

SUMMARY NOTES:

DEVELOPER/OWNER: ADRIAN TAMES
HYG HOMES
84 NE LOOP 410,
SUITE 242
SAN ANTONIO, TX 78216

ENGINEER: BGE, INC., TBPE-1046
CONTACT: DAVID BABINEAUX, P.E.
EMAIL: DBABINEAUX@BGEINC.COM
7330 SAN PEDRO AVENUE SUITE 202
SAN ANTONIO, TEXAS 78216
PHONE: (210) 469-3285

SURVEYOR: BGE, INC., TBPE F1046
CONTACT: DION ALBERTSON
EMAIL: DALBERTSON@BGEINC.COM
7330 SAN PEDRO AVENUE SUITE 202
SAN ANTONIO, TEXAS 78216
PHONE: (210) 581-3600

FLOODPLAIN INFORMATION

NO PORTION OF THE LOT IN THIS TRACT IS WITHIN THE BOUNDARIES OF THE 100 YEAR FLOODPLAIN OF ANY WATERWAY THAT IS WITHIN THE LIMITS OF THE FEDERAL FLOOD INSURANCE ADMINISTRATION FIRM PANEL.

FEMA PANEL: 48029C0220G EFF. 9/29/2010
TRACT SIZE: 7.36 ACRES
TYPE: SINGLE FAMILY RESIDENTIAL

GENERAL NOTES

ALL CONSTRUCTION SHALL CONFORM TO THE LATEST SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION.

STREETS - CITY OF SAN ANTONIO
WATER - SAN ANTONIO WATER SYSTEM - SAWS
DRAINAGE - CITY OF SAN ANTONIO
WASTEWATER - SAN ANTONIO WATER SYSTEM - SAWS

CONTACT INFORMATION FOR COORDINATION AND EMERGENCY

CITY OF SAN ANTONIO: (210) 207-1111
ELECTRIC UTILITY: CPS ENERGY (210) 353-4357
WATER UTILITY: SAN ANTONIO WATER SYSTEM-SAWS (210) 704-7297
WASTEWATER UTILITY: SAN ANTONIO WATER SYSTEM-SAWS (210) 704-7297

Digitally Approved by COSA DSD
Streets and Traffic Plat Review

Courtesy Street Plan Review:

By: Abel Barraza AB

Date: 7.8.2025



CIVIL CONSTRUCTION DRAWINGS: HERON VALLEY PHASE 1 CITY OF SAN ANTONIO

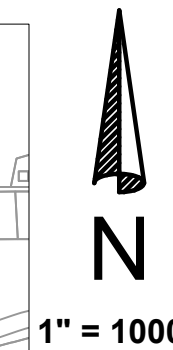
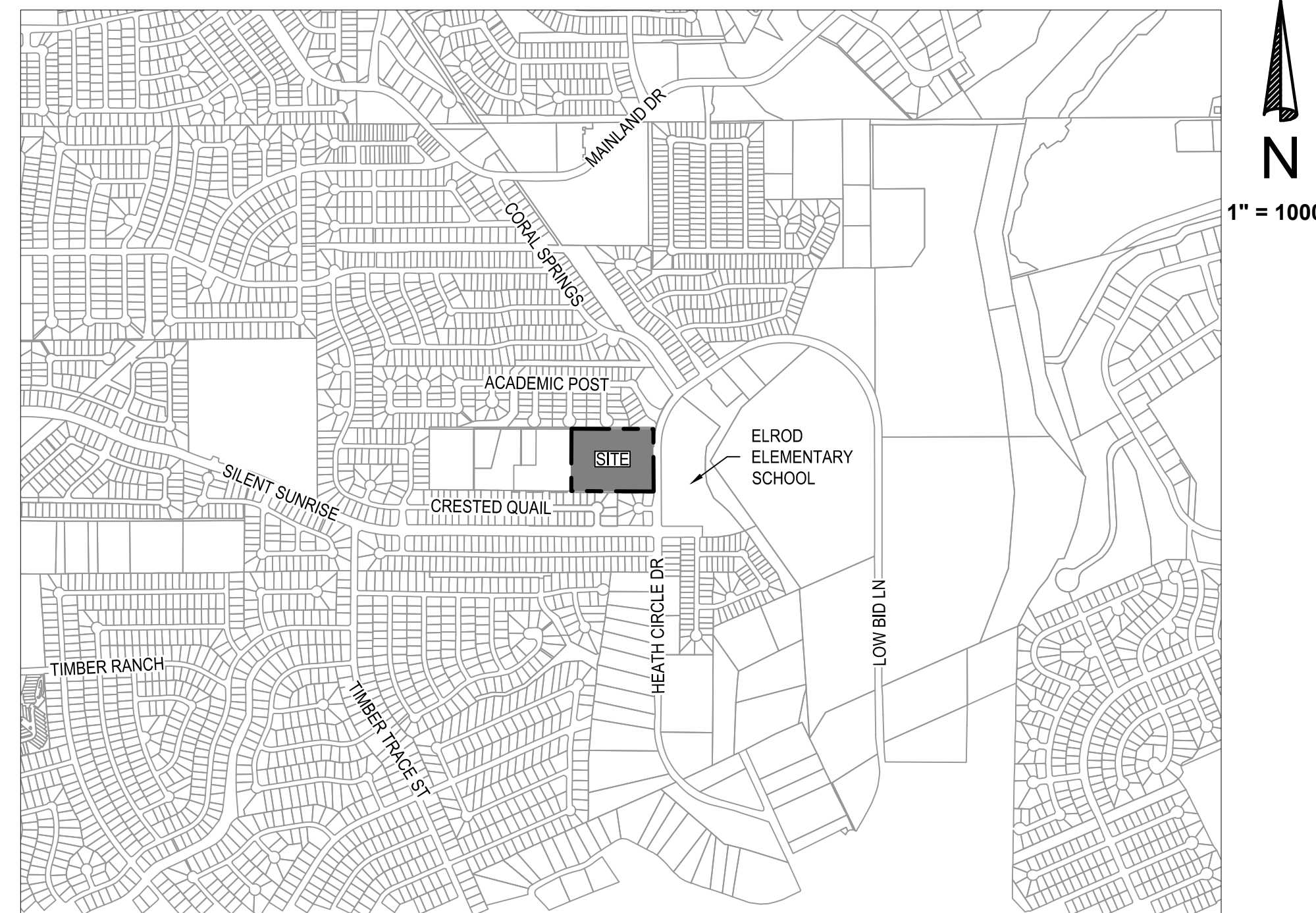
WATER, SEWER, STREET & DRAINAGE IMPROVEMENTS

JUNE 2025

HERON VALLEY PHASE 1

Sheet Number	Sheet Title
C00.00	COVER SHEET
C01.00	CIVIL GENERAL NOTES
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C01.11	DEMOLITION PLAN
C02.00	EROSION & SEDIMENTATION CONTROL PLAN
C02.10	EROSION & SEDIMENTATION CONTROL DETAILS
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C02.22	DETAILED TREE PROTECTION PLAN (SHEET 2 OF 4)
C02.23	DETAILED TREE PROTECTION PLAN (SHEET 3 OF 4)
C02.24	DETAILED TREE PROTECTION PLAN (SHEET 4 OF 4)
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C02.31	TREE PROTECTION TABLES (SHEET 2 OF 2)
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C02.40	TREE PROTECTION PLAN DETAILS
C03.00	OVERALL GRADING PLAN
C03.20	DETENTION POND PLAN
C04.00	UTILITY PLAN
C05.00	OVERALL WASTEWATER PLAN
C05.10	WASTEWATER LINE A PLAN & PROFILE STA 1+00 TO 6+50
C05.11	WASTEWATER LINE A PLAN & PROFILE STA 6+50 TO END
C05.12	WASTEWATER LINE B PLAN & PROFILE
C06.00	WATER DISTRIBUTION PLAN
C06.01	WATER CROSSING DETAIL
C07.00	PARROT VALLEY PLAN AND PROFILE
C07.01	CONDOR VALLEY PLAN AND PROFILE
C07.02	CANARY VALLEY PLAN AND PROFILE
C07.03	FLAMINGO VALLEY PLAN AND PROFILE
C07.04	ROBIN VALLEY PLAN AND PROFILE
C07.10	KNUCKLE DETAILS
C08.00	STORM DRAIN COLLECTION PLAN
C08.10	STORM LINE A PLAN AND PROFILE
C08.11	STORM LINE B PLAN AND PROFILE
C08.20	STREET & DRAINAGE DETAILS (SHEET 1 OF 5)
C08.21	STREET & DRAINAGE DETAILS (SHEET 2 OF 5)
C08.22	STREET & DRAINAGE DETAILS (SHEET 3 OF 5)
C08.23	STREET & DRAINAGE DETAILS (SHEET 4 OF 5)
C08.24	STREET & DRAINAGE DETAILS (SHEET 5 OF 5)
C09.00	SIGNAGE PLAN
C09.01	SIGNAGE DETAILS (SHEET 1 OF 2)
C09.02	SIGNAGE DETAILS (SHEET 2 OF 2)

VICINITY MAP



REVISIONS/CORRECTIONS					
SHEET LIST	DESCRIPTION	DATE	REVISE (R) ADD (A) VOID (V) SHEET NO.'S	ACCEPTED BY	APPROVAL DATE

NOT FOR CONSTRUCTION

SUBMITTED BY



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7330 San Pedro Ave., Suite 202
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Tel: 210-581-3600 • www.browngay.com
TBPE Registration No. F-1046

DAVID BABINEAUX, P.E.
BGE, INC. TBPE NO. F-1046
7330 SAN PEDRO AVENUE SUITE 202
SAN ANTONIO, TEXAS 78216
PHONE: (210) 469 - 3285

DATE: _____

REVIEWED BY THE
SAN ANTONIO WATER SYSTEM

THIS DOES NOT RELIEVE THE DESIGNING ENGINEER,
CONTRACTOR OR SUB-CONTRACTOR OF THE
RESPONSIBILITY FOR COMPLYING WITH ALL OF THE
SAN ANTONIO WATER SYSTEM AND T.C.E.Q. RULES
AND REGULATIONS

BY: *Antonio D. Rivera*
DATE: 11/15/2024

REVIEWED BY THE
SAN ANTONIO WATER SYSTEM

THIS DOES NOT RELIEVE THE DESIGNING ENGINEER,
CONTRACTOR OR SUB-CONTRACTOR OF THE
RESPONSIBILITY FOR COMPLYING WITH ALL OF THE
SAN ANTONIO WATER SYSTEM AND T.C.E.Q. RULES
AND REGULATIONS

BY: Michael Nguyen
DATE: 2024.12.06
11:11:07-0600'

SAWS PRESSURE ZONE: 1111

DEVELOPER NAME:	HYG HOMES
DEVELOPER ADDRESS:	84 NE LOOP 410, SUITE 242
CITY:	SAN ANTONIO
STATE:	TX
ZIP:	78216
PHONE:	(210)-968-2025
FAX:	N/A
SAWS BLOCK MAP #:	N/A
TOTAL EDU'S:	42
TOTAL ACREAGE:	7.361
TOTAL LINEAR FOOTAGE OF PIPE:	2,078
PLAT NO.:	24-11800389
NUMBER OF LOTS:	40
SAWS JOB NO.:	24-1154

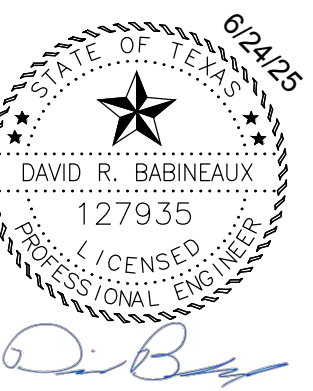
MIDDLE COLLECTION AND TREATMENT AREA (MCTA)

DEVELOPER NAME:	HYG HOMES
DEVELOPER ADDRESS:	84 NE LOOP 410, SUITE 242
CITY:	SAN ANTONIO
STATE:	TX
ZIP:	78216
PHONE:	(210)-968-2025
FAX:	N/A
SAWS BLOCK MAP #:	N/A
TOTAL EDU'S:	40
TOTAL ACREAGE:	7.361
TOTAL LINEAR FOOTAGE OF PIPE:	2,078
PLAT NO.:	24-11800389
NUMBER OF LOTS:	40
SAWS JOB NO.:	24-1625



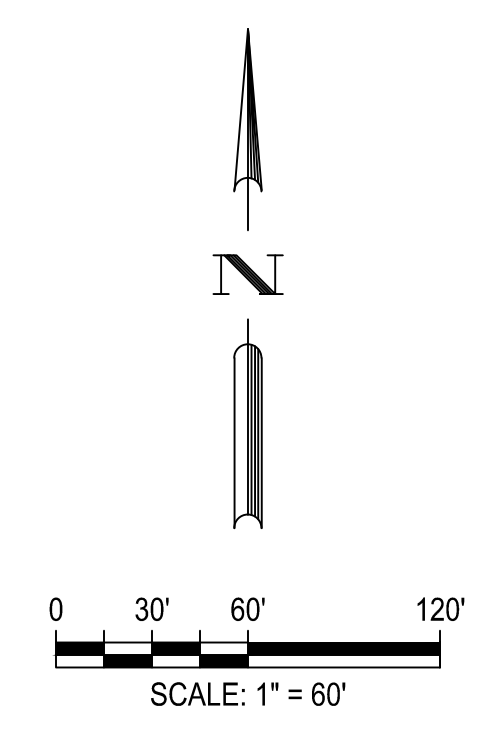
Know what's below.
Call before you dig.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.



C00.00

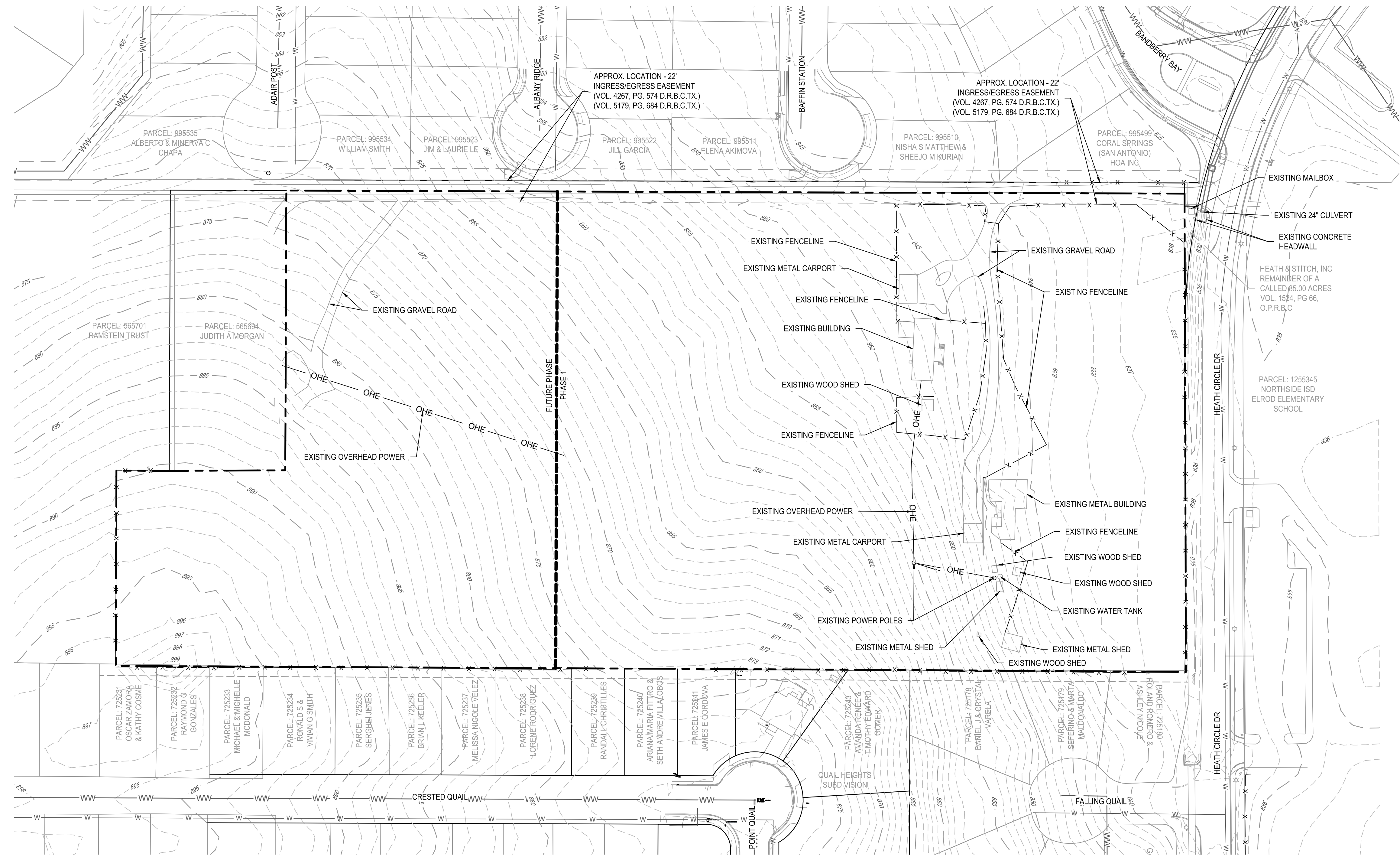
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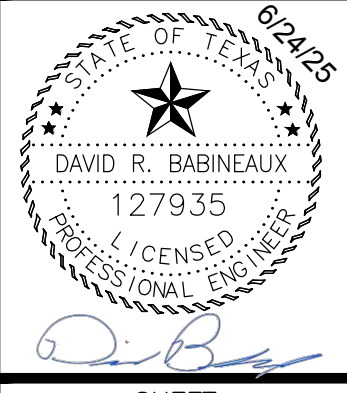
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	EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING WASTEWATER
	EXISTING WATER
	EXISTING STORM DRAIN
	EXISTING OVERHEAD POWER
	EXISTING FENCE LINE

- NOTES
- BEARING ORIENTATION IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83.
 - DRAWING IS IN SURFACE VALUES.

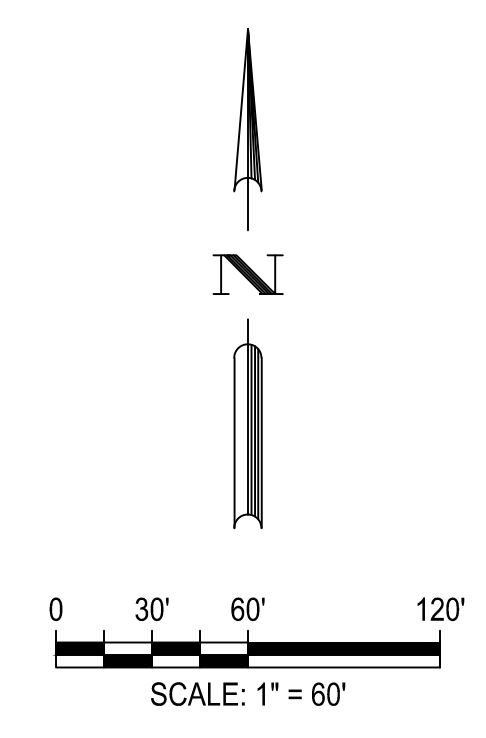


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EPE Registration No. P-1046

HERON VALLEY PHASE 1
EXISTING CONDITIONS PLAN

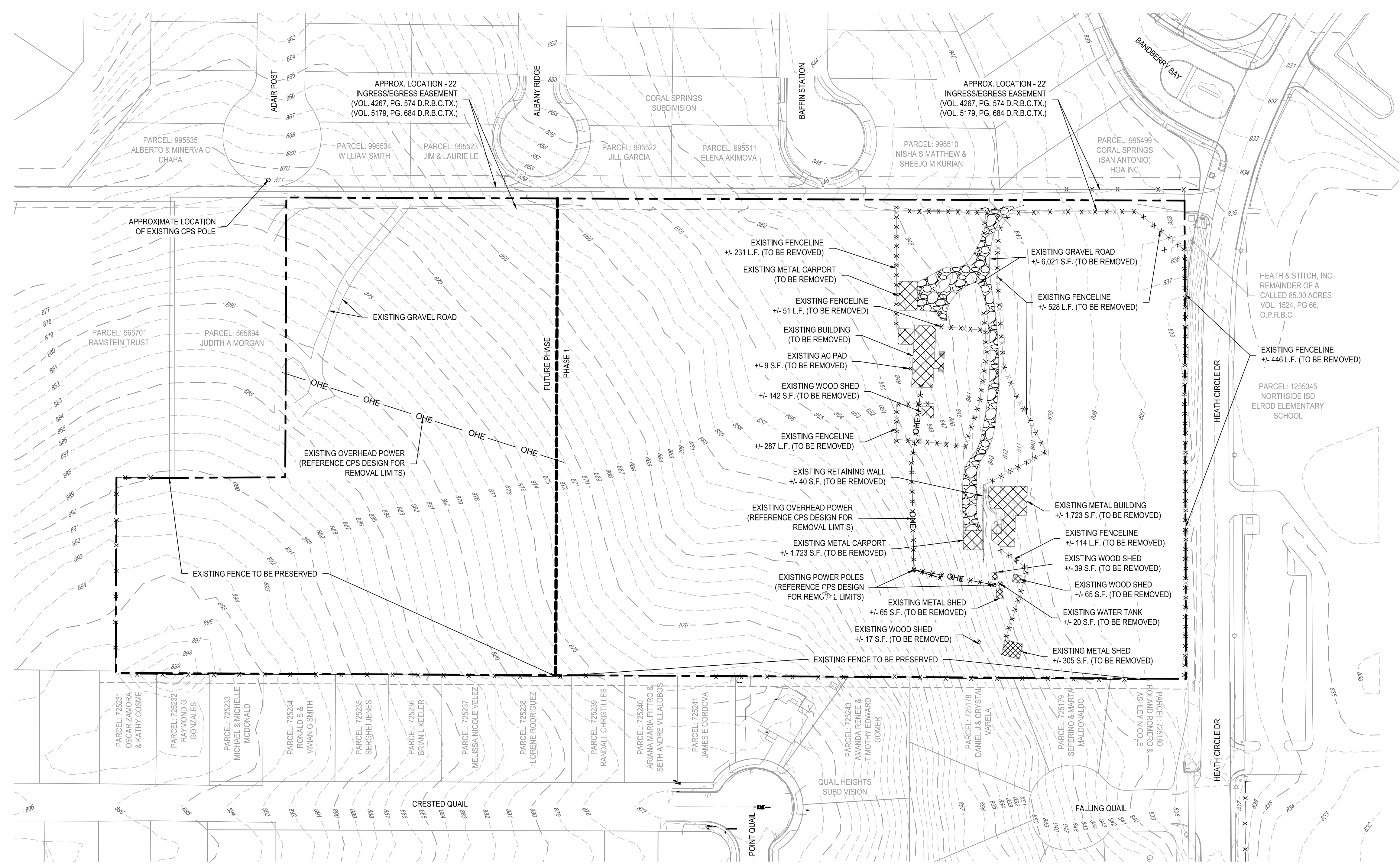


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LEGEND

	PROPERTY BOUNDARY
	EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING WASTEWATER
	EXISTING WATER
	EXISTING STORM DRAIN
	EXISTING OVERHEAD POWER
	EXISTING OVERHEAD POWER TO BE REMOVED
	EXISTING FENCE LINE
	EXISTING FENCE LINE TO BE REMOVED
	EXISTING GRAVEL ROAD TO BE REMOVED
	EXISTING STRUCTURE TO BE REMOVED



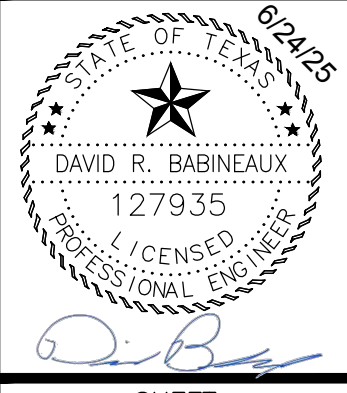
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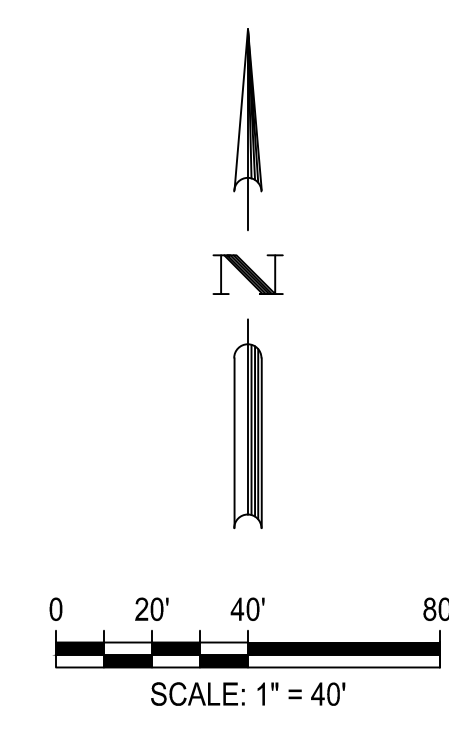
DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC



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San Antonio, TX 78216
TEL: 214-358-9300 www.bgeenergy.com
T&E Registration No. F-1049

HERON VALLEY PHASE 1
DEMOLITION PLAN





LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	LIMITS OF CONSTRUCTION
	SILT FENCE
	SILT FENCE/LIMITS OF CONSTRUCTION
	FLOW ARROW
	CONSTRUCTION ENTRANCE
	CONCRETE WASHOUT AREA
	CONSTRUCTION STAGING AREA
	INLET PROTECTION
	ROCK BERM
	J HOOKS

EROSION AND SEDIMENTATION NOTES:

- ALL SWPPP AND BEST MANAGEMENT PRACTICES (BMPs) SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH TEXAS COMMISSION ON ENVIRONMENTAL QUALITY.
- SWPPP SIGN SHALL BE DISPLAYED AT ENTRANCE/EXIT LOCATION. ENTRANCE/EXIT, CONCRETE WASHOUT PIT AND CONSTRUCTION EQUIPMENT STORAGE AREA ARE TO BE DETERMINED IN THE FIELD.
- CONTRACTOR MAY MODIFY STORM WATER CONTROLS TO ACHIEVE THE DESIRED INTENT. ANY CHANGES ARE TO BE NOTED, SIGNED AND DATED BY THE RESPONSIBLE PARTY IN THE SWPPP BOOK.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL STORM WATER CONTROLS.
- CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER OF ANY QUESTIONS REGARDING THE INTENT OF THIS PLAN.
- CONTRACTOR IS REQUIRED TO FILE NOTIS (NOTICE OF INTENT) AND NOTS (NOTICE OF TERMINATION) FOR THIS PROJECT. REFER TO NPDES FOR PROPER POSTING REQUIREMENTS AND DOCUMENTS.
- CONTRACTOR SHALL PERFORM INSPECTIONS OF CONTROLS ONCE EVERY FOURTEEN (14) DAYS AND WITHIN TWENTY-FOUR (24) HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER OR AS AN ALTERNATIVE METHOD CONTRACTOR SHALL PERFORM INSPECTIONS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS.
- A COPY OF THIS PLAN, SWPPP BINDER AND INSPECTION REPORTS MUST REMAIN AT THE CONSTRUCTION SITE AT ALL TIMES.
- BARE SOILS SHALL HAVE STABILIZATION MEASURES INSTALLED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED FOR MORE THAN 21 DAYS.
- ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED WITH MULCH FOR TEMPORARY VEGETATIVE COVER. NO AREA, SUBJECT TO EROSION SHALL BE LEFT DISTURBED AND UNSUITABLE FOR PERIODS LONGER THAN IS ABSOLUTELY NECESSARY TO CARRY OUT THAT PORTION OF THE CONSTRUCTION WORK, OR 1 WEEK AFTER THE SOIL HAS BEEN DISTURBED, WHICHEVER IS LESS.
- DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM PRODUCTS BASED UPON TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ADJACENT ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- INSTALL SILT FENCES AS SHOWN ON THE PLANS AND WHEREVER STORM WATER COLLECTS OR EXITS THE PROJECT. INSTALL ROCK BERM DIKES AT ALL CURB NILETS AS SHOWN ON THE PLANS.
- BACKFILL THE UTILITY TRENCHES IN A TIMELY MANNER TO MINIMIZE EROSION.
- SOIL STOCKPILES LEFT OVER A PERIOD OF SEVEN DAYS SHALL BE COVERED WITH SOIL RETENTION BLANKETS AND SILT FENCE SHALL BE ERRECTED AROUND THE PERIMETER OF STOCKPILE MATERIAL.
- WHEN THE PROJECT AREA HAS STABILIZED AND ALL CONSTRUCTION IS COMPLETED AND ACCEPTED, REMOVE ALL CONTROLS.
- FINAL STABILIZATION IS ACCOMPLISHED WHEN VEGETATION AT THE DISTURBED AREAS HAS ACHIEVED 70% OF THE BACKGROUND NATIVE VEGETATION.
- CONTRACTOR TO COORDINATE WITH THE OWNER'S REPRESENTATIVE FOR LOCATION OF STAGING AREA.
- ACCESSIBLE SYMBOL IS FOR REFERENCE ONLY. DO NOT PROVIDE MARKING ON SPACE.

CONTRACTOR/BUILDERS RESPONSIBILITY:

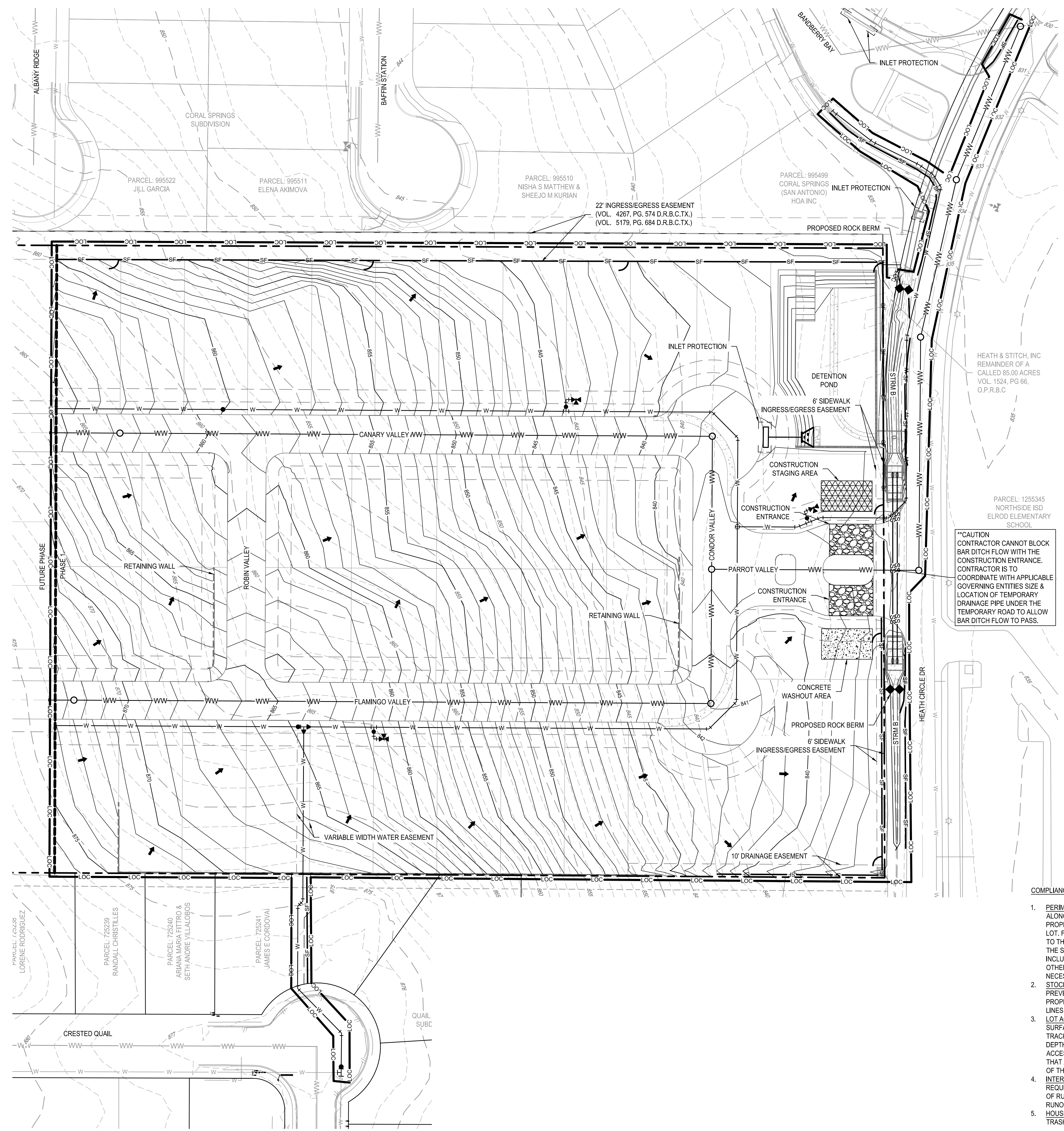
- INSTALL NEEDED EROSION AND SEDIMENT CONTROL PRACTICES PRIOR TO ANY LAND DISTURBANCE TO PREVENT EXCESSIVE SEDIMENT FROM LEAVING THE SITE.
- CONTACT A T.C.E.Q. INSPECTOR TO ANSWER ANY QUESTIONS REGARDING SITE PLAN AND TO REVIEW A COMPLETED WORKSHEET.
- PERIODIC INSPECTION AND MAINTENANCE ARE VITAL TO THE PERFORMANCE OF EROSION AND SEDIMENT CONTROLS. IT IS RECOMMENDED THAT ALL TEMPORARY EROSION CONTROLS BE INSPECTED WEEKLY AND AFTER EVERY RAINFALL.
- MAINTENANCE: ESC (EROSION SEDIMENT CONTROLS) SHOULD BE ROUTINELY INSPECTED AND MAINTAINED UNTIL SITE IS PERMANENTLY VEGETATED. SOMETIMES ROUTINE INSPECTIONS MAY SHOW A NEED FOR ADJUSTMENTS OR ADDITIONAL ESCS.
- CONTACT A T.C.E.Q. INSPECTOR WHEN CONSTRUCTION IS COMPLETE AND THE SITE HAS BEEN STABILIZED WITH PERMANENT VEGETATION OR OTHER APPROVED METHODS.
- REVEGETATE THE SITE: PREVENT EROSION ON INDIVIDUAL LOTS WITH GROUND COVER. EXISTING TREES AND VEGETATION SHOULD BE PROTECTED TO HELP MAINTAIN A STABLE GROUND SURFACE AND PREVENT LOSS OF VALUABLE TOPSOIL. EROSION CONTROL BLANKETS, MATTING AND MULCHES CAN HELP STABILIZE THE AREA UNTIL PERMANENT VEGETATION IS ESTABLISHED. THE SITE NEEDS TO HAVE AT LEAST 80 PERCENT COVER OF PERMANENT VEGETATION BEFORE ESCS CAN BE REMOVED.

ALL DISTURBED AREAS SHALL BE PERMANENTLY SEEDDED OR OTHERWISE STABILIZED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OR WHERE TEMPORARY CONSTRUCTION ACTIVITY HAS CEASED FOR MORE THAN 21 DAYS

COMPLIANCE CHECKLIST:

- PERIMETER CONTROLS: INSTALL ESCS (EROSION SEDIMENT CONTROLS) ALONG THE BACK OF THE CURB AND ALONG THE LOT LINE OF ADJACENT PROPERTIES, WHICH ARE DOWNHILL AND RECEIVE RUNOFF FROM YOUR LOT. FOLLOWING SIDEWALK INSTALLATION, ESCS SHOULD BE REMOVED TO THE BACK OF THE SIDEWALK TO PREVENT SEDIMENT FROM REACHING THE SIDEWALK. MAINTAIN ESCS TO ENSURE PROPER FUNCTION, INCLUDING REPAIR OR REPLACEMENT OF TORN, DEGRADED OR OTHERWISE INEFFECTIVE MATERIALS. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE PROTECTION.
- STOCKPILES: INSTALL SEDIMENT CONTROLS AROUND STOCKPILES TO PREVENT SEDIMENT FROM REACHING THE STREET AND ADJACENT PROPERTIES. LOCATE STOCKPILES AWAY FROM THE STREET, PROPERTY LINES AND DRAINAGE WAYS.
- LOT ACCESS: REQUIRED FOR EACH INDIVIDUAL LOT. MAINTAIN A SURFACE SUITABLE FOR PARKING AND UNLOADING TO PREVENT THE TRACKING OF MUD AND ROCK ONTO THE STREET. A MINIMUM 6-INCH DEPTH OF 3- TO 5-INCH AGGREGATE IS SUGGESTED. ALL VEHICLES THAT ACCESS THE LOT MUST USE THE CONSTRUCTION ENTRANCE. ANY SOILS THAT ARE TRACKED ONTO THE STREET MUST BE REMOVED BY THE END OF THE DAY.
- INTERMEDIATE CONTROL: LONG OR STEEP DRAINAGE PATHS MAY REQUIRE INTERMEDIATE OR INTERIOR ESCS TO HELP SLOW THE FLOW OF RUNOFF. FAILURE OF PERIMETER CONTROLS DUE TO THE FORCE OF RUNOFF OFTEN DETERMINE THE NEED FOR INTERMEDIATE CONTROLS.
- HOUSEKEEPING: PROVIDE ADEQUATE SANITARY FACILITIES AND TRASH/REFUSE BINS.

CAUTION
CONTRACTOR CANNOT BLOCK BAR DITCH FLOW WITH THE CONSTRUCTION ENTRANCE. CONTRACTOR IS TO COORDINATE WITH APPLICABLE GOVERNING ENTITIES SIZE & LOCATION OF TEMPORARY DRAINAGE PIPE UNDER THE TEMPORARY ROAD TO ALLOW BAR DITCH FLOW TO PASS.



G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01 - Unit 103_CADD\01 - Shis\02.00 EROSION & SEDIMENTATION CONTROL PLAN.dwg Layout: EROSION & SEDIMENTATION CONTROL PLAN By: Orodfiguez

DESIGNED BY:	JDC
REVIEWED BY:	OR
DRAWN BY:	JDC

BGE

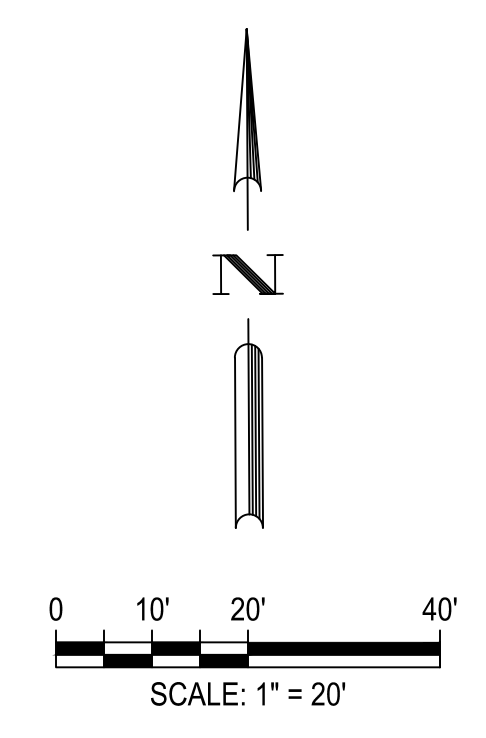
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
Tel: 210-358-3360 www.bgeinc.com
EPA Registration No. P-1049

HERON VALLEY PHASE 1

EROSION & SEDIMENTATION CONTROL PLAN

SHEET
C02.00

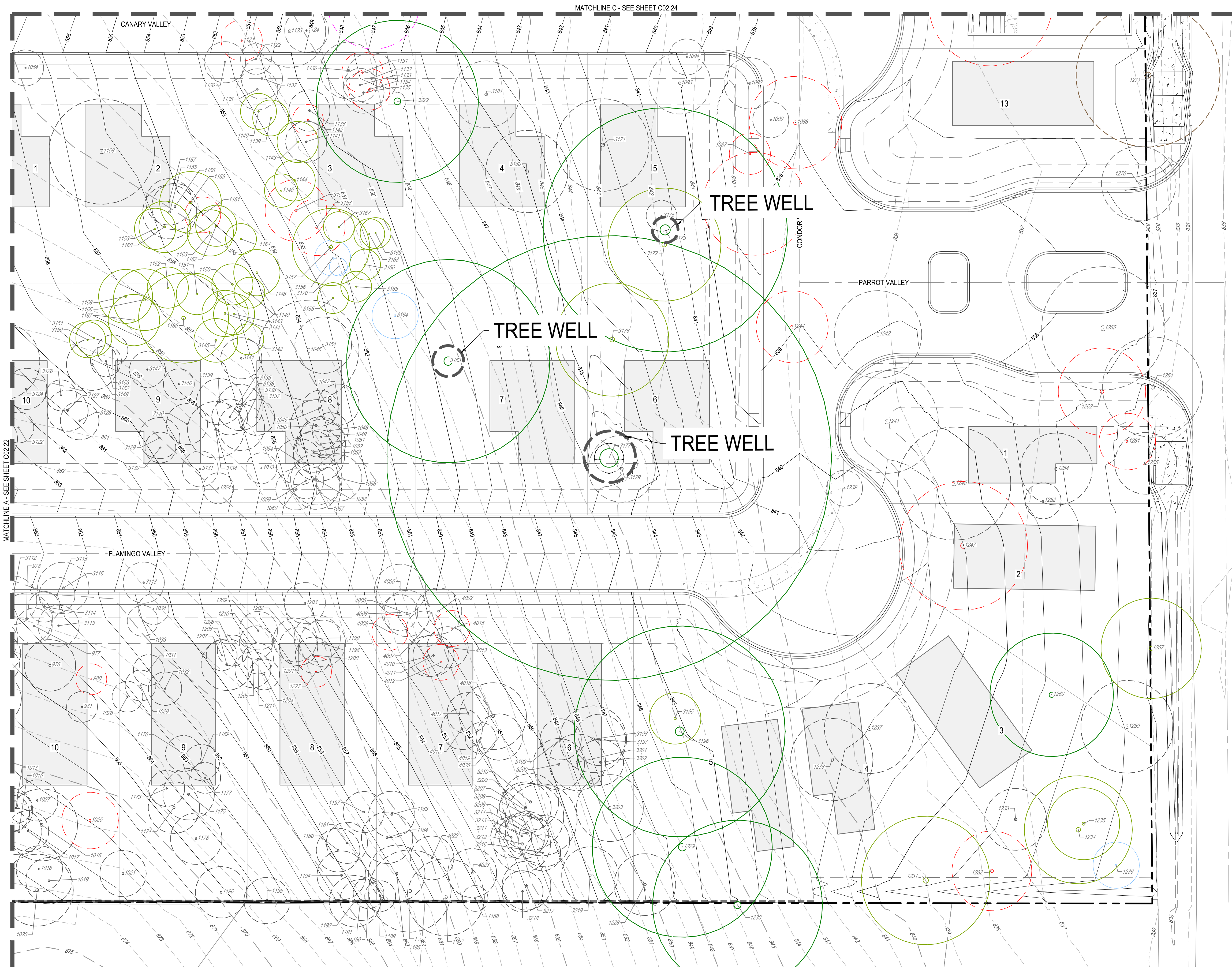
DATE	REV	DESCRIPTION
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LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED LOT LINES
	PROPOSED EASEMENT
	LOT NUMBER
	PRESERVED HERITAGE TREE
	PRESERVED SIGNIFICANT TREE
	REMOVED SIGNIFICANT TREE
	EXEMPT - REMOVED HERITAGE TREE
	EXEMPT - REMOVED SIGNIFICANT TREE
	PRESERVED UNPROTECTED TREE
	REMOVED TREE IN POOR CONDITION
	REMOVED INVASIVE TREE

- GENERAL NOTES**
- BEARING ORIENTATION IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE 4204, NAD-83. DISTANCES SHOWN ARE SURFACE VALUES.
 - NO CONSTRUCTION (CLEARING, CUTTING, FILLING, TRENCHING, ETC.) SHALL TAKE PLACE WITHIN THE 1/2 ROOT PROTECTION ZONE (RPZ). CONTRACTOR TO ENSURE TREE PROTECTION FULLY ENCAPSULATES 1/2 RPZ AND SHALL NOTIFY TO OWNER/ENGINEER IMMEDIATELY IF THIS AREA IS ENCRoACHED. PLEASE REFERENCE THE COSA TREE PRESERVATION AND PROTECTION DETAILS.
 - PLEASE SEE TREE MAN ASSESSMENT FROM 06-17-2024 FOR FURTHER INFORMATION.
- MITIGATION NOTES**
- HOME BUILDER WILL BE REQUIRED TO PLANT 3 - 2" (MIN) CALIPER TREES WITH A SHADE VALUE OF 875 PER LOT. A TOTAL OF 192 TREES WILL BE PLANTED ON THE SITE BASED ON THE TABLE. LOTS 1-9 (BLOCK B) WILL HAVE ONE ADDITIONAL 2" TREE PLANTED (REFERENCE APPENDIX D FOR LIST OF APPROVED TREE SPECIES).
 - A TOTAL OF 200 MITIGATION INCHES WERE REQUIRED FROM THE SITE. 201 INCHES WILL BE MITIGATED BY PLANTING TREES.
 - TREE WELLS HAVE A MINIMUM SPACING OF 5' FROM THE TREE TRUNK.



DETAIL SHEET 1

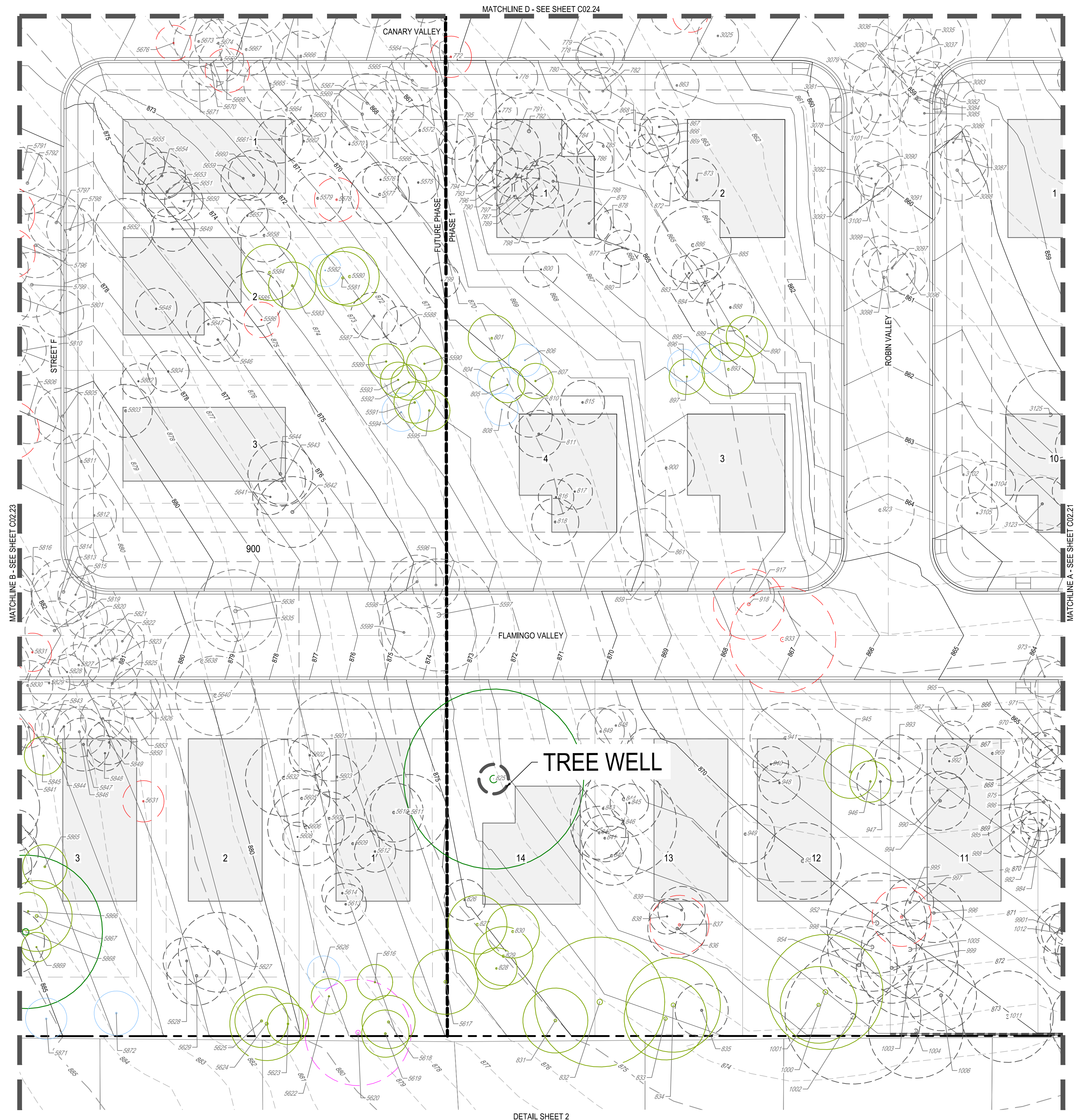
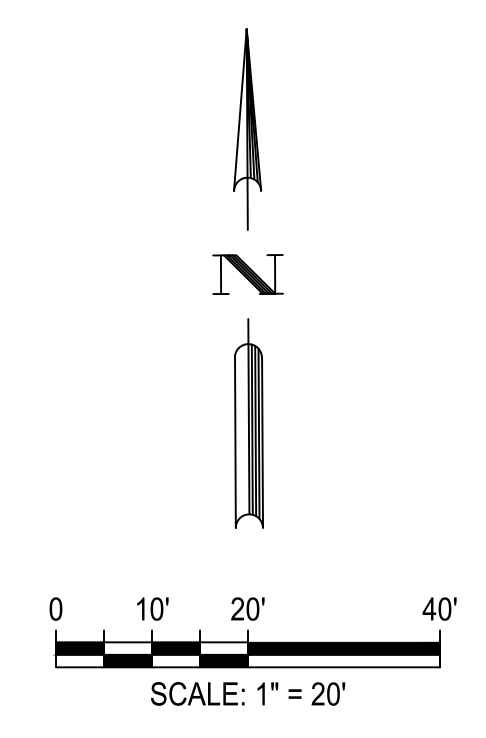
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NOT FOR CONSTRUCTION

HERON VALLEY PHASE 1
DETAILED TREE PROTECTION PLAN
(SHEET 1 OF 4)

BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-358-3300 www.bgeinc.com
TXPE Registration No. P-1046

DATE	REV	DESCRIPTION



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED LOT LINES
	PROPOSED EASEMENT
	LOT NUMBER
	PRESERVED HERITAGE TREE
	PRESERVED SIGNIFICANT TREE
	REMOVED SIGNIFICANT TREE
	EXEMPT - REMOVED HERITAGE TREE
	EXEMPT - REMOVED SIGNIFICANT TREE
	PRESERVED UNPROTECTED TREE
	REMOVED TREE IN POOR CONDITION
	REMOVED INVASIVE TREE

- GENERAL NOTES**
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 2. NO CONSTRUCTION (CLEARING, CUTTING, FILLING, TRENCHING, ETC.) SHALL TAKE PLACE WITHIN THE 1/2 ROOT PROTECTION ZONE (RPZ). CONTRACTOR TO ENSURE TREE PROTECTION FULLY ENCAPSULATES 1/2 RPZ AND SHALL NOTIFY TO OWNER/ENGINEER IMMEDIATELY IF THIS AREA IS ENCRoACHED. PLEASE REFERENCE THE COSA TREE PRESERVATION AND PROTECTION DETAILS.
 3. PLEASE SEE TREE MAN ASSESSMENT FROM 06-17-2024 FOR FURTHER INFORMATION.

- MITIGATION NOTES**
1. HOME BUILDER WILL BE REQUIRED TO PLANT 3 - 2" (MIN) CALIPER TREES WITH A SHADE VALUE OF 875 PER LOT. A TOTAL OF 192 TREES WILL BE PLANTED ON THE SITE BASED ON THE TABLE. LOTS 1-9 (BLOCK B) WILL HAVE ONE ADDITIONAL 2" TREE PLANTED (REFERENCE APPENDIX D FOR LIST OF APPROVED TREE SPECIES).
 2. A TOTAL OF 200 MITIGATION INCHES WERE REQUIRED FROM THE SITE. 201 INCHES WILL BE MITIGATED BY PLANTING TREES.
 3. TREE WELLS HAVE A MINIMUM SPACING OF 5' FROM THE TREE TRUNK.

DESIGNED BY: JDC
 REVIEWED BY: OR
 DRAWN BY: JDC



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 San Antonio, TX 78216
 TEL: 214-361-3300 www.bgeenergy.com
 TX P&E Registration No. P-1046

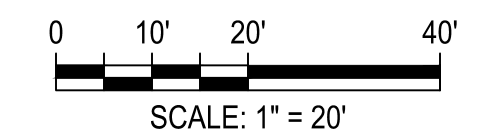
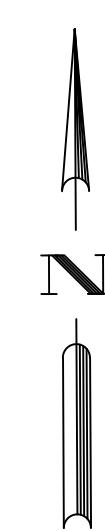
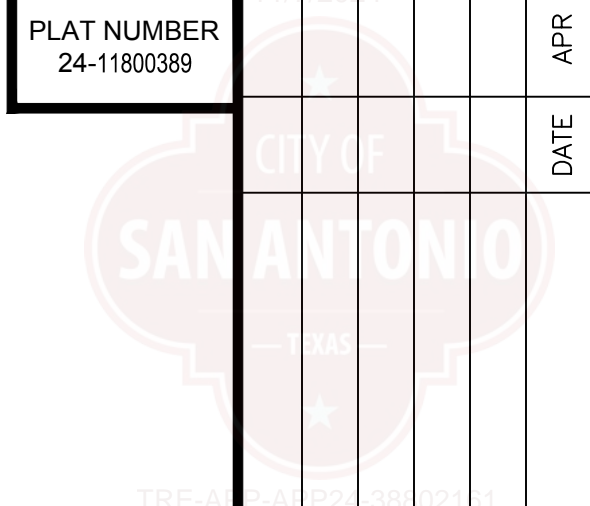
HERON VALLEY PHASE 1
 DETAILED TREE PROTECTION PLAN
 (SHEET 2 OF 4)

NOT FOR CONSTRUCTION

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PLAT NUMBER
24-11800389

DATE	APR
REV	
DESCRIPTION	



LEGEND

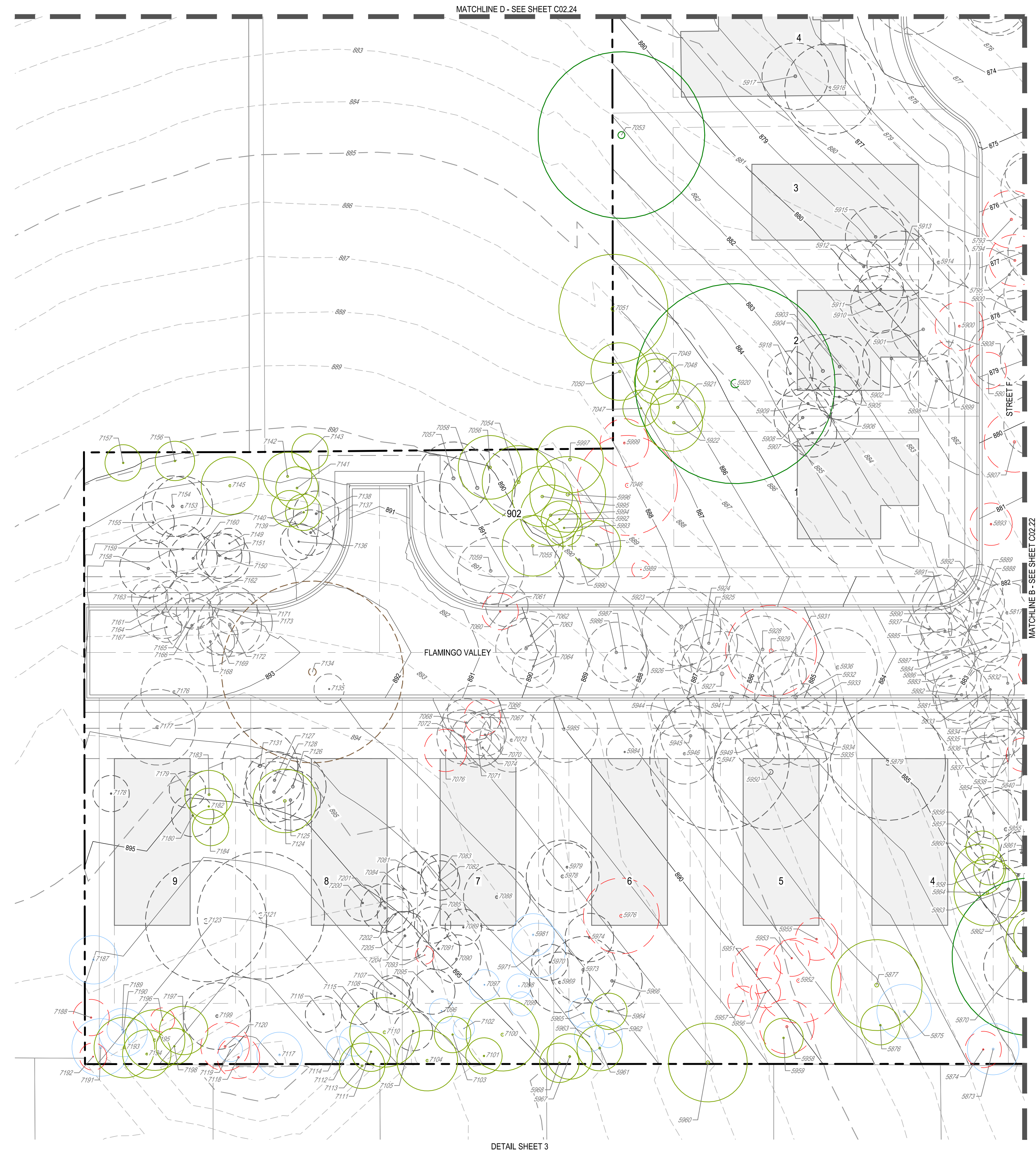
- PROPERTY BOUNDARY
- PHASE BOUNDARY
- PROPOSED LOT LINES
- PROPOSED EASEMENT
- LOT NUMBER
- PRESERVED HERITAGE TREE
- PRESERVED SIGNIFICANT TREE
- REMOVED SIGNIFICANT TREE
- EXEMPT - REMOVED HERITAGE TREE
- EXEMPT - REMOVED SIGNIFICANT TREE
- PRESERVED UNPROTECTED TREE
- REMOVED TREE IN POOR CONDITION
- REMOVED INVASIVE TREE

GENERAL NOTES

- BEARING ORIENTATION IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE 4204, NAD-83. DISTANCES SHOWN ARE SURFACE VALUES.
- NO CONSTRUCTION (CLEARING, CUTTING, FILLING, TRENCHING, ETC.) SHALL TAKE PLACE WITHIN THE 1/2 ROOT PROTECTION ZONE (RPZ). CONTRACTOR TO ENSURE TREE PROTECTION FULLY ENCAPSULATES 1/2 RPZ AND SHALL NOTIFY TO OWNER/ENGINEER IMMEDIATELY IF THIS AREA IS ENCRoACHED. PLEASE REFERENCE THE COSA TREE PRESERVATION AND PROTECTION DETAILS.
- PLEASE SEE TREE MAN ASSESSMENT FROM 06-17-2024 FOR FURTHER INFORMATION.

MITIGATION NOTES

- HOME BUILDER WILL BE REQUIRED TO PLANT 3 - 2" (MIN) CALIPER TREES WITH A SHADE VALUE OF 875 PER LOT. A TOTAL OF 192 TREES WILL BE PLANTED ON THE SITE BASED ON THE TABLE. LOTS 1-9 (BLOCK B) WILL HAVE ONE ADDITIONAL 2" TREE PLANTED (REFERENCE APPENDIX D FOR LIST OF APPROVED TREE SPECIES).
- A TOTAL OF 200 MITIGATION INCHES WERE REQUIRED FROM THE SITE. 201 INCHES WILL BE MITIGATED BY PLANTING TREES.
- TREE WELLS HAVE A MINIMUM SPACING OF 5' FROM THE TREE TRUNK.



DETAIL SHEET 3

NOT FOR CONSTRUCTION

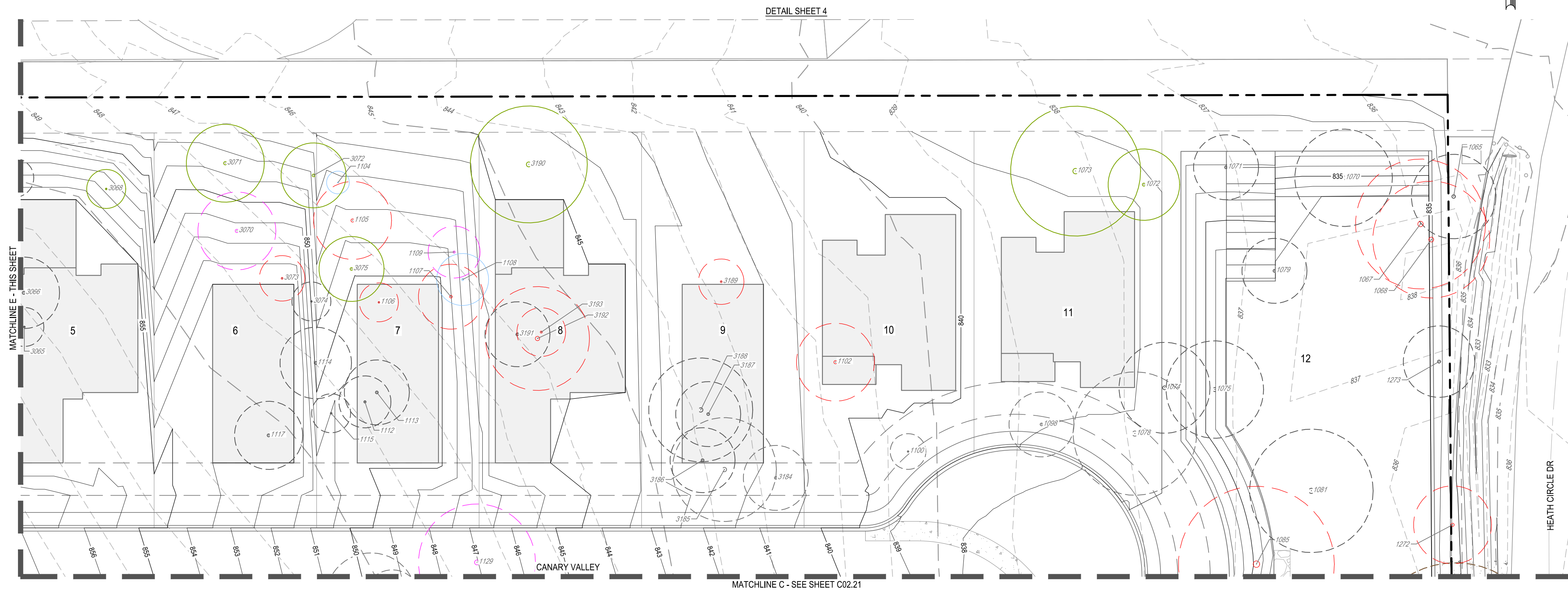
HERON VALLEY PHASE 1
 DETAILED TREE PROTECTION PLAN
 (SHEET 3 OF 4)



BGE, INC.
 7330 San Pedro, Suite 202
 San Antonio, TX 78216
 TEL: 214-591-3369 www.bgeenergy.com
 TPE Registration No. P-1046

SHEET
C02.23

DATE	REV	DESCRIPTION



LEGEND

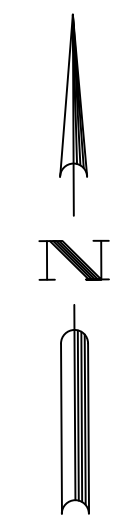
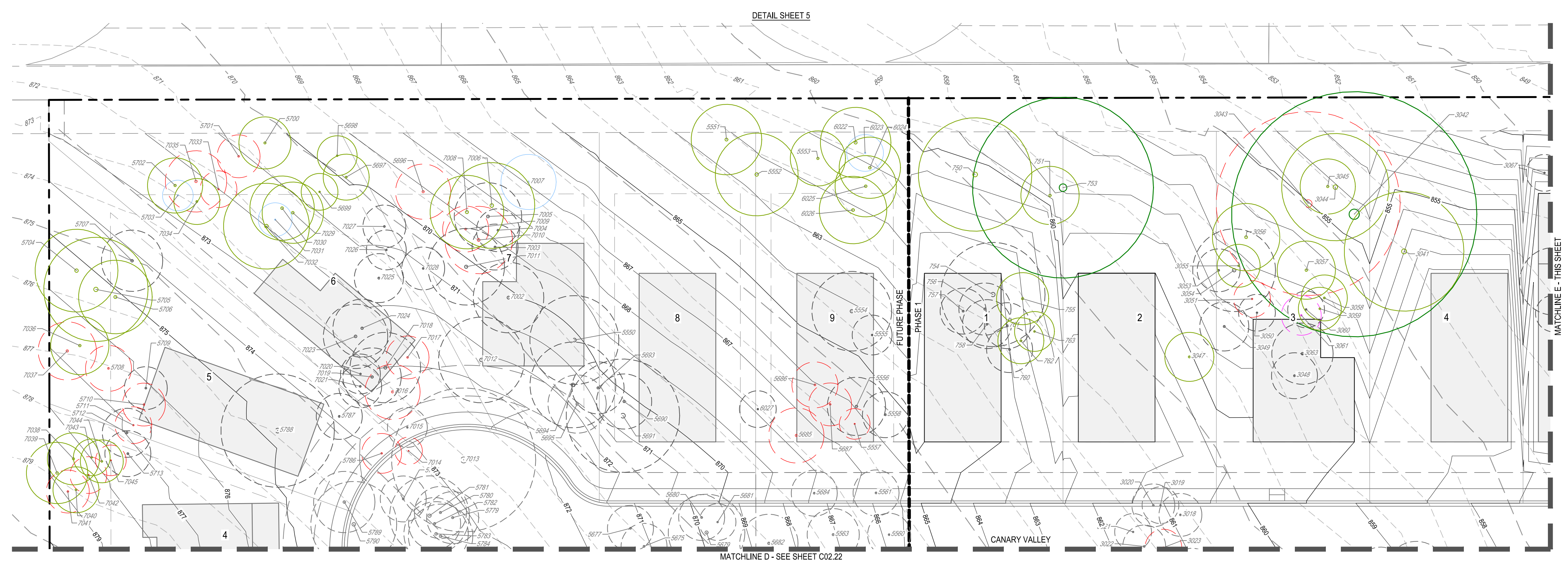
	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED LOT LINES
	PROPOSED EASEMENT
	LOT NUMBER
	PRESERVED HERITAGE TREE
	PRESERVED SIGNIFICANT TREE
	REMOVED SIGNIFICANT TREE
	EXEMPT - REMOVED HERITAGE TREE
	EXEMPT - REMOVED SIGNIFICANT TREE
	PRESERVED UNPROTECTED TREE
	REMOVED TREE IN POOR CONDITION
	REMOVED INVASIVE TREE

GENERAL NOTES

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3. PLEASE SEE TREE MAN ASSESSMENT FROM 06-17-2024 FOR FURTHER INFORMATION.

MITIGATION NOTES

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2. A TOTAL OF 200 MITIGATION INCHES WERE REQUIRED FROM THE SITE. 201 INCHES WILL BE MITIGATED BY PLANTING TREES.
3. TREE WELLS HAVE A MINIMUM SPACING OF 5' FROM THE TREE TRUNK.



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HERON VALLEY PHASE 1
DETAILED TREE PROTECTION PLAN
(SHEET 4 OF 4)

NOT FOR CONSTRUCTION

SHEET
C02.24



BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-358-3300 www.bgeenergy.com
TSP# Registration No. P-1040

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 750-933.

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 940-1102.

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 1104-1238.

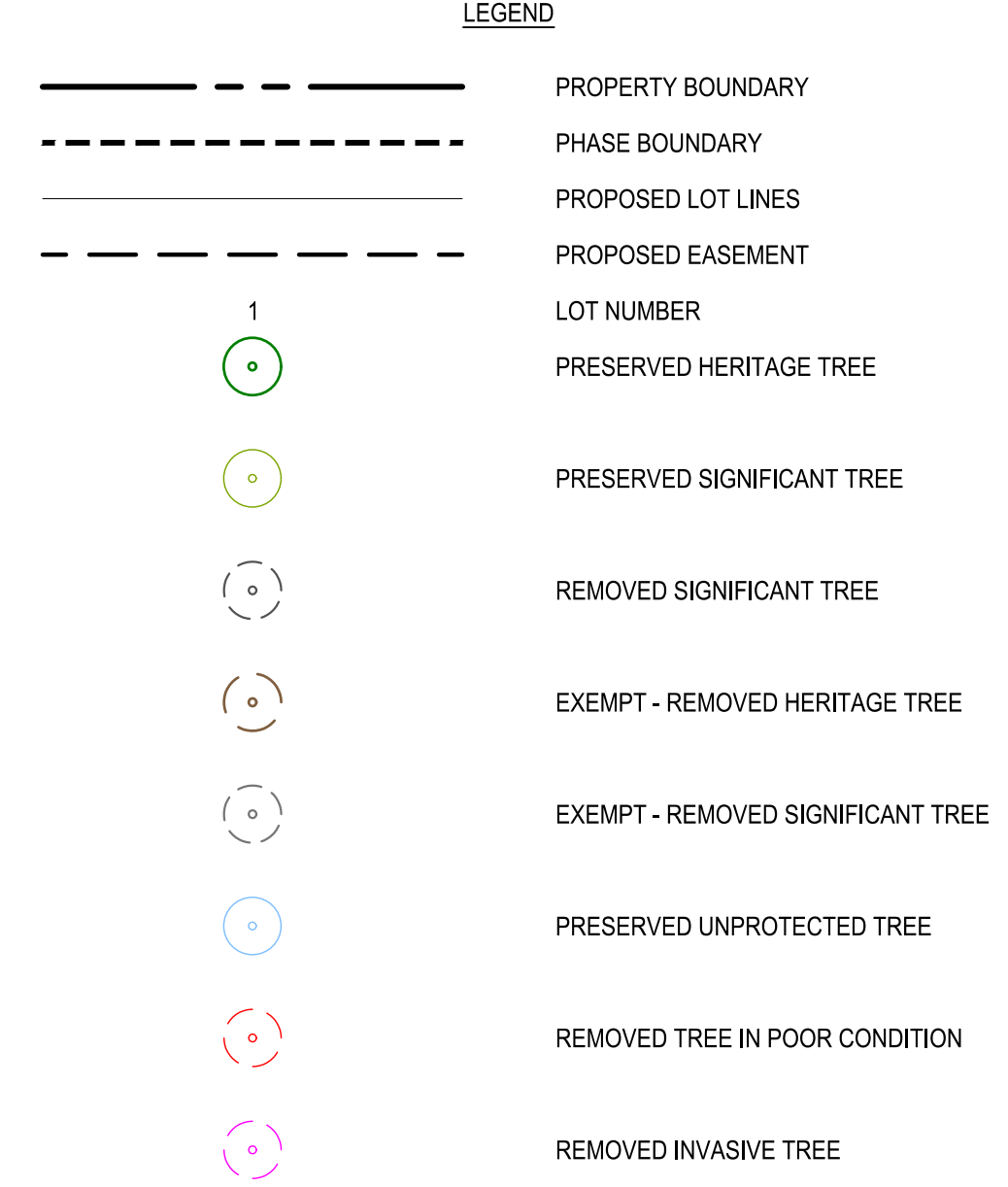
TREE TABLE with columns: POINT, DBH, SPECIES. Rows 1239-1316.

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 1317-1564.

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 1565-1812.

TREE TABLE with columns: POINT, DBH, SPECIES. Rows 1813-2060.

TOTAL INCHES BY CATEGORY table with categories like SIGNIFICANT-NON-EXEMPT TO REMAIN, HERITAGE-3:1 TO REMAIN, etc.



- GENERAL NOTES: 1. BEARING ORIENTATION IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM... 2. NO CONSTRUCTION (CLEARING, CUTTING, FILLING, TRENCHING, ETC.) SHALL TAKE PLACE WITHIN THE 1/2 ROOT PROTECTION ZONE (RPZ)... 3. PLEASE SEE TREE MAN ASSESSMENT FROM 06-17-2024 FOR FURTHER INFORMATION.
- MITIGATION NOTES: 1. HOME BUILDER WILL BE REQUIRED TO PLANT 3 - 2" (MIN) CALIPER TREES WITH A SHADE VALUE OF 875 PER LOT... 2. A TOTAL OF 200 MITIGATION INCHES WERE REQUIRED FROM THE SITE... 3. TREE WELLS HAVE A MINIMUM SPACING OF 5' FROM THE TREE TRUNK.

PLAT NUMBER 24-1180389

Project information including BGE INC. logo, address (7330 San Pedro, Suite 202, San Antonio, TX 78216), phone, fax, and registration info. Also includes 'HERON VALLEY PHASE 1' and 'TREE PROTECTION TABLES (SHEET 1 OF 2)' text.

NOT FOR CONSTRUCTION

G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\03_CADD\01_Shis\02.70 TREE PROTECTION PLAN.dwg Layout: TREE PROTECTION CALCULATIONS Plotted: 10/17/2024 8:54:46 AM By: Calderon

PLAT NUMBER
24-1180389

DATE	APR
DESCRIPTION	
REV	
DESIGNED BY:	JDC
REVIEWED BY:	OR
DRAWN BY:	JDC

TREE SURVEY METHOD PRESERVATION REQUIREMENTS AND CALCULATIONS			
	VALUE	UNIT	COMMENTS
Overall Preservation			
Total	8,399.50	in.	
(Non-exempt) Removed	3,764.00	in.	
Preserved	4,635.50	in.	55.19%
100 yr Floodplain			
Significant			
Total	-	in.	
Removed	-	in.	
Preserved	-	in.	80.00%
Required 80%			0.00% Mitigation
Heritage			
Total	-	in.	
Removed	-	in.	
Preserved	-	in.	100.00%
Required 100%			0.00% Mitigation
Environmentally Sensitive Areas			
Significant			
Total	-	in.	
Removed	-	in.	
Preserved	-	in.	80.00%
Required 80%			0.00% Mitigation
Heritage			
Total	-	in.	
Removed	-	in.	
Preserved	-	in.	100.00%
Required 100%			0.00% Mitigation
Outside of Floodplain & ESA			
Significant			
Total (Non-Exempt)	5,493.00	in.	
Removed (Non-Exempt)	3,764.00	in.	
Preserved (Non-Exempt)	1,729.00	in.	31.48%
Required 35%			3.52% Mitigation
Total (Exempt)	2,314.50	in.	
Removed (Exempt)	2,314.50	in.	
Preserved (Exempt)	-	in.	
Required (n/a)			0.00% Mitigation
Heritage			
Total	534.00	in.	
Removed	-	in.	
Preserved	534.00	in.	100.00%
Required 100%			0.00% Mitigation
Total (Exempt)	58.00	in.	
Removed (Exempt)	58.00	in.	
Preserved (Exempt)	-	in.	
Required (n/a)			0.00% Mitigation
PRESERVATION MITIGATION REQUIRED			
100 yr Floodplain - Protected Required Mitigation	-	in.	(removed)
100 yr Floodplain - Heritage Required Mitigation	-	in.	(removed)
<small>(All tree species of Ash, Hackberry, Huisache, Ashe Juniper and Mesquite will be mitigated at 1:1.)</small>			
	-	in.	(removed x 1)
<small>(All other heritage trees to be mitigated at 3:1)</small>			
	-	in.	(removed x 3)
Environmentally Sensitive Areas - Protected Required Mitigation	-	in.	(removed)
Environmentally Sensitive Areas - Heritage Required Mitigation	-	in.	(removed)
<small>(All tree species of Ash, Hackberry, Huisache, Ashe Juniper and Mesquite will be mitigated at 1:1.)</small>			
	-	in.	(removed x 1)
<small>(All other heritage trees to be mitigated at 3:1)</small>			
	-	in.	(removed x 3)
Outside of Floodplain - Protected Required Mitigation	194.00	in.	
Outside of Floodplain - Heritage Required Mitigation	-	in.	(removed)
<small>(All tree species of Ash, Hackberry, Huisache, Ashe Juniper and Mesquite will be mitigated at 1:1.)</small>			
	-	in.	(removed x 1)
<small>(All other heritage trees to be mitigated at 3:1)</small>			
	-	in.	(removed x 3)
Total - Protected Mitigation Required	194.00	in.	
Total - Heritage Mitigation Required	-	in.	
TOTAL MITIGATION REQUIRED	194.00	in.	
PRESERVATION MITIGATION PROVIDED			
Total Inches Planted	201.00	in.	
<small>TOTAL MITIGATION (IN.) FROM THE "TOTAL PLANTED TREES" TABLE</small>			
Total Inches to be Paid	-	in.	
	\$	-	(\$200 per inch)
POST CONSTRUCTION TREE CANOPY REQUIRED			
Total Area Outside of Floodplain	11.34	Ac.	
Number of Residential Lots	61	Lots	
Required Canopy (38%)	187,708.75	Sq. Ft.	
Preserved Canopy (ESA & Outside of Floodplain)	1,729.00	in.	
**Assumed M-L trees from Appendix E	90,628.30	Sq. Ft.	=(Dia. In / Radius) * Shade Value=(Dia.in/16.7)*8.75
Heritage Canopy (ESA & Outside of Floodplain)	534.00	in.	
**Assumed M-L trees from Appendix E	27,990.46	Sq. Ft.	=(Dia. In / Radius) * Shade Value=(Dia.in/16.7)*8.75
Required Canopy to be Planted	69,089.99	Sq. Ft.	
POST CONSTRUCTION TREE CANOPY MITIGATION PROVIDED			
Total Canopy Planted	175,218.75	Sq. Ft.	
<small>TOTAL MITIGATION (SQ. FT.) FROM THE "TOTAL PLANTED TREES" TABLE</small>			
Total inches to be paid	-	in.	
	\$	-	(\$200 per inch)
TOTAL MITIGATION	-	in.	
Total inches to be paid	\$	-	

LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED LOT LINES
	PROPOSED EASEMENT
1	LOT NUMBER
	PRESERVED HERITAGE TREE
	PRESERVED SIGNIFICANT TREE
	REMOVED SIGNIFICANT TREE
	EXEMPT - REMOVED HERITAGE TREE
	EXEMPT - REMOVED SIGNIFICANT TREE
	PRESERVED UNPROTECTED TREE
	REMOVED TREE IN POOR CONDITION
	REMOVED INVASIVE TREE

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 - PLEASE SEE TREE MAN ASSESSMENT FROM 06-17-2024 FOR FURTHER INFORMATION.
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 - TREE WELLS HAVE A MINIMUM SPACING OF 5' FROM THE TREE TRUNK.

TOTAL PLANTED TREES										
Description	Total Number of Trees	Diameter (in.)	Required Diameter (in.)	Extra Diameter (in.)	Shade Value	(Sq. Ft.)	Energy Credit	Total Planted Diameter (in.)	TOTAL MITIGATION (in.)	TOTAL MITIGATION (Sq. Ft.)
Required 2 trees per lot (NON-E.C.)	122	2.0	1.5	0.5		875.0	-	244	61	96,075.00
Number of extra trees on lots (E.C.)	61	2.0	-	2.0		875.0	1.5	122	122	72,056.25
Number of extra trees	9	2.0	-	2.0		875.0	-	18	18	7,087.50
TOTAL	192							384	201	175,218.75

HERON VALLEY PHASE 1
 TREE PROTECTION CALCULATIONS

NOT FOR CONSTRUCTION



BGE, INC.
 7330 San Pedro, Suite 202
 San Antonio, TX 78216
 TEL: 214-361-3600 www.bgeenergy.com
 TREE Registration No. F-1046

1.1 ELEVATION (ROOT PROTECTION ZONE)
1.2 LEVEL I & FENCE PROTECTION
1.3 LEVEL II & FENCE PROTECTION
1.4 BRANCH PRUNING DETAIL
1.5 BRANCH CLEARANCE DETAIL
1.6 NEW TREE PLANTING DETAIL
1.7 TREE INVENTORY SUMMARY

TREE PROTECTION TABLE			
TREE SHEET #	TREE/CALIPHS POSITION OR LOCATION FROM ANCHOR POINT	TREE SIZE / NUMBER	REMARKS
SEE TREE PRESERVATION PLAN SHEETS			

GENERAL NOTES:
1. ALL TREES WITH A DIAMETER GREATER THAN 6 INCHES MEASURED AT THE THINNEST POINT SHALL BE MARKED AND BOUND BY A FENCE...
2. NO NEW PROTECTION SHALL BE INSTALLED...
3. ACCESS TO FENCED AREAS...
4. GRADING...
5. TREE REMOVAL...
6. TREE PROTECTION FENCES...
7. BRANCH PRUNING...
8. BRANCH CLEARANCE...
9. NEW TREE PLANTING...

2.1 TREE GRATE/FRAME & PAVERS
2.2 SECTION: PAVES & TREE GRATE
2.3 DETAIL: BOLT/CONC. CONNECTION
3.1 ELEVATED WALKWAY
3.2 ELEVATED WALKWAY CONCRETE DUCKING
3.3 ELEVATED WALKWAY STEEL DECKING
3.4 ELEVATED WALKWAY SECTION

ADDITIONAL GENERAL NOTES:
1. LOCATE AND MARK...
2. THE CONTRACTOR SHALL...
3. BRANCH PRUNING...
4. BRANCH CLEARANCE...
5. TREE REMOVAL...
6. TREE PROTECTION FENCES...
7. BRANCH PRUNING...
8. BRANCH CLEARANCE...
9. NEW TREE PLANTING...

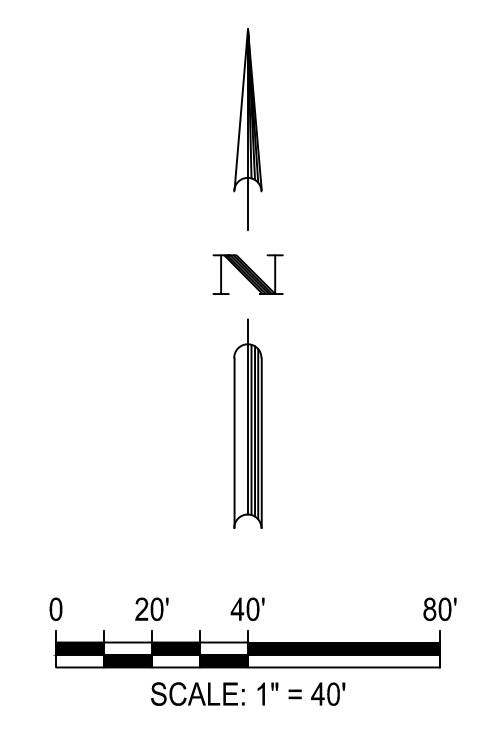
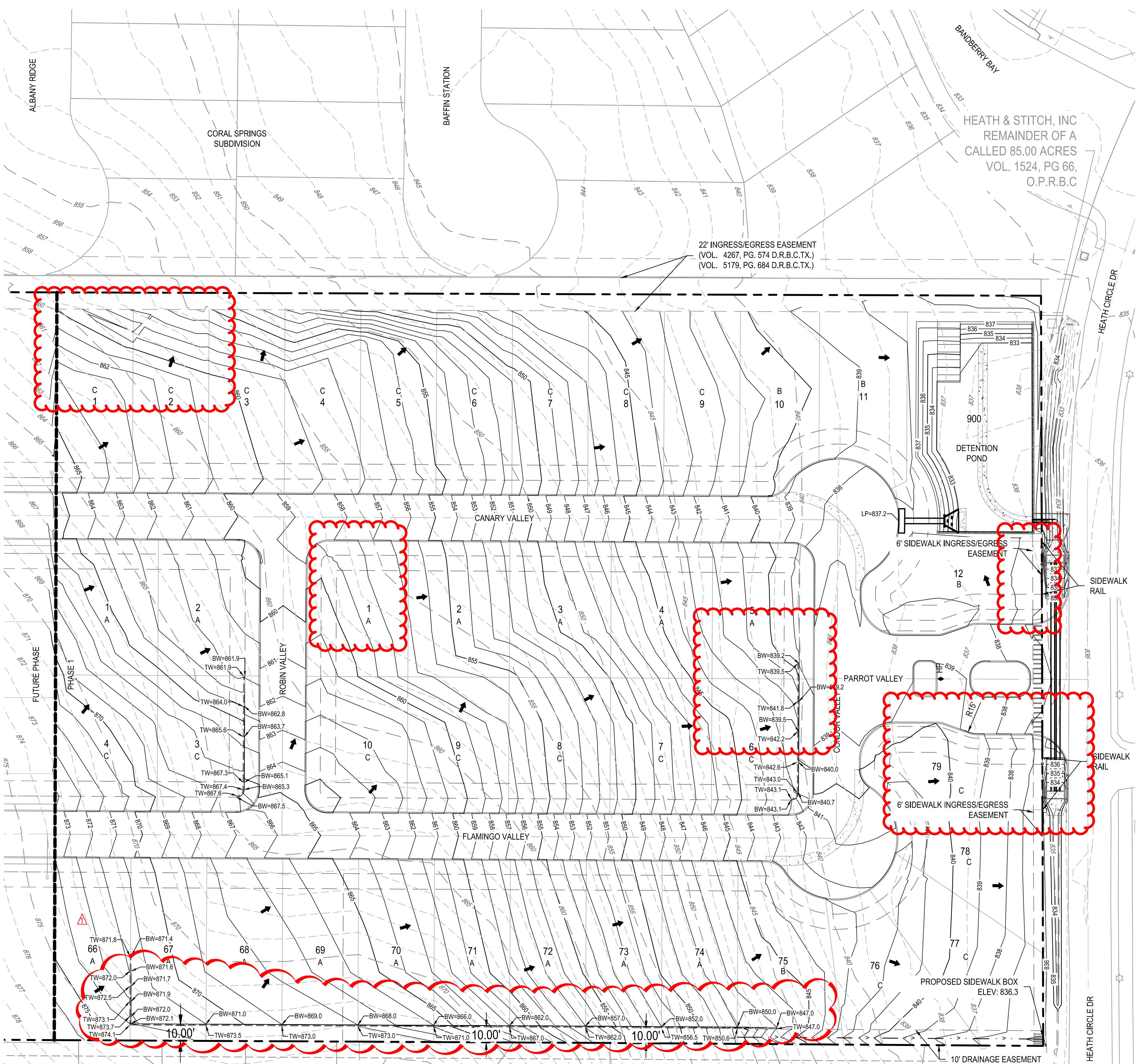
2.1 EXPOSED ROOT PROTECTION DETAIL
2.2 TREE GRATE DETAIL
2.3 TREE WELL SECTION
2.4 SECTION: PAVES & ASPHALT
2.5 SECTION: TREE GRATE FRAME
2.6 TREE GRATE PLAN VIEW

GENERAL NOTES:
1. EXPOSED ROOT PROTECTION...
2. TREE GRATE DETAIL...
3. TREE WELL SECTION...
4. SECTION: PAVES & ASPHALT...
5. SECTION: TREE GRATE FRAME...
6. TREE GRATE PLAN VIEW...

4.1 TREE ABATEMENT DETAIL B
4.2 PLAN VIEW B
4.3 SEGMENTAL GRAVITY WALL
4.4 TREE ABATEMENT DETAIL C
4.5 TREE ABATEMENT DETAIL D
4.6 PLAN VIEW C
4.7 LIMESTONE BOULDER GRAVITY WALL
4.8 PLAN VIEW D

GENERAL NOTES:
1. TREE ABATEMENT...
2. SEGMENTAL GRAVITY WALL...
3. LIMESTONE BOULDER GRAVITY WALL...

DATE	APR
DESCRIPTION	
REV	
DESIGNED BY:	JDC
REVIEWED BY:	OR
DRAWN BY:	JDC

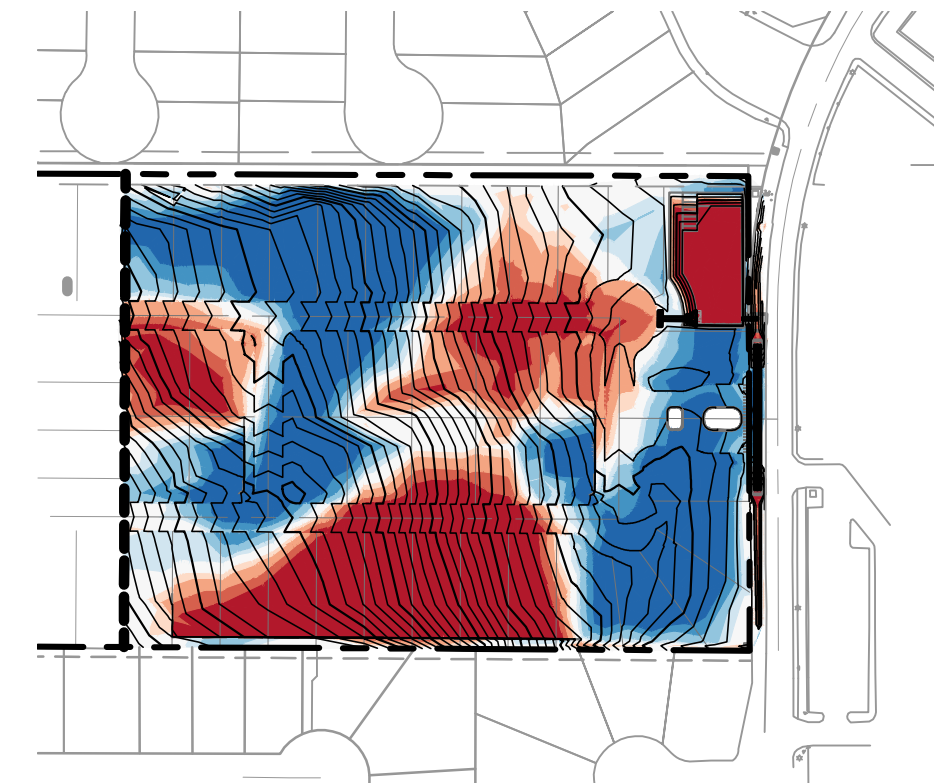


LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED LOT LINES
	EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED STORM LINE WITH MANHOLE
	PROPOSED CURB INLET
	TYPICAL RAMP (SEE SHEET C08.24)
	LOW POINT/HIGH POINT
	LOT NUMBER AND GRADING TYPE
	DIRECTION OF FLOW
	RETAINING WALL
	PROPOSED SWALE FLOWLINE

CUT FILL TABLE

Number	Minimum Elevation	Maximum Elevation	Color
1	-8.000	-1.500	Red
2	-1.500	-1.000	Orange
3	-1.000	-0.500	Light Orange
4	-0.500	-0.250	Yellow
5	-0.250	0.250	Light Green
6	0.250	0.500	Green
7	0.500	1.000	Dark Green
8	1.000	1.500	Blue
9	1.500	7.000	Dark Blue



FINISHED FLOOR ELEVATIONS

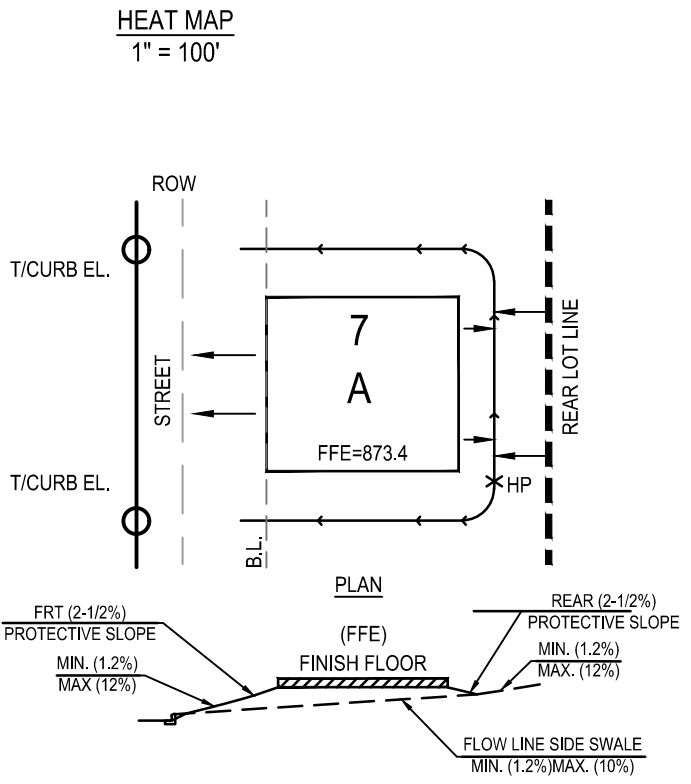
THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND OR FINISHED FLOOR ELEVATION WHICH EVER IS HIGHER, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORM WATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO THE STORM WATER CONVEYANCE STRUCTURES MUST HAVE FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE STRUCTURE.

LOT FILL NOTES:

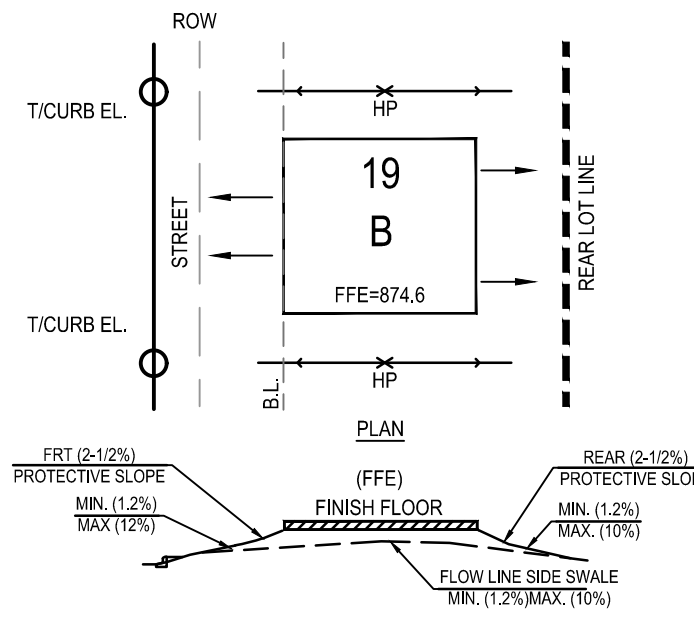
- ALL LOTS WITH FILL SHALL BE COMPACTED IN ACCORDANCE WITH THE 79G PROCEDURE THAT MEETS THE REQUIREMENTS OF THE FIA DATA SHEET, DOCUMENTATION AND THE EVIDENCE OF COMPACTED SHALL BE FURNISHED TO THE ENGINEER & OWNER.

GENERAL NOTES:

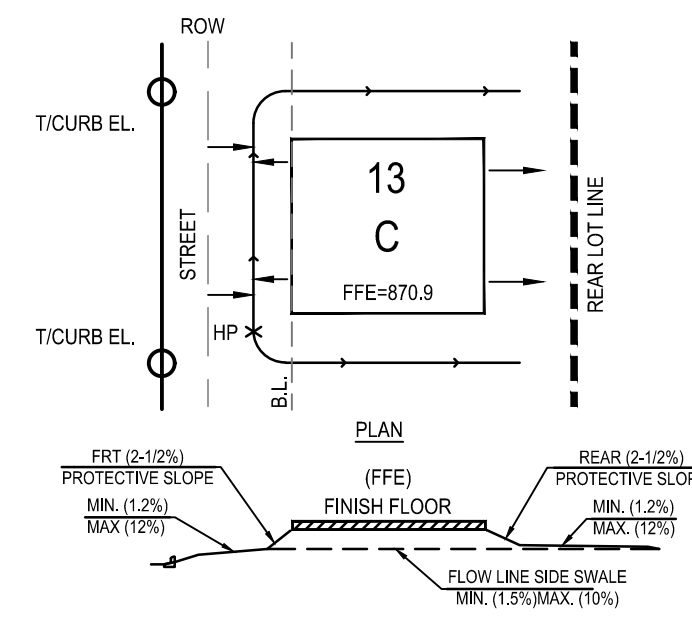
- HOME BUILDER SHALL REFER TO THE APPROVED SUBDIVISION PLAT TO CONFIRM ALL BUILDING SETBACKS PRIOR TO ANY FOUNDATION WORK.
- AS SOON AS PRACTICAL, HOME BUILDER SHALL ESTABLISH VEGETATION (HYDROMULCH, SEEDING, SOODING, ETC.) TO PREVENT EROSION FROM OCCURRING.
- CONTRACTOR SHALL CONTACT ENGINEER REGARDING 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 OF STREET RIGHT OF WAY ACCORDING TO THE MASTER DRAINAGE PLAN FOR THE PROJECT. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW PONDING OF WATER.
- 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.
- EARTHEN GRADING SLOPES SHALL BE NO GREATER THAN 3:1.
- SLOPES GREATER THAN 3:1 ARE ASSUMED TO BE MILLED ROCK. IF SITE CONDITIONS VARY FROM THIS, NOTIFY ENGINEER IMMEDIATELY.



TYPE 'A'
ALL DRAINAGE TO STREET



TYPE 'B'
DRAINAGE TO BOTH STREET AND REAR LOT LINE



TYPE 'C'
DRAINAGE TO REAR LOT LINE

G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\103_CADD\01 - Heron Valley\01_Unit\103_CADD\01 - Overall Grading Plan.dwg Layout: OVERALL GRADING PLAN Plotted: 9/19/2025 4:30:01 PM By: Ordriguez

WALL LOCATION AND GRADING CHANGE

HERON VALLEY PHASE 1
OVERALL GRADING PLAN

STATE OF TEXAS
DAVID R. BABINEAUX
127935
LICENSED PROFESSIONAL ENGINEER
SHEET
C03.00

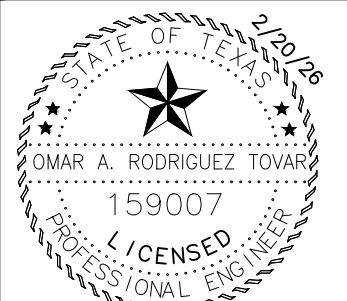
DATE	DESCRIPTION
APR	

DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC



BGE INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-368-3800 www.bgeenergy.com
EPA Registration No. P-1040

HERON VALLEY PHASE 1
DETENTION POND PLAN

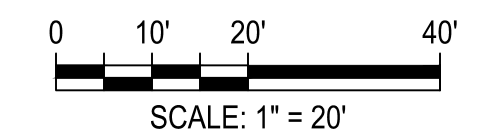


STRM QVD (25 YEAR) TABLE

PIPE	EXISTING Q(CFS)	PROPOSED Q (CFS)	V (F/S)	D (FT)
POND OUTFALL	25.17	24.05	10	1.75

STRM QVD (100 YEAR) TABLE

PIPE	EXISTING Q(CFS)	PROPOSED Q (CFS)	V (F/S)	D (FT)
POND OUTFALL	31.10	28.02	11.65	1.75



LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EASEMENT
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED CURB INLET
- PROPOSED WASTEWATER LINE
- PROPOSED WATER LINE
- PROPOSED ELECTRIC
- PROPOSED GAS LINE
- PROPOSED WASTEWATER SERVICES
- PROPOSED WATER SERVICES
- DIRECTION OF FLOW
- PROPOSED SWALE FLOWLINE
- JURISDICTIONAL WATERS

PROFILE LEGEND

- PROPOSED STORM PIPE
- WATER SURFACE ELEVATION
- PROPOSED GRADE
- EXISTING GRADE

NOTE: UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS, AND PRIOR TO THE RELEASE OF THE CERTIFICATE OF ACCEPTANCE OR OCCUPANCY BY THE PERMIT CENTER, THE DESIGN ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DETENTION FACILITY, FILTRATION FACILITIES AND/OR WATER QUALITY FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.

NOTES:

- 1) CONTRACTOR TO CONNECT PROPOSED STORM SEWER OUTFALL TO POND.
- 2) EARTHEN DETENTION FACILITY SHALL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT (85%) OF THE DISTURBED SURFACE AREA MUST BE ESTABLISHED VEGETATION PRIOR TO FINAL PHASE ACCEPTANCE.
- 3) VEGETATION SHALL BE DROUGHT RESISTANT, LOW GROWTH, NATIVE SPECIES GRASSES WHICH WILL ALLOW UNOBSTRUCTED PASSAGE OF FLOODWATERS IN ACCORDANCE WITH CITY OF SAN ANTONIO STORM WATER DESIGN CRITERIA MANUAL.
- 4) CONTRACTOR SHALL PHASE CONSTRUCTION AND/OR PROVIDE NECESSARY BMPs TO MITIGATE INTERIM CONDITIONS RUNOFF DURING CONSTRUCTION DUE TO CLEARING, GRADING, SUBGRADE PREPARATION, PAVING, BUILDINGS, ETC., AND TO PREVENT ADVERSE IMPACTS TO OTHER PROPERTY, STRUCTURES, AND INFRASTRUCTURE DURING CONSTRUCTION.
- 5) DETENTION POND EXCAVATION AND/OR EMBANKMENT NECESSARY FOR PROVIDING STORAGE MUST BE SUBSTANTIALLY COMPLETE PRIOR TO CITY INSPECTION OF STREET SUBGRADE, CURB, FLEX BASE, AND PAVEMENT WITHIN THE WATERSHED DRAINING TO THE DETENTION POND.
- 6) DETENTION POND WALLS DESIGN BY OTHERS. PLEASE REFERENCE ROSCH STRUCTURAL PLANS. CONTRACTOR TO PERMIT STRUCTURAL WALLS AND COORDINATE WITH STRUCTURAL ENGINEER FOR INSPECTIONS & TESTS.

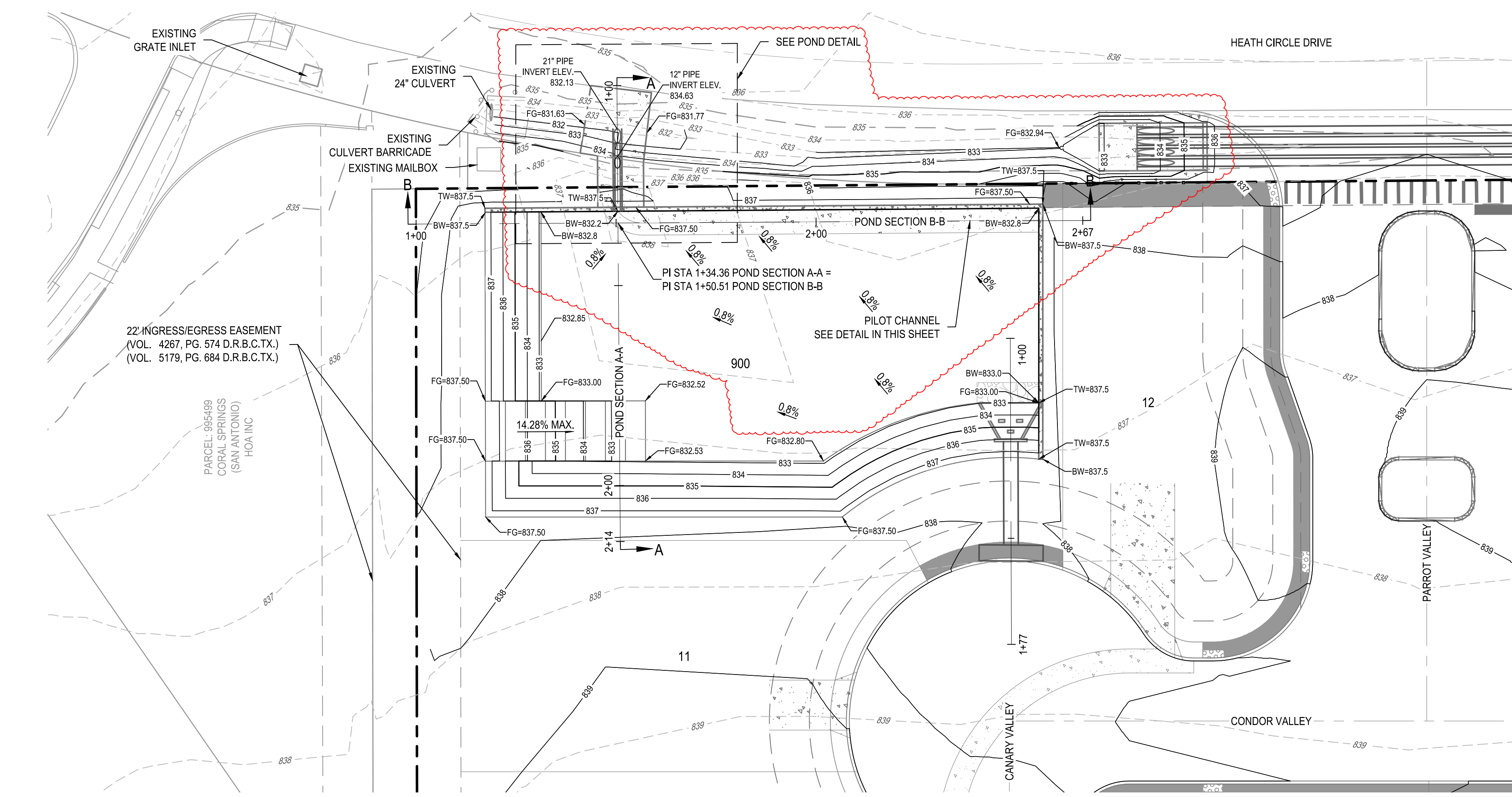
POND TABLE

POND ELEVATION (ft)	SURFACE AREA (sq. ft.)	POND DEPTH (ft)	VOLUME (cu. ft.)	CUMULATIVE VOLUME (cu. ft.)
832.50	2,237.75	N/A	N/A	0.00
833.00	7,026.70	0.500	2,204.97	2,204.97
833.50	7,343.13	0.500	3,592.17	5,797.13
834.00	7,665.40	0.500	3,751.84	9,548.98
834.50	7,993.53	0.500	3,914.45	13,463.42
835.00	8,327.50	0.500	4,079.97	17,543.39
835.50	8,667.31	0.500	4,248.42	21,791.81
836.00	9,012.97	0.500	4,419.79	26,211.60
836.50	9,364.48	0.500	4,594.08	30,805.68
837.00	9,721.83	0.500	4,771.30	35,576.98
837.50	10,085.03	0.500	4,951.44	40,528.42

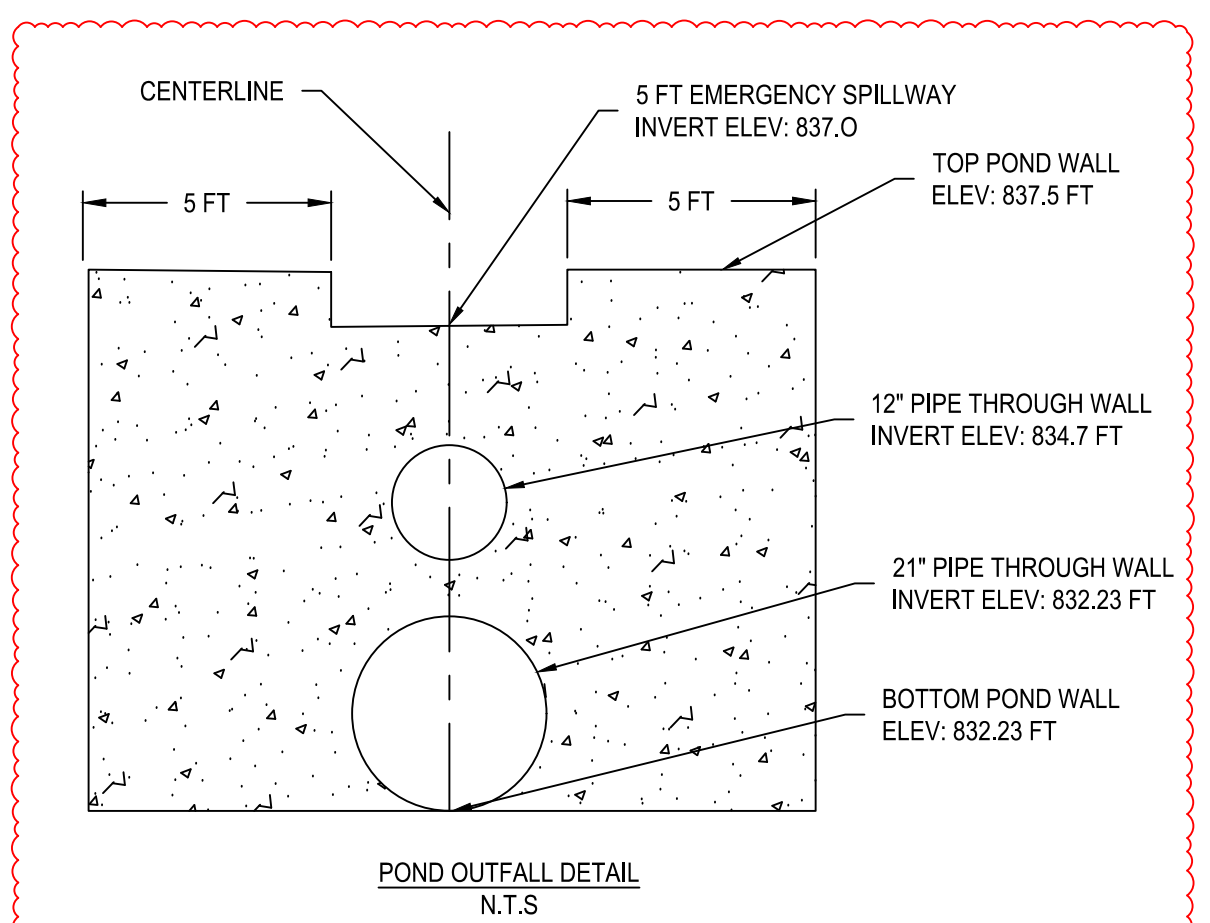
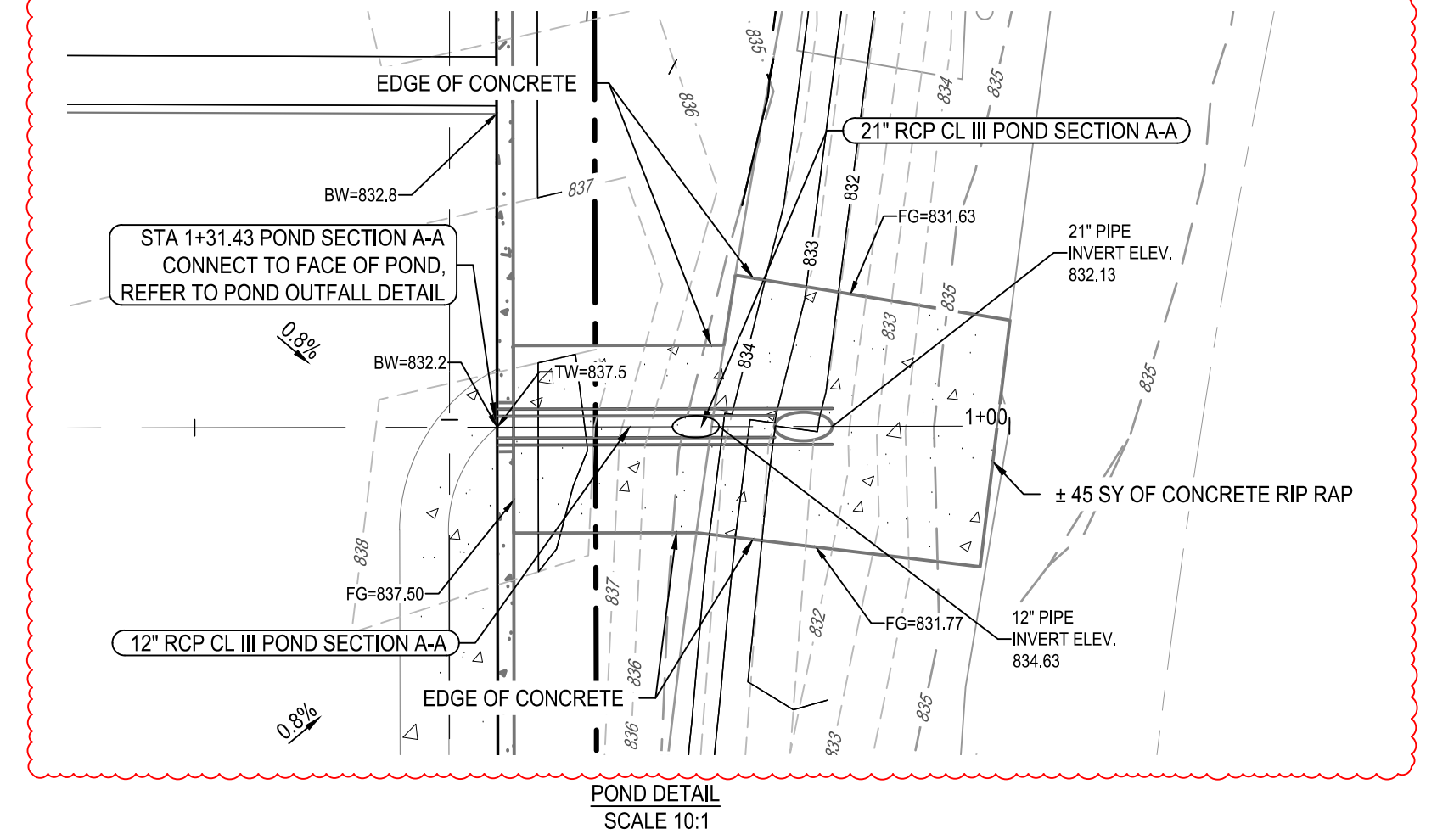
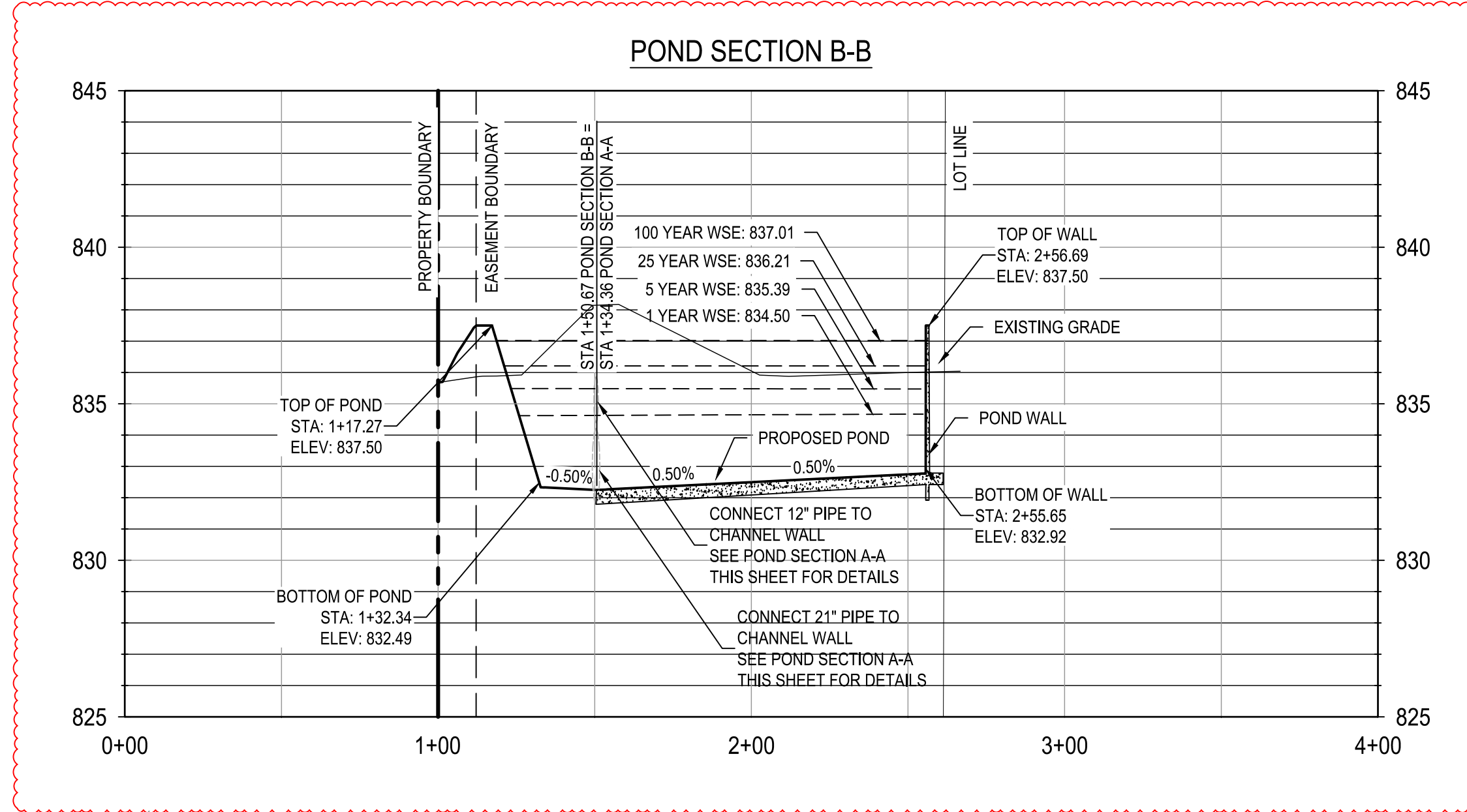
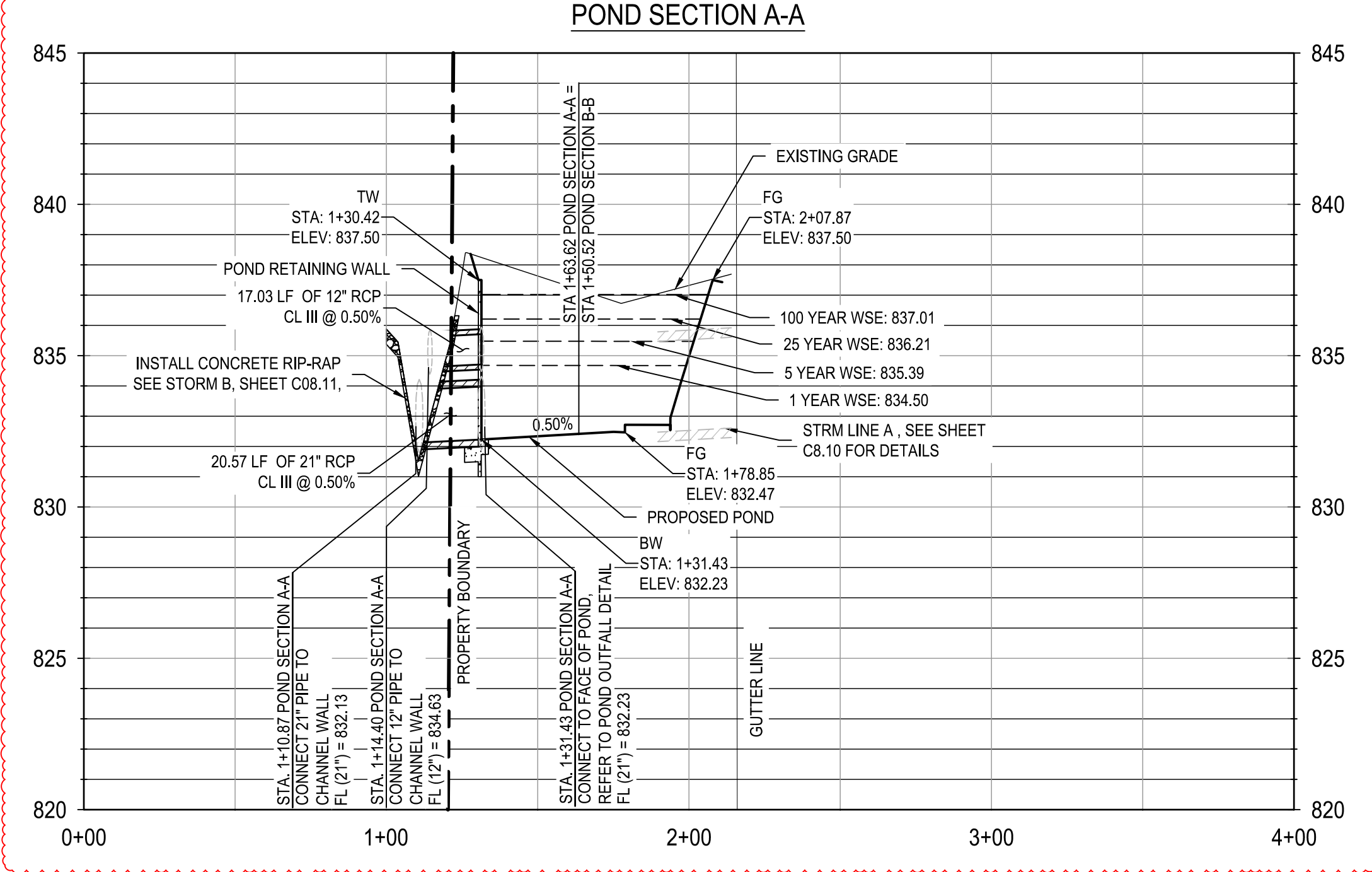
POND HEADWATER ELEVATIONS

ULTIMATE STORM EVENT	ELEV.
1 YEAR	834.50
5 YEAR	835.39
25 YEAR	836.21
100 YEAR	837.01

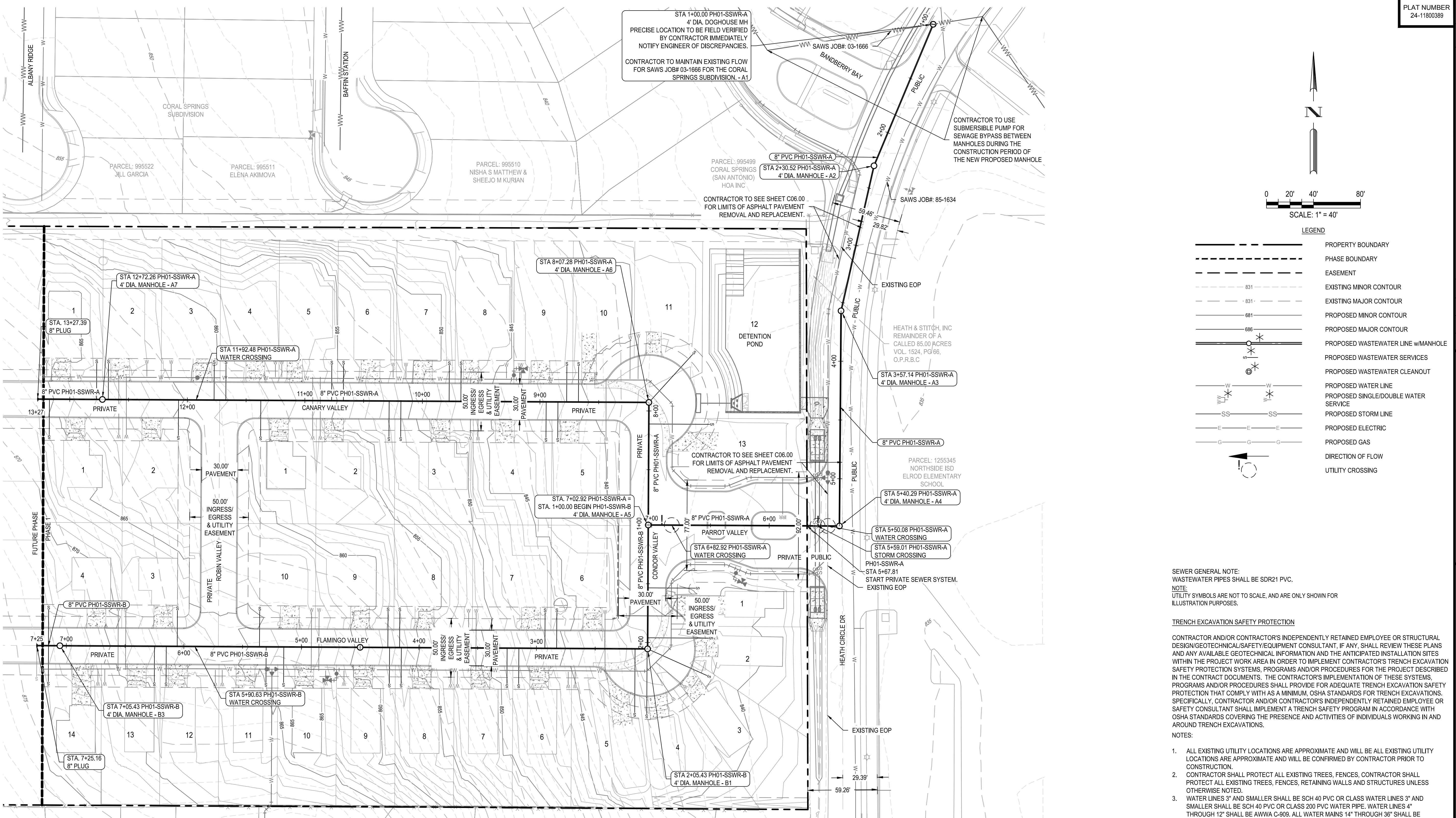
Approved by COSA Public Works
By:
Date: 3/10/2026



CONSTRUCTION DOCUMENTS FOR THE PROJECT WERE PREVIOUSLY SEALED BY DAVID R. BABINEAUX, P.E. #127935 DATED 6/24/2025. COPIES OF WHICH ARE ON FILE AT THE OFFICES OF BGE INC. I. OMAR A RODRIGUEZ TOVAR, P.E. #159007 DATED 02/20/2026 AM SEALING FOR REVISIONS LABELED AS ONE AND CLOUDED HEREON.



G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\103_CADD\01 - Heron Valley\01_Unit\103_CADD\01 - DETENTION POND PLAN.dwg Plotted: 2/20/2026 4:07:47 PM By: Orodriguez



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED WASTEWATER LINE w/MANHOLE
	PROPOSED WASTEWATER CLEANOUT
	PROPOSED WATER LINE
	PROPOSED SINGLE/DOUBLE WATER SERVICE
	PROPOSED STORM LINE
	PROPOSED ELECTRIC
	PROPOSED GAS
	DIRECTION OF FLOW
	UTILITY CROSSING

SEWER GENERAL NOTE:
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NOTE:
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REVIEWED BY THE
SAN ANTONIO WATER SYSTEM

THIS DOES NOT RELIEVE THE DESIGNING ENGINEER,
CONTRACTOR OR SUB-CONTRACTOR OF THE
RESPONSIBILITY FOR COMPLYING WITH ALL OF THE
SAN ANTONIO WATER SYSTEM AND T.C.E.Q. RULES
AND REGULATIONS

BY: *Ante S. Rinal*
DATE: 11/15/2024

MIDDLE COLLECTION AND TREATMENT AREA (MCTA)

DEVELOPER NAME	HYG HOMES
DEVELOPER ADDRESS	84 NE LOOP 410, SUITE 242
CITY	SAN ANTONIO
STATE	TX
ZIP	78216
PHONE (210)	966-2025
FAX	N/A
SAWS BLOCK MAP #	N/A
TOTAL EDUS	40
TOTAL ACREAGE	7.361
TOTAL LINEAR FOOTAGE OF PIPE	1,341.74' (PVC)
PLAT NO.	24-11800389
NUMBER OF LOTS	40
SAWS JOB NO.	24-1625

PRIVATE STREET DESIGNATION:

LOT 999, BLOCK 9, IS A PRIVATE STREET AND IS DESIGNATED AS AN IRREVOCABLE UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE, CABLE TELEVISION, DRAINAGE, PEDESTRIAN, PUBLIC WATER, WASTEWATER, AND RECYCLED WATER MAINS.

HERON VALLEY PHASE 1
OVERALL WASTEWATER PLAN

NOT FOR CONSTRUCTION

JAVIER CASTELLO
122170
11/14/2024
SHEET
C05.00

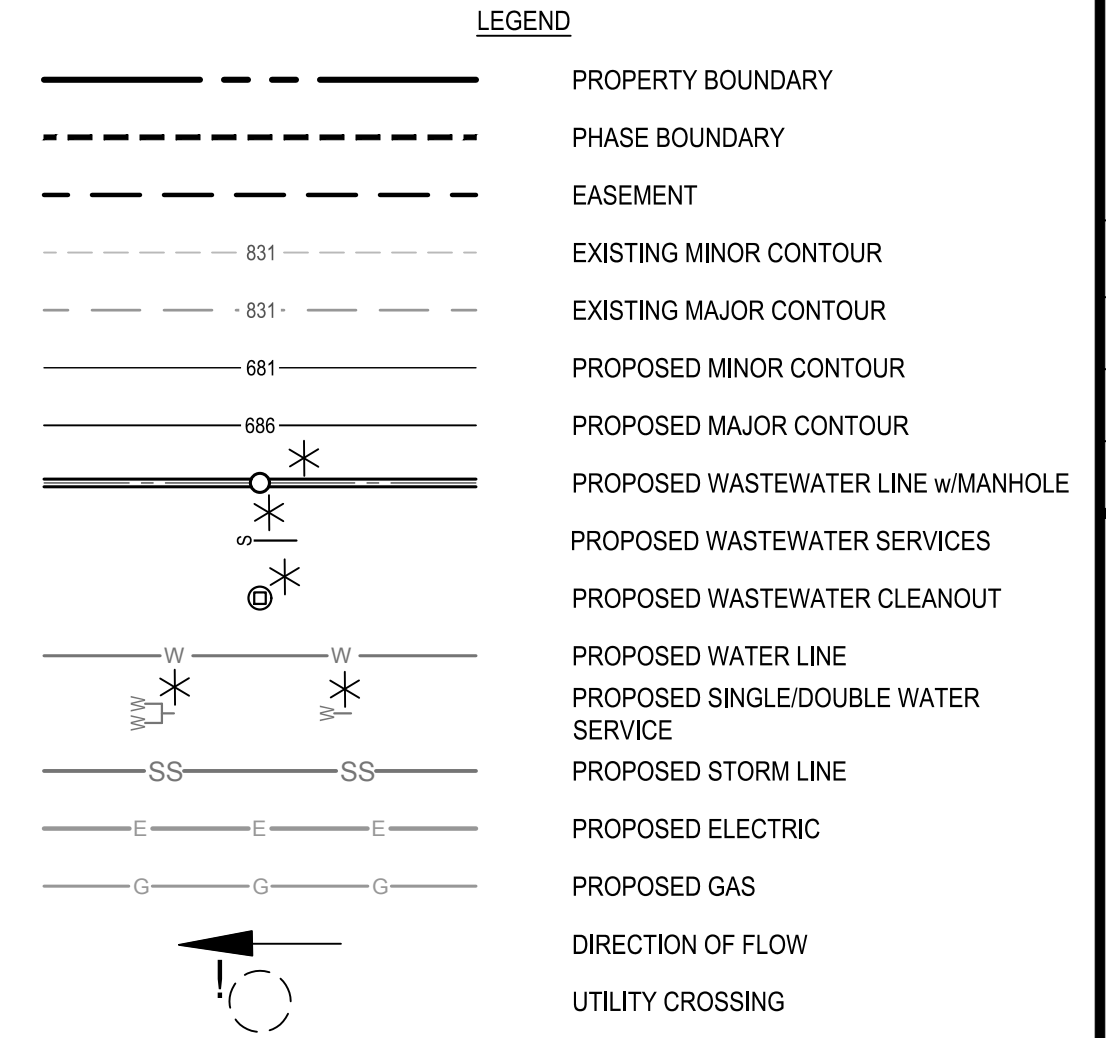
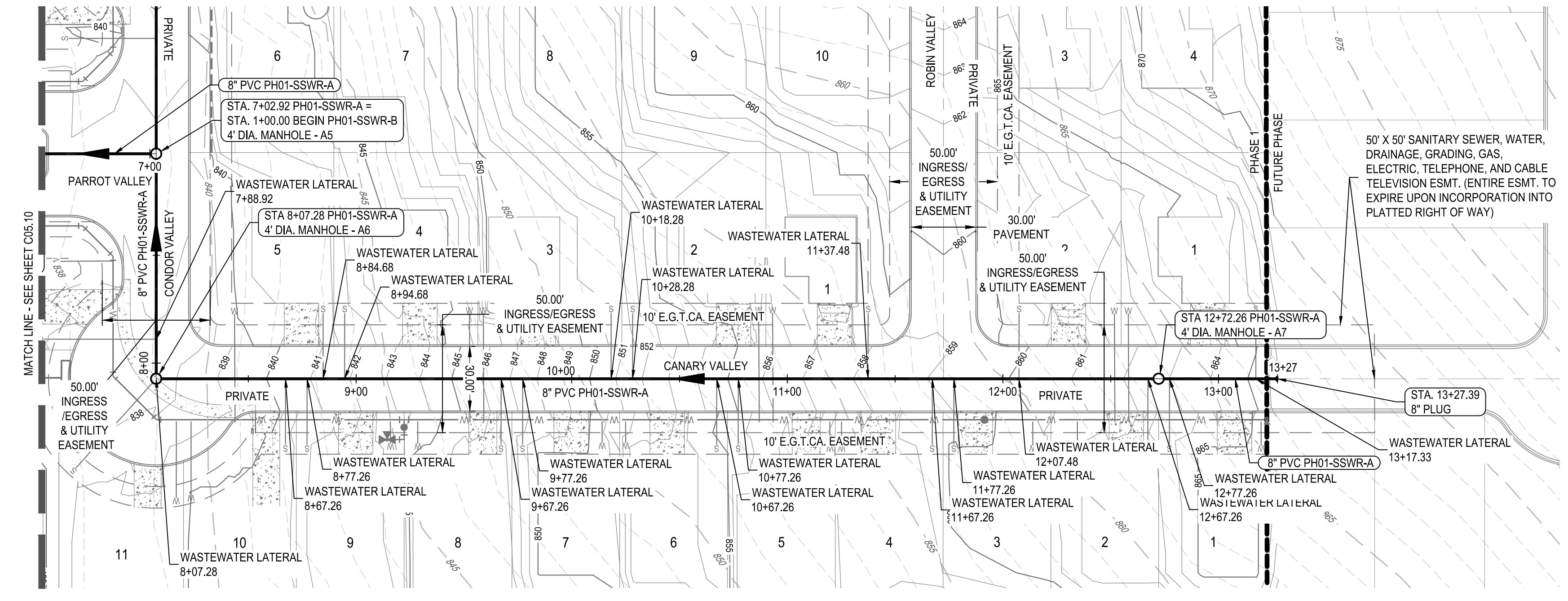
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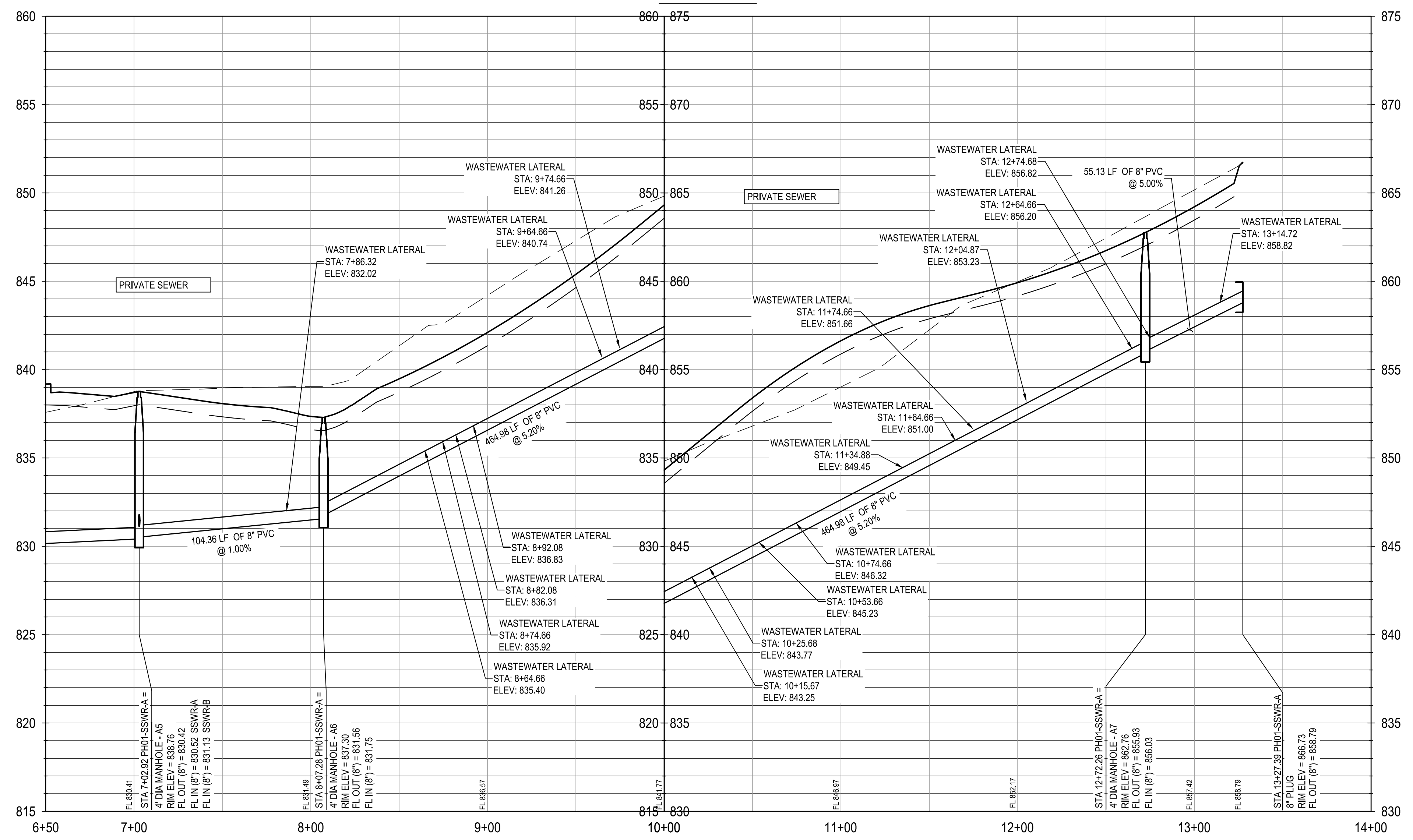
BY: *Antonio D. Rivas*
DATE: 11/15/2024

MIDDLE COLLECTION AND TREATMENT AREA (MCTA)			
DEVELOPER NAME:	HYG HOMES		
DEVELOPER ADDRESS:	84 NE LOOP 410, SUITE 242		
CITY:	SAN ANTONIO	STATE:	TX
ZIP:	78216		
PHONE:	(210) 886-2025	FAX:	N/A
SAWS BLOCK MAP #:	N/A	TOTAL EDUS:	40
TOTAL ACRES:	2.361		
TOTAL LINEAR FOOTAGE OF PIPE:	11,142.00	PLAT NO.:	24-11800389
NUMBER OF LOTS:	40	SAWS JOB NO.:	24-1625

PLAT NUMBER
24-11800389



PH01-SSWR-A



SEWER GENERAL NOTE:
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G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01 - Unit 103_CADD\01 - Shis\05.10 WASTEWATER LINE A PLAN & PROFILE.dwg Layout: 11/14/2024 3:56:30 PM By: Calderon

DATE	APR
DESCRIPTION	
DESIGNED BY:	JDC
REVIEWED BY:	OR
DRAWN BY:	JDC

BGE

BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 210-360-9999
www.bgeinc.com
TXE Registration No. P-1040

HERON VALLEY PHASE 1
WASTEWATER LINE A PLAN & PROFILE
STA 6+50 TO END

NOT FOR CONSTRUCTION

JAVIER CASTELLO
122170
11/14/2024

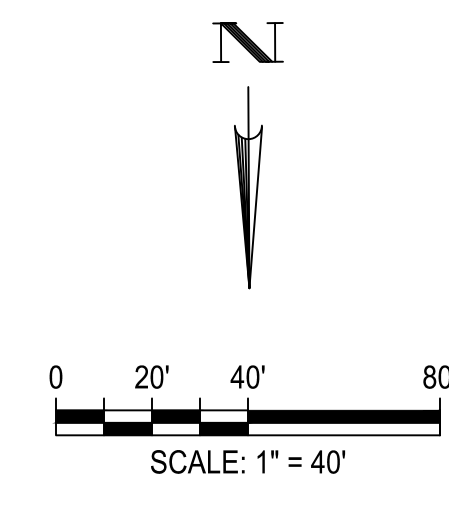
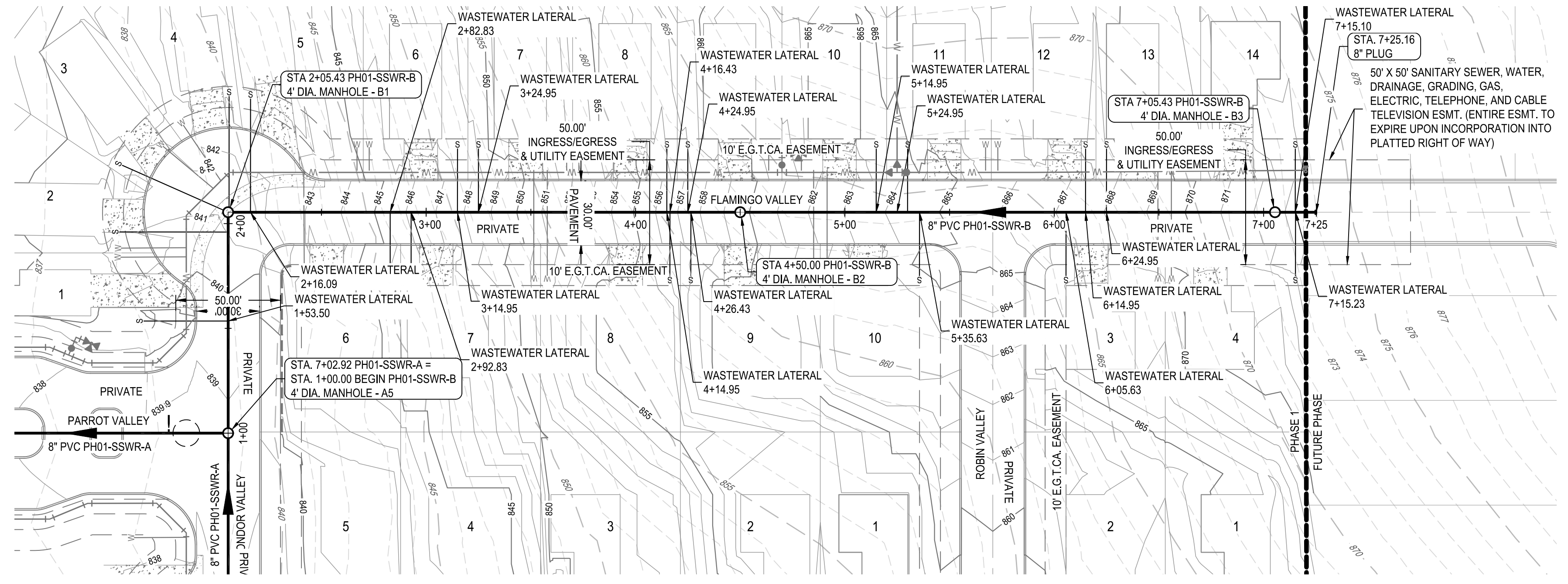
SHEET
C05.11

G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01 - Unit 103_CADD\01 - Shts\C05.12 WASTEWATER LINE B PLAN & PROFILE.dwg Layout: WASTEWATER LINE B PLAN & PROFILE - 11/14/2024 3:56:33 PM By: Calderon

REVIEWED BY THE
SAN ANTONIO WATER SYSTEM
THIS DOES NOT RELIEVE THE DESIGNING ENGINEER,
CONTRACTOR OR SUB-CONTRACTOR OF THE
RESPONSIBILITY FOR COMPLYING WITH ALL OF THE
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BY: *Ante D. Rinal*
DATE: 11/15/2024

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PHONE:	(210) 886-2025	FAX:	N/A
SAWS BLOCK MAP #:	N/A	TOTAL EDUS:	40
TOTAL ACRES:	2.361		
TOTAL LINEAR FOOTAGE OF PIPE:	1184.12	PLAT NO.:	24-11800389
NUMBER OF LOTS:	40	SAWS JOB NO.:	24-1625

PLAT NUMBER
24-11800389



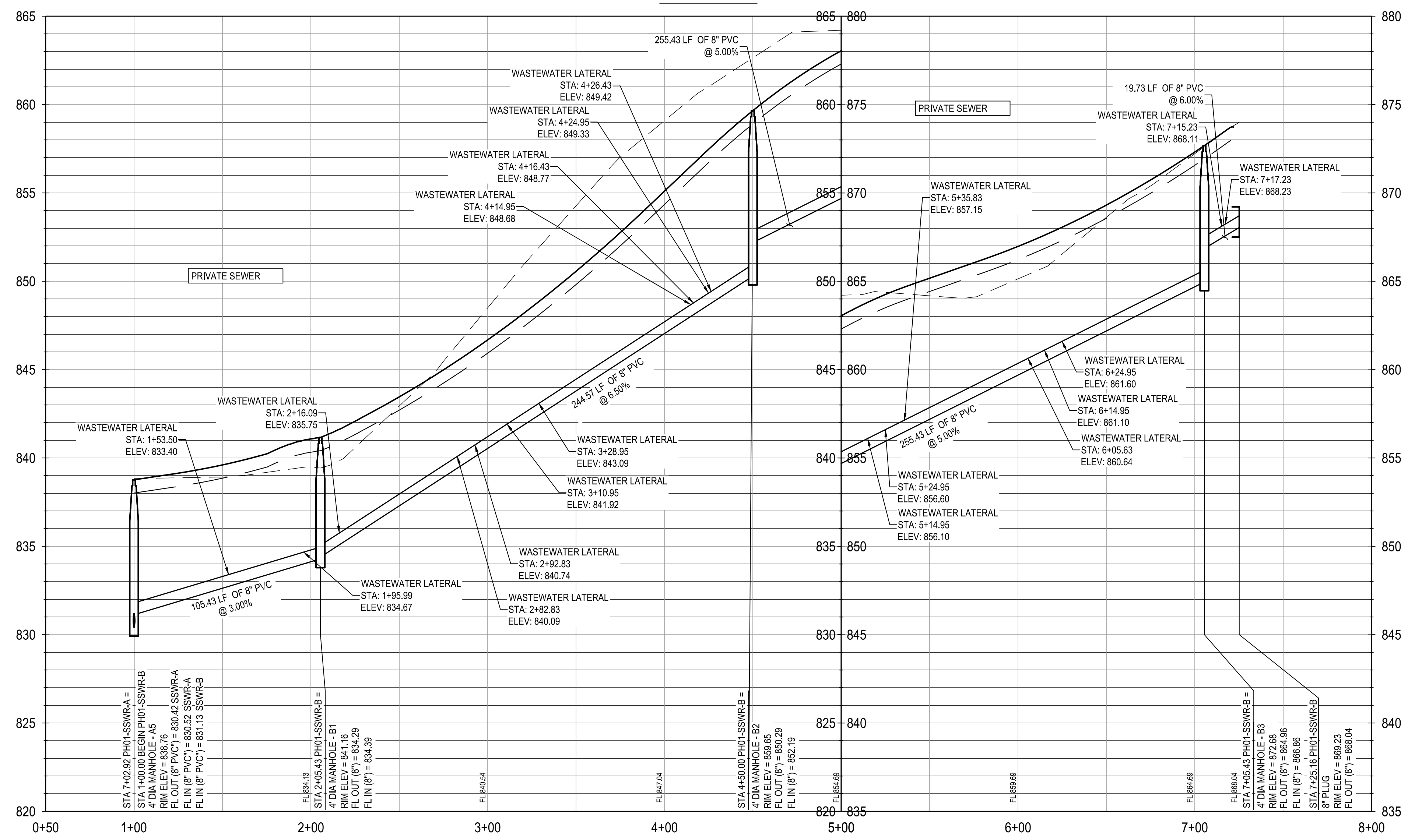
LEGEND

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	PROPOSED SINGLE/DOUBLE WATER SERVICE
	PROPOSED STORM LINE
	PROPOSED ELECTRIC
	PROPOSED GAS
	DIRECTION OF FLOW
	UTILITY CROSSING

PROFILE LEGEND

	PROPOSED WASTEWATER MAIN
	EXISTING SURFACE
	PROPOSED SURFACE
	PROPOSED SUBGRADE

PH01-SSWR-B



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DATE	APR
DESCRIPTION	
DESIGNED BY:	JDC
REVIEWED BY:	OR
DRAWN BY:	JDC

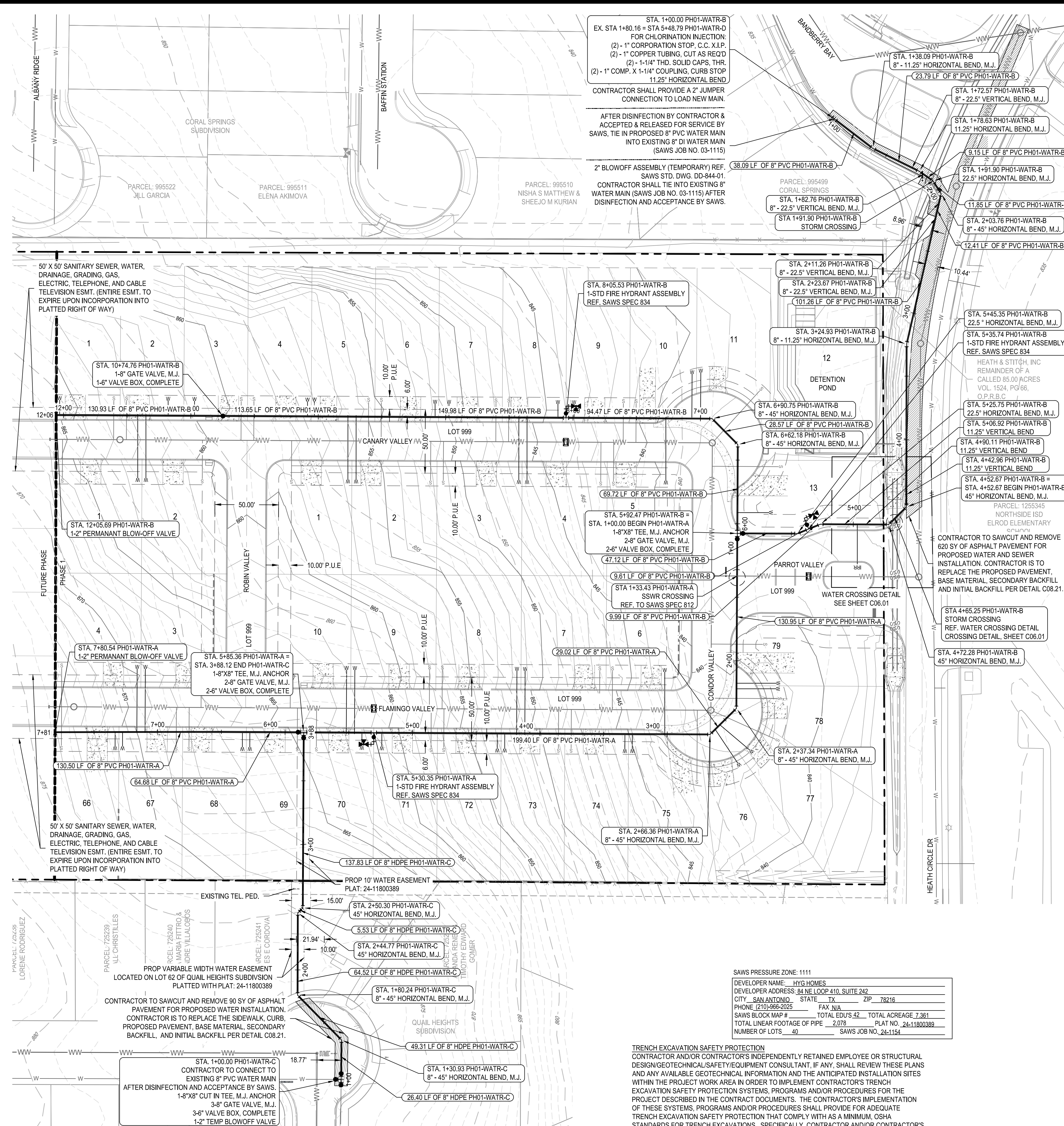
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 210-330-9300 www.bgeenergy.com
TXPE Registration No. F-1049

HERON VALLEY PHASE 1

WASTEWATER LINE B PLAN & PROFILE

NOT FOR CONSTRUCTION

11/14/2024
SHEET
C05.12



STA. 1+00.00 PH01-WATR-B EX. STA 1+80.16 = STA 5+48.79 PH01-WATR-D FOR CHLORINATION INJECTION: (2) - 1" COPPER STOP, C.C. X.I.P. (2) - 1" COPPER TUBING, CUT AS REQ'D (2) - 1-1/4" THD. SOLID CAPS, THR. (2) - 1" COMP. X 1-1/4" COUPLING, CURB STOP 11.25' HORIZONTAL BEND CONTRACTOR SHALL PROVIDE A 2" JUMPER CONNECTION TO LOAD NEW MAIN. AFTER DISINFECTION BY CONTRACTOR & ACCEPTED & RELEASED FOR SERVICE BY SAWS, TIE IN PROPOSED 8" PVC WATER MAIN INTO EXISTING 8" DI WATER MAIN (SAWS JOB NO. 03-1115) 2" BLOWOFF ASSEMBLY (TEMPORARY) REF. SAWS STD. DIVG. DD-844-01. CONTRACTOR SHALL TIE INTO EXISTING 8" WATER MAIN (SAWS JOB NO. 03-1115) AFTER DISINFECTION AND ACCEPTANCE BY SAWS.

SAWS PRESSURE ZONE: 1111 DEVELOPER NAME: HYG HOMES DEVELOPER ADDRESS: 84 NE LOOP 410, SUITE 242 CITY: SAN ANTONIO, STATE: TX, ZIP: 78216 PHONE: (210) 986-2025 FAX: N/A SAWS BLOCK MAP # TOTAL EDUS 42 TOTAL ACREAGE 7.361 TOTAL LINEAR FOOTAGE OF PIPE 2,078 PLAT NO. 24-11800389 NUMBER OF LOTS 40 SAWS JOB NO. 24-1154

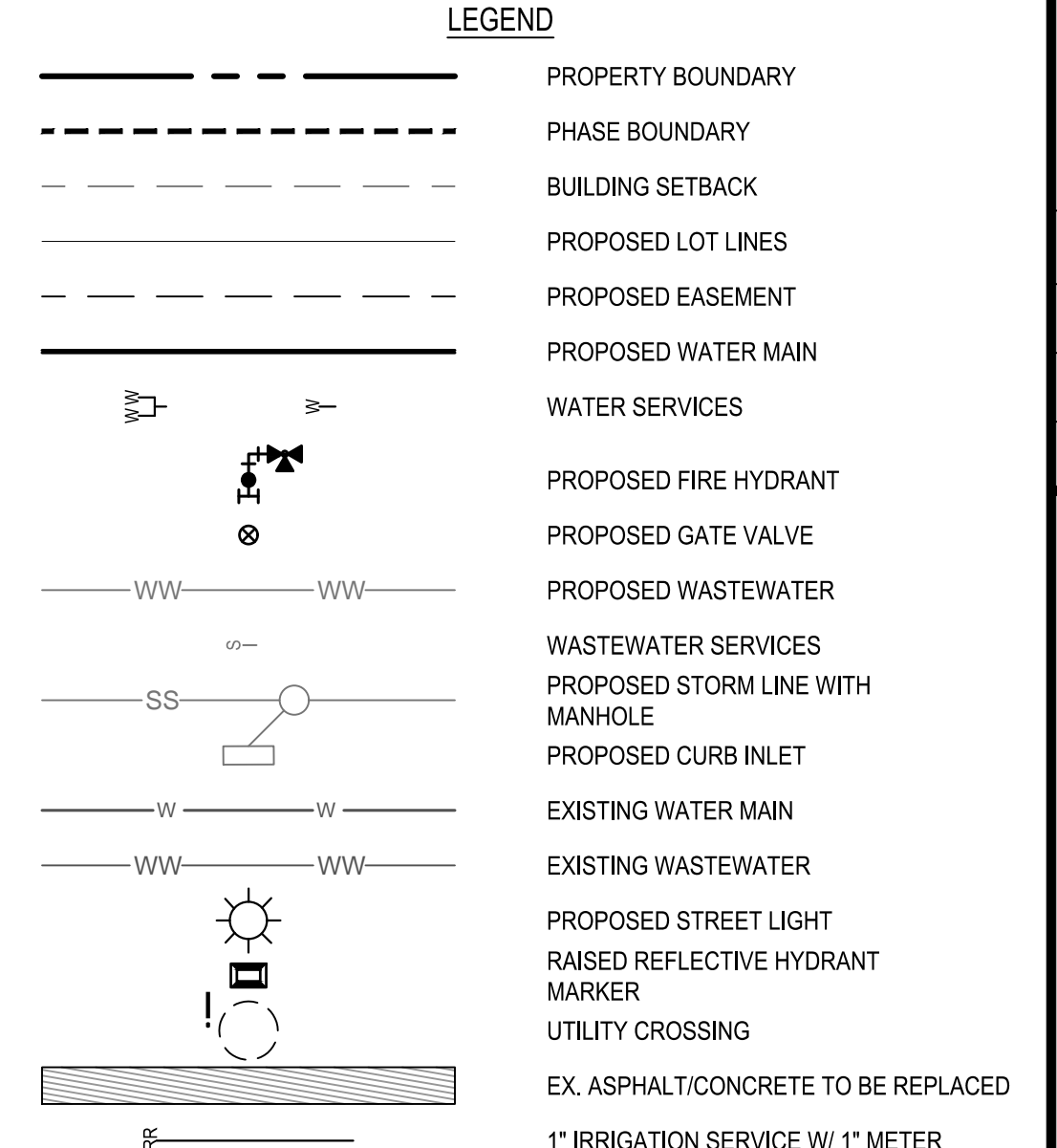
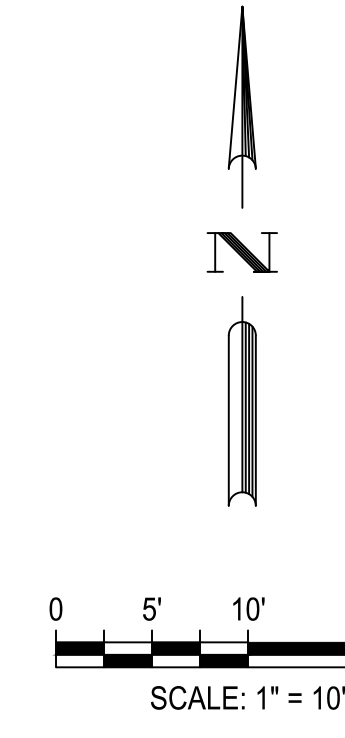
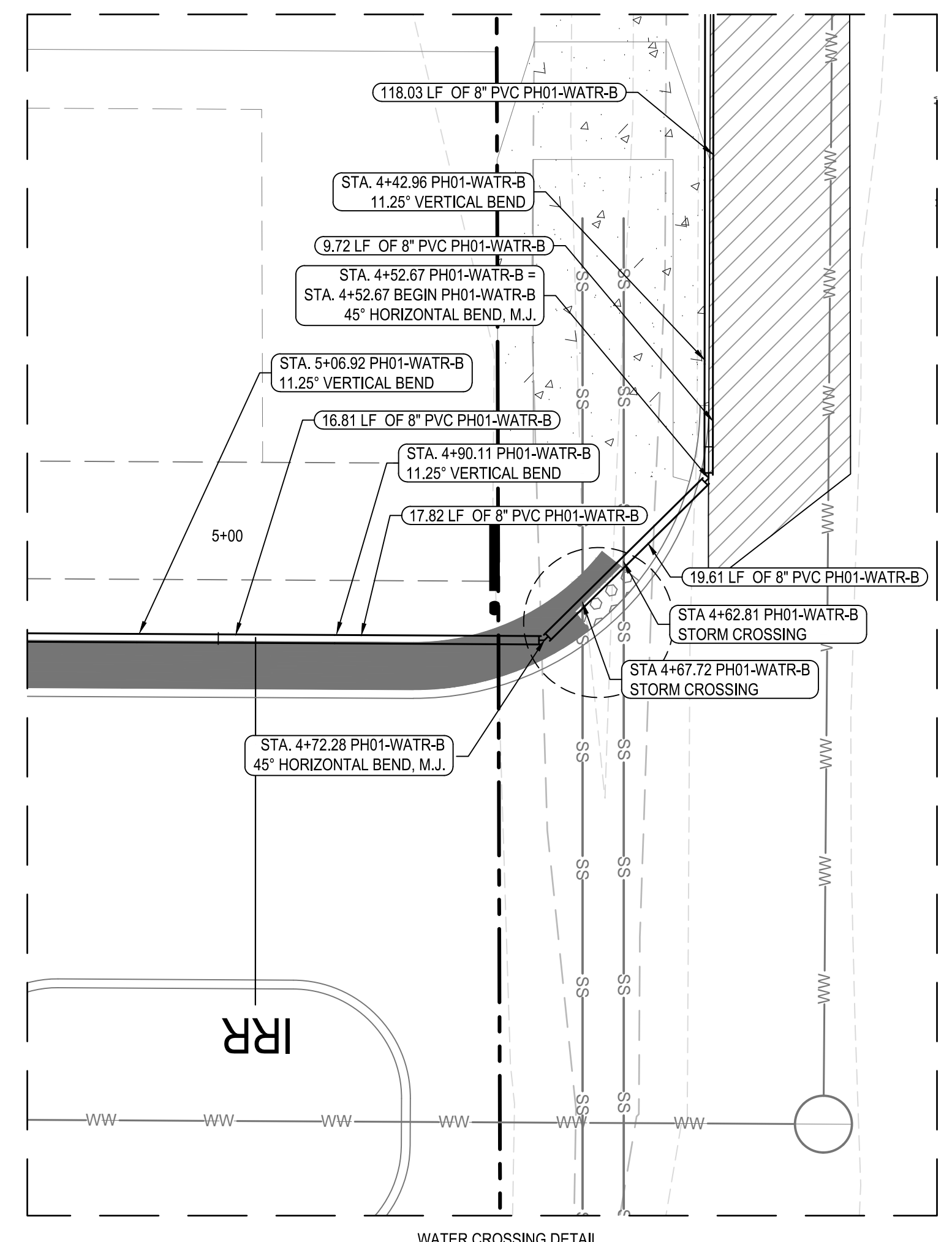
TRENCH EXCAVATION SAFETY PROTECTION CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK 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 COVERING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

CONTRACTOR TO VERIFY EXACT LOCATION OF WATER MAIN PRIOR TO CONSTRUCTION COMMENCEMENT

PLAT NUMBER 24-11800389
SCALE: 1" = 60'
LEGEND
PROPERTY BOUNDARY
PHASE BOUNDARY
BUILDING SETBACK
PROPOSED LOT LINES
PROPOSED EASEMENT
PROPOSED WATER MAIN
WATER SERVICES
PROPOSED FIRE HYDRANT
PROPOSED GATE VALVE
PROPOSED WASTEWATER
WASTEWATER SERVICES
PROPOSED STORM LINE WITH MANHOLE
PROPOSED CURB INLET
EXISTING WATER MAIN
EXISTING WASTEWATER
PROPOSED STREET LIGHT
RAISED REFLECTIVE HYDRANT MARKER
UTILITY CROSSING
EX. ASPHALT/CONCRETE TO BE REPLACED
1" IRRIGATION SERVICE W/ 1" METER
TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
SAWS GENERAL CONSTRUCTION:
1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:
A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM, TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.
B. CURRENT TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE.
C. CURRENT SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.
D. CURRENT CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION "PUBLIC WORKS CONSTRUCTION" AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A COP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM), THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A COP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
F. THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE: [HTTPS://WWW.SAWS.ORG/BUSINESS_CENTERS/SPECS](https://www.saws.org/business_centers/specs). UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.
G. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-2973. AN NOTIFICATION PROCEDURE THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.
H. LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATION AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.
I. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
SAWS UTILITY LOCATES: [HTTP://WWW.SAWS.ORG/SERVICE/LOCATES](http://www.saws.org/service/locates)
COSA DRAINAGE (210) 207-0724 OR (210) 207-0026
COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8480
COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6008 OR 811
J. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING CURBS, DRIVEWAYS, SIDEWALKS, LANDSCAPING, AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT BY THE PROJECT'S CONSTRUCTION. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEAR COUNTY RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
K. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING AGENCIES' REQUIREMENTS FOR CONSTRUCTION OF TRENCHES IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
L. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
M. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTRKREQ@SAWS.ORG.
N. WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE AND FOR PAYING FOR THE TESTS SHOULD BE SENT TO CONSTRKREQ@SAWS.ORG.
O. ANY AND ALL SAWS WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
P. COMPACTION NOTE (ITEM 804) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRANCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THE REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.
SAWS WATER NOTES:
1. PRIOR TO TIES, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIES. THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE THE WORK ACCORDINGLY.
FOR WATER MAINS 12" OR HIGHER, SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014
2. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVED AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 300, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".
3. VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG (NSPI).
4. SUITABLE ANCHORAGE/THRUST BLOCKING OR JOINT RESTRAINT SHALL BE PROVIDED AT ALL OF THE FOLLOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, CAPS, TIES, CROSSES, VALVES, AND BENDS. IN ACCORDANCE WITH THE STANDARD DRAWINGS D9-39 SERIES AND ITEM NO. 839, IN THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION.
5. ALL VALVES SHALL READ "OPEN RIGHT".
6. PRIVATE CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 926 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 926 FEET, THE DEVELOPER OR SUBLEASER 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)". SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. *NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).
7. PIPE DISINFECTION WITH DRY HYTH FOR PROJECTS LESS THAN 800 LINEAR FEET (ITEM NO. 847.3) MAINS SHALL BE DISINFECTED WITH DRY HYTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED FOR MAIN REPAIRS. THE CONTRACTOR SHALL UTILIZE ALL APPROPRIATE SAFETY MEASURE TO PROTECT HIS PERSONNEL DURING DISINFECTION OPERATIONS.
8. BACKFLOW PREVENTION DEVICES:
A. ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS ARE REQUIRED TO HAVE BACKFLOW PREVENTION DEVICES.
B. ALL COMMERCIAL BACKFLOW PREVENTION DEVICES MUST BE APPROVED BY SAWS PRIOR TO INSTALLATION.
9. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND SAWS HAS RELEASED THE MAIN FOR TIE-IN AND USE.
10. DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

PLAT NUMBER 24-11800389
DATE APR
DESCRIPTION
DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC
BGE
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 210-360-3600 www.bge.com
EPA Registration No. P-1046
HERON VALLEY PHASE 1
WATER DISTRIBUTION PLAN
NOT FOR CONSTRUCTION
STATE OF TEXAS
JAVIER CASTELLO
122170
12/05/24
SHEET
C06.00

DATE	APR
DESCRIPTION	
REV	
DESIGNED BY:	JDC
REVIEWED BY:	OR
DRAWN BY:	JDC



SAWS PRESSURE ZONE: 1111

DEVELOPER NAME:	HYG HOMES
DEVELOPER ADDRESS:	84 NE LOOP 410, SUITE 242
CITY:	SAN ANTONIO, STATE: TX, ZIP: 78216
PHONE (210)-966-2025	FAX N/A
SAWS BLOCK MAP #	TOTAL EDUS: 42, TOTAL ACREAGE: 7.361
TOTAL LINEAR FOOTAGE OF PIPE	2,078 PLAT NO. 24-11800389
NUMBER OF LOTS	40 SAWS JOB NO. 24-1154

NOTE:
1. ELECTRIC/GAS/TELECOMM PLANS SHOWN FOR SCHEMATIC PURPOSES ONLY. REFER TO APPLICABLE UTILITY PLANS FOR FULL APPROVED LAYOUT.

NOTE:
IF THE MAXIMUM STATIC PRESSURE EXCEEDS 80 PSI, A PRV WILL BE REQUIRED ON THE PROPERTY OWNER'S SIDE OF THE WATER METER.

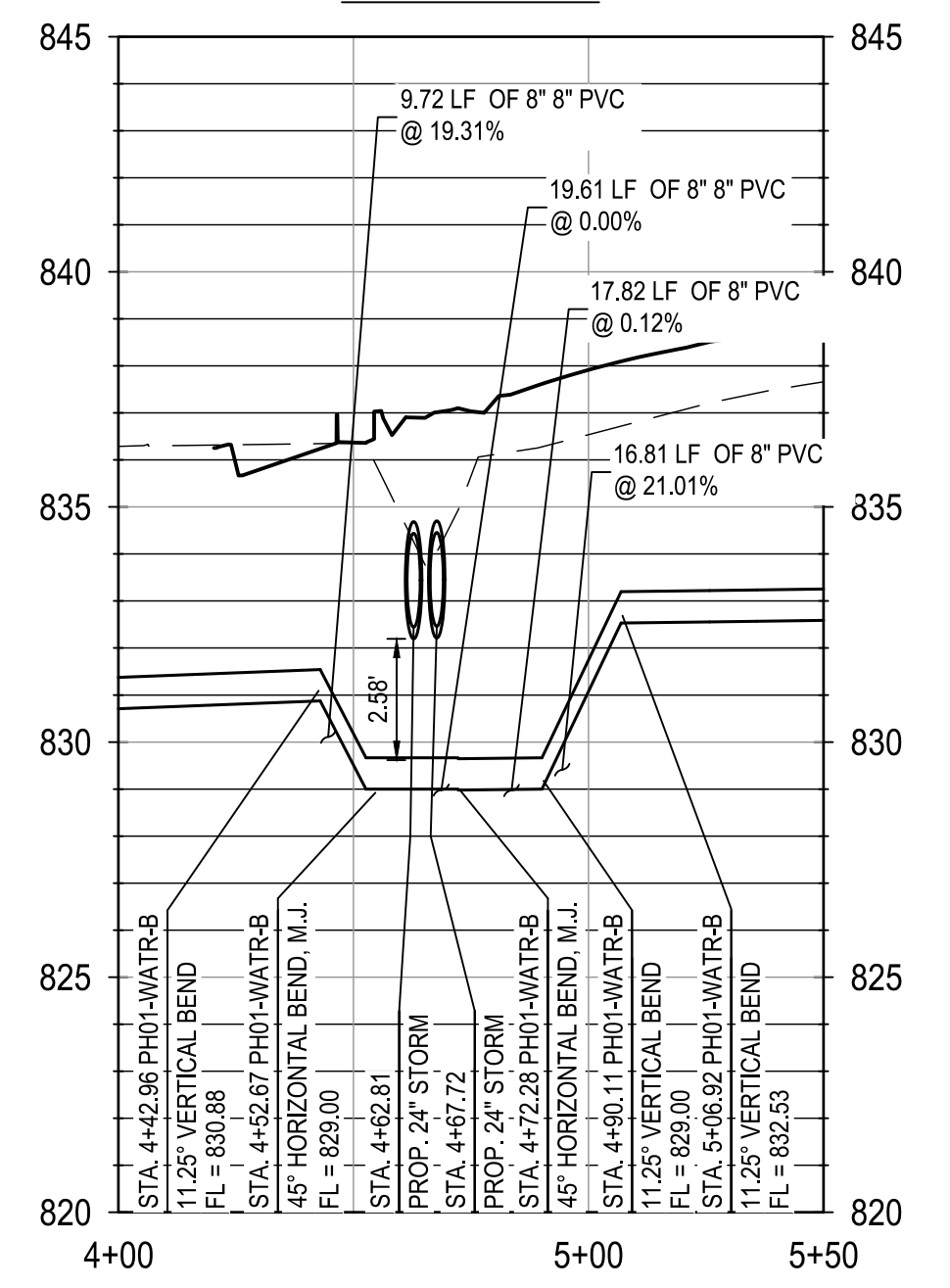
SAWS GENERAL CONSTRUCTION:

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:
 - A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM, TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 211 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.
 - B. CURRENT TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE.
 - C. CURRENT SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.
 - D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR CONSTRUCTION PUBLIC WORKS CONSTRUCTION."
 - E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM). THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
- THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE: [HTTPS://WWW.SAWS.ORG/BUSINESS_CENTERS/SPECS](https://www.saws.org/business_centers/specs), UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.
- THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973. NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.
- LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATION AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
 - SAWS UTILITY LOCATES: [HTTP://WWW.SAWS.ORG/SERVICES/LOCATES](http://www.saws.org/services/locates)
 - COSA DRAINAGE (210) 207-0724 OR (210) 207-6026
 - COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8448
 - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
 - TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-4005 OR 811
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING, AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT BY THE PROJECT'S CONSTRUCTION. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) AND/OR BEAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) AND/OR BEAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSWORKREQ@SAWS.ORG.
- WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSWORKREQ@SAWS.ORG.
- ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
- COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRANCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THE REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.

SAWS WATER NOTES:

- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS. THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
 - FOR WATER MAINS 12" OR HIGHER, SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014
- ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 300, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".
- VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG (NSPI).
- SUITABLE ANCHORAGE/THRUST BLOCKING OR JOINT RESTRAINT SHALL BE PROVIDED AT ALL OF THE FOLLOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, CAPS, TIEES, CROSSES, VALVES, AND BENDS. IN ACCORDANCE WITH THE STANDARD DRAWINGS DD-839 SERIES AND ITEM NO. 839 IN THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- ALL VALVES SHALL READ "OPEN RIGHT".
- PRIVATELY OWNED CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 926 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 926 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF "PRV IS/ARE REQUIRED FOR SUCH LOT(S)". ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. *NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).
- PIPE DISINFECTION WITH DRY HYTH FOR PROJECTS LESS THAN 800 LINEAR FEET, (ITEM NO. 847.3); MAINS SHALL BE DISINFECTED WITH DRY HYTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED FOR MAIN REPAIRS. THE CONTRACTOR SHALL UTILIZE ALL APPROPRIATE SAFETY MEASURE TO PROTECT HIS PERSONNEL DURING DISINFECTION OPERATIONS.
- BACKFLOW PREVENTION DEVICES:
 - ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS ARE REQUIRED TO HAVE BACKFLOW PREVENTION DEVICES.
 - ALL COMMERCIAL BACKFLOW PREVENTION DEVICES MUST BE APPROVED BY SAWS PRIOR TO INSTALLATION.
- FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND SAWS HAS RELEASED THE MAIN FOR TIE-IN AND USE.
- DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

PH01-WATR-B



TRENCH EXCAVATION SAFETY PROTECTION
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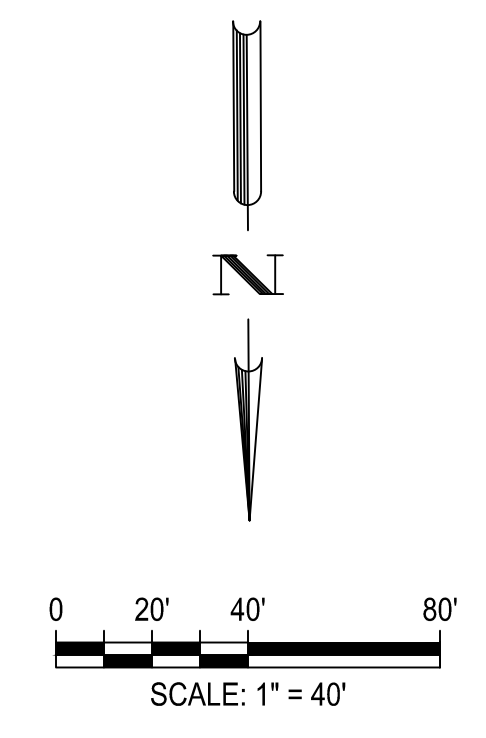
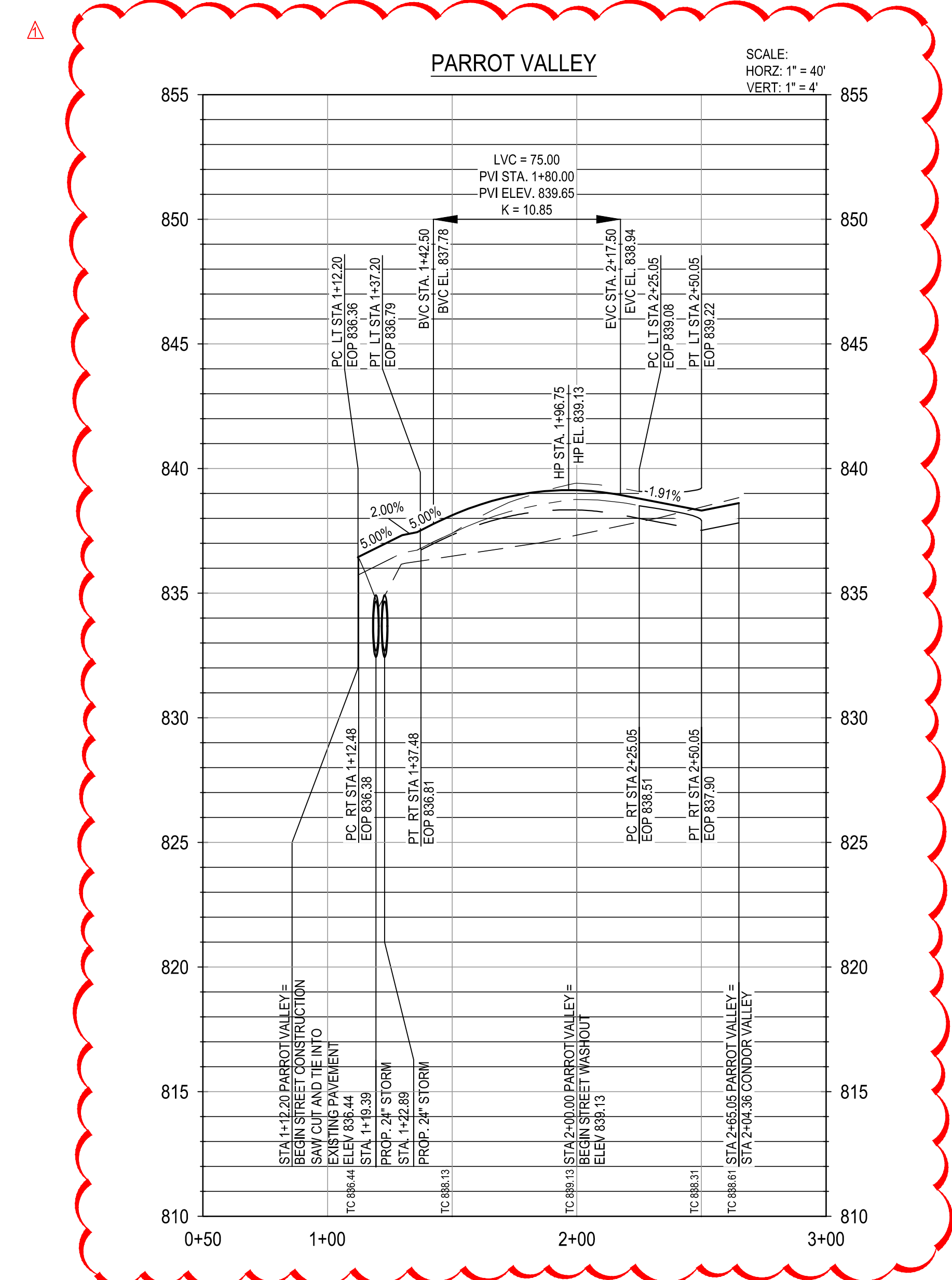
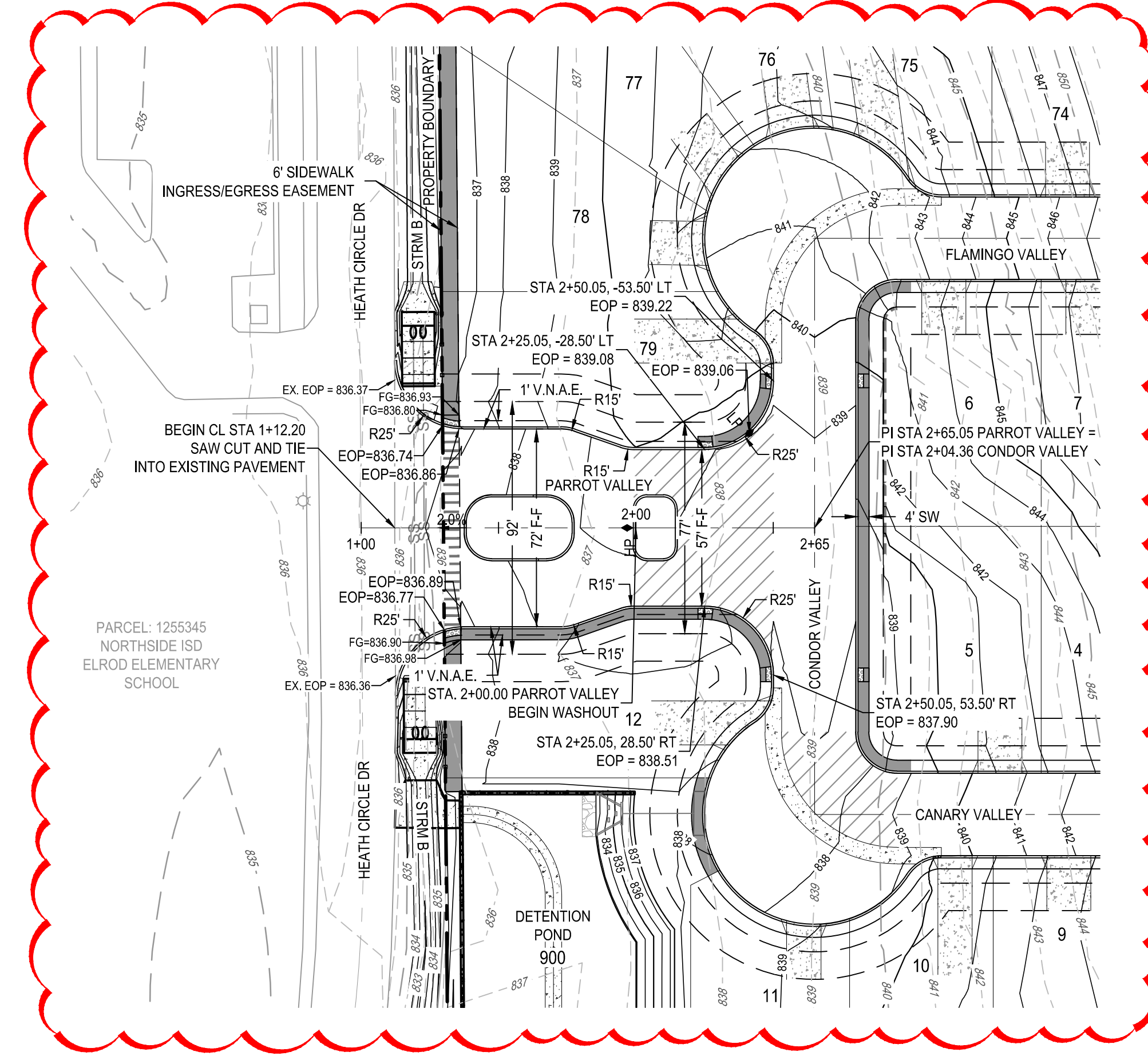


BGE, INC.
 7330 San Pedro, Suite 202
 San Antonio, TX 78216
 TEL: 210-361-3600 www.bge.com
 TSP# Registration No. P-1046

HERON VALLEY PHASE 1
 WATER CROSSING DETAIL

NOT FOR CONSTRUCTION





LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	ROAD CENTERLINE
	PROPOSED CURB & GUTTER
	CONTRACTOR SIDEWALK
	HOME BUILDER SIDEWALK
	TYPICAL RAMP (SEE SHEET C08.24)
	ASPHALT VALLEY GUTTER
	LOW POINT/HIGH POINT
	PROPOSED STORM LINE WITH MANHOLE
	PROPOSED CURB INLET
	WASHOUT AREA

PROFILE LEGEND

	PROPOSED FG @ CENTERLINE
	PROPOSED SUBGRADE
	PROPOSED BOTTOM OF CURB RIGHT
	PROPOSED BOTTOM OF CURB LEFT
	EXISTING GROUND @ CENTERLINE

NOTE:
CONTRACTOR SHALL ENSURE THAT PROPOSED A.D.A. RAMPS AND ACCESSIBLE ROUTES ALONG ROAD CROSSING COMPLY WITH SPECIFICATIONS FOR BOTH RUNNING SLOPE AND CROSS SLOPE.
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 - SIDEWALKS ADJACENT TO SINGLE FAMILY LOTS ARE TO BE CONSTRUCTED CONCURRENTLY WITH EACH SINGLE FAMILY HOUSE BY THE HOME BUILDER.

PRIVATE STREET DESIGNATION:
LOT 999, BLOCK 9, IS A PRIVATE STREET AND IS DESIGNATED AS AN IRREVOCABLE UNDERGROUND AND AT-GRADE INFRASTRUCTURE AND SERVICE FACILITIES EASEMENT FOR GAS, ELECTRIC, STREET LIGHT, TELEPHONE, CABLE TELEVISION, DRAINAGE, PEDESTRIAN, PUBLIC WATER, WASTEWATER, AND RECYCLED WATER MAINS.

DATE	REV	DESCRIPTION
	1	STREET PLAN REVISION

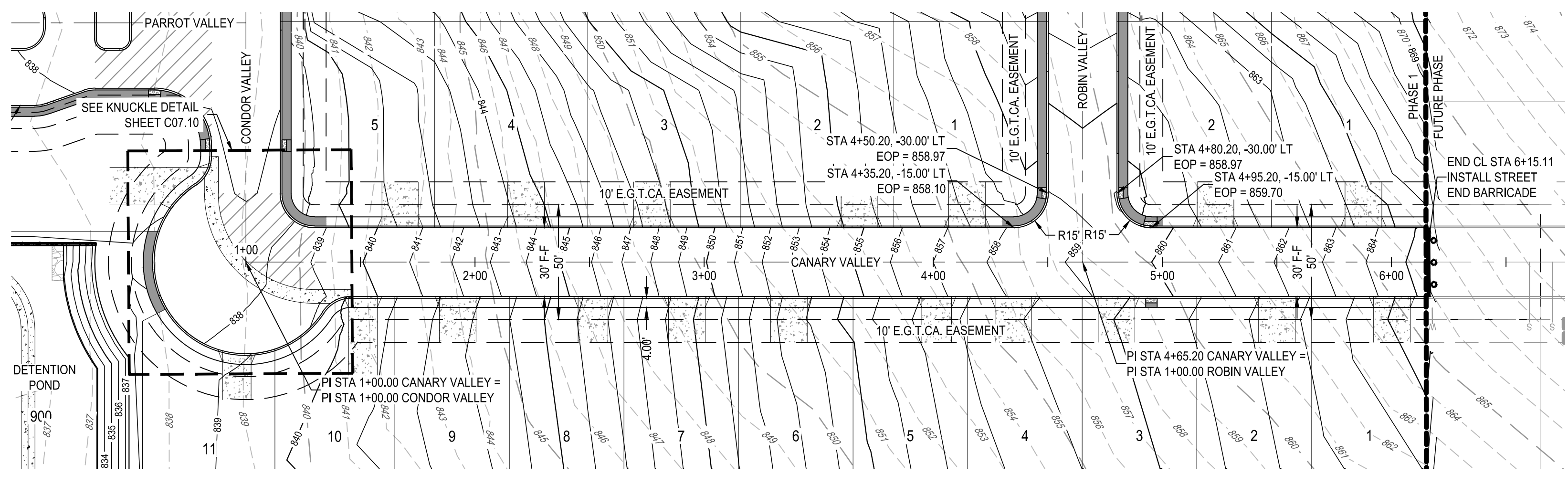
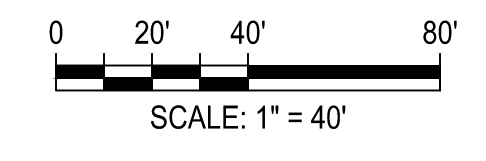
HERON VALLEY PHASE 1
PARROT VALLEY PLAN AND PROFILE

BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
Tel: 214-360-0000 www.bgeinc.com
EPA Registration No. P-1049

DAVID R. BABINEAU
1279.55
LICENSED PROFESSIONAL ENGINEER

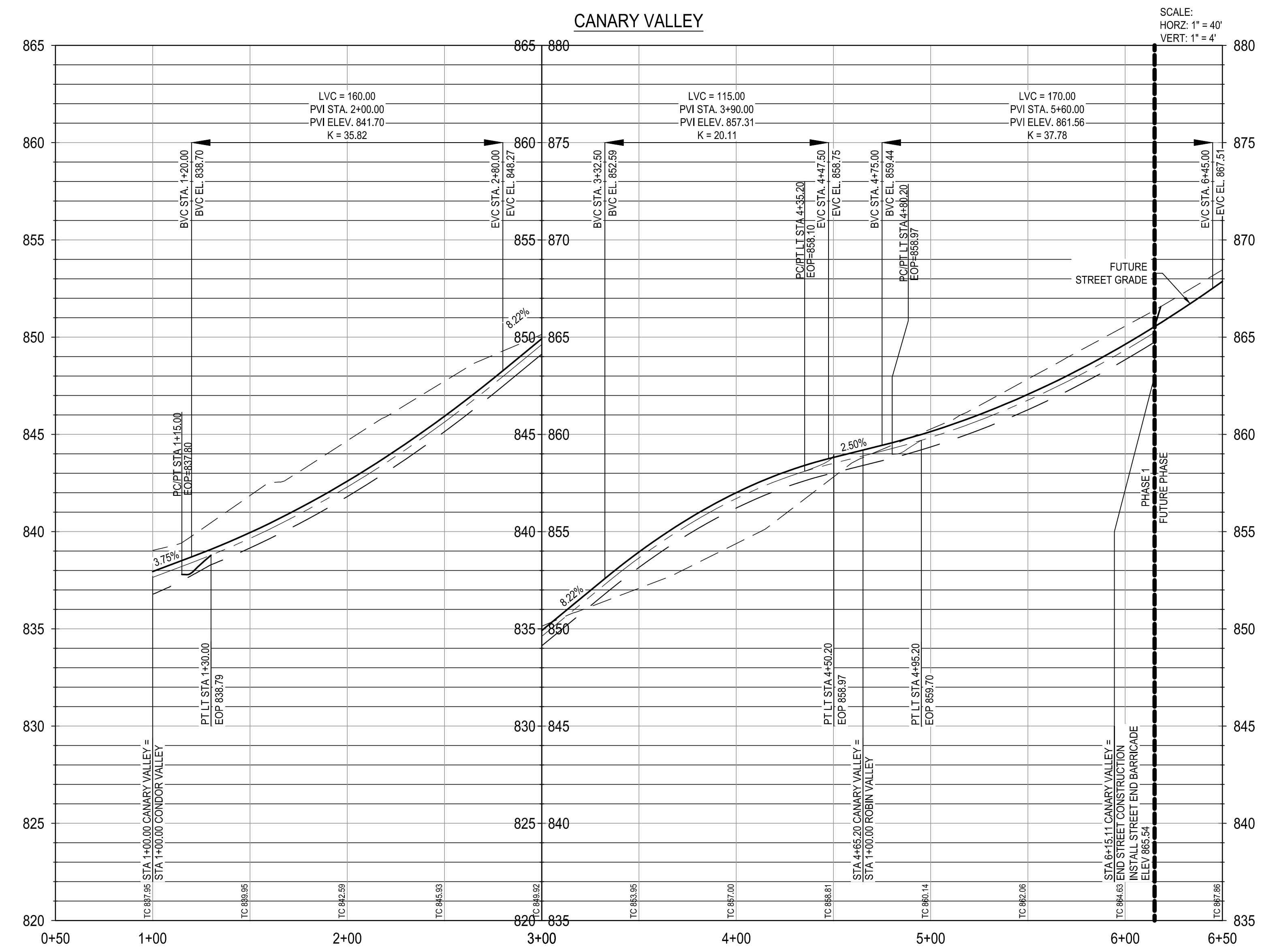
SHEET
C07.00

DATE	REV	DESCRIPTION



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	ROAD CENTERLINE
	PROPOSED CURB & GUTTER
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	HOME BUILDER SIDEWALK
	TYPICAL RAMP (SEE SHEET C08.24)
	ASPHALT VALLEY GUTTER
	LOW POINT/HIGH POINT
	PROPOSED STORM LINE WITH MANHOLE
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PROFILE LEGEND

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TRENCH EXCAVATION SAFETY PROTECTION

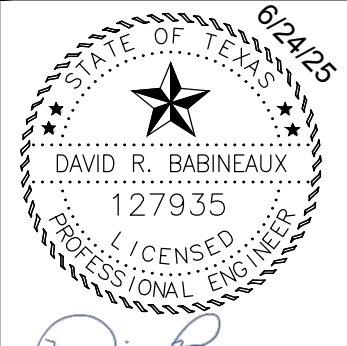
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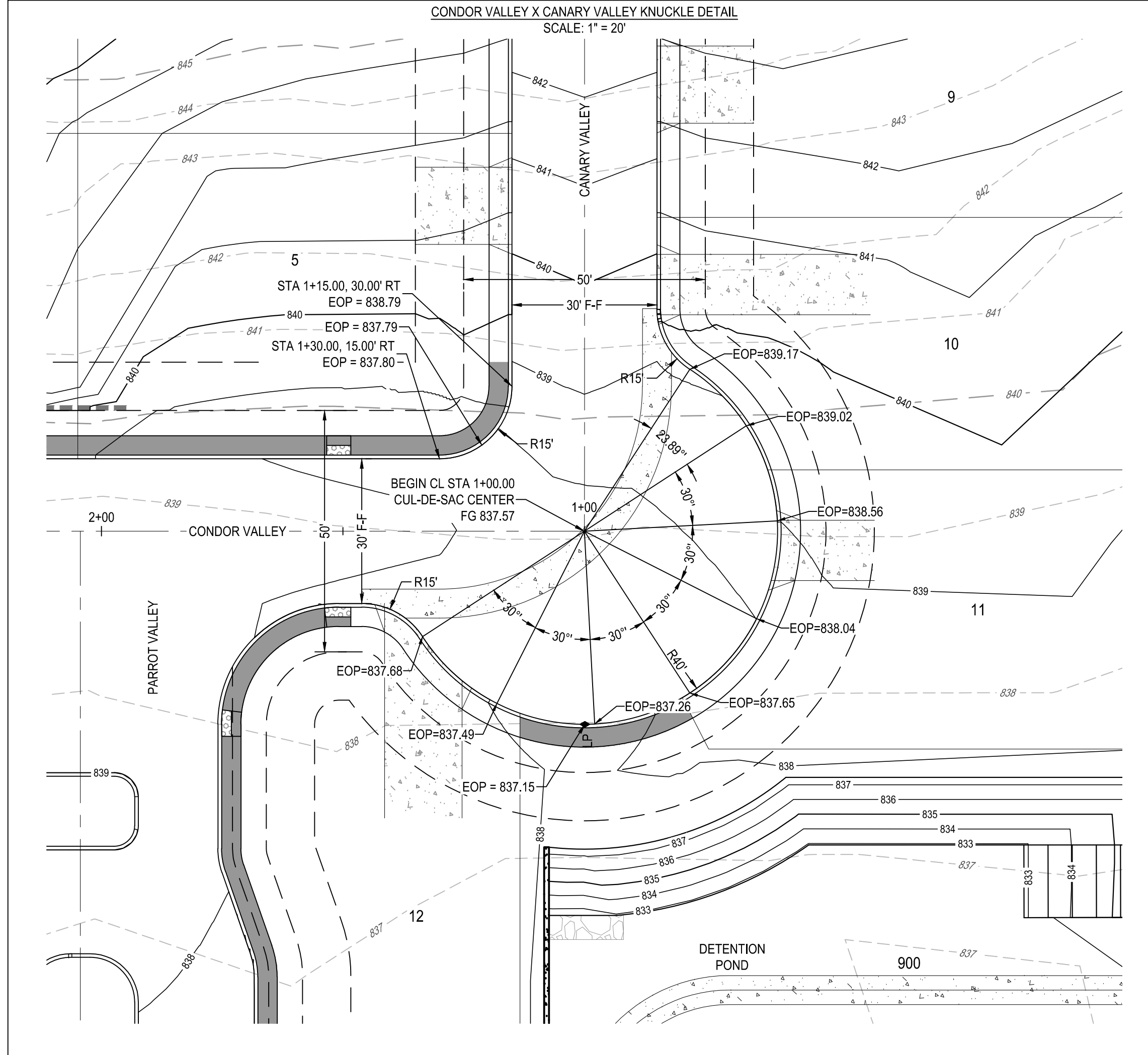
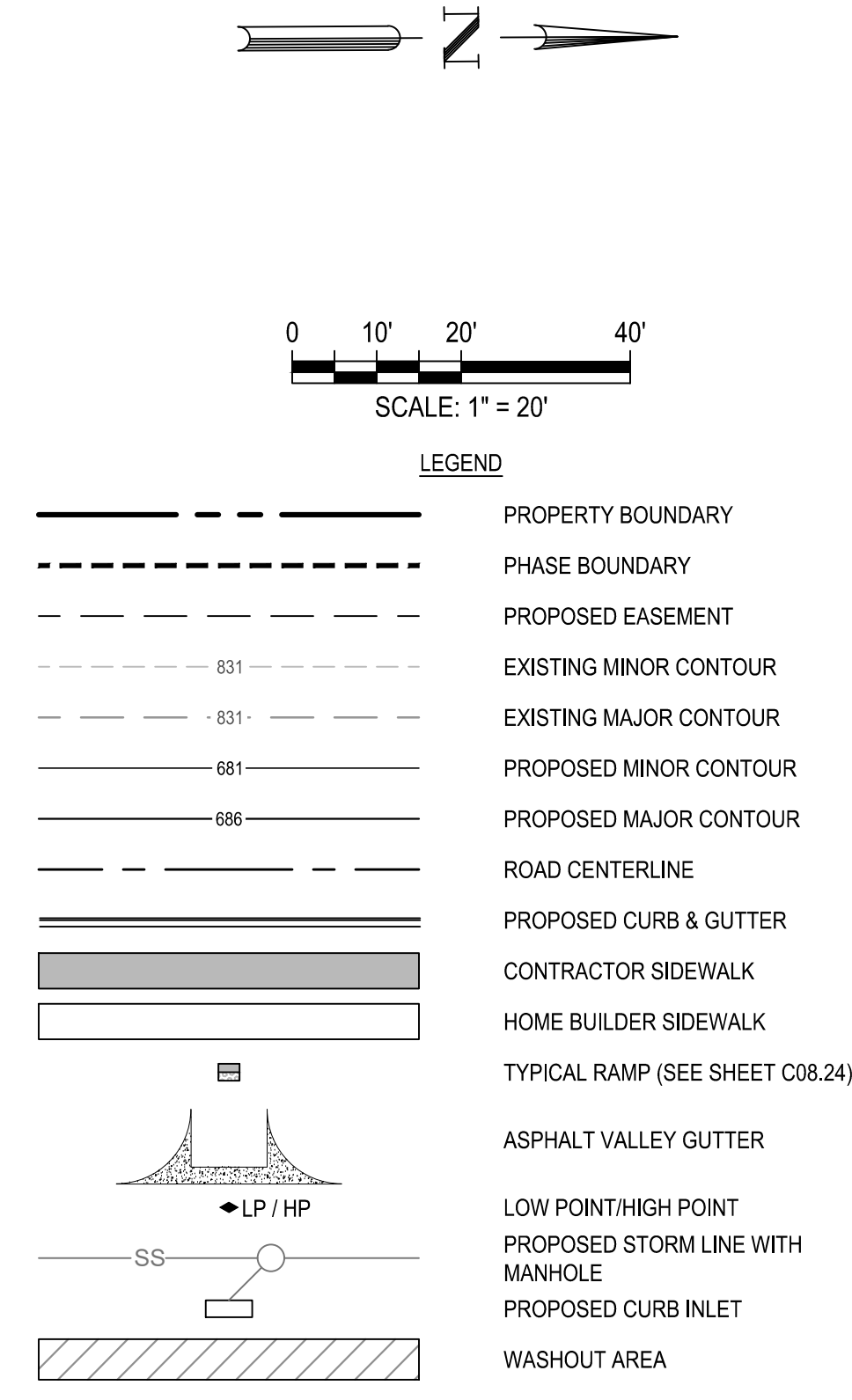
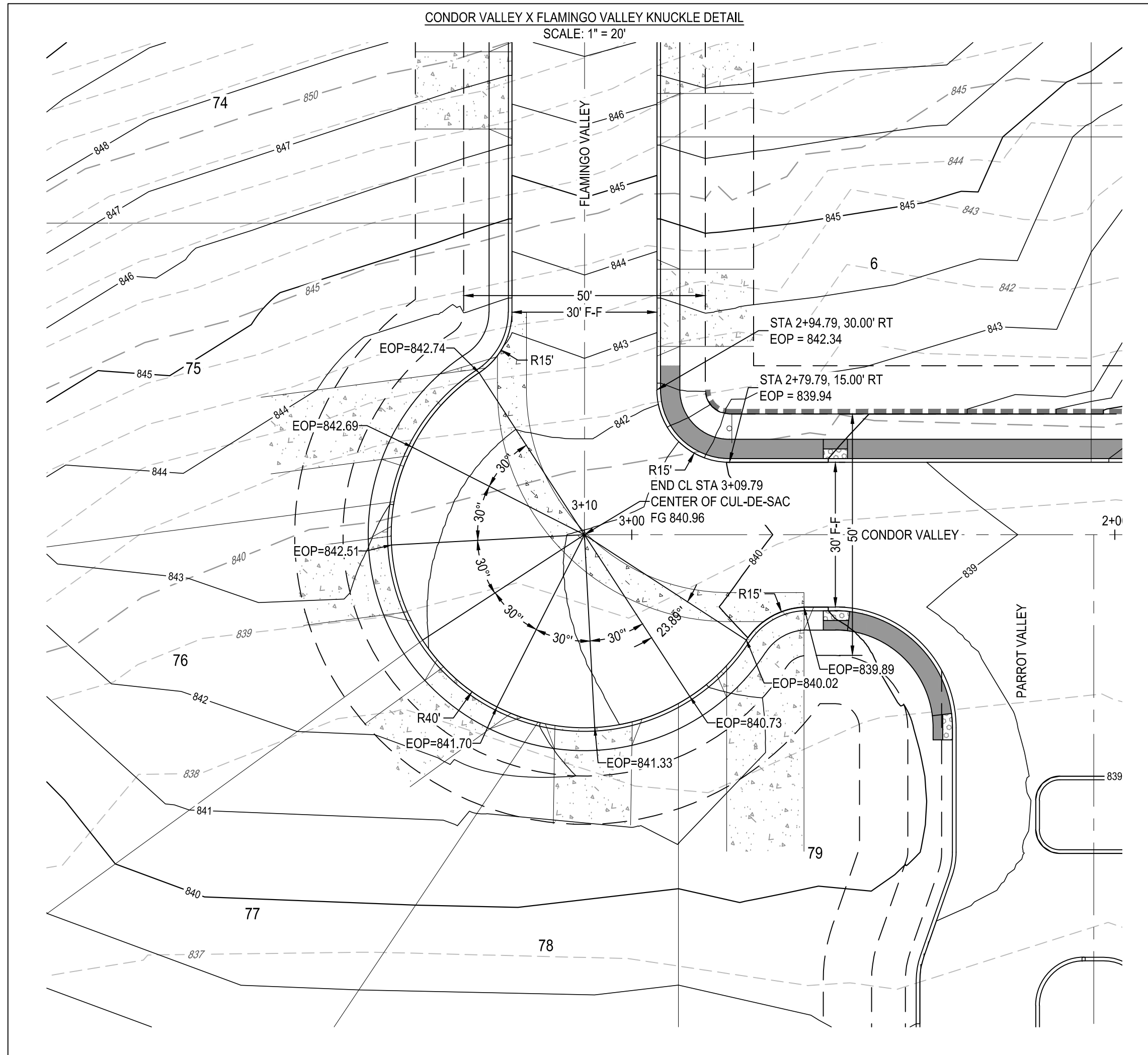
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HERON VALLEY PHASE 1
CANARY VALLEY PLAN AND PROFILE



DATE	APR
DESCRIPTION	
REV	
DESIGNED BY:	JDC
REVIEWED BY:	OR
DRAWN BY:	JDC



NOTE:
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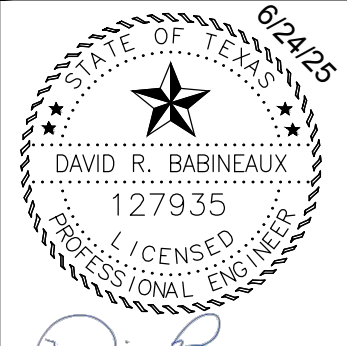
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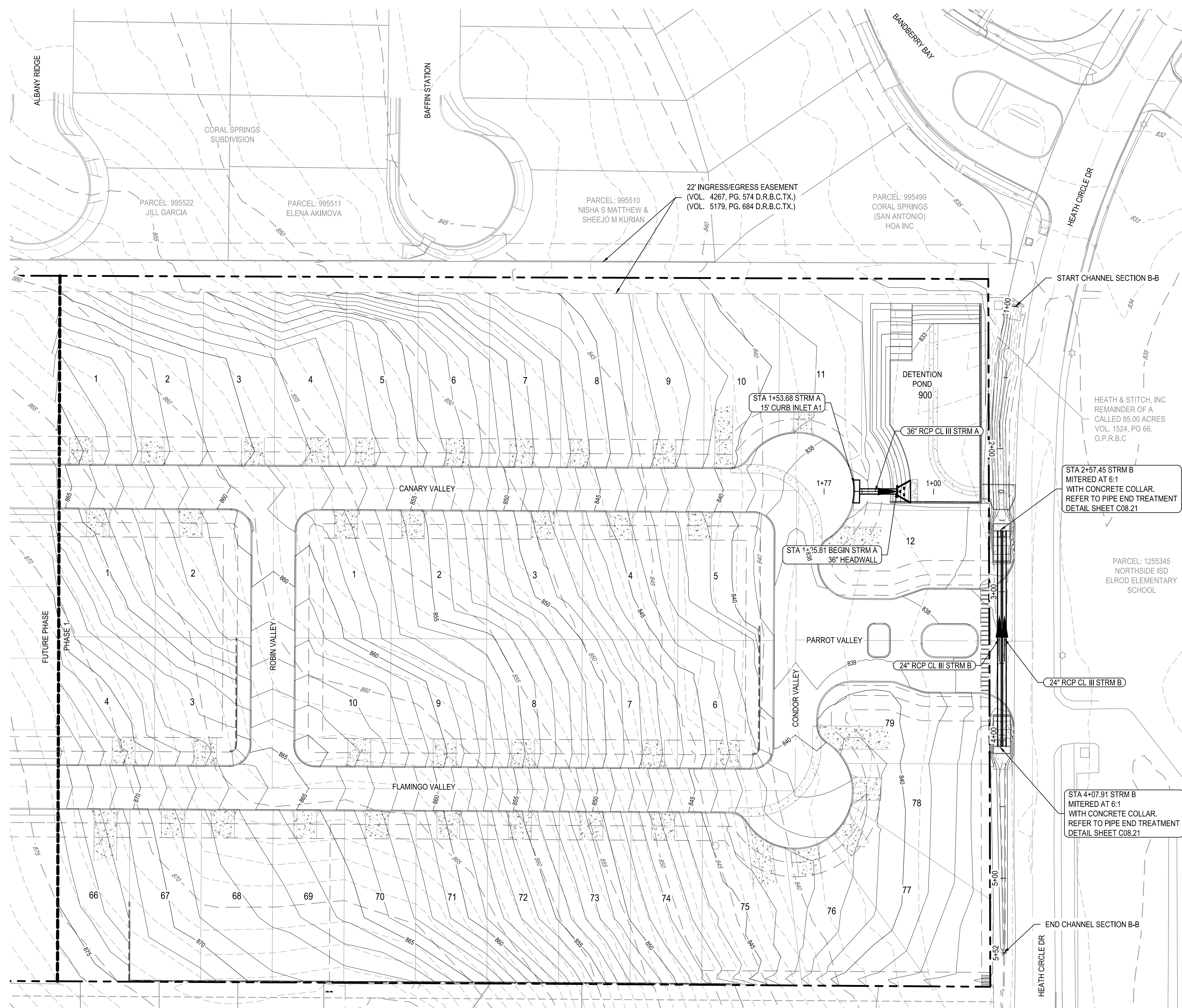
DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC

BGE
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
Tel: 214-368-3360 www.bgeenergy.com
EPE Registration No. P-1046

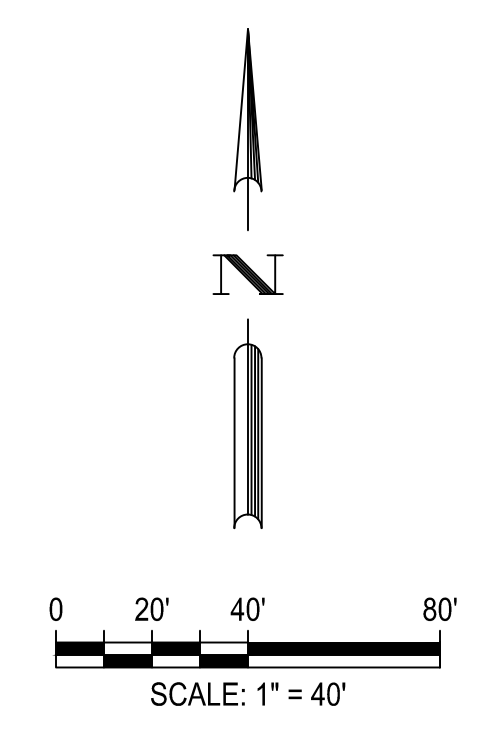
HERON VALLEY PHASE 1
KNUCKLE DETAILS



G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\03_CADD\01_Shis\08.00 STORM DRAIN COLLECTION PLAN.dwg Layout: STORM DRAIN COLLECTION PLAN By: Calderon



PLAT NUMBER
24-11800389



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED STORM DRAIN w/ MANHOLE
	PROPOSED CURB INLET
	PROPOSED WASTEWATER LINE
	PROPOSED WATER LINE
	EXISTING FORCE MAIN
	PROPOSED ELECTRIC
	PROPOSED GAS LINE
	PROPOSED WASTEWATER SERVICES
	PROPOSED WATER SERVICES
	DIRECTION OF PIPE FLOW
	UTILITY CROSSING
	PROPOSED SWALE FLOWLINE

PROFILE LEGEND

	PROPOSED STORM PIPE
	PROPOSED GROUND
	PROPOSED SUBGRADE
	EXISTING GROUND
	25/100 YEAR HGL

* ALL WATER/WASTEWATER SYMBOLS ARE NOT TO SCALE, AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES. REFER TO DETAILS SHOWN IN THIS PLAN SET.

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 - ALL CONCRETE LINING SHALL DEVELOP A MIN. COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS
 - FOR NORMAL CONDITIONS, THE CONCRETE LINING SHALL BE A MINIMUM OF FIVE (5) INCHES THICK AND REINFORCED WITH NO. 4 ROUND BARS @ 18 INCHES ON CENTER EACH WAY OR WELDED WIRE FABRIC OF 6"x6" - WID6 X WID6, WHERE SURCHARGE, NATURE OF GROUND, HEIGHT AND STEEPNESS OF SLOPE, ETC., BECOME CRITICAL. DESIGN SHALL BE IN ACCORDANCE WITH LATEST STRUCTURAL STANDARDS. ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN THREE THOUSAND (3,000) POUNDS PER SQUARE INCH IN TWENTY-EIGHT (28) DAYS. THE DEPTH OF ALL TOE DOWNS SHALL BE 36 INCHES UPSTREAM, 24 INCHES DOWNSTREAM, AND 18 INCHES FOR SIDE SLOPES. THE CITY'S CONSTRUCTION INSPECTOR MAY PERMIT AN 18" TOE DOWN IN ROCK SUB GRADE IN LIEU OF THE ABOVE TOE DOWN REQUIREMENTS. THE HORIZONTAL DIMENSIONS OF TOE DOWNS SHALL NOT BE LESS THAN SIX (6) INCHES.
 - CONCRETE COLLARS ARE TO BE USED TO CONNECT STORM PIPE SEGMENTS. PLEASE REFER TO SHEET C06.022 FOR CONCRETE COLLAR DETAIL.

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Approved by COSA Public Works
By: *EO*
Date: 6/25/2025

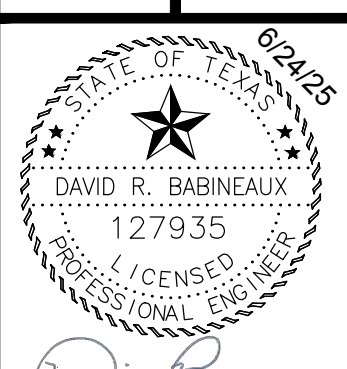
DATE	REV	DESCRIPTION

DESIGNED BY: JDC
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DRAWN BY: JDC



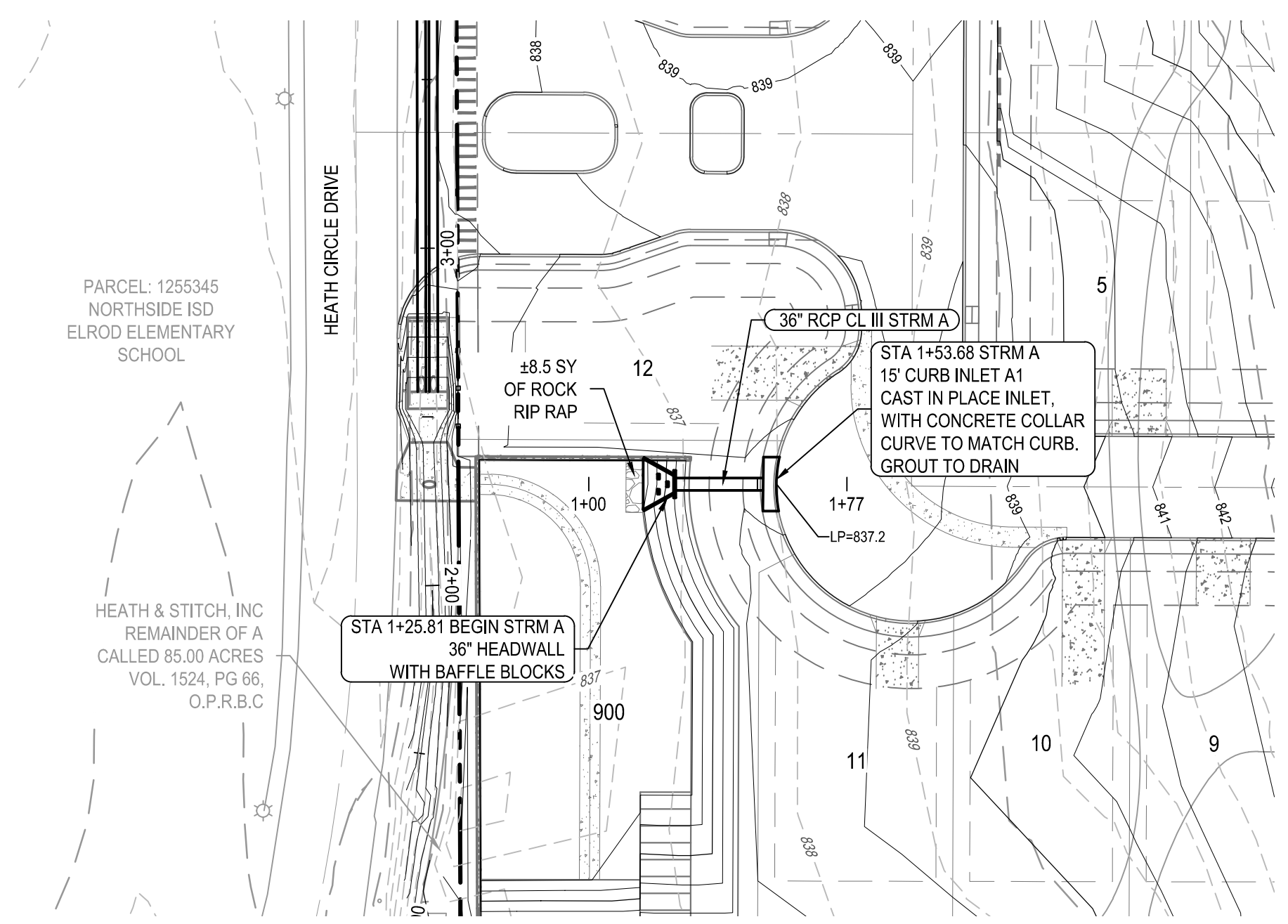
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
Tel: 214-336-0000 www.bgeenergy.com
EPA Registration No. P-1046

HERON VALLEY PHASE 1
STORM DRAIN COLLECTION PLAN



SHEET
C08.00

DATE	REV	DESCRIPTION

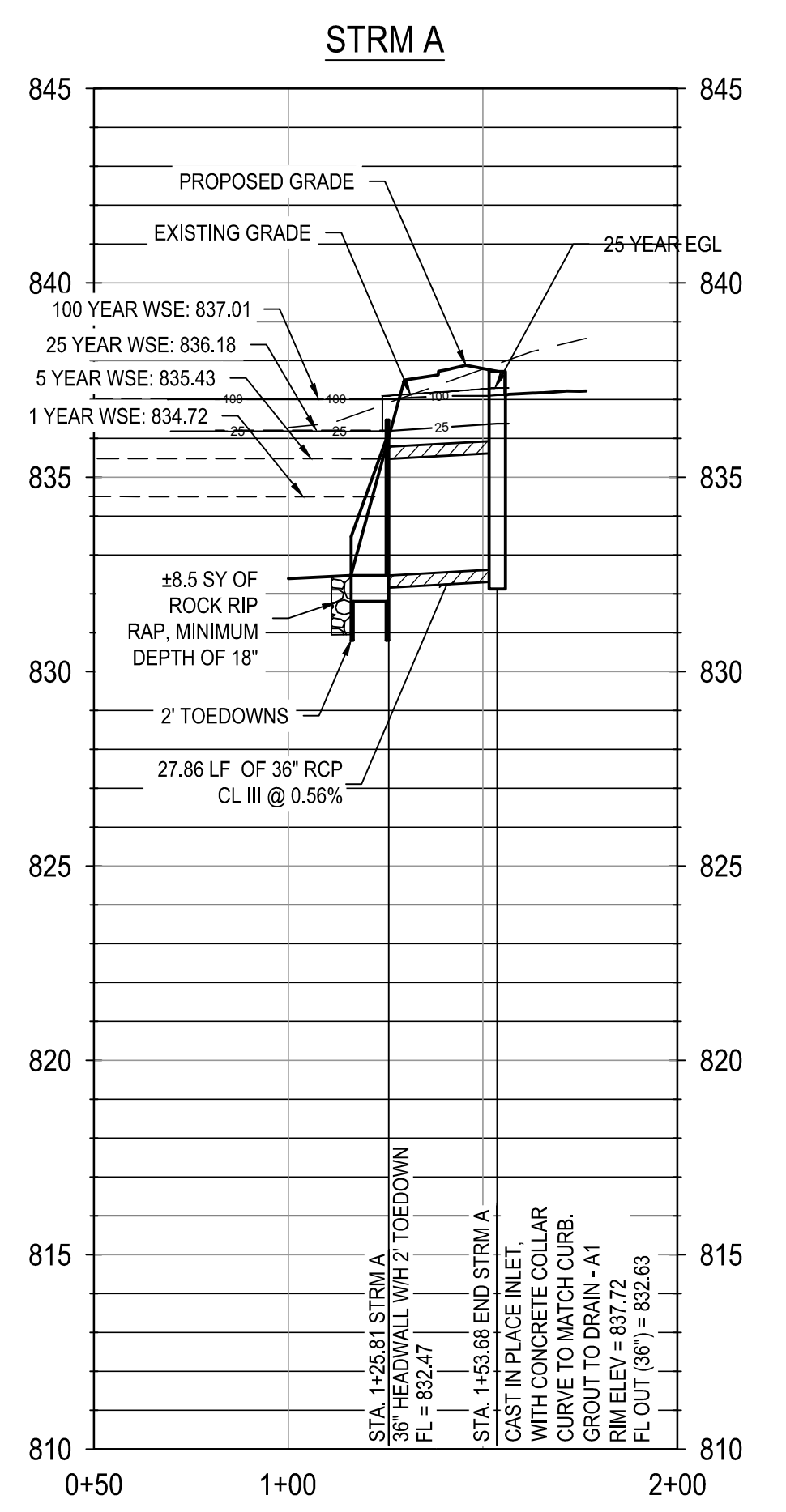
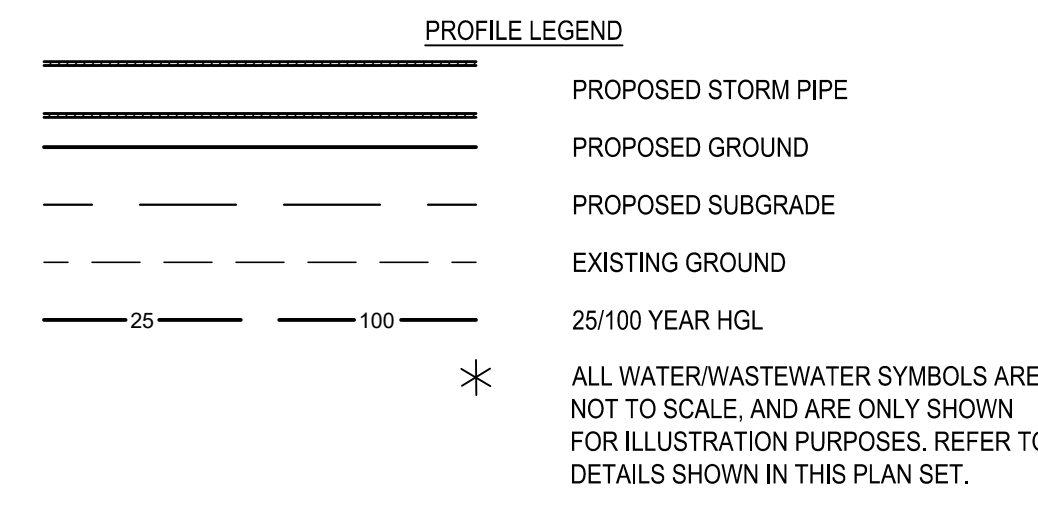
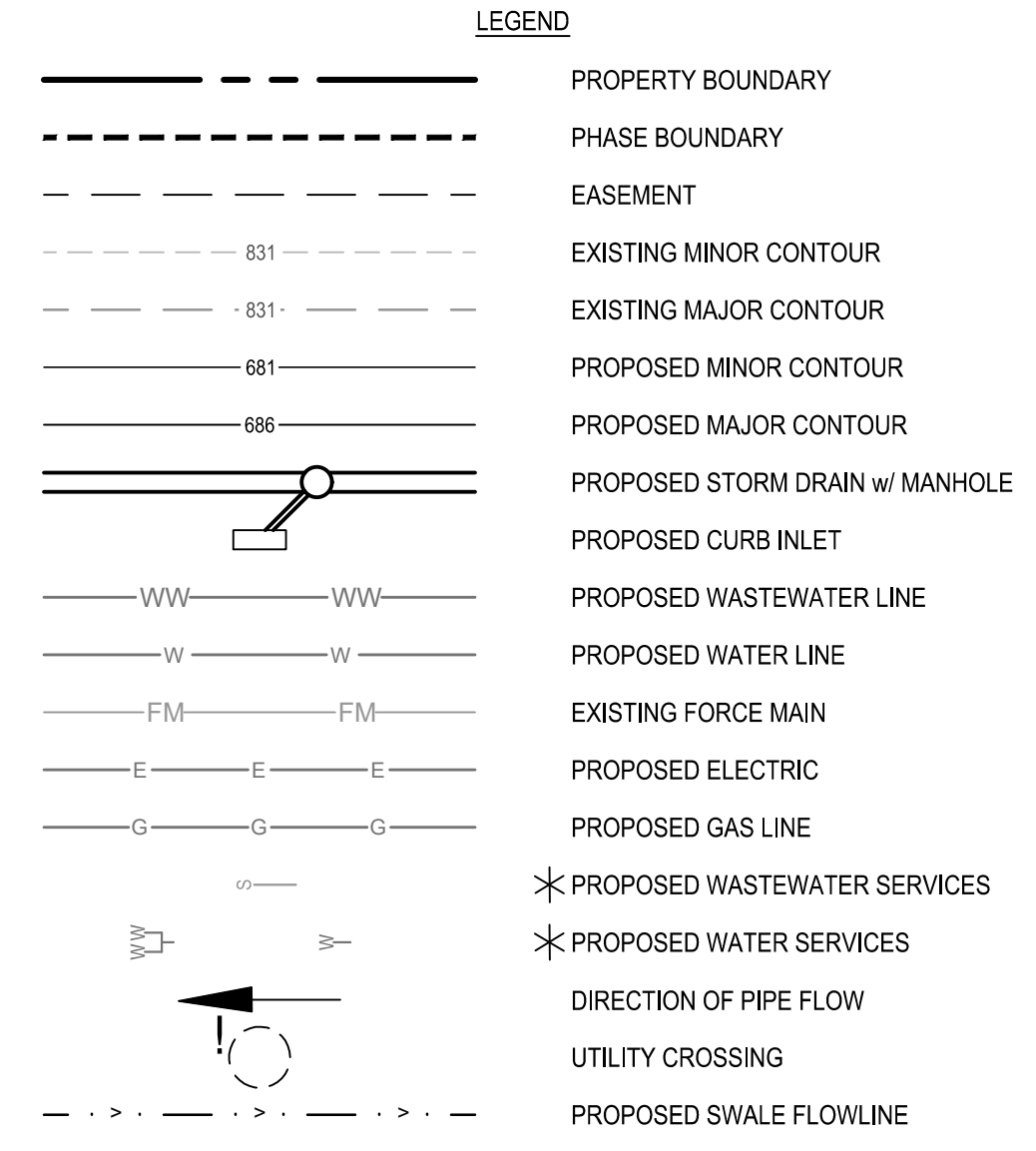
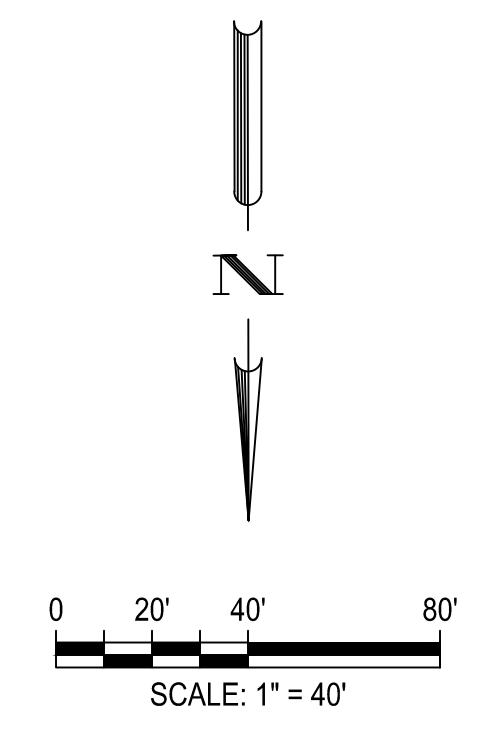


STRM QVD (25 YEAR) TABLE

PIPE	Q (CFS)	V (F/S)	D (FT)
STRM A	29.10	7.66	3.70

STRM QVD (100 YEAR) TABLE

PIPE	Q (CFS)	V (F/S)	D (FT)
STRM A	35.62	9.56	3.70



HERON VALLEY
STRM A (25 YR Storm Event)

Q =	29.1	cfs	
V ₁ =	7.66	fps	
g =	32.2		
Y ₁ =	1	ft	height of blocks
F ₁ =	$V/(g \cdot Y_1)^{0.5} = 1.35$		
Y ₂ =	$0.5 \cdot (-1 + \sqrt{1 + 8(F_1)^{0.5}}) \cdot Y_1 = 1.47$		subcritical flow depth
L _B =	$4.5(Y_2)/F_1^{0.76} = 5.28$		length of basin
L _W /3 =	1.76		min. dimension from pipe outfall to first row blocks
Spacing =	0.75 (Y ₁) = 0.75		min. separation between rows of blocks
Sidewall =	$3(Y_2)/8 = 0.38$		Min. separation from block to edge of riprap
Y ₂ ' =	$(1.10 \cdot F_1^2 / 120) Y_2 = 1.60$		(1.7 < F ₁ < 5.5)
Y ₂ ' =	$0.85 Y_2 = 1.25$		(5.5 < F ₁ < 11)
Y ₂ ' =	$(1.00 \cdot F_1^2 / 800) Y_2 = 0.00$		(11 < F ₁ < 17)
Z =	Y ₂ ' / 3 = 0.49		
Wingwall	Y ₂ ' + z = 2.09		(1.7 < F ₁ < 5.5) (square area)
V ₂ = Q/A ₂	Q = 29.1		
	A ₂ = 20.895		(wingwall x outfall width)
Therefore:	V ₂ = 1.39		

NOTE: VELOCITY LEAVING 24" HEADWALL EXCEEDS 6 FPS, BAFFLE BLOCKS ARE REQUIRED, PLEASE REFER TO DETAIL ON SHEET C08.21. BAFFLE BLOCKS WILL REDUCE VELOCITY ENTERING THE POND TO BELOW 6FPS.

Approved by COSA Public Works
By: [Signature]
Date: 6/25/2025

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 - FOR NORMAL CONDITIONS, THE CONCRETE LINING SHALL BE A MINIMUM OF FIVE (5) INCHES THICK AND REINFORCED WITH NO. 4 ROUND BARS @ 18 INCHES ON CENTER EACH WAY OR WELDED WIRE FABRIC OF 6"x6" - W/D6 X W/D6, WHERE SURCHARGE, NATURE OF GROUND, HEIGHT AND STEEPNESS OF SLOPE, ETC. BECOME CRITICAL, DESIGN SHALL BE IN ACCORDANCE WITH LATEST STRUCTURAL STANDARDS. ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN THREE THOUSAND (3,000) POUNDS PER SQUARE INCH IN TWENTY-EIGHT (28) DAYS. THE DEPTH OF ALL TOE DOWNS SHALL BE 36 INCHES UPSTREAM, 24 INCHES DOWNSTREAM, AND 18 INCHES FOR SIDE SLOPES. THE CITY'S CONSTRUCTION INSPECTOR MAY PERMIT AN 18" TOE DOWN IN ROCK SUB GRADE IN LIEU OF THE ABOVE TOE DOWN REQUIREMENTS. THE HORIZONTAL DIMENSIONS OF TOE DOWNS SHALL NOT BE LESS THAN SIX (6) INCHES.
 - CONCRETE COLLARS ARE TO BE USED TO CONNECT STORM PIPE SEGMENTS, PLEASE REFER TO SHEET C06.022 FOR CONCRETE COLLAR DETAIL.

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 COVERING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

HERON VALLEY PHASE 1

STORM LINE A PLAN AND PROFILE

SHEET
C08.10

6/24/25

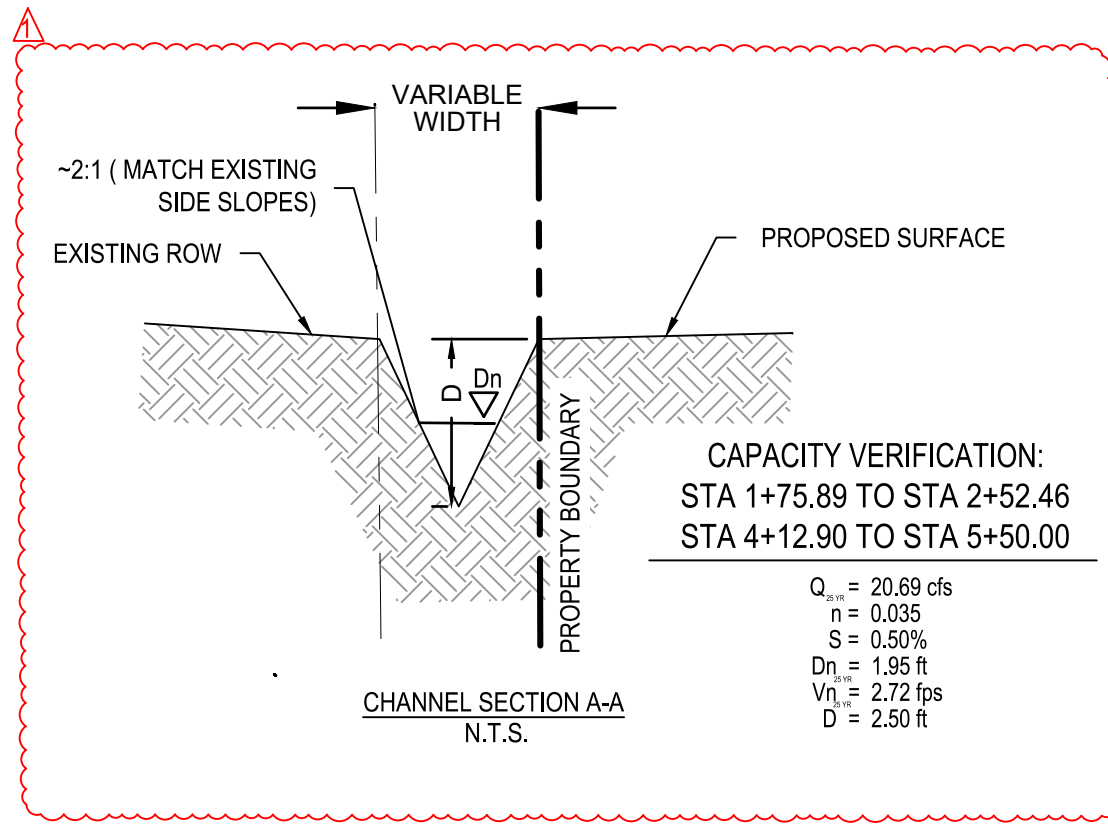
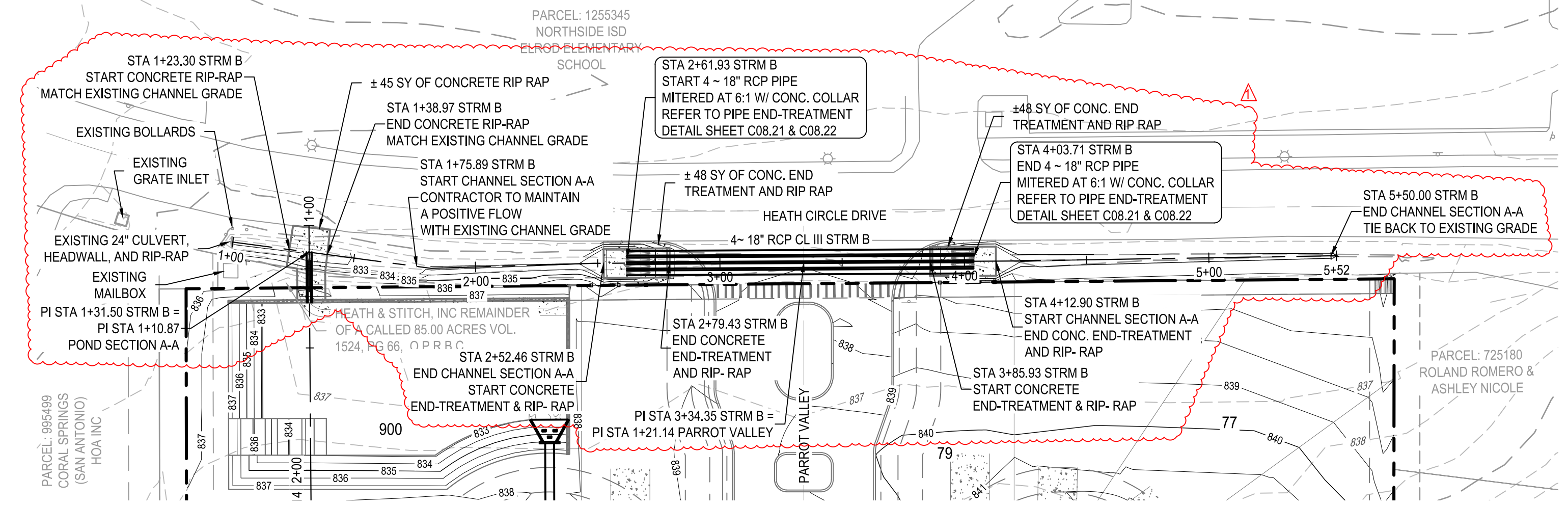
127935

DAVID R. BARNHAUX
REGISTERED PROFESSIONAL ENGINEER

DATE	REV	DESCRIPTION
APR		



PIPE	EXISTING Q(CFS)	PROPOSED Q (CFS)	V (F/S)	D (FT)
STRM B - CULVERT	21.11	20.69	3.45	1.19



CONSTRUCTION DOCUMENTS FOR THE PROJECT WERE PREVIOUSLY SEALED BY DAVID R. BABINEAUX, P.E. #127835 DATED 8/24/2025. COPIES OF WHICH ARE ON FILE AT THE OFFICES OF BGE INC. I. OMAR A. RODRIGUEZ TOVAR, P.E. #159007 DATED 02/20/2026 AM SEALING FOR REVISIONS LABELED AS ONE AND CLOUDED HEREON.

LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED STORM DRAIN w/ MANHOLE
	PROPOSED CURB INLET
	PROPOSED WASTEWATER LINE
	PROPOSED WATER LINE
	EXISTING FORCE MAIN
	PROPOSED ELECTRIC
	PROPOSED GAS LINE
	EXISTING AT&T TELECOM LINE
	PROPOSED WASTEWATER SERVICES
	PROPOSED WATER SERVICES
	DIRECTION OF PIPE FLOW
	UTILITY CROSSING
	PROPOSED SWALE FLOWLINE

PROFILE LEGEND

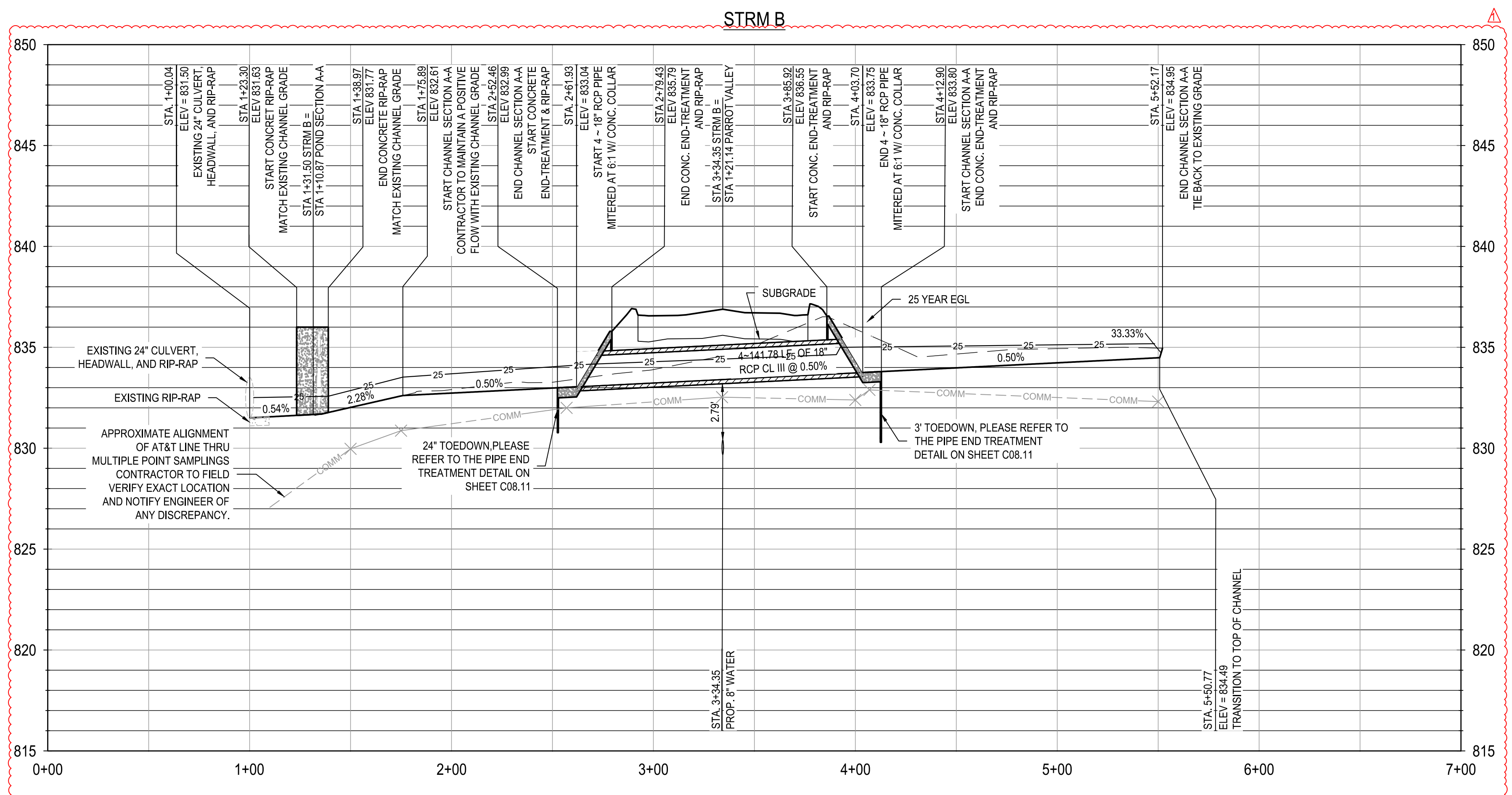
	PROPOSED STORM PIPE
	PROPOSED GROUND
	PROPOSED SUBGRADE
	EXISTING GROUND
	25/100 YEAR HGL

* ALL WATER/WASTEWATER SYMBOLS ARE NOT TO SCALE, AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES. REFER TO DETAILS SHOWN IN THIS PLAN SET.

- NOTES:
- IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SIDING. EIGHTY FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE.
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 - CONCRETE COLLARS ARE TO BE USED TO CONNECT STORM PIPE SEGMENTS. PLEASE REFER TO SHEET C08.022 FOR CONCRETE COLLAR DETAIL.
 - CONTRACTOR TO INSTALL 2-PIECES SLEEVE FOR EXISTING CROSSING AT&T LINES PER AT&T SPECIFICATIONS.

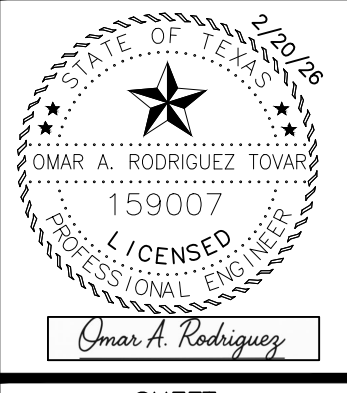
TRENCH EXCAVATION SAFETY PROTECTION

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 COVERING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

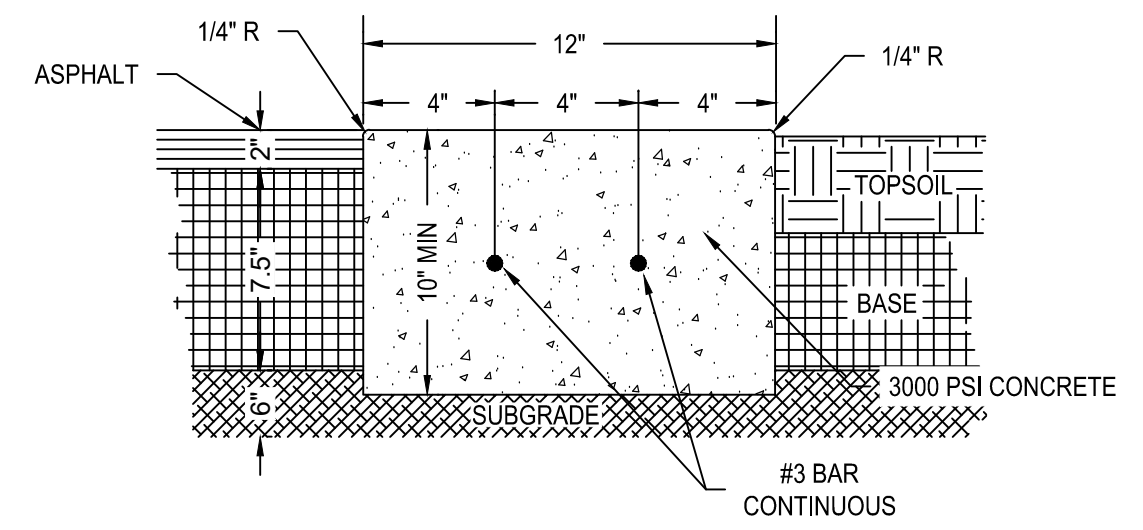
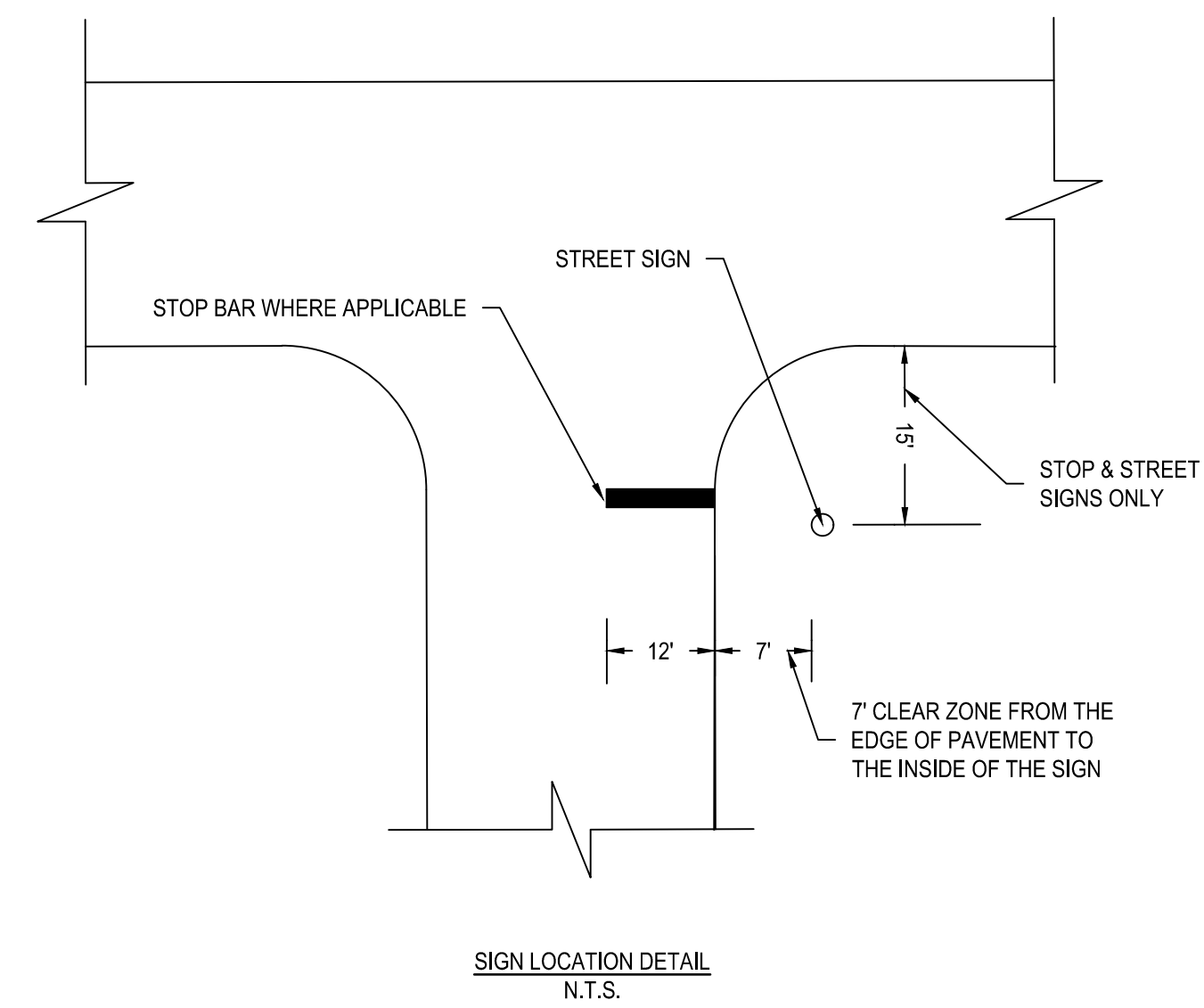


Approved by COSA Public Works
By:
Date: 3/10/2026

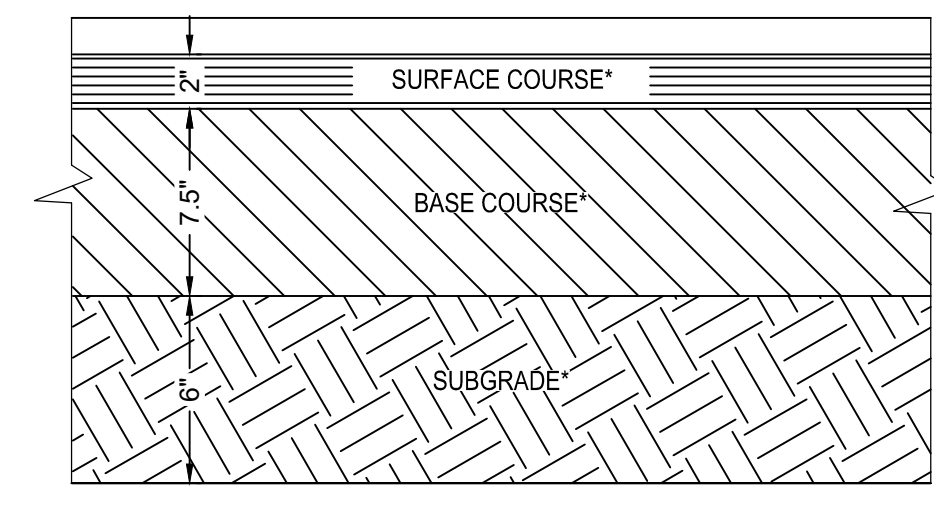
HERON VALLEY PHASE 1
STORM LINE B PLAN AND PROFILE



REV	DATE	DESCRIPTION



- NOTES:
1. REINFORCING STEEL SHALL BE GRADE 60 DEFORMED BARS CONFORMING TO ASTM A 615/A 615M OR ASTM A 706/A 706M.
 2. WIRE TIES SHALL BE 16 GAUGE OR HEAVIER BLACK ANNEALED STEEL WIRE.



VALUES AND RECOMMENDATIONS THAT SHALL BE USED ARE FOUND IN THE ABOVE REFERENCED GEOTECHNICAL INVESTIGATION REPORT. CONTRACTOR SHALL REFERENCE THE RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL INVESTIGATION REPORTS PREPARED BY:

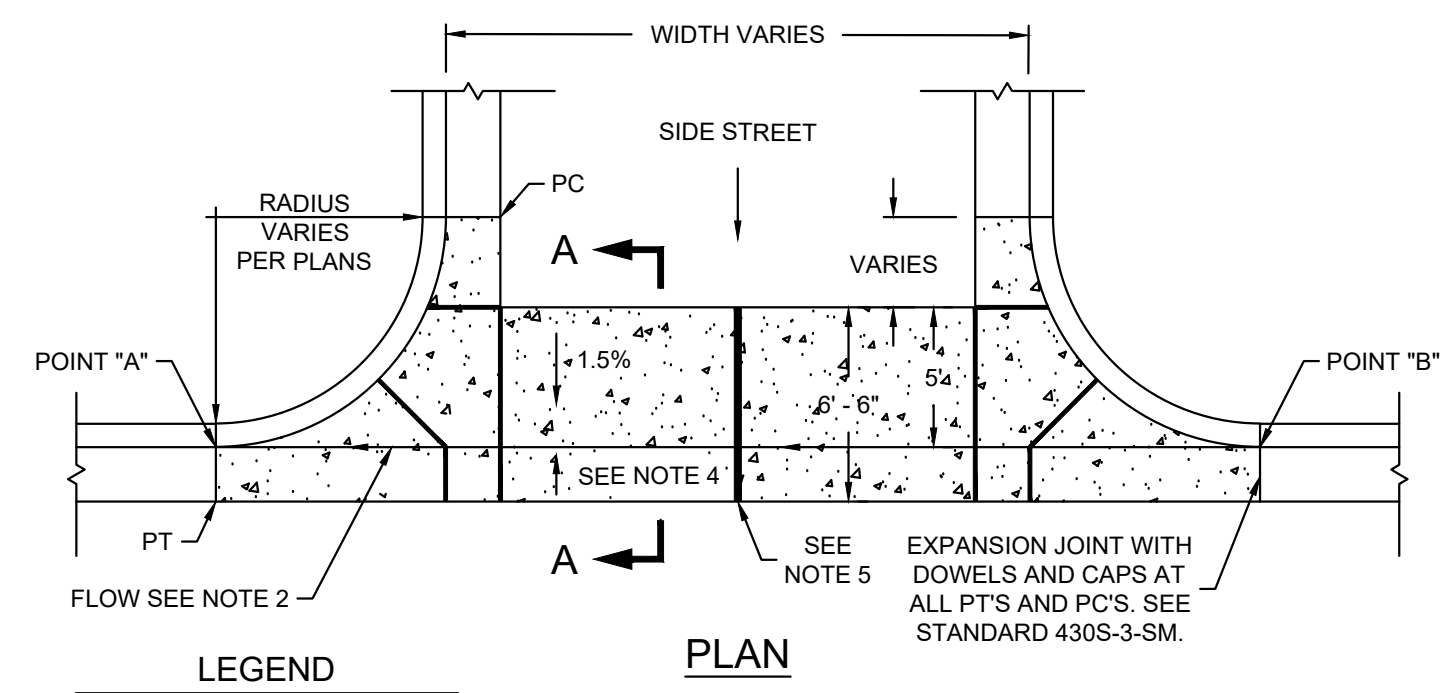
BEA
PROJECT NO. 12-22-0015
JANUARY 27, 2023

TYPICAL PAVEMENT DETAIL
N.T.S.

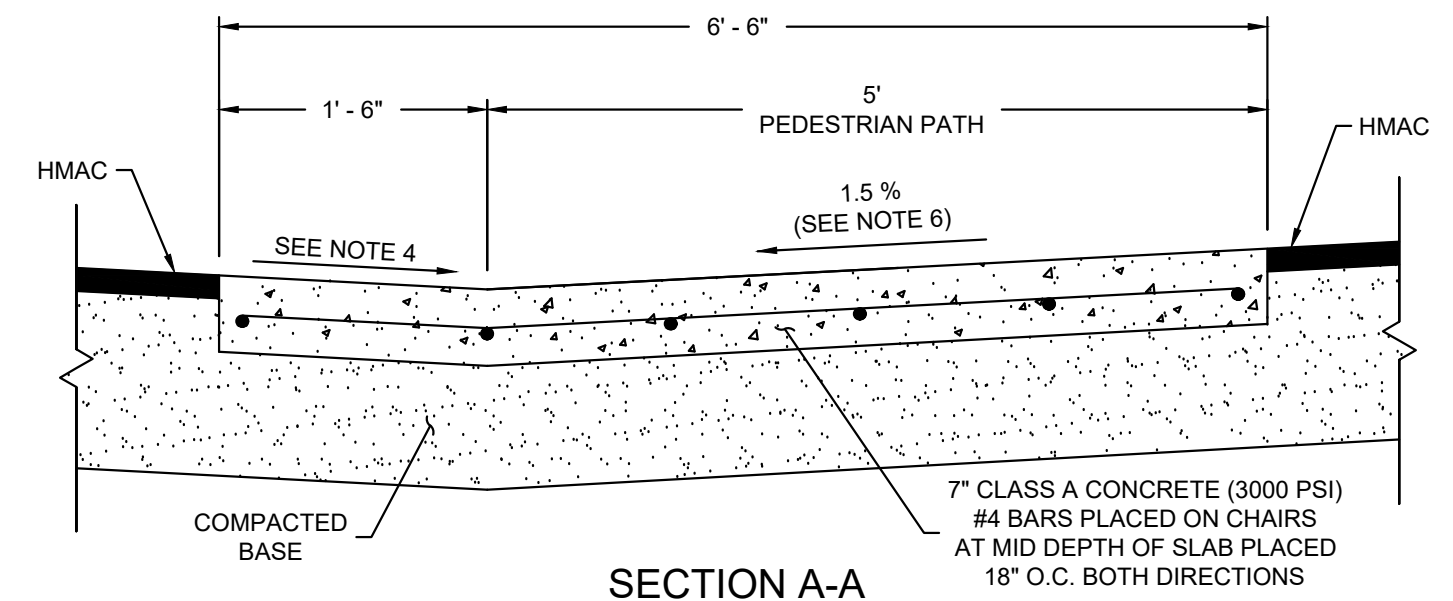
DESIGNED BY: ####
REVIEWED BY: ####
DRAWN BY: ####



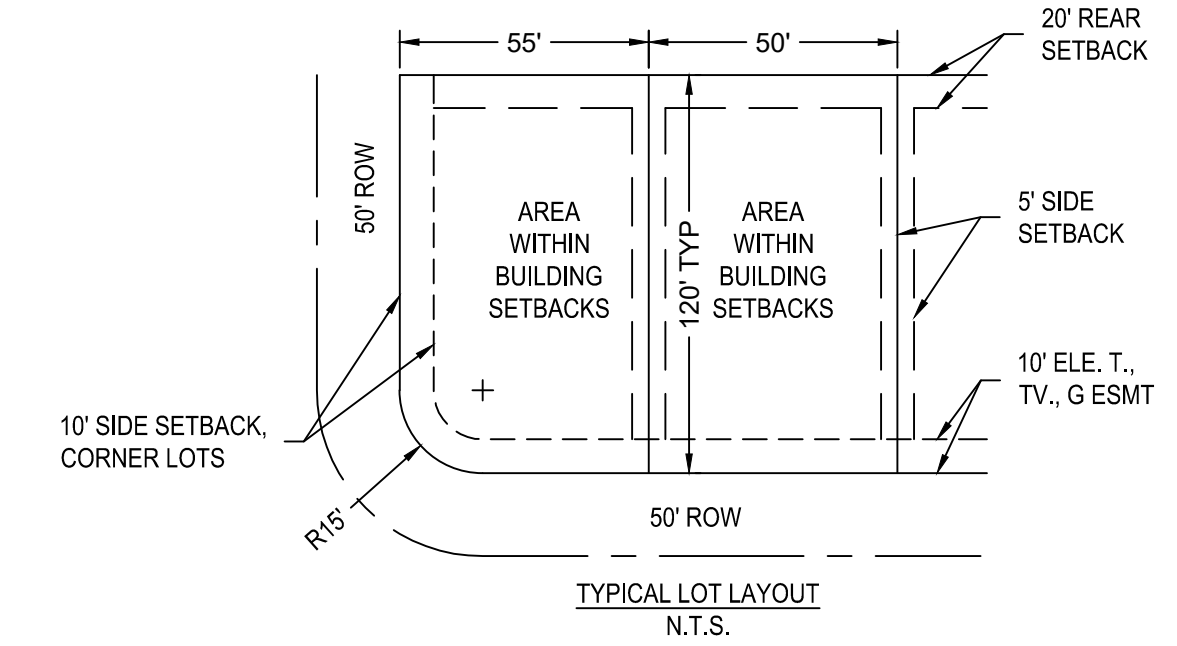
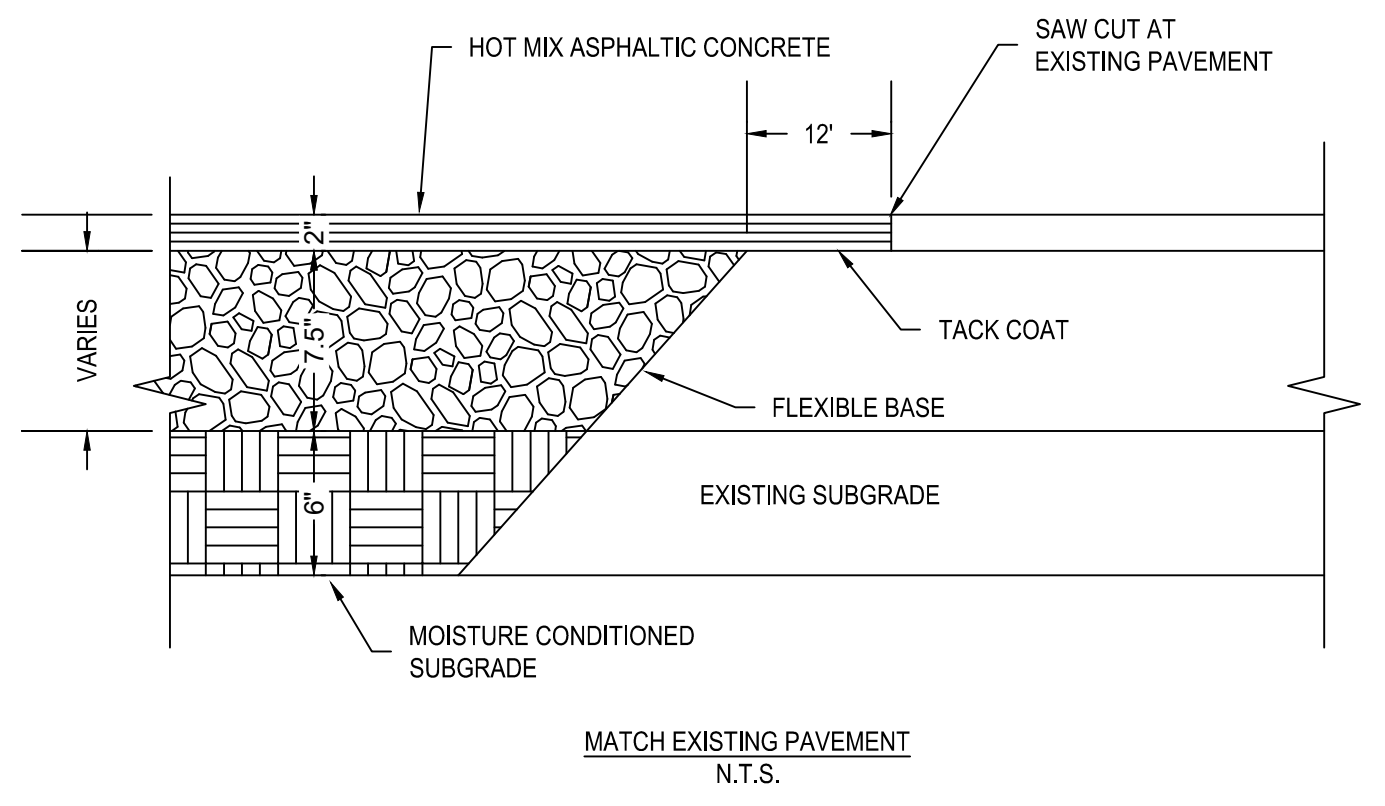
BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
Tel: 214-336-0000 www.bgeinc.com
EPA Registration No. P-1046



LEGEND
CONTROL JOINTS -
3/4\"/>

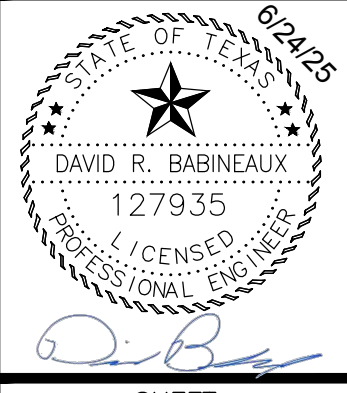


- NOTES:
1. MONOLITHIC CURB AND GUTTER SHALL BE MEASURED BY PLAN QUANTITY PER SQUARE FEET AND PAID AS VALLEY GUTTER.
 2. MINIMUM SLOPE FROM POINT "A" TO POINT "B" SHALL BE 0.50%.
 3. ALL CONTROL JOINT WILL BE TOOL JOINT OR SAW CUT WITH WALK BEHIND SAW.
 4. MATCH CROSS-SLOPE OF ROAD 2% TYPICAL ~ 1.5% MIN. OR 3% MAX.
 5. INSTALL COLD JOINT IF NEEDED TO MAINTAIN TRAFFIC. SEE DETAIL 420S-3-SM.
 6. IF A PEDESTRIAN PATH IS NOT REQUIRED, THE SLOPE MAY BE ADJUSTED TO MATCH THE ROAD OR 6% MAX.



CONCRETE VALLEY GUTTER

HERON VALLEY PHASE 1
STREET & DRAINAGE DETAILS
(SHEET 1 OF 5)

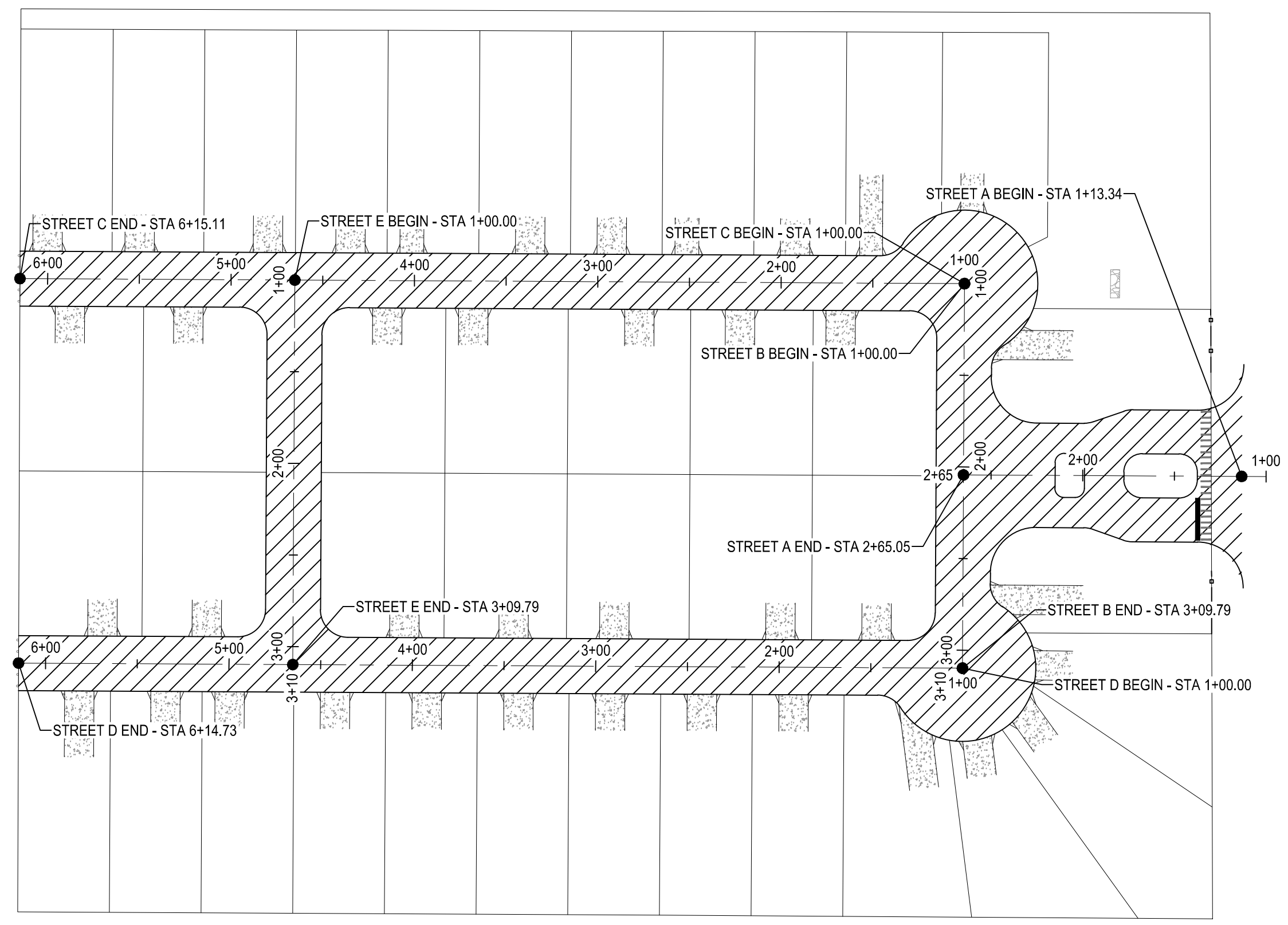
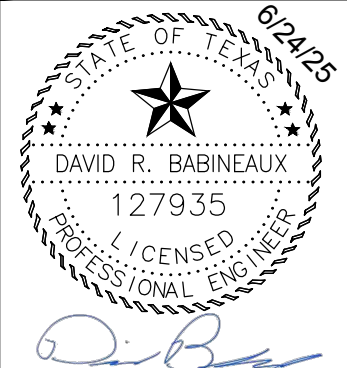


G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\03_CADD\01_Shis\009.21 STREET & DRAINAGE DETAILS (SHEET 2 OF 5).dwg Layout: STREET & DRAINAGE DETAILS (SHEET 1 OF 5) Plotted: 6/24/2025 4:11:03 PM By: Calderon



BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-358-3360 www.bgeenergy.com
EPC Registration No. P-1040

HERON VALLEY PHASE 1
STREET & DRAINAGE DETAILS
(SHEET 2 OF 5)

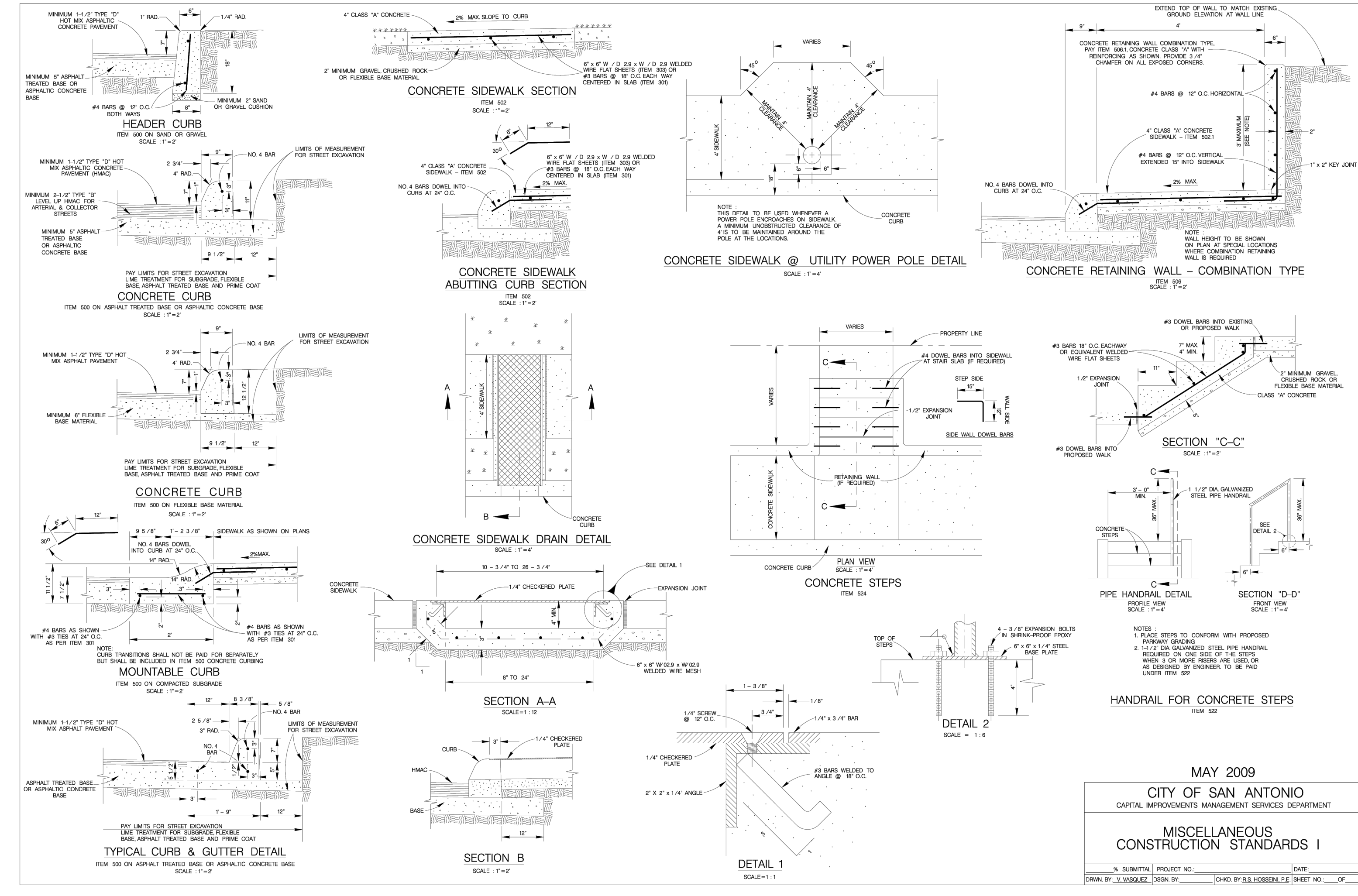


PAVEMENT DESIGN SCHEMATIC
1" = 60'

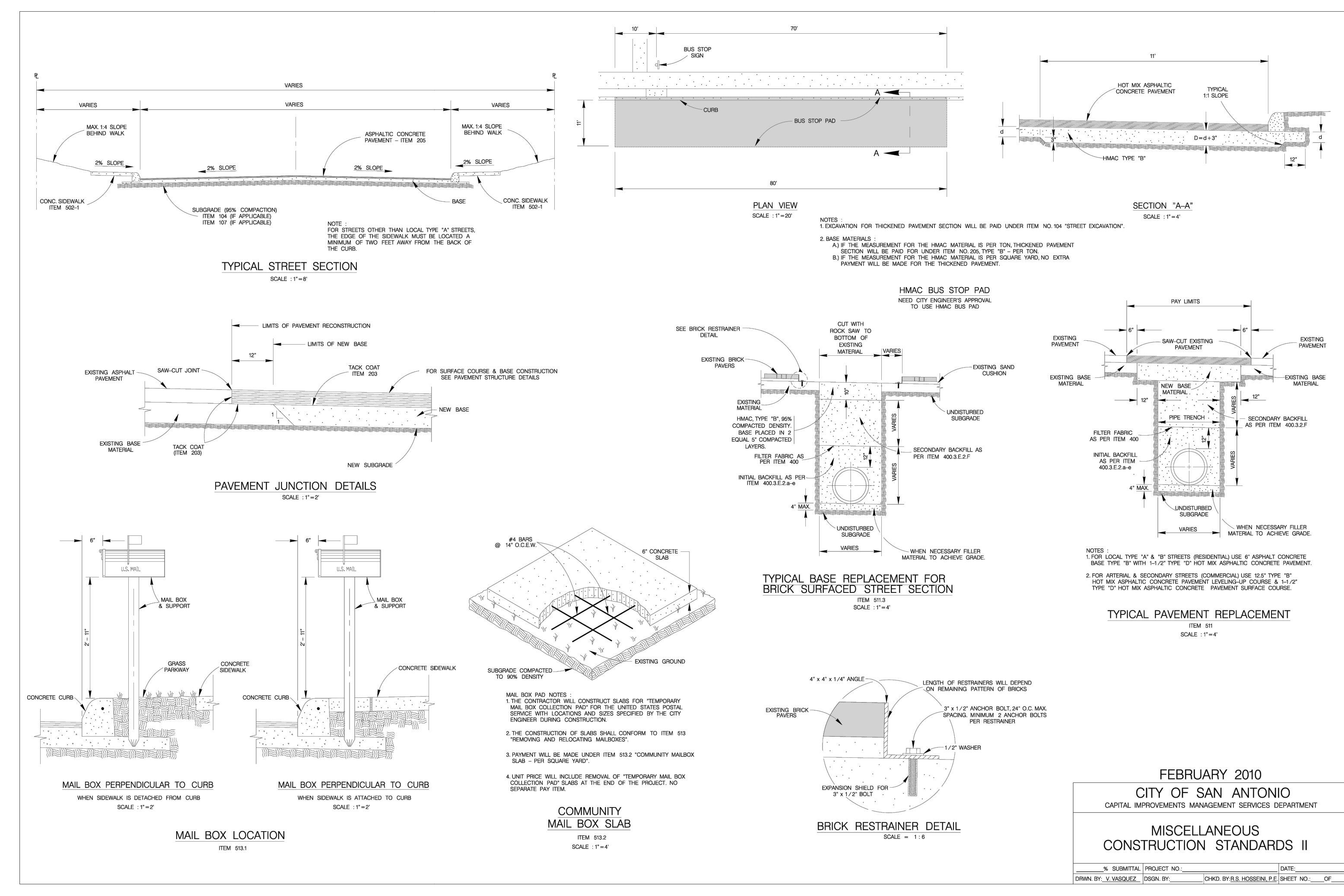
STREET CLASSIFICATION	ASPHALTIC CONCRETE TYPE D (IN)	ASPHALTIC CONCRETE TYPE B (IN)	LIMESTONE BASE (IN)	GEOGRID	SUBGRADE (IN)	STRUCTURAL NUMBER
LOCAL A STREET (NO BUS TRAFFIC)	2.00	-	7.50	NO	6	2.41

NOTE:
1. REFERENCE GEOTECHNICAL REPORT (BEA NO. P12-21-306R) FOR BORING INFORMATION AND CBR LOCATIONS.

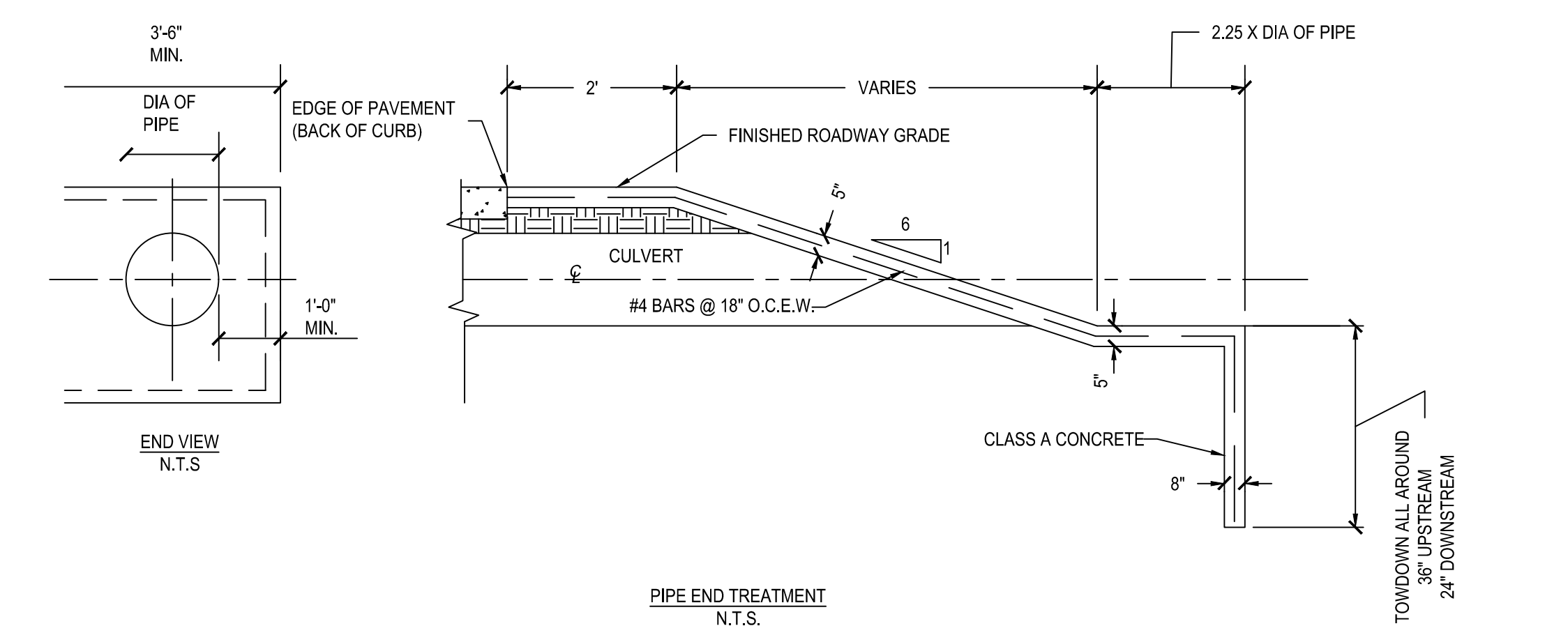
LEGEND:
 LOCAL A STREET* -
 STREET A: STA. 1+00 TO 2+65.05
 STREET B: STA. 1+00 TO 3+09.79
 STREET C: STA. 1+00 TO 6+15.11
 STREET D: STA. 1+00 TO 6+14.73
 STREET E: STA. 1+00 TO 3+09.79



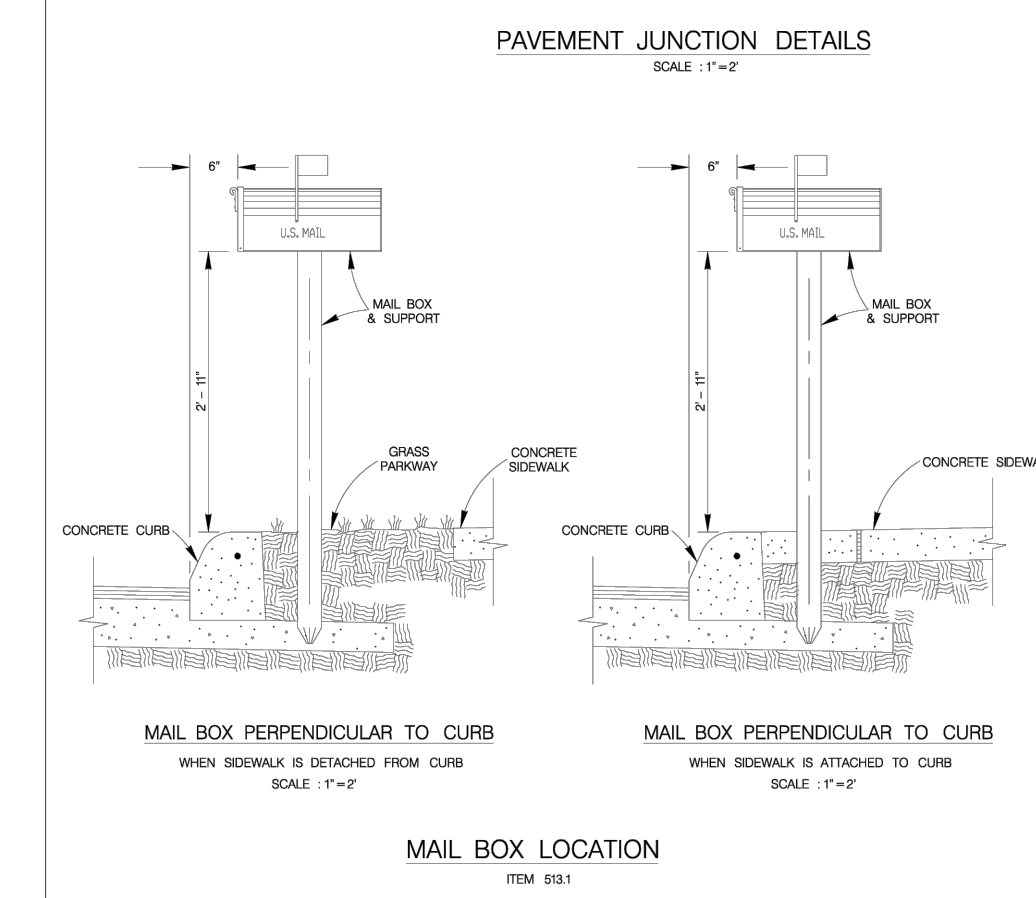
MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
MISCELLANEOUS CONSTRUCTION STANDARDS I
DRAWN BY: V. VASQUEZ, DESIGNED BY: CHAD R. B. LOSSEN, SHEET NO. 01 OF 01



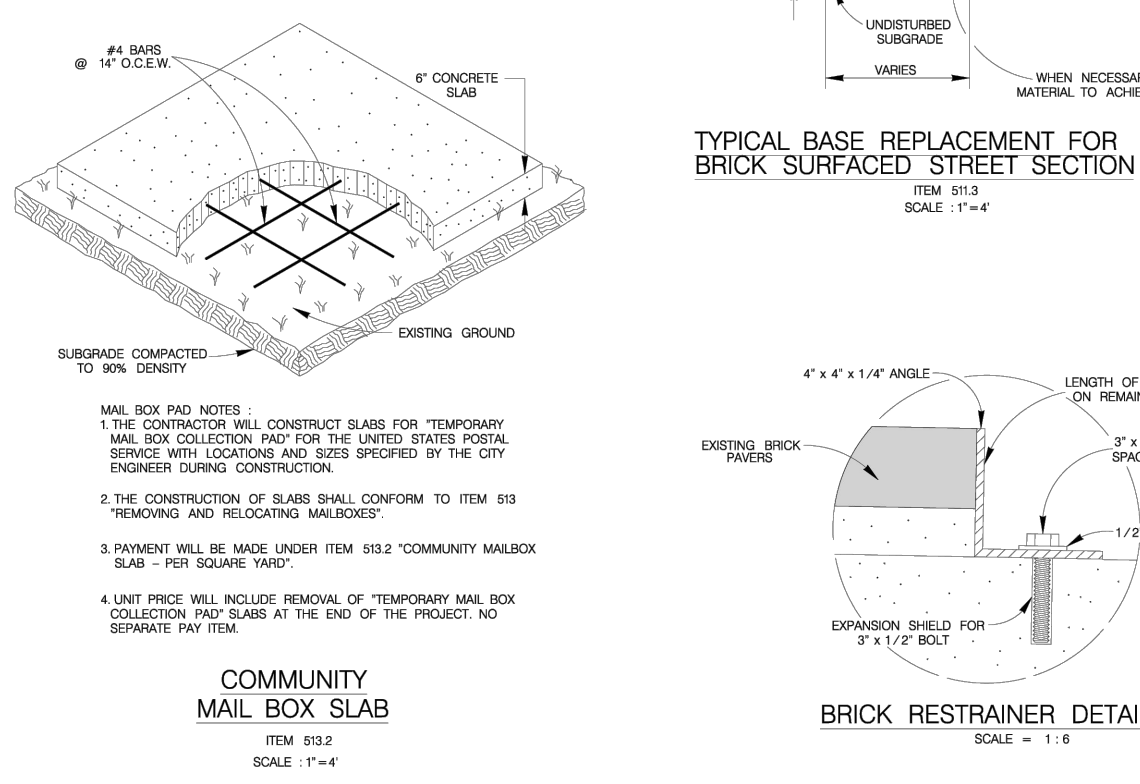
FEBRUARY 2010
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
MISCELLANEOUS CONSTRUCTION STANDARDS II
DRAWN BY: V. VASQUEZ, DESIGNED BY: CHAD R. B. LOSSEN, SHEET NO. 01 OF 01



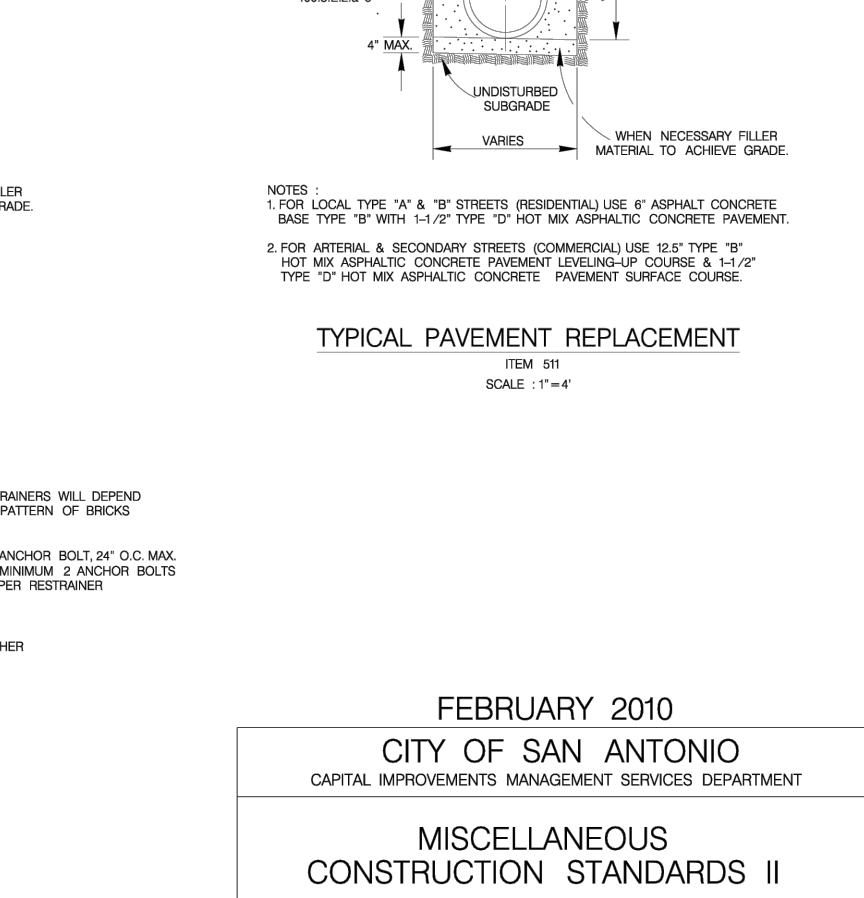
PIPE END TREATMENT N.T.S.



MAIL BOX LOCATION ITEM 531 SCALE 1" = 4'

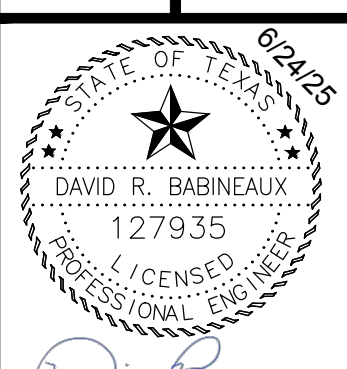


COMMUNITY MAIL BOX SLAB ITEM 532 SCALE 1" = 4'

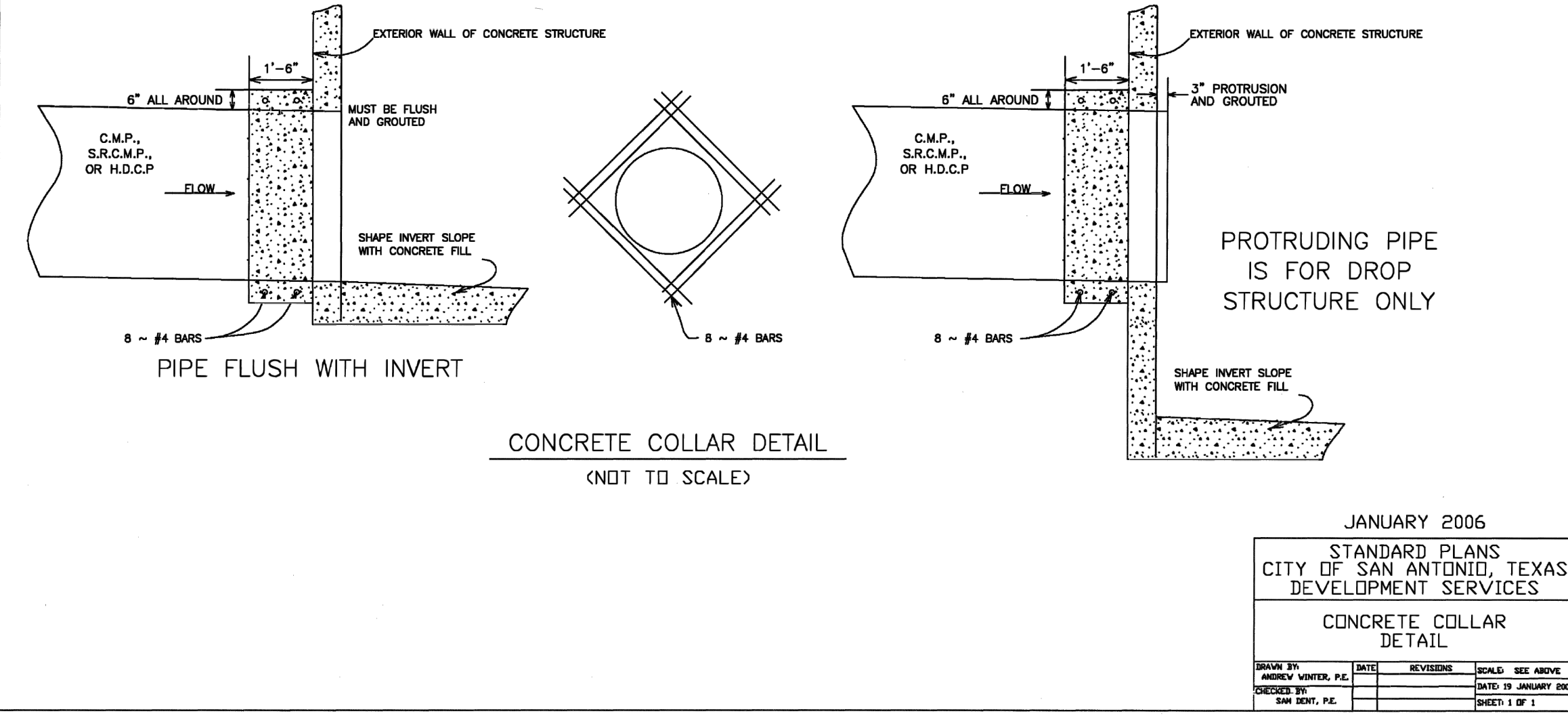


TYPICAL PAVEMENT REPLACEMENT ITEM 511 SCALE 1" = 4'

G:\T\C\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\103_CADD\01_Unit\103_CADD\01_Street & Drainage Details (Sheet 2 of 5).dwg Layout: STREET & DRAINAGE DETAILS (SHEET 2 OF 5) Plotted: 6/24/2025 4:11:44 PM By: Calderon

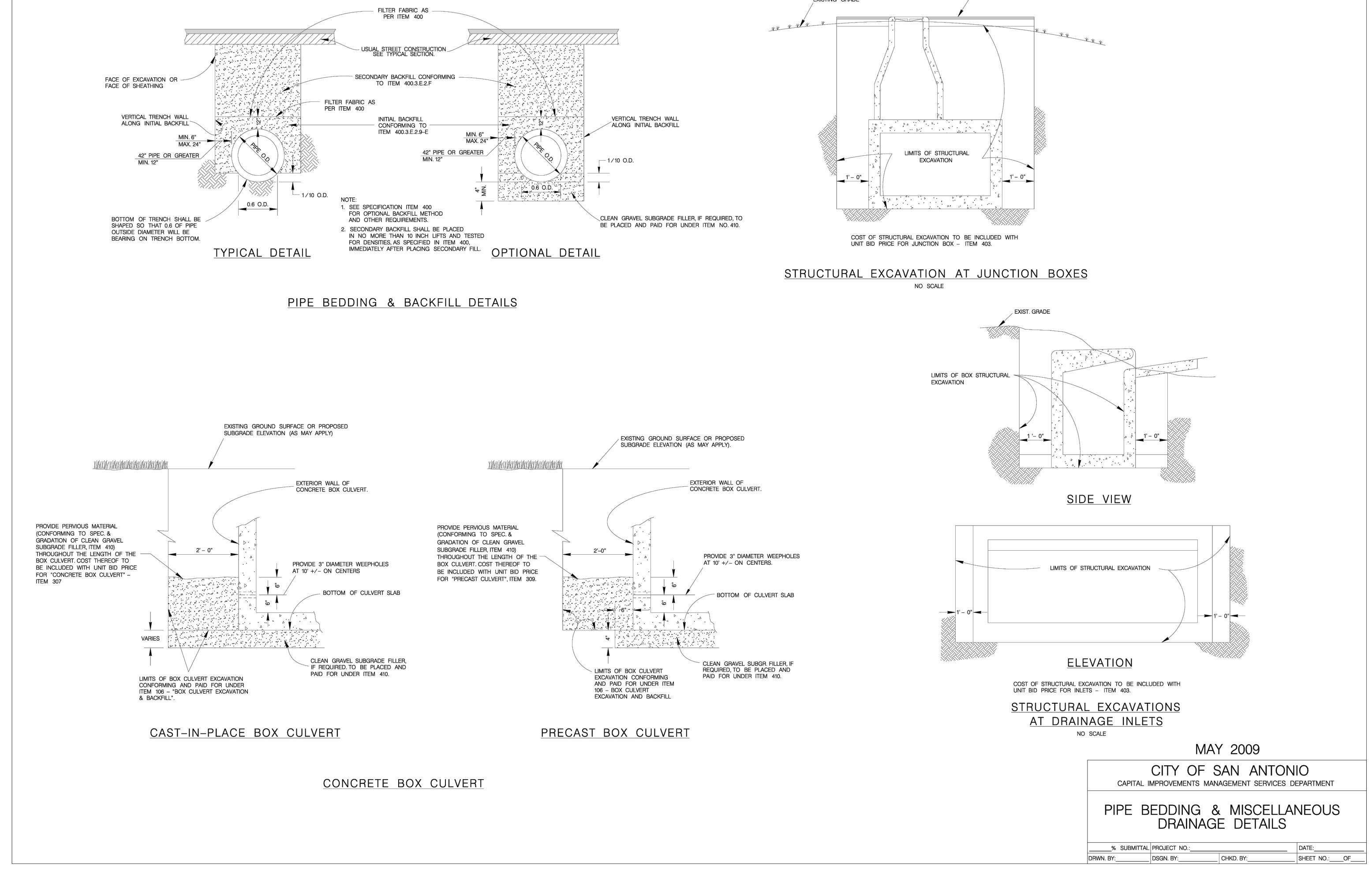


1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A," 3000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM A-15. THE DEFORMATION SHALL CONFORM TO ASTM A-305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (3,000 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).



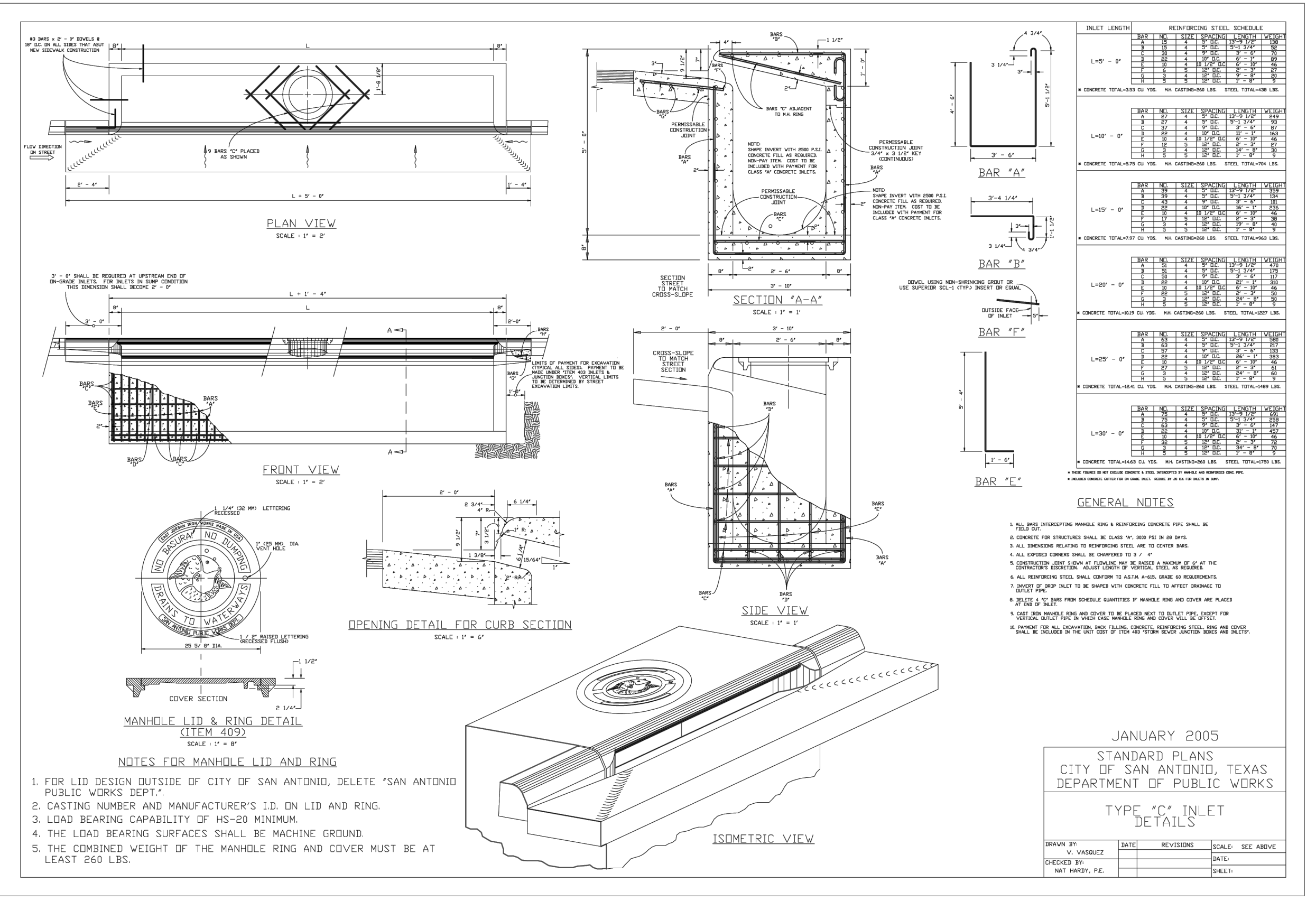
JANUARY 2006
STANDARD PLANS
CITY OF SAN ANTONIO, TEXAS
DEPARTMENT OF PUBLIC WORKS
CONCRETE COLLAR
DETAIL

DATE	REVISIONS	SCALE	SEE ABOVE
01/05/06	ISSUED	AS SHOWN	SHEET 3 OF 5



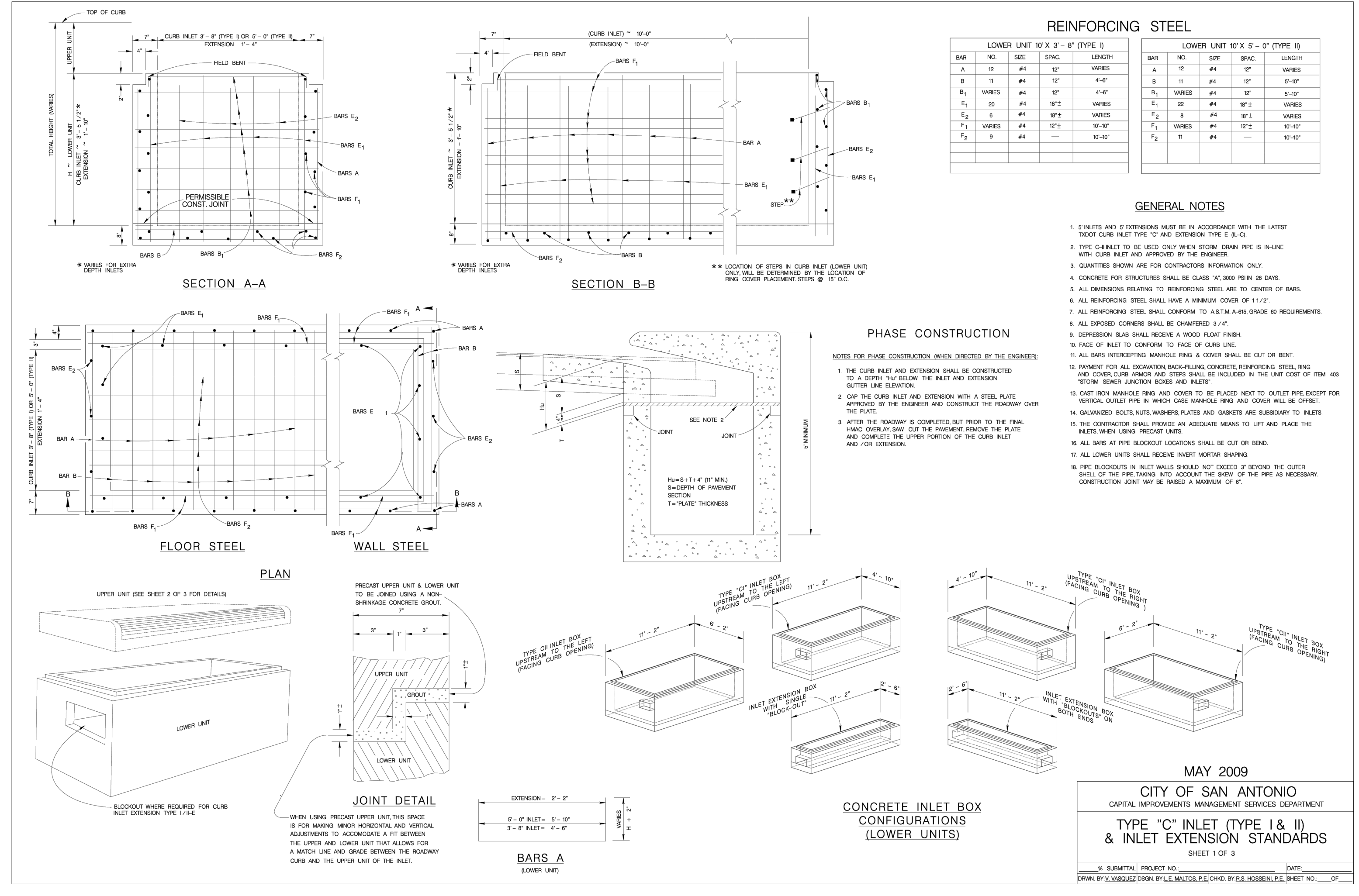
MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
PIPE BEDDING & MISCELLANEOUS
DRAINAGE DETAILS

DATE	REVISIONS	SCALE	SEE ABOVE
05/09/09	ISSUED	AS SHOWN	SHEET NO. 09



JANUARY 2005
STANDARD PLANS
CITY OF SAN ANTONIO, TEXAS
DEPARTMENT OF PUBLIC WORKS
TYPE 'C' INLET
DETAILS

DATE	REVISIONS	SCALE	SEE ABOVE
01/05/05	ISSUED	AS SHOWN	SHEET NO. 05



MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
TYPE 'C' INLET (TYPE 1 & II)
& INLET EXTENSION STANDARDS
SHEET 1 OF 3

DATE	REVISIONS	SCALE	SEE ABOVE
05/09/09	ISSUED	AS SHOWN	SHEET NO. 09

24" dia. Headwall (with dissipators)

Approximate weight of product: 4,000 lbs

Concrete and steel specifications designed to meet Texas Highway Department standards

Notes:
- Consult manufacturer before handling

CAPITAL PRECAST, INC.
6905 SOUTH OLD BASTROP HWY
SAN MARCOS, TEXAS 78666
PH. (830) 666-6200

FOR 24" Headwall

JOB	DATE	Rev. No.	SHEET
DRAWN	12/1/2015		1 OF 1
FILE	catalog/headwalls/24 Headwall		

REINFORCING STEEL (FOR Hu = 11')

UPPER UNIT 10' X 3'-6" (TYPE B)				UPPER UNIT 10' X 6" (TYPE B)					
BAR NO.	SIZE	SPAC.	LENGTH	WEIGHT	BAR NO.	SIZE	SPAC.	LENGTH	WEIGHT
A	#4	12"	30'-0"	60	A	#4	12"	30'-0"	60
B	#4	12"	30'-0"	60	B	#4	12"	30'-0"	60
C	#4	12"	30'-0"	60	C	#4	12"	30'-0"	60
D	#4	12"	30'-0"	60	D	#4	12"	30'-0"	60
E	#4	12"	30'-0"	60	E	#4	12"	30'-0"	60
F	#4	12"	30'-0"	60	F	#4	12"	30'-0"	60
G	#4	12"	30'-0"	60	G	#4	12"	30'-0"	60
H	#4	12"	30'-0"	60	H	#4	12"	30'-0"	60
I	#4	12"	30'-0"	60	I	#4	12"	30'-0"	60
J	#4	12"	30'-0"	60	J	#4	12"	30'-0"	60
K	#4	12"	30'-0"	60	K	#4	12"	30'-0"	60
L	#4	12"	30'-0"	60	L	#4	12"	30'-0"	60
M	#4	12"	30'-0"	60	M	#4	12"	30'-0"	60
TOTAL WEIGHT				620 LB.	TOTAL WEIGHT				759 LB.

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

DEPRESSION SLAB		UPPER UNIT (ONLY)	
DEPRESSION SLAB	C.Y.	UPPER UNIT (ONLY)	C.Y.
10' INLET	0.7	10' X 3'-6" CURB INLET	1.9
10' EXTENSION	0.7	10' X 5'-0" CURB INLET	2.7
		EXTENSION	1.0

MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
TYPE "C" INLET (TYPE I & II) & INLET EXTENSION STANDARDS
SHEET 3 OF 3

G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01_Unit\103_CADD\01_Shts\C08.21 STREET & DRAINAGE DETAILS (SHEET 2 OF 5).dwg Layout: STREET & DRAINAGE DETAILS (SHEET 4 OF 5) Plotted: 6/24/2025 4:13:31 PM By: Calderon

JANUARY 2005
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
ELEVATED SIDEWALK & RETARD STANDARDS
SHEET 3 OF 3

MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
TYPE "C" INLET (TYPE I & II) & INLET EXTENSION STANDARDS
SHEET 3 OF 3

DESIGNED BY: ###
REVIEWED BY: ###
DRAWN BY: ###

BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-358-3380 www.bge.com
TYPE Registration No. P-1046

HERON VALLEY PHASE 1
STREET & DRAINAGE DETAILS
(SHEET 4 OF 5)

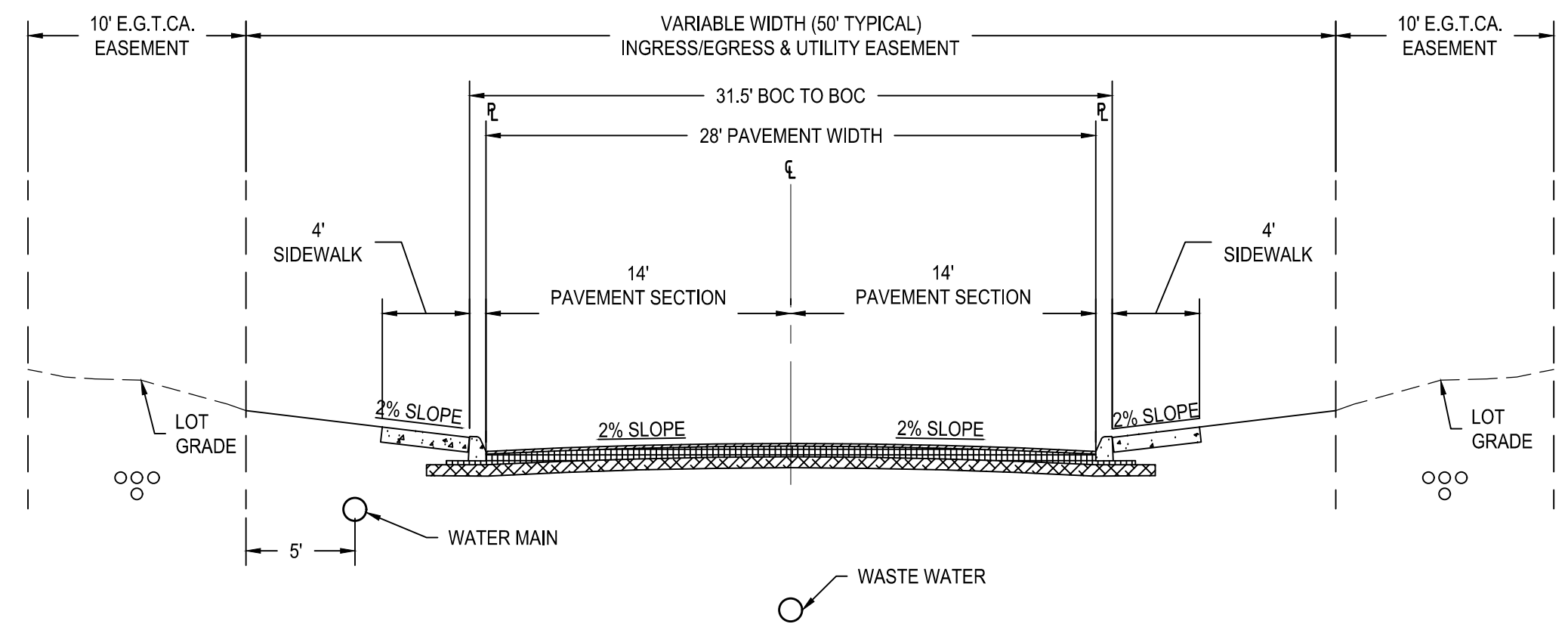
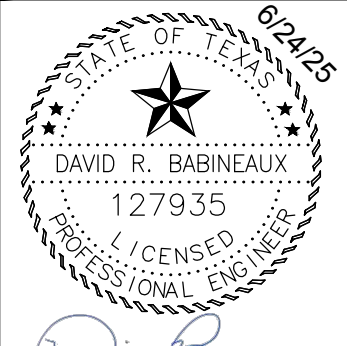
SHEET
C08.23

DESIGNED BY: ###
REVIEWED BY: ###
DRAWN BY: ###

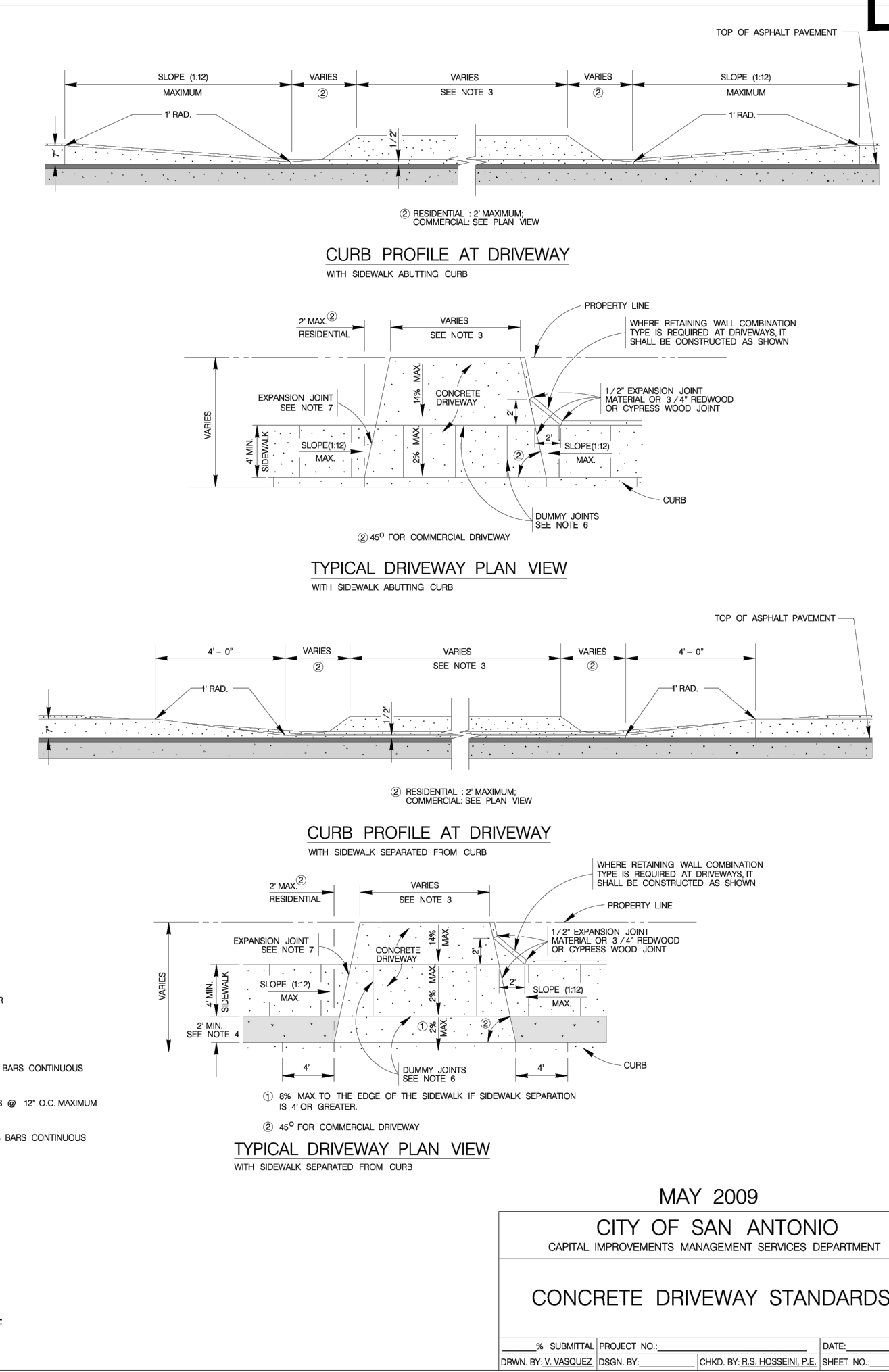
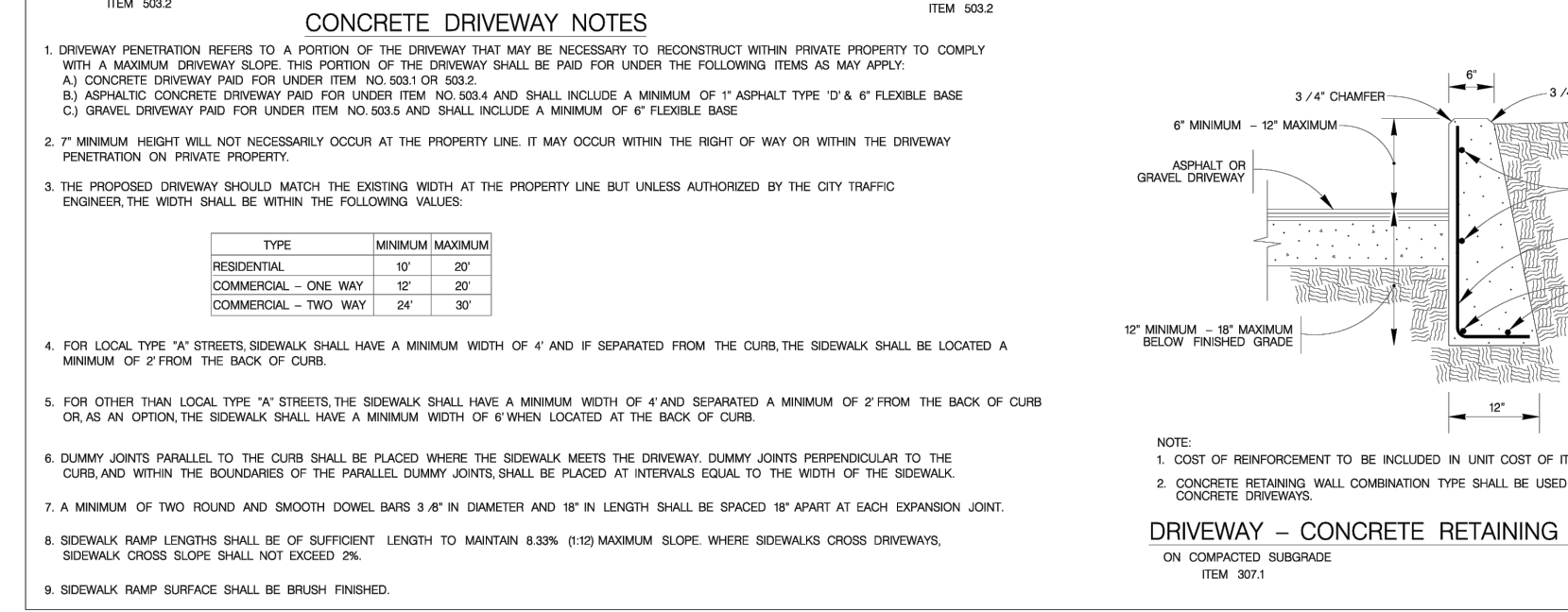
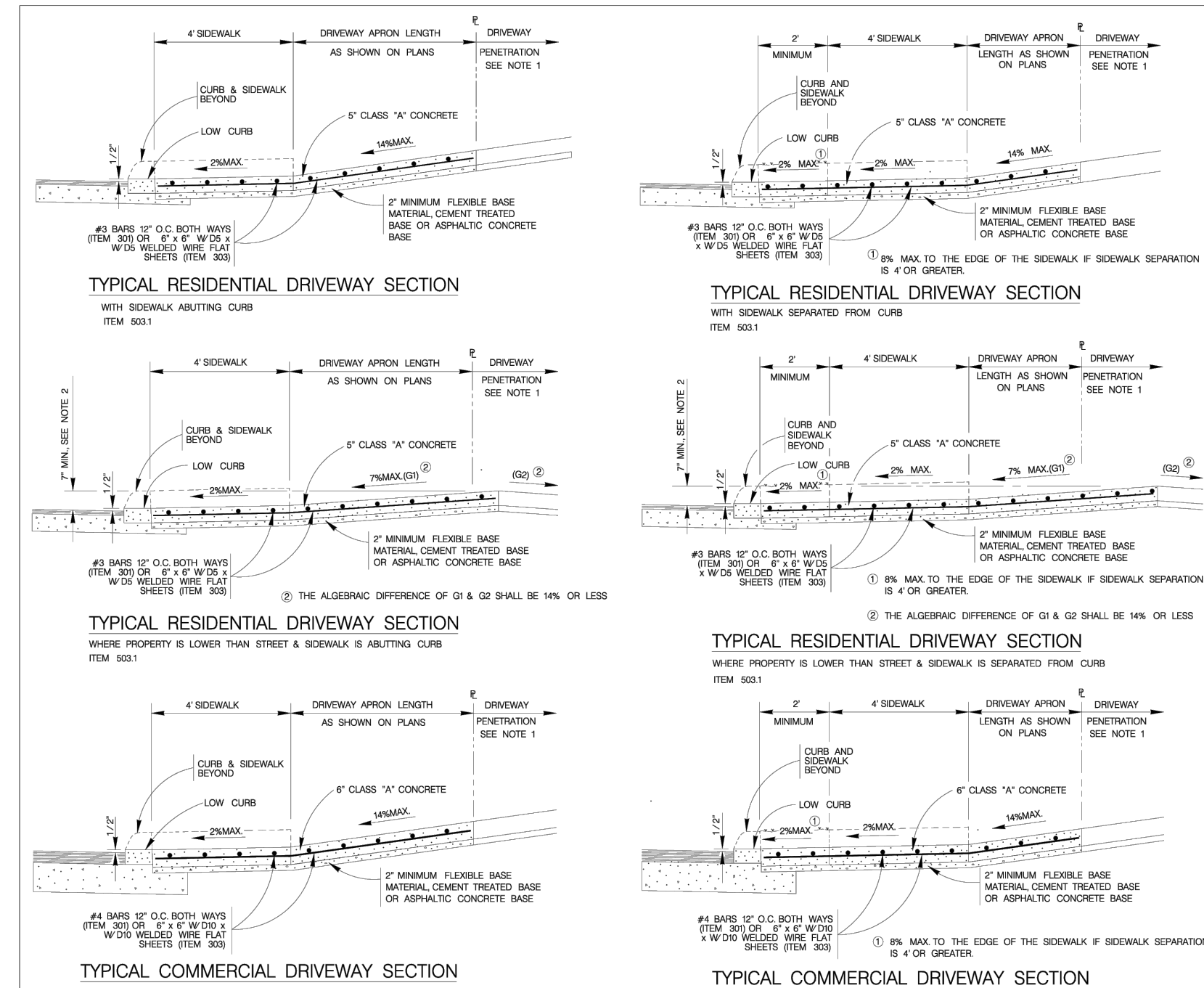


BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214.358.3360 www.bgeenergy.com
E-MAIL: Registration.No. P-1040

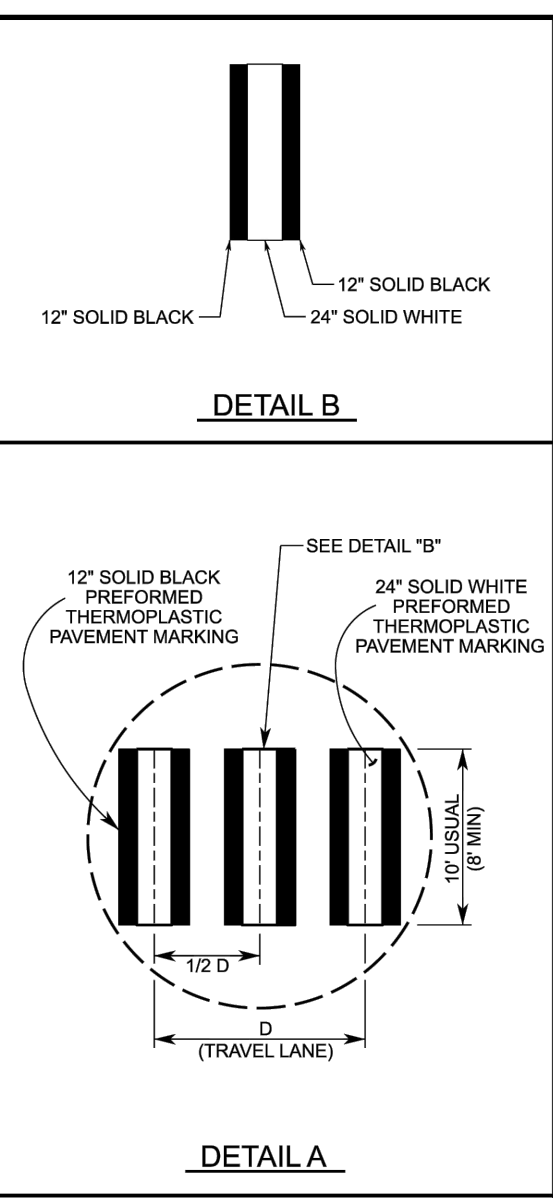
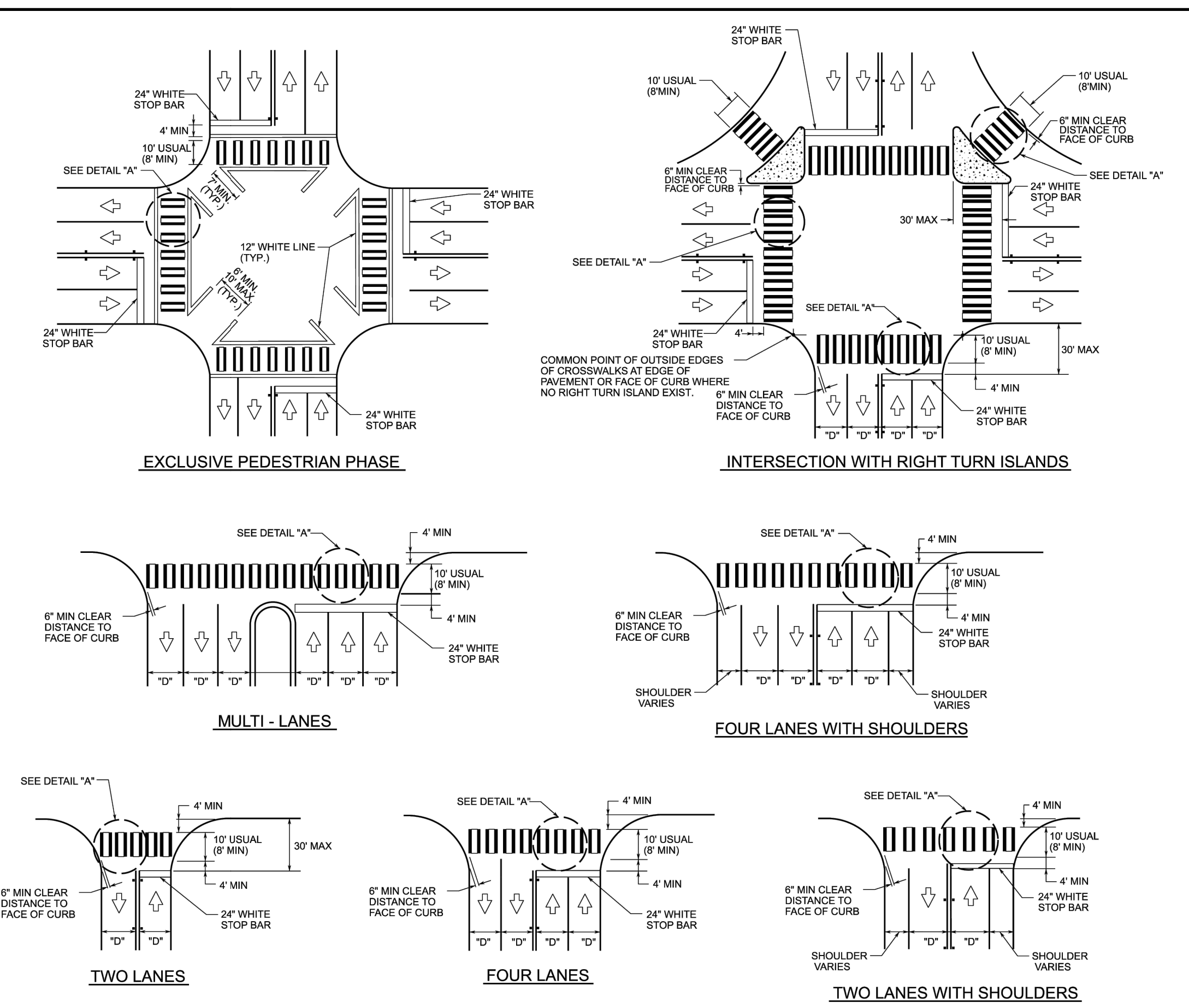
HERON VALLEY PHASE 1
STREET & DRAINAGE DETAILS
(SHEET 5 OF 5)



TYPICAL LOCAL TYPE A & UTILITY ASSIGNMENT
N.T.S.

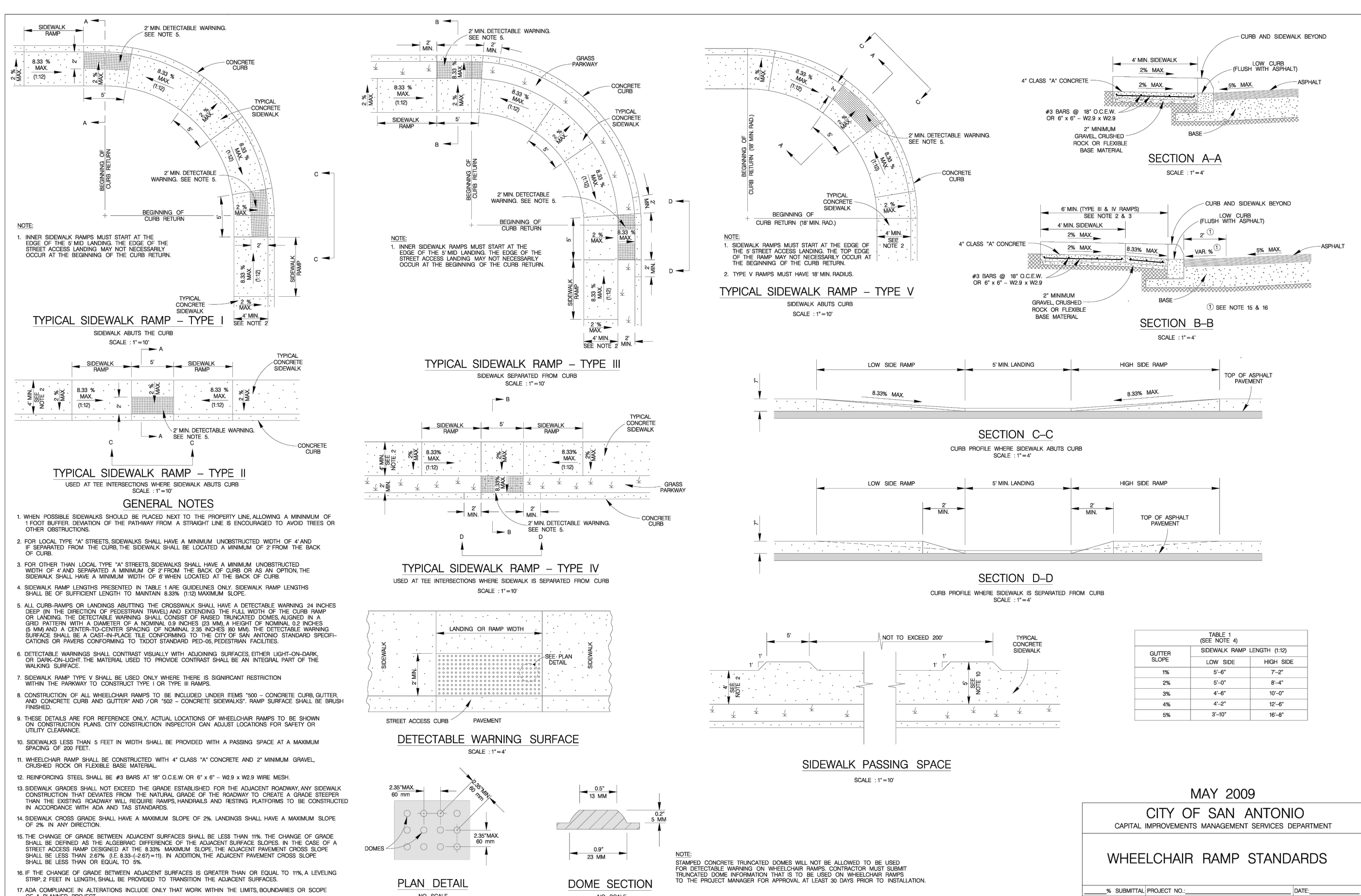


MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
CONCRETE DRIVEWAY STANDARDS



GENERAL NOTES
1. 10' IS EQUAL TO THE WIDTH OF TRAVEL LANE. SEE TEXAS MUTCD 305.10
2. PREFORMED THERMOPLASTIC MATERIAL SHALL BE SUPPLIED BY A MANUFACTURER LISTED ON TxDOT'S MATERIAL PRODUCER LIST (MPL).
3. PREPARED THERMOPLASTIC MATERIAL SHALL BE SUPPLIED BY A MANUFACTURER LISTED ON TxDOT'S MATERIAL PRODUCER LIST (MPL).

SEPTEMBER 2024
CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING AND OPERATIONS STANDARDS
TYPICAL CROSSWALK DETAILS
SHEET 01 OF 01
TCD-24



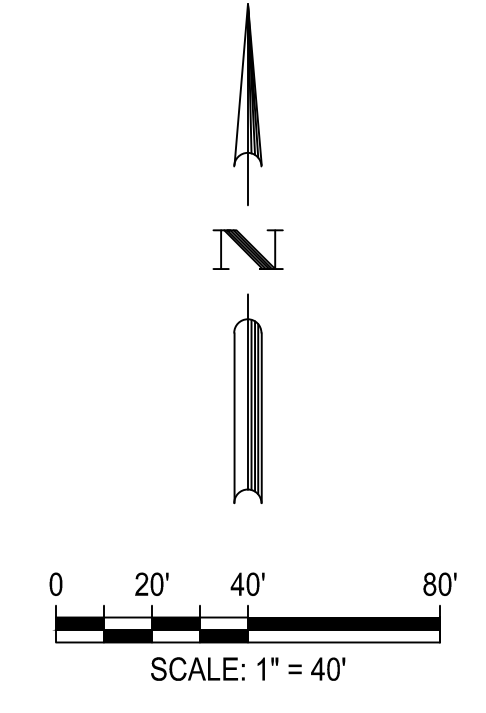
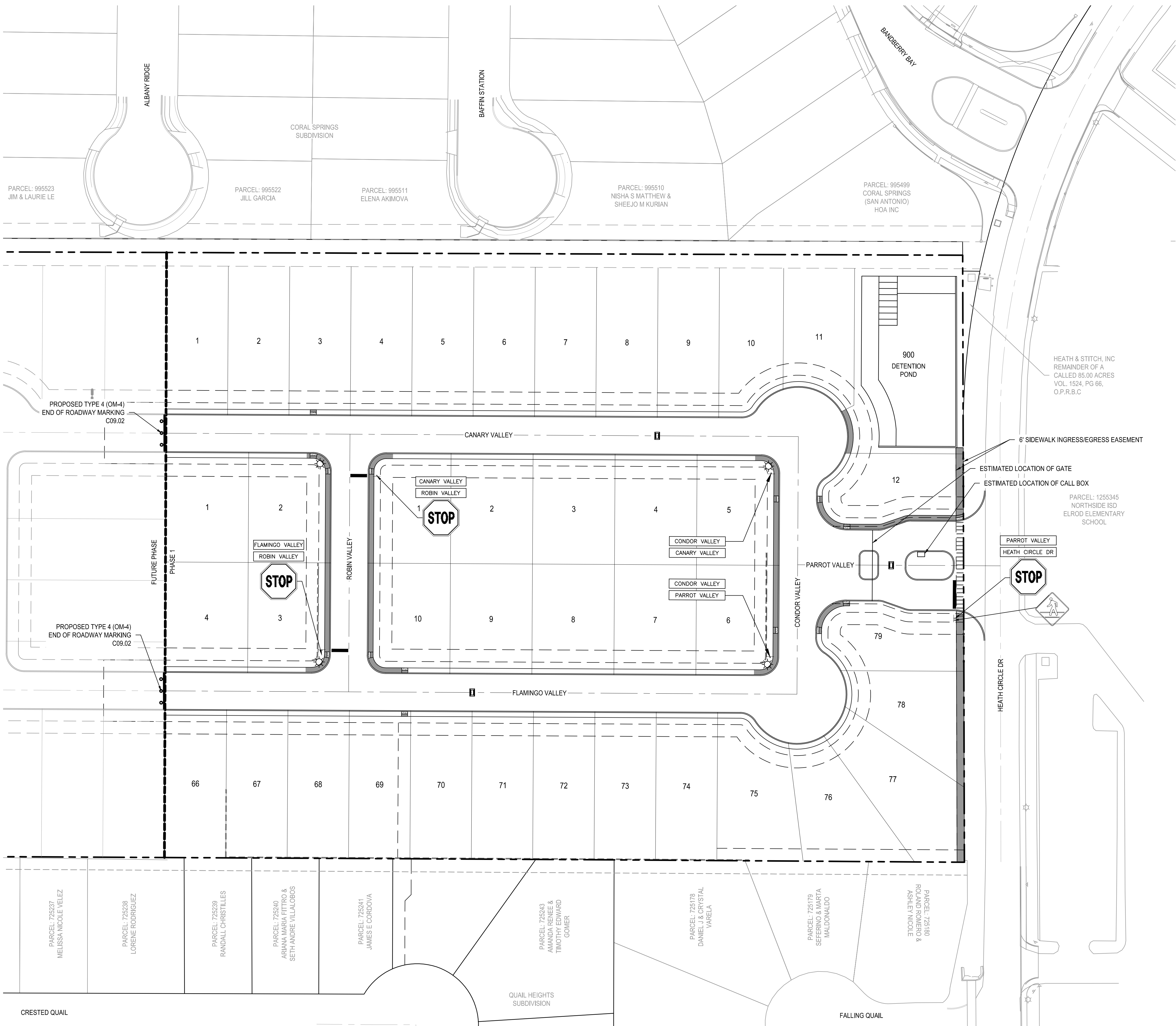
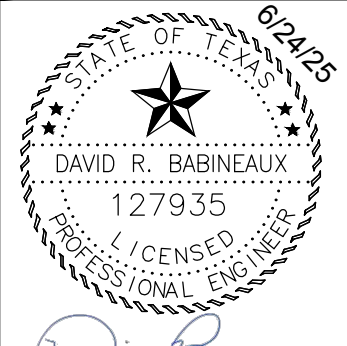
MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
WHEELCHAIR RAMP STANDARDS



BGE, INC.
7330 San Pedro, Suite 202
San Antonio, TX 78216
TEL: 214-368-3360 www.bgeinc.com
TXE Registration No. P-1049

HERON VALLEY PHASE 1

SIGNAGE PLAN



LEGEND

	PROPERTY BOUNDARY
	PHASE BOUNDARY
	EASEMENT
	PROPOSED 24" WHITE SOLID STOP BAR
	STREET LIGHT
	TYPICAL RAMP (SEE SHEET C08.24)
	RAISED REFLECTIVE HYDRANT MARKER
	PROPOSED PEDESTRIAN CROSSING SIGN: W11-2 30" X 30" (SEE SHEET C09.01 - SIGNAGE DETAILS (SHEET 1 OF 2) FOR SIGN MOUNTING DETAILS)
	PROPOSED STOP SIGN
	STREET END BARRICADE
	PEDESTRIAN CROSSING

- NOTES:**
- SIGN PLACEMENT AND STRIPING PLACEMENT PER TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
 - ALL SIGNS SHALL CONFORM TO THE 2011 TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), REVISION 1, NOVEMBER 2012
 - PAVEMENT MARKINGS TO BE HOT APPLIED THERMOPLASTIC PER TxDOT SPEC. DMS-8220.
 - CONTRACTOR SHALL INSTALL TEMPORARY STREET END MARKERS AND PLACE AT THE END OF EACH PHASE UNTIL PROJECT COMPLETION.
 - POSTED SPEED ALONG THIS PORTION OF LOCAL STREETS SHALL BE 25 MPH.
 - COUNTY WILL INSTALL SIGNAGE AND INVOICE THE OWNER. CONTRACTOR TO INSTALL ALL PAVEMENT MARKINGS AND HYDRANT MARKERS.
 - SEE SHEET C11.12
 - STREETLIGHTS TO BE PLACED ACCORDING TO CPS DESIGN. STREETLIGHT STAKING TO BE COORDINATED WITH CPS.

G:\TXC\Projects\San Antonio Projects\2938-00 - Heron Valley\01_Unit\03_CADD\01_Shis\C11.00 SIGNAGE PLAN.dwg Layout: SIGNAGE PLAN.dwg Plotted: 6/24/2025 4:18:08 PM By: Orodriguez

REV	DATE	DESCRIPTION

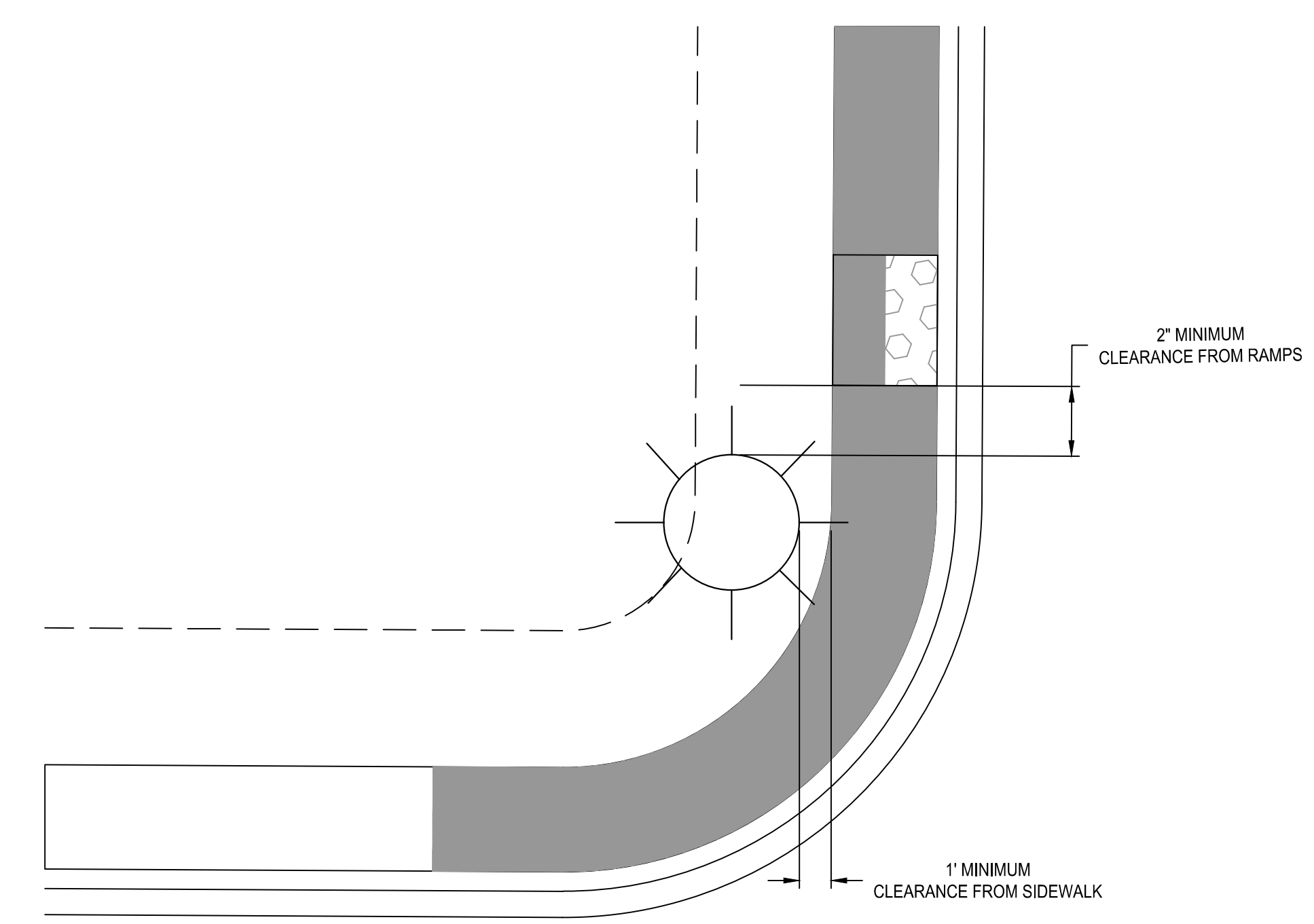
DESIGNED BY: JDC
REVIEWED BY: OR
DRAWN BY: JDC



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TX P.E. Registration No. P-1049

HERON VALLEY PHASE 1
SIGNAGE DETAILS (SHEET 1 OF 2)

DATE: 8/24/25
SHEET: C09.01



NOTE: LIGHT POST TO BE PLACED CLEAR OF ALL SIDEWALK, RAMPS, AND FIRE HYDRANTS.

TCP (SC-1a)
ONE LANE TWO-WAY (TWO LANES)
CONTROL WITH PILOT VEHICLE

TCP (SC-1b)
ONE LANE TWO-WAY (THREE LANES)
CONTROL WITH PILOT VEHICLE AND CHANNELIZING DEVICES

LEGEND

	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed (MPH)	Formula	Minimum Taper Lengths (ft)	Suggested Maximum Spacing of Channelizing Devices (ft)	Minimum Sign Spacing Distance (ft)	Suggested Longitudinal Buffer Space (ft)	Stopping Sight Distance (ft)
30	L = WS	10', 11', 12'	30' on a taper	60'	120'	90'
35		150', 165', 180'	35'	70'	160'	200'
40		205', 225', 245'	40'	80'	240'	250'
45		265', 295', 320'	45'	90'	320'	305'
50		450', 495', 540'	50'	100'	400'	360'
55		500', 550', 600'	55'	110'	500'	425'
60		550', 605', 660'	60'	120'	600'	495'
65		600', 660', 720'	65'	130'	700'	570'
70		650', 715', 780'	70'	140'	800'	645'
75		700', 770', 840'	75'	150'	900'	730'
80		750', 825', 900'	80'	160'	1000'	820'

W = Width of Offset (FT) S = Posted Speed (MPH)

TYPICAL USAGE

MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY

GENERAL NOTES

- Flags attached to signs where shown are REQUIRED.
- All traffic control devices illustrated are REQUIRED, except if project signing is present, END ROAD WORK (G20-2) sign is optional with approval by the Engineer.
- Sign spacing may be increased or an additional ROAD WORK AHEAD (CW20-10) sign may be used if advance warning ahead of the flagger sign is less than 1500 feet.
- Flaggers should use two-way radios or other methods of communication at all times for traffic control coordination.
- Flaggers should use 24" STOP (CW20-8) / SLOW (CW20-8a) paddles to control traffic. Flags should be limited to emergency situations.
- If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
- If the seal coat operation crosses intersections, traffic in these areas must be controlled. Care must be taken to prevent vehicles from crossing the asphalt before the aggregate is placed. This may require positioning additional traffic control personnel (flaggers) at the intersection.
- Temporary rumble strips are not required on seal coat operations.
- The pilot car is used to guide vehicles through traffic control zone. The pilot car shall have an identification name displayed and PILOT CAR, FOLLOW ME (G20-4) sign or message board mounted in a conspicuous position on rear.

TCP (SC-1a)

- Channelizing devices on the centerline are not required when a pilot car is leading traffic, unless directed by the Engineer.

DISCLAIMER: This proposal is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by the engineer for any use of the information provided herein for any purpose other than that intended by the engineer.

DATE: 8/24/25

SHEET 1 OF 8

Texas Department of Transportation
Traffic Safety Division Standard

TRAFFIC CONTROL PLAN
SEAL COAT OPERATIONS
ONE-LANE TWO-WAY

TCP (SC-1) - 22

FILE: 2936-1-22.dwg	DATE: 08/24/25	BY: JDC	CHECKED: OR	SCALE: AS SHOWN	SHEET NO: 1 OF 8
4-21	REVISED:	DATE:	BY:	SCALE:	SHEET NO:
4-22					



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San Antonio, TX 78216
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T&E Registration No. P-1049

OBJECT MARKER - BID ITEM DESCRIPTIONS

XXXXX OM ASSM (OM-XX)(XXXX)XXXXXX(X)

PAYMENT
INSTL = Installation
REPLC = Replacement

TYPE OF OBJECT MARKER
1, 2, 3, or 4

NUMBER OF REFLECTORS OR DIRECTION
X = 3-Size 2 reflector units (Type 2 only)
Y = 1-Size 3 reflector unit (Type 2 only)
Z = 3-Size 1 or 1-Size 4 reflector units (Type 2 only)
L = Left Side (Type 3 Object Marker only)
R = Right Side (Type 3 Object Marker only)
C = Center (Type 3 Object Marker only)

TYPE OF POST
WC = Wing Channel Post
WFLX = White Flexible Post
YFLX = Yellow Flexible Post
TWL = Thin Wall Tubing

TYPE OF MOUNT
GND = Ground Embedded (drivable or set in concrete)
SRF = Surface Mount
WAS = Wedge Anchor Steel
WAP = Wedge Anchor Plastic

IDENTIFICATION
LS = Low Speed, Low Impact
HH = High Speed, High Impact

DIRECTION (if required)
BI = Bi-Directional

OBJECT MARKER DEFINITION

Devices used to mark obstructions within or adjacent to the roadway. (See TMUTCD - Chapter 2C, WARNING SIGNS AND OBJECT MARKERS.)

DEVICE	Type 1 (OM-1)	Type 2 (OM-2)			Type 3 (OM-3)			Type 4 (OM-4)
	OM-1	OM-2X	OM-2Y	OM-2Z	OM-3L	OM-3R	OM-3C	OM-4
SHEETING	Yellow - Type B ₁ or C ₁ sheeting	White and Yellow - Type B or C sheeting			Alternating Acrylic Black and Retroreflective Yellow - Type B ₁ or C ₁ sheeting			Red - Type B ₁ or C ₁ sheeting
POST TYPE	TWT	WC	WC	WFLX, YFLX	TWT, WFLX			TWT
MOUNT TYPE	WAS, WAP	GNDLL	GNDLL	GNDLL, GNDHI, SRFL, SRFH	WAS, WAP, GNDLL, GNDHI, SRFL, SRFH			WAS, WAP

REFLECTOR UNIT DIMENSIONS FOR OBJECT MARKERS

SIZE	SIZE 1	SIZE 2	SIZE 3	SIZE 4
DEVICE				
NOTE	1. Size 1 and 4 - Direct applied reflective sheeting for use on flexible post (fb). 2. Size 2 and 3 - For use on wing channel (wc) post only. Use approved metal, plastic, or fiberglass backplate with 1/8" mounting holes.			

POST TYPE AND SUPPORT FOUNDATION DETAILS

WING CHANNEL (WC)	FLEXIBLE POSTS (YFLX, WFLX)	WEDGE ANCHOR SYSTEMS
GND 2'-0" typ.	GND Reflective material Post Stub	SRF Reflective material Post Base
		WAS Ground line 27" 30" 12" dia.
		WAP Ground line 17" 20" 12" dia. 3.5" 1.7"

TYPES 1, 3, AND 4 OBJECT MARKERS TYPICAL INSTALLATION

Ground line
Travel Lane
Pavement surface
Ground line

TYPE 2 OBJECT MARKERS TYPICAL INSTALLATION

Approximately 4'-0"
Pavement surface
Ground line
2'-0" to 8'-0" or in front of object being marked
See General Notes 1, 2, and 3

NOTES

- Embedded Wing Channel (WC) post option may be used for Type 2 object markers and delineators only.
- 1/2" dia. steel per ASTM A 1011 S5 Gr. 50, or ASTM A499.

GENERAL NOTES

- Where a restriction prevents consistent placement from the pavement edge, place the affected object markers in line with the innermost edge of the obstruction.
- When Type 2 object markers are more than 8'-0" from the edge of the pavement, it may not be possible to maintain a height of approximately 4'-0". If this is the case, place the object marker as close to the recommended height as possible.
- Install all object markers in accordance with the manufacturer's recommendation.
- Diagonal stripes on Type 3 object markers shall slope down toward the intended travel lane.
- Object marker substrates shall be 0.080" aluminum sign blank and conform to ASTM B-209 Alloy 6061-T6 or an approved alternative.

DEPARTMENTAL MATERIAL SPECIFICATIONS	
FLEXIBLE DELINEATOR & OBJECT MARKER POSTS (EMBEDDED & SURFACE MOUNT TYPES)	DMS-4400
SIGN FACE MATERIALS	DMS-8300
DELINEATORS, OBJECT MARKERS AND BARRIER REFLECTORS	DMS-8600

OBJECT MARKER MATERIAL DESCRIPTION & INSTALLATION D & OM(2)-25

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Texas Department of Transportation
Traffic Safety Division Standard