

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  
Date: 7.8.2025

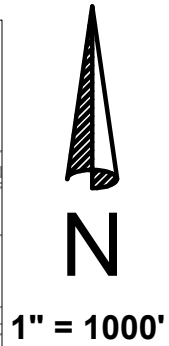


# CIVIL CONSTRUCTION DRAWINGS: HERON VALLEY PHASE 1 CITY OF SAN ANTONIO

## WATER, SEWER, STREET & DRAINAGE IMPROVEMENTS

JUNE 2025

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



BGE, Inc.  
7330 San Pedro Ave., Suite 202  
San Antonio, TX 78216  
Tel: 210-581-3600 • www.browningay.com  
TBPE Registration No. F-1046

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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  
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HERON VALLEY PHASE 1

Sheet Number	Sheet Title
C00.00	COVER SHEET
C01.00	CIVIL GENERAL NOTES
C01.10	EXISTING CONDITIONS PLAN
C01.11	DEMOLITION PLAN
C02.00	EROSION & SEDIMENTATION CONTROL PLAN
C02.10	EROSION & SEDIMENTATION CONTROL DETAILS
C02.20	TREE PROTECTION PLAN
C02.21	DETAILED TREE PROTECTION PLAN (SHEET 1 OF 4)
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)
C02.30	TREE PROTECTION TABLES (SHEET 1 OF 2)
C02.31	TREE PROTECTION TABLES (SHEET 2 OF 2)
C02.32	TREE PROTECTION CALCULATIONS
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)

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) 469-3285 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

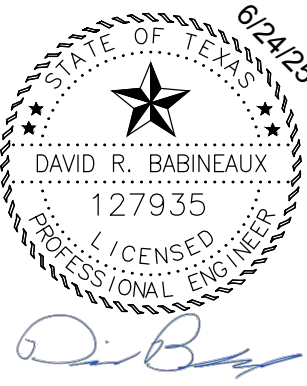
MIDDLE COLLECTION AND TREATMENT AREA (MCTA)

DEVELOPER NAME: HYG HOMES  
DEVELOPER ADDRESS: 84 NE LOOP 410, SUITE 242  
CITY: SAN ANTONIO, STATE: TX, ZIP: 78216  
PHONE: (210) 469-3285 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







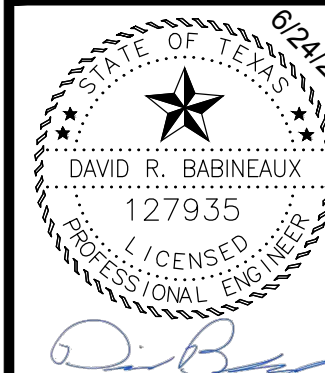


- ## NOTES

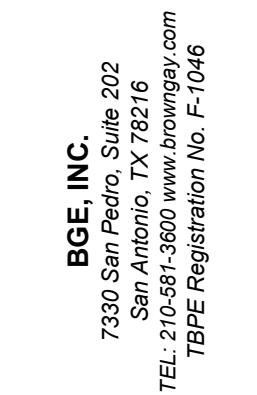
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HERON VALLEY PHASE 1

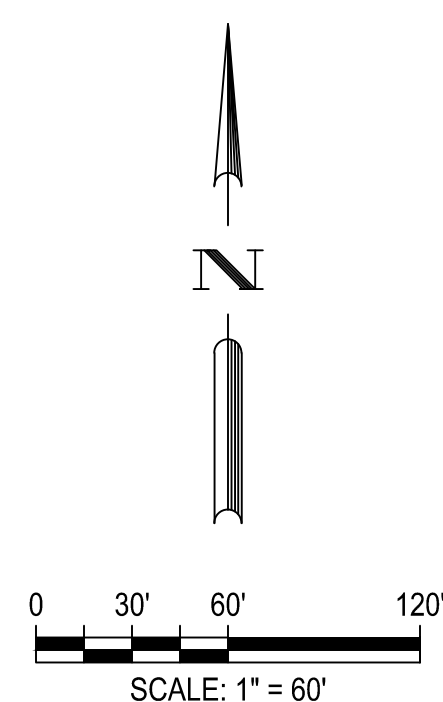
## EXISTING CONDITIONS PLAN



















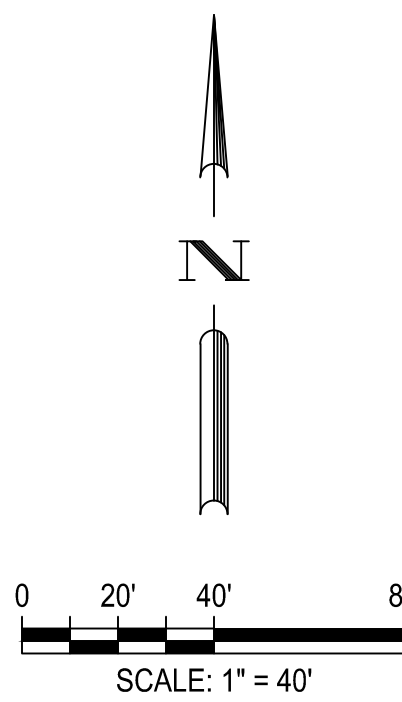
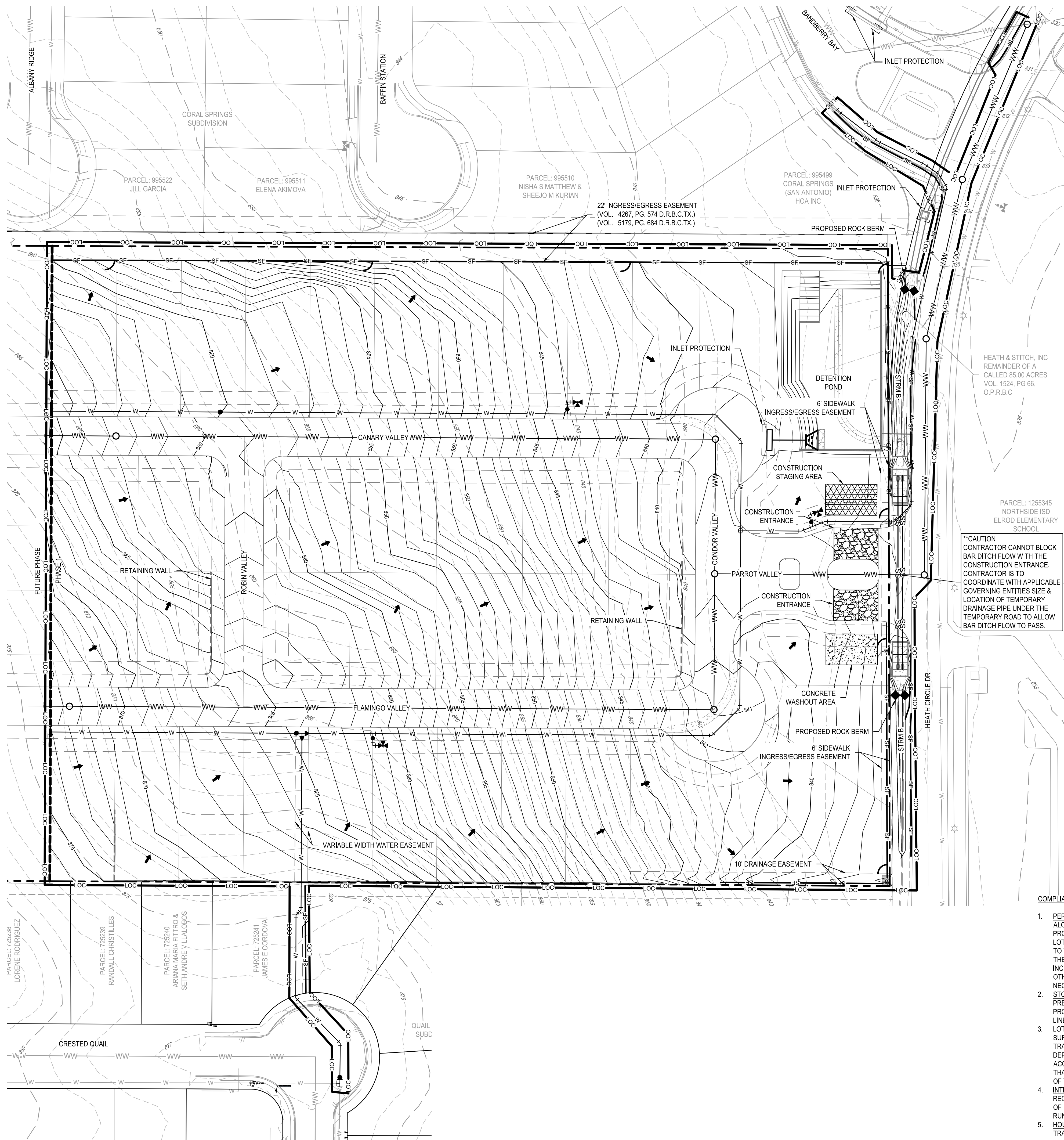
## DEMOLITION PLAN



	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

G:\TXC\Projects\San Antonio Projects\12936-00 - Heron Valley\01\_Unit 1\03\_CADD\01\_Shts\C01.11 DEMOLITION PLAN.dwg Layout: DEMOLITION PLAN Plotted: 6/24/2025 3:26:44 PM By: Calderon





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 NOI'S (NOTICE OF INTENT) AND NOT'S (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. IF 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 ERCTED 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 ESC'S.
- 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 ESC'S 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:

- PERMETER CONTROLS: INSTALL ESC'S (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, ESC'S SHOULD BE REMOVED TO THE BACK OF THE SIDEWALK TO PREVENT SEDIMENT FROM REACHING THE SIDEWALK. MAINTAIN ESC'S 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 TRUCKED ONTO THE STREET MUST BE REMOVED BY THE END OF THE DAY.
- INTERMEDIATE CONTROL: LONG OR STEEP DRAINAGE PATHS MAY REQUIRE INTERMEDIATE OR INTERIOR ESC'S 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.

PLAT NUMBER  
24-11800389

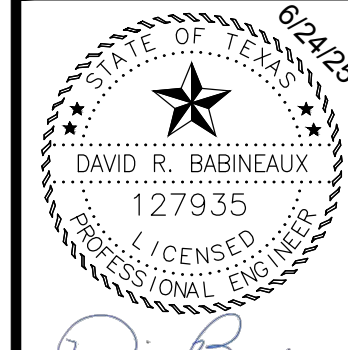
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DESIGNED BY: JDC  
REVIEWED BY: OR  
DRAWN BY: JDC



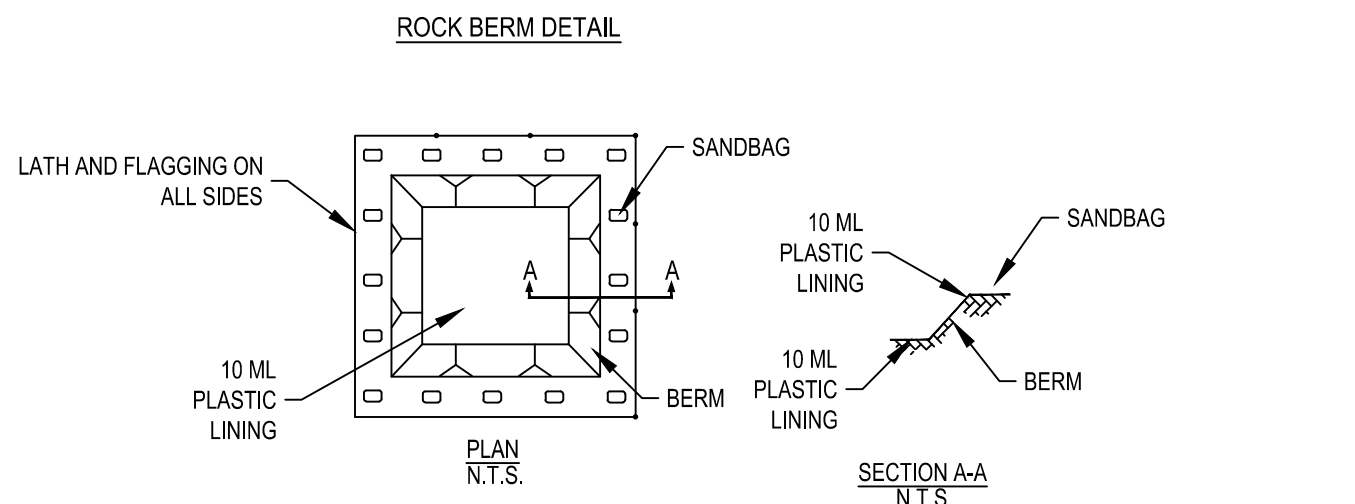
BGE, INC.  
7330 San Pedro, Suite 202  
San Antonio, TX 78216  
TEL: 214-368-3360 www.bgeinc.com  
TXPE Registration No. F-1046

HERON VALLEY PHASE 1  
EROSION & SEDIMENTATION CONTROL PLAN



SHEET  
C02.00





## CONCRETE WASHOUT NOTES

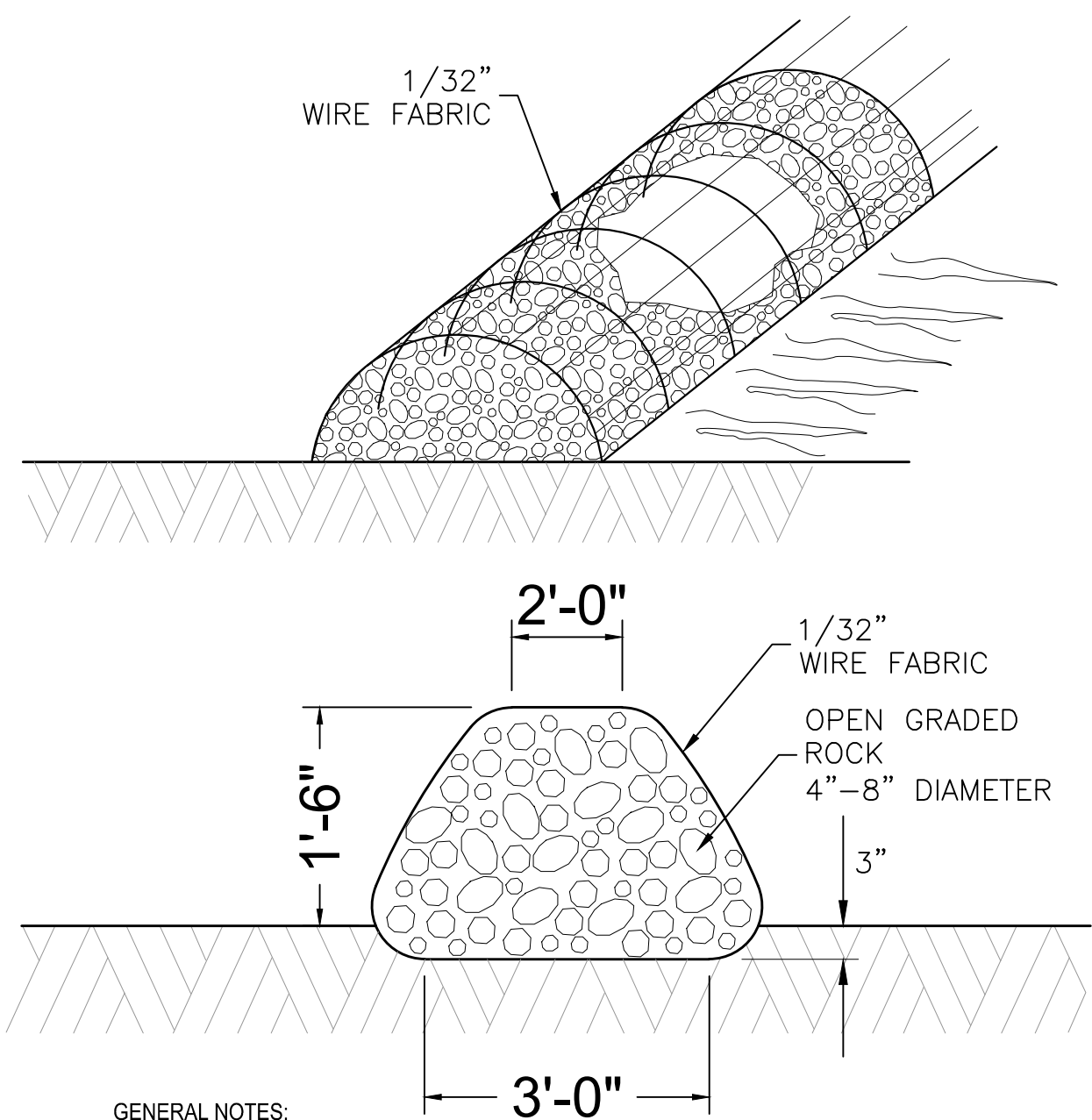
1. THE LINED WASHOUT PIT SHALL BE SUFFICIENTLY LARGE ENOUGH TO HOLD EXPECTED VOLUME OF WASHOUT MATERIAL.
2. WHEN FACILITY IS NO LONGER REQUIRED, HARDENED CONCRETE SHALL PROPERLY REMOVED AND DISPOSED OF.
3. CONTRACTOR TO BACKFILL PIT UPON REMOVAL OF LINING.

### SAND BAG NOTES

1. THE SAND BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 300 PSI, AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
2. THE BAG LENGTH SHOULD BE 24 TO 30 INCHES, WIDTH SHOULD BE 16 TO 18 INCHES AND THICKNESS SHOULD BE 6 TO 8 INCHES.
3. SANDBAGS SHOULD BE FILLED WITH COARSE GRADE SAND, FREE FROM DELETERIOUS MATERIAL. ALL SAND SHOULD PASS THROUGH A NO. 10 SIEVE. THE FILLED BAG SHOULD HAVE AN APPROXIMATE WEIGHT OF 40 POUNDS.
4. OUTLET PIPE SHOULD BE SCHEDULE 40 OR STRONGER POLYVINYL CHLORIDE (PVC) HAVING A NOMINAL INTERNAL DIAMETER OF 4 INCHES.

**1** **IN-GROUND CONCRETE WASHOUT PIT**  
N.T.S.

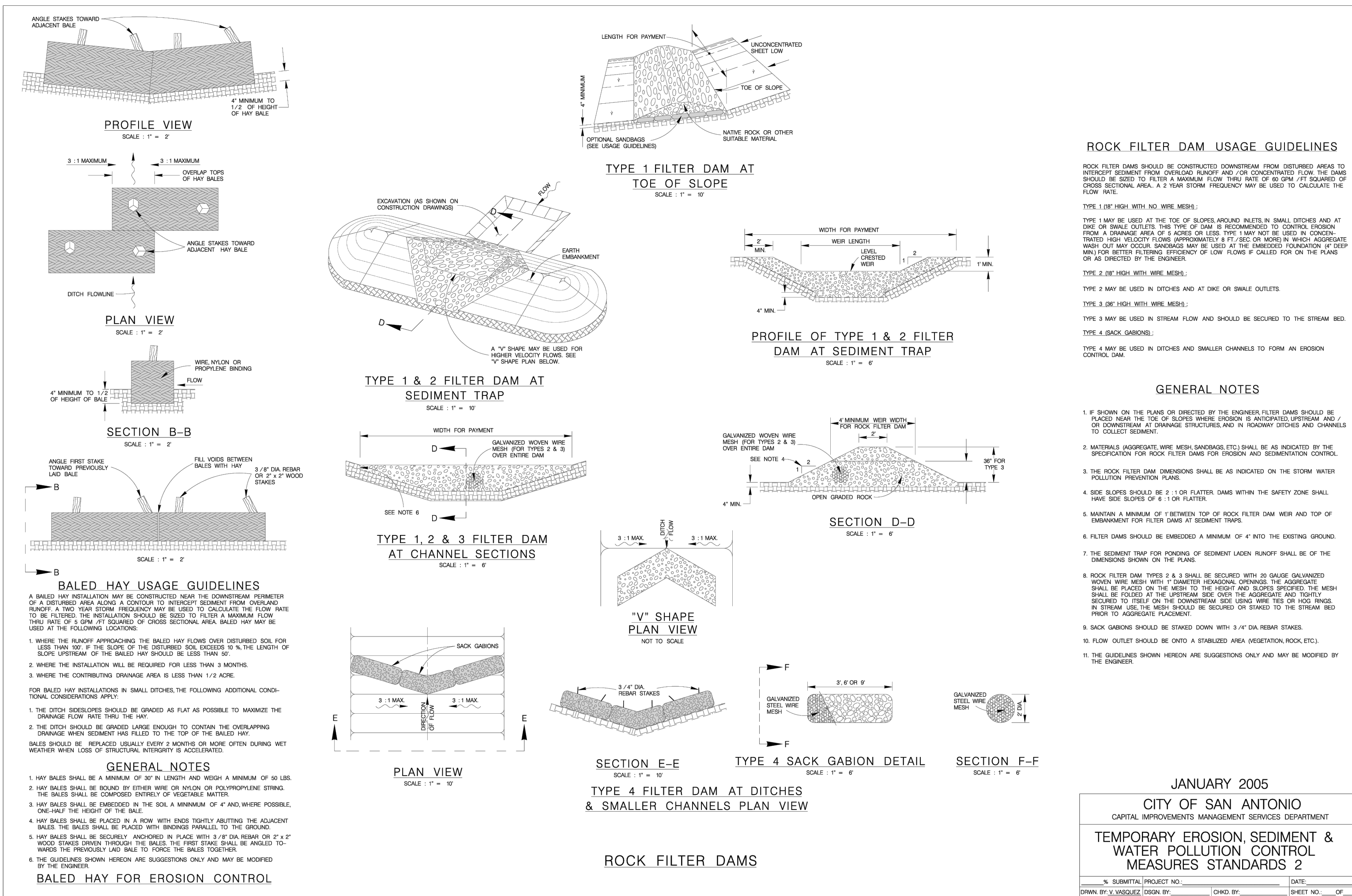
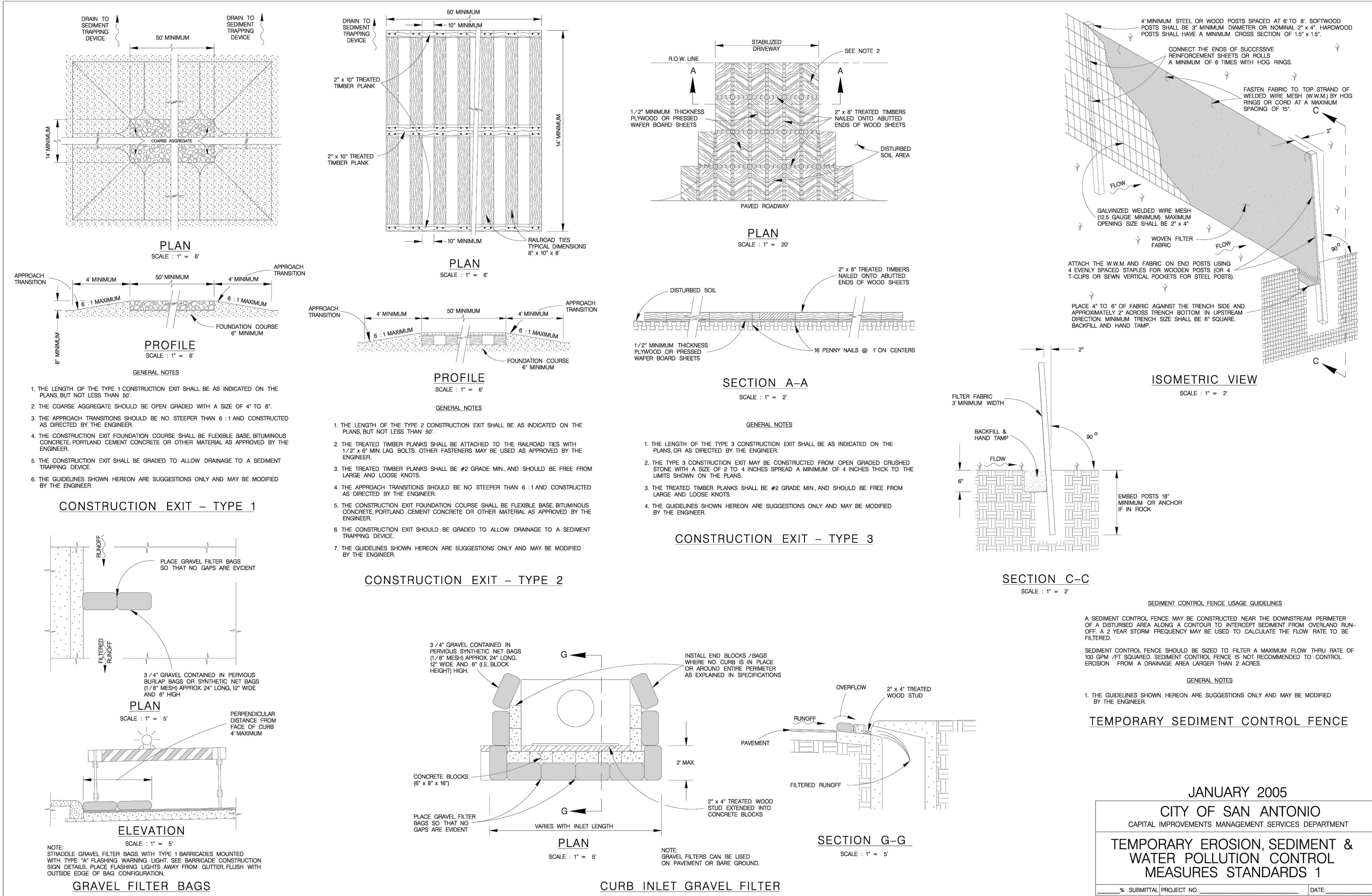
NOTE: SEE GENERAL NOTES SHEETS FOR EROSION CONTROL NOTES



### GENERAL NOTES

1. USE ONLY OPEN GRADED ROCK 4-8 INCHES DIAMETER FOR STREAM FLOW CONDITION; USE OPEN GRADED ROCK 3-5 INCHES DIAMETER FOR OTHER CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENING AND MINIMUM WIRE DIAMETER OF 1/32 INCH.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH OF 12 INCHES, THE HEIGHT OF THE BERM OR 12 INCH, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED SITE AND IN A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SERVICE SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 6 INCHES.
6. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

2 ROCK BERM  
N.T.S.



REV	DESCRIPTION	DATE	APR
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DESIGNED BY: JDC

REVIEWED BY: OR

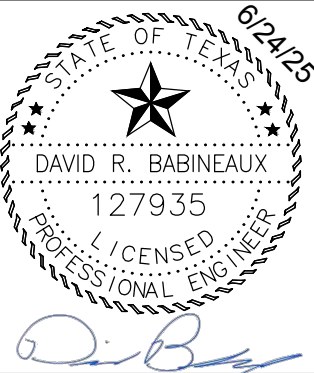
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**BGE, INC.**  
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San Antonio, TX 78216  
TEL: 210-581-3600 [www.browning.com](http://www.browning.com)  
TBPE Registration No. F-1046

HERON VALLEY PHASE 1

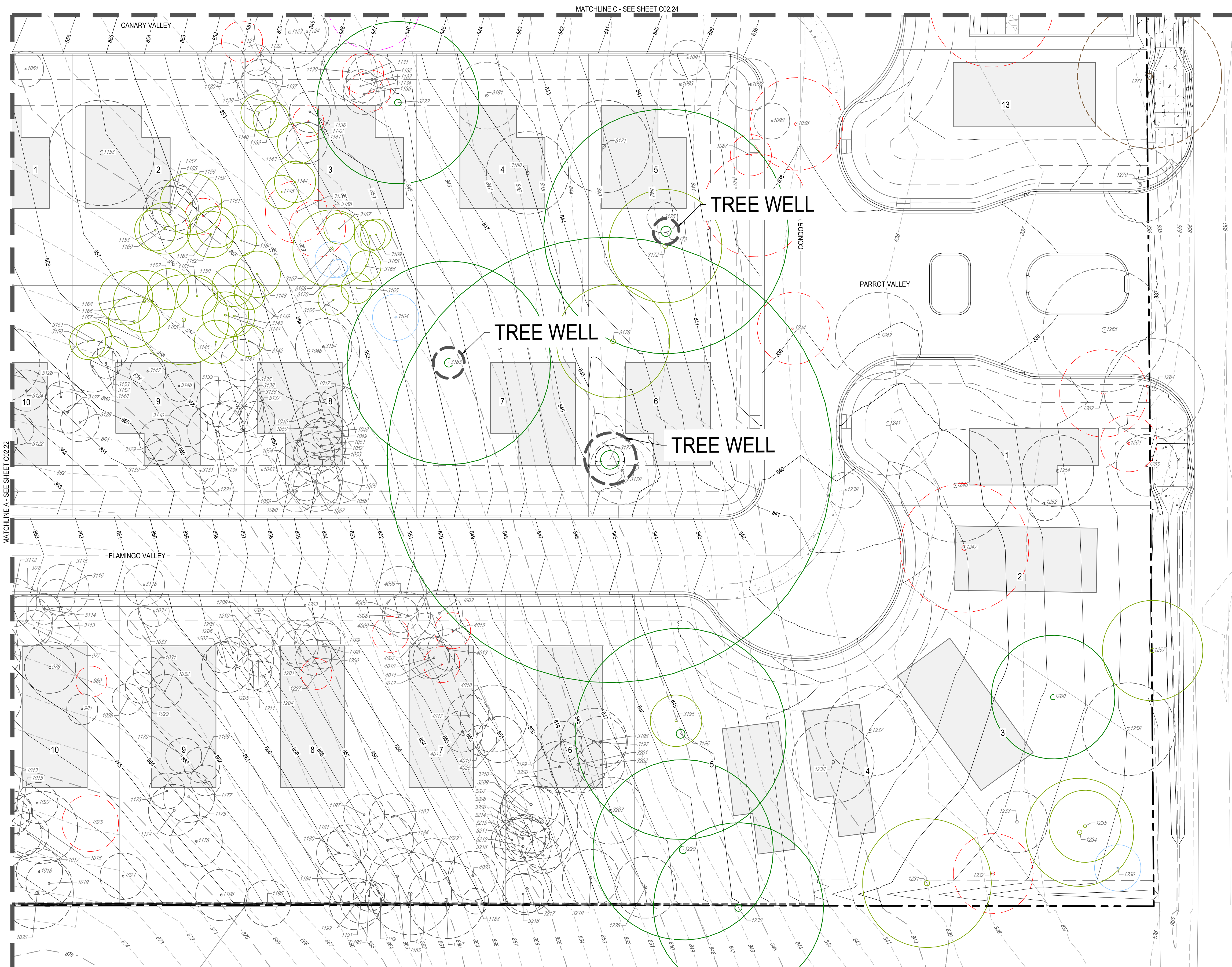
## EROSION & SEDIMENTATION CONTROL DETAILS
















SHEET

C02.10





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

1. BEARING ORIENTATION IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE 4204, NAD-83. DISTANCES SHOWN ARE SURFACE VALUES.
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 ENCLOSED. PLEASE REFERENCE THE COSA TREE PRESERVATION AND PROTECTION DETAILS.
3. PLEASE SEE TREE MAN ASSESSMENT FROM 06-17-2024 FOR FURTHER INFORMATION.

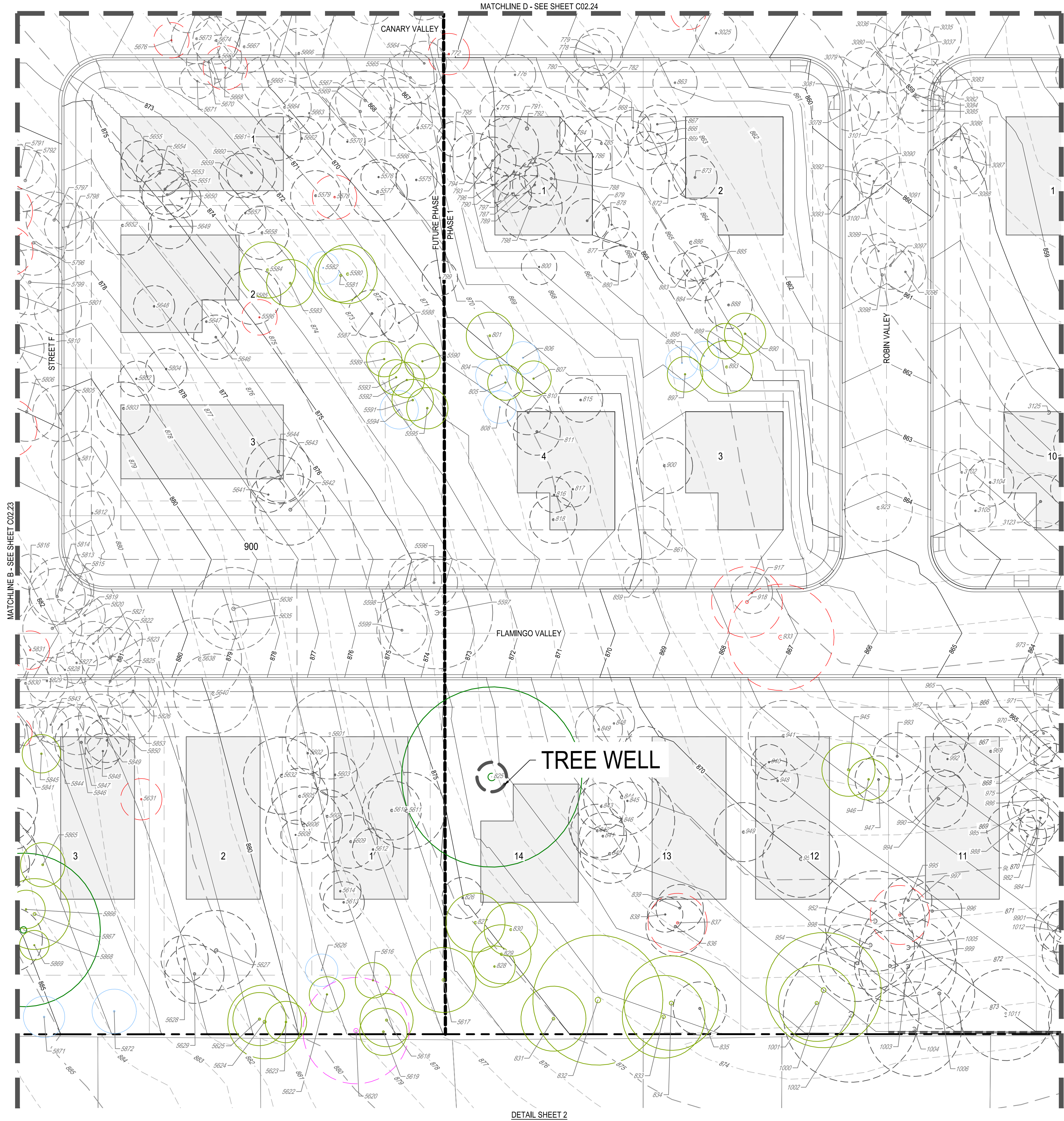
### MITIGATION NOTES

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. TREES WILL HAVE A MINIMUM SPACING OF 5 FEET FROM THE TREE TRUNK

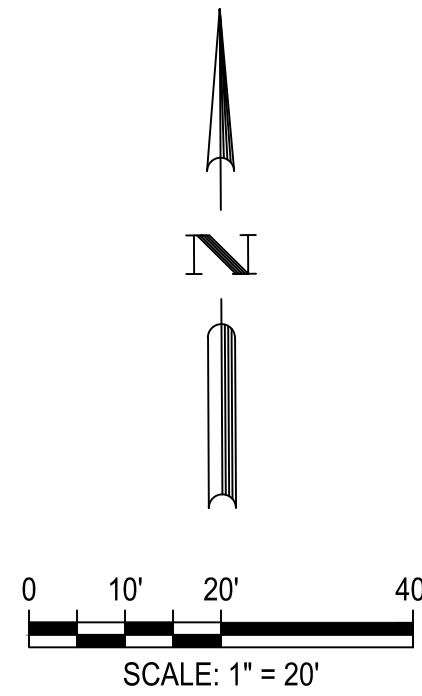
\\T:\Projects\San Antonio Projects\12936-00 - Heron Valley\01\_Unit 1\03\_CADD\01\_Shts\C02.70 TREE PROTECTION PLAN.dwg Layout: DETAILED TREE PROTECTION PLAN (SHEET 1 OF 4) Plotted: 10/29/2024 11:05:28 AM By: Calderon



G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01\_Unit\03\_CADD\01\_Shts\C02.20 TREE PROTECTION PLAN.dwg Layout: 10/29/2024 11:06:32 AM By: Calderon



DETAIL SHEET 2



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.

PLAT NUMBER  
24-11800389

DATE	DESCRIPTION
APR	

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



BGE, INC.  
7330 San Pedro, Suite 202  
San Antonio, TX 78216  
TEL: 210-581-5380 www.bgeinc.com  
TREE Registration No. F-1045

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

NOT FOR CONSTRUCTION

SHEET  
C02.22







G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01\_Unit V03\_CADD\01\_Shts\C02.20 TREE PROTECTION PLAN.dwg Layout: DETAILED TREE PROTECTION PLAN (SHEET 4 OF 4) Plotted: 10/29/2024 11:06:44 AM By: Calderon

PLAT NUMBER  
24-11800389

DATE  
APR

DESCRIPTION

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



BGE, INC.  
7330 San Pedro, Suite 202  
San Antonio, TX 78216  
TEL: 210.581.5360 www.bgeinc.com  
TREE Registration No. T-1045

HERON VALLEY PHASE 1

DETAILED TREE PROTECTION PLAN  
(SHEET 4 OF 4)

NOT FOR CONSTRUCTION

SHEET  
C02.24

0 10' 20' 40'  
SCALE: 1" = 20'

LEGEND

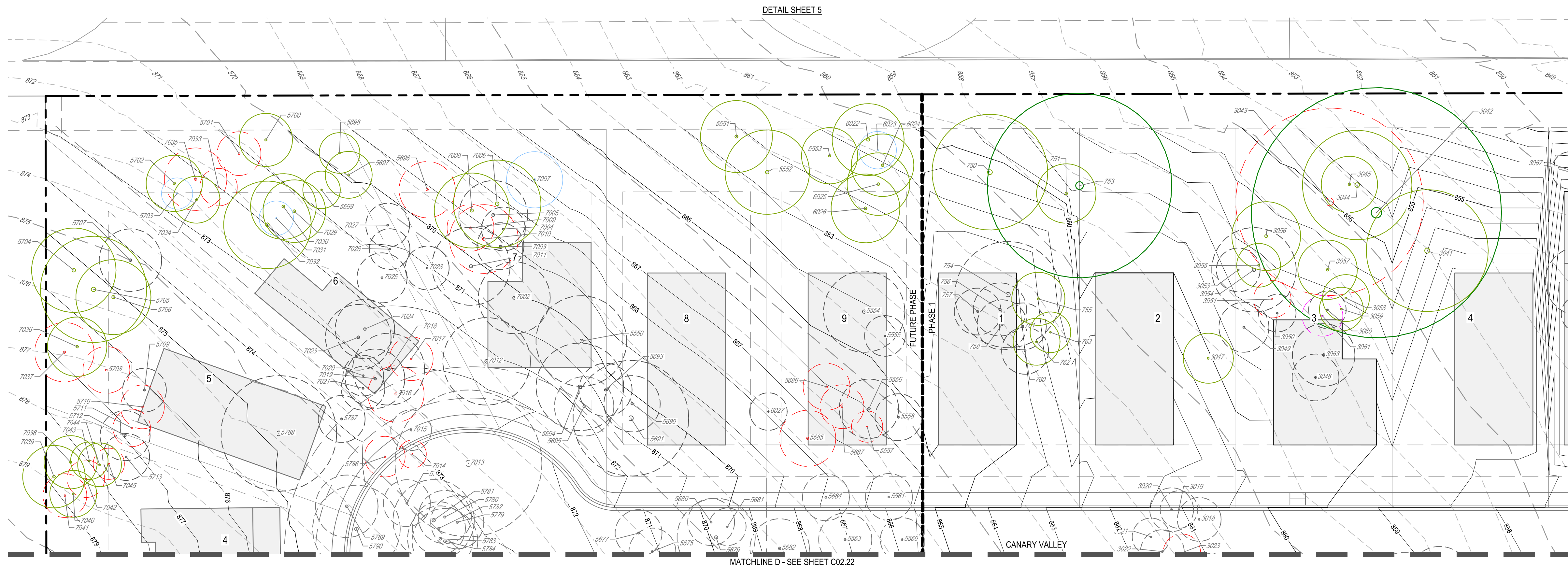
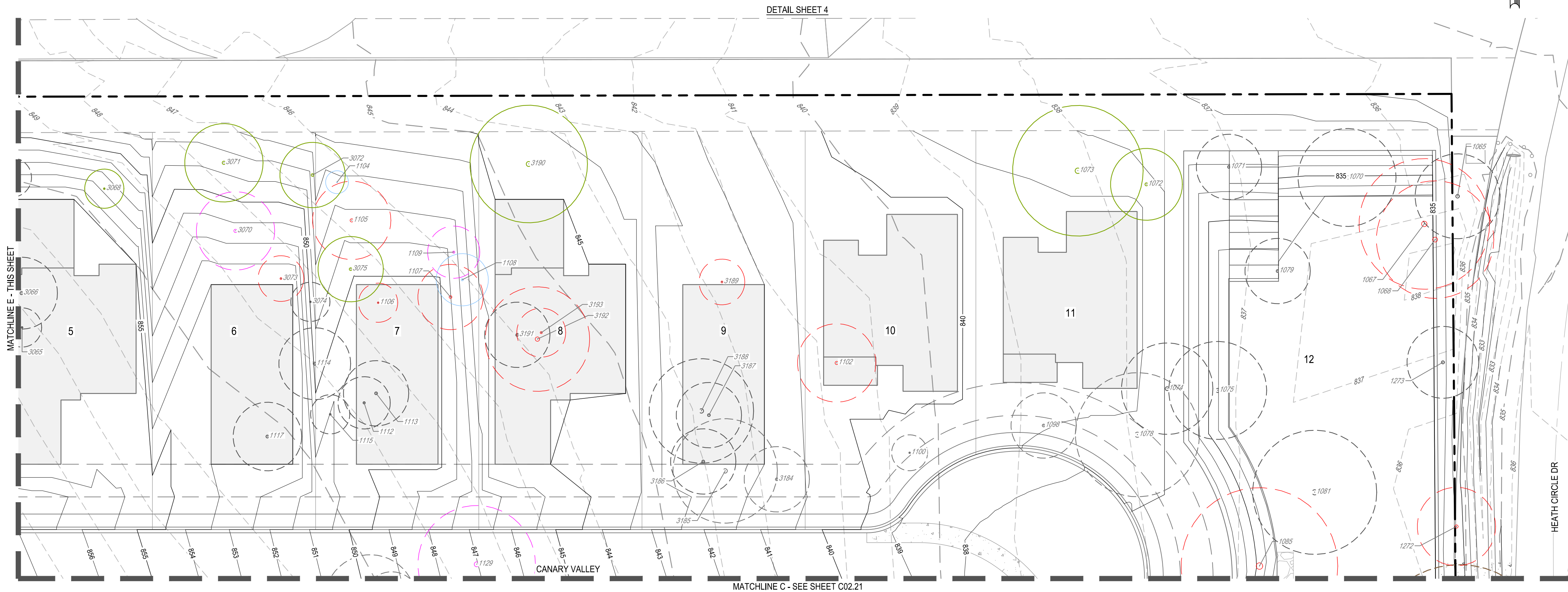
- PROPERTY BOUNDARY
- PHASE BOUNDARY
- PROPOSED LOT LINES
- PROPOSED EASEMENT
- LOT NUMBER
- PRESERVED HERITAGE TREE
- PRESERVED SIGNIFICANT TREE
- REMOVED SIGNIFICANT TREE
- EXEMPT - REMOVED HERITAGE TREE
- EXEMPT - REMOVED SIGNIFICANT TREE
- PRESERVED UNPROTECTED TREE
- REMOVED TREE IN POOR CONDITION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





TREE TABLE		
POINT	DBH	SPECIES
750	18.5	LIVE OAK
751	9.5	LIVE OAK
753	39	LIVE OAK
754	17	LIVE OAK
755	8.5	LIVE OAK
756	8.5	LIVE OAK
757	7.5	LIVE OAK
758	8	LIVE OAK
760	7.5	LIVE OAK
761	7.5	LIVE OAK
762	7.5	LIVE OAK
763	6.5	LIVE OAK
772	7	LIVE OAK
775	6	LIVE OAK
776	7	LIVE OAK
778	6.5	LIVE OAK
779	8	LIVE OAK
780	7.5	LIVE OAK
782	8	LIVE OAK
784	6	LIVE OAK
785	9	LIVE OAK
786	6	LIVE OAK
787	6	LIVE OAK
788	9	LIVE OAK
789	7.5	LIVE OAK
790	8	LIVE OAK
791	10	LIVE OAK
792	13	ASHE JUNIPER
793	8	LIVE OAK
794	8.5	LIVE OAK
795	6	LIVE OAK
796	6	LIVE OAK
797	6.5	LIVE OAK
798	11	LIVE OAK
799	6	LIVE OAK
800	6	LIVE OAK
801	8	LIVE OAK
804	5.5	LIVE OAK
805	6	LIVE OAK
806	5.5	LIVE OAK
807	6	LIVE OAK
808	5.5	LIVE OAK
810	7.5	LIVE OAK
811	8	LIVE OAK
815	7.5	LIVE OAK
816	6	LIVE OAK
817	6	LIVE OAK
818	8	LIVE OAK
825	30.5	LIVE OAK
826	7	LIVE OAK
827	10	LIVE OAK
828	7	LIVE OAK
829	10	LIVE OAK
830	9	LIVE OAK
831	11	LIVE OAK
832	22	LIVE OAK
833	14	LIVE OAK
834	16	LIVE OAK
835	9	ELM
836	10	LIVE OAK
837	10	HACKBERRY
838	6	ELM
839	8	LIVE OAK
840	10	ASHE JUNIPER
841	8	LIVE OAK
842	9	LIVE OAK
843	8	LIVE OAK
844	13	LIVE OAK
845	6.5	LIVE OAK
846	18	LIVE OAK
847	7	LIVE OAK
848	7	LIVE OAK
849	8	LIVE OAK
859	6	LIVE OAK
861	9	LIVE OAK
863	7.5	LIVE OAK
866	7	LIVE OAK
867	6.5	LIVE OAK
868	6	LIVE OAK
869	6.5	LIVE OAK
872	6	LIVE OAK
873	7.5	LIVE OAK
877	6	LIVE OAK
878	6	LIVE OAK
879	7.5	LIVE OAK
880	6	LIVE OAK
883	6	LIVE OAK
884	6	LIVE OAK
885	6	LIVE OAK
886	13	ASHE JUNIPER
888	8	LIVE OAK
889	6	LIVE OAK
890	7	LIVE OAK
893	9	LIVE OAK
895	5	LIVE OAK
896	5.5	LIVE OAK
897	6	LIVE OAK
900	9.5	LIVE OAK
917	7	LIVE OAK
918	12	ASHE JUNIPER
923	11.5	LIVE OAK
933	18	LIVE OAK

TREE TABLE		
POINT	DBH	SPECIES
940	6	LIVE OAK
941	12	LIVE OAK
945	9	LIVE OAK
946	7	LIVE OAK
947	8	LIVE OAK
948	7	LIVE OAK
949	10	ASHE JUNIPER
951	13	ELM
952	17	LIVE OAK
954	13	LIVE OAK
965	6	LIVE OAK
967	6	LIVE OAK
969	9	LIVE OAK
970	6	LIVE OAK
971	8	LIVE OAK
973	7	LIVE OAK
974	7	LIVE OAK
975	6	LIVE OAK
976	10	LIVE OAK
977	7	LIVE OAK
978	10	ASHE JUNIPER
980	8	LIVE OAK
981	6	LIVE OAK
982	6	LIVE OAK
984	7	LIVE OAK
985	7	LIVE OAK
986	10	LIVE OAK
987	6.5	ELM
988	8.5	LIVE OAK
990	6	LIVE OAK
992	6	LIVE OAK
993	8	LIVE OAK
994	10	ASHE JUNIPER
995	8	ELM
996	10	LIVE OAK
997	10	LIVE OAK
998	15	LIVE OAK
999	12	LIVE OAK
1000	19.5	LIVE OAK
1001	13	LIVE OAK
1002	23	LIVE OAK
1003	16.5	LIVE OAK
1004	16	LIVE OAK
1005	16.5	LIVE OAK
1006	12	LIVE OAK
1011	15.5	LIVE OAK
1012	7	LIVE OAK
1013	6	LIVE OAK
1015	9	LIVE OAK
1016	14	LIVE OAK
1017	8	LIVE OAK
1018	9	LIVE OAK
1019	9	LIVE OAK
1020	14	LIVE OAK
1021	9	ELM
1025	11	ASHE JUNIPER
1027	8	LIVE OAK
1028	6	LIVE OAK
1029	6	LIVE OAK
1031	6	LIVE OAK
1032	6.5	LIVE OAK
1033	6	LIVE OAK
1034	6	LIVE OAK
1043	6	LIVE OAK
1045	7	LIVE OAK
1046	19.5	LIVE OAK
1047	8	LIVE OAK
1048	7	LIVE OAK
1049	8	LIVE OAK
1050	10	LIVE OAK
1051	9.5	LIVE OAK
1052	8	LIVE OAK
1053	10	LIVE OAK
1054	9	LIVE OAK
1056	9	LIVE OAK
1057	9	LIVE OAK
1058	10	LIVE OAK
1059	7	LIVE OAK
1060	8	LIVE OAK
1064	7	ELM
1065	13	HACKBERRY
1067	20	MESQUITE
1068	18	HUISACHE
1070	15	MESQUITE
1071	10	MESQUITE
1072	11	MESQUITE
1073	20	MESQUITE
1074	14	MESQUITE
1075	15	MESQUITE
1078	19	MESQUITE
1079	10	MESQUITE
1081	19	MESQUITE
1085	24	MESQUITE
1086	18	HACKBERRY
1087	8	MESQUITE
1088	20	HACKBERRY
1090	7	TX PERSIMMON
1092	10	MESQUITE
1093	12	MESQUITE
1094	7	TX PERSIMMON
1098	10	MESQUITE
1100	5.5	TX PERSIMMON
1102	12	MESQUITE

TREE TABLE		
POINT	DBH	SPECIES
1104	3.5	TX PERSIMMON
1105	12	MESQUITE
1106	6	MESQUITE
1107	10	MESQUITE
1108	8	HACKBERRY
1109	8	LIGUSTRUM
1112	8	ELM
1113	10	ELM
1114	11	ASHE JUNIPER
1115	6	ELM
1117	10.5	ASHE JUNIPER
1120	8	LIVE OAK
1121	8	LIVE OAK
1122	6	ELM
1123	14	HACKBERRY
1124	8.5	ELM
1129	18	CHINABERRY
1130	11	MESQUITE
1131	8	LIVE OAK
1132	10	LIVE OAK
1133	6.5	LIVE OAK
1134	8	HACKBERRY
1135	7	LIVE OAK
1136	8	LIVE OAK
1137	8	LIVE OAK
1138	8	LIVE OAK
1139	7	LIVE OAK
1140	7	LIVE OAK
1141	8	LIVE OAK
1142	8	LIVE OAK
1143	8	LIVE OAK
1144	8	ELM
1145	6.5	LIVE OAK
1148	9	LIVE OAK
1149	6	LIVE OAK
1150	8	LIVE OAK
1151	8	LIVE OAK
1152	8	LIVE OAK
1153	8	LIVE OAK
1155	10.5	LIVE OAK
1156	9	LIVE OAK
1157	9	LIVE OAK
1158	20.5	LIVE OAK
1159	12	ASHE JUNIPER
1160	10	LIVE OAK
1161	7	LIVE OAK
1162	8	LIVE OAK
1163	9	LIVE OAK
1164	6	LIVE OAK
1165	17.5	LIVE OAK
1166	12	LIVE OAK
1167	10	LIVE OAK
1168	10.5	LIVE OAK
1169	7	LIVE OAK
1170	7	LIVE OAK
1173	7	LIVE OAK
1174	12.5	LIVE OAK
1175	10	ASHE JUNIPER
1177	6	LIVE OAK
1178	10	LIVE OAK
1180	8.5	LIVE OAK
1181	8	LIVE OAK
1183	9	LIVE OAK
1184	10	LIVE OAK
1185	11	LIVE OAK
1186	16	LIVE OAK
1187	15	LIVE OAK
1188	5	TX PERSIMMON
1189	6	LIVE OAK
1190	6	LIVE OAK
1191	8	LIVE OAK
1192	10	LIVE OAK
1194	9.5	LIVE OAK
1195	9	LIVE OAK
1196	10	LIVE OAK
1197	8	LIVE OAK
1198	9	LIVE OAK
1199	9	LIVE OAK
1200	7	LIVE OAK
1201	7.5	LIVE OAK
1202	8.5	LIVE OAK
1203	8	LIVE OAK
1204	6	LIVE OAK
1205	7	LIVE OAK
1206	10	ASHE JUNIPER
1207	6	LIVE OAK
1208	6	LIVE OAK
1209	7.5	LIVE OAK
1210	6.5	LIVE OAK
1211	6	LIVE OAK
1224	6	LIVE OAK
1227	6	LIVE OAK
1228	12	LIVE OAK
1229	35	LIVE OAK
1230	33	LIVE OAK
1231	17.5	HACKBERRY
1232	15.5	MESQUITE
1233	14.5	MESQUITE
1234	21	MESQUITE
1235	14	HACKBERRY
1236	9	MESQUITE
1237	17.5	LIVE OAK
1238	16	LIVE OAK

TREE TABLE		
POINT	DBH	SPECIES
1239	7	TX PERSIMMON
1241	20	MESQUITE
1242	17	MESQUITE
1244	14	MESQUITE
1245	22	MESQUITE
1247	25	MESQUITE
1252	7	TX PERSIMMON
1254	14	MESQUITE
1255	12	MESQUITE
1257	19.5	LIVE OAK
1259	18	MESQUITE
1260	24	MESQUITE
1261	11	MESQUITE
1262	17	MESQUITE
1264	19.5	MESQUITE
1265	16.5	MESQUITE
1270	14.5	MESQUITE
1271	28	MESQUITE
1272	12	MESQUITE
1273	11	MESQUITE
3018	7	LIVE OAK
3019	6	LIVE OAK
3020	6.5	LIVE OAK
3021	6	LIVE OAK
3022	7	LIVE OAK
3023	6	LIVE OAK
3025	7	LIVE OAK
3035	10	LIVE OAK
3036	8	LIVE OAK
3037	8	LIVE OAK
3041	19.5	LIVE OAK
3042	40	LIVE OAK
3043	30	LIVE OAK
3044	17.5	LIVE OAK
3045	9	LIVE OAK
3047	8	LIVE OAK
3048	7.5	LIVE OAK
3049	8	LIVE OAK
3050	6	LIVE OAK
3051	8	LIVE OAK
3053	7	LIVE OAK
3054	13.5	ASHE JUNIPER
3055	7	LIVE OAK
3056	11	LIVE OAK
3057	9.5	LIVE OAK
3058	7.5	LIVE OAK
3059	7	LIVE OAK
3060	6	LIVE OAK
3061	6.5	LIGUSTRUM
3063	10	LIVE OAK
3065	6	GUM BUMELIA
3066	11	ASHE JUNIPER
3067	6	ELM
3068	6	ELM
3070	12	LIGUSTRUM
3071	12	ASHE JUNIPER
3072	10	ASHE JUNIPER
3073	7	HACKBERRY
3074	6	TX PERSIMMON
3075	10	HACKBERRY
3078	7	LIVE OAK
3079	7	LIVE OAK
3080	8	LIVE OAK
3081	9.5	ELM
3082	7	LIVE OAK
3083	8	LIVE OAK
3084	9.5	LIVE OAK
3085	7.5	LIVE OAK
3086	6	LIVE OAK
3087	8	LIVE OAK
3088	10.5	LIVE OAK
3090	8	LIVE OAK
3091	11.5	LIVE OAK
3092	6	LIVE OAK
3093	6	LIVE OAK
3096	7	LIVE OAK
3097	8	LIVE OAK
3098	10.5	LIVE OAK
3099	8	LIVE OAK
3100	6	ELM
3101	7	LIVE OAK
3102	8	LIVE OAK
3104	8	LIVE OAK
3105	7	LIVE OAK
3112	9.5	LIVE OAK
3113	8	LIVE OAK
3114	6	LIVE OAK
3115	7	LIVE OAK
3116	10	LIVE OAK
3118	8	LIVE OAK
3122	6	LIVE OAK
3123	9	LIVE OAK
3124	8	LIVE OAK
3125	15	LIVE OAK
3126	6	LIVE OAK
3127	8	LIVE OAK
3128	7.5	LIVE OAK
3129	8	LIVE OAK
3130	6	LIVE OAK
3131	7	LIVE OAK
3134	11	LIVE OAK
3135	7	LIVE OAK
3136	9	LIVE OAK

TREE TABLE		
POINT	DBH	SPECIES
3137	7	LIVE OAK
3138	9	LIVE OAK
3139	9	LIVE OAK
3140	8	LIVE OAK
3141	8	LIVE OAK
3142	6	LIVE OAK
3143	8	LIVE OAK
3144	9	LIVE OAK
3145	8.5	LIVE OAK
3146	6	LIVE OAK
3147	7	LIVE OAK
3148	10	LIVE OAK
3150	7	LIVE OAK
3151	7	LIVE OAK
3152	6	LIVE OAK
3153	6	ELM
3154	11	LIVE OAK
3155	6	LIVE OAK
3156	7	HACKBERRY
3157	15	LIVE OAK
3158	11	LIVE OAK
3159	12	LIVE OAK
3163	39.5	LIVE OAK
3164	9	HACKBERRY
3165	6	TX PERSIMMON
3166	6	LIVE OAK
3167	6	LIVE OAK
3168	6	LIVE OAK
3169	6	LIVE OAK
3170	3.5	TX PERSIMMON
3171	18	HACKBERRY
3172	22	LIVE OAK
3173	47.5	LIVE OAK
3175	6	LIVE OAK
3176	22	LIVE OAK
3177	86.5	LIVE OAK
3179	13	ELM
3180	16	HACKBERRY
3181	13	HACKBERRY
3184	10	HACKBERRY
3185	16	HACKBERRY
3186	10	HACKBERRY
3187	10	HACKBERRY
3188	16	HACKBERRY
3189	7	PINE
3190	18	ASHE JUNIPER
3191	10.5	ASHE JUNIPER
3192	15	HACKBERRY
3193	7.5	MESQUITE
3195	10	HACKBERRY
3196	41	LIVE OAK
3197	10	LIVE OAK
3198	13	LIVE OAK
3199	8	LIVE OAK
3200	10	LIVE OAK
3201	11	HACKBERRY
3202	9	LIVE OAK
3203	13	HACKBERRY
3206	10	LIVE OAK
3207	14	LIVE OAK
3208	13	LIVE OAK
3209	10	LIVE OAK
3210	11	LIVE OAK
3211	8	LIVE OAK
3212	11	LIVE OAK
3213	9	LIVE OAK
3214	8.5	LIVE OAK
3216	7	LIVE OAK
3217	9.5	LIVE OAK
3218	8	LIVE OAK
3219	11	LIVE OAK
3222	31.5	LIVE OAK
4002	9	LIVE OAK
4005	10	LIVE OAK
4006	9	LIVE OAK
4007	7	LIVE OAK
4008	7	LIVE OAK
4009	7	LIVE OAK
4010	8	LIVE OAK
4011	8	LIVE OAK
4012	7	LIVE OAK
4013	8	LIVE OAK
4015	7	LIVE OAK
4016	8	LIVE OAK
4017	8	LIVE OAK
4018	13	LIVE OAK
4019	6	LIVE OAK
4022	8.5	LIVE OAK
4023	9.5	LIVE OAK
4025	9	LIVE OAK
5550	14.5	LIVE OAK
5551	11.5	LIVE OAK
5552	13.5	LIVE OAK
5553	9	LIVE OAK
5554	13	ASHE JUNIPER
5555	6.5	LIVE OAK
5556	9.5	LIVE OAK
5557	5	LIVE OAK
5558	7.5	LIVE OAK
5560	7	LIVE OAK
5561	7.5	LIVE OAK
5563	8.5	LIVE OAK
5564	7.5	LIVE OAK



TREE TABLE		
POINT	DBH	SPECIES
5864	11	LIVE OAK
5865	7.5	LIVE OAK
5866	6.5	TX PERSIMMON
5867	12	LIVE OAK
5868	26	LIVE OAK
5869	5	TX PERSIMMON
5870	11	LIVE OAK
5871	7	HACKBERRY
5872	7.5	ASHE JUNIPER
5873	8.5	HACKBERRY
5874	6	HACKBERRY
5875	9	ASHE JUNIPER
5876	6.5	LIVE OAK
5877	15	ASHE JUNIPER
5879	19	LIVE OAK
5881	7	LIVE OAK
5882	9.5	LIVE OAK
5883	8.5	LIVE OAK
5884	9.5	LIVE OAK
5885	8	LIVE OAK
5886	8	LIVE OAK
5887	7.5	LIVE OAK
5888	9	LIVE OAK
5889	9	LIVE OAK
5890	8	LIVE OAK
5891	9.5	LIVE OAK
5892	8	LIVE OAK
5893	7	LIVE OAK
5898	9	LIVE OAK
5899	6.5	LIVE OAK
5900	8	LIVE OAK
5901	10.5	LIVE OAK
5902	9.5	LIVE OAK
5903	10	LIVE OAK
5904	12	LIVE OAK
5905	7.5	LIVE OAK
5906	10	LIVE OAK
5907	8	LIVE OAK
5908	9.5	LIVE OAK
5909	8.5	LIVE OAK
5910	9.5	LIVE OAK
5911	7.5	LIVE OAK
5912	8.5	LIVE OAK
5913	11	LIVE OAK
5914	10.5	LIVE OAK
5915	10	LIVE OAK
5916	15	ASHE JUNIPER
5917	11	ASHE JUNIPER
5918	7.5	LIVE OAK
5920	33	LIVE OAK
5921	9	LIVE OAK
5922	9.5	LIVE OAK
5923	13	LIVE OAK
5924	9	LIVE OAK
5925	9.5	LIVE OAK
5926	6.5	LIVE OAK
5927	14	LIVE OAK
5928	11	LIVE OAK
5929	15	LIVE OAK
5931	8	LIVE OAK
5932	13.5	LIVE OAK
5933	8	ELM
5934	10	LIVE OAK
5935	10	LIVE OAK
5936	13	LIVE OAK
5937	7.5	ELM
5941	14	LIVE OAK
5944	8	LIVE OAK
5945	10	LIVE OAK
5946	10	LIVE OAK
5947	23	LIVE OAK
5949	7	LIVE OAK
5950	19	LIVE OAK
5951	8	LIVE OAK
5952	14	HACKBERRY
5953	6	LIVE OAK
5955	7	LIVE OAK
5956	5	LIVE OAK
5957	5	LIVE OAK
5958	9	LIVE OAK
5959	6.5	LIVE OAK
5960	13	LIVE OAK
5961	7.5	LIVE OAK
5962	4.5	LIVE OAK
5963	5	LIVE OAK
5964	6	LIVE OAK
5965	5	LIVE OAK
5966	10	LIVE OAK
5967	7.5	LIVE OAK
5968	6.5	LIVE OAK
5969	10	LIVE OAK
5970	6	LIVE OAK
5971	9	ASHE JUNIPER
5973	11	LIVE OAK
5974	8	LIVE OAK
5976	12.5	ASHE JUNIPER
5978	12	LIVE OAK
5979	8	LIVE OAK
5981	7	ASHE JUNIPER
5984	6	LIVE OAK
5985	11	LIVE OAK
5986	10	LIVE OAK
5987	7.5	LIVE OAK

TREE TABLE		
POINT	DBH	SPECIES
5988	5	LIVE OAK
5990	8	LIVE OAK
5991	8	LIVE OAK
5992	6	LIVE OAK
5993	6	TX PERSIMMON
5994	10	LIVE OAK
5995	10	LIVE OAK
5996	12.5	LIVE OAK
5997	11	LIVE OAK
5999	9	LIVE OAK
6022	11.5	LIVE OAK
6023	6	HACKBERRY
6024	10	LIVE OAK
6025	10	LIVE OAK
6026	11	LIVE OAK
6027	6	LIVE OAK
7002	11.5	LIVE OAK
7003	7.5	LIVE OAK
7004	7	LIVE OAK
7005	11	LIVE OAK
7006	14	LIVE OAK
7007	9	ASHE JUNIPER
7008	12	LIVE OAK
7009	7.5	LIVE OAK
7010	11	LIVE OAK
7011	12.5	LIVE OAK
7012	14	LIVE OAK
7013	23.5	LIVE OAK
7014	4.5	LIVE OAK
7015	6.5	LIVE OAK
7016	9	LIVE OAK
7017	7	LIVE OAK
7018	11.5	LIVE OAK
7019	9.5	LIVE OAK
7020	6.5	LIVE OAK
7021	7	LIVE OAK
7023	10.5	LIVE OAK
7024	9.5	LIVE OAK
7025	8	LIVE OAK
7026	6.5	LIVE OAK
7027	7	LIVE OAK
7028	7	ELM
7029	10	LIVE OAK
7030	10.5	LIVE OAK
7031	5.5	LIVE OAK
7032	12.5	LIVE OAK
7033	6	LIVE OAK
7034	7.5	LIVE OAK
7035	10	HACKBERRY
7036	9.5	LIVE OAK
7037	9.5	LIVE OAK
7038	8.5	LIVE OAK
7039	10	LIVE OAK
7040	7.5	LIVE OAK
7041	7	LIVE OAK
7042	6	LIVE OAK
7043	6	LIVE OAK
7044	7	LIVE OAK
7045	5	LIVE OAK
7046	16.5	MESQUITE
7047	6	LIVE OAK
7048	7.5	LIVE OAK
7049	6	LIVE OAK
7050	9.5	LIVE OAK
7051	18	LIVE OAK
7053	27.5	LIVE OAK
7054	12	LIVE OAK
7055	10	LIVE OAK
7056	10.5	LIVE OAK
7057	12	LIVE OAK
7058	12.5	LIVE OAK
7059	11	LIVE OAK
7060	6	LIVE OAK
7061	7	LIVE OAK
7062	8	LIVE OAK
7063	10	LIVE OAK
7064	7	LIVE OAK
7066	9	LIVE OAK
7067	6	LIVE OAK
7068	8	LIVE OAK
7070	7	LIVE OAK
7071	9	LIVE OAK
7072	9	LIVE OAK
7073	10.5	LIVE OAK
7074	6	LIVE OAK
7076	7	LIVE OAK
7081	7	LIVE OAK
7082	6.5	LIVE OAK
7083	6	LIVE OAK
7084	7.5	LIVE OAK
7085	6	LIVE OAK
7088	11	ASHE JUNIPER
7089	6	LIVE OAK
7090	8	LIVE OAK
7091	7	LIVE OAK
7093	3	LIVE OAK
7095	7.5	LIVE OAK
7096	4	LIVE OAK
7097	5	LIVE OAK
7098	4	TX PERSIMMON
7099	4	TX PERSIMMON
7100	12	LIVE OAK
7101	6	LIVE OAK

TREE TABLE		
POINT	DBH	SPECIES
7102	3.5	TX PERSIMMON
7103	6	LIVE OAK
7104	10	LIVE OAK
7105	6.5	LIVE OAK
7107	6	LIVE OAK
7108	6	LIVE OAK
7110	11.5	LIVE OAK
7111	6.5	ELM
7112	5	LIVE OAK
7113	7.5	LIVE OAK
7114	4	LIVE OAK
7115	6	LIVE OAK
7116	6	LIVE OAK
7117	7.5	HACKBERRY
7118	7	MESQUITE
7119	4	TX PERSIMMON
7120	8	LIVE OAK
7121	21	LIVE OAK
7123	20	LIVE OAK
7124	10.5	LIVE OAK
7125	10	LIVE OAK
7126	11	LIVE OAK
7127	9.5	LIVE OAK
7128	10	LIVE OAK
7131	12.5	LIVE OAK
7134	30	LIVE OAK
7135	5	TX PERSIMMON
7136	6	LIVE OAK
7137	7.5	LIVE OAK
7138	7.5	LIVE OAK
7139	6	LIVE OAK
7140	6	LIVE OAK
7141	7	LIVE OAK
7142	8	LIVE OAK
7143	6	LIVE OAK
7145	9.5	LIVE OAK
7149	5	TX PERSIMMON
7150	8	LIVE OAK
7151	7.5	LIVE OAK
7153	10	LIVE OAK
7154	10	LIVE OAK
7155	7	LIVE OAK
7156	6.5	TX PERSIMMON
7157	6	LIVE OAK
7158	9.5	LIVE OAK
7159	8	LIVE OAK
7160	8	LIVE OAK
7161	6	LIVE OAK
7162	9	LIVE OAK
7163	6	LIVE OAK
7164	8.5	TX PERSIMMON
7165	6	LIVE OAK
7166	9	LIVE OAK
7167	5	TX PERSIMMON
7168	8	LIVE OAK
7169	6.5	LIVE OAK
7171	8	LIVE OAK
7172	10.5	LIVE OAK
7173	10	LIVE OAK
7176	11	LIVE OAK
7177	12.5	LIVE OAK
7178	6	ELM
7179	6	LIVE OAK
7180	7	LIVE OAK
7182	6	LIVE OAK
7183	8	LIVE OAK
7184	6	LIVE OAK
7187	8	HACKBERRY
7188	6	LIVE OAK
7189	5	LIVE OAK
7190	8	HACKBERRY
7191	9.5	HACKBERRY
7192	4.5	PERSIMMON
7193	10	LIVE OAK
7194	8	LIVE OAK
7195	10	HACKBERRY
7196	4	LIVE OAK
7197	8	LIVE OAK
7198	6	LIVE OAK
7199	11	ASHE JUNIPER
7200	6	LIVE OAK
7201	8	LIVE OAK
7202	6	LIVE OAK
7204	8	LIVE OAK
7205	6	LIVE OAK
9901	8.5	ELM

TOTAL INCHES BY CATEGORY	
SIGNIFICANT-NON-EXEMPT TO REMAIN	1,729.00
SIGNIFICANT-NON-EXEMPT TO BE REMOVED	3,764.00
SIGNIFICANT-EXEMPT TO REMAIN	
SIGNIFICANT-EXEMPT TO BE REMOVED	2,314.50
HERITAGE-3:1 TO REMAIN	510.00
HERITAGE-3:1 TO BE REMOVED	-
HERITAGE-1:1 TO REMAIN	24.00
HERITAGE-1:1 TO BE REMOVED	-
HERITAGE-EXEMPT TO REMAIN	-
HERITAGE-EXEMPT TO BE REMOVED	58.00
UNPROTECTED TO REMAIN	232.50
POOR CONDITION TO BE REMOVED	899.50
INVASIVE TO BE REMOVED	62.50

<b>LEGEND</b>	
	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 ENCLOSED. 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 SHADE VALUE OF 875 PER LOT. A TOTAL OF 182 TREES WILL BE PLANTED ON THIS SITE BASED ON THE TABLE. LOTS 1-9 (BLOCK B) WILL HAVE ONE ADDITIONAL TREE PLANTED (REFERENCE APPENDIX D FOR LIST OF APPROVED TREE SPECIES).

A TOTAL OF 200 MITIGATION INCHES WERE REQUIRED FROM THE SITE. 201 TREES WILL BE MITIGATED BY PLANTING TREES.

REE WELLS HAVE A MINIMUM SPACING OF 5' FROM THE TREE TRUNK.

PLAT NUMBER  
24-11800389

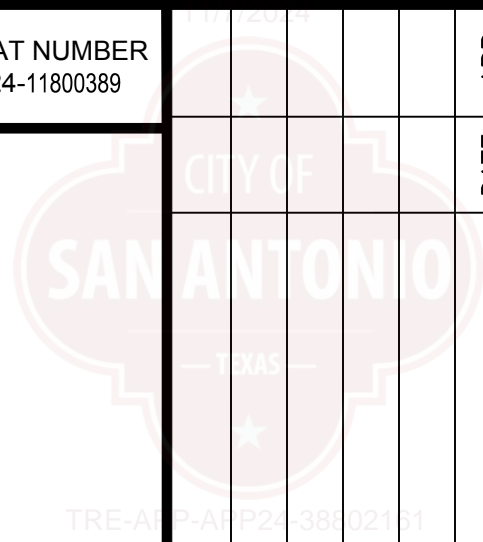
<div style="display: flex; justify-content: space-between;"> <div> <p>SHEET C02.31</p> </div> <div> <p>HERON VALLEY PHASE 1</p> </div> <div> <p>TREE PROTECTION TABLES (SHEET 2 OF 2)</p> </div> </div>	<div style="text-align: center;">  <p><b>BGE, INC.</b>  7890 Saint Paulino Street, #22  San Antonio, TX 78246  TEL: 210-581-3600, www.bgeingay.com  TBEPE Registration No. F-1046</p> </div>		DESIGNED BY:	JDC	△		<div style="display: flex; justify-content: space-between;"> <div> <p>DATE</p> </div> <div> <p>REV</p> </div> </div>	<div style="display: flex; justify-content: space-between;"> <div> <p>APR</p> </div> <div> <p>DESCRIPTION</p> </div> </div>
			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		in.	
Total	-	in.	
Removed	-	in.	
Preserved	-	in.	80.00%
Required 80% Heritage			0.00% Mitigation
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% Heritage			0.00% Mitigation
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) Heritage			0.00% Mitigation
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)
(All tree species of Ash, Hackberry, Huisache, Ashe Juniper and Mesquite will be mitigated at 1:1.)	-	in.	(removed x 1)
(All other heritage trees to be mitigated at 3:1.)	-	in.	(removed x 3)
Environmentally Sensitive Areas - Protected Required Mitigation	-	in.	(removed)
Environmentally Sensitive Areas - Heritage Required Mitigation	-	in.	(removed)
(All tree species of Ash, Hackberry, Huisache, Ashe Juniper and Mesquite will be mitigated at 1:1.)	-	in.	(removed x 1)
(All other heritage trees to be mitigated at 3:1.)	-	in.	(removed x 3)
Outside of Floodplain - Protected Required Mitigation	194.00	in.	
Outside of Floodplain - Heritage Required Mitigation	-	in.	(removed)
(All tree species of Ash, Hackberry, Huisache, Ashe Juniper and Mesquite will be mitigated at 1:1.)	-	in.	(removed x 1)
(All other heritage trees to be mitigated at 3:1.)	-	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.	
	TOTAL MITIGATION (in.) FROM THE "TOTAL PLANTED TREES" TABLE		
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)*87.5
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)*87.5
Required Canopy to be Planted	69,089.99	Sq. Ft.	
POST CONSTRUCTION TREE CANOPY MITIGATION PROVIDED			
Total Canopy Planted	175,218.75	Sq. Ft.	
	TOTAL MITIGATION (SQ. FT.) FROM THE "TOTAL PLANTED TREES" TABLE		
Total inches to be paid	-	in.	
\$	-		(\$200 per inch)
TOTAL MITIGATION			
Total inches to be paid	-	in	
\$	-		

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

PLAT NUMBER  
24-11800389
















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



**BGE, INC.**  
7330 San Pedro, Suite 202  
San Antonio, TX 78216  
TEL: 210-581-3600 [www.browning.com](http://www.browning.com)

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

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

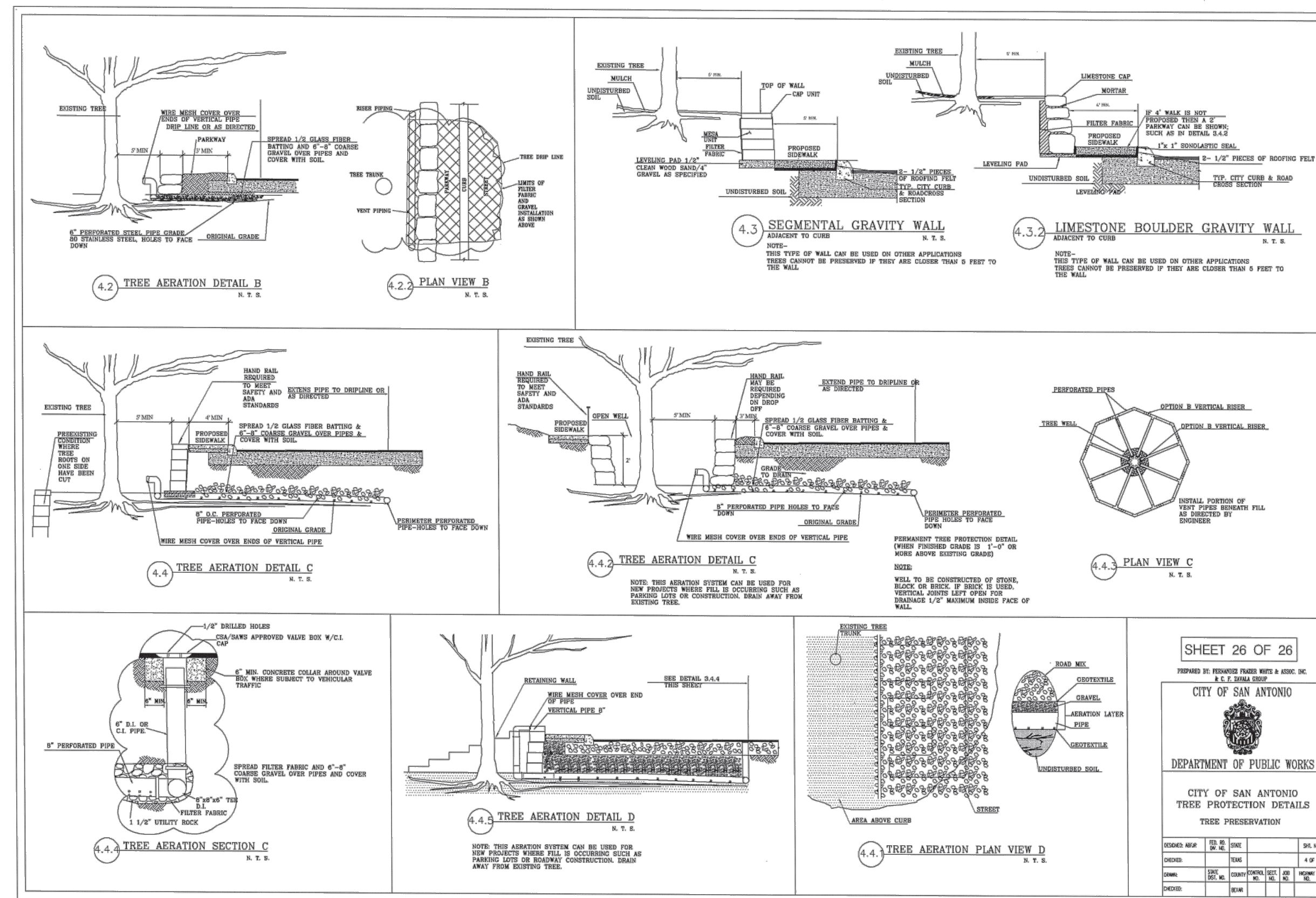
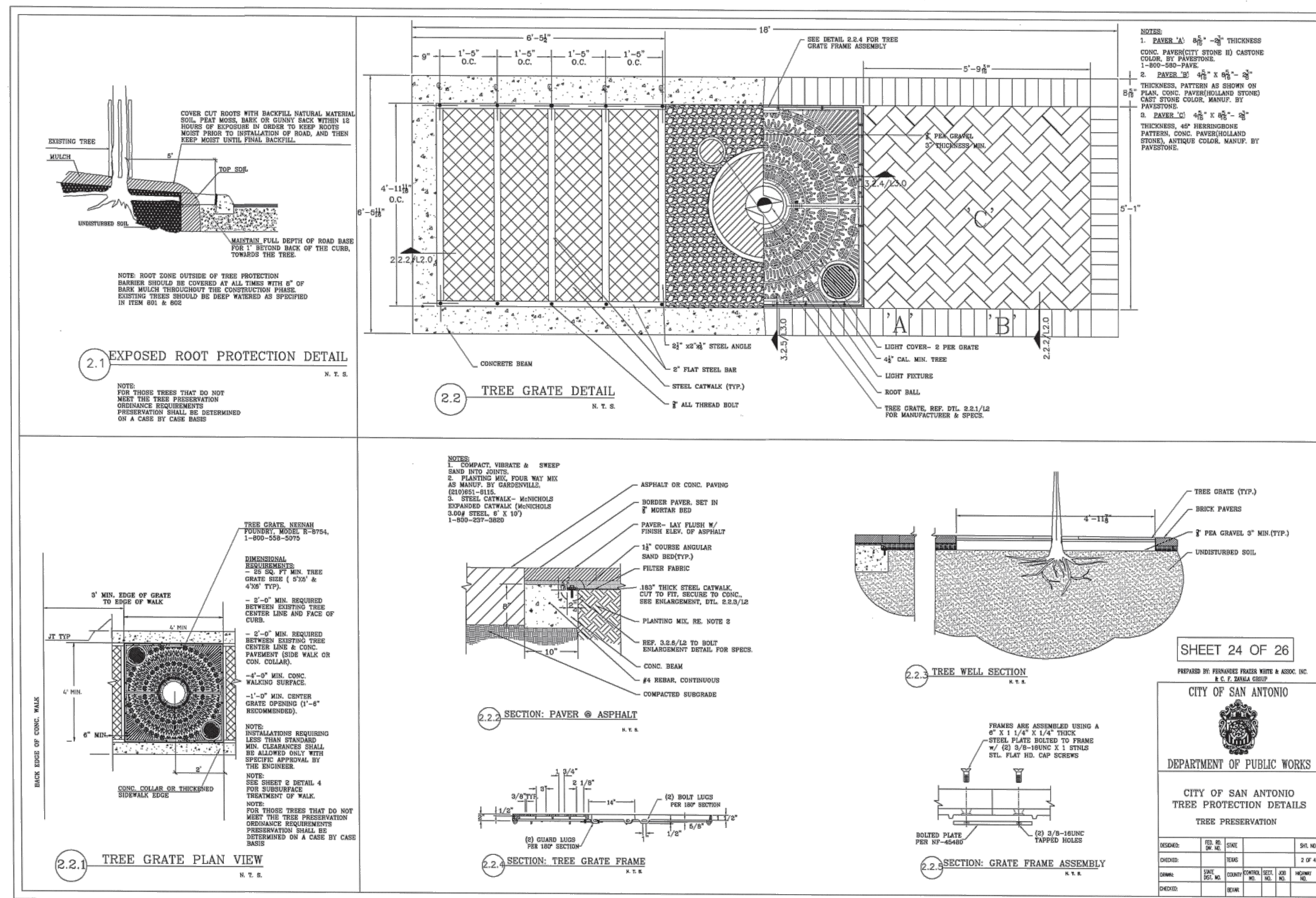
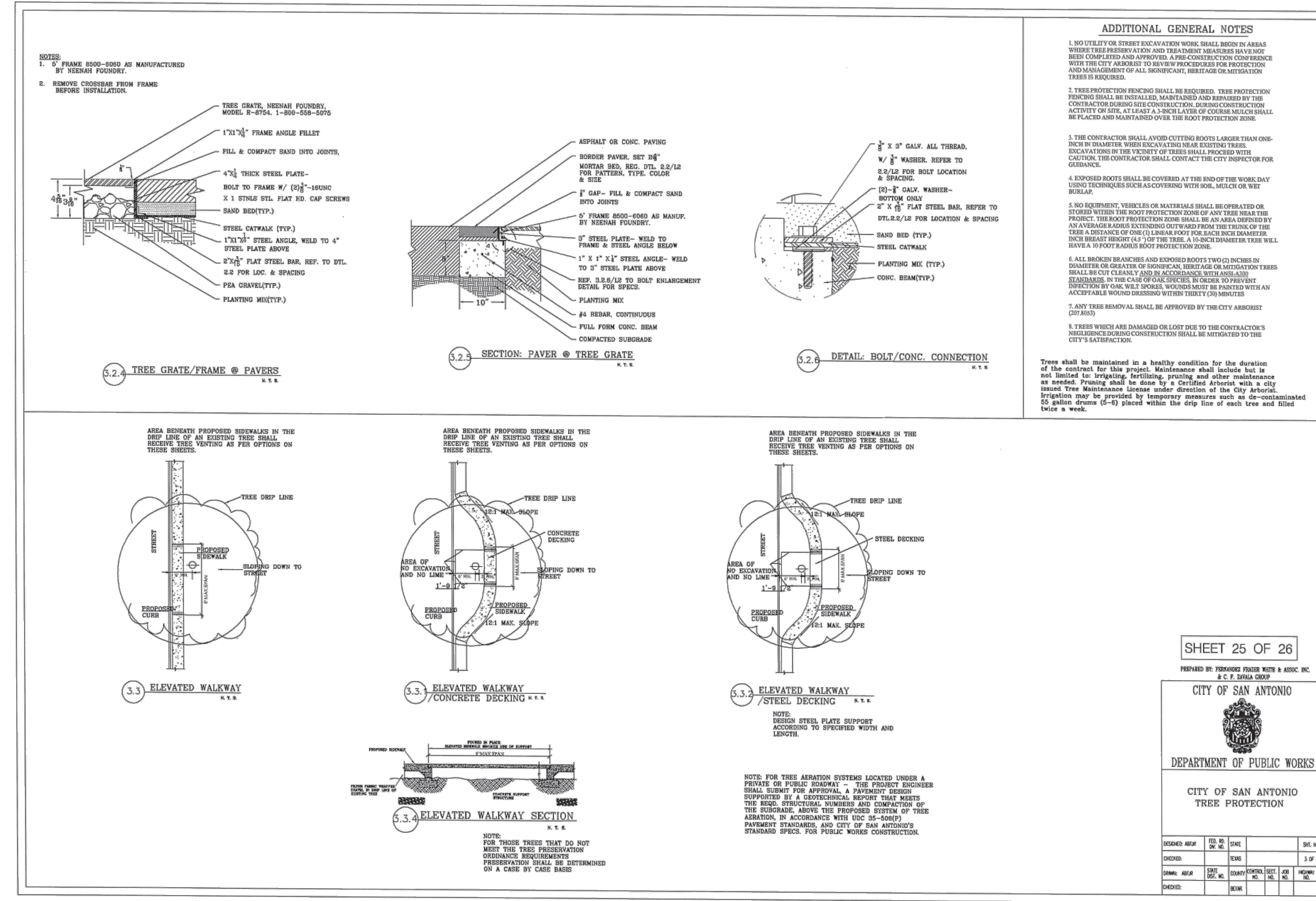
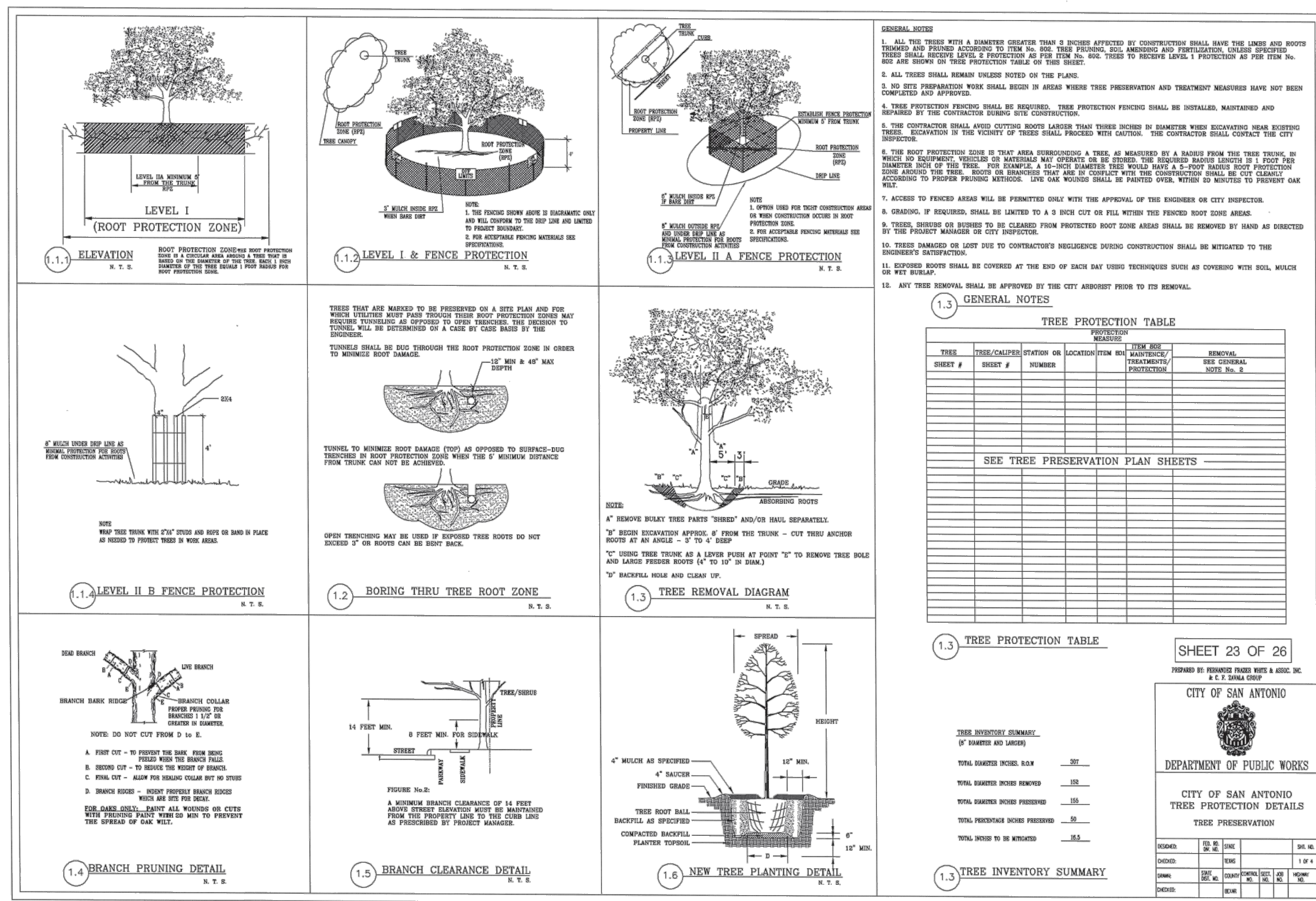
### MITIGATION NOTES

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.

NOT FOR CONSTRUCTION

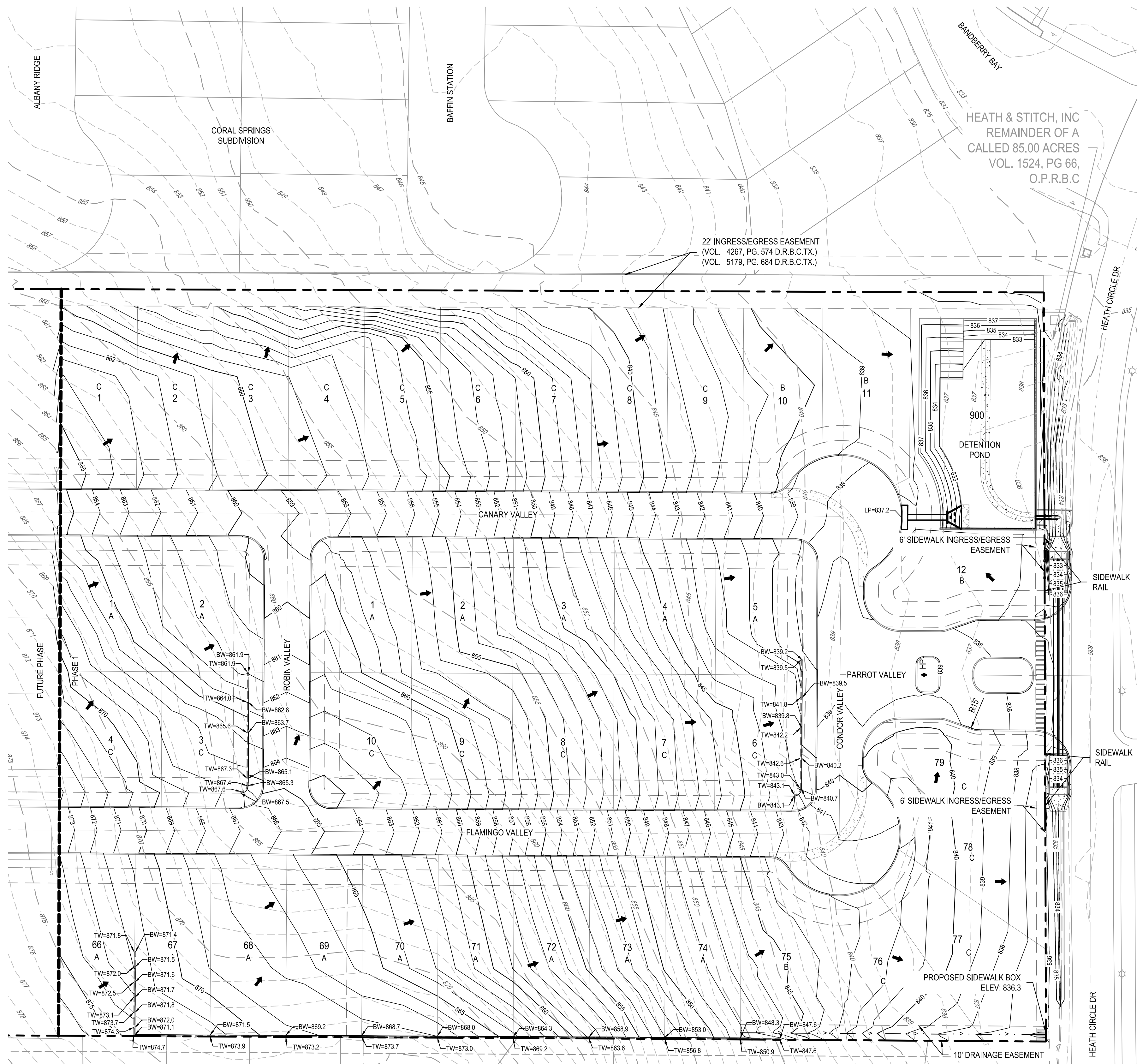
HERON VALLEY PHASE 1  
TREE PROTECTION CALCULATIONS





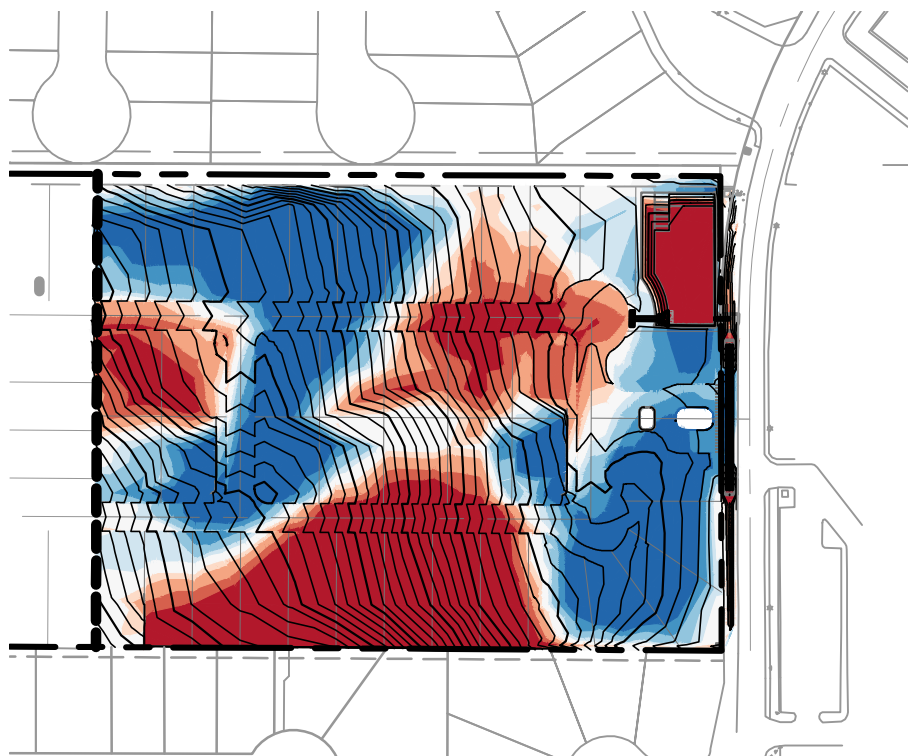


G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01\_Unit V03\_CADD\01\_Overall Grading Plan.dwg Layout: OVERALL GRADING PLAN Plotted: 6/24/2025 3:33:14 PM By: Orodriaguez

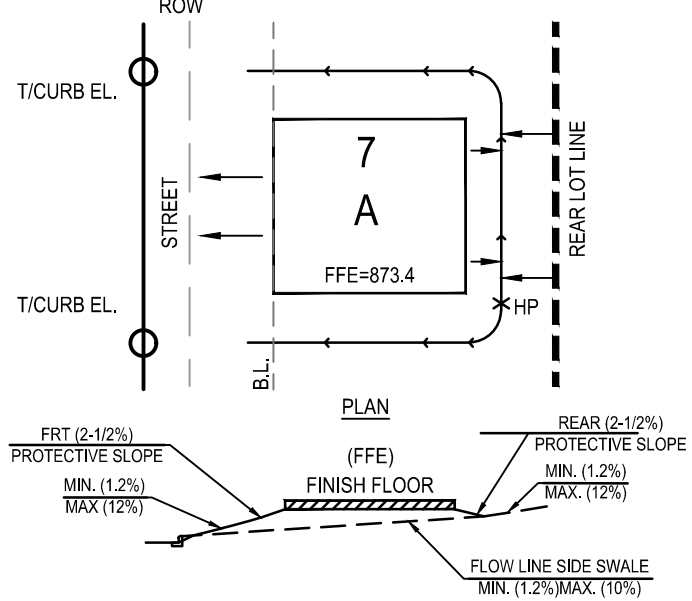


CUT FILL TABLE			
Number	Minimum Elevation	Maximum Elevation	Color
1	-8.000	-1.500	
2	-1.500	-1.000	
3	-1.000	-0.500	
4	-0.500	-0.250	
5	-0.250	0.250	
6	0.250	0.500	
7	0.500	1.000	
8	1.000	1.500	
9	1.500	7.000	

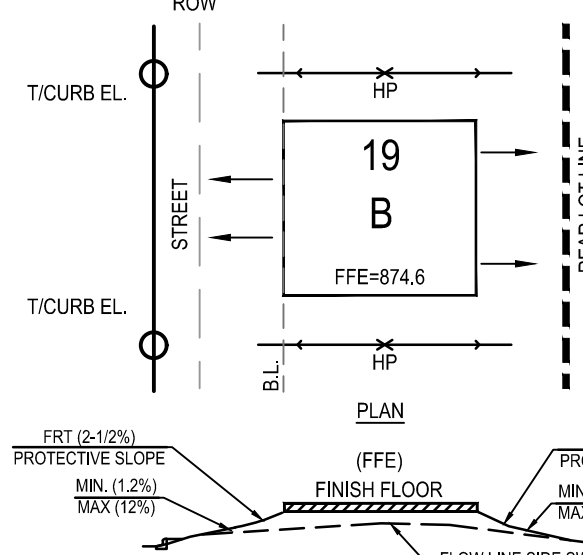
LEGEND	
	PROPERTY BOUNDARY
	PHASE BOUNDARY
	PROPOSED LOT LINES
	EASEMENT
	EXISTING MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED STORM LINE WITH MANHOLE
	PROPOSED CURB INLET
	TYPICAL RAMP (SEE SHEET C08.24)
	LOW POINT/HIGH POINT
	LOT NUMBER AND GRADING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



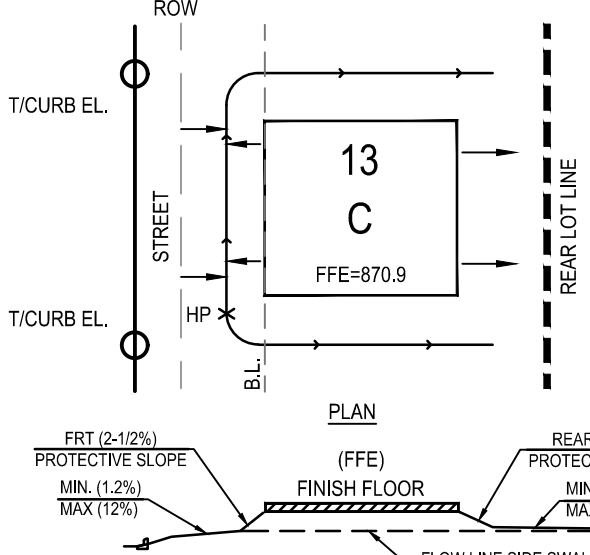
HEAT MAP  
1" = 100'



TYPE "A"  
ALL DRAINAGE TO STREET



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



TYPE "C"  
DRAINAGE TO REAR LOT LINE

#### 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 FHIA 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, SODDING, ETC...) TO PREVENT EROSION FROM OCCURRING.
- CONTRACTOR SHALL CONTACT ENGINEER REGARDING ANY QUESTIONS ON THE INTENT OF THIS PLAN.
- POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS AND TOWARDS THE PROPER DRAINAGE EASEMENT 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.

PLAT NUMBER  
24-11800389

DATE	DESCRIPTION
APR	

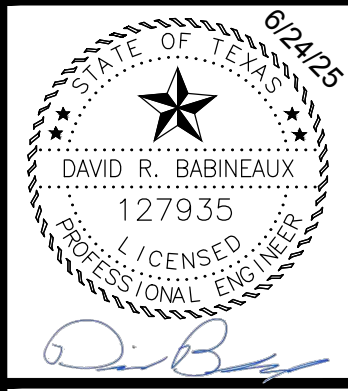
DESIGNED BY: JDC  
REVIEWED BY: OR  
DRAWN BY: JDC



BGE, INC.  
7330 San Pedro, Suite 202  
San Antonio, TX 78216  
TEL: 210-598-3360 www.bgeinc.com  
TXPE Registration No. F-1046

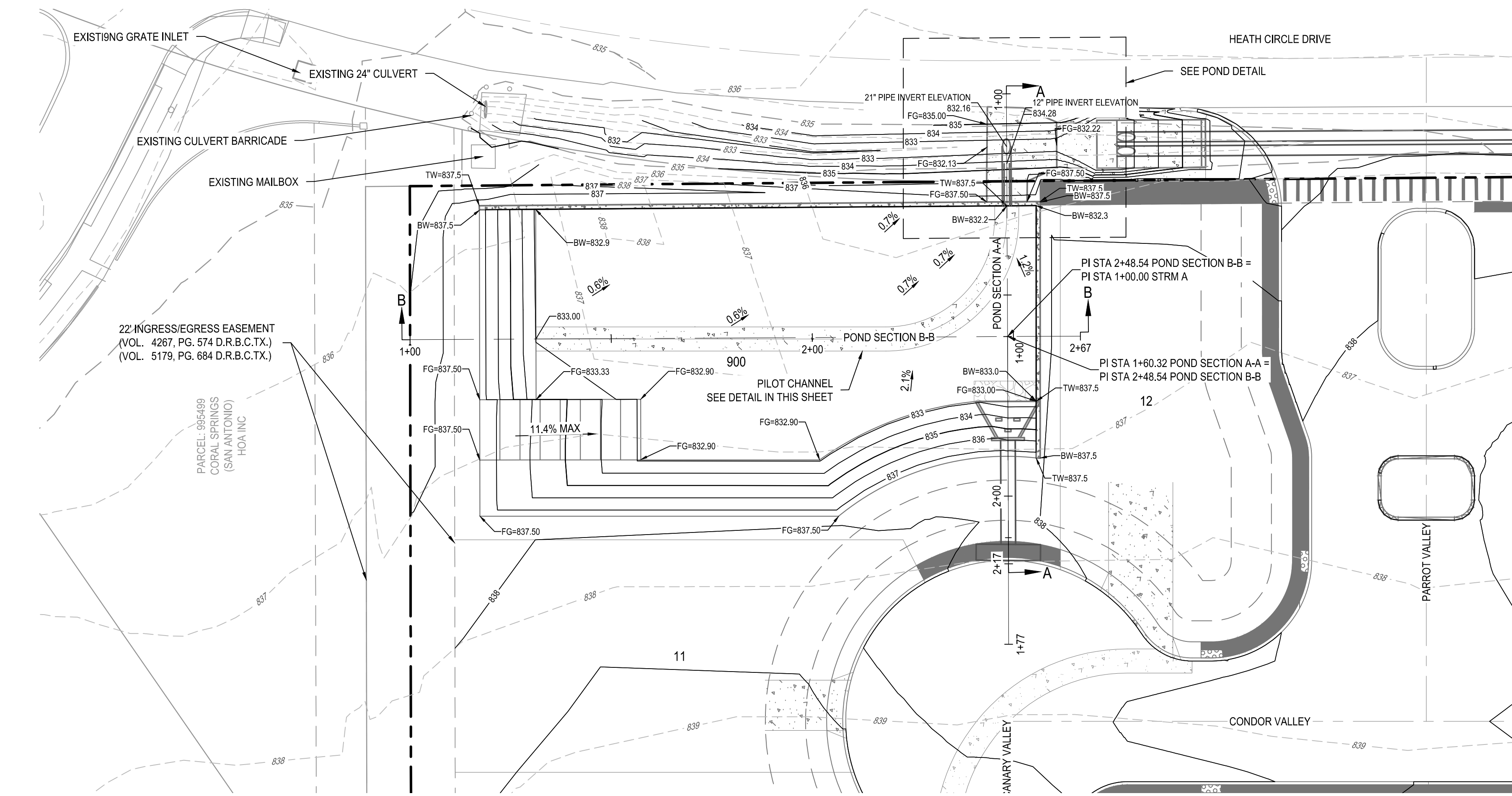
HERON VALLEY PHASE 1

OVERALL GRADING PLAN



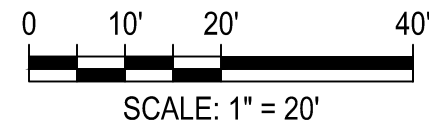
SHEET  
C03.00





STRM QVD (25 YEAR) TABLE				
PIPE	EXISTING Q(CFS)	Q (CFS)	V ( F/S)	D (FT)
POND OUTFALL	25.17	22.95	9.62	1.75

STRM QVD (100 YEAR) TABLE				
PIPE	EXISTING Q(CFS)	Q (CFS)	V ( F/S)	D (FT)
POND OUTFALL	31.10	29.74	11.64	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

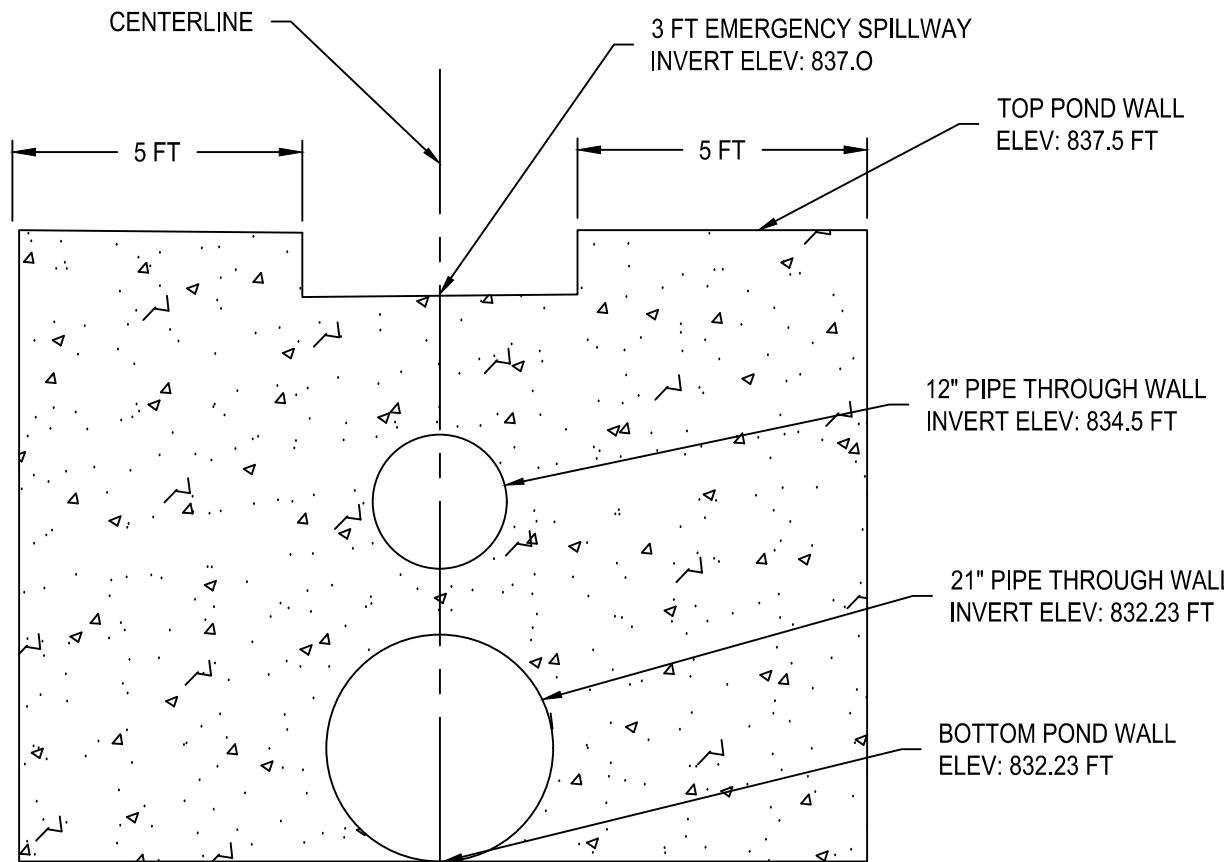
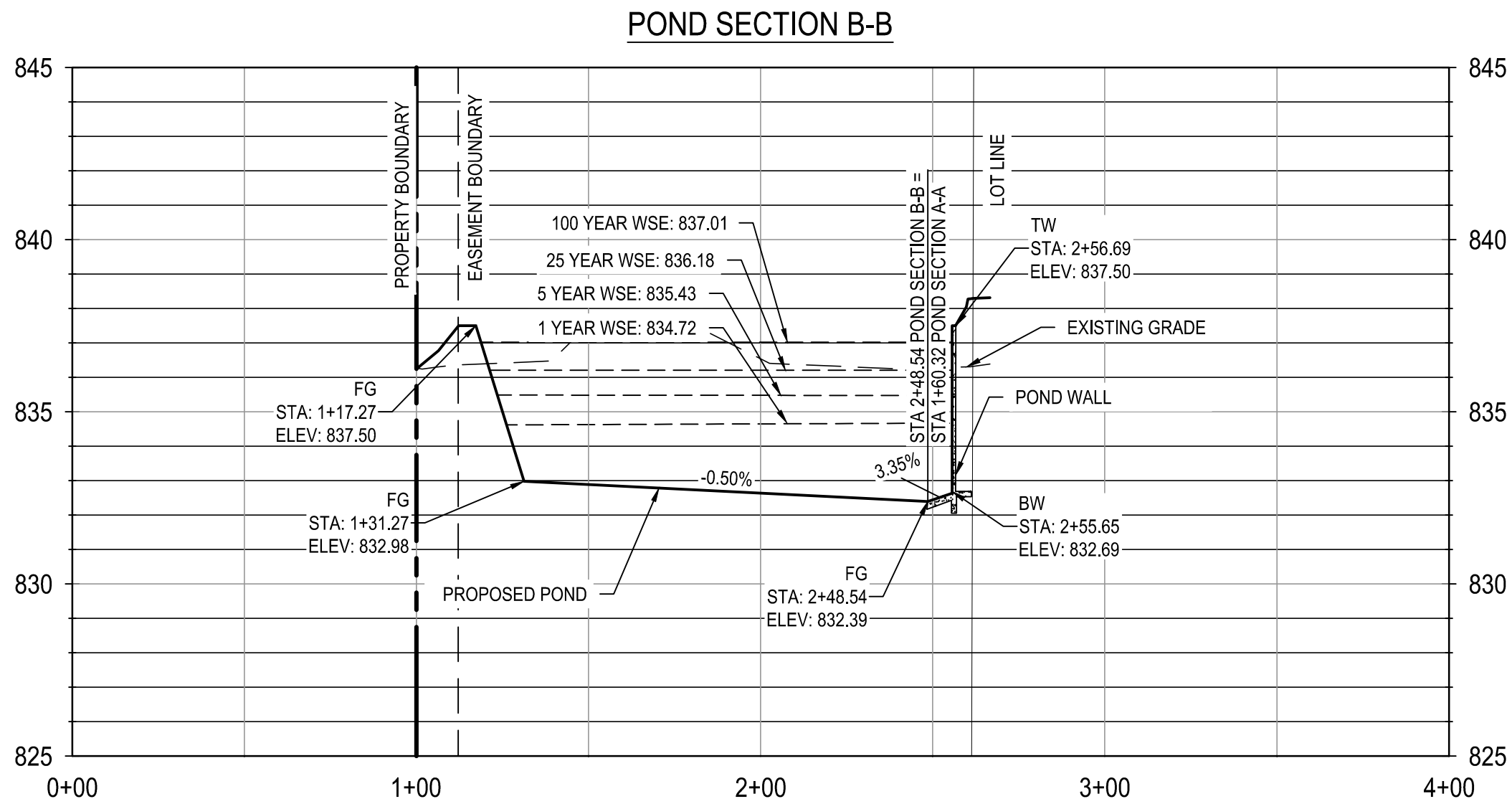
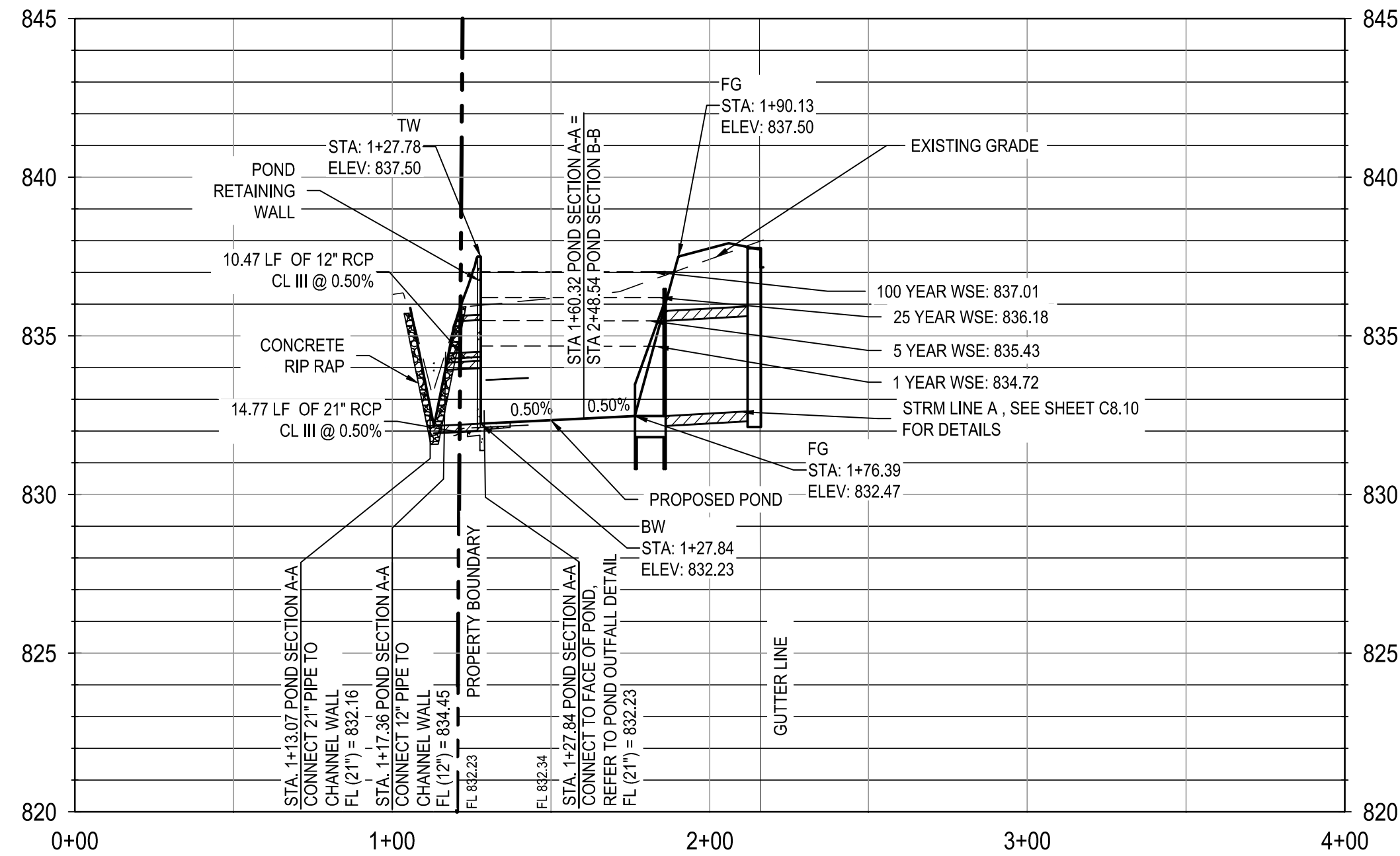
PROFILE LEGEND

	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 POND 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 DATED 3/17/2025. CONTRACTOR TO PERMIT STRUCTURAL WALLS AND COORDINATE WITH STRUCTURAL ENGINEER FOR INSPECTIONS & TESTS.



POND HEADWATER ELEVATIONS	
ULTIMATE STORM EVENT	ELEV.
1 YEAR	834.72
5 YEAR	835.43
25 YEAR	836.18
100 YEAR	837.01

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

POND TABLE					
ELEVATION (FT)	POND DEPTH (FT)	STAGE (FT)	SURFACE AREA (SF)	VOLUME (CF)	CUMULATIVE VOLUME (CF)
832.23	0	0	119	0	0
832.5	0.27	0.27	1,474	181	181
833.0	0.5	0.5	6,760	873	1,054
833.5	0.5	1.0	7,196	3,488	4,542
834.0	0.5	1.5	7,512	3,676	8,219
834.5	0.5	2.0	7,841	3,838	12,056
835.0	0.5	2.5	8,183	4,005	16,061
835.5	0.5	3.0	8,539	4,180	20,241
836.0	0.5	3.5	8,908	4,361	24,602
836.5	0.5	4.0	9,288	4,548	29,150
837.0	0.5	4.5	9,680	4,741	33,892
837.5	0.5	5.0	10,081	4,939	38,831

PLAT NUMBER  
24-11800389

DATE	DESCRIPTION
APR	

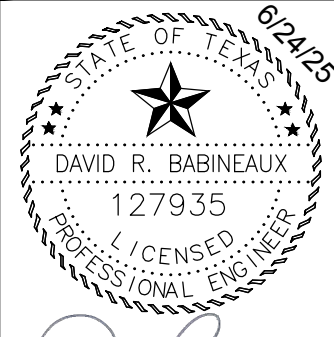
DESIGNED BY: JDC  
REVIEWED BY: OR  
DRAWN BY: JDC



BGE, INC.  
7330 San Pedro, Suite 202  
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TX P.E. Registration No. F-1046

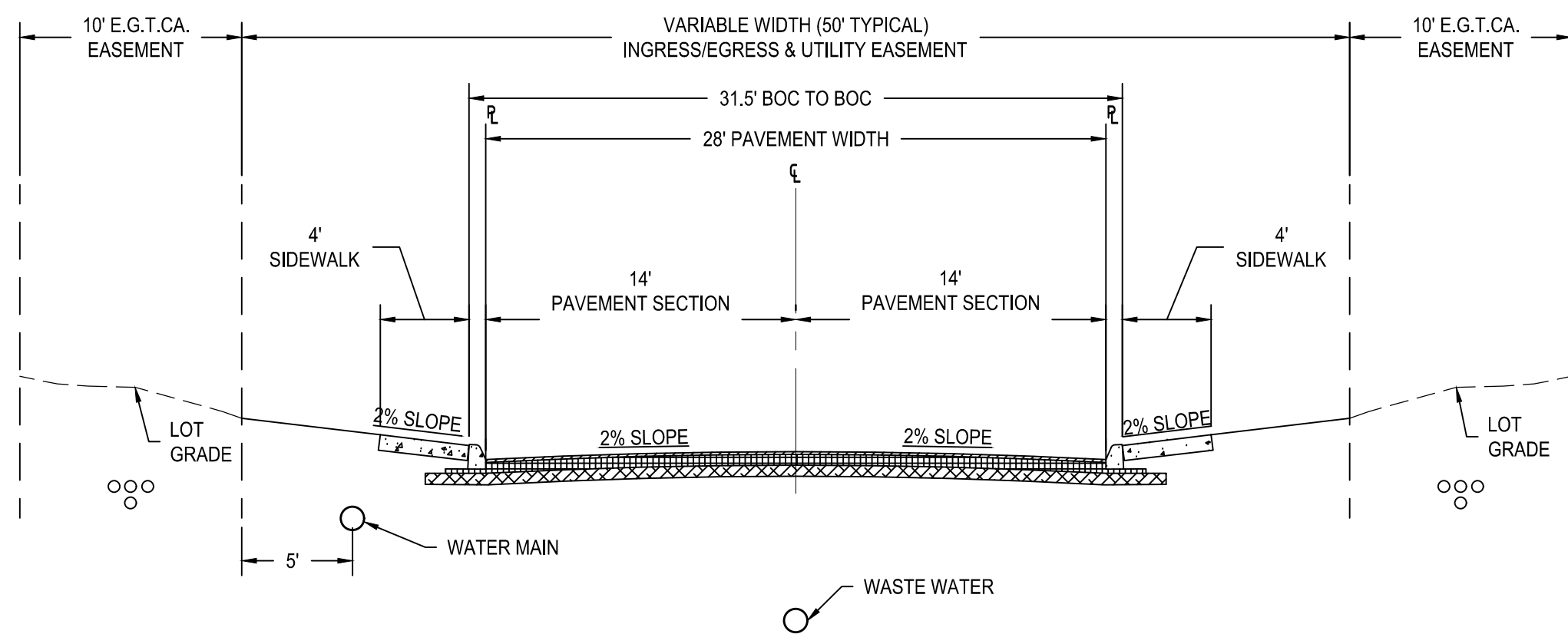
HERON VALLEY PHASE 1

DETENTION POND PLAN



SHEET  
C03.20





UTILITY GENERAL NOTES:

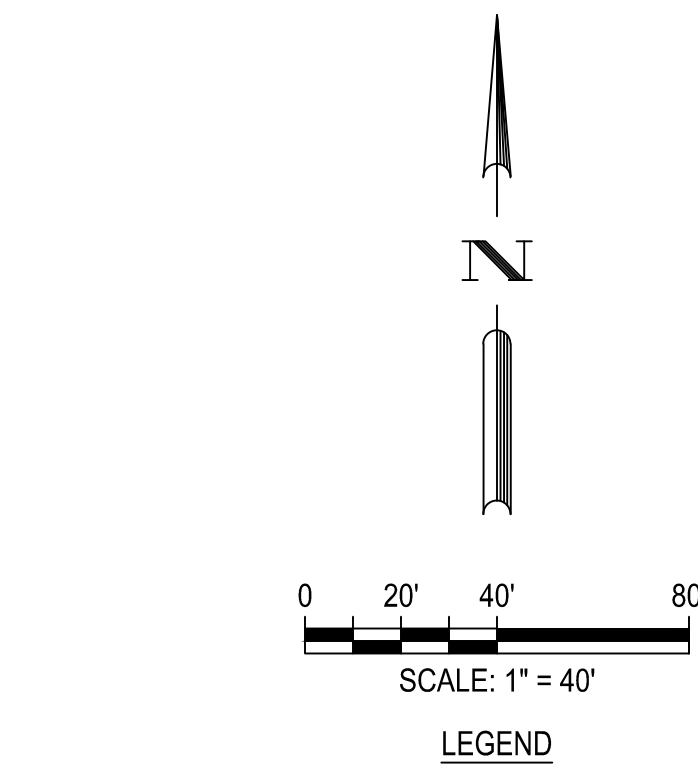
1. ALL MAINS SHALL BE FLUSHED, HYDROSTATICALLY TESTED, AND DISINFECTED BY THE CONTRACTOR.
2. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS OF UTILITIES MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
3. ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT THEIR EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
5. ALL ITEMS NOT SPECIFICALLY CALLED FOR ON THE PLANS, OR IN THE SPECIFICATIONS, BUT NECESSARY TO REASONABLY CONSTRUCT THE FACILITY OR IMPROVEMENT, SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT AND NO SEPARATE PAYMENTS WILL BE MADE FOR THESE ITEMS.
6. DEPTH OF BURY FOR ALL PIPING SHALL BE A MINIMUM OF 4' UNLESS OTHERWISE NOTED OR APPROVED BY SAYS.
7. CONDUIT TO GRADE SITE TO WITHIN +/- 0.10' BEFORE THE INSTALLATION OF UTILITIES TO ENSURE PROPER COVER IS ACHIEVED.
8. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES REGARDING THE LOCATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION.
9. THE CONTRACTOR SHALL EXCAVATE AROUND EXISTING UTILITIES WHICH INTERSECT THE PROPOSED ALIGNMENT OF THE SERVICES AND NOTIFY THE ENGINEER OF POTENTIAL CONFLICTS, PRIOR TO ANY CONSTRUCTION IN THE AREA.
10. ALL DISTURBED AREAS WITHIN EASEMENTS AND CITY OF SAN ANTONIO RIGHT-OF-WAY SHALL BE HYDRO-MULCHED IN ACCORDANCE WITH THE CITY OF SAN ANTONIO SUBDIVISION ORDINANCE AND TxDOT SPECIFICATIONS.
11. SITE FILL BELOW ELEVATION OF 928 FEET THEREFORE PVR'S WILL BE REQUIRED AT EACH 100 FEET METER. IRRELEVATION IS THE RESPONSIBILITY OF THE HOME BUILDER ON THE PRIVATE SIDE. OF THE METER.
12. DRIVEWAY LOCATIONS AND DIMENSIONS ARE FOR REFERENCE ONLY. CONTRACTOR IS TO CONFIRM DRIVEWAY LOCATIONS WITH HOME BUILDER PRIOR TO INSTALLATION OF THE UTILITIES.

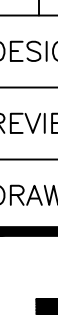
**TILITY TRENCH COMPACTION**

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-114, TEX-115, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF SAN ANTONIO STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF SAN ANTONIO STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

**TRENCH EXCAVATION SAFETY PROTECTION**

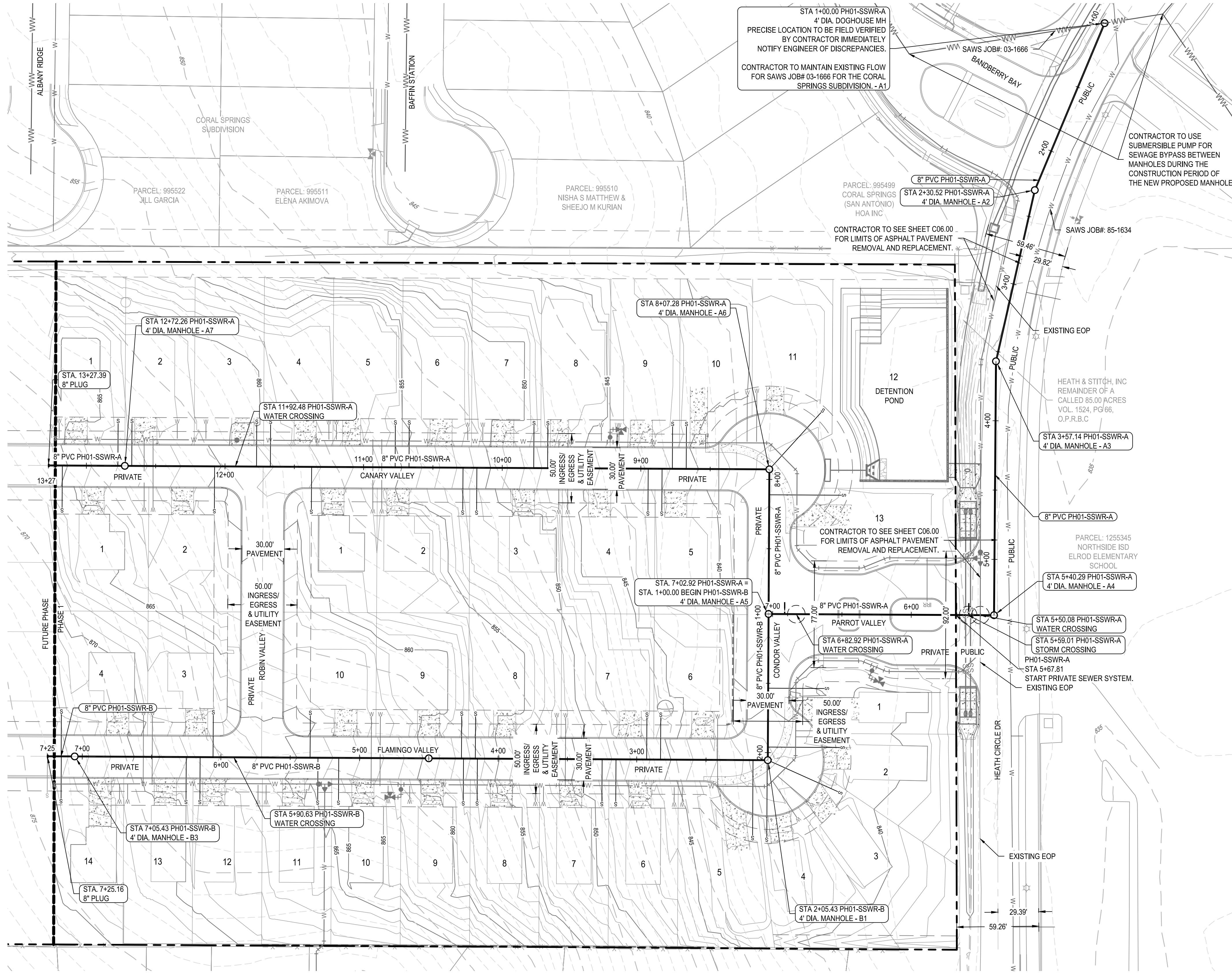
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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



<div>HERON VALLEY PHASE 1</div>	<div>UTILITY PLAN</div>	<div><p><b>BGE, INC.</b> 7330 S. Saint Francis Street, Rm. 802 Suite 100 San Antonio, TX 78246 TEL: 210-581-3600 <a href="http://www.browning.com">www.browning.com</a> TBEPE Registration No. F-1046</p></div>	△	DESIGNED BY:	JDC				
			△	REVIEWED BY:	OR				
			△	DRAWN BY:	JDC				
			△						
			△						
						DESCRIPTION	REV	DATE	APR



G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01\_Unit 103\_CADD\01\_Shts\C05.00 OVERALL WASTEWATER PLAN.dwg Layout: OVERALL WASTEWATER PLAN Plotted: 11/14/2024 3:58:22 PM By: Calderon



STA 1+00.00 PH01-SSWR-A  
4" DIA. DOGHOUSE MH  
PRECISE LOCATION TO BE FIELD VERIFIED  
BY CONTRACTOR IMMEDIATELY  
NOTIFY ENGINEER OF DISCREPANCIES.  
CONTRACTOR TO MAINTAIN EXISTING FLOW  
FOR SAWS JOB# 03-1666 FOR THE CORAL  
SPRINGS SUBDIVISION - A1

CONTRACTOR TO SEE SHEET C06.00  
FOR LIMITS OF ASPHALT PAVEMENT  
REMOVAL AND REPLACEMENT.

CONTRACTOR TO USE  
SUBMERSIBLE PUMP FOR  
SEWAGE BYPASS BETWEEN  
MANHOLES DURING THE  
CONSTRUCTION PERIOD OF  
THE NEW PROPOSED MANHOLE

CONTRACTOR TO SEE SHEET C06.00  
FOR LIMITS OF ASPHALT PAVEMENT  
REMOVAL AND REPLACEMENT.

8" PVC PH01-SSWR-A  
STA 2+30.52 PH01-SSWR-A  
4" DIA. MANHOLE - A2

SAWS JOB# 85-1634

HEATH & STITCH, INC  
REMAINDER OF A  
CALLED 85.00 ACRES  
VOL. 1524, PG 66,  
O.P.R.B.C

STA 3+57.14 PH01-SSWR-A  
4" DIA. MANHOLE - A3

PARCEL: 1255345  
NORTHSIDE ISD  
ELROD ELEMENTARY  
SCHOOL

STA 5+40.29 PH01-SSWR-A  
4" DIA. MANHOLE - A4

STA 5+50.08 PH01-SSWR-A  
WATER CROSSING

STA 5+50.01 PH01-SSWR-A  
STORM CROSSING

PH01-SSWR-A  
STA 5+05.08  
START PRIVATE SEWER SYSTEM.  
EXISTING EOP

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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.C. RULES  
AND REGULATIONS  
BY: *Shirley 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 1384.14' OF 8" 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.

SEWER GENERAL NOTE:  
WASTEWATER PIPES SHALL BE SDR21 PVC.  
NOTE:  
UTILITY SYMBOLS ARE NOT TO SCALE, AND ARE ONLY SHOWN FOR  
ILLUSTRATION PURPOSES.

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.

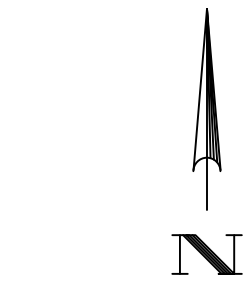
NOTES:

- ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND WILL BE ALL EXISTING UTILITY  
LOCATIONS ARE APPROXIMATE AND WILL BE CONFIRMED BY CONTRACTOR PRIOR TO  
CONSTRUCTION.
- CONTRACTOR SHALL PROTECT ALL EXISTING TREES, FENCES, CONTRACTOR SHALL  
PROTECT ALL EXISTING TREES, FENCES, RETAINING WALLS AND STRUCTURES UNLESS  
OTHERWISE NOTED.
- WATER LINES 3" AND SMALLER SHALL BE SCH 40 PVC OR CLASS WATER LINES 3" AND  
SMALLER SHALL BE SCH 40 PVC OR CLASS 200 PVC WATER PIPE, WATER LINES 4"  
THROUGH 12" SHALL BE AWWA C-909, ALL WATER MAINS 14" THROUGH 36" SHALL BE  
C-909.
- GENERALLY, WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE GENERALLY,  
WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE SHOWN FOR INSTALLATION  
LOCATION PURPOSES, NOT ALL FITTINGS ARE NOTED, SHOWN, OR INDICATED.
- REFER TO GENERAL NOTES SHEET OR SPECIFIC DETAIL SHEET IN THIS SET FOR  
GENERAL NOTES SHEET OR SPECIFIC DETAIL SHEET IN THIS SET FOR FURTHER  
INSTRUCTIONS, FOR ANY DISCREPANCIES THE MORE STRINGENT WILL APPLY.
- REFER TO PLAN AND PROFILE SHEETS IN THIS SET FOR SANITARY REFER TO PLAN AND  
PROFILE SHEETS IN THIS SET FOR SANITARY SEWER AND STORM SEWER DESIGN  
INFORMATION.
- RADIUS WATERLINE PIPE SHALL BE LAID IN 20 FT INCREMENTS AT 1" RADIUS WATERLINE  
PIPE SHALL BE LAID IN 20 FT INCREMENTS AT 1" DEFLECTIONS.
- COMPACTION OF TRENCH UNDER PROPOSED PAVING SHOULD USE COMPACTION OF  
TRENCH UNDER PROPOSED PAVING SHOULD USE APPROPRIATE REPLACEMENT  
GRANULAR MATERIAL IF UNSUITABLE SOIL IS EXCAVATED FROM TRENCH.
- ALL OTHER UTILITIES SHALL BE INSTALLED BELOW THE WATER LINE ALL OTHER UTILITIES  
SHALL BE INSTALLED BELOW THE WATER LINE WITH AT LEAST 1' SEPARATION.

FINISHED FLOOR ELEVATIONS

THE ELEVATIONS OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE  
FINISHED GRADE OF THE SURROUNDING GROUND, 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.

PLAT NUMBER  
24-11800389



0 20' 40' 80'

SCALE: 1" = 40'

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 SERVICES
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED WATER LINE
- PROPOSED SINGLE/DOUBLE WATER SERVICE
- PROPOSED STORM LINE
- PROPOSED ELECTRIC
- PROPOSED GAS
- DIRECTION OF FLOW
- UTILITY CROSSING

DATE	DESCRIPTION
APR	

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



BGE, INC.  
7330 San Pedro, Suite 202  
San Antonio, TX 78216  
TEL: 210-581-3600 www.bgeenergy.com  
TXE Registration No. F-1040

HERON VALLEY PHASE 1  
OVERALL WASTEWATER PLAN

NOT FOR CONSTRUCTION



11/14/2024

SHEET

C05.00



SHEET  
C05.10



G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01\_Unit\03\_CADD\01\_Shts\C05.10 WASTEWATER LINE A PLAN & PROFILE.dwg Layout: WASTEWATER LINE A PLAN & PROFILE STA 6+50 TO END Plotted: 11/14/2024 3:56:30 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  
SAN ANTONIO WATER SYSTEM AND T.C.E.Q. RULES  
AND REGULATIONS

BY: *Antonio B. 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) 586-2025 FAX: N/A  
SAWS BLOCK MAP #: N/A TOTAL EDDS: 40 TOTAL ACREAGE: 2.361  
TOTAL LINEAR FOOTAGE OF PIPE: 1184.12' (8" PVC) PLAT NO.: 24-11800389  
NUMBER OF LOTS: 40 SAWS JOB NO.: 24-1625

PLAT NUMBER:  
24-11800389

DATE

DESCRIPTION

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



BGE, INC.  
7330 San Pedro, Suite 202  
San Antonio, TX 78216  
TEL: 210-581-3600 www.bgeinc.com  
TXEPE Registration No. F-1040

HERON VALLEY PHASE 1

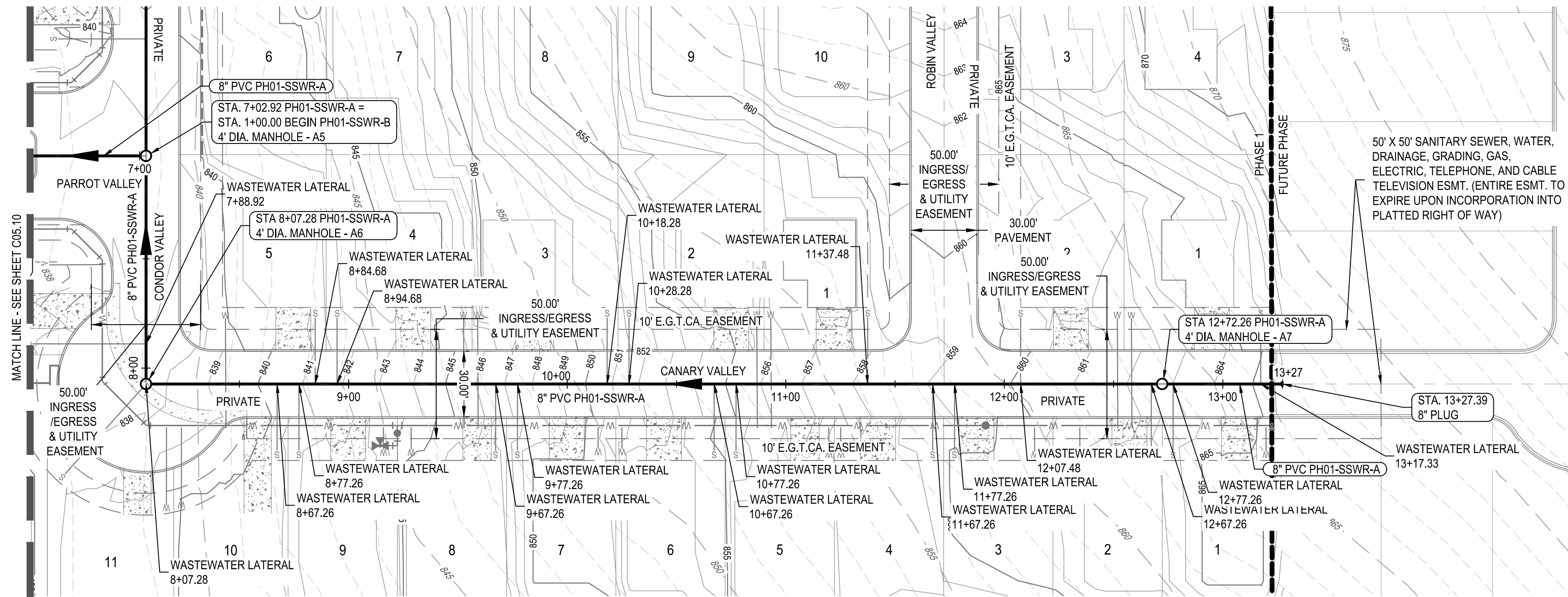
WASTEWATER LINE A PLAN & PROFILE  
STA 6+50 TO END

NOT FOR CONSTRUCTION



11/14/2024

SHEET  
C05.11



0 20' 40' 80'  
SCALE: 1" = 40'

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 SERVICES
- PROPOSED WASTEWATER CLEANOUT
- PROPOSED WATER LINE
- 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

SEWER GENERAL NOTE:  
WASTEWATER PIPES SHALL BE SDR21 PVC.  
NOTE:  
UTILITY SYMBOLS ARE NOT TO SCALE, AND ARE ONLY SHOWN FOR  
ILLUSTRATION PURPOSES.

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.

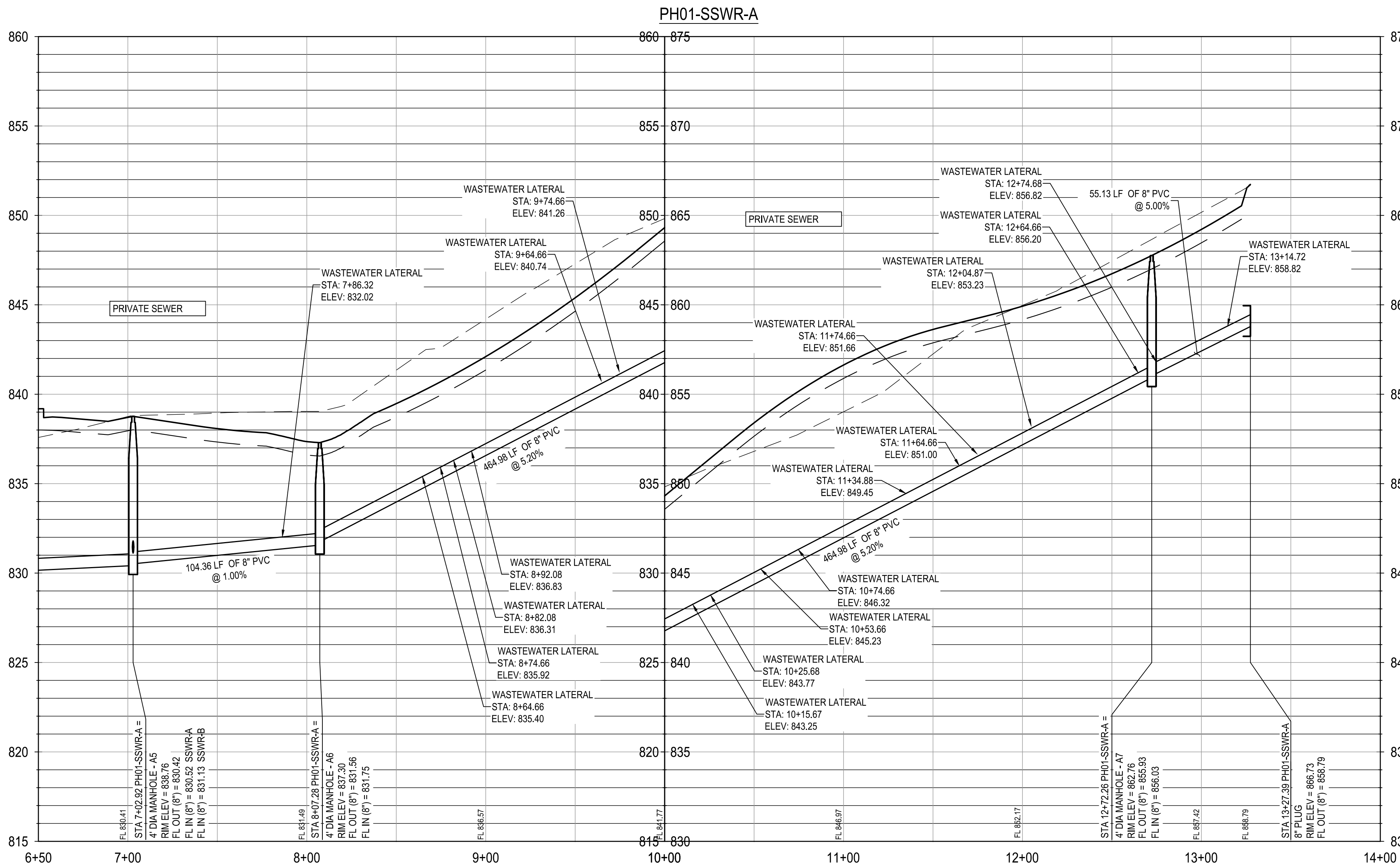
NOTES:

- ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND WILL BE ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND WILL BE CONFIRMED BY CONTRACTOR PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PROTECT ALL EXISTING TREES, FENCES, CONTRACTOR SHALL PROTECT ALL EXISTING TREES, FENCES, RETAINING WALLS AND STRUCTURES UNLESS OTHERWISE NOTED.
- WATER LINES 3" AND SMALLER SHALL BE SCH 40 PVC OR CLASS WATER LINES 3" AND SMALLER SHALL BE SCH 40 PVC OR CLASS 200 PVC WATER PIPE. WATER LINES 4" THROUGH 12" SHALL BE AWWA C-909. ALL WATER MAINS 14" THROUGH 36" SHALL BE C-909.
- GENERALLY, WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE GENERALLY, WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE SHOWN FOR INSTALLATION LOCATION PURPOSES. NOT ALL FITTINGS ARE NOTED, SHOWN, OR INDICATED.
- REFER TO GENERAL NOTES SHEET OR SPECIFIC DETAIL SHEET IN THIS SET FOR FURTHER INSTRUCTIONS. FOR ANY DISCREPANCIES THE MORE STRINGENT WILL APPLY.
- REFER TO PLAN AND PROFILE SHEETS IN THIS SET FOR SANITARY REFER TO PLAN AND PROFILE SHEETS IN THIS SET FOR SANITARY SEWER AND STORM SEWER DESIGN INFORMATION.
- RADIUS WATERLINE PIPE SHALL BE LAID IN 20 FT INCREMENTS AT 1" RADIUS WATERLINE PIPE SHALL BE LAID IN 20 FT INCREMENTS AT 1" DEFLECTIONS.
- COMPACTION OF TRENCH UNDER PROPOSED PAVING SHOULD USE COMPACTION OF TRENCH UNDER PROPOSED PAVING SHOULD USE APPROPRIATE REPLACEMENT GRANULAR MATERIAL IF UNSUITABLE SOIL IS EXCAVATED FROM TRENCH.
- ALL OTHER UTILITIES SHALL BE INSTALLED BELOW THE WATER LINE ALL OTHER UTILITIES SHALL BE INSTALLED BELOW THE WATER LINE WITH AT LEAST 1' SEPARATION.

FINISHED FLOOR ELEVATIONS

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.

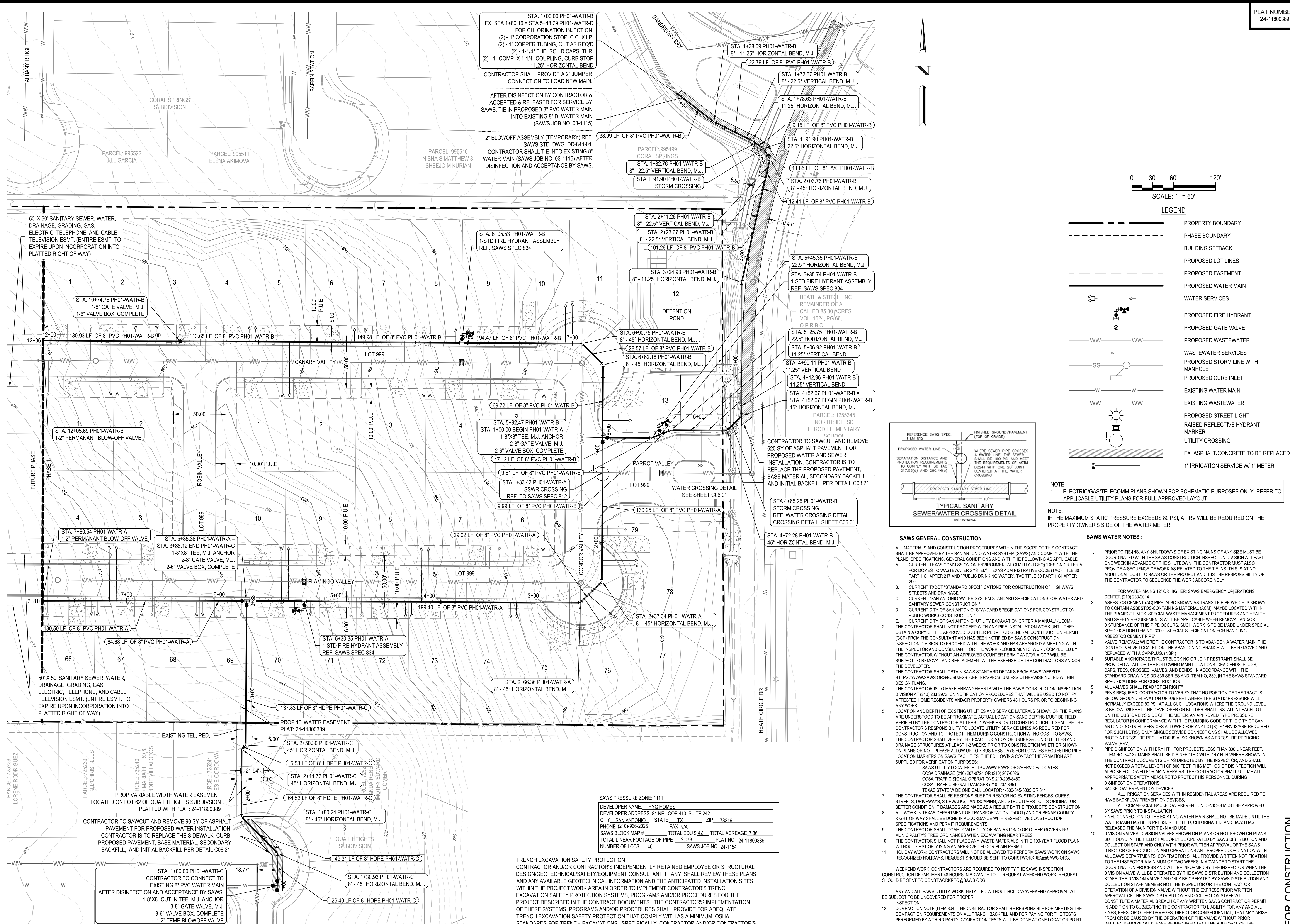
THE ELEVATIONS OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORM WATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO THE STORM WATER CONVEYANCE STRUCTURES MUST HAVE FLOOR SLAB ELEVATION OR BOTTOM 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.











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

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

SAWS PRESSURE ZONE: 1111

DEVELOPER NAME:	HYG HOMES
DEVELOPER ADDRESS:	84 NE LOOP 410, SUITE 242
CITY:	SAN ANTONIO, TX
STATE:	TX
ZIP:	78216
PHONE:	(210) 385-2025
FAX:	N/A
SAWS BLOCK MAP #:	TOTAL EDUS 42
TOTAL LINEAR FOOTAGE OF PIPE:	2,078
NUMBER OF LOTS:	40
SAWS JOB NO.:	24-1154

- 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 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."  
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.  
F. THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE: <https://www.saws.org/business/standard-specs>, UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.  
G. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.  
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>  
COSA DRAINAGE (210) 207-0724 OR (210) 207-0026  
COSA TRAFFIC SIGNAL OPERATIONS (210) 208-5480  
COSA TRAFFIC SIGNAL DAMAGES (210) 207-3551  
TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-8008 OR 811  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING EXISTING FEES, 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.  
J. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.  
K. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.  
L. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTRUCTION@SAWS.ORG.  
M. WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE AND REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSTRUCTION@SAWS.ORG.  
N. ANY AND ALL CONSTRUCTION WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.  
O. 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.  
P. 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  
2. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS-CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 300, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".  
3. VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTRACTOR SHALL LOCATE THE MAIN ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG (NSPI).  
4. SUITABLE ANCHORAGE/THRUST BLOCKING OR JOINT RESTRAINT SHALL BE PROVIDED AT ALL OF THE FOLLOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, CAPS, TEES, CROSSES, VALVES, AND BENDS, IN ACCORDANCE WITH THE STANDARD DRAWINGS D0-839 SERIES AND ITEM NO. 839, IN THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION.  
5. ALL VALVES SHALL BE DRY HTH FOR PROJECTS LESS THAN 800 LINEAR FEET. (ITEM NO. 847.3); MAINS SHALL BE DISINFECTED WITH DRY HTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED FOR MAIN REPAIRS. THE CONTRACTOR SHALL UTILIZE ALL APPROPRIATE SAFETY MEASURES TO PROTECT HIS PERSONNEL DURING DISINFECTION OPERATIONS.  
6. 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.  
7. 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.

PLAT NUMBER  
24-11800389

DATE  
APR

DESCRIPTION

DESIGNED BY: JDC

REVIEWED BY: OR

DRAWN BY: JDC

BGE INC.

7230 San Pedro, Suite 202  
San Antonio, TX 78216  
TEL: 248-3603 www.bgeinc.com  
TDE Registration No. F-106

HERON VALLEY PHASE 1

WATER DISTRIBUTION PLAN

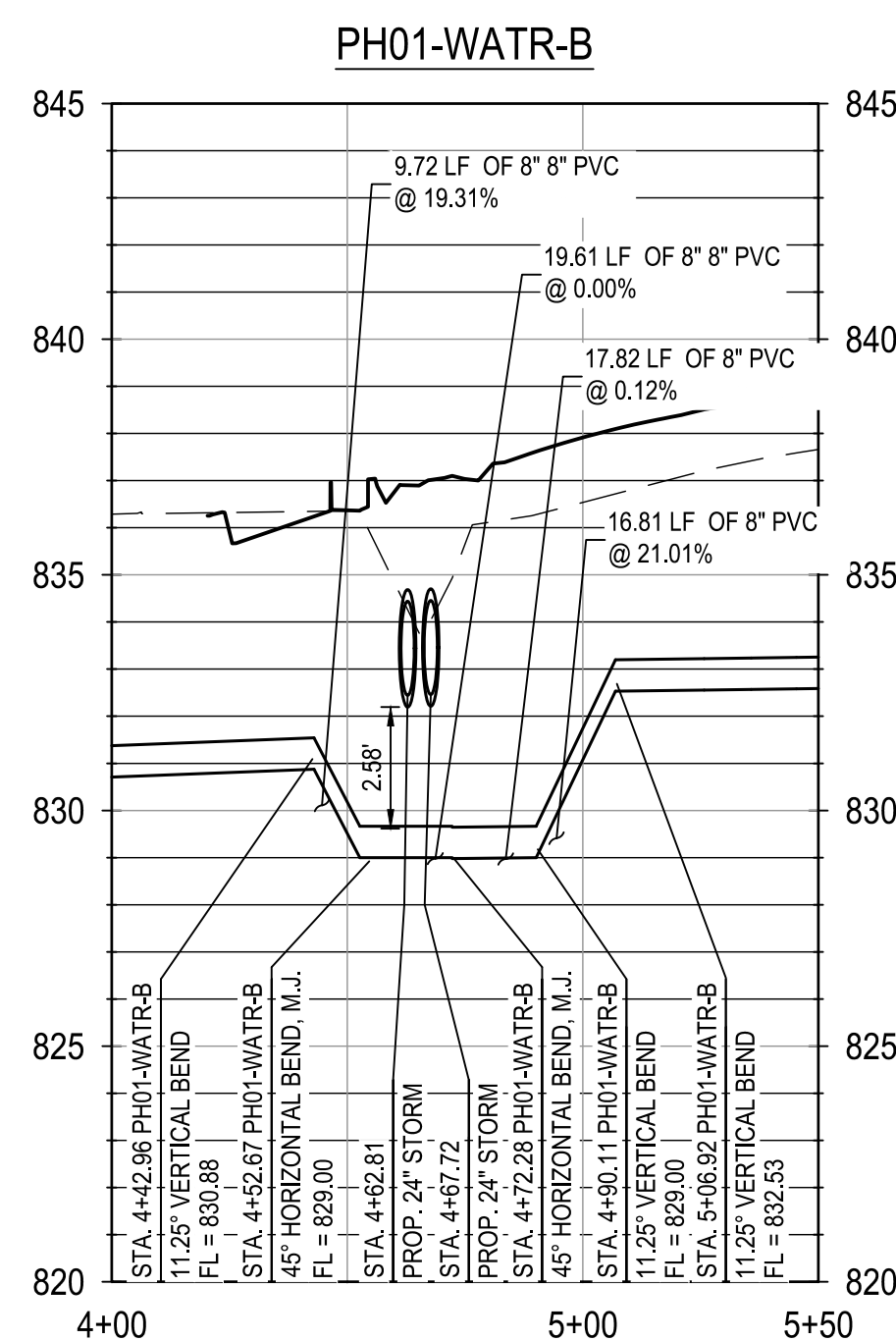
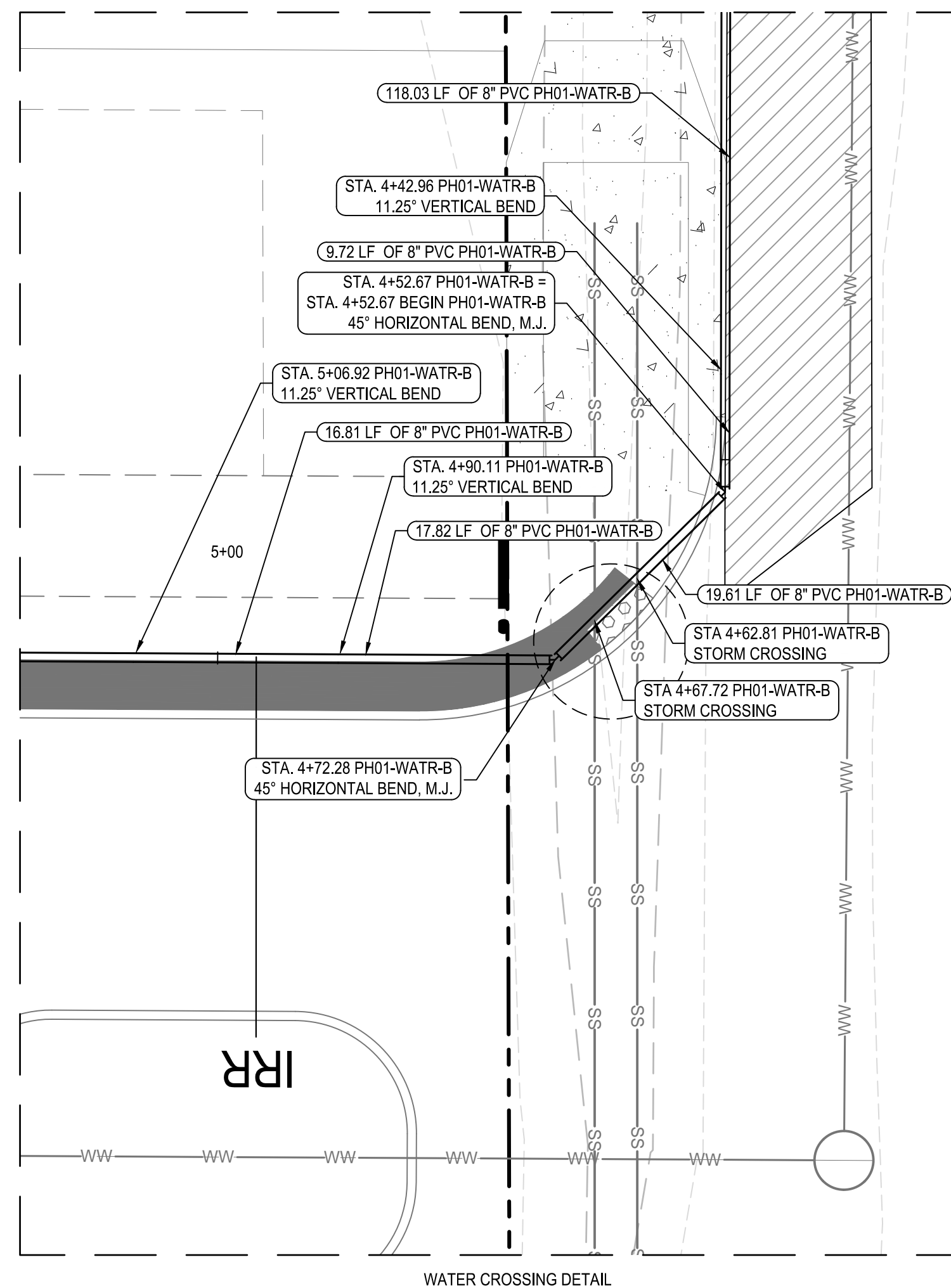
NOT FOR CONSTRUCTION

STATE OF TEXAS  
JAVIER CASTELLO  
122170  
Professional Engineer  
Civil Engineering

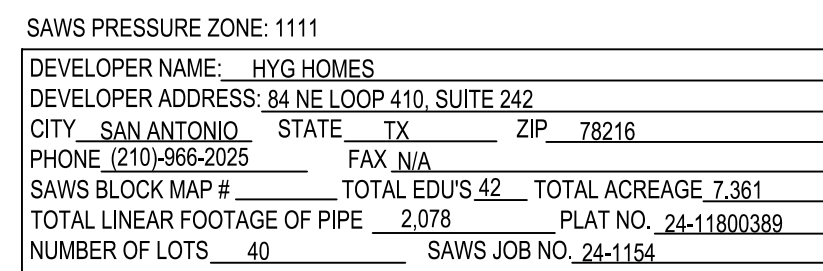
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**TRENCH EXCAVATION SAFETY PROTECTION**  
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND 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 PROTECTION TO PROTECTED AREAS AND TO 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.



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

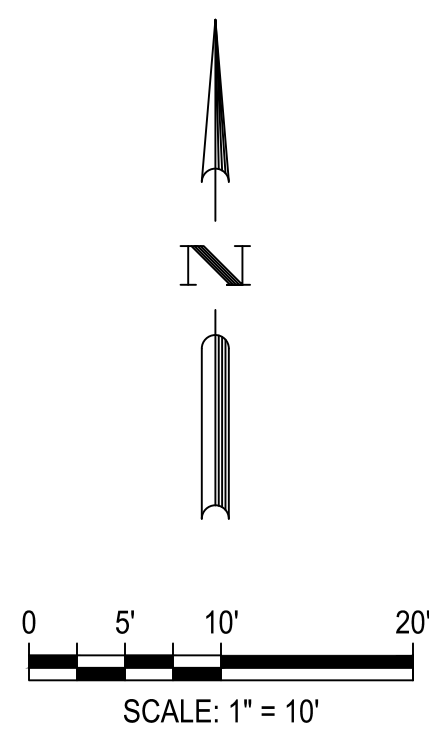
NOTE:  
IF THE MAXIMUM STATIC PRESSURE EXCEEDS 80 PSI, A PRV WILL BE REQUIRED ON THE  
PROPERTY OWNER'S SIDE OF THE WATER METER.







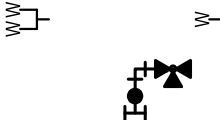













- SAWS GENERAL CONSTRUCTION :

- A. 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. CITY OF SAN ANTONIO TEXAS "CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF DOMESTIC WASTEWATER SYSTEM," TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 21 AND "PUBLIC DRINKING WATER," TAC TITLE 30 PART 1 CHAPTER 21 SUBCHAPTER 1.
- B. CURRENT DUTY "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE."
- C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR CURENT 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 CONTRACTING DIVISION. IF SUCH BEEN OBTAINED FROM THE CONSTRUCTION DIVISION TO PROCEED WITH THE WORK AND HAS REMAINED IN EFFECT 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 CONTRACTOR AND THE DEVELOPER.
- F. THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE, [HTTP://WWW.SAWS.ORG/BUSINESS\\_CENTERS/DETAILS](http://www.saws.org/BUSINESS_CENTERS/DETAILS), UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.
- G. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-2879, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFTER 48 HOURS, RESIDENTS, AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.
- H. LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LINES SHOWN ON THE PLANS ARE ASSUMED TO BE CORRECT. THE CONTRACTOR SHALL VERIFY THE EXISTING UTILITIES 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 MAINTAIN EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHERE SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATIONS. OWNERS OF UTILITIES PROVIDING THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
- SAWS UTILITY LOCATES: [HTTP://WWW.SAWS.ORG/SERVICELOCATES](http://www.saws.org/SERVICELOCATES)  
CASA DRAINAGE (210)-072-0724 OR (210)-402-0628  
CASA TRAFFIC SIGNAL OPERATIONS (210)-380-4444  
CASA TRAFFIC SIGNAL DAMAGES (210)-380-4551  
TEXAS STATE WIDE ONE CALL LOCATOR (1-800)-551-6906 OR RNC
- I. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING DRIVEWAYS, 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 (TDOT) AND BEAR COUNTRY SHALL BE DONE IN ACCORDANCE WITH ANY CHANGE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- J. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING JURISDICTION'S TREE TRIMMING STANDARDS.
- K. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAN CERTIFICATE.
- L. THE CONTRACTOR SHALL NOT BE ALLOWED TO DISPOSE OR REFORM SAWS' WORK ON SAMS RECOGNIZED HOLIDAYS. REQUESTS SHOULD BE SENT TO [CONSTRUCTORS@SAWS.ORG](mailto:CONSTRUCTORS@SAWS.ORG).

- 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 SUFFICIENT NOTICE TO THE SAWS CONSTRUCTION INSPECTION DIVISION OF ANY 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.
- ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN FOR ITS ASBESTOS-CONTAINING MATERIALS, IS PROHIBITED FROM BEING LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISBURSANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL PERMITS FROM ITEM NO. 3000. SPECIAL SPECIFICATION FOR HANDLING UNDESIRABLE ASBESTOS CEMENT PIPE.
- WATER REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE EXISTING PIPE LOCATION SHALL BE MARKED BY A WARNING BARRIERS WILL BE REMOVED AND REPLACED WITH A CAP/PIN. (NSPI)
- SUITABLE ANCHORAGE/THREAT BLOCKING OR JOINT RESTRAINT SHALL BE PROVIDED AT ALL OF THE FOLLOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, CAPS, CROSSINGS, VALVES, AND OTHER SPECIAL LOCATIONS. SEE THE STANDARD DRAWINGS DD-839 SERIES AND ITEM NO. 839. IN THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- ALL WATER MAINS SHALL BE PROTECTED BY A MINIMUM OF TWO FEET OF PRISV REQUIRED: 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 SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 926 FEET, THE CONTRACTOR SHALL INSTALL AN APPROVED TIE-IN 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 (ANY LOT/S) (SEE PERRY HARRIS REQUIRED FOR SHUT-OFF ONLY). NO OTHER TYPE OF PROTECTION SHALL BE ALLOWED. NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).
- PROTECTION WITH DIRT HYD FOR PROJECTIONS LESS THAN 800 HIGHER FEET (ITEM NO. 847.3). MAINS SHALL BE DISINFECTED WITH DIRT HYD WHERE SHOWN ON THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL BE USED FOR ALL MAINS EXCEPTED FOR DISINFECTION BY OTHER MEANS. 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 BEEN ADVISED BY MAIL FOR DISINFECTION.
- 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 DISTRIBUTION AND COLLECTION STAFF. THE CONTRACTOR SHALL COOPERATE WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE DISINFECTION PROCESS. THE DISINFECTION OF A DIVISION VALVE OR 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. OPERATING A DIVISION VALVE WITHOUT WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OR ANY WRITTEN SAWS CONTRACT OR PERMIT AND MAY BE SUBJECT TO A FINE OF \$500 PER VIOLATION. OTHER VIOLATIONS INCLUDE 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 SAWS DISTRIBUTION AND COLLECTION STAFF OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE ID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM MUST BE KEPT IN THE CONTRACTOR'S POSSESSION BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

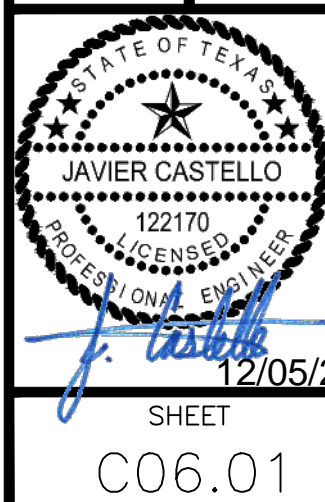


	PROPERTY BOUNDARY
	PHASE BOUNDARY
	BUILDING SETBACK
	PROPOSED LOT LINES
	PROPOSED EASEMENT
	PROPOSED WATER MAIN
	WATER SERVICES
	PROPOSED FIRE HYDRANT
	PROPOSED GATE VALVE
	PROPOSED WASTEWATER
	WASTEWATER SERVICES
	PROPOSED STORM LINE WITH MANHOLE
	PROPOSED CURB INLET
	EXISTING WATER MAIN
	EXISTING WASTEWATER
	PROPOSED STREET LIGHT
	RAISED REFLECTIVE HYDRANT MARKER
	UTILITY CROSSING
	EX. ASPHALT/CONCRETE TO BE REPLACED
	1" IRRIGATION SERVICE W/ 1" METER

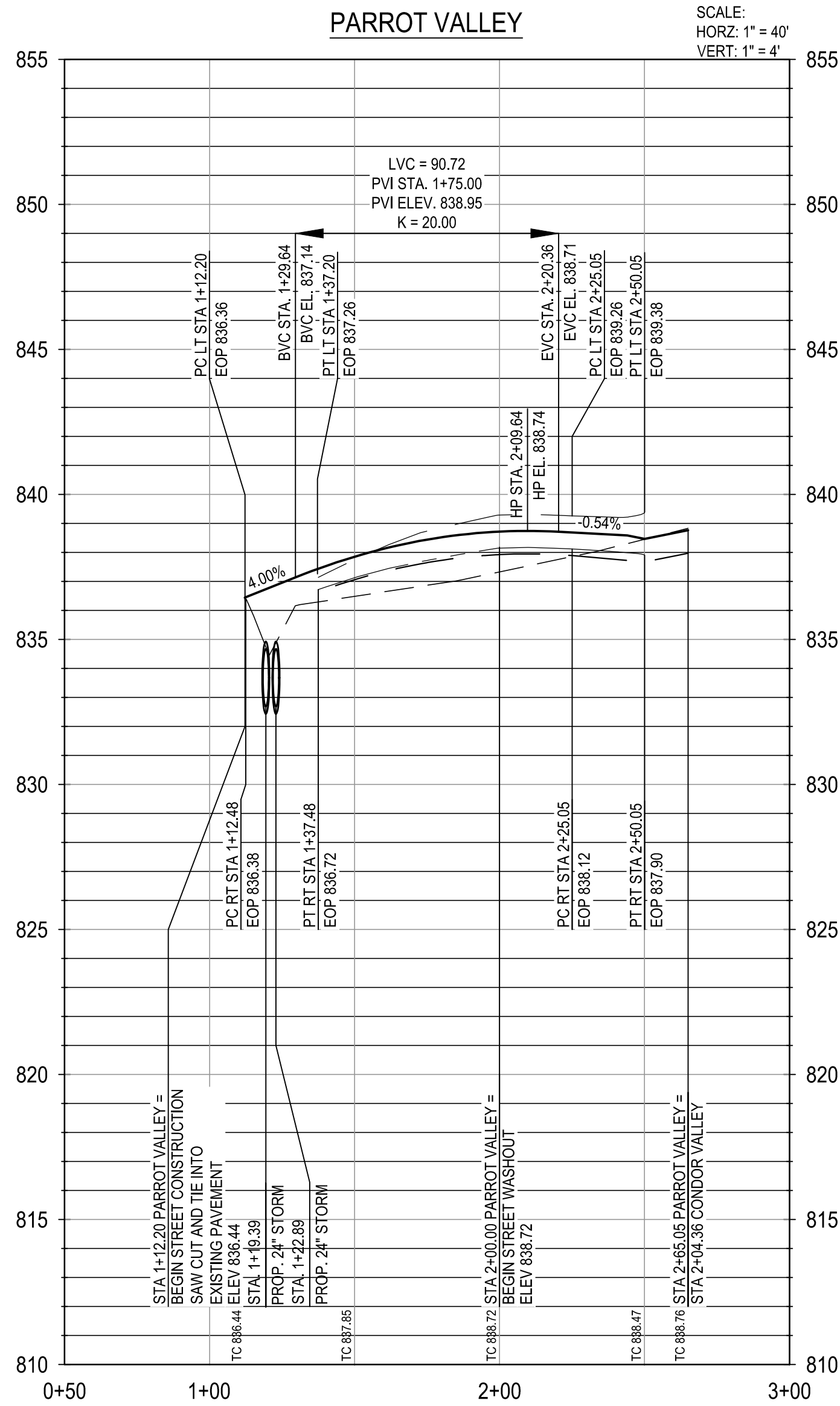
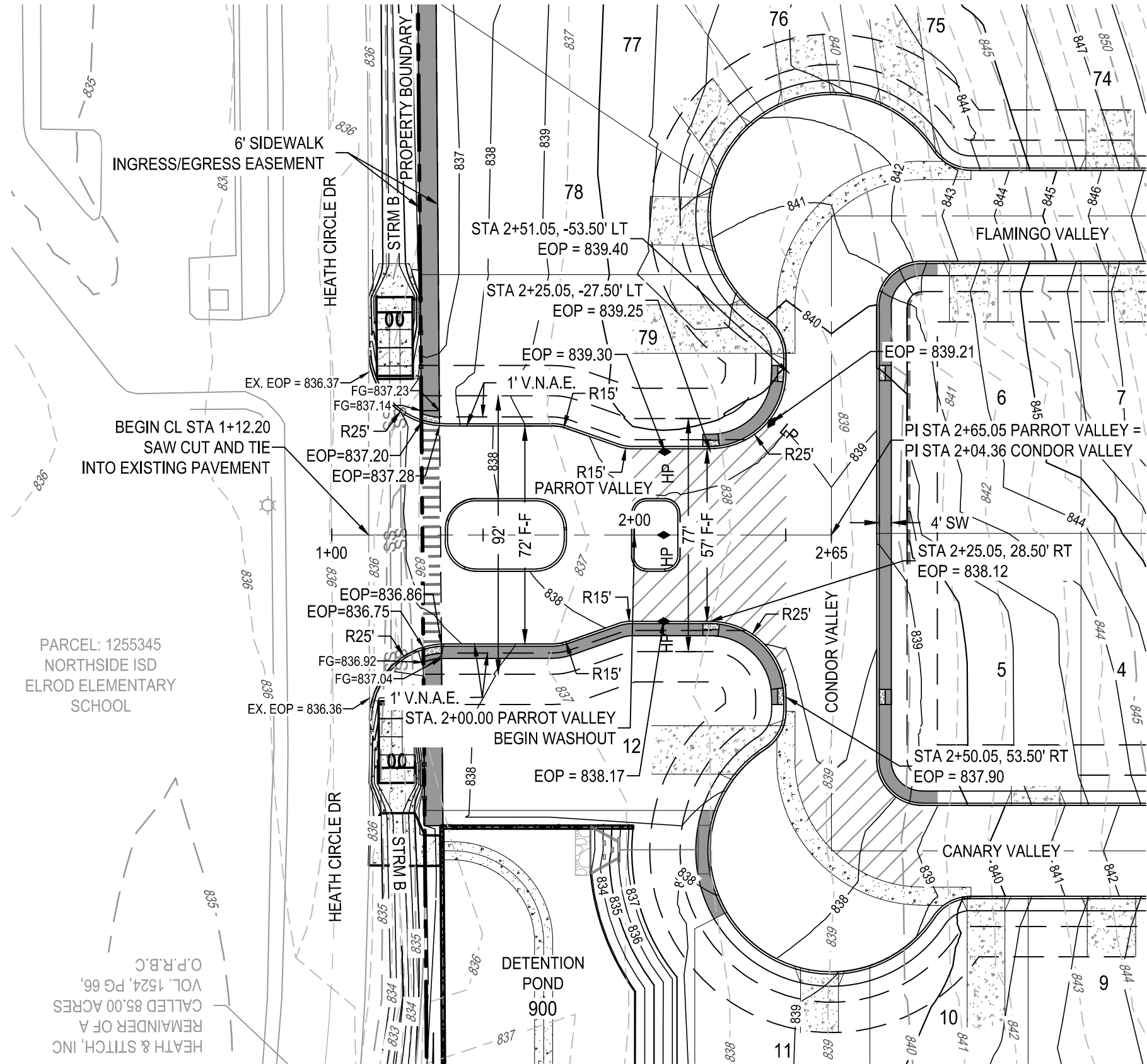
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HERON VALLEY PHASE 1

## WATER CROSSING DETAIL

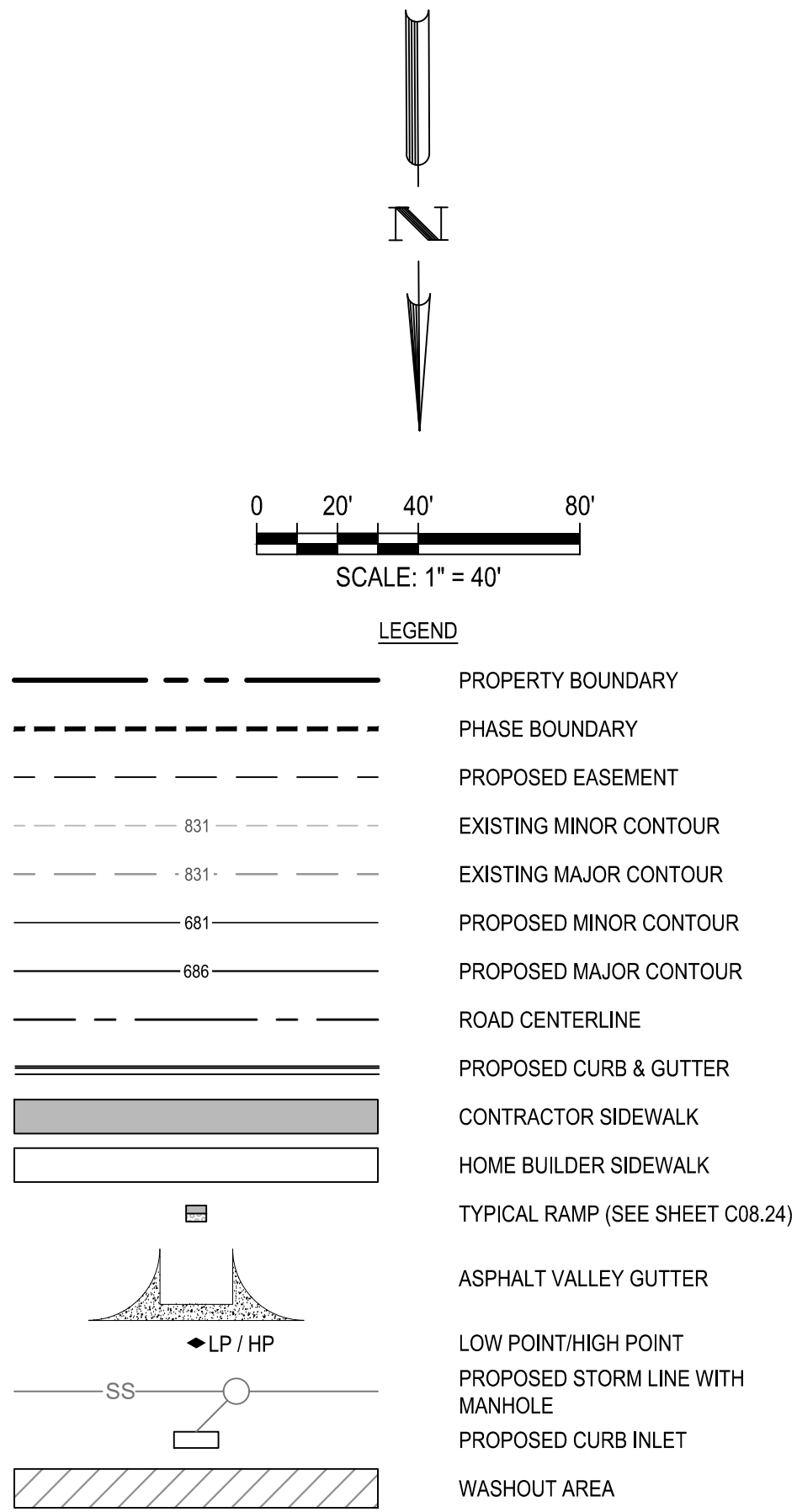






PRIVATE STREET DESIGNATION:

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.



- TRENCH EXCAVATION SAFETY PROTECTION**
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  - CONTRACTOR TO GRADE OR REGRADE ALL AREAS WITHIN ROAD ROW INCLUDING DITCHES FOR POSITIVE DRAINAGE.
  - CONTRACTOR SHALL GRADE TO DRAIN AREAS UPSTREAM AND DOWNSTREAM OF ALL PROPOSED CHANNELS.
  - CONTRACTOR TO COORDINATE WITH DEVELOPER REGARDING TREE WELLS TO ENSURE TREES TO REMAIN ARE SAVED. CONTRACTOR TO REFERENCE LANDSCAPE PLANS FOR TREE WELL FINISHES.
  - CONTRACTOR SHALL HYDROMULCH OR WOODMULCH ALL DISTURBED AREAS, INCLUDING RIGHT-OF-WAY, STEEP SLOPES, DRAINAGE DITCHES WHERE SOIL SUBGRADE IS ENCOUNTERED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT WATERING IN HYDROMULCH AREAS TO ESTABLISH VEGETATION.
  - ALL TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. ALL STRIPING TO BE THERMOPLASTIC.
  - ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
  - SIDEWALKS ADJACENT TO SINGLE FAMILY LOTS ARE TO BE CONSTRUCTED CONCURRENTLY WITH EACH SINGLE FAMILY HOUSE BY THE HOME BUILDER.

PLAT NUMBER  
24-11800389

DATE  
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DESCRIPTION

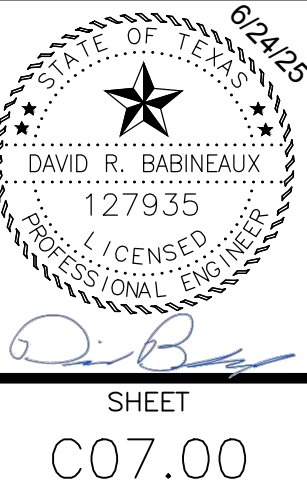
DESIGNED BY: JDC  
REVIEWED BY: OR  
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BGE, INC.  
7330 San Pedro, Suite 202  
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TEL: 214-881-3600 www.bgeinc.com  
TYPE Registration No. F-1046

HERON VALLEY PHASE 1

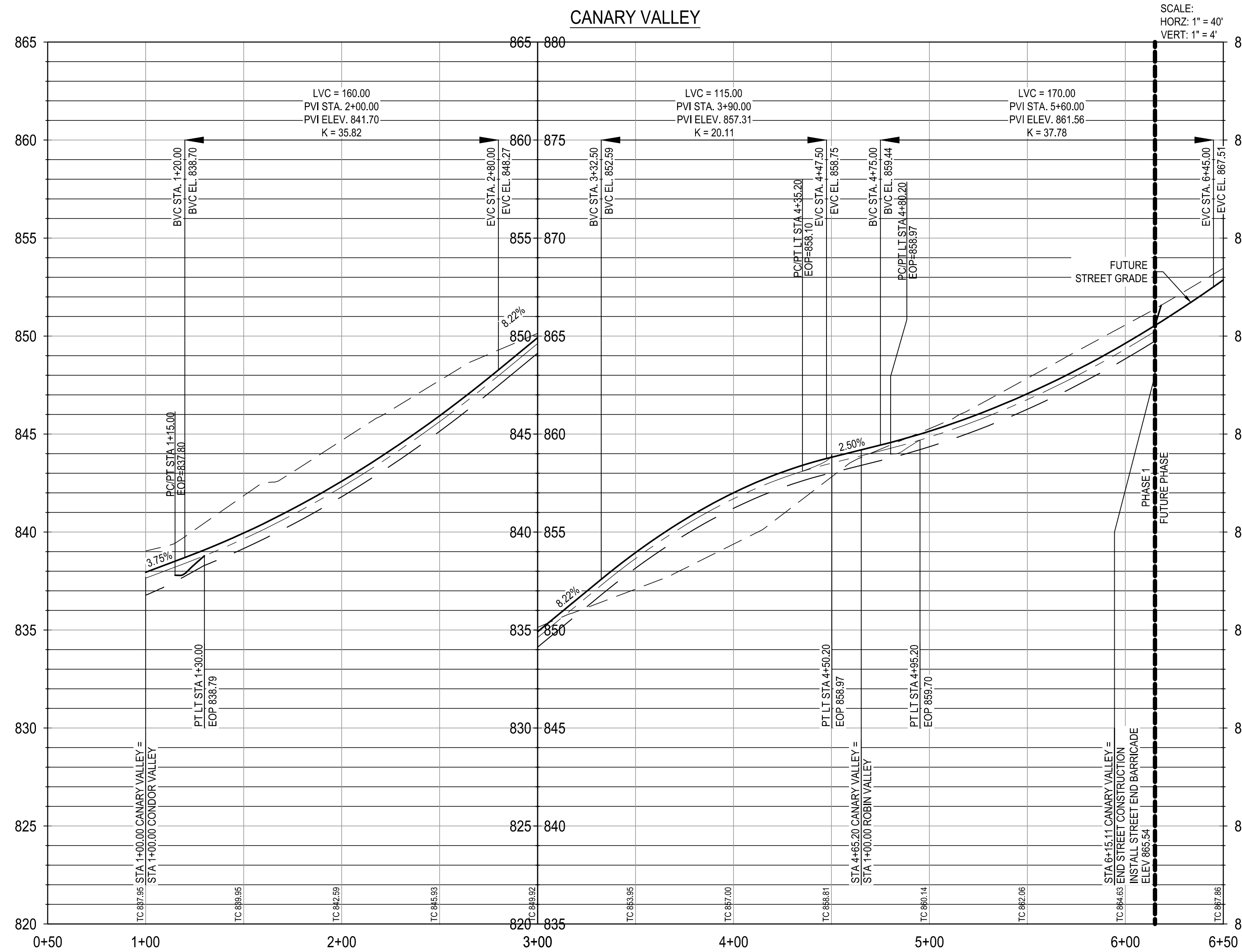
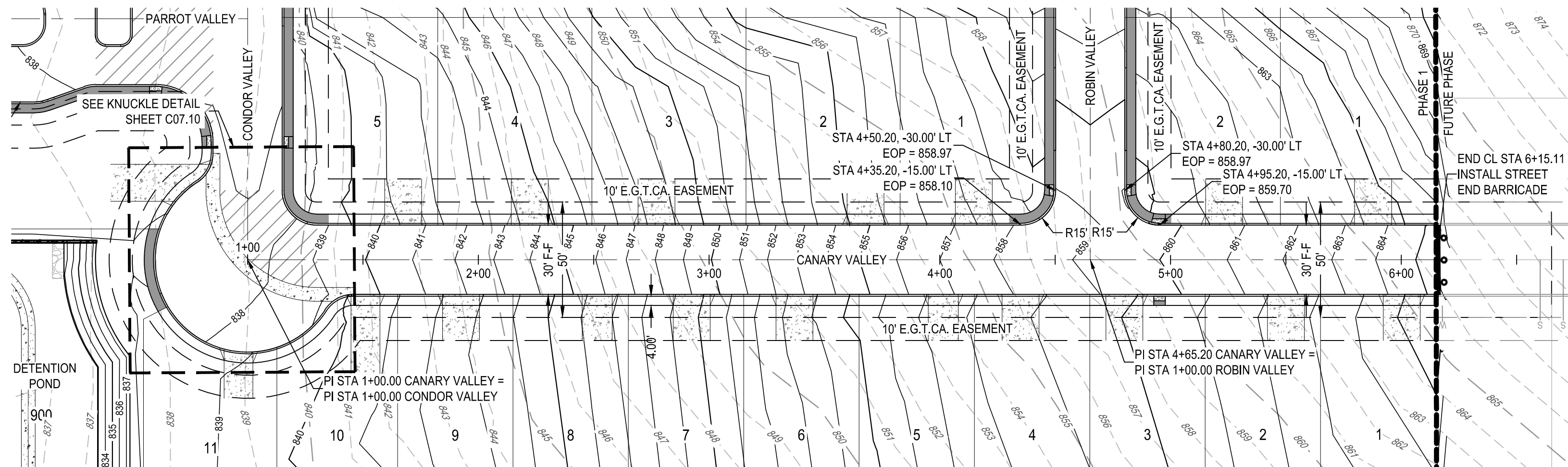
PARROT VALLEY PLAN AND PROFILE





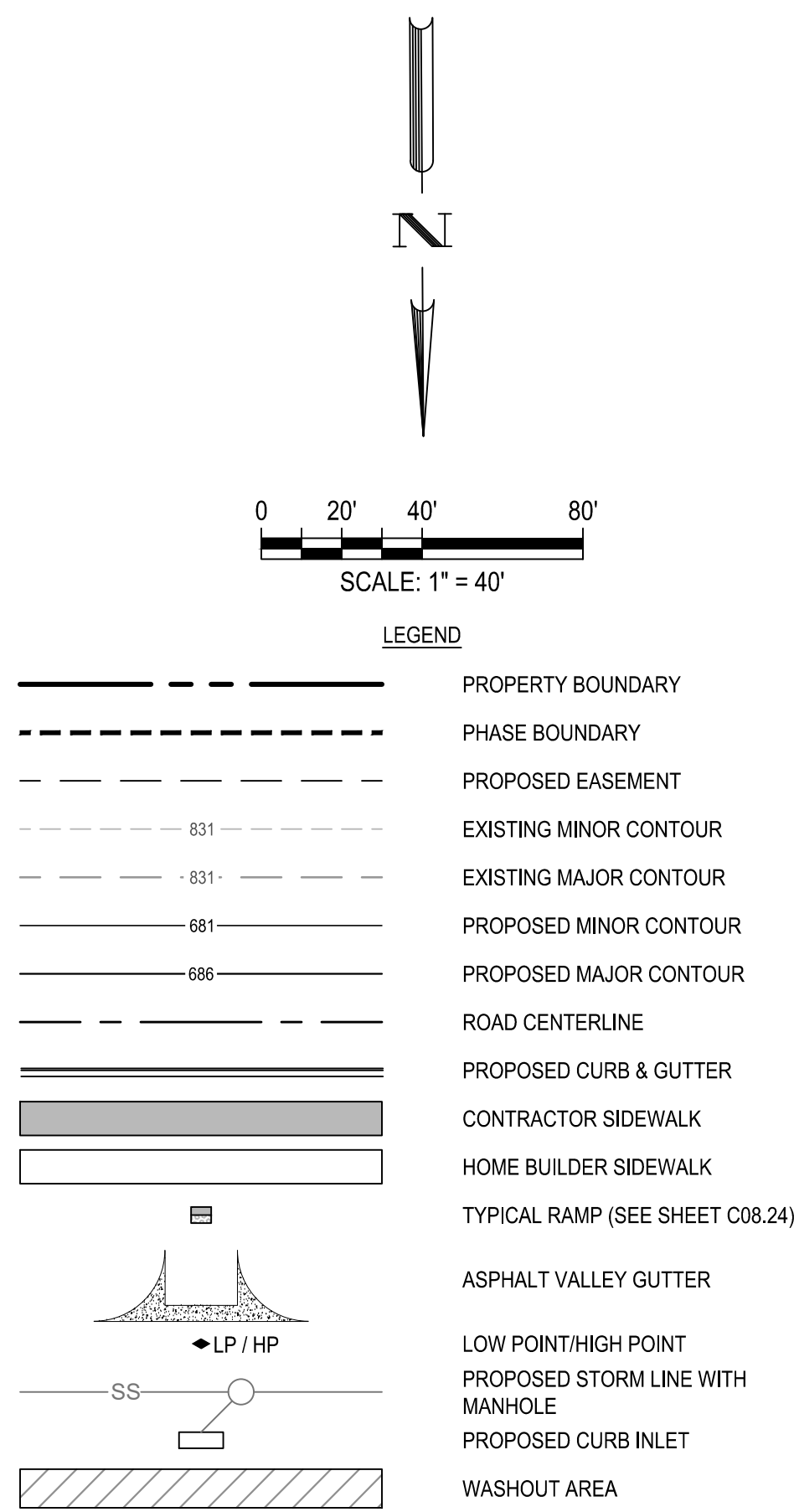
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NOTE:  
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\* CONTRACTOR TO FIELD VERIFY AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

### TRENCH EXCAVATION SAFETY PROTECTION

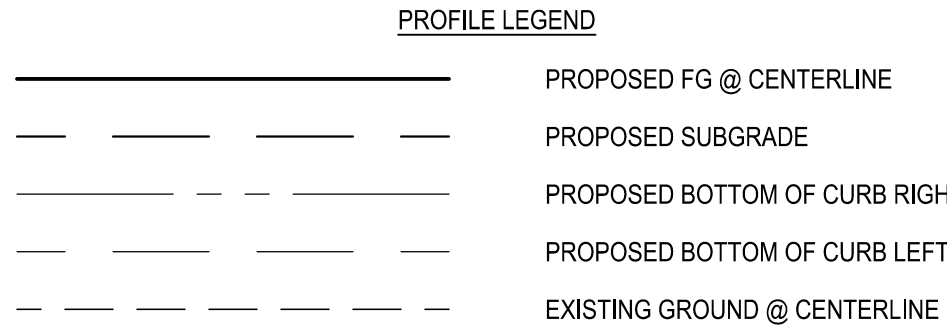
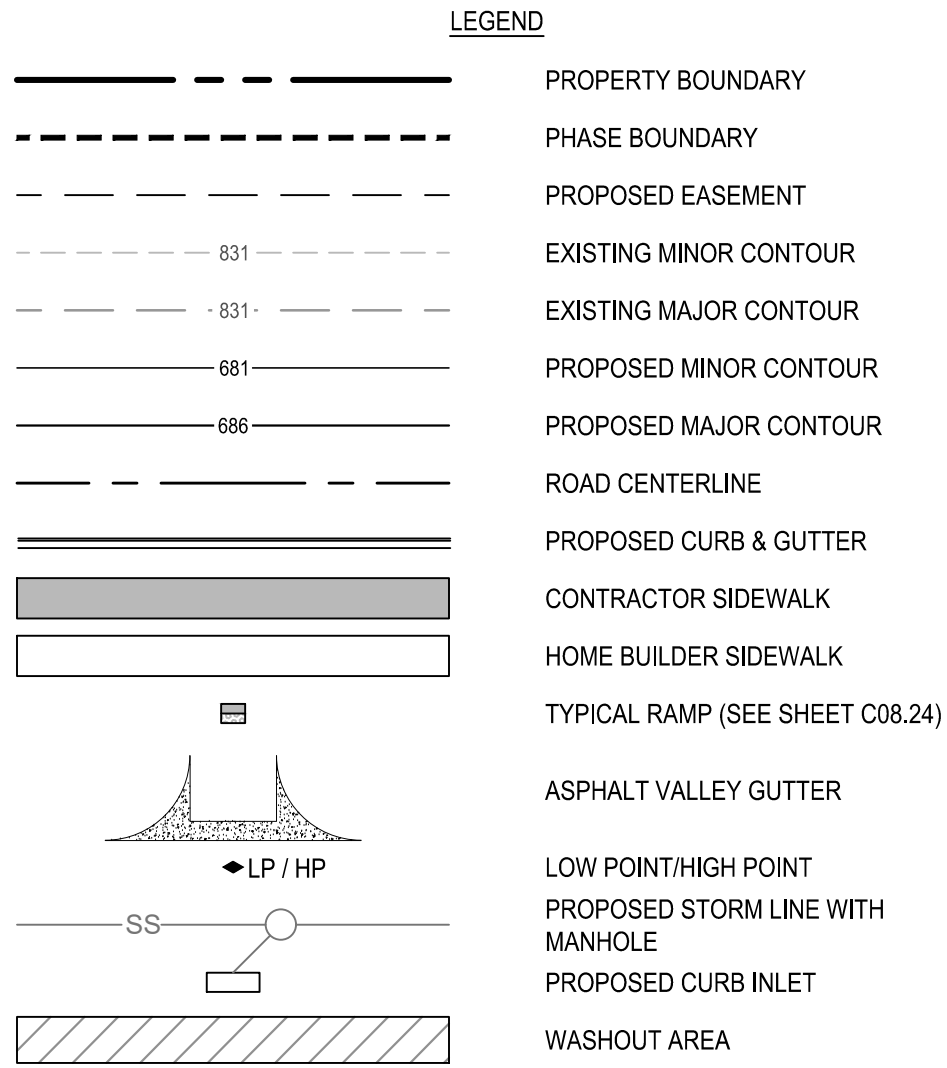
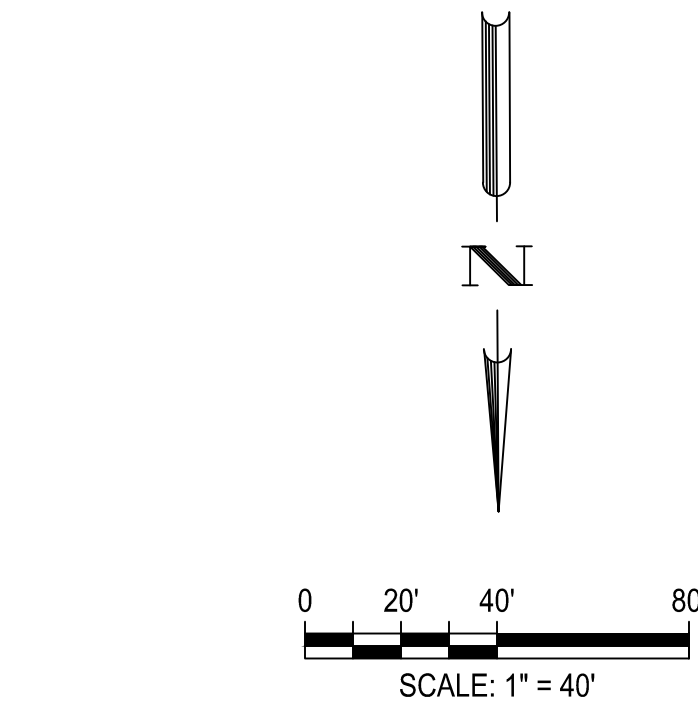
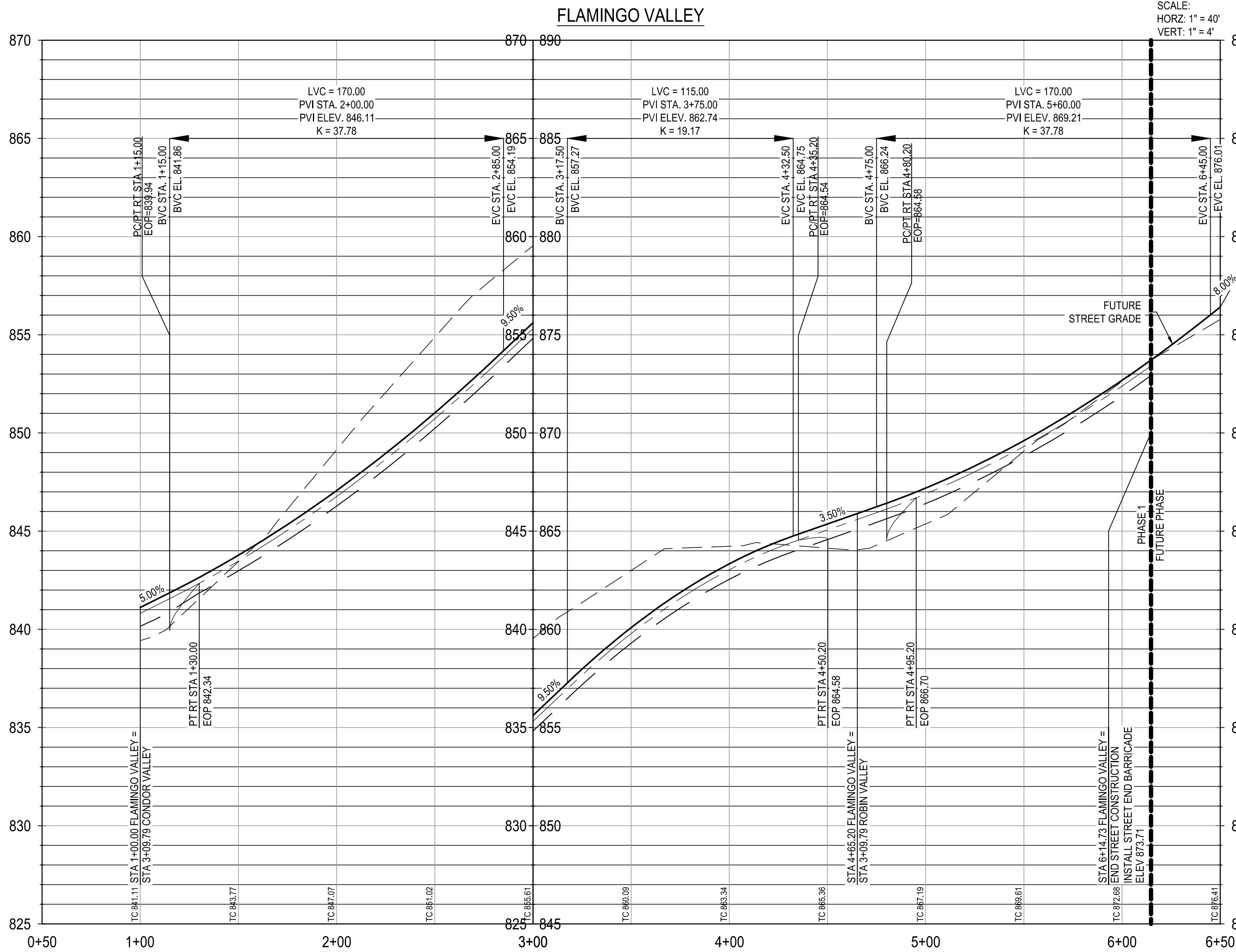
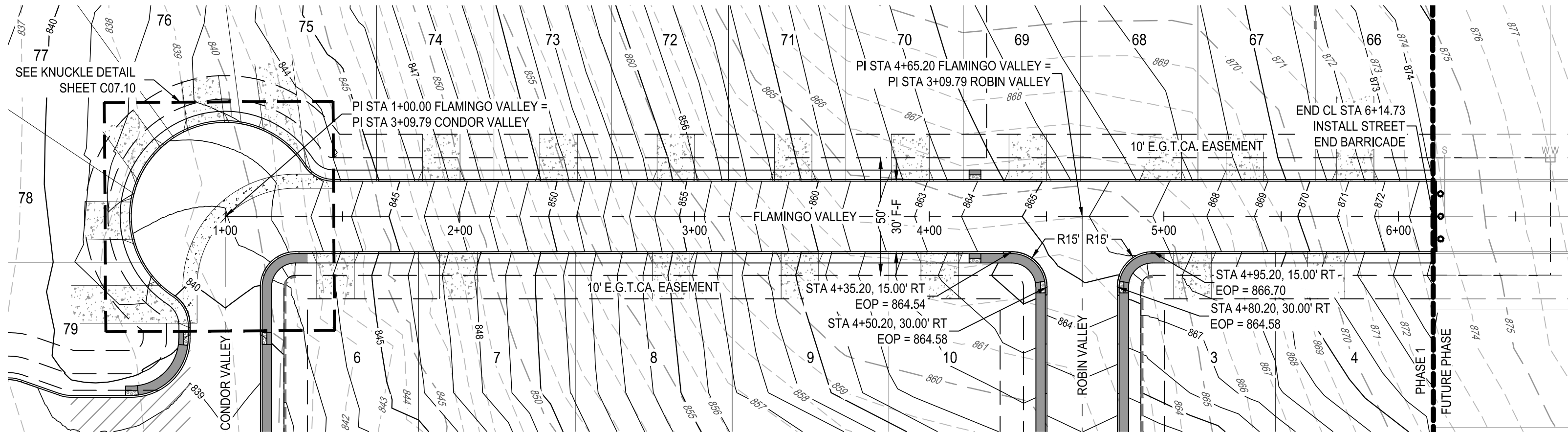
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<div style="text-align: center;">  <p><b>BGE, INC.</b>  7330 Santa Monica Blvd., 202  Suite 200  Santa Monica, CA 90405  TEL: 213-381-3600; www.browning.com  TBEPE Registration No. F-1046</p> </div>	<div style="display: flex; justify-content: space-between;"> <div>HERON VALLEY PHASE 1</div> <div>CANARY VALLEY PLAN AND PROFILE</div> </div>		DATE	APR
	DESIGNED BY:	JDC	REV	
	REVIEWED BY:	OR		
	DRAWN BY:	JDC		





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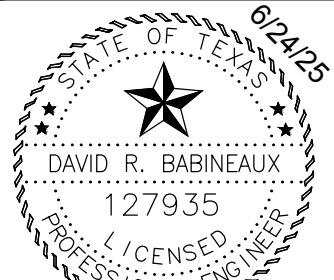
DESIGNED BY: JDC  
REVIEWED BY: OR  
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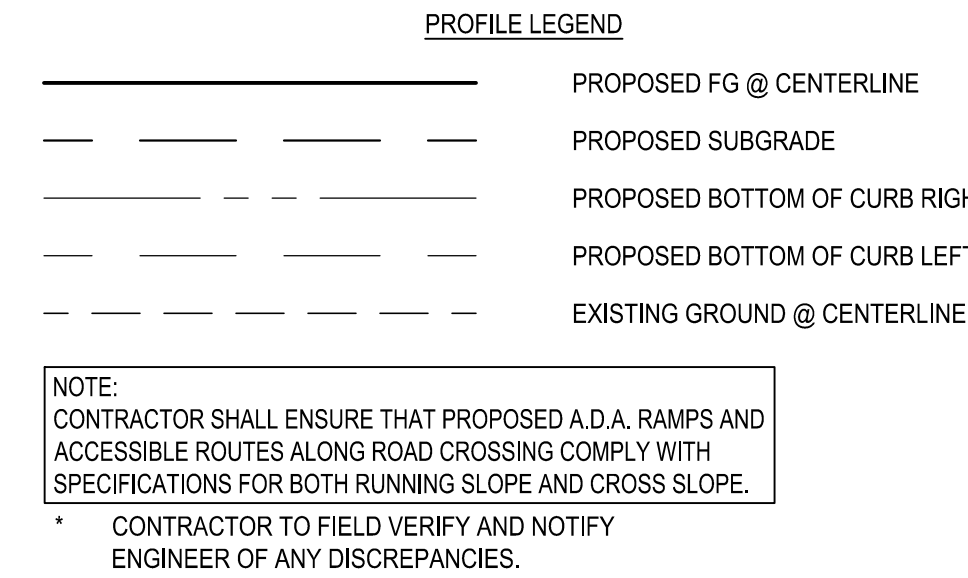
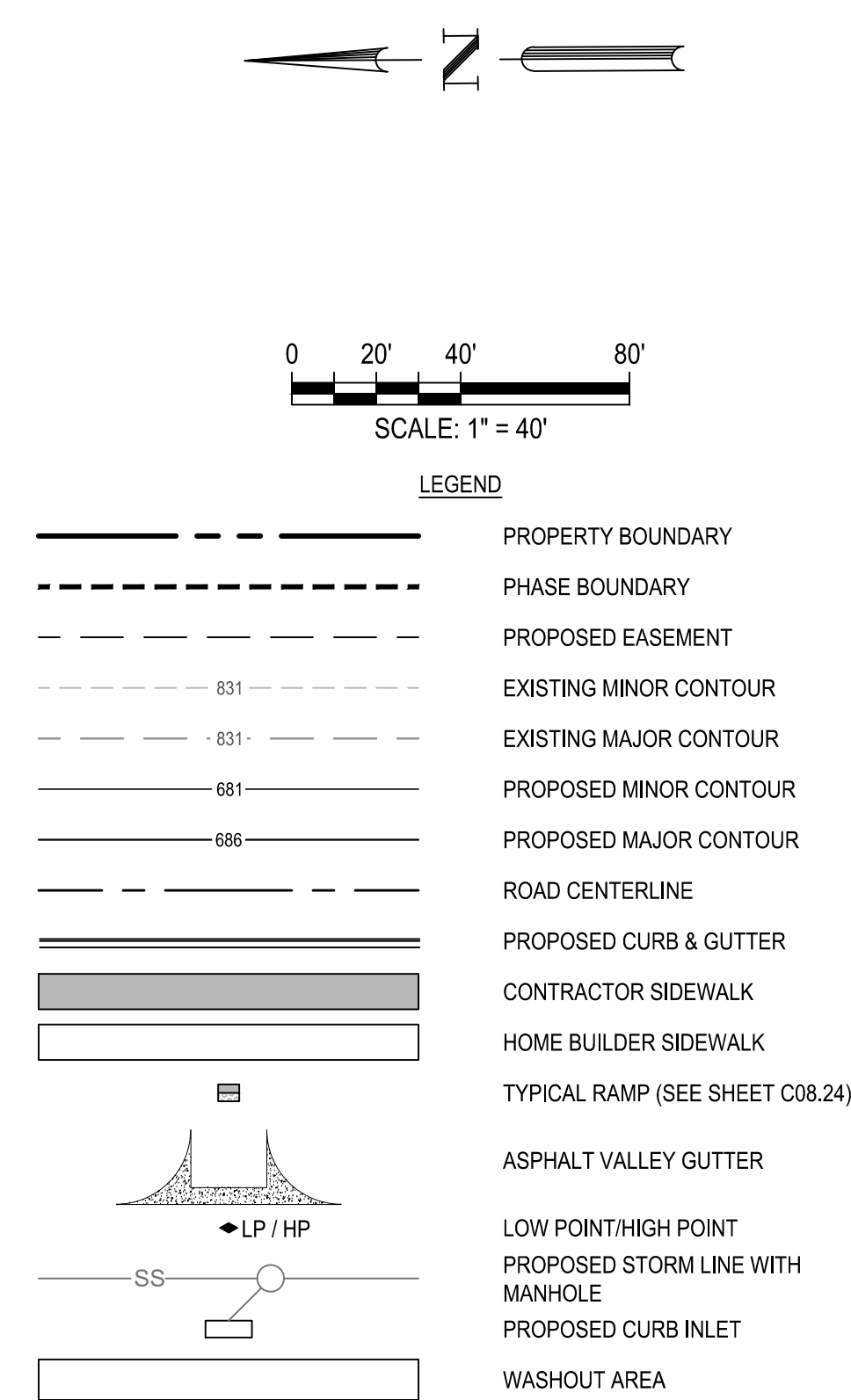
HERON VALLEY PHASE 1

FLAMINGO VALLEY PLAN AND PROFILE



SHEET  
C07.03





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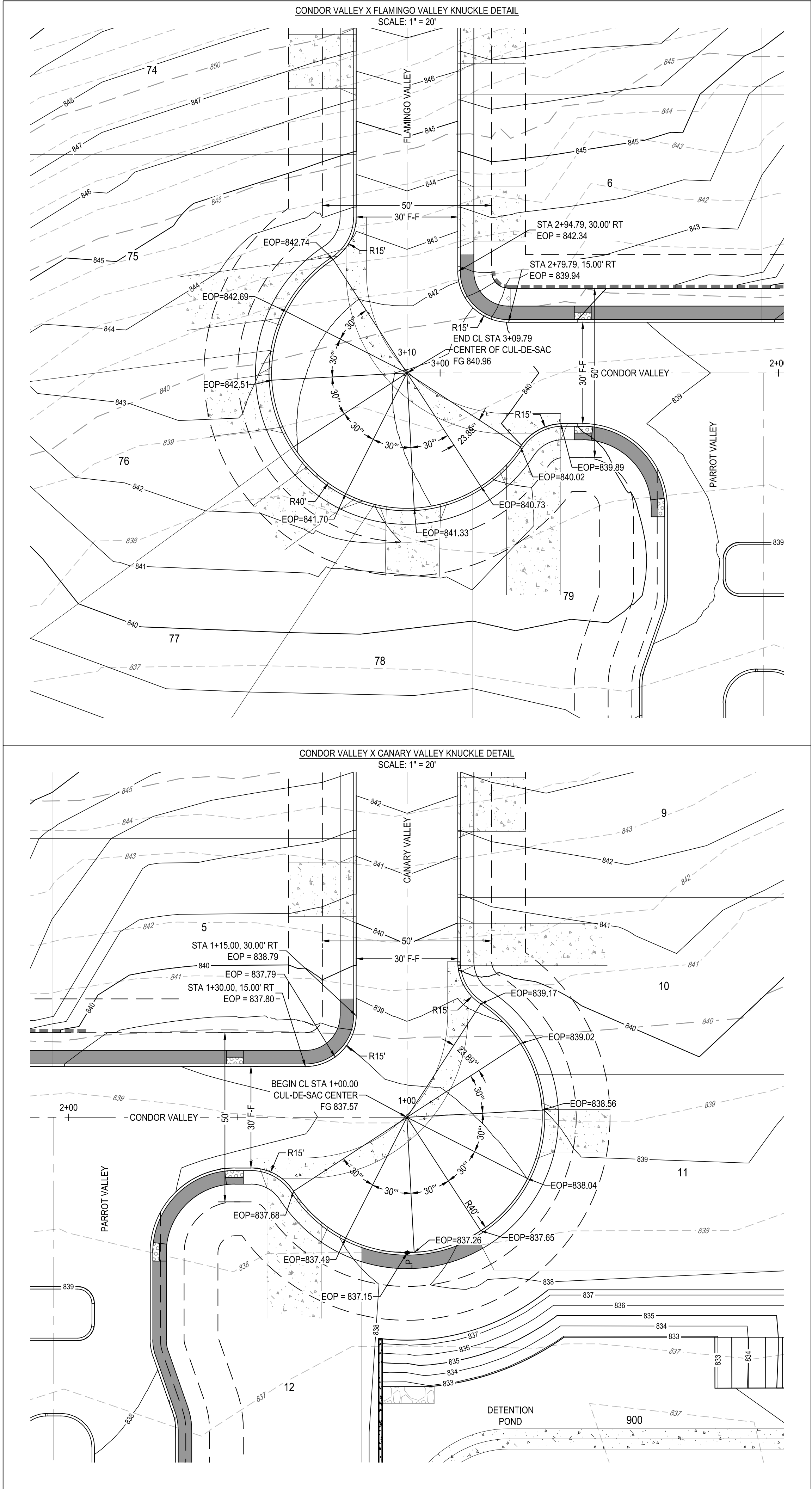
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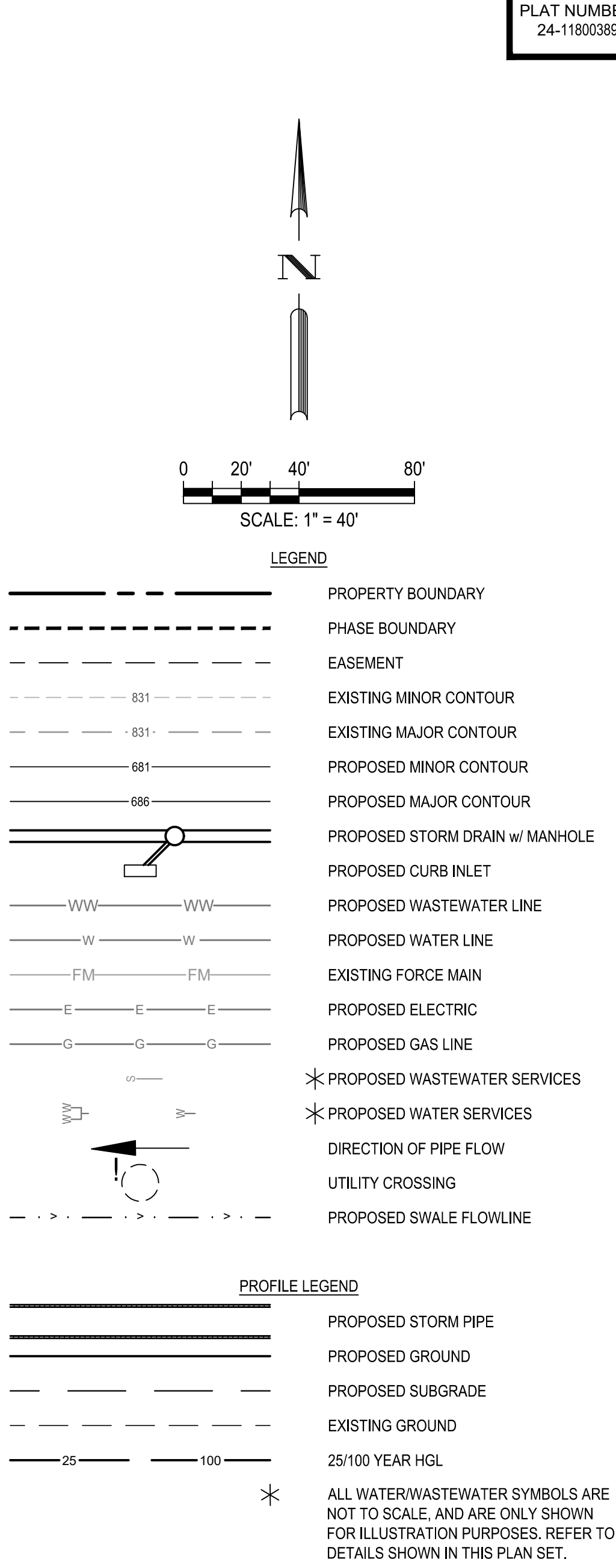
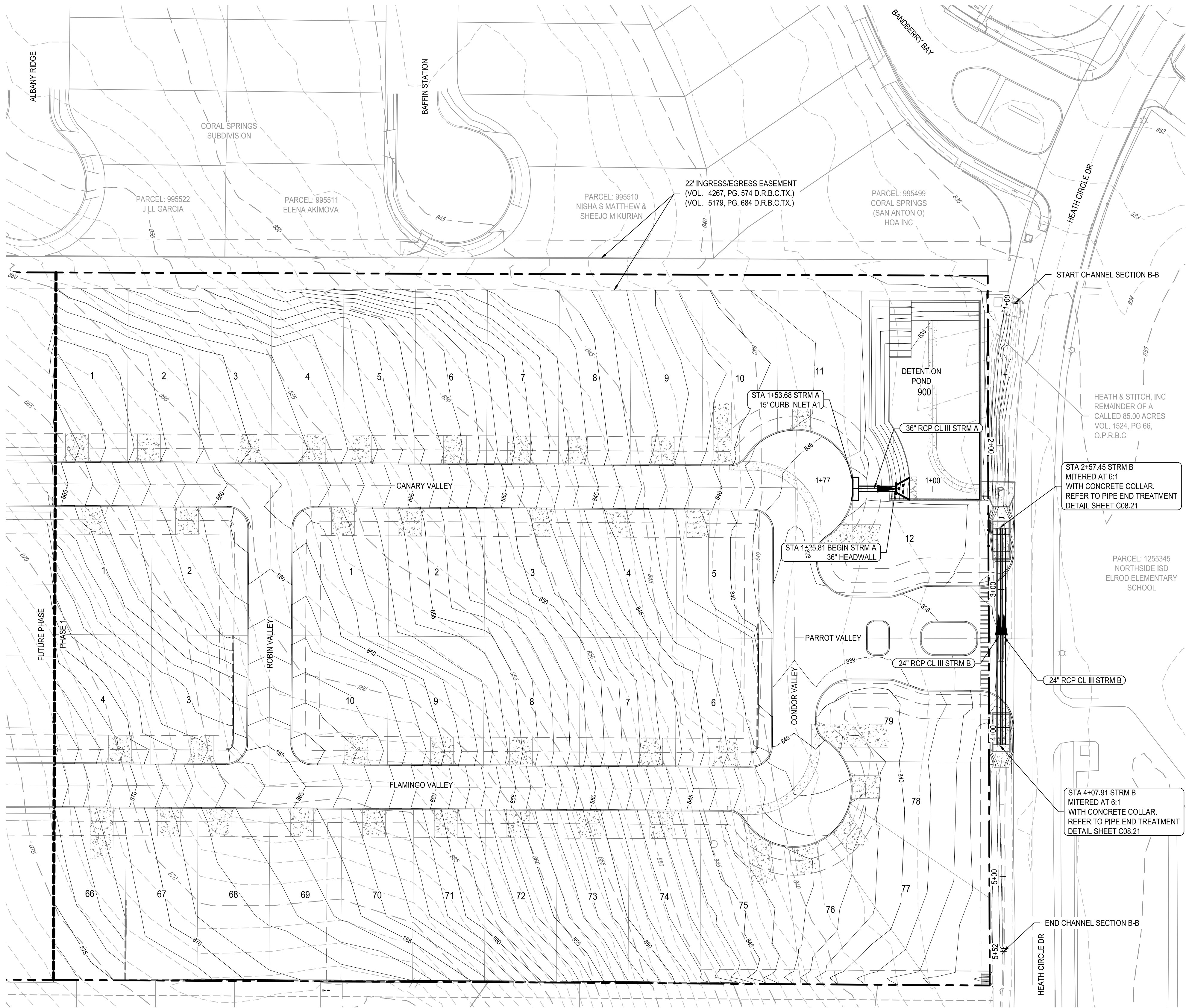


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NOTES:

1. 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
2. ALL CONCRETE LINING SHALL DEVELOP A MIN. COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS
3. 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.
4. CONCRETE COLLARS ARE TO BE USED TO CONNECT STORM PIPE SEGMENTS. PLEASE REFER TO SHEET C08.022 FOR CONCRETE COLLAR DETAIL.

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

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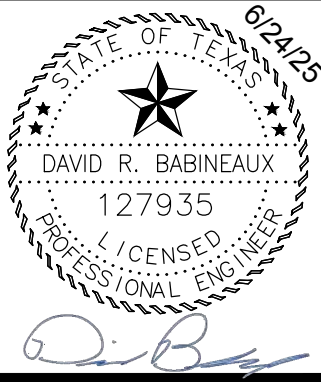
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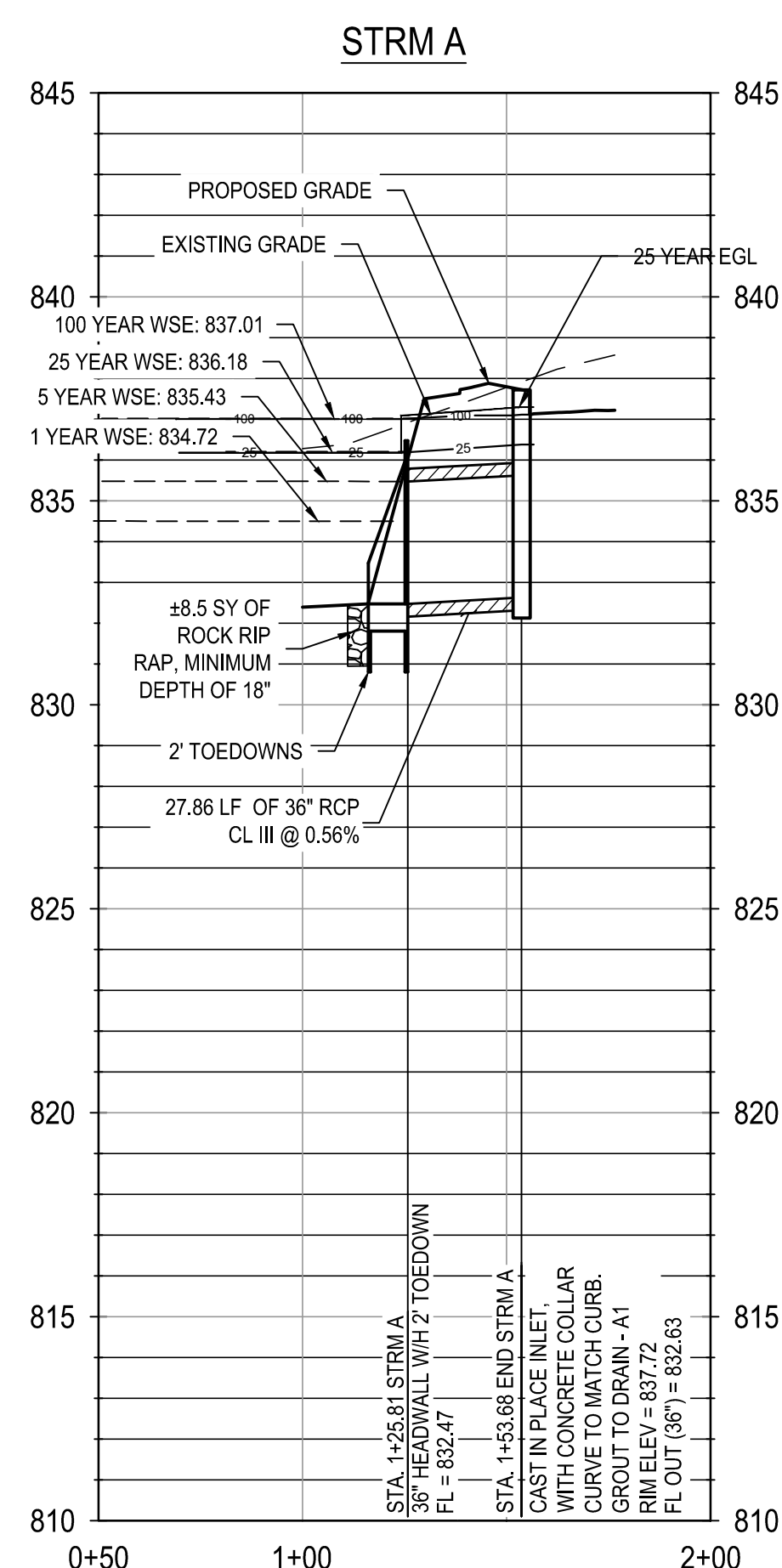
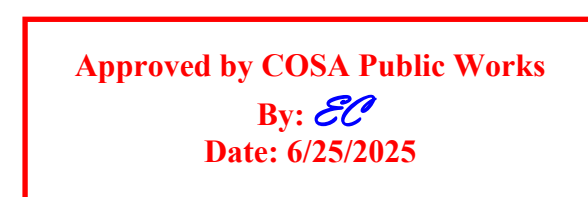
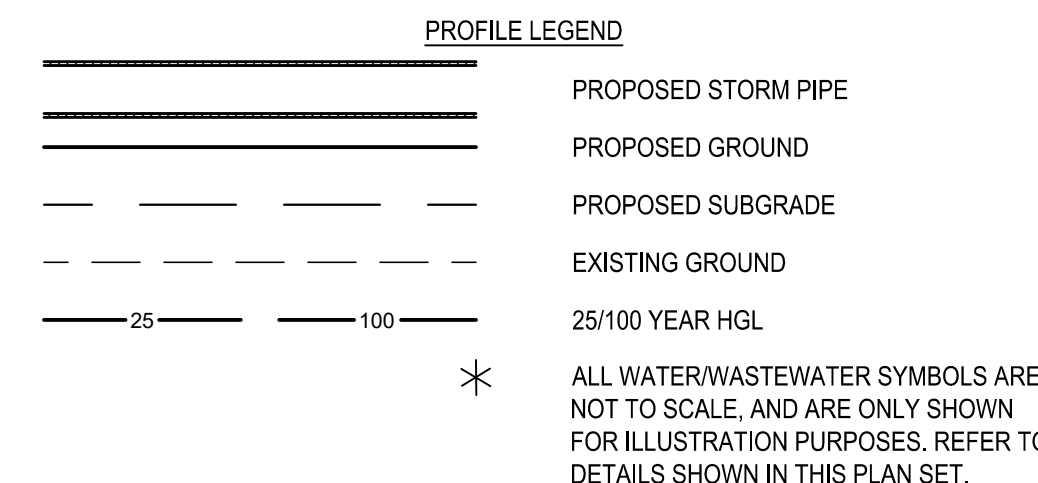
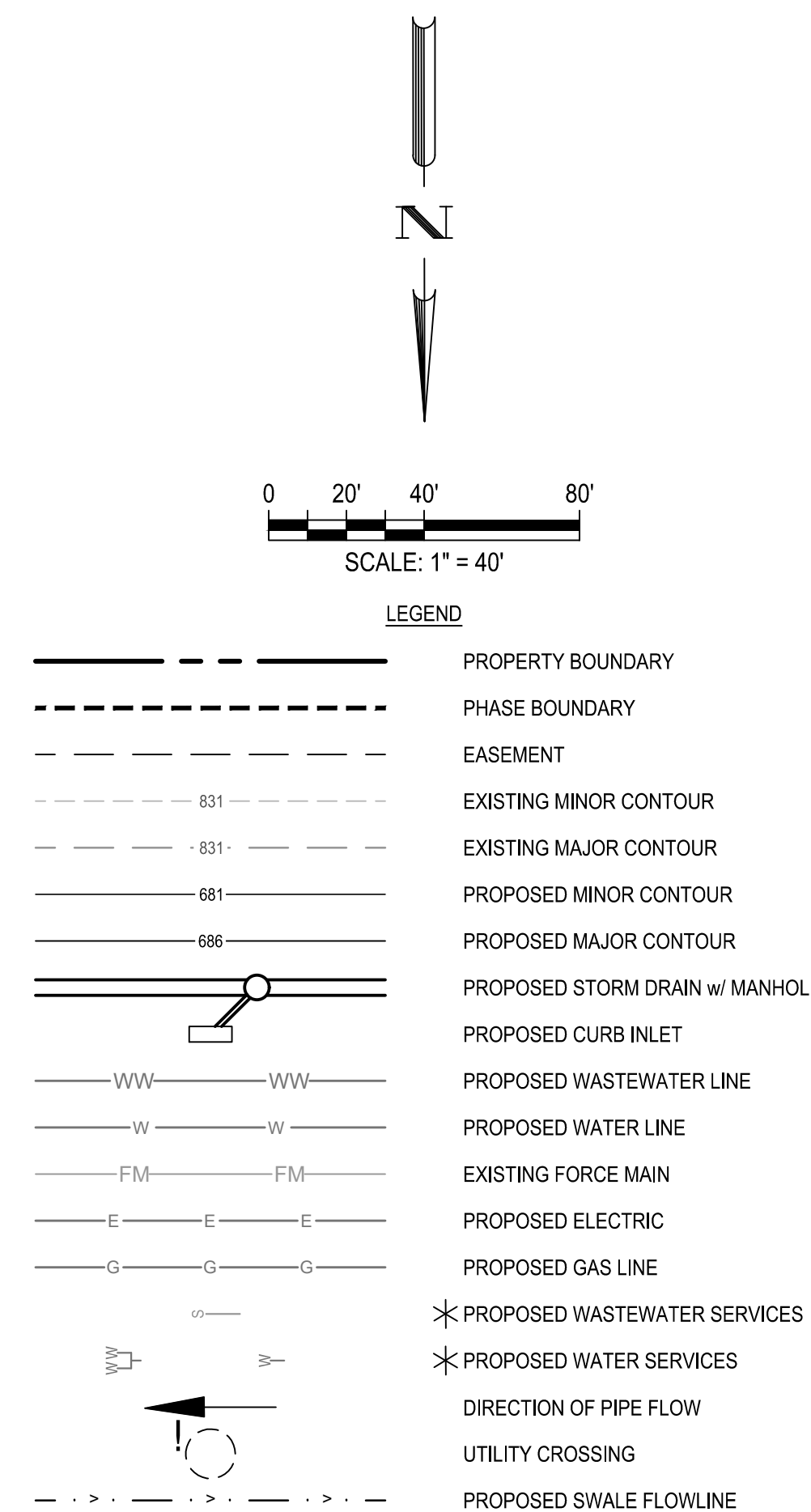
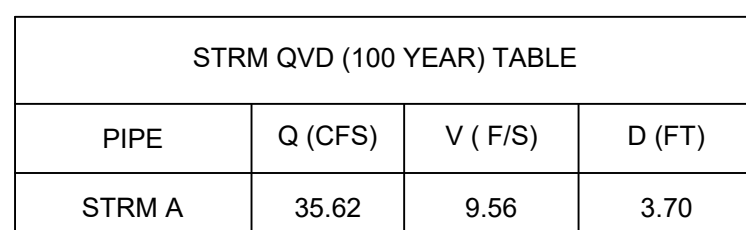
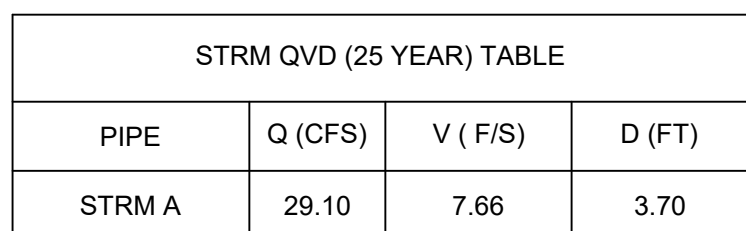
HERON VALLEY PHASE 1

STORM DRAIN COLLECTION PLAN



SHEET  
C08.00





HERON VALLEY STRM A (25 YR Storm Event)			
Q =	29.1	cfs	
V <sub>1</sub> =	7.66	fps	
g =	32.2		
y <sub>1</sub> =	1	ft	height of blocks
F <sub>1</sub> =	$V/(g \cdot y_1)^{0.5} =$	1.35	
y <sub>2</sub> =	$0.5 \cdot (-1 + (1 + 8 \cdot F_1^2)^{0.5}) \cdot y_1 =$	1.47	subcritical flow depth
L <sub>b</sub> =	$4.5(y_2/F_1)^{0.76} =$	5.28	length of basin
L <sub>p</sub> /3 =		1.76	min. dimension from pipe outfall to first row blocks
Spacing =	$0.75(y_2) =$	0.75	min. separation between rows of blocks
Sidewall =	$3(y_2)/8 =$	0.38	Min. separation from block to edge of riprap
y <sub>2</sub> ' =	$(1.10 \cdot F_1^2 / 120)y_2 =$	1.60	(1.7<F <sub>1</sub> <5.5)
y <sub>2</sub> ' =	$0.85 y_2 =$	1.25	(5.5<F <sub>1</sub> <11)
y <sub>2</sub> ' =	$(1.00 \cdot F_1^2 / 800)y_2 =$	0.00	(11<F <sub>1</sub> <17)
Z =	y <sub>2</sub> / 3 =	0.49	
Wingwall	y <sub>2</sub> ' + z =	2.09	(1.7<F <sub>1</sub> <5.5) (square area)
V <sub>2</sub> = Q/A <sub>2</sub>	Q =	29.1	
	A <sub>2</sub> =	20.895	(wingwall x outfall width)
Therefore:	V <sub>2</sub> =	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

## NOTES

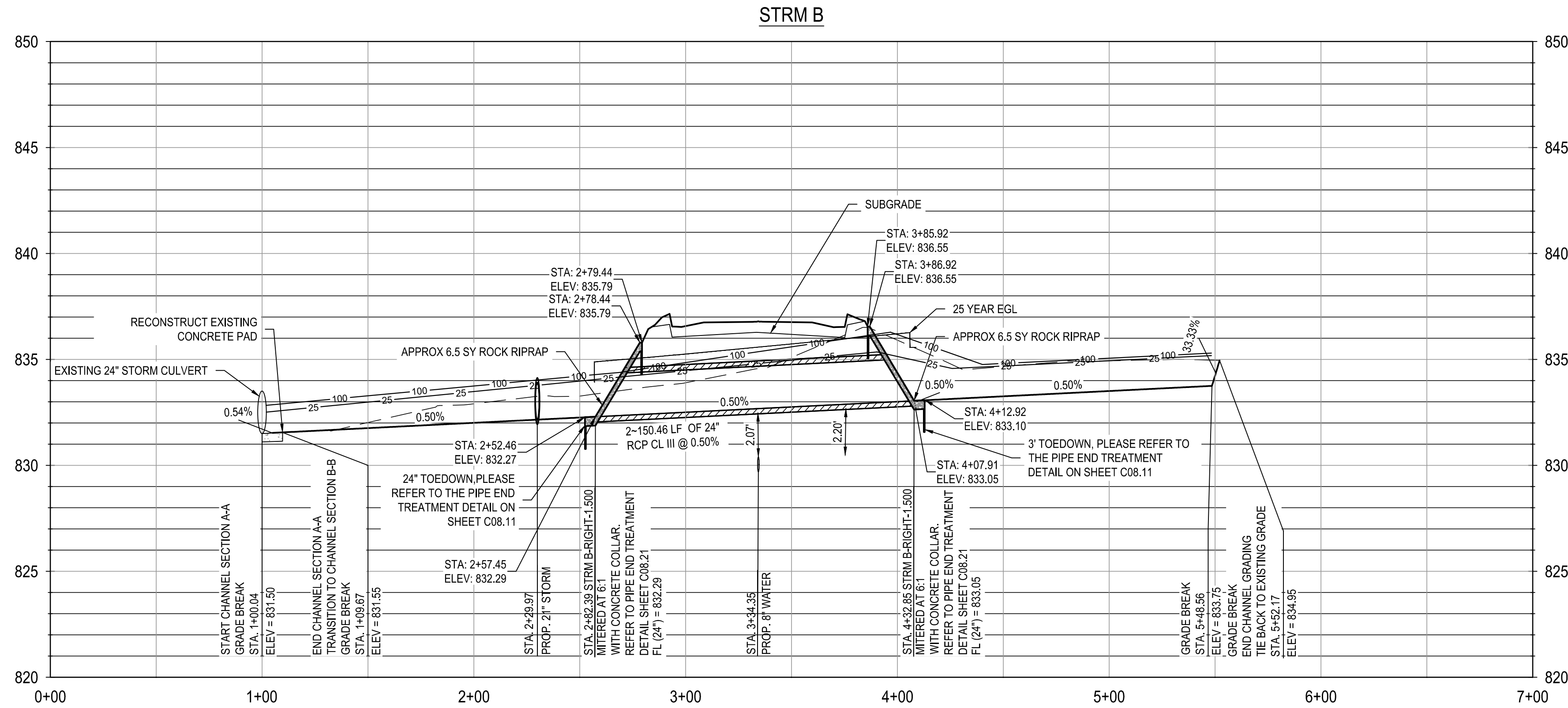
1. IMPROVED EARTHEN CHANNELS AND DETENTION PONDS WILL BE VEGETATED BY SEEDING OR SIDING. EIGHTY FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CHANNEL FOR MAINTENANCE
2. ALL CONCRETE LINING SHALL DEVELOP A MIN. COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS
3. 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. HIGHWAY OR RAILROAD WEIR FABRIC OF 6" X 6" WITH 4" WIDE, 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 TOW DOWNS SHALL BE 36 INCHES UPSTREAM, 24 INCHES DOWNSTREAM, AND 18 INCHES FOR SIDE SLOPES. THE CITY'S CONSTRUCTION INSPECTOR MAY PERMIT AN 18" TOW DOWN IN ROCK SUBSTRATA IN LIEU OF THE ABOVE TOW DOWN REQUIREMENTS. THE HORIZONTAL DISTANCE OF TOW DOWNS SHALL BE NO MORE THAN SIX (6) FEET
4. 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 THAT THE CONTRACTOR HAS IDENTIFIED IN THE CONTRACT DOCUMENTS. 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 EXCAVATION SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS COVERING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.



G:\TXC\Projects\San Antonio Projects\2936-00 - Heron Valley\01\_Unit 1\03\_CADD\01\_Shts\C08.11 STORM LINE B PLAN AND PROFILE.dwg Layout STORM LINE B PLAN AND PROFILE.dwg By: Ordoñez



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

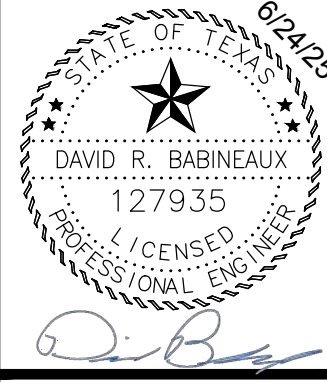
NOTES:

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TRENCH EXCAVATION SAFETY PROTECTION

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HERON VALLEY PHASE 1  
STORM LINE B PLAN AND PROFILE



SHEET  
C08.11

PLAT NUMBER  
24-11800389

DESCRIPTION

REV

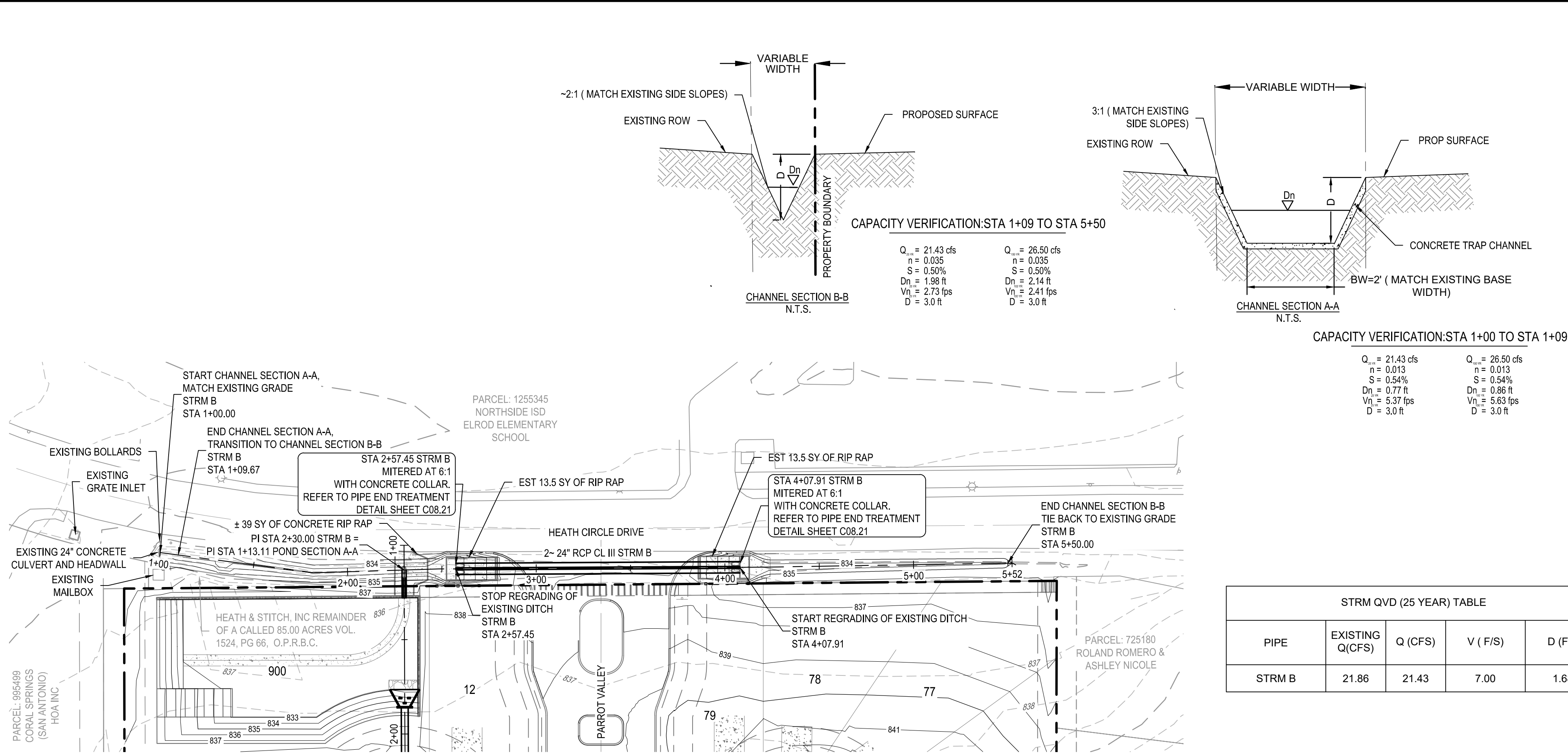
DESIGNED BY: JDC

REVIEWED BY: OR

DRAWN BY: JDC

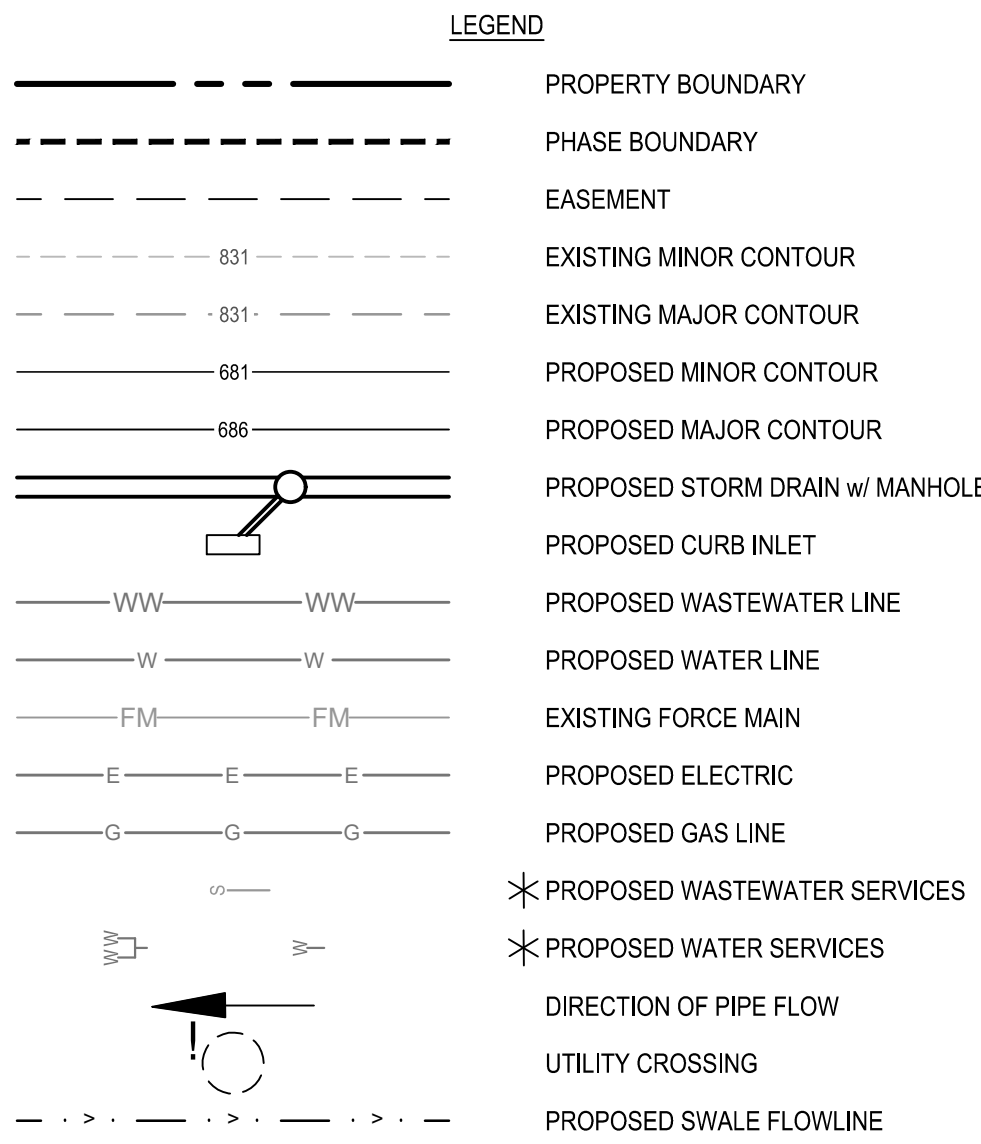


BGE, INC.  
7330 San Pedro, Suite 202  
San Antonio, TX 78216  
TEL: 214-881-3360 www.bgeenergy.com  
TXPE Registration No. F-1046

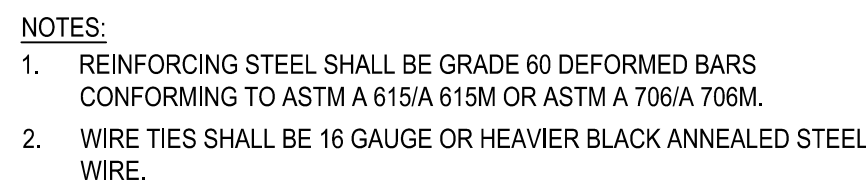


STRM QVD (25 YEAR) TABLE				
PIPE	EXISTING Q(CFS)	Q (CFS)	V ( F/S)	D (FT)
STRM B	21.86	21.43	7.00	1.68

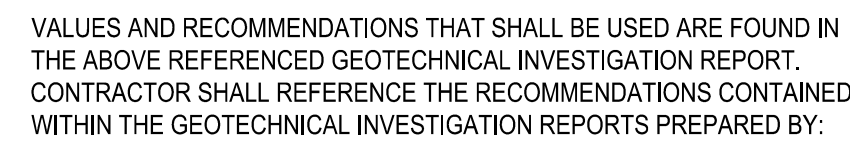
STRM QVD (100 YEAR) TABLE				
PIPE	EXISTING Q(CFS)	Q (CFS)	V ( F/S)	D (FT)
STRM B	27.04	26.50	8.73	1.82



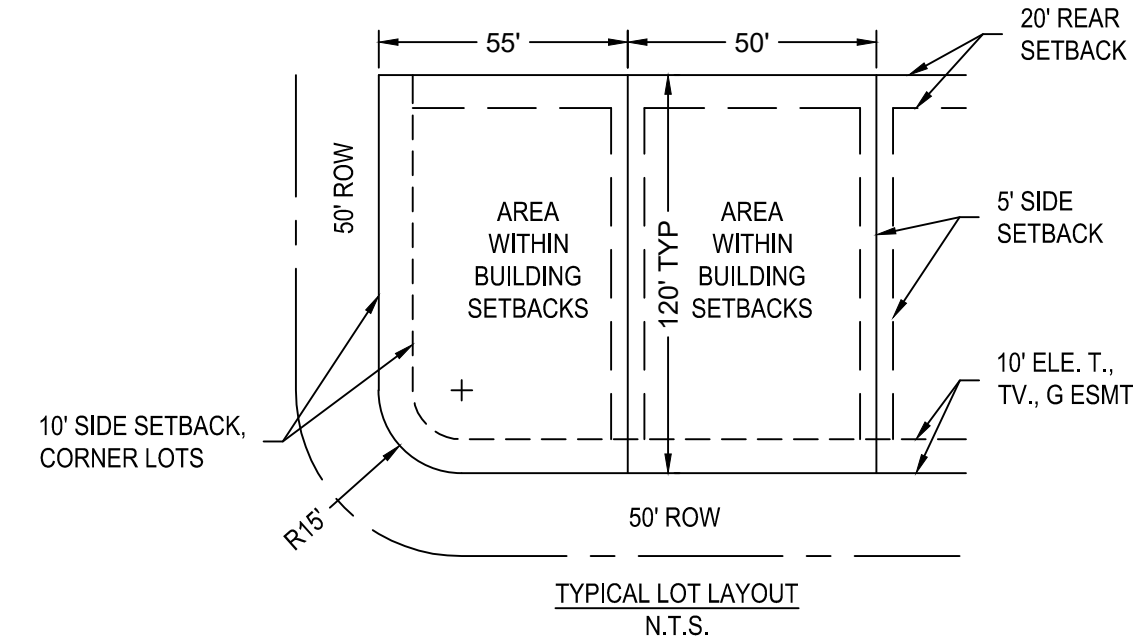
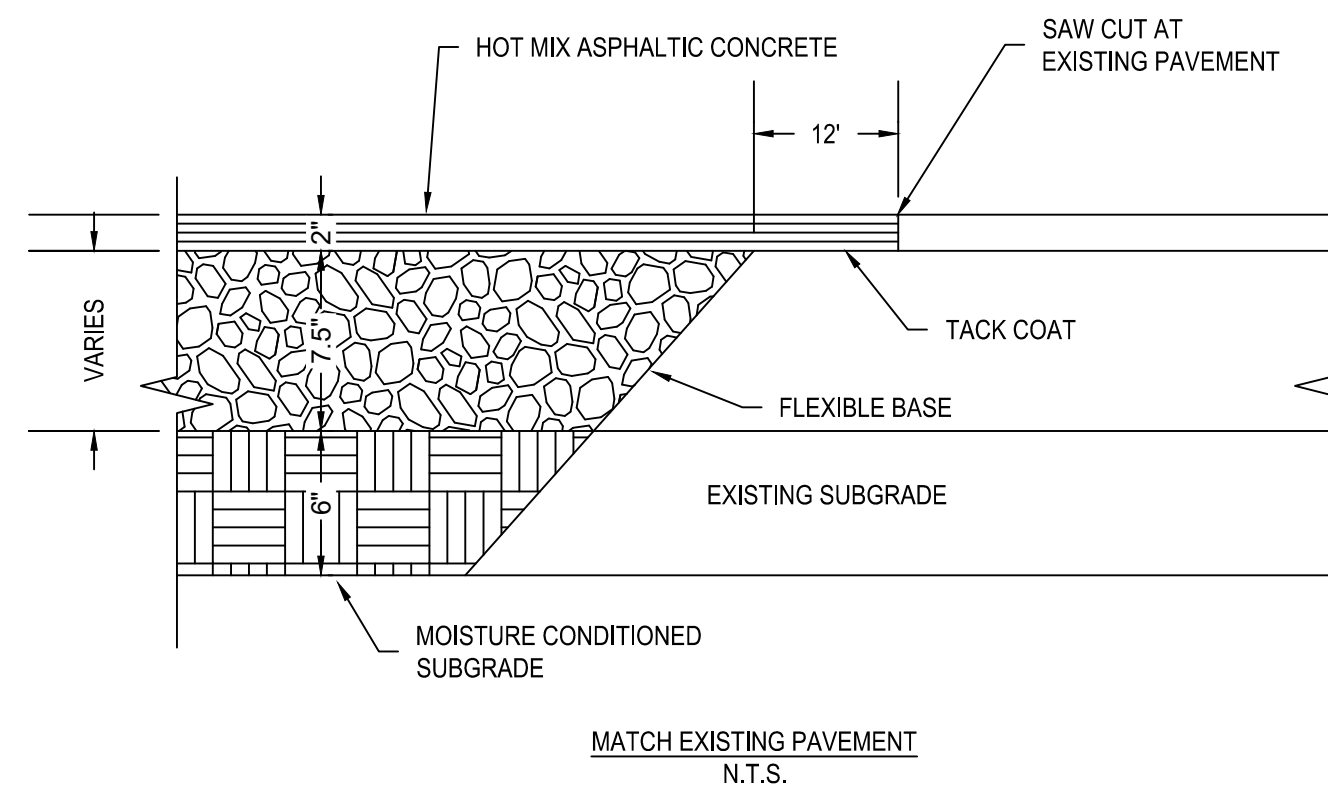
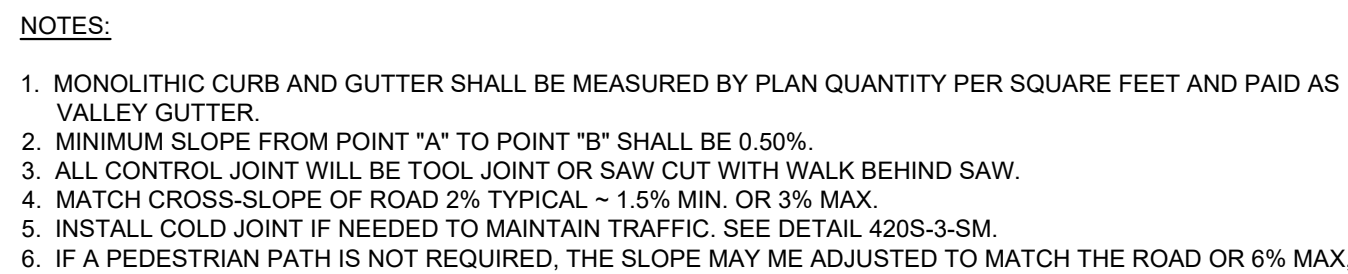




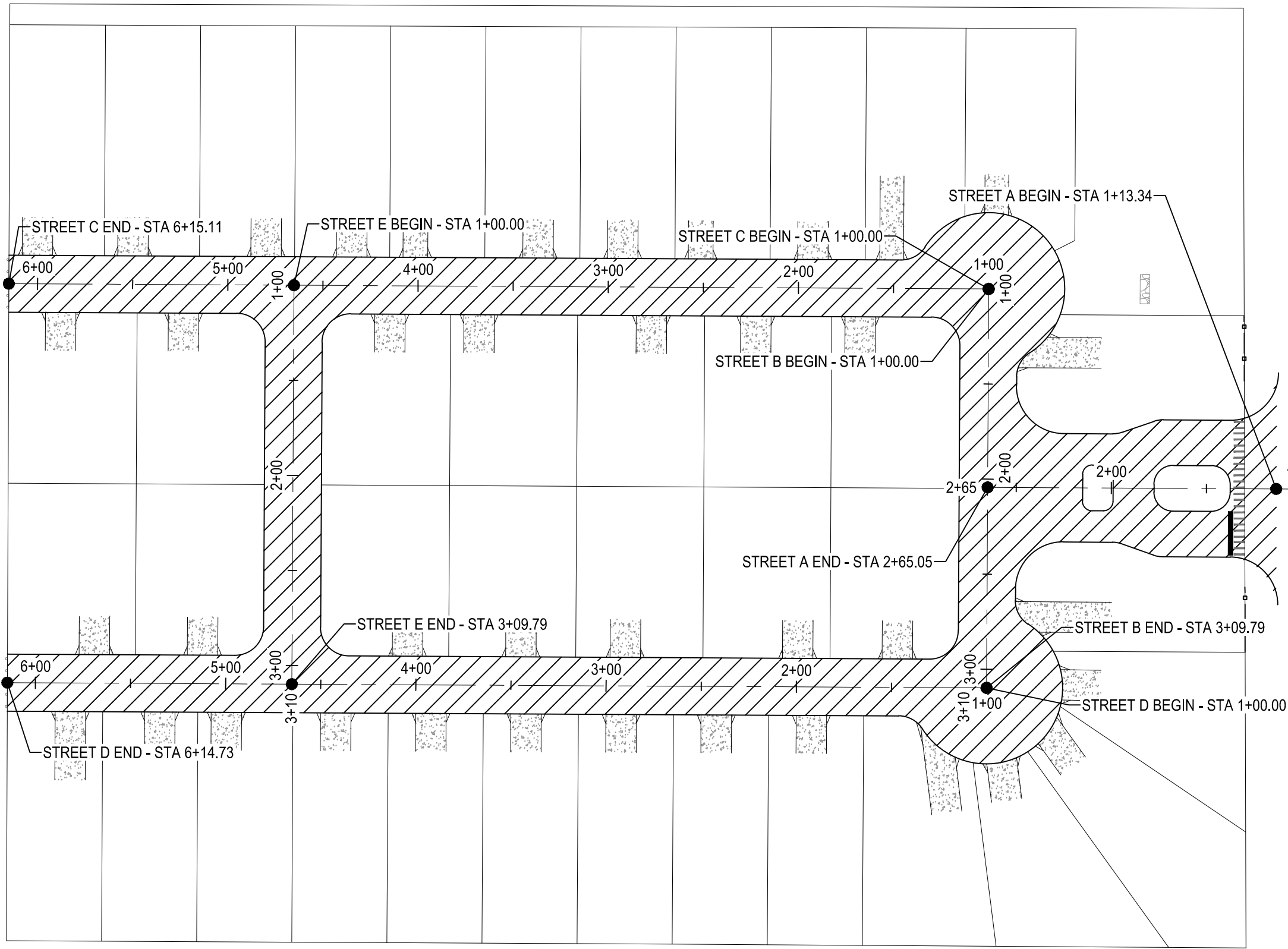
12" FLUSH CURB  
N.T.S.



TYPICAL PAVEMENT DETAIL  
N.T.S.





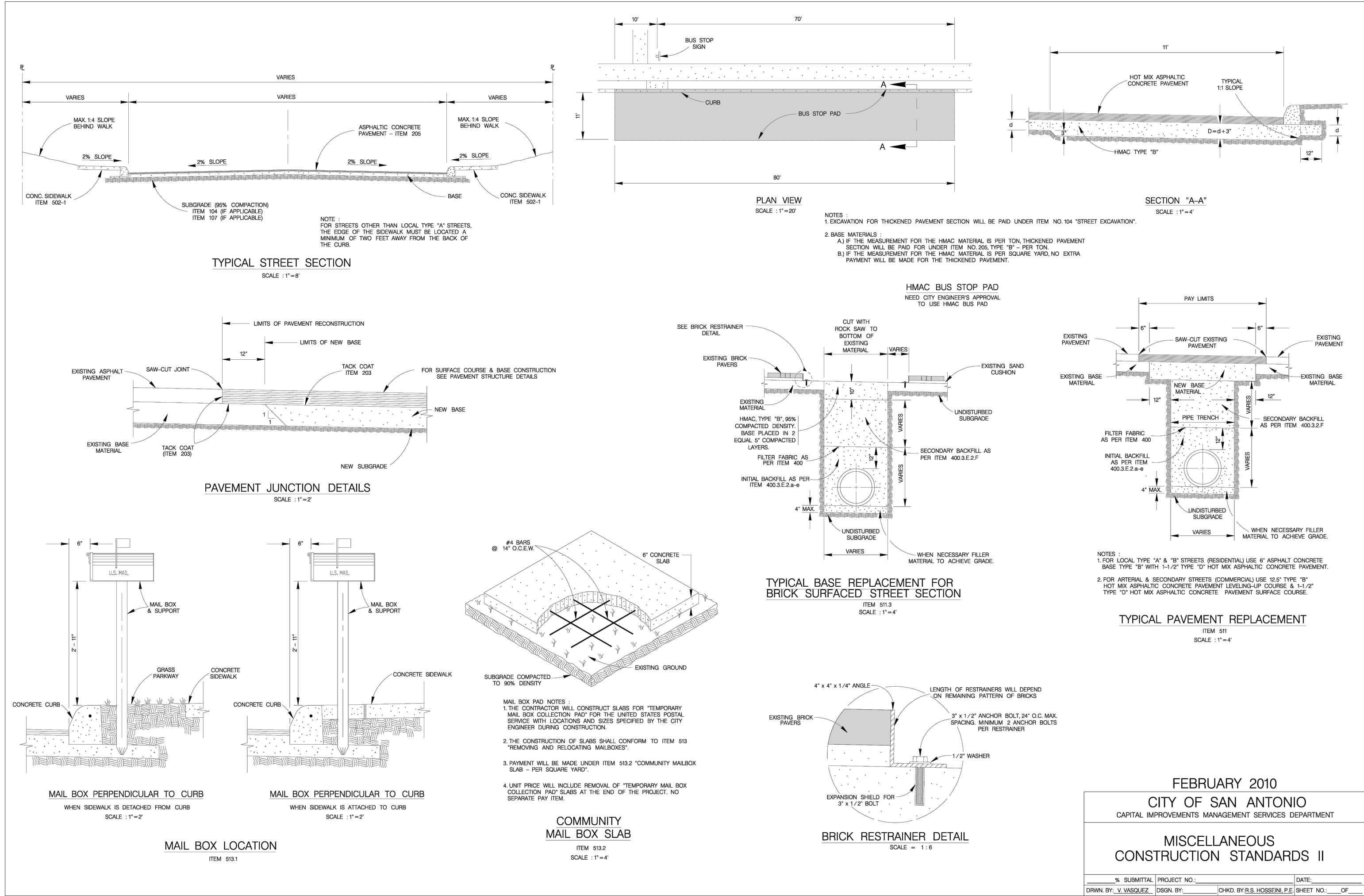
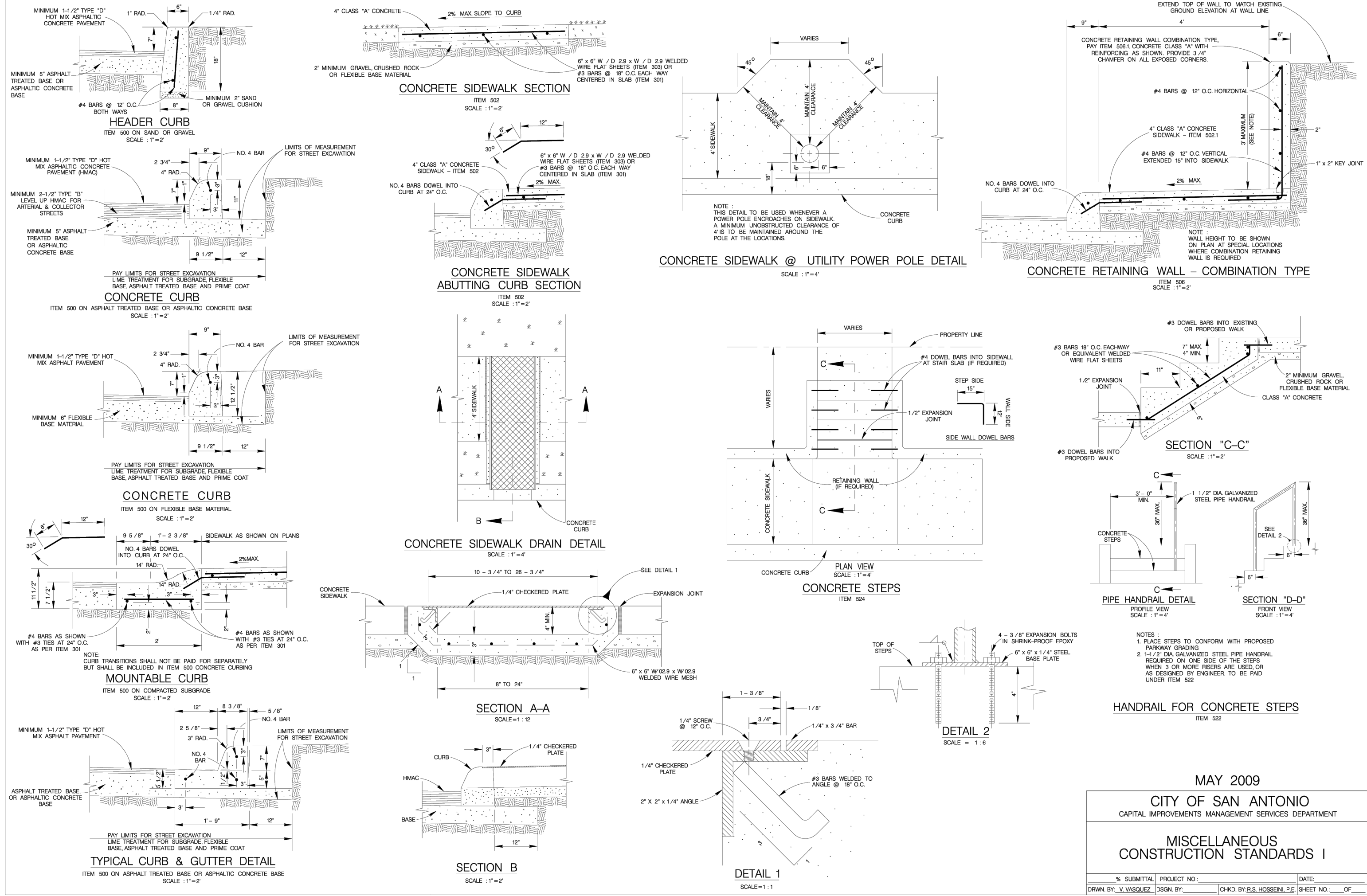
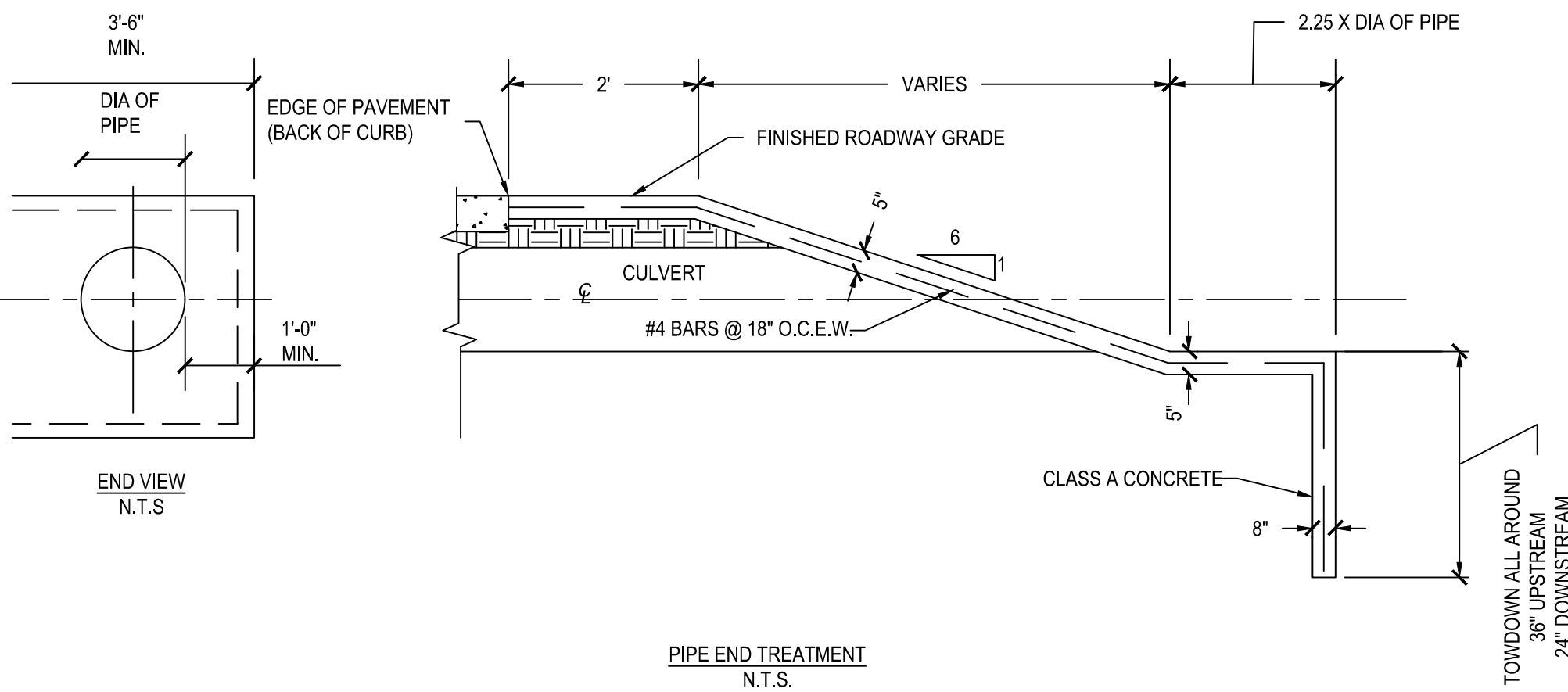


NOTE:  
1. REFERENCE GEOTECHNICAL REPORT (BEA NO. P12-21-306R) FOR BORING INFORMATION AND CBR LOCATIONS.

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

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



PLAT NUMBER  
24-11800389

DATE

REV

DESIGNED BY: ###

REVIEWED BY: ###

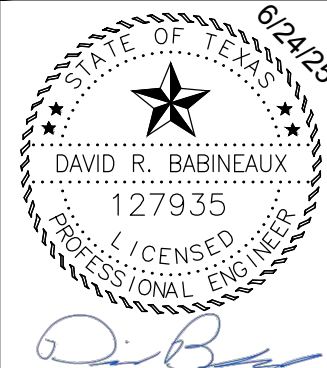
DRAWN BY: ###



BGE, INC.  
7330 San Pedro, Suite 202  
San Antonio, TX 78216  
Tel.: 214.368.3600 www.bgeinc.com  
TCE registration no. F-146

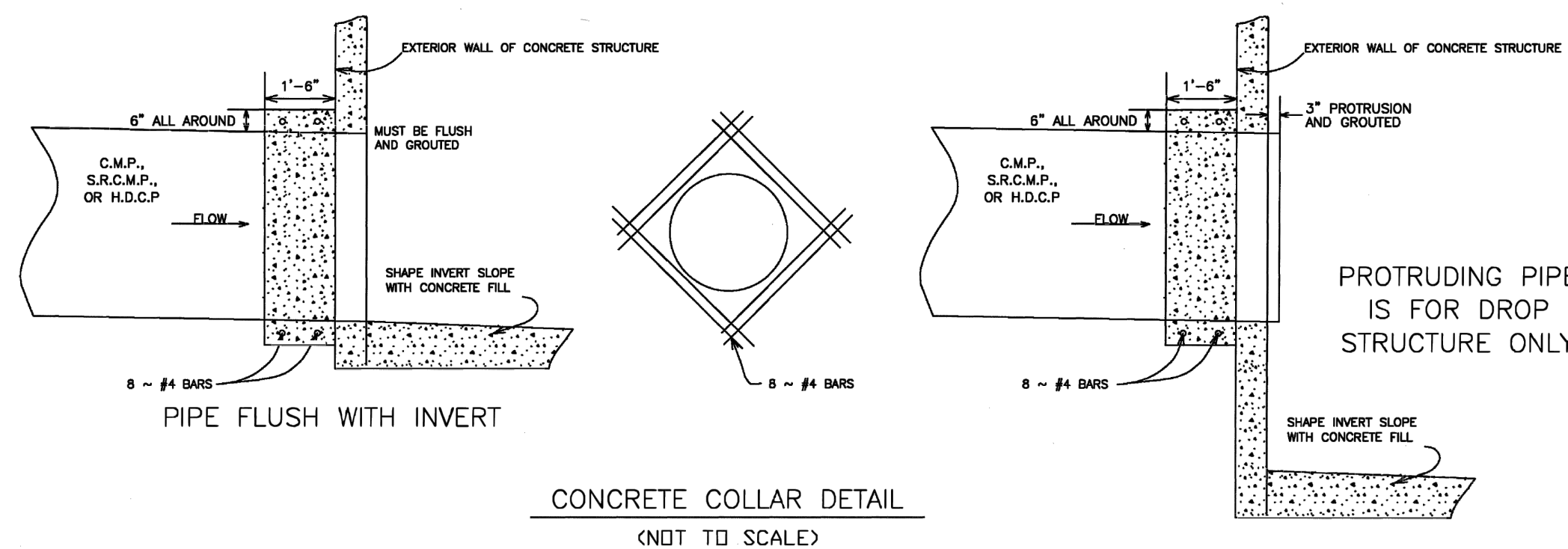
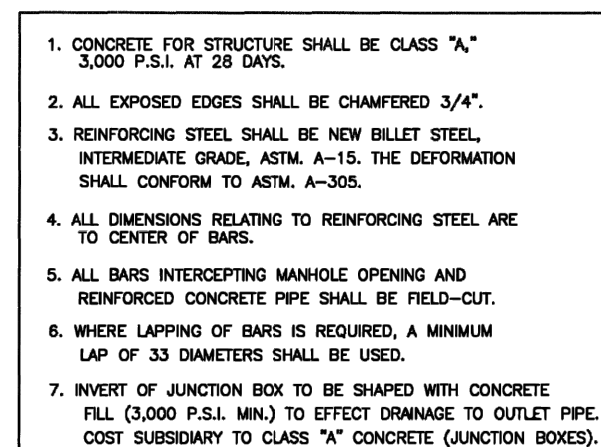
HERON VALLEY PHASE 1

STREET & DRAINAGE DETAILS  
(SHEET 2 OF 5)

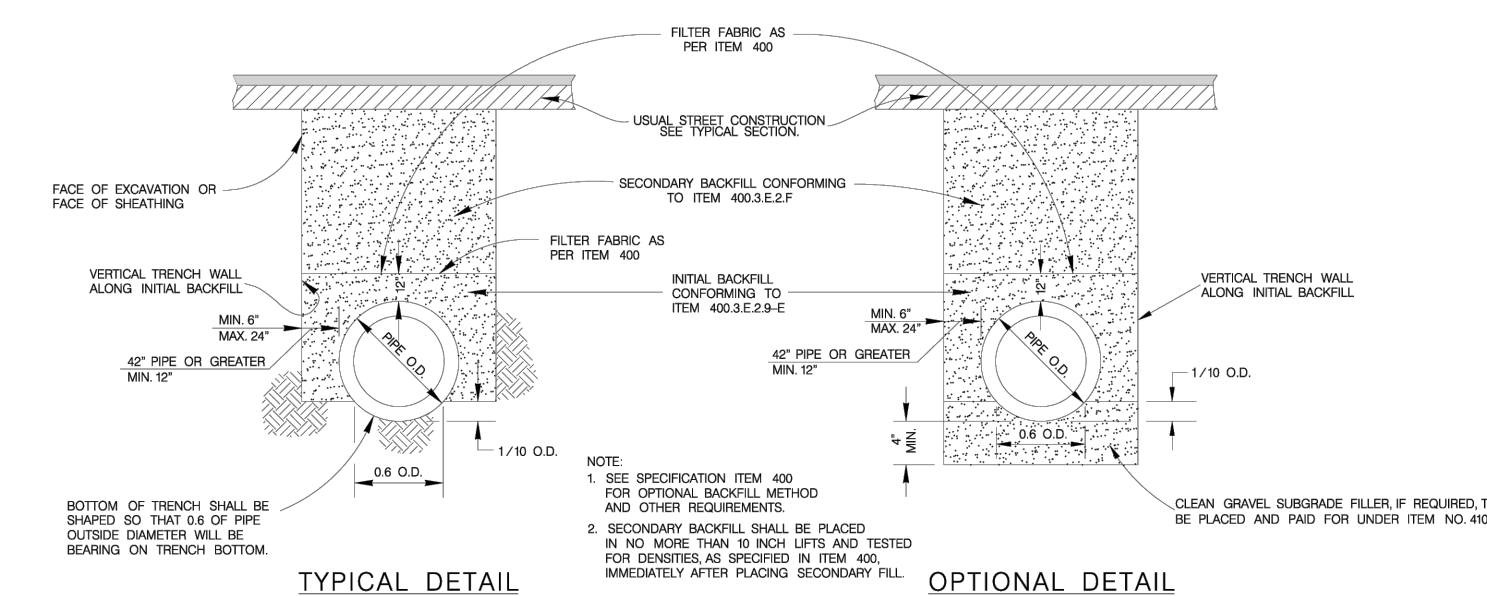


SHEET  
C08.21

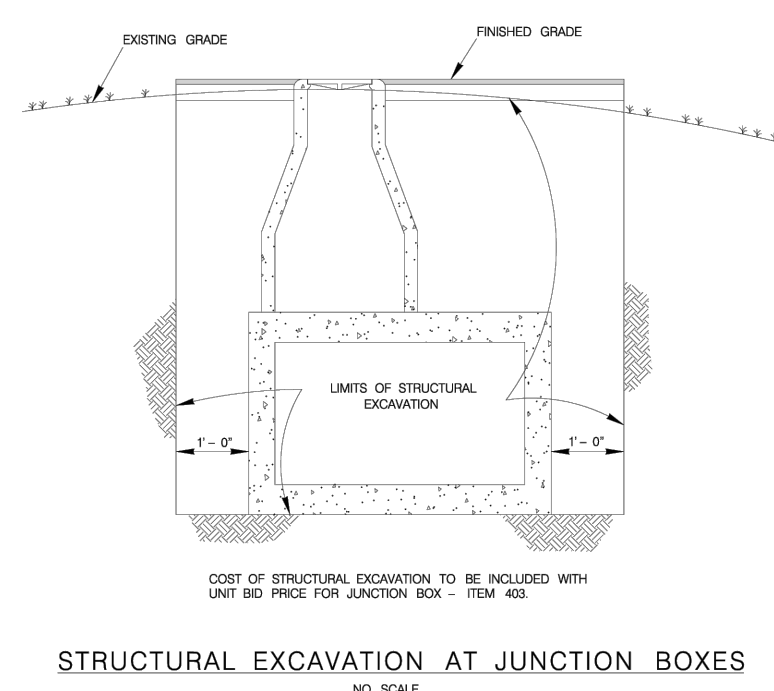




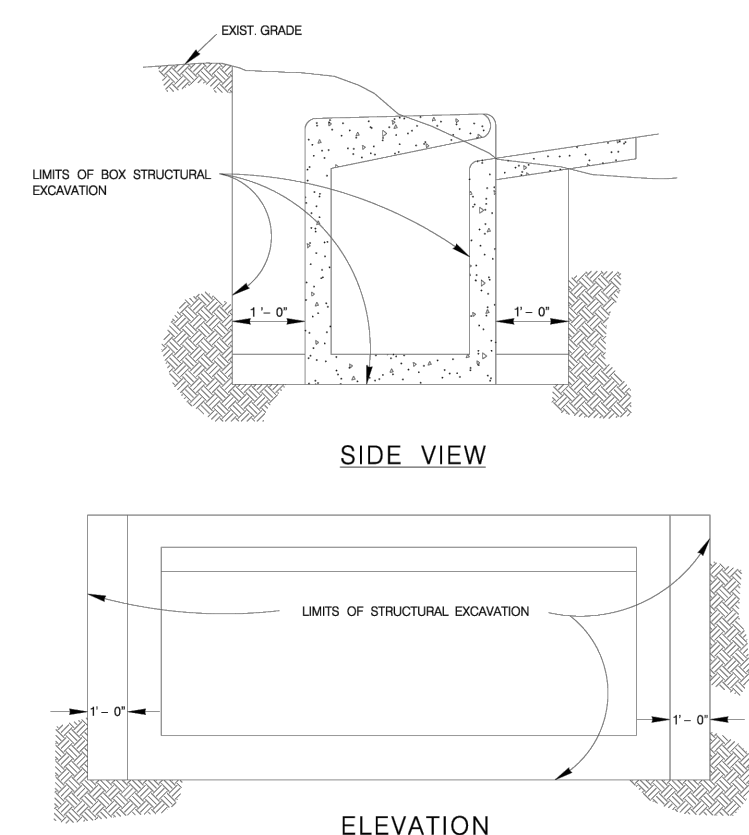
JANUARY 2006			
STANDARD PLANS CITY OF SAN ANTONIO, TEXAS DEVELOPMENT SERVICES			
CONCRETE COLLAR DETAIL			
DRAWN BY:	DATE:	REVISIONS:	SHEET: SEE ABOVE
ARCHER WINTER, P.E.			
CHECKED BY:			DATE: 19 JANUARY 06
SAN DEIT, P.E.			SHEET: 1 OF 1



### PIPE BEDDING & BACKFILL DETAILS



## STRUCTURAL EXCAVATION AT JUNCTION BOXES



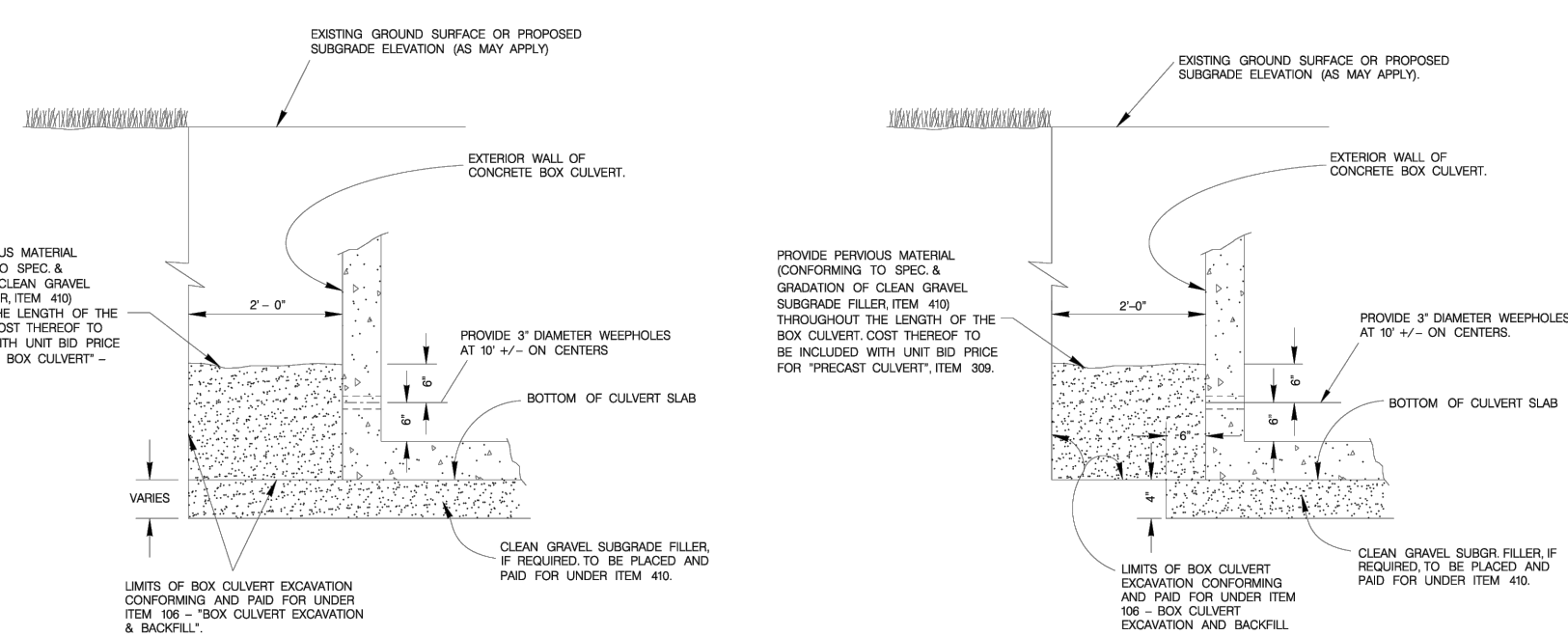
## STRUCTURAL EXCAVATIONS AT DRAINAGE INLETS

MAY 2009

CITY OF SAN ANTONIO  
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

PIPE BEDDING & MISCELLANEOUS  
DRAINAGE DETAILS

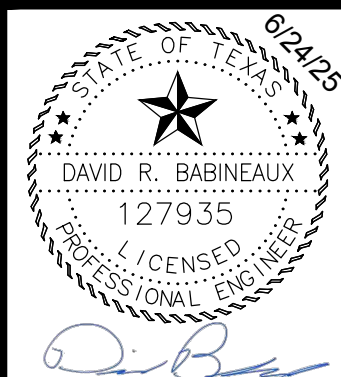
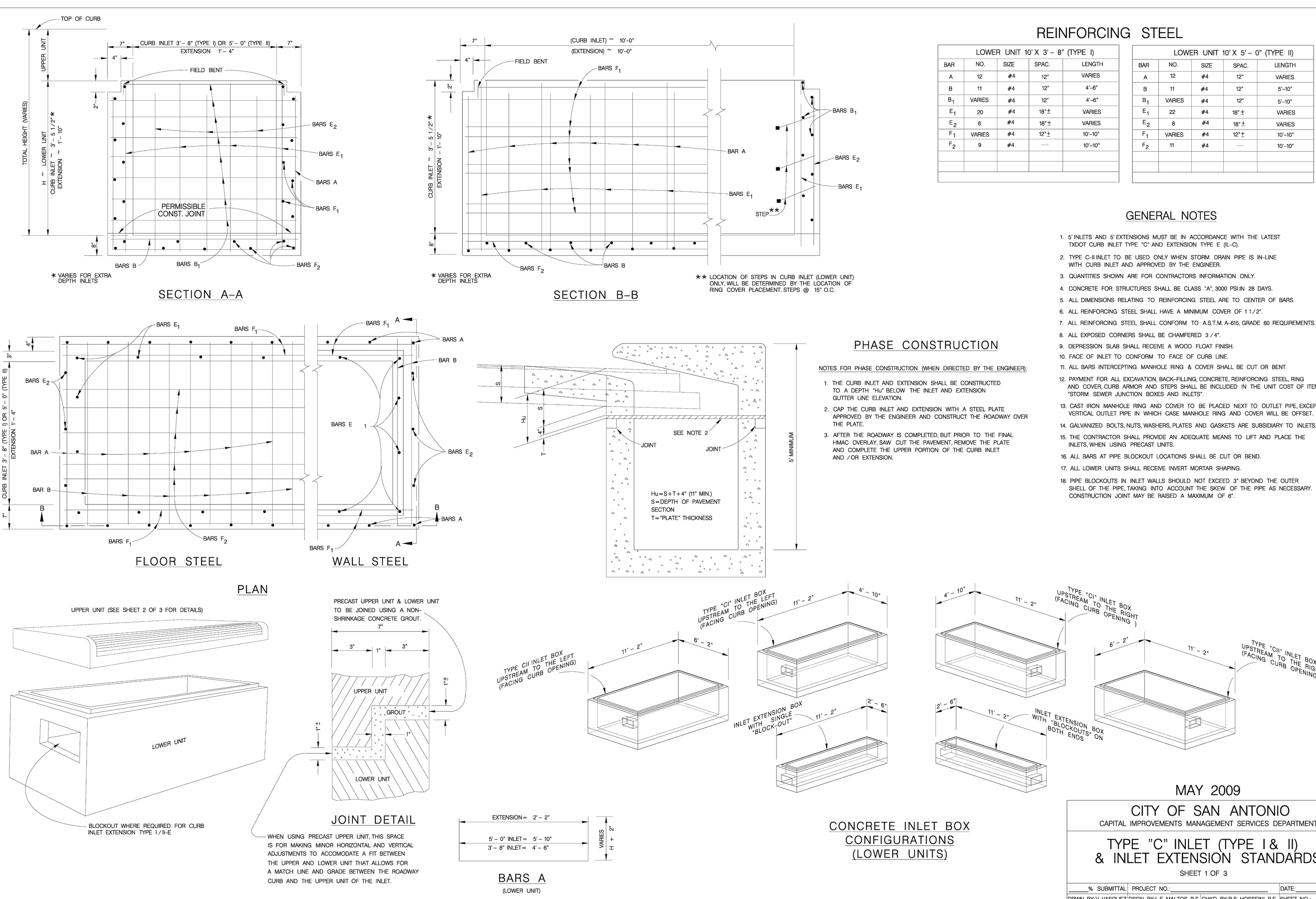
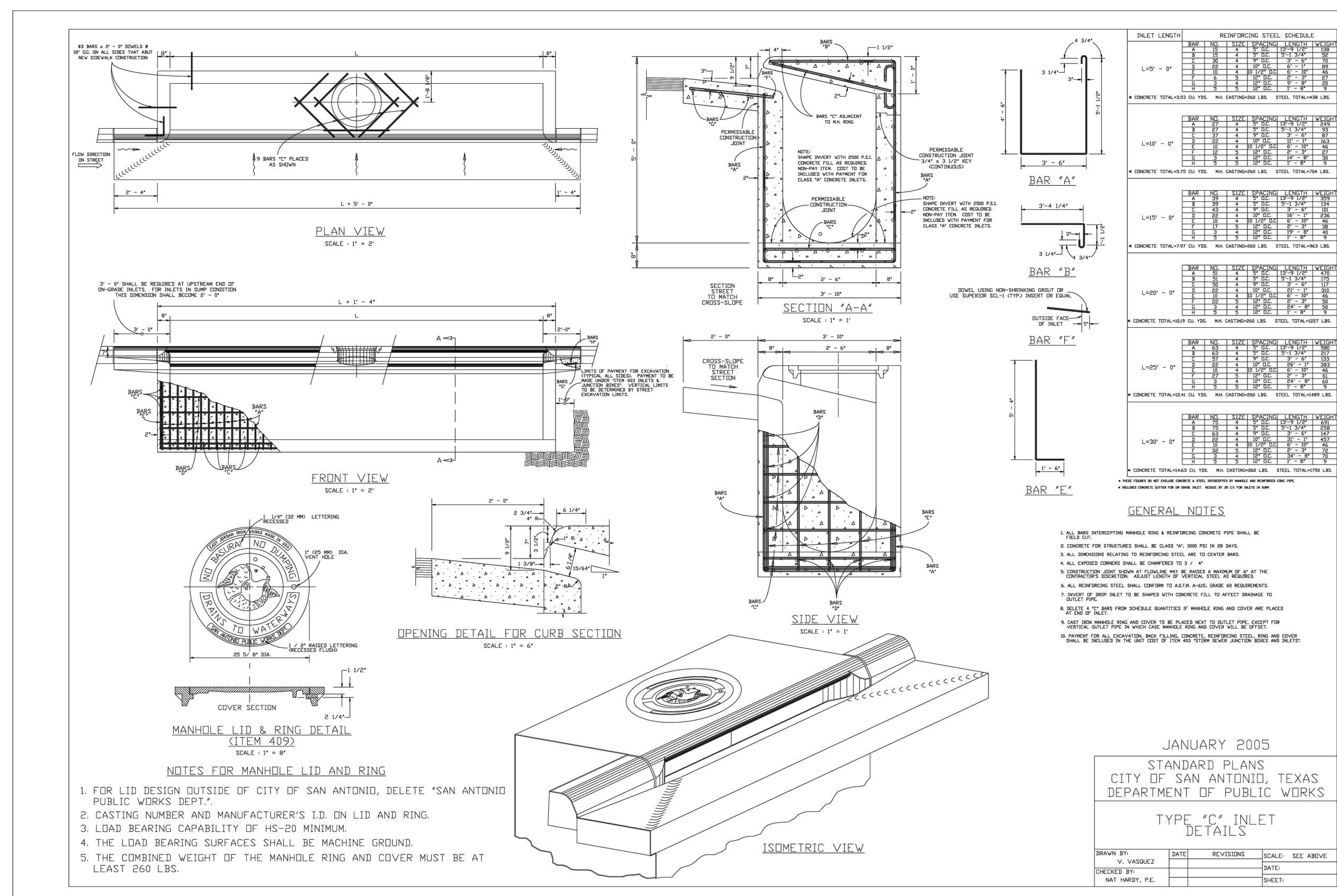
% SUBMITTAL		PROJECT NO.:		DATE:	
DRWN. BY:	DSGN. BY:	CHKD. BY:	SHEET NO. OF		



### CAST-IN-PLACE BOX CULVERT

PRECAST BOX CULVERT

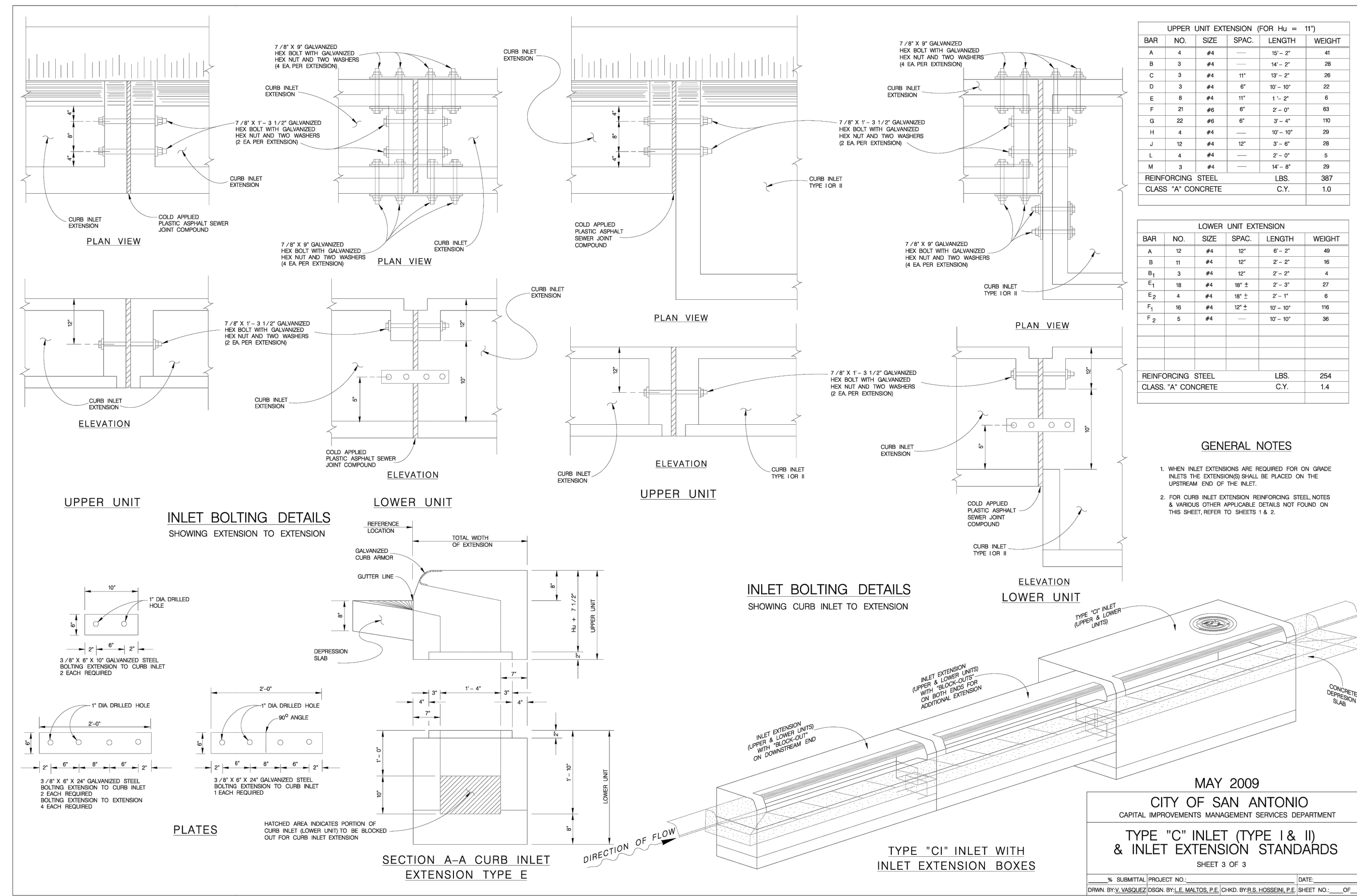
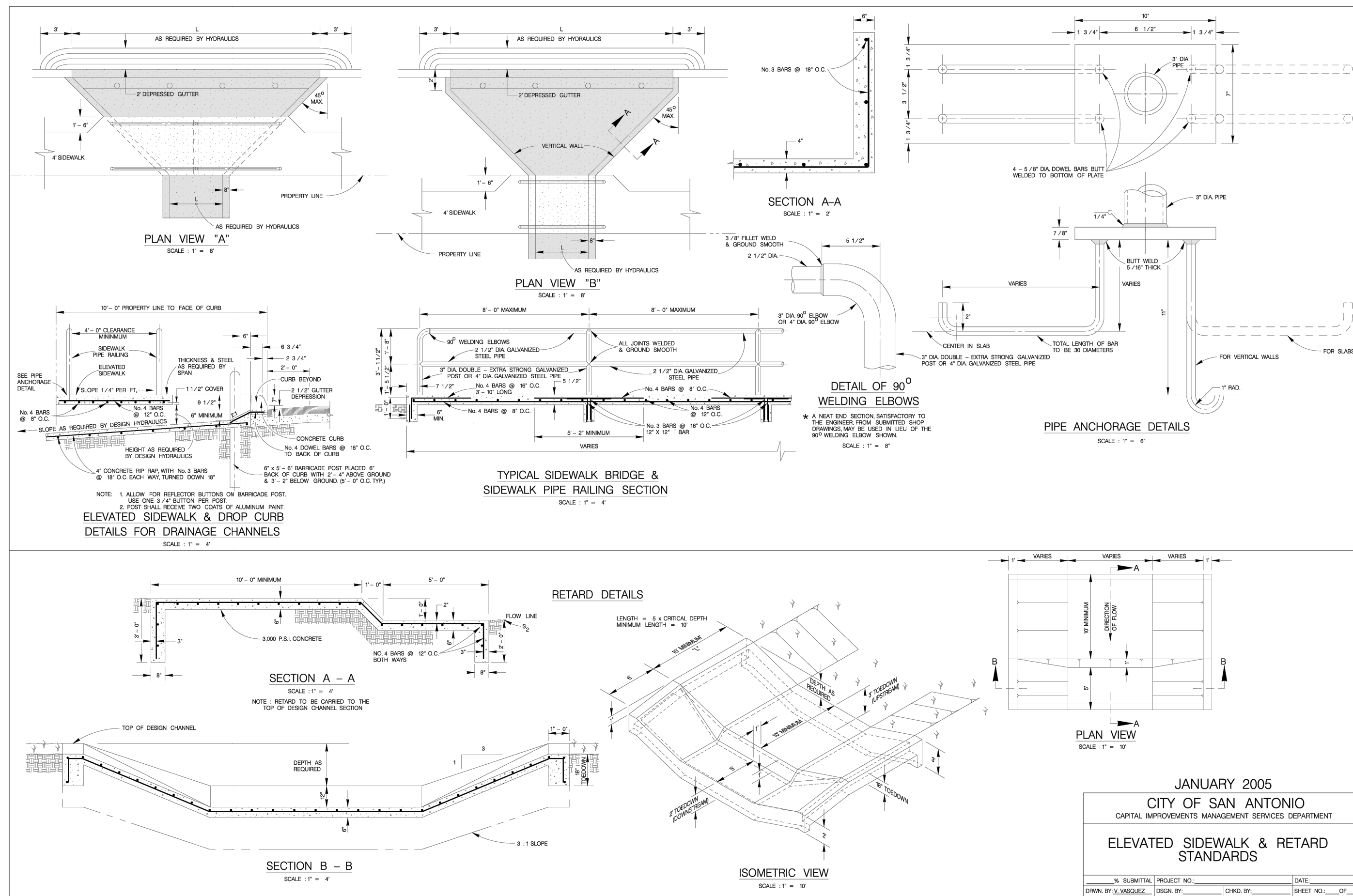
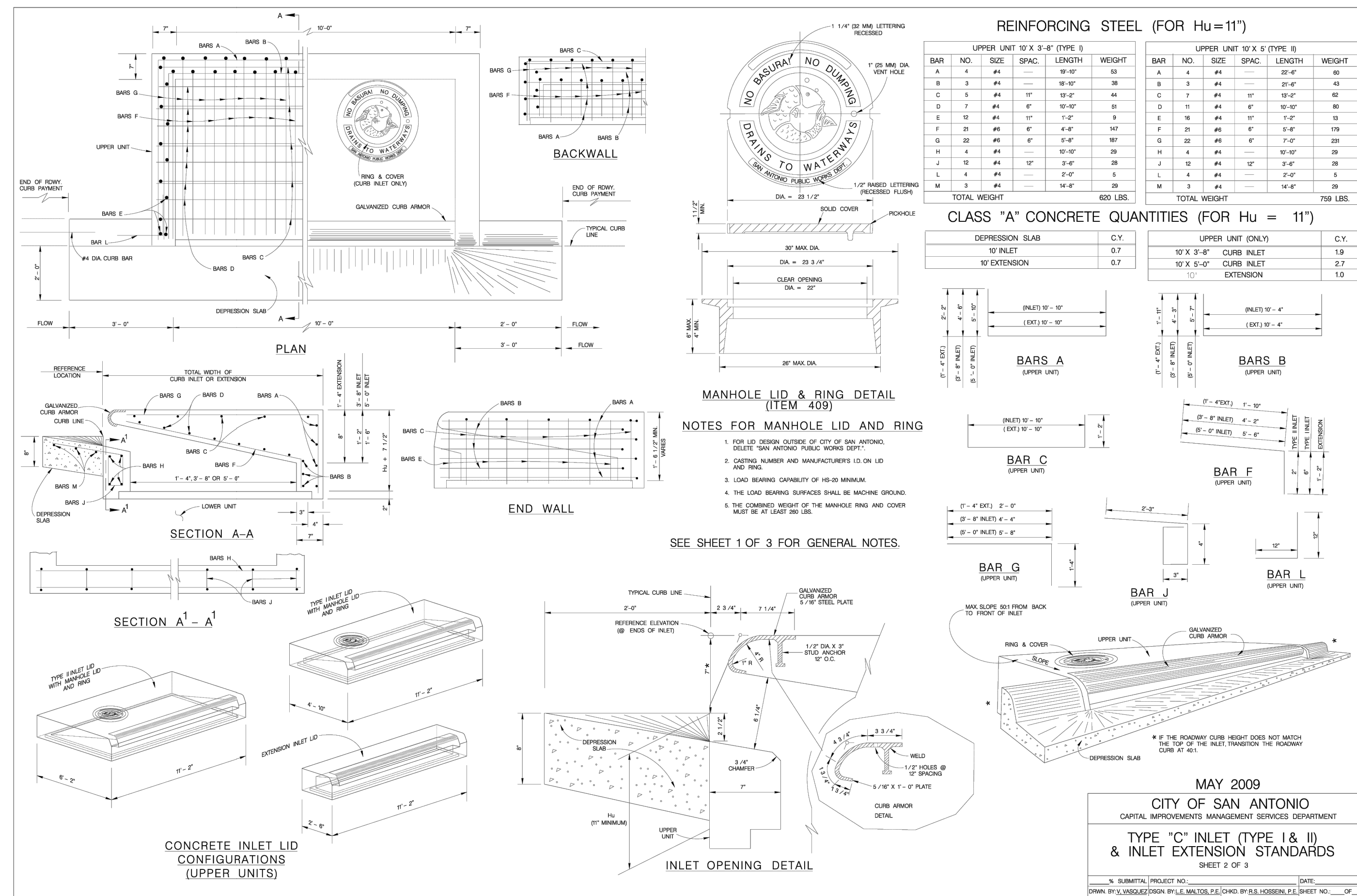
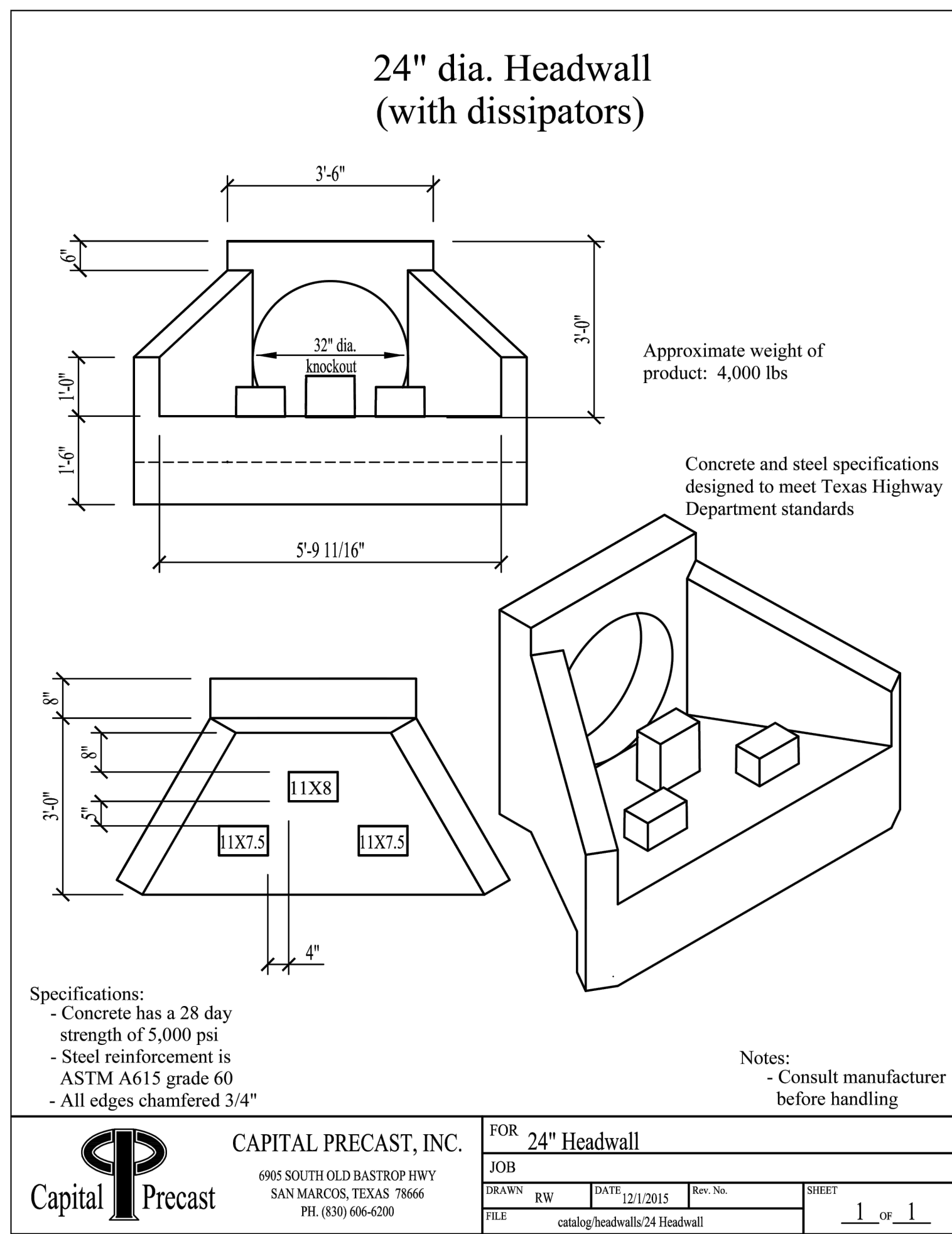
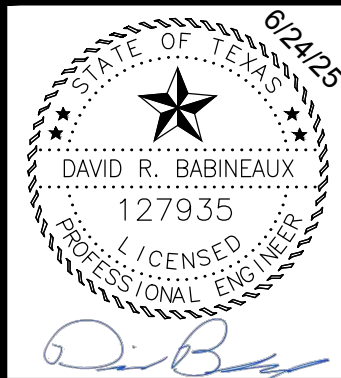
### CONCRETE BOX CULVERT



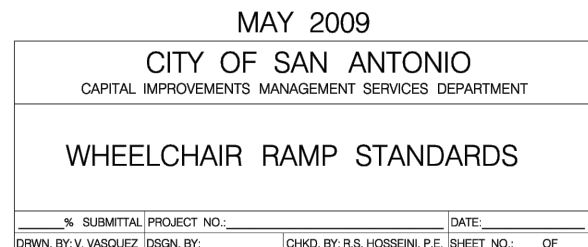
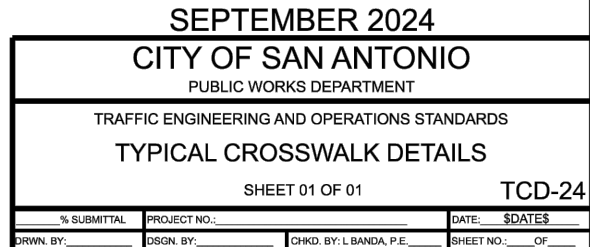
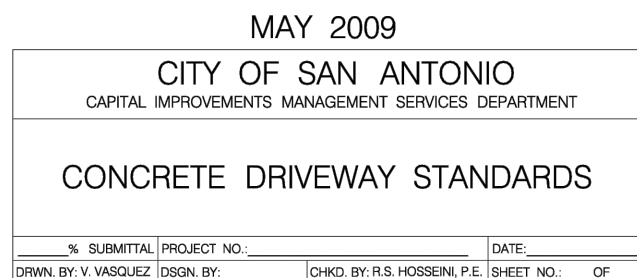




**BGE, INC.**  
7330 San Pedro, Suite 202  
San Antonio, TX 78216  
TEL: 210-581-3600 [www.browning.com](http://www.browning.com)  
TBDE Registration No. E 4046

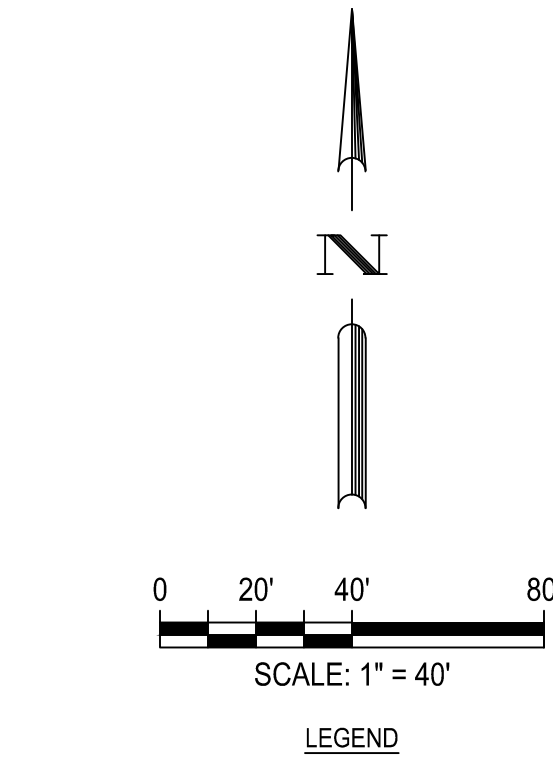
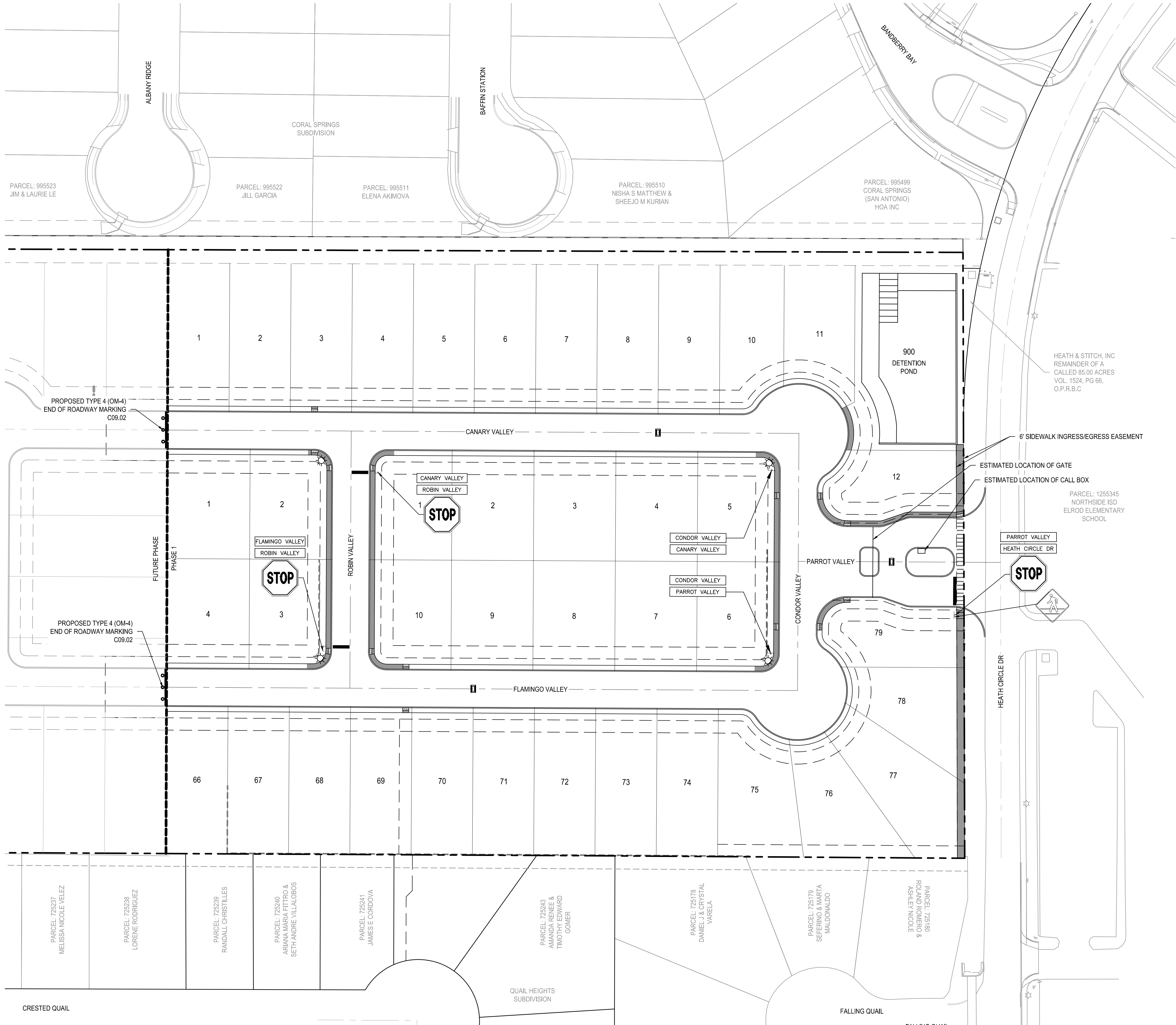








G:\TXC\Projects\San Antonio Projects\2938-00 - Heron Valley\01\_Unit\03\_CADD\01\_Shts\C11.00 SIGNAGE PLAN.dwg Layout: SIGNAGE PLAN Plotted: 5/24/2025 4:18:08 PM By: Odriguez



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:

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

PLAT NUMBER  
24-11800389

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HERON VALLEY PHASE 1

SIGNAGE PLAN

62425

STATE OF TEXAS  
DAVID R. BABINGAUX  
127935  
LICENSED PROFESSIONAL ENGINEER

Q. B.

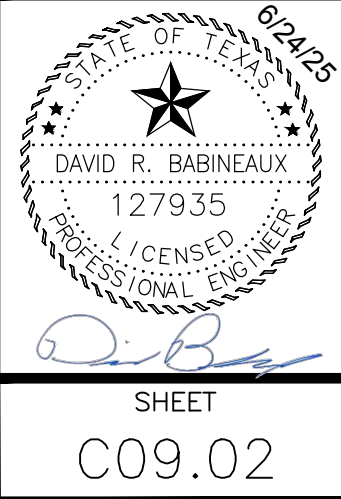
SHEET

C09.00








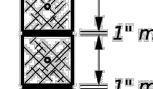
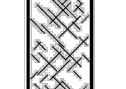





[illegible]

SHEET  
C09.02

# OBJECT MARKER - BID ITEM DESCRIPTIONS

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

<p><b>PAYMENT</b> RDITL = Installation REPLC = Replacement</p> <p><b>TYPE OF OBJECT MARKER</b> 1 = 2 or 4 <b>NUMBER OF REFLECTORS OR DIRECTION</b> Y = 3 Size 2 reflector only (Type 2 only) Y = 1 Size 3 reflector only (Type 2 only) Z = 3 Size 1 or 2 Size 1 reflector only (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)</p> <p><b>TYPE OF POST</b> WEC = Wing Channel Post WFLX = White Flexible Post YFLX = Yellow Flexible Post TWT = Thin Wall Tubing</p> <p><b>TYPE OF MOUNT</b> GEM = Ground Embedded (drivable or set in concrete) SRF = Surface Mount WAS = Wedge Anchor Steel WAP = Wedge Anchor Plastic</p> <p><b>IDENTIFICATION</b> L1 = Low Speed, Low Impact HH = High Speed, High Impact</p> <p><b>DIRECTION (If required)</b> B = Bi-directional</p>	<p><b>REMARKS</b></p>
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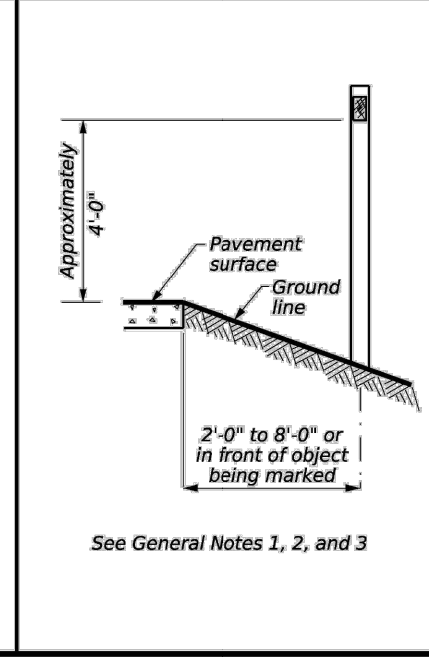
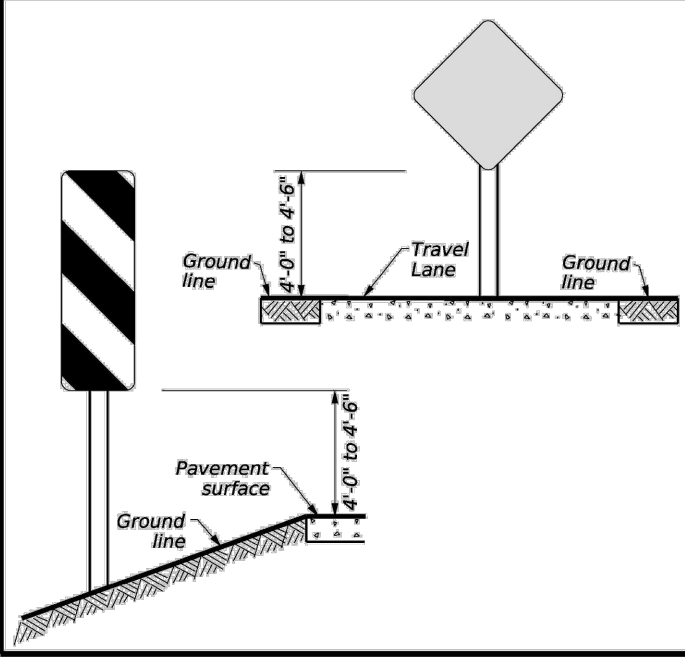
OBJECT MARKER DEFINITION									
Devices used to mark obstructions within or adjacent to the roadway. (See TMUTCD - Chapter 2C, WARNING SIGNS AND OBJECT MARKERS.)									
DEVICE	Type 1 (OM-1)	Type 2 (OM-2)			Type 3 (OM-3)			Type 4 (OM-4)	
	OM-1	OM-2X	OM-2Y	OM-2Z	OM-3L	OM-3R	OM-3C	OM-4	
		 3-Size 3 reflector units	 1-Size 3 reflector unit	 1-Size 4 reflector unit or 3-Size 1 reflector units					
SHEETING	Yellow - Type B <sub>h</sub> or C <sub>h</sub> sheeting		White and Yellow - Type B or C sheeting			Alternating Acrylic Black and Retroreflective Yellow - Type B <sub>h</sub> or C <sub>h</sub> sheeting			Red - Type B <sub>h</sub> or C <sub>h</sub> sheeting
POST TYPE	TWT	WC	WC	WFLX, YFLX	TWT, WFLX			TWT	
MOUNT TYPE	WAS, WAP	GNDDL	GNDDL	GNDDL, GNDHH, SRFL, SRFHH	WAS, WAP, GNDLL, GNDHH, SRFL, SRFHH			WAS, WAP	

### REFLECTOR UNIT DIMENSIONS FOR OBJECT MARKERS

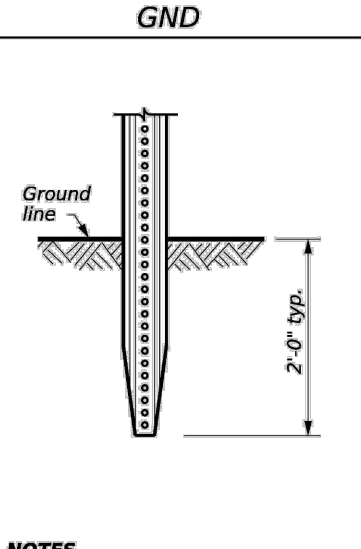
	SIZE 1	SIZE 2	SIZE 3	SIZE 4
DEVICE				
NOTE	1. Size 1 and 4 - Direct applied reflective sheeting for use on flexible post (fbd). 2. Size 2 and 3 - For use on wing channel (wc) post only. Use approved metal, plastic, or fiberglass backplate with $\frac{1}{8}$ " mounting holes.			
TYPES 1, 3, AND 4 OBJECT MARKERS TYPICAL INSTALLATION			TYPE 2 OBJECT MARKERS TYPICAL INSTALLATION	

### TYPES 1, 3, AND 4 OBJECT MARKERS TYPICAL INSTALLATION

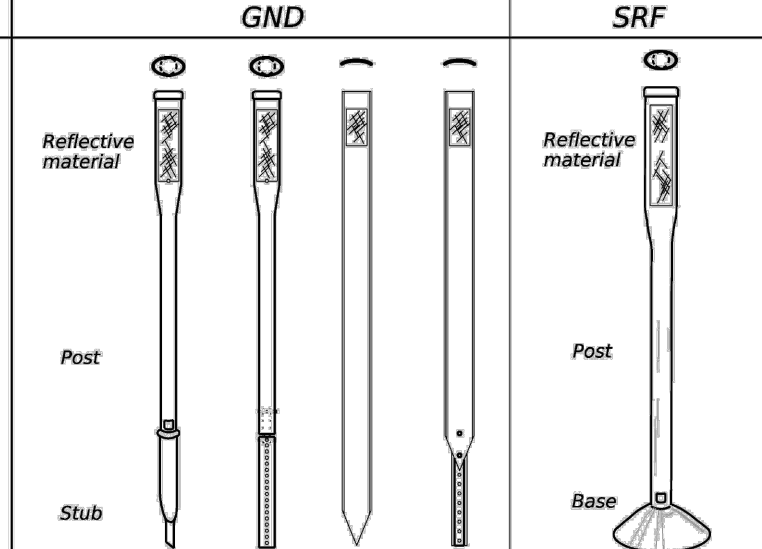
## TYPE 2 TACTICAL MARKERS TYPE INSTALLATION



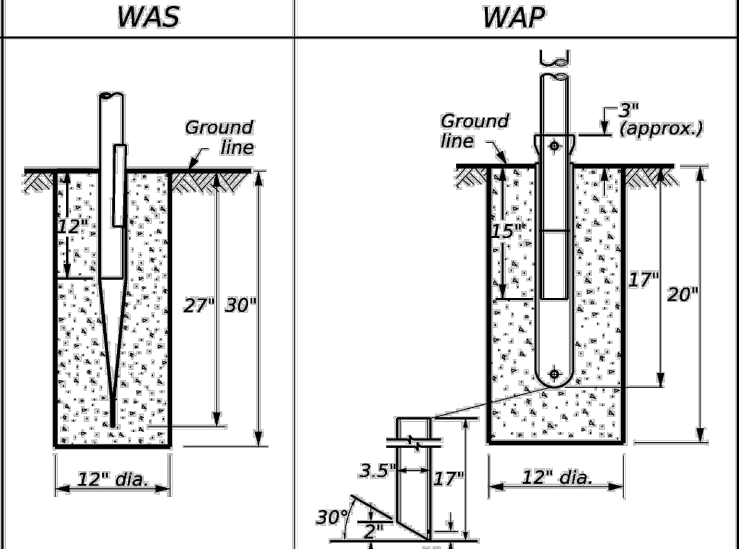
### **WING CHANNEL (WC)**



### ***FLEXIBLE POSTS (YFLX, WFLX)***



## WEDGE ANCHOR SYSTEMS



- |   |  |   |
|---|--|---|
| 1. Embedded Wing Channel (IWC)<br>post position may be used for Type 1<br>object markers and delineators<br>only.   | <p align="center"><b>NOTES</b></p> <p>1. Use "Flexible Delineator and Object Marker Posts" Material Producer List for approved devices.</p> <p>2. Install per manufacturer's recommendations.</p> <p>3. Post length may vary to meet field conditions.</p> | <p align="center"><b>NOTE</b></p> <p>1. Install</p> |
| 2. 1.12 I-beet steel per ASTM A 1011<br>SS Gr. 50, or ASTM A499.  |  |   |
| <p><b>GENERAL NOTES</b></p>   |  |   |
| <p>1. Where a restriction prevents consistent placement from the pavement edge, place the affected object markers in line with the innermost edge of the obstruction.</p> <p>2. 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.</p> <p>3. Install all object markers in accordance with the manufacturer's recommendation.</p> <p>4. Diagonal stripes on Type 3 object markers shall slope down toward the intended travel lane.</p> <p>5. Object marker substrates shall be .080" aluminum sign blank and conform to ASTM B-209 Alloy 6061-T6 or an approved alternative.</p> |  |   |

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2. Install per manufacturer's recommendations.
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3. Install all object markers in accordance with the manufacturer's recommendation.
4. Diagonal stripes on Type 3 object markers shall slope down toward the intended travel lane.
5. 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**

FILE:	dom-25.dgn	ON:	TxDOT	OC:	TxDOT	OR:	TxDOT	CC:	TxDOT
TxDOT		May 2025							
REVIEWS		CONF	DECT	JOB		ISSUANCE			
B-04	5-25	DIST		COUNTY			SHEET NO.		
3-15									
7-20									
20B									