



October 2, 2024

Mr. Otis Spriggs  
Director of Development Services  
City of Angleton  
121 S. Velasco  
Angleton, TX 77515

Re: On-Going Services  
Ashland Sections 1 and 2 Construction Plans – 3<sup>rd</sup> Submittal Review  
Angleton, Texas  
HDR Job No. 10391496

Dear Mr. Spriggs:

HDR Engineering, Inc. (HDR) has reviewed the construction plans for the above referenced subdivision and offers the following comments:

Construction Plans

1. Respective Authority Approvals shall be coordinated and received prior to construction. This includes but is not limited to Brazoria County and TxDOT.
2. The storm pipe material within the planset was previously designed using reinforced concrete pipe and has changed to "HP Storm Pipe" with the most recent submittals. Request for the use of this pipe material alternative was recently coordinated through the City in which use of the pipe would be allowed subject to the installation being performed per standard specifications designated by TxDOT. A formal request shall be made in writing for use of the pipe in other concurrent and future sections within the subdivision.

HDR takes no objection to the proposed Ashland Sections 1 and 2 Construction Plans with the exceptions noted. Please note, this does not necessarily mean that the entire drawings, including all supporting data and calculations, has been completely checked and verified; however, the drawings and supporting data are signed, dated, and sealed by a Professional Engineer licensed to practice in the State of Texas, which therefore conveys the engineer's responsibility and accountability.

If you have any questions, please feel free to contact us at our office (713)-622-9264.

Sincerely,

HDR Engineering, Inc.

Javier Vasquez, P.E., CFM  
Civil Engineer

cc: Files (10391496)

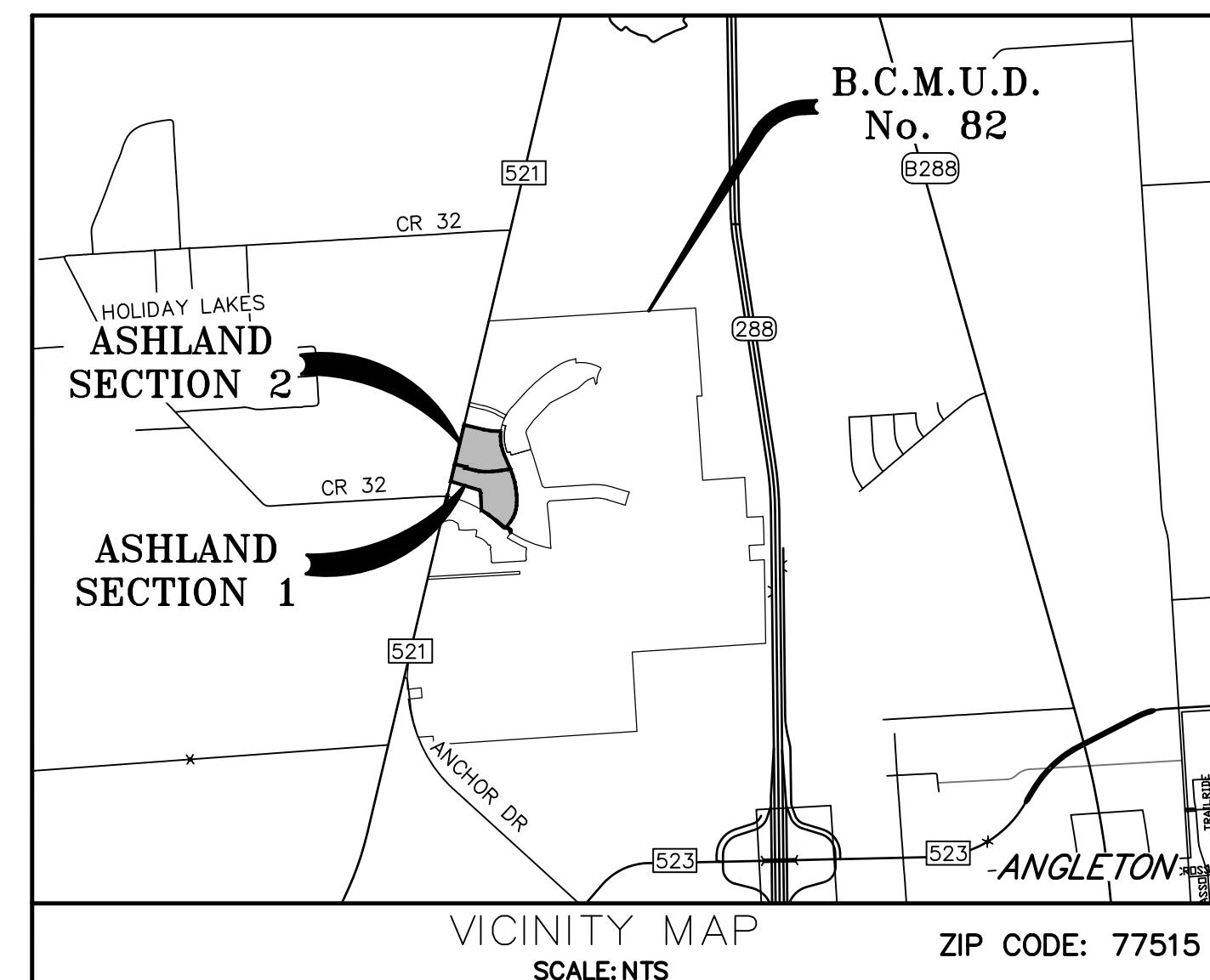
Attachments

# CONSTRUCTION OF ASHLAND SECTIONS 1 & 2 FOR BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 82

	APP.
	REV.
	NO.
	DATE
	REVISIONS
ASHLAND SECTIONS 1 & 2	

## INDEX OF DRAWINGS

<u>TITLE</u>	
1	COVER SHEET & INDEX
2	GENERAL CONSTRUCTION NOTES
3	SECTION 1 PLAT 1 OF 2
4	SECTION 1 PLAT 2 OF 2
5	SECTION 2 PLAT 1 OF 2
6	SECTION 2 PLAT 2 OF 2
7	GENERAL CONSTRUCTION LAYOUT-WATER & SEWER I
8	GENERAL CONSTRUCTION LAYOUT-WATER & SEWER II
9	GENERAL CONSTRUCTION LAYOUT-PAVING & DRAINAGE I
10	GENERAL CONSTRUCTION LAYOUT-PAVING & DRAINAGE II
11	GENERAL CONSTRUCTION LAYOUT-SIGNS & BARRICADES I
12	GENERAL CONSTRUCTION LAYOUT-SIGNS & BARRICADES II
13	GENERAL CONSTRUCTION LAYOUT-STORM WATER POLLUTION PREVENTION PLAN I
14	GENERAL CONSTRUCTION LAYOUT-STORM WATER POLLUTION PREVENTION PLAN II
15	GENERAL CONSTRUCTION LAYOUT-GRADING PLAN I
16	GENERAL CONSTRUCTION LAYOUT-GRADING PLAN II
17	DRAINAGE CALCULATIONS
<u>PLAN &amp; PROFILE</u>	
18	AMETHYST VALLEY LANE STA 0+00.00 TO STA 9+49.03
19	GOLDEN CANYON DRIVE STA 0+00.00 TO STA 8+27.81
20	SUNSTONE STREET 1 OF 2 STA 0+00.00 TO STA 5+00.00
21	SUNSTONE STREET 2 OF 2 STA 5+00.00 TO STA 9+11.60
22	EMERALD HILLS DRIVE STA 0+00.00 TO STA 9+36.03
23	AMBER PASS LANE STA 0+00.0 TO 8+87.96
24	OPAL PASS DRIVE STA 0+00.00 TO 7+26.27
25	GRANITE GROVE COURT STA 0+00.00 TO 3+03.09
	DESERT ROSE DRIVE STA 0+00.00 TO 3+80.00
<u>DETAILS</u>	
26	STORM WATER POLLUTION PREVENTION PLAN DETAILS
27	SANITARY SEWER & WATER DETAILS
28	STORM WATER DRAINAGE DETAILS
29	PAVEMENT DETAILS
30	MISCELLANEOUS DETAILS



NOTE: THIS PROJECT IS LOCATED IN CITY OF ANGLETON ETJ IN BRAZORIA COUNTY

FIRM  
FLOOD INSURANCE RATE MAP 485458  
PANEL 430  
MAP NUMBER 48039C0430K  
DATED DECEMBER 30, 2020  
THIS SITE IS IN ZONE "X-SHADED"

**ONE-CALL NOTIFICATION SYSTEM  
CALL BEFORE YOU DIG**  
(713) 223-4567 (In Houston)  
(New Statewide Number Outside Houston)  
1-800-545-6005  
- OR -  
TEXAS811 (DIG TESS): 1-800-344-8377  
- OR -  
LONE STAR NOTIFICATION CENTER: 1-800-669-8344  
**CALL AT LEAST 2 WORKING DAYS  
(48 HOURS) BEFORE YOU DIG**

PROPERTY OWNER AND/OR DEVELOPER OR HIS ENGINEER WILL NOTIFY THE COUNTY ENGINEER'S OFFICE AND THE APPLICABLE DRAINAGE DISTRICT BY LETTER AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION OF IMPROVEMENTS BEGINNING. CONTRACTOR SHALL PROVIDE A MINIMUM OF 24 HOURS ADVANCE NOTICE TO COUNTY ENGINEER, OF EACH DAY'S CONSTRUCTION. FAILURE TO DO SO MAY RESULT IN REJECTION, BY COUNTY, FOR ACCEPTANCE AND MAINTENANCE. INSPECTIONS SHALL BE SCHEDULED ON NORMAL COUNTY WORKING DAYS MONDAY THROUGH FRIDAY.

**OWNER/DEVELOPER INFO**  
ANCHOR HOLDINGS MP, LLC  
101 PARKLANE BOULEVARD, SUITE 102  
SUGAR LAND, TX 77478

### GENERAL NOTES

- Release of this application does not constitute a verification of all data, information and calculations supplied by the applicant. The engineer of record is solely responsible for the completeness, accuracy and adequacy of their submital, whether or not the application is reviewed for Code compliance by the City Engineer.
- All responsibility for the adequacy of these plans remains with the Engineer who prepared them. In approving these plans, the City of Angleton must rely on the adequacy of the work of the Design Engineer.

**PROPERTY INFORMATION**  
WATERSHED: OYSTER CREEK  
THERE ARE NO PROPOSED VARIANCES/WAIVERS FROM THE LDC OR THE ACM

OCTOBER 2024

JOB NO. 16759-0010-12



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
4350 Lockhill-Selma Road, Suite 100 • San Antonio, Texas 78249 • 210.494.5511

**ASHLAND SECTION 1**  
A SUBDIVISION OF 17.02 ACRES OF LAND OUT OF THE SHUBAEL MARSH SURVEY, A-82 BRAZORIA COUNTY, TEXAS

**ASHLAND SECTION 2**  
A SUBDIVISION OF 14.26 ACRES OF LAND OUT OF THE SHUBAEL MARSH SURVEY, A-82 BRAZORIA COUNTY, TEXAS

\_\_\_\_\_  
Otis Spriggs  
City of Angleton Director of Development

Date

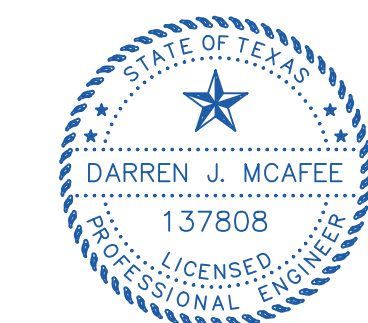
\_\_\_\_\_  
Brazoria County Municipal Utility District  
No. 82 Engineer

Date

I, Darren J. McAfee, a Professional Engineer licensed in the State of Texas, do hereby certify that these plans were prepared under my supervision to meet or exceed the specifications and requirements of Brazoria County, Texas.

\_\_\_\_\_  
Darren J. McAfee, P.E.

10/1/2024  
Date





ANGLETON GENERAL CONSTRUCTION NOTES:

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ANGLETON CONSTRUCTION MANUAL (ACM) AND LAND DEVELOPMENT CODE, HEREAFTER REFERRED TO THE ACM AND THE LDC.
2. APPROVAL OF THESE CONSTRUCTION PLANS DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY, ADEQUACY, AND COMPLIANCE OF THE SUBMITTED PLANS.
3. ALL RESPONSIBILITY FOR THE PLANS RESTS ON DESIGN ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY MUST RELY ON THE ADEQUACY AND ACCURACY OF THE DESIGN ENGINEER.
4. DESIGNS SHALL BE IN COMPLETE COMPLIANCE WITH THE LDC AND THE ACM. ANY WAIVER, DEVIATION, VARIANCE, OR EXCEPTION FROM ANY SPECIFIC REQUIREMENT(S) OF THE LDC OR ACM THAT WERE NOT EXPRESSLY REQUESTED WHEN PLANS ARE SUBMITTED, SHALL NOT BE CONSTRUED TO HAVE BEEN GRANTED IF PLANS ARE APPROVED. IT IS THE RESPONSIBILITY OF THE ENGINEER TO MAKE SUCH A WAIVER PROACTIVELY WHEN PLANS ARE SUBMITTED.
5. A MINIMUM OF TWO EXISTING BENCHMARKS SHOULD BE SHOWN ON THE PLANS. IN ADDITION, TWO PERMANENT BENCHMARKS PER SUBDIVISION SHALL BE INSTALLED IN EACH NEW SUBDIVISION TO INCLUDE DESCRIPTION, LOCATION, AND ELEVATION AND TIE TO CITY STANDARDS.
6. CAST BRONZE SURVEY MARKERS SHALL BE PLACED IN CONCRETE IN PERMANENT, ACCESSIBLE LOCATIONS AT THE TIME OF CONSTRUCTION. THE LOCATIONS OF THE MARKERS SHALL BE INDICATED ON THE CONSTRUCTION PLANS. A MINIMUM OF ONE MARKER SHALL BE PLACED FOR EACH 20 ACRES OF THE PROJECT.
7. PRIOR TO BEGINNING CONSTRUCTION, THE OWNER OR HIS AUTHORIZED REPRESENTATIVE SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE WITH THE CITY, THE DEVELOPER'S CONSULTING ENGINEER, CONTRACTOR, AND ANY OTHER AFFECTED PARTIES. THE CITY SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE TIME OF THE CONFERENCE AND 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
8. THE CONTRACTOR SHALL PROVIDE THE CITY A MINIMUM OF 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION.
9. BARRICADES, BUILT TO CITY SPECIFICATIONS, SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB SAFETY.
10. IF BLASTING IS PLANNED, A BLASTING PERMIT MUST BE SECURED PRIOR TO COMMENCEMENT OF ANY BLASTING.
11. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE BEFORE ACCEPTANCE OF THE SUBDIVISION.
12. THE LOCATION OF ANY WATER OR WASTEWATER LINES SHOWN ON THE PLANS MUST BE VERIFIED BY THE PUBLIC WORKS DEPARTMENT.
13. USE ONE CALL UTILITY SYSTEM: DIAL 1-800-344-8377, 48 HOURS BEFORE YOU DIG.
14. ALL STORM SEWER PIPES TO BE CLASS III RCP UNLESS NOTED OTHERWISE.

CITY OF ANGLETON STANDARD CONSTRUCTION SEQUENCING:

- 1. CALL THE CITY 48 HOURS PRIOR TO BEGINNING ANY WORK AND SCHEDULE A PRECONSTRUCTION MEETING WITH THE CITY AND ALL AFFECTED UTILITY PROVIDERS, THE GENERAL CONTRACTOR, THE DEVELOPER AND THE DEVELOPER'S ENGINEER.
2. OBTAIN A DEVELOPMENT PERMIT FROM THE CITY.
3. PROVIDE THE CITY WITH EVIDENCE ALL TCEQ LICENSES AND REQUIREMENTS ARE UP TO DATE.
4. INSTALL TEMPORARY EROSION CONTROLS AND TREE PROTECTION FENCING PRIOR TO ANY CLEARING AND GRUBBING. NOTIFY THE CITY WHEN INSTALLED.
5. ROUGH-CUT ALL REQUIRED OR NECESSARY PONDS. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF ANY EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A LOW-LEVEL OUTLET AND AN EMERGENCY OVERFLOW MEETING THE REQUIREMENTS OF THE LDC. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL FINAL RESTORATION IS ACHIEVED.
6. DELIVER APPROVED ROUGH-CUT SHEETS TO THE CITY ENGINEER PRIOR TO CLEARING AND GRUBBING.
7. ROUGH GRADE STREETS. NO DEVELOPMENT OF EMBANKMENT WILL BE PERMITTED AT THIS TIME.
8. INSTALL ALL UTILITIES TO BE LOCATED UNDER THE PROPOSED PAVEMENT OR WITHIN THE ROAD RIGHT-OF-WAY.
9. DELIVER STORM SEWER CUT SHEETS TO THE CITY ENGINEER.
10. BEGIN INSTALLATION OF STORM SEWER LINES. UPON COMPLETION, RESTORE AS MUCH DISTURBED AREA AS POSSIBLE, PARTICULARLY CHANNELS AND LARGE OPEN AREAS.
11. DELIVER FINAL GRADE CUT SHEETS TO THE CITY ENGINEER.
12. RE-GRADE STREETS TO SUB-GRADE.
13. ENSURE THAT UNDERGROUND UTILITY CROSSINGS ARE COMPLETED. LAY 1ST-COURSE BASE MATERIAL ON STREETS.
14. INSTALL CURB AND GUTTER.
15. LAY FINAL BASE COURSE ON ALL STREETS.
16. LAY ASPHALT.
17. COMPLETE FINAL GRADING AND RESTORATION OF DETENTION, SEDIMENTATION / FILTRATION PONDS.
18. COMPLETE PERMANENT EROSION CONTROL AND RESTORATION OF SITE VEGETATION.
19. REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROLS.
20. COMPLETE ANY NECESSARY FINAL DRESS UP OF AREAS DISTURBED.

CITY OF ANGLETON SPECIAL NOTES (NOT ALL NOTES APPLY TO ASHLAND SECTIONS 1 & 2):

- 1. THE SUBGRADE MATERIAL IN ASHLAND WAS TESTED BY TOLONAY-WONG ENGINEERS GEOTECHNICAL LABORATORY ON 06/06/2022 AND THE STREET SECTION DESIGNED ACCORDING TO THE LDC AND ACM.
2. CONSTRUCTED STREET SECTIONS SHALL SHOW THE FOLLOWING:
PROVIDE STREET NAMES, WIDTH OF R.O.W., OR OTHER METHODS TO IDENTIFY PROPOSED DESIGN OF DIFFERENT PAVEMENT THICKNESS. IN WRITING OR GRAPHICALLY, DESCRIBE THE STREET SECTION(S) TO BE CONSTRUCTED.
MANHOLE FRAMES, COVERS, AND WATER VALVE COVERS WILL BE RAISED TO FINISHED PAVEMENT GRADE AT THE OWNER'S EXPENSE BY A QUALIFIED CONTRACTOR WITH CITY INSPECTION. ALL UTILITY ADJUSTMENTS SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION.
CROWNS OF INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40' FROM THE INTERSECTING CURB LINE UNLESS OTHERWISE NOTED. INLETS ON THE INTERSECTING STREET SHALL NOT BE CONSTRUCTED WITHIN 40 FEET OF THE VALLEY GUTTER, UNLESS OTHERWISE NOTED.
PRIOR TO FINAL ACCEPTANCE OF A STREET OUTSIDE THE CITY LIMITS, STREET NAME SIGNS CONFORMING TO COUNTY STANDARDS SHALL BE INSTALLED BY DEVELOPER.
SIDEWALK REQUIREMENTS (GIVE STREET NAME AND LOCATION OF REQUIRED SIDEWALK, I.E., NORTH, SOUTH, EAST, OR WEST SIDE.
A CURB LAY DOWN WHERE REQUIRED WHEN ALL POINTS OF SIDEWALKS INTERSECTS CURBS.
INSIDE THE CITY LIMITS, SIDEWALKS SHALL BE COMPLETED PRIOR TO ACCEPTANCE OF ANY DRIVEWAY APPROACHES AND/OR ISSUANCE OF A CERTIFICATE OF OCCUPANCY. WHEN OUTSIDE THE CITY LIMITS, A LETTER OF CREDIT MAY BE POSTED OR OTHER SUITABLE FINANCIAL ARRANGEMENTS MAY BE MADE TO ENSURE CONSTRUCTION OF THE SIDEWALKS. IN EITHER CASE, SIDEWALKS ADJACENT TO "COMMON AREAS", PARKWAYS, OR OTHER LOCATIONS ON WHICH NO BUILDING CONSTRUCTION WILL TAKE PLACE, MUST BE CONSTRUCTED PRIOR TO FINAL ACCEPTANCE OF THE SUBDIVISION.
A LICENSE AGREEMENT FOR LANDSCAPING MAINTENANCE AND IRRIGATION IN STREET R.O.W. SHALL BE EXECUTED BY THE DEVELOPER IN PARTY WITH THE CITY PRIOR TO FINAL ACCEPTANCE.

TCEQ WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES

- 1. THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED. AT A MINIMUM, CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS MEET TCEQ'S "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS."
2. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/NSF INTERNATIONAL STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI [§290.44(A)1].
3. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NSF INTERNATIONAL SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS [§290.44(A)2].
4. NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY [§290.44(A)3].
5. ALL WATER LINE CROSSINGS OF WASTEWATER MAINS SHALL BE PERPENDICULAR [§290.44(E)1)(B)].
6. WATER TRANSMISSION AND DISTRIBUTION LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE [§290.44(A)4].
7. THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES IS 0.25 PERCENT [§290.44(B)].
8. THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES WITH VENT OPENINGS TO THE ATMOSPHERE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT [§290.44(D)1].
9. THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION [§290.44(F)1].
10. WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI-PERMANENT BODY OF WATER THE WATERLINE SHALL BE INSTALLED IN A SEPARATE WATERTIGHT PIPE ENCASEMENT. VALVES MUST BE PROVIDED ON EACH SIDE OF THE CROSSING WITH FACILITIES TO ALLOW THE UNDERWATER PORTION OF THE SYSTEM TO BE ISOLATED AND TESTED [§290.44(F)2].
11. PURSUANT TO 30 TAC §290.44(A)5, THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA FORMULAS FOR PVC PIPE, CAST IRON AND DUCTILE IRON PIPE. INCLUDE THE FORMULAS IN THE NOTES ON THE PLANS.
- THE HYDROSTATIC LEAKAGE RATE FOR POLYVINYL CHLORIDE (PVC) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-605 AS REQUIRED IN 30 TAC §290.44(A)5. PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

WHERE:

- Q = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
L = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).
- THE HYDROSTATIC LEAKAGE RATE FOR DUCTILE IRON (DI) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-600 AS REQUIRED IN 30 TAC §290.44(A)5. PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

WHERE:

- L = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
S = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).
12. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION. SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZED MUST MEET §290.44(E)1)-(4).
13. THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT [§290.44(E)5].
14. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER LINE, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION [§290.44(E)6].
15. SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MAINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE [§290.44(E)7].
16. WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS [§290.44(E)8].
17. THE CONTRACTOR SHALL DISINFECT THE NEW WATERLINES IN ACCORDANCE WITH AWWA STANDARD C-651-14 OR MOST RECENT, THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATERLINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER [§290.44(F)3].
18. DECHLORINATION OF DISINFECTING WATER SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C655-09 OR MOST RECENT.

TEXAS COMMISSION OF ENVIRONMENTAL QUALITY ORGANIZED SEWAGE COLLECTION SYSTEM GENERAL CONSTRUCTION NOTES

- 1. THIS ORGANIZED SEWAGE COLLECTION SYSTEM (SCS) MUST BE CONSTRUCTED IN ACCORDANCE WITH 30.1. TEXAS ADMINISTRATIVE CODE (TAC) §213.5(C). THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) EDWARDS AQUIFER RULES AND ANY LOCAL GOVERNMENT STANDARD SPECIFICATIONS.
2. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE PRESIDING TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
- THE NAME OF THE APPROVED PROJECT,
- THE ACTIVITY START DATE; AND
- THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
3. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
4. SEWER LINES LOCATED WITHIN OR CROSSING THE 5-YEAR FLOODPLAIN OF A DRAINAGE WAY WILL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL, OR THE SEWER LINES MUST BE ENCASED IN CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES.
5. WHERE WATER LINES AND NEW SEWER LINE ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
6. TRENCHING, BEDDING AND BACKFILL MUST CONFORM WITH 30 TAC §217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES IA, IB, II OR III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 (ANSI A 106.2) CLASSES A, B OR C.
7. SEWER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW SEWER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN-OUT, IT MUST BE TESTED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEAN-OUT IS USED AT THE END OF THE PROPOSED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEANOUT UNLESS IT CAN BE CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(C)3(E).
8. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC §217.57.
9. ALL MANHOLES MUST BE TESTED TO MEET OR EXCEED THE REQUIREMENTS OF 30 TAC §217.58.

UTILITY CONSTRUCTION NOTES:

- 1. CONSTRUCTION OF WATER, SANITARY SEWER, AND STORM DRAINAGE FACILITIES SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE CITY OF ANGLETON STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED IN THE PLANS.
2. WHEN TRENCH CONDITION WARRANTS THE USE OF DEWATERING SYSTEMS, THEIR USE SHALL BE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
3. CONTRACTOR SHALL REMOVE ALL MUD, DIRT AND DEBRIS DEPOSITED OR DROPPED ON EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY DAILY. MATERIAL THAT IS HAZARDOUS TO TRAFFIC SHALL BE REMOVED IMMEDIATELY.
4. CONTRACTOR SHALL PROTECT ALL TREES ADJACENT TO WORK AREA. NO TREES SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIAL AND EQUIPMENT STORED ON THE JOB SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STORAGE OF MATERIALS IN A SAFE AND WORKMANLIKE MANNER TO PREVENT INJURIES, DURING AND AFTER WORKING HOURS, UNTIL PROJECT ACCEPTANCE.
6. THE CONTRACTOR SHALL PROVIDE SHEETING, SHORING AND BRACING NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION, AS MAY BE REQUIRED BY O.S.H.A., FEDERAL, STATE AND LOCAL LAWS, CODES AND ORDINANCES.
7. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING PUBLIC OR PRIVATE UTILITY LINES, INCLUDING, BUT NOT LIMITED TO, WATER LINES, WASTEWATER COLLECTION SYSTEMS, STORM SEWERS, BACKSLOPE INTERCEPTORS, IRRIGATION LINES, ELECTRICAL LINES, AND MATERIAL AND PROPERTY DAMAGES DURING CONSTRUCTION. ALL DAMAGES, RELOCATION, OR REPLACEMENT OF EXISTING UTILITIES SHALL BE REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS, DETAILS, AND REQUIREMENTS OF THE UTILITY'S OWNER.
8. THE CONTRACTOR SHALL RETURN ALL EXISTING PAVING AND DRIVEWAYS TO ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE OWNER UNLESS OTHERWISE NOTED OR SPECIFICALLY CALLED OUT AS A PAY ITEM.

WATER MAIN CONSTRUCTION NOTES:

- 1. ALL WATER MAIN PIPE SHALL BE BLUE AND INCLUDE TRACER WIRE IN THE SAME TRENCH AND ABOVE THE WATER MAIN AND IN GATE VALVES.
2. ALL WATER MAIN PIPING SHALL HAVE A MINIMUM COVER OF FOUR (4) FEET BELOW FINISHED GROUND UNLESS OTHERWISE NOTED.
3. ALL PROPOSED 4-INCH TO 12-INCH WATER MAINS SHALL BE POLYVINYL CHLORIDE PIPE (PVC) C900, DR 18.
4. ALL WATER MAIN PIPE SHALL BE BANK SAND BEDDED AND BACKFILLED.
5. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED IN AN APPROVED MANNER IN ACCORDANCE WITH CITY OF ANGLETON STANDARD SPECIFICATIONS.
6. MAINTAIN 12-INCH MINIMUM VERTICAL CLEARANCE BETWEEN ALL STORM SEWERS AND CULVERTS UNLESS OTHERWISE NOTED.
7. SANITARY FACILITY CLEARANCES TO POTABLE WATER FACILITIES SHALL FOLLOW THE LATEST RULES AND REGULATIONS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
8. ALL TEES, ELBOWS, BENDS, AND PLUGS SHALL INCLUDE RESTRAINT OF FITTINGS. RESTRAINT MAY BE BY MEANS OF THRUST BLOCKS OR RESTRAINED JOINT PIPE (OF APPROVED MANUFACTURER). IF RESTRAINED JOINT PIPE IS USED, ALL PIPES LESS THAN 12-INCHES (12") IN DIAMETER SHALL INCLUDE A MINIMUM OF TWO (2) JOINTS OF RESTRAINT ON EACH SIDE OF THE FITTING AND ALL PIPES EQUAL TO OR GREATER THAN 16-INCHES (16") IN DIAMETER SHALL INCLUDE A MINIMUM OF THREE (3) JOINTS OF RESTRAINT ON EACH SIDE OF THE FITTING. WATERLINE FITTINGS SHALL BE CAST OR DUCTILE IRON UNLESS OTHERWISE NOTED. ALL PIPE FITTINGS SHALL BE MECHANICAL JOINTS.

SANITARY SEWER CONSTRUCTION NOTES:

- 1. ALL SANITARY SEWER MAIN PIPE SHALL BE GREEN.
2. ALL PROPOSED 4-INCH TO 15-INCH SANITARY SEWER MAINS SHALL BE POLYVINYL CHLORIDE PIPE (PVC) SDR 26.
3. ALL SANITARY SEWER MAIN PIPE SHALL BE BANK SAND BEDDED AND BACKFILLED.
4. ALL SANITARY SEWER MAINS & MANHOLES SHALL BE TESTED IN AN APPROVED MANNER IN ACCORDANCE WITH CITY OF ANGLETON STANDARD SPECIFICATIONS.
5. MAINTAIN 24-INCH MINIMUM CLEARANCE BETWEEN ALL STORM SEWERS AND CULVERTS UNLESS OTHERWISE NOTED.
6. SANITARY FACILITY CLEARANCES TO POTABLE WATER FACILITIES SHALL FOLLOW THE LATEST RULES AND REGULATIONS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
7. SANITARY SEWER MANHOLE COVERS SHALL BE STANDARD CITY OF ANGLETON, UNLESS OTHERWISE NOTED.
8. ALL SANITARY MANHOLES WITHIN THE 100-YEAR FLOOD PLAIN (DESIGNATED) SHALL HAVE THE TOP SET AT LEAST TWELVE (12) INCHES ABOVE THE BASE FLOOD ELEVATION OR SEALED AND VENTED.
9. SANITARY SEWER MANHOLES SHALL BE PRECAST OR CAST-IN-PLACE IN ACCORDANCE WITH CITY OF SUGAR LAND SPECIFICATIONS.
10. MANHOLE RIMS ARE TO BE SET AT THE ELEVATIONS SHOWN ON THE PLANS INITIALLY. AFTER SITE RESTORATION IS COMPLETED, RIMS ARE TO BE ADJUSTED TO THREE (3) TO SIX (6) INCHES ABOVE FINAL GRADE AND BACK-DRESSED WITH DIRT TO PROVIDE DRAINAGE AWAY FROM THE MANHOLE.

GENERAL CONSTRUCTION NOTES:

- 1. PRIOR TO BIDDING THE PROJECT, THE CONTRACTOR SHALL INSPECT THE SITE AND SATISFY ITSELF THAT ABOVE AND BELOW GROUND CONDITIONS OF THE SITE ARE ACCEPTABLE FOR CONSTRUCTION. CONTRACTOR SHALL NOTE ANY VISIBLE CONFLICTS NOT SHOWN IN THE DRAWINGS AND BRING TO THE ATTENTION OF THE ENGINEER PRIOR TO BIDDING THE PROJECT. SHOULD A CONSTRUCTION CONFLICT OCCUR DUE TO A VISIBLE CONFLICT APPARENT AT THE TIME OF BIDDING, ALL CONSTRUCTION AND ENGINEERING COSTS ASSOCIATED WITH THE CHANGE SHALL BE BORNE BY THE CONTRACTOR.
2. THIS PROJECT IS WITHIN THE CITY OF ANGLETON E.T.J. AND BRAZORIA COUNTY, TEXAS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL PERMITS. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY REGULATION OF BRAZORIA COUNTY, TEXAS FOR FLOODPLAIN MANAGEMENT PRIOR TO STARTING CONSTRUCTION.
4. THE APPROXIMATE LOCATION OF EXISTING UTILITIES ARE GIVEN FOR REFERENCE ONLY. BEFORE COMMENCING THE WORK ON THIS CONTRACT, THE CONTRACTOR SHALL VERIFY BY FIELD INVESTIGATION THE ACTUAL LOCATIONS OF ALL UTILITY FACILITIES WITHIN AND ADJACENT TO THE LIMITS OF THE WORK THAT MAY BE AFFECTED BY THE WORK. CONFLICTS WHICH RESULT DUE TO NEGLIGENCE BY THE CONTRACTOR TO LOCATE, HORIZONTALLY AND VERTICALLY, EXISTING UTILITIES WHICH ARE SHOWN ON THE CONSTRUCTION DRAWINGS, OR WHICH THE CONTRACTOR HAS BEEN GIVEN NOTICE OR HAS KNOWLEDGE, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF REMEDIAL WORK, REMOVAL OF PORTIONS OF THE WORK OR EXTENSIVE DESIGN CHANGES OCCASIONED BY THE FAILURE OF THE CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UTILITIES AS DESCRIBED ABOVE SHALL BE BORNE BY THE CONTRACTOR.
5. CONTRACTOR IS TO CONTACT THE TEXAS811 AT 811 OR 1-800-344-8347 FOR LOCATION OF EXISTING FACILITIES THAT MAY NOT BE SHOWN ON THE PLANS AT LEAST 72 HOURS PRIOR BUT NOT MORE THAN 14 WORKING DAYS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ALL EXISTING FACILITIES OR ANY OFF-SITE AREAS AFFECTED BY THIS CONSTRUCTION PROJECT TO EXISTING OR BETTER CONDITION, UNLESS OTHERWISE NOTED, AT NO ADDITIONAL COST TO THE OWNER.
7. CONTRACTOR SHALL COMPLY WITH O.S.H.A. REGULATIONS AND TEXAS STATE LAW CONCERNING TRENCH SAFETY SYSTEMS.
8. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND VEHICULAR ACCESS TO ALL ADJACENT PROPERTIES. ACCESS SHALL BE MAINTAINED DURING ALL WEATHER CONDITIONS.
9. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE "NATIONAL POLLUTANTS DISCHARGE ELIMINATION SYSTEM" (NPDES) REQUIREMENTS, AND ALL ANGLETON DRAINAGE DISTRICT REQUIREMENTS. BEST MANAGEMENT PRACTICES SHALL BE FOLLOWED FOR SWPPP.
10. SHOULD SOFT UNSTABLE AREAS APPEAR DURING THE COURSE OF GRADING, THE CONTRACTOR SHALL REMOVE UNSTABLE MATERIAL AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL REPLACE THIS WITH A SUITABLE MATERIAL COMPACTED AS REQUIRED PER SPECIFICATIONS. (LIMITED TO 18" AT NO COST TO THE OWNER.)
11. ALL WASTE MATERIALS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
12. PROVIDE ISOLATION JOINTS BETWEEN ALL PROPOSED SIDEWALKS AND ALL SLABS, STRUCTURES, AND PAVEMENTS. ALSO PROVIDE ISOLATION JOINTS WHERE PIPES PENETRATE CONCRETE SLABS OR PAVEMENT. ISOLATION JOINTS SHALL CONSIST OF ASPHALT IMPREGNATED FIBERBOARD AND JOINT SEALANT MATERIAL.
13. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING RED LINE RECORD DRAWINGS AT THE COMPLETION OF THIS PROJECT, PRIOR TO FINAL PAVEMENT.
14. CONTRACTOR TO FOLLOW CONSTRUCTION DETAILS IF DRAWINGS DEVIATE FROM CITY OF SUGARLAND STANDARDS.
15. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SITE DRAINAGE AT ALL TIMES AT NO ADDITIONAL COST TO THE OWNER WHETHER BY GRADING OR PUMPING.
16. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES TO THE EXISTING PUBLIC OR PRIVATE LINES INCLUDING BUT NOT LIMITED TO WATER LINES, WASTEWATER COLLECTION SYSTEM AND STORM SEWERS DURING CONSTRUCTION. ALL DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH CITY OF SUGARLAND STANDARDS WITH NO COST TO THE OWNER OR PUBLIC.

Table with 4 columns: NO., DATE, REVISIONS, APP. (Empty rows for revision tracking)

BRAZORIA COUNTY MUD NO. 82
BARZORIA COUNTY, TEXAS

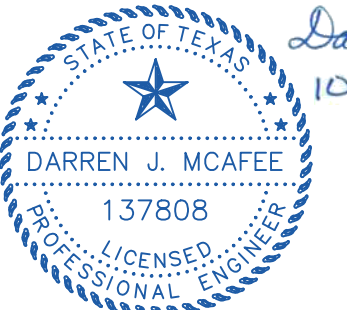
ASHLAND SECTIONS 1 & 2

GENERAL CONSTRUCTION NOTES



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290
3100 Ann Springs Blvd, Suite 1504 Austin, Texas 78741-2124 (512) 441-2923

SCALE: NTS DGN. BY: AHR
DATE: OCTOBER 2024 DWN. BY: JWS
JOB NO. 16759-0010-12 DWG. NO.
SUBMITTED: SURV. BY:
F.B. NO.



10/11/2024

SHEET NO. 2 OF 30



LINE TABLE		LINE TABLE		LINE TABLE	
LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	S75°57'23"E	214.38'	L23	N51°28'17"W	213.25'
L2	S14°02'37"W	26.43'	L24	N01°53'19"W	276.69'
L3	S75°57'23"E	131.00'	L25	S59°02'37"W	19.64'
L4	S76°48'30"E	59.87'	L26	N27°06'16"E	18.28'
L5	S79°40'46"E	59.08'	L27	S12°19'49"E	12.23'
L6	S83°34'43"E	117.91'	L28	S63°19'12"W	25.26'
L7	N89°09'01"E	117.69'	L29	N14°02'37"E	325.78'
L8	N84°32'11"E	117.51'	L30	N07°21'55"E	165.77'
L9	N81°08'49"E	60.84'	L31	N55°18'02"W	197.79'
L10	N82°25'29"E	115.20'	L32	S51°28'17"E	60.00'
L11	N67°42'34"E	47.25'	L33	N45°20'22"W	60.35'
L12	S22°17'26"E	18.96'	L34	S50°05'32"E	71.93'
L13	S36°32'41"W	142.60'	L35	S79°31'01"E	99.89'
L14	N49°11'44"W	142.96'	L36	N72°23'56"E	125.74'
L15	N01°53'19"W	311.03'	L37	S23°32'13"W	173.77'
L16	N14°45'48"W	51.62'	L38	N15°55'27"E	77.08'
L17	N71°59'47"W	560.10'	L39	N09°18'34"E	71.66'
L18	N14°02'37"E	324.05'	L40	N02°41'41"E	62.57'
L19	N14°02'37"E	121.43'	L41	N01°31'19"W	72.90'
L20	N75°57'23"W	157.06'	L42	N04°05'16"W	64.49'
L21	N84°30'04"E	100.92'	L43	N06°39'12"W	86.77'
L22	S78°38'33"W	180.00'	L44	N52°56'11"W	13.82'

CURVE TABLE					
CURVE	RADIUS	DELTA ANGLE	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	1465.00'	23°53'41"	610.97'	S10°20'36"E	606.55'
C2	715.00'	17°23'49"	217.10'	S10°18'10"W	216.27'
C3	500.00'	17°32'37"	153.10'	S27°46'22"W	152.50'
C4	30.00'	92°14'59"	48.30'	S82°40'10"W	43.25'
C5	1940.00'	2°00'36"	68.06'	N50°12'02"W	68.05'
C6	2060.00'	8°50'10"	317.69'	N53°36'49"W	317.38'
C7	55.00'	90°00'00"	86.39'	S30°57'23"E	77.78'
C8	1200.00'	19°32'33"	409.30'	S85°43'39"E	407.32'
C9	55.00'	80°19'29"	77.11'	N55°20'11"W	70.95'
C10	1285.00'	15°10'15"	340.24'	N07°35'19"W	339.25'
C11	465.00'	24°31'56"	199.10'	N12°15'46"E	197.58'
C12	55.00'	103°59'59"	99.83'	N76°31'44"E	86.68'
C13	55.00'	49°34'58"	47.60'	S26°40'48"E	46.12'
C14	3000.00'	2°22'16"	124.15'	S00°42'11"E	124.14'
C19	25.00'	19°11'17"	8.37'	N23°38'16"E	8.33'
C20	65.00'	128°22'35"	145.64'	S30°57'23"E	117.03'
C21	25.00'	19°11'17"	8.37'	N85°33'01"W	8.33'
C22	25.00'	86°41'32"	37.83'	N43°35'48"W	34.32'
C23	25.00'	88°18'48"	38.53'	S43°35'48"W	34.83'
C24	25.00'	28°32'28"	12.45'	N70°13'50"E	12.33'

CURVE TABLE					
CURVE	RADIUS	DELTA ANGLE	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C25	65.00'	127°28'40"	144.62'	N60°18'04"W	116.58'
C26	25.00'	18°32'43"	8.09'	S05°50'06"E	8.06'
C27	25.00'	87°38'52"	38.24'	S57°32'01"E	34.62'
C28	25.00'	92°11'18"	40.22'	N32°32'54"E	36.02'
C29	25.00'	92°11'22"	40.23'	N55°15'46"W	36.02'
C30	25.00'	87°38'52"	38.24'	S34°49'07"W	34.62'
C31	25.00'	20°44'45"	9.05'	S14°27'51"W	9.00'
C32	65.00'	147°11'04"	166.98'	N77°41'00"E	124.71'
C33	25.00'	22°44'49"	9.93'	N40°05'53"W	9.86'
C34	25.00'	22°44'49"	9.93'	N62°50'41"W	9.86'
C35	65.00'	95°04'36"	107.86'	S26°40'48"E	95.90'
C36	25.00'	22°44'49"	9.93'	N09°29'06"E	9.86'

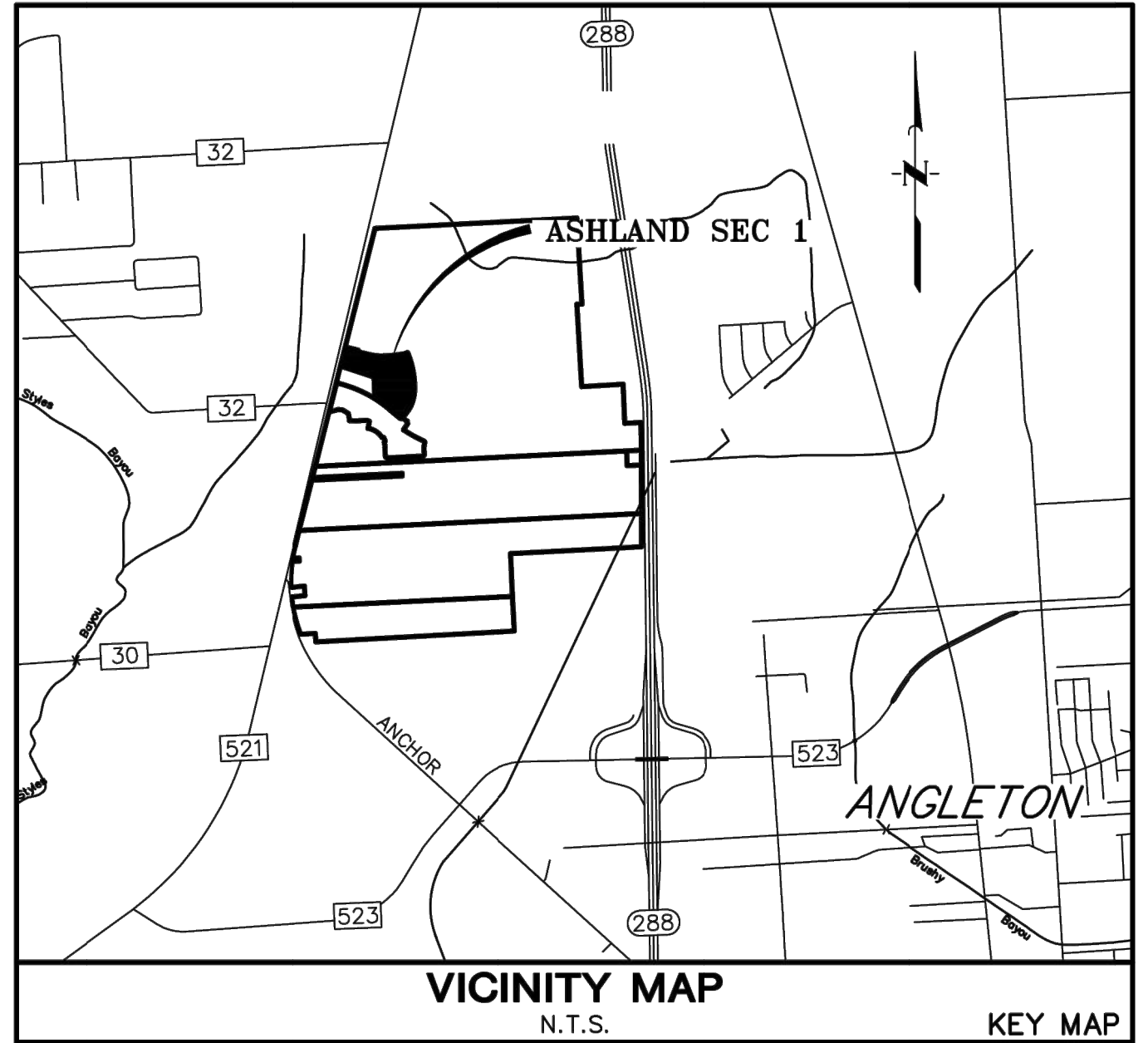
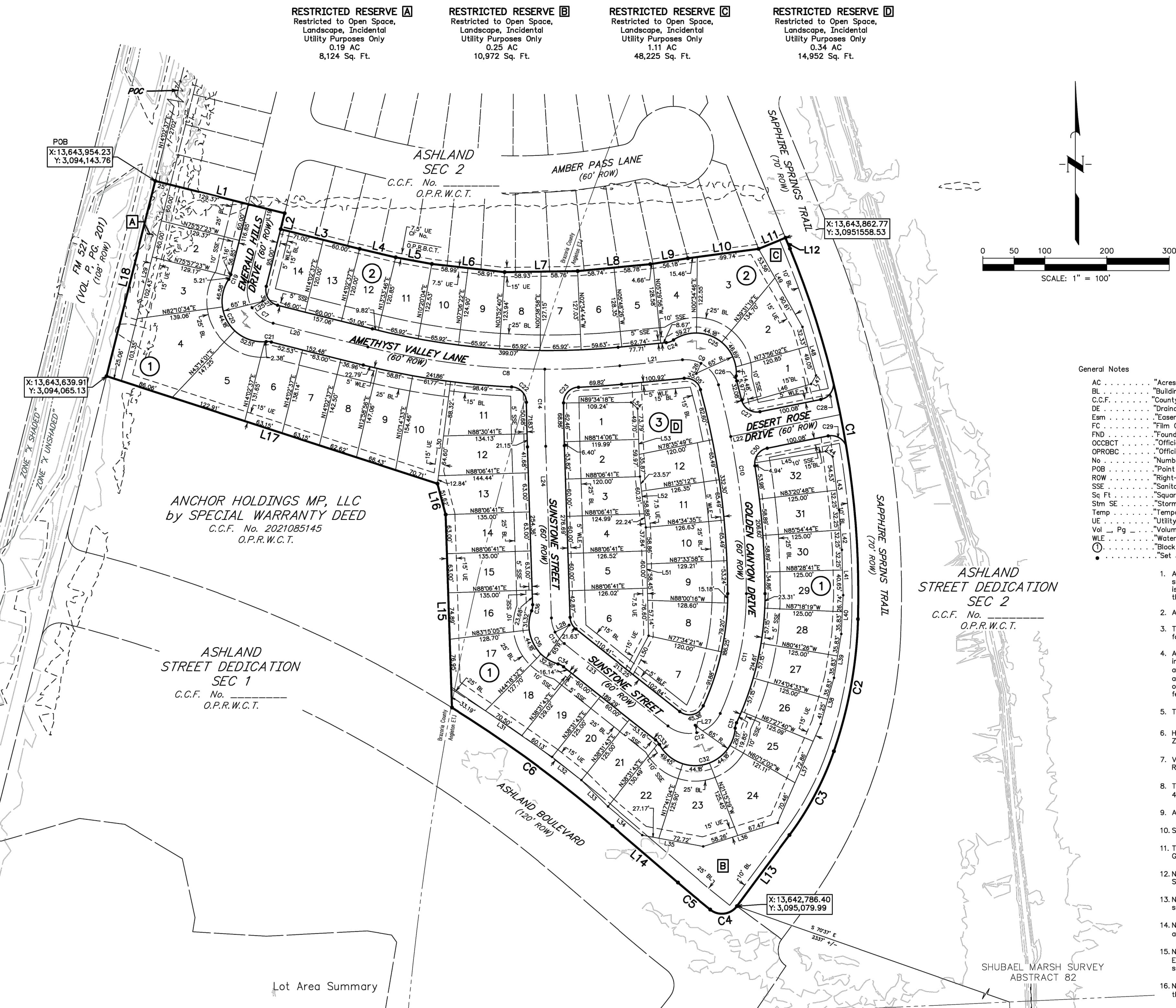
Street Name and Length		
Street Name	Length (Centerline)	Type
Emerald Hills Drive	164.63 Ft	Local
Amethyst Valley Lane	749.03 Ft	Local
Golden Canyon Drive	627.81 Ft	Local
Sunstone Street	711.60 Ft	Local
Desert Rose Drive	180.00 Ft	Local

Block 1	
Lot No.	Sq. Ft.
1	7,762
2	7,762
3	9,724
4	16,612
5	11,351
6	8,558
7	8,840
8	8,839
9	9,392
10	10,513
11	10,127
12	8,816
13	8,927
14	8,505
15	8,505
16	9,159
17	12,369

Block 1	
Lot No.	Sq. Ft.
18	8,153
19	7,620
20	7,500
21	7,691
22	9,528
23	10,987
24	11,493
25	7,997
26	8,083
27	8,070
28	8,070
29	7,859
30	7,718
31	7,718
32	7,691
33	8,124

Block 2	
Lot No.	Sq. Ft.
1	7,423
2	10,386
3	12,813
4	8,071
5	8,096
6	7,974
7	7,939
8	7,849
9	7,783
10	7,741
11	7,622
12	7,272
13	7,200
14	8,386

Block 3	
Lot No.	Sq. Ft.
1	7,261
2	7,212
3	7,350
4	7,584
5	7,576
6	12,147
7	11,761
8	8,488
9	8,195
10	7,965
11	7,881
12	7,721



- General Notes
- AC ..... "Acres"
  - BL ..... "Building Line"
  - C.C.F. .... "County Clerk's File"
  - DE ..... "Drainage Easement"
  - Eam ..... "Easement"
  - FC ..... "Firm Code"
  - FND ..... "Found"
  - OCBCT ..... "Official County Clerk, Brazoria County, Texas"
  - OPRBOC ..... "Official Public Records of Brazoria County"
  - No ..... "Number"
  - POB ..... "Point of Beginning"
  - ROW ..... "Right-of-Way"
  - SSE ..... "Sanitary Sewer Easement"
  - Sq Ft ..... "Square Feet"
  - Stm SE ..... "Storm Sewer Easement"
  - Temp ..... "Temporary"
  - UE ..... "Utility Easement"
  - Vol = Pg ..... "Volume and Page"
  - WLE ..... "Waterline Easement"
  - Ⓢ ..... "Block Number"
  - ⦿ ..... "Set 3/4-inch Iron Rod With Cap Stamped 'Quiddity' as Per Certification"
1. A one-foot reserve (1' reserve) has been dedicated to the public in fee as a buffer separation between the side or end of streets in subdivision plots where such streets abut adjacent acreage tracts, the condition of such dedication being that when the adjacent property is subdivided in a recorded plat, the one-foot reserve shall thereupon become vested in the public for street right-of-way purposes and the title fee thereto shall revert to and rest in the dedicator, his heirs, assigns or successors.
  2. All building lines along street rights-of-way are as shown on the plat.
  3. The Coordinates shown hereon are Texas South Central Zone No. 4204 State Plane Grid Coordinates (NAD83) and have a combined scale factor 0.999870017.
  4. Absent written authorization by the affected utilities, all utility and aerial easements must be kept unobstructed from any non-utility improvements or obstructions by the property owner. Any unauthorized improvements or obstructions may be removed by any public utility at the property owner's expense. While wooden posts and paneled wooden fences along the perimeter and back to back easements and alongside rear lots lines are permitted, they too may be removed by public utilities at the property owner's expense should they be an obstruction. Public Utilities may put said wooden posts and paneled wooden fences back up, but generally will not replace with new fencing.
  5. There are pipelines or pipeline easements within the platted area shown hereon.
  6. HORIZONTAL DATUM: All bearings are referenced to the Texas Coordinate system, North American datum of 1983 (nad83), South Central Zone.
  7. VERTICAL DATUM: All elevations are referenced to the North American Vertical Datum of 1988 (navd88), Geoid 12b, based on Allertora's RTK Network, Stations HAGS\_1012 and HCOG\_14012.
  8. These tracts lie within Zone "X" And Zone "X-Shaded" of the Flood Insurance Rate Map, Community No. 485458, Map Number 48039C0430K, Panel 430, Suffix "K" dated December 30, 2020, for Brazoria County, Texas and incorporated areas.
  9. All drainage easements shown hereon shall be dedicated to the public and shall be maintained by the MUD.
  10. Sidewalks shall be constructed in accordance with the Development Agreement between the City of Angleton, Texas and Developer.
  11. This subdivision shall be serviced by the following providers: Brazoria County Mud #82. Centerpoint, Texas New Mexico Power, And Centric Gas & Fiber.
  12. Notice: Filing a portion of this addition by metes and bounds is a violation of the Unified Development Code of the City of Angleton and is subject to fines and withholding of utilities and building permits.
  13. Notice: Plat approval shall not be deemed to or presumed to give authority to violate, nullify, void, or cancel any provisions of local, state, or federal laws, ordinances, or codes.
  14. Notice: The applicant is responsible for securing any Federal permits that may be necessary as the result of proposed development activity. The City of Angleton is not responsible for determining the need for, or ensuring compliance with any Federal permit."
  15. Notice: Approval of this plat does not constitute a verification of all data, information and calculations applied by the applicant. The Engineer of Record or Registered Public Land Surveyor is solely responsible for the completeness, accuracy and adequacy of his/her submittal whether or not the application is reviewed for code compliance by the City Engineer.
  16. Notice: All responsibility for the adequacy of this plat remains with the engineer or surveyor who prepared them. In approving these plans, the City of Angleton must rely on the adequacy of the work of the Engineer and/or surveyor of record.
  17. Reserves A, B, C, and D shall be owned and maintained by the Brazoria County MUD No. 82 and Home Owners Association.
  18. Incidental Utilities are including but not limited to the underground utility services.
  19. Drive way access shall be denied off FM 521 and Ashland Blvd.

# ASHLAND SEC 1

**A SUBDIVISION OF 17.02 ACRES OF LAND  
OUT OF THE  
SHUBAEL MARSH SURVEY, A-82  
BRAZORIA COUNTY, TEXAS**

**58 LOTS      4 RESERVES      3 BLOCKS**

**NOVEMBER 2023**

**OWNER**  
ANCHOR HOLDINGS MP LLC  
101 PARKLANE BOULEVARD  
SUITE 102  
SUGAR LAND, TEXAS 77478  
281-912-3364

**PLANNER**  
META PLANNING AND DESIGN  
24275 KATY FREEWAY  
SUITE 200  
KATY, TEXAS 77494  
281-810-1422

**ENGINEER/PLANNER/SURVEYOR:**  
 **QUIDDITY**  
Quality Engineering, LLC  
Texas Board of Professional Engineers and Land Surveyors  
Registration Nos. F-23290 & 30840100  
1229 Corporate Drive, Suite 100 • Rosenberg, TX 77471 • 281.342.2033



STATE OF TEXAS §  
COUNTY OF BRAZORIA §

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

THAT \_\_\_\_\_ acting herein by and through its duly authorized officers, does hereby adopt this plat designating the hereinabove described property as Ashland Sec 1, a subdivision in the jurisdiction of the City of Angleton, Texas, and does hereby dedicate, in fee simple, to the public use forever, the streets, alleys and public parkland shown thereon. The streets, alleys and parkland are dedicated for street purposes. The easements and public use areas, as shown, are dedicated for the public use forever, for the purposes indicated on this plat. No buildings, fences, trees, shrubs, or other improvements or growths shall be constructed or placed upon, over, or across the easements as shown, except that landscape improvements may be placed in landscape easements, if approved by the City of Angleton. In addition, utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easement limits the use to particular utilities, said use by public utilities being subordinate to the public's and City of Angleton's use thereof. The City of Angleton and public utility entities shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs, or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of their respective systems in said easements. The City of Angleton and public utility entities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, reading meters, and adding to or removing all or parts of their respective systems without the necessity at any time of procuring permission from anyone.

STATE OF TEXAS §  
COUNTY OF BRAZORIA §

This plat is hereby adopted by the owners (called "Owners") and approved by the City of Angleton, ("City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees, successors, and assigns:

"Drainage Easements" shown on the plat are reserved for drainage purposes forever, and the maintenance of the drainage easements shall be provided by all of the owners of lots in the subdivision. All Owner documents shall specify, confirm and bind the Owner(s) to continuously maintain all Drainage Easements and shall relieve the City of Angleton of the responsibility to maintain any Drainage Easement. The fee simple title to the Drainage and Floodway Easement shall always remain in the Owner(s).

The City and Angleton Drainage District will not be responsible for the maintenance and operation of easement or for any damage or injury to private property or person that results from the flow of water along said easement or for the control of erosion, but reserves the right to use enforcement powers to ensure that drainage easements are properly functioning in the manner in which they were designed and approved.

The Owners shall keep all Drainage Easements clean and free of debris, silt, and any substance which would result in unsanitary conditions or obstruct the flow of water, and the City of Angleton or Angleton Drainage District shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the Owners to alleviate any public health or safety issues.

The Association hereby agrees to indemnify and hold harmless the City from any such damages and injuries.

STATE OF TEXAS §  
COUNTY OF BRAZORIA §

The owner of land shown on this plat, in person or through a duly authorized agent, dedicates to the use of the public forever all streets, alleys, parks, watercourses, drains, easements and public places thereon shown for the purpose and consideration therein expressed.

\_\_\_\_\_  
Owner  
\_\_\_\_\_  
Duly Authorized Agent

STATE OF TEXAS §  
COUNTY OF \_\_\_\_\_ §

BEFORE ME, the undersigned authority, on this day personally appeared \_\_\_\_\_, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and considerations therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public in and for the State of Texas

\_\_\_\_\_  
Print Name

My commission expires: \_\_\_\_\_

STATE OF TEXAS §  
COUNTY OF \_\_\_\_\_ §

KNOW ALL MEN BY THESE PRESENTS:

That I, Steve Jares, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown thereon were properly placed under my supervision.

\_\_\_\_\_  
Steve Jares  
Registered Professional Land Surveyor  
Texas Registration No 5317

STATE OF TEXAS §  
COUNTY OF BRAZORIA §

KNOW ALL MEN BY THESE PRESENTS:

That I, William A.C. McAshan, do hereby certify that proper engineering consideration has been provided in this plat. To the best of my knowledge, this plat conforms to all requirements of the Angleton LDC, except for any variances that were expressly granted by the City Council.

\_\_\_\_\_  
William A.C. McAshan, P.E.  
Professional Engineer

STATE OF TEXAS §  
COUNTY OF BRAZORIA §

A METES & BOUNDS description of a certain 17.02 acre tract of land situated in Shubael Marsh Surveys, Abstract Nos. 81 & 82 in Brazoria County, Texas, being out of a called 469.08 acre tract conveyed to Anchor Holdings MP, LLC by Special Warranty Deed recorded in Clerk's File No. 2021085145 of the Official Public Records of Brazoria County (OPRBC); said 17.02 acre tract being more particularly described as follows with all bearings being based on the Texas Coordinate System of 1983, South Central Zone:

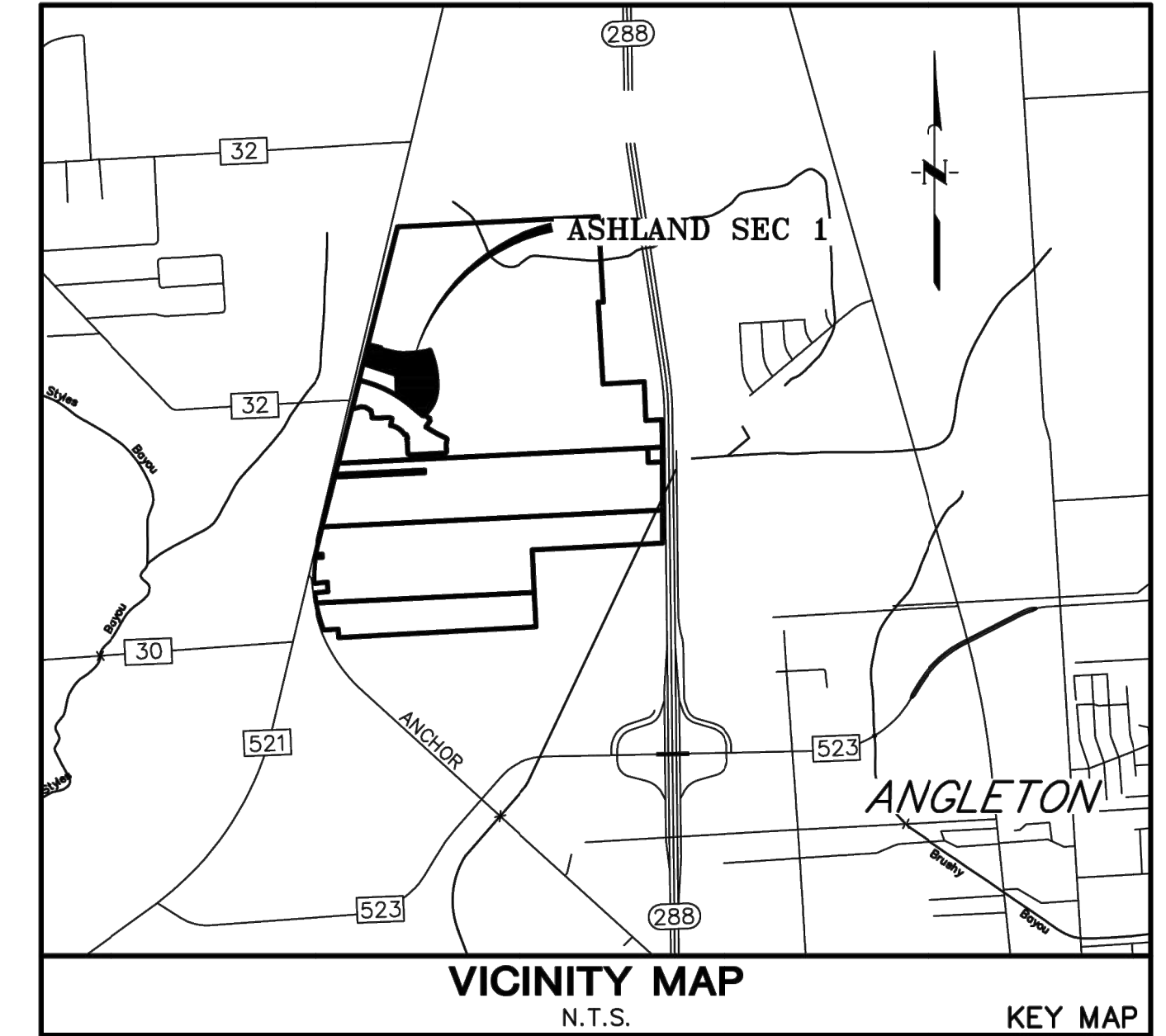
COMMENCING at a found concrete monument for the northwest corner of said 469.08 acre tract, common with the southwest corner of a called 2.97 acre tract of land conveyed to James W. Northrup & Deborah Northrup by Warranty Deed with Vendor's Lien recorded in Clerk's File No. 01-008056 of the Official Records of Brazoria County (ORBC), being in the east line of F.M. Highway 521 recorded in Volume P, Page 201.

THENCE, South 14°02'37" West, along the east line of said F.M. Highway 521, 2702.30 feet to the POINT OF BEGINNING of the herein described subject tract;

THENCE, over and across said 469.08 acre tract the following twenty three (23) courses and distances:

1. South 75°57'23" East, 214.38 feet to a point for corner;
2. South 14°02'37" West, 26.43 feet to a point for corner;
3. South 75°57'23" West, 131.00 feet to a point for corner;
4. South 76°48'30" East, 59.87 feet to a point for corner;
5. South 79°40'46" East, 59.08 feet to a point for corner;
6. South 83°34'43" East, 117.91 feet to a point for corner;
7. North 89°09'01" East, 117.69 feet to a point for corner;
8. North 84°32'11" East, 117.51 feet to a point for corner;
9. North 81°08'49" East, 60.84 feet to a point for corner;
10. North 82°25'29" East, 115.20 feet to a point for corner;
11. North 67°42'34" East, 47.25 feet to a point for corner;
12. South 22°17'26" East, 18.96 feet to a point for corner marking the beginning of a tangent curve to the right;
13. Along the arc of said tangent curve to the right, having a radius of 1465.00 feet, a central angle of 23°53'41", an arc length of 610.97 feet, and a long chord bearing South 10°20'36" East, with a chord length of 606.55 feet to a point for corner marking the beginning of a compound curve to the right;
14. Along the arc of said compound curve to the right, having a radius of 715.00 feet, a central angle of 17°23'49", an arc length of 217.10 feet, and a long chord bearing South 10°18'10" West, with a chord length of 216.27 feet to a point for corner marking the beginning of a compound curve to the right;
15. Along the arc of said compound curve to the right, having a radius of 500.00 feet, a central angle of 17°32'37", an arc length of 153.10 feet, and a long chord bearing South 27°46'22" West, with a chord length of 152.50 feet to a point for corner;
16. South 36°32'41" West, 142.60 feet to a point for corner marking the beginning of a tangent curve to the right;
17. Along the arc of said tangent curve to the right, having a radius of 30.00 feet, a central angle of 92°14'59", an arc length of 48.30 feet, and a long chord bearing South 82°40'10" West, with a chord length of 43.25 feet to a point for corner marking the beginning of a compound curve to the right;
18. Along the arc of said compound curve to the right, having a radius of 1940.00 feet, a central angle of 02°00'36", an arc length of 68.06 feet, and a long chord bearing North 50°12'02" West, with a chord length of 68.05 feet to a point for corner;
19. North 49°11'44" West, 142.96 feet to a point for corner marking the beginning of a tangent curve to the left;
20. Along the arc of said tangent curve to the left, having a radius of 2060.00 feet, a central angle of 08°50'10", an arc length of 317.69 feet, and a long chord bearing North 53°36'49" West, with a chord length of 317.38 feet to a point for corner;
21. North 01°53'19" West, 311.02 feet to a point for corner;
22. North 14°45'48" West, 51.62 feet to a point for corner;
23. North 71°59'47" West, 560.10 feet to a point for corner in the east line of said F.M. Highway 521;

THENCE, North 14°02'37" East, 324.05 feet, along the east line of said F.M. Highway 521, to the POINT OF BEGINNING, CONTAINING 17.02 acres of land in Brazoria County, Texas.



APPROVED this \_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by the Planning and Zoning Commission, City of Angleton, Texas.

\_\_\_\_\_  
Chairman, Planning and Zoning Commission

\_\_\_\_\_  
City Secretary

APPROVED this \_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by the City Council, City of Angleton, Texas.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
City Secretary

STATE OF TEXAS §  
COUNTY OF BRAZORIA §

This instrument was acknowledged before me on the \_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

On behalf of the Notary Public, State of Texas

# ASHLAND SEC 1

A SUBDIVISION OF 17.02 ACRES OF LAND  
OUT OF THE  
SHUBAEL MARSH SURVEY, A-82  
BRAZORIA COUNTY, TEXAS

58 LOTS      4 RESERVES      3 BLOCKS  
NOVEMBER 2023

**OWNER**  
ANCHOR HOLDINGS MP LLC  
101 PARKLANE BOULEVARD  
SUITE 102  
SUGAR LAND, TEXAS 77478  
281-912-3364

**PLANNER**  
META PLANNING AND DESIGN  
24275 KATY FREEWAY  
SUITE 200  
KATY, TEXAS 77494  
281-810-1422

**ENGINEER/PLANNER/SURVEYOR:**  
  
Quiddity Engineering, LLC  
Texas Board of Professional Engineers and Land Surveyors  
Registration Nos. F-23290 & 30049100  
1229 Corporate Drive, Suite 100 • Rosenberg, TX 77471 • 281.342.2033



**RESTRICTED RESERVE A**  
Restricted to Open Space, Landscape, Incidental Utility Purposes Only  
0.06 AC  
2,681 Sq. Ft.

**RESTRICTED RESERVE B**  
Restricted to Open Space, Landscape, Incidental Utility Purposes Only  
0.50 AC  
21,900 Sq. Ft.

**RESTRICTED RESERVE C**  
Restricted to Open Space, Landscape, Incidental Utility Purposes Only  
0.59 AC  
24,231 Sq. Ft.

LINE	BEARING	DISTANCE
L1	S75°57'23"E	368.86'
L2	S78°43'03"E	146.99'
L3	S86°42'50"E	172.57'
L4	S221°7'26"E	283.14'
L5	S67°42'34"W	47.25'
L6	S82°25'29"W	115.20'
L7	S81°08'49"W	60.84'
L8	S84°32'11"W	117.51'
L9	S89°09'01"W	117.69'
L10	N83°34'43"W	117.91'
L11	N79°40'46"W	59.08'
L12	N76°48'30"W	59.87'
L13	N75°57'23"W	131.00'
L14	N14°02'37"E	26.43'
L15	N75°57'23"W	214.38'
L16	N14°02'37"E	742.14'
L17	N08°45'59"E	103.09'
L18	N75°57'23"W	160.14'
L19	N14°02'37"E	532.14'
L20	N75°57'23"W	156.12'

LINE	BEARING	DISTANCE
L21	N62°27'43"E	116.15'
L22	N14°02'40"E	665.05'
L23	N14°02'37"E	117.00'
L24	N09°00'30"E	161.10'
L25	N75°57'23"W	111.00'
L26	N78°38'49"W	98.29'
L27	N86°03'39"W	97.99'
L28	N86°26'54"E	97.99'
L29	N54°54'45"E	108.40'
L30	N51°53'32"E	55.09'
L31	N00°20'56"E	140.43'
L32	N83°34'13"W	53.11'
L33	N13°17'21"W	134.37'
L34	N33°06'22"E	25.13'
L35	N70°53'11"W	25.00'
L36	N21°03'03"W	144.78'
L37	N00°14'08"W	25.00'
L38	N30°57'23"W	18.89'
L39	S16°37'52"E	7.50'

CURVE	RADIUS	DELTA ANGLE	ARC LENGTH	CHORD BEARING	CHORD LENGTH	TANGENT
C1	815.00'	30°12'04"	429.59'	S07°11'24"E	424.64'	219.91'
C2	1200.00'	15°36'22"	326.85'	S83°45'33"E	325.84'	164.44'
C3	50.00'	90°00'00"	78.54'	S59°02'37"W	70.71'	50.00'
C4	900.00'	30°40'30"	481.84'	N88°42'23"E	476.11'	246.85'
C5	25.00'	89°05'41"	38.87'	N45°07'46"E	35.07'	24.61'
C6	25.00'	83°38'19"	36.49'	N48°45'15"W	33.34'	22.37'
C7	25.00'	120°34'48"	52.61'	S35°04'03"W	43.43'	43.81'
C8	65.00'	247°58'39"	281.32'	S81°14'01"E	107.79'	96.41'
C9	25.00'	120°34'48"	52.61'	N17°32'06"W	43.43'	43.81'
C10	25.00'	22°44'49"	9.93'	S64°34'58"E	9.86'	5.03'
C11	65.00'	135°29'37"	153.71'	S59°02'37"W	120.32'	158.86'
C12	25.00'	22°44'49"	9.93'	N02°40'13"E	9.86'	5.03'
C13	25.00'	90°00'00"	39.27'	S59°02'37"W	35.36'	25.00'
C14	25.00'	90°00'00"	39.27'	S30°57'23"E	35.36'	25.00'
C15	25.00'	44°02'28"	19.22'	N80°35'27"W	18.75'	10.11'
C16	65.00'	283°43'03"	321.87'	N20°25'44"W	80.29'	51.04'
C17	25.00'	60°42'06"	26.49'	N48°03'47"E	25.26'	14.64'

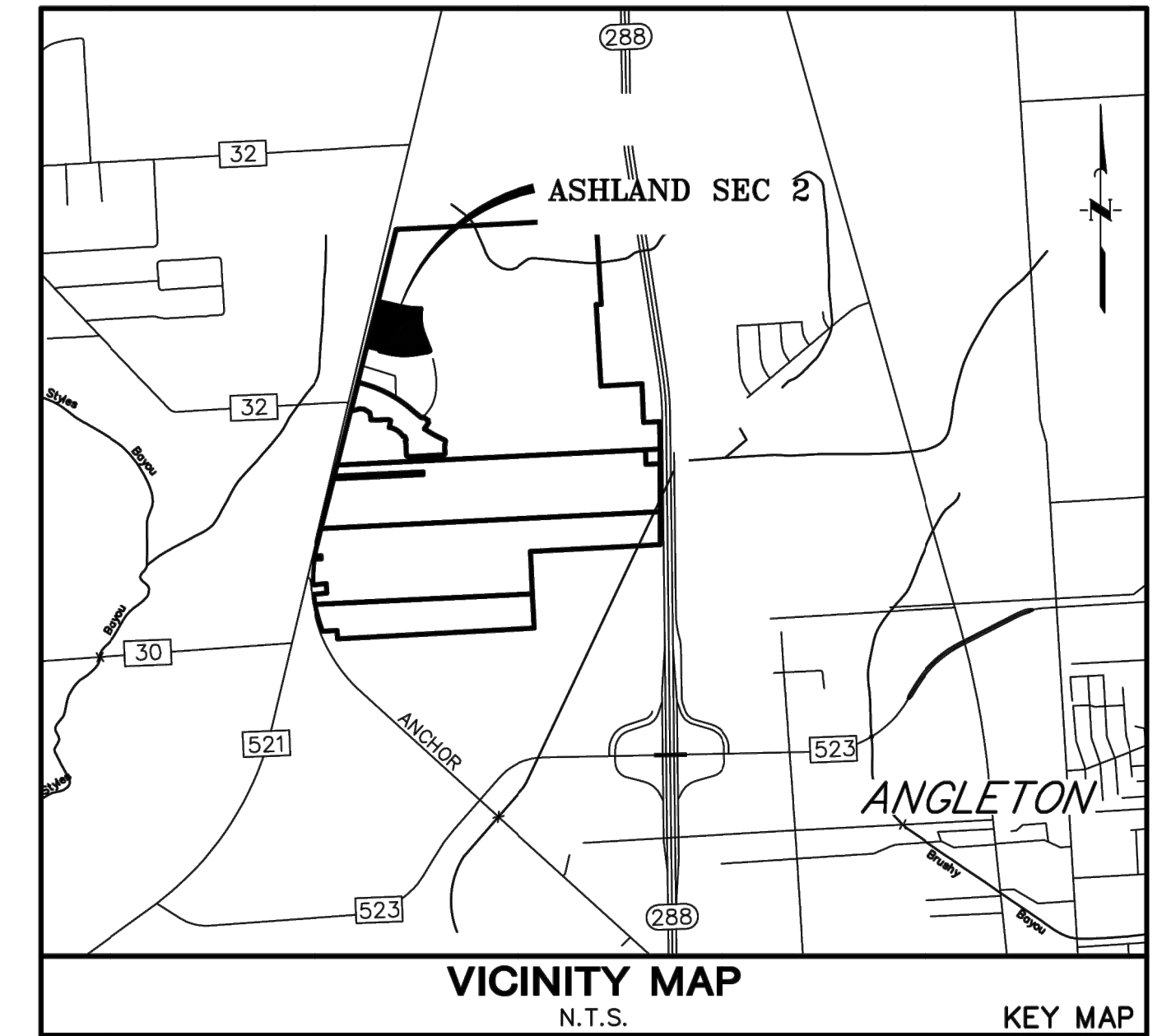
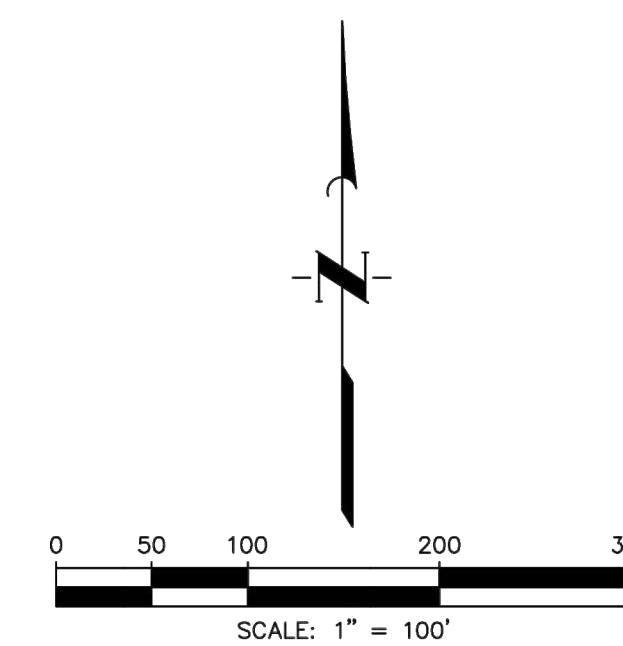
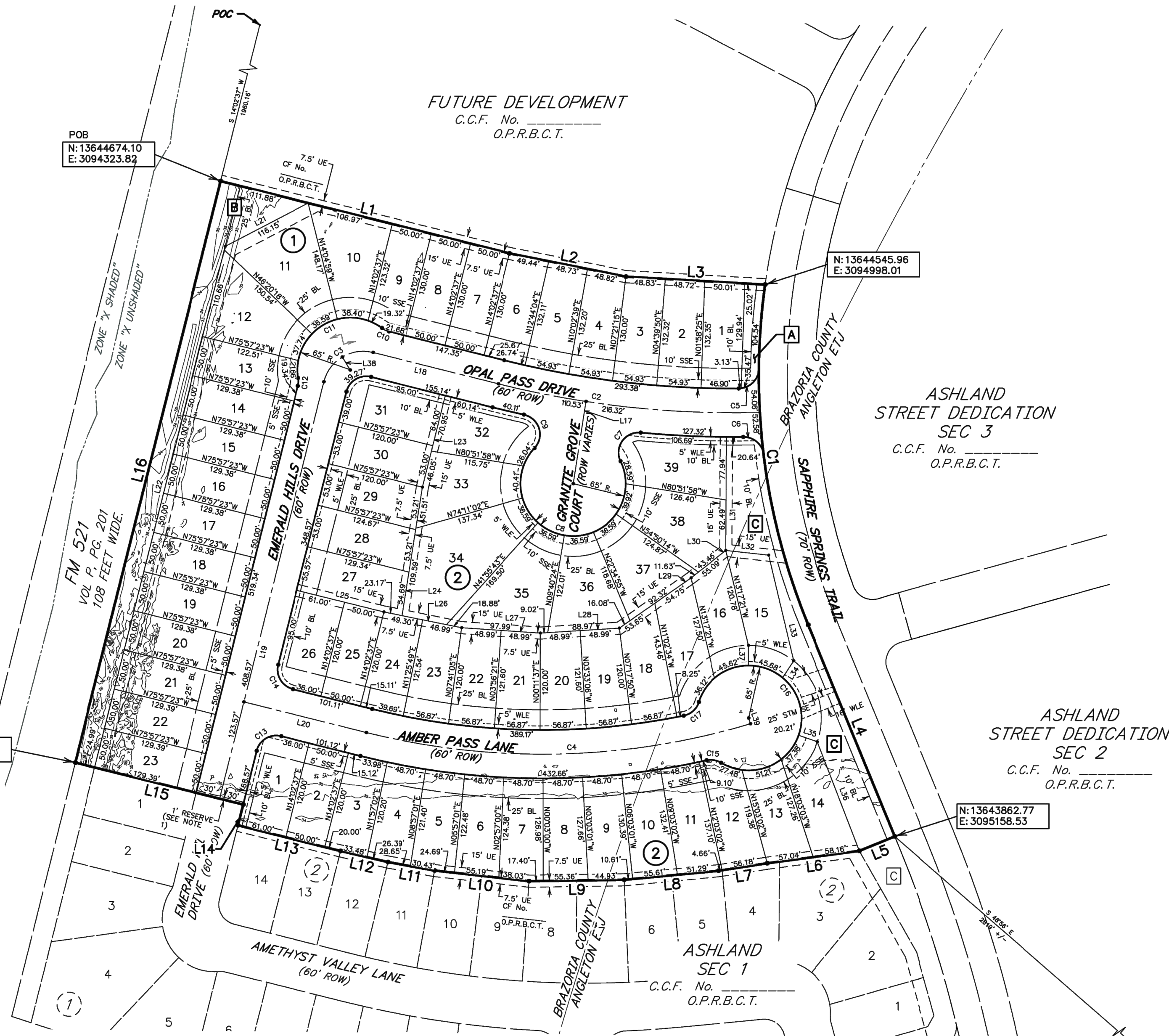
Lot Area Summary

Block 1	Lot No.	Sq. Ft.
1	1	6,571
2	2	6,868
3	3	6,811
4	4	6,808
5	5	6,859
6	6	6,676
7	7	6,500
8	8	6,500
9	9	6,404
10	10	9,207
11	11	11,262
12	12	9,395
13	13	6,357
14	14	6,469
15	15	6,469
16	16	6,469
17	17	6,469
18	18	6,469
19	19	6,469
20	20	6,469
21	21	6,469
22	22	6,469
23	23	6,469

Block 2	Lot No.	Sq. Ft.
1	1	7,186
2	2	6,000
3	3	6,811
4	4	6,270
5	5	6,340
6	6	6,396
7	7	6,562
8	8	6,611
9	9	6,724
10	10	6,837
11	11	7,031
12	12	6,888
13	13	6,380
14	14	7,627
15	15	7,505
16	16	6,613
17	17	7,454
18	18	6,942
19	19	6,406
20	20	6,406
21	21	6,406
22	22	6,406
23	23	6,405

Block 2	Lot No.	Sq. Ft.
23	23	6,405
24	24	6,296
25	25	6,000
26	26	7,186
27	27	7,310
28	28	6,731
29	29	6,484
30	30	6,360
31	31	7,546
32	32	7,954
33	33	8,257
34	34	14,552
35	35	10,712
36	36	8,351
37	37	8,145
38	38	9,241
39	39	9,017

Street Name	Length (Centerline)	Type
Granite Grove Court	103.09 Ft	LOCAL
Opal Pass Drive	526.26 Ft	LOCAL
Emerald Hills Drive	571.41 Ft	LOCAL
Amber Pass Lane	637.96 Ft	LOCAL



General Notes

- AC ..... "Acres"
  - BL ..... "Building Line"
  - C.C.F. .... "County Clerk's File"
  - DE ..... "Drainage Easement"
  - Eam ..... "Easement"
  - FC ..... "Film Code"
  - FND ..... "Found"
  - OCCBCT ..... "Official County Clerk, Brazoria County, Texas"
  - OPROBC ..... "Official Public Records of Brazoria County"
  - MUD ..... "Municipal Utility District"
  - No ..... "Number"
  - POB ..... "Point of Beginning"
  - ROW ..... "Right-of-Way"
  - SSE ..... "Sanitary Sewer Easement"
  - Sq Ft ..... "Square Feet"
  - Stm SE ..... "Storm Sewer Easement"
  - Temp ..... "Temporary"
  - UE ..... "Utility Easement"
  - Vol - Pg ..... "Volume and Page"
  - WLE ..... "Waterline Easement"
  - ..... "Block Number"
  - ..... "Set 3/4-inch Iron Rod (With Cap Stamped 'Quiddity Eng Property Corner') as Per Certification"
1. A one-foot reserve (1' reserve) has been dedicated to the public in fee as a buffer separation between the side or end of streets in subdivision plots where such streets abut adjacent acreage tracts, the condition of such dedication being that when the adjacent property is subdivided in a recorded plat, the one-foot reserve shall thereupon become vested in the public for street right-of-way purposes and the title fee thereto shall revert to and revest in the dedicator, his heirs, assigns or successors.
  2. All building lines along street rights-of-way are as shown on the plat.
  3. The Coordinates shown hereon are Texas South Central Zone No. 4204 State Plane Grid Coordinates (NAD83) and have a combined scale factor 0.999870017.
  4. Absent written authorization by the affected utilities, all utility and aerial easements must be kept unobstructed from any non-utility improvements or obstructions by the property owner. Any unauthorized improvements or obstructions may be removed by any public utility at the property owner's expense. While wooden posts and paneled wooden fences along the perimeter and back to back easements and alongside rear lots lines are permitted, they too may be removed by public utilities at the property owner's expense should they be an obstruction. Public Utilities may put said wooden posts and paneled wooden fences back up, but generally will not replace with new fencing.
  5. There are no pipelines or pipeline easements within the platted area shown hereon.
  6. HORIZONTAL DATUM: All bearings are referenced to the Texas Coordinate system, North American datum of 1983 (nad83), South Central Zone.
  7. VERTICAL DATUM: All elevations are referenced to the North American Vertical Datum of 1988 (navd88), Geoid 12b, based on Allterra's RTK Network, Stations HAGS\_1012 and HCOG\_14012.
  8. These tracts lie within Zone "X" And Zone "X-Shaded" of the Flood Insurance Rate Map, Community No. 485458, Map Number 48039C0430K, Panel 430, Suffix "K" dated December 30, 2020, for Brazoria County, Texas and incorporated areas.
  9. All drainage easements shown hereon shall be dedicated to the public and shall be maintained by the MUD.
  10. Sidewalks shall be constructed in accordance with the Development Agreement between the City of Angleton, Texas and Developer.
  11. This subdivision shall be serviced by the following providers: Brazoria County Mud #82, Centerpoint, Texas New Mexico Power, and Centric Gas & Fiber.
  12. Notice: Selling a portion of this addition by metes and bounds is a violation of the Unified Development Code of the City of Angleton and State platting statutes and is subject to fines and withholding of utilities and building permits.
  13. Notice: Plat approval shall not be deemed to or presumed to give authority to violate, nullify, void, or cancel any provisions of local, state, or federal laws, ordinances, or codes.
  14. Notice: The applicant is responsible for securing any Federal permits that may be necessary as the result of proposed development activity. The City of Angleton is not responsible for determining the need for, or ensuring compliance with any Federal permit.
  15. Notice: Approval of this plat does not constitute a verification of all data, information and calculations supplied by the applicant. The Engineer of Record or Registered Public Land Surveyor is solely responsible for the completeness, accuracy and adequacy of his/her submittal whether or not the application is reviewed for code compliance by the City Engineer.
  16. Notice: All responsibility for the adequacy of this plat remains with the Engineer or Surveyor who prepared them. In approving these plans, the City of Angleton must rely on the adequacy of the work of the Engineer and/or Surveyor of record.
  17. Reserves A, B, and C shall be owned and maintained by the Brazoria County MUD No. 82 and the Home Owners Association.
  18. Incidental Utilities are including but not limited to the underground utility services.
  19. Drive way access shall be denied off FM 521 and Ashland Blvd.

**ASHLAND**  
**SEC 2**  
A SUBDIVISION OF 14.26 ACRES OF LAND  
OUT OF THE  
SHUBAEL MARSH SURVEY, A-82  
BRAZORIA COUNTY AND ANGLETON ETJ, TEXAS  
**62 LOTS      3 RESERVES      2 BLOCKS**  
**NOVEMBER 2023**

**OWNER**  
ANCHOR HOLDINGS MP LLC  
101 PARKLANE BOULEVARD  
SUITE 102  
SUGAR LAND, TEXAS 77478  
281-912-3364

**ENGINEER/PLANNER/SURVEYOR:**  
**QUIDDITY**  
Quality Engineering, LLC  
Texas Board of Professional Engineers and Land Surveyors  
Registration Nos. F-23290 & 30040100  
1229 Corporate Drive, Suite 100 • Rosenberg, TX 77471 • 281.342.2033



STATE OF TEXAS §  
COUNTY OF BRAZORIA §

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

THAT \_\_\_\_\_ acting herein by and through its duly authorized officers, does hereby adopt this plat designating the hereinabove described property as Ashland Sec 2, a subdivision in the jurisdiction of the City of Angleton, Texas, and does hereby dedicate, in fee simple, to the public use forever, the streets, alleys and public parkland shown thereon. The streets, alleys and parkland are dedicated for street purposes. The easements and public use areas, as shown, are dedicated for the public use forever, for the purposes indicated on this plat. No buildings, fences, trees, shrubs, or other improvements or growths shall be constructed or placed upon, over, or across the easements as shown, except that landscape improvements may be placed in landscape easements, if approved by the City of Angleton. In addition, utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easement limits the use to particular utilities, said use by public utilities being subordinate to the public's and City of Angleton's use thereof. The City of Angleton and public utility entities shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs, or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of their respective systems in said easements. The City of Angleton and public utility entities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, reading meters, and adding to or removing all or parts of their respective systems without the necessity at any time of procuring permission from anyone.

STATE OF TEXAS §  
COUNTY OF BRAZORIA §

This plat is hereby adopted by the owners (called "Owners") and approved by the City of Angleton, ("City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees, successors, and assigns:

"Drainage Easements" shown on the plat are reserved for drainage purposes forever, and the maintenance of the drainage easements shall be provided by all of the owners of lots in the subdivision. All Owner documents shall specify, confirm and bind the Owner(s) to continuously maintain all Drainage Easements and shall relieve the City of Angleton of the responsibility to maintain any Drainage Easement. The fee simple title to the Drainage and Floodway Easement shall always remain in the Owner(s).

The City and Angleton Drainage District will not be responsible for the maintenance and operation of easement or for any damage or injury to private property or person that results from the flow of water along said easement or for the control of erosion, but reserves the right to use enforcement powers to ensure that drainage easements are properly functioning in the manner in which they were designed and approved.

The Owners shall keep all Drainage Easements clean and free of debris, silt, and any substance which would result in unsanitary conditions or obstruct the flow of water, and the City of Angleton or Angleton Drainage District shall have the right of ingress and egress for the purpose of inspection and supervision of maintenance work by the Owners to alleviate any public health or safety issues.

The Association hereby agrees to indemnify and hold harmless the City from any such damages and injuries.

STATE OF TEXAS §  
COUNTY OF BRAZORIA §

The owner of land shown on this plat, in person or through a duly authorized agent, dedicates to the use of the public forever all streets, alleys, parks, watercourses, drains, easements and public places thereon shown for the purpose and consideration therein expressed.

\_\_\_\_\_  
Owner  
\_\_\_\_\_  
Duly Authorized Agent

STATE OF TEXAS §  
COUNTY OF \_\_\_\_\_ §

BEFORE ME, the undersigned authority, on this day personally appeared \_\_\_\_\_, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and considerations therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
Notary Public in and for the State of Texas

\_\_\_\_\_  
Print Name

My commission expires: \_\_\_\_\_

STATE OF TEXAS §  
COUNTY OF \_\_\_\_\_ §

KNOW ALL MEN BY THESE PRESENTS:

That I, Steve Jares, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown thereon were properly placed under my supervision.

\_\_\_\_\_  
Steve Jares  
Registered Professional Land Surveyor  
Texas Registration No 5317

STATE OF TEXAS §  
COUNTY OF BRAZORIA §

KNOW ALL MEN BY THESE PRESENTS:

That I, William A.C. McAshan, do hereby certify that proper engineering consideration has been provided in this plat. To the best of my knowledge, this plat conforms to all requirements of the Angleton LDC, except for any variances that were expressly granted by the City Council.

\_\_\_\_\_  
William A.C. McAshan, P.E.  
Professional Engineer

STATE OF TEXAS §  
COUNTY OF BRAZORIA §

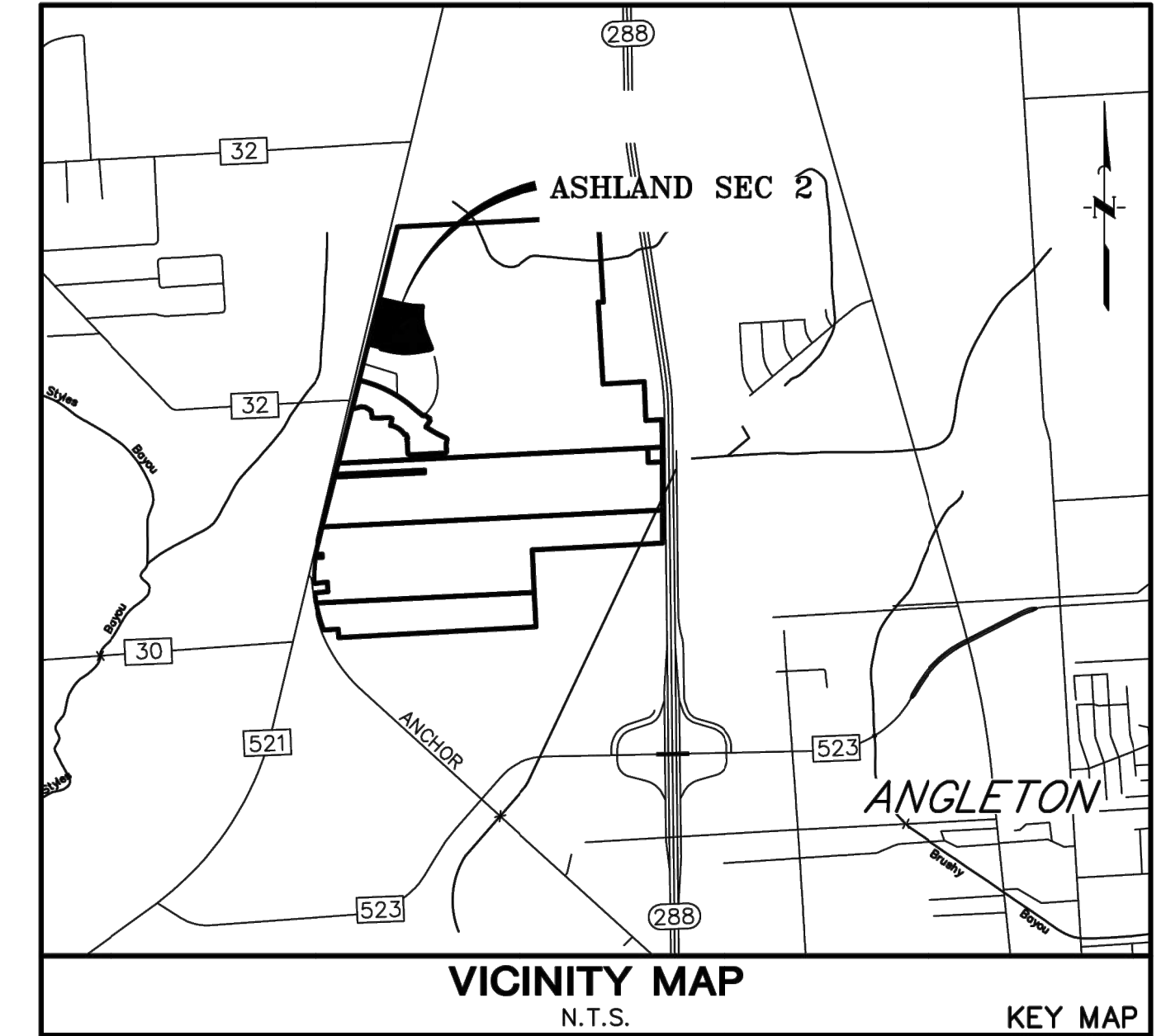
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COMMENCING at a found concrete monument for the northwest corner of said 469.08 acre tract, common with the southwest corner of a called 2.97 acre tract of land conveyed to James W. Northrup & Deborah Northrup by Warranty Deed with Vendor's Lien recorded in Clerk's File No. 01-008056 of the Official Records of Brazoria County (ORBC), being in the east line of F.M. Highway 521 recorded in Volume P, Page 201;

THENCE, South 14°02'37" West, along the east line of said F.M. Highway 521, 1960.16 feet to the POINT OF BEGINNING of the herein described subject tract;

- THENCE, over and across said 469.08 acre tract the following sixteen (16) courses and distances:
  - 1.South 75°57'23" East, 368.86 feet to a point for corner;
  - 2.South 78°43'03" East, 146.99 feet to a point for corner;
  - 3.South 86°42'50" East, 172.57 feet to a point for corner marking the beginning of a tangent curve to the right;
  - 4.Along the arc of said tangent curve to the right, having a radius of 815.00 feet, a central angle of 30°12'04", an arc length of 429.59 feet, and a long chord bearing South 07°11'24" East, with a chord length of 424.64 feet to a point for corner;
  - 5.South 22°17'26" East, 283.14 feet to a point for corner;
  - 6.South 67°42'34" West, 47.25 feet to a point for corner;
  - 7.South 82°25'29" West, 115.20 feet to a point for corner;
  - 8.South 81°08'49" West, 60.84 feet to a point for corner;
  - 9.South 84°32'11" West, 117.51 feet to a point for corner;
  10. South 89°09'01" West, 117.69 feet to a point for corner;
  11. North 83°34'43" West, 117.91 feet to a point for corner;
  12. North 79°40'46" West, 59.08 feet to a point for corner;
  13. North 76°48'30" West, 59.87 feet to a point for corner;
  14. North 75°57'23" West, 131.00 feet to a point for corner;
  15. North 14°02'37" East, 26.43 feet to a point for corner;
  16. North 75°57'23" West, 214.38 feet to a point for corner in the east line of said F.M. Highway 521;

THENCE, North 14°02'37" East, 742.14 feet, along the east line of said F.M. Highway 521, to the POINT OF BEGINNING, CONTAINING 14.26 acres of land in Brazoria County, Texas.



APPROVED this \_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by the Planning and Zoning Commission, City of Angleton, Texas.

\_\_\_\_\_  
Chairman, Planning and Zoning Commission

\_\_\_\_\_  
City Secretary

APPROVED this \_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by the City Council, City of Angleton, Texas.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
City Secretary

STATE OF TEXAS §  
COUNTY OF BRAZORIA §

This instrument was acknowledged before me on the \_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by


\_\_\_\_\_  
Name

\_\_\_\_\_  
Title  
On behalf of the Notary Public, State of Texas

# ASHLAND SEC 2

**A SUBDIVISION OF 14.26 ACRES OF LAND  
OUT OF THE  
SHUBAEL MARSH SURVEY, A-82  
BRAZORIA COUNTY AND ANGLETON ETJ, TEXAS  
62 LOTS      3 RESERVES      2 BLOCKS  
NOVEMBER 2023**

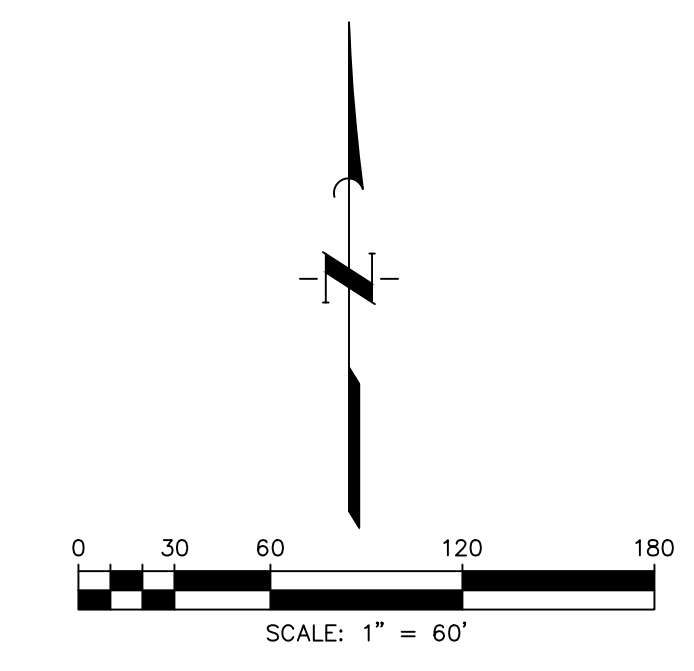
**OWNER**  
ANCHOR HOLDINGS MP LLC  
101 PARKLANE BOULEVARD  
SUITE 102  
SUGAR LAND, TEXAS 77478  
281-912-3364

**ENGINEER/PLANNER/SURVEYOR:**  
 **QUIDDITY**  
Quality Engineering, LLC  
Texas Board of Professional Engineers and Land Surveyors  
Registration Nos. F-23290 & 30040100  
1229 Corporate Drive, Suite 100 • Houston, TX 77471 • 281.342.2033



(VOL. P, PG. 201, COMM. COURT REC.)

MATCHLINE SEE SHEET 8



**BENCHMARK**  
 ELEVATIONS WERE OBTAINED WITH REAL TIME KINETIC GLOBAL POSITIONING SATELLITE EQUIPMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION: D66956 DW1 CLUTE COOP CORS ARP, DL3490 TXBC BAY CITY CORS ARP, DH3614 TXLM LA MARQUE CORS ARP.

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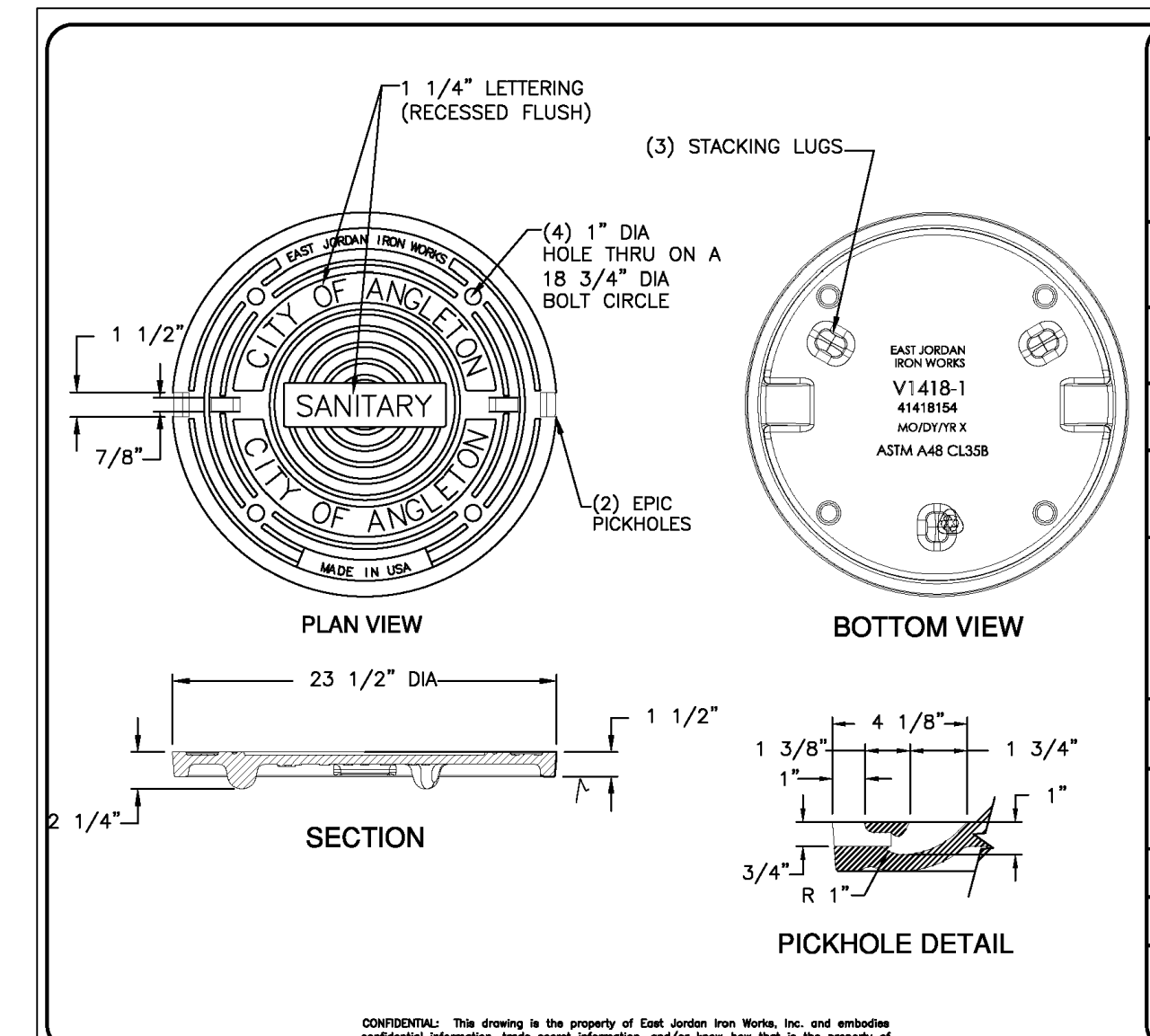
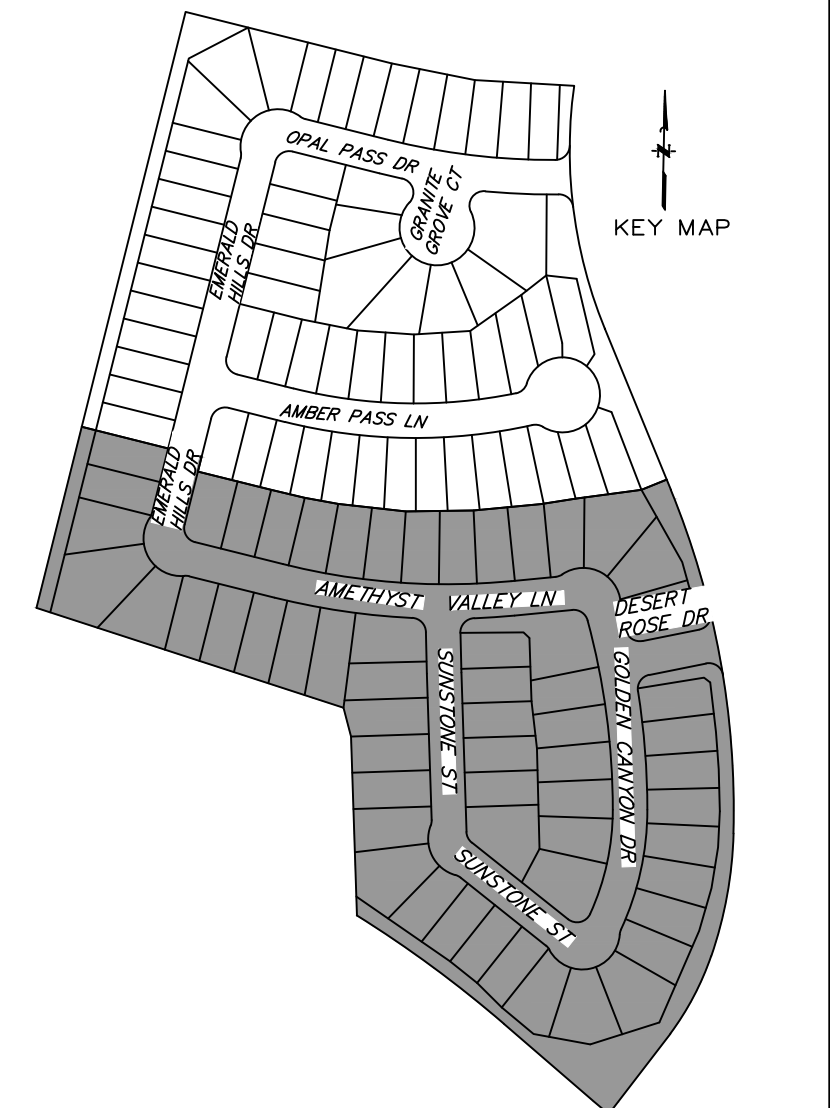
TBM B BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, 3130 FEET NORTH FROM THE INTERSECTION OF ANCHOR ROAD, 2.7' FROM THE EDGE OF ASPHALT AND 36' NORTHWEST FROM A POWER POLE. ELEVATION = 36.59 FEET, NAVD 88.

**FLOODPLAIN**  
 THIS TRACT LIES WITHIN ZONES "X-SHADED" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY NO. 485458, MAP NUMBER 48039C0430K, PANEL 430, SUFFIX "K" DATED DECEMBER 30, 2020, FOR BRAZORIA COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "X-SHADED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

**WATER LINE-SANITARY SEWER CROSSING**  
 PLACE ONE FULL 18" SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE CENTERED AT CROSSING. EMBED SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PROVIDE RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24" INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY (SEE SANITARY SEWER CONSTRUCTION NOTES - SHEET 2 - PROTECTION REQUIREMENTS AT WATERLINE - SANITARY SEWER CROSSING), 24" MIN CLEARANCE. NO SEPARATE PAY.

**SANITARY SEWER MANHOLES**  
 ALL SANITARY SEWER MANHOLES SHALL BE COATED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD SPECIFICATIONS AND APPROVED PRODUCTS LIST.

**SANITARY SEWER NOTE**  
 ALL GRAVITY SANITARY SEWER PIPE SHALL BE SDR 26 PVC.

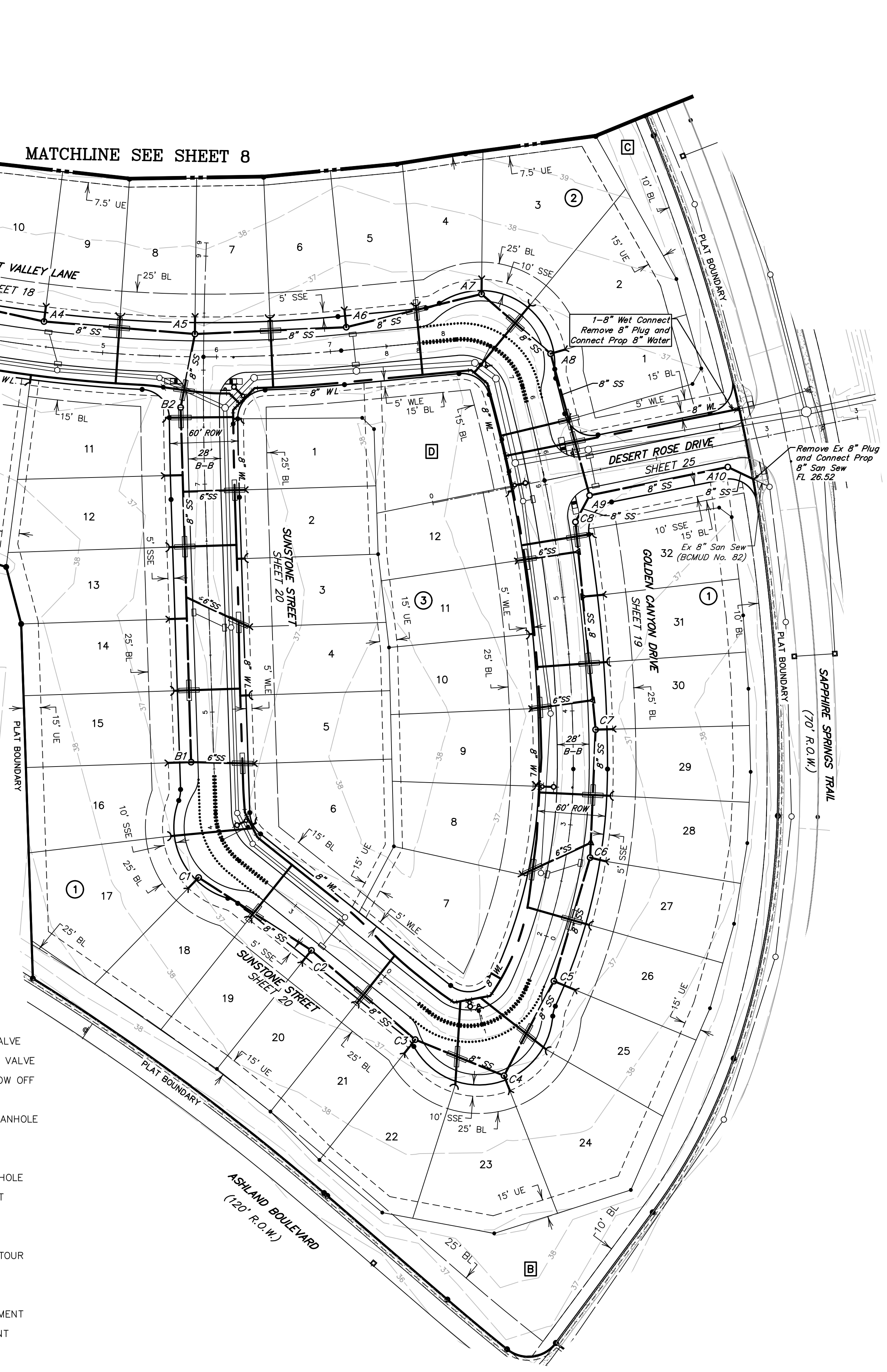


FUTURE ASHLAND DEVELOPMENT

<b>EJW EAST JORDAN</b> 800-626-4653 www.ejw.com MADE IN USA	
PRODUCT NUMBER	41418154
CATALOG NUMBER	V1418-1
<b>MANHOLE COVER</b>	
LOAD RATING	HEAVY DUTY
COATING	UNDIPPED
MATERIAL SPECIFICATION	
COVER - GRAY IRON	ASTM A48 CL358
OPEN AREA	N/A
DESIGNATES MACHINED SURFACE	
DRAWN	DATE
TCL	05/04/04
LAST REVISED	DATE
DEW	07/26/07
REFERENCE INFORMATION	
41418039.1C	
41418040.1D	

**LEGEND**

EXISTING	PROPOSED	
		WATERLINE w/ GATE VALVE
		FLUSH VALVE w/ GATE VALVE
		PLUG & CLAMP w/ BLOW OFF
		WATERLINE LEAD
		SANITARY SEWER w/ MANHOLE
		SANITARY STACK
		SANITARY LEAD
		STORM SEWER w/ MANHOLE
		STORM SEWER w/ INLET
		GASLINE
		SWALE CENTERLINE
		NATURAL GROUND CONTOUR
		UTILITY EASEMENT
		WATERLINE EASEMENT
		SANITARY SEWER EASEMENT
		STORM SEWER EASEMENT
		DRAINAGE EASEMENT
		AERIAL EASEMENT
		RESTRICTED RESERVE



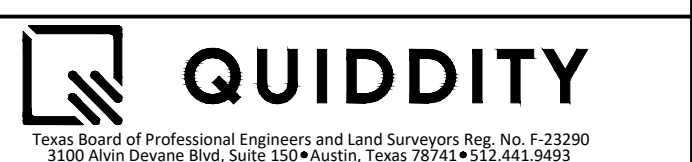
NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
 BARZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2  
 GENERAL CONSTRUCTION LAYOUT

**WATER & SEWER I**



SCALE: 1"=60'	DGN. BY: AHR
DATE: OCTOBER 2024	DWN. BY: JWS
JOB NO. 16759-0010-12	DWG. NO. _____
SUBMITTED: _____	SURV. BY: _____
	F.B. NO. _____

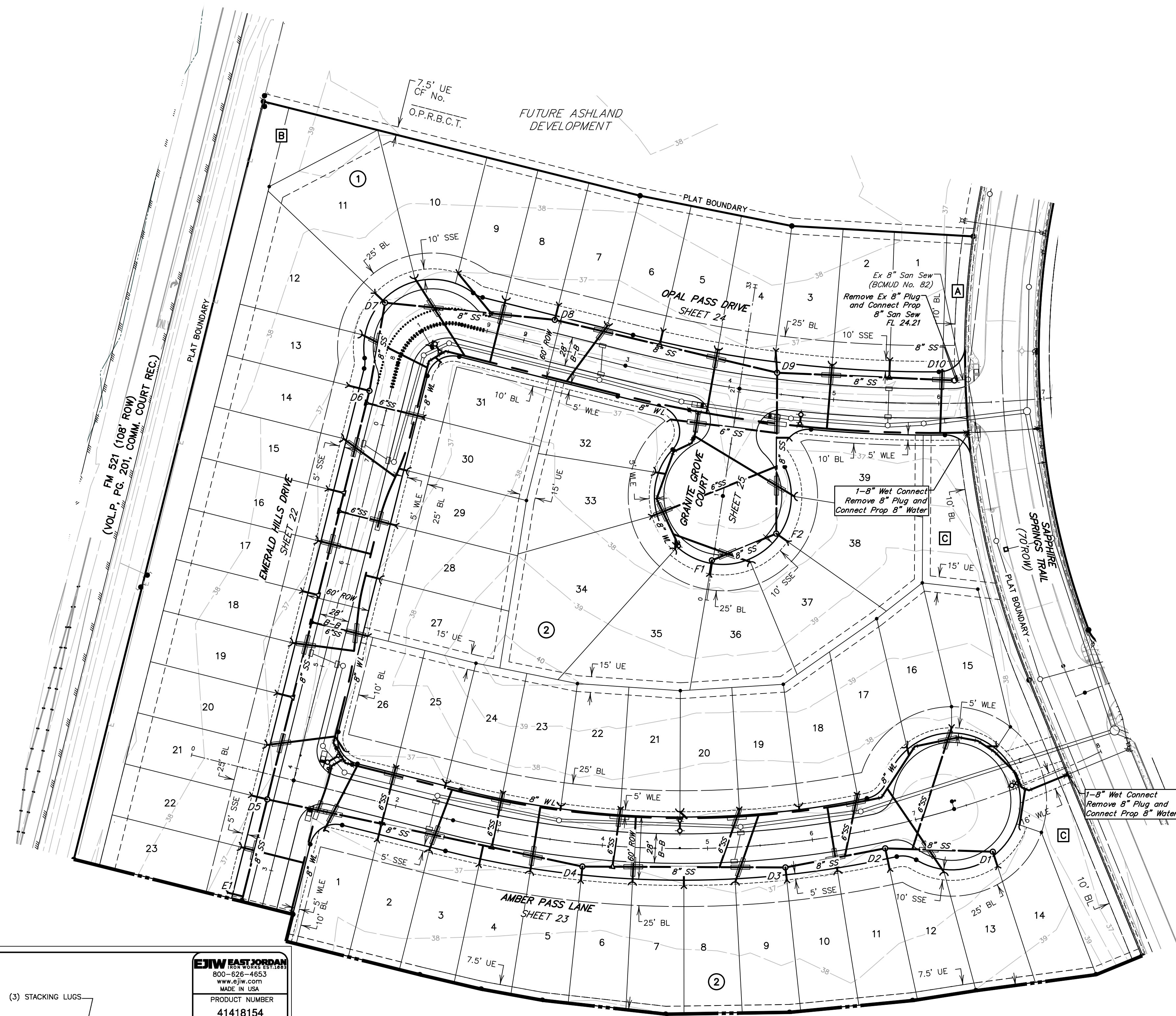


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**ADDITIONAL NOTES:**  
 IN AREAS WHERE THE PROJECT DESIGN INCORPORATES FILL ADJACENT TO NEIGHBORING LANDOWNERS, THE CONTRACTOR SHALL IMPLEMENT GRADING AND/OR PERIMETER RUNOFF CATCHMENT DEVICES (E.G.-PERIMETER DITCHES) DURING CONSTRUCTION TO ENSURE THAT ADJACENT PARCELS BORDERING THE PROJECT SITE DO NOT EXPERIENCE INTERIM DRAINAGE FLOWS THAT EXCEED PRE-DEVELOPMENT CONDITIONS FOR STORM EVENTS UP TO AND INCLUDING THE CURRENT STORM DRAINAGE DESIGN CRITERIA AT THE TIME OF THE PERMIT OR CARRY SEDIMENT GENERATED AS PART OF CONSTRUCTION ACTIVITIES, WHERE APPLICABLE, THESE PRACTICES ARE IN ADDITION TO THE STANDARD STORM WATER POLLUTION PREVENTION PLAN DESIGN AND SHALL INCLUDE ADDITIONAL DITCHES REDIRECTION SITE DRAINAGE OR TEMPORARY PIPING. THIS NOTE IS NOT INTENDED TO ADDRESS ANY LIABILITY OR RESPONSIBILITY UNDER TEXAS WATER CODE 11.086.

FOR STORM EVENTS UP TO AND INCLUDING THE 100 YR STORM, IT HAS BEEN DETERMINED THAT THE RESULTING SHEET FLOW PONDING WILL NOT ENCRACH WITHIN A TEN FOOT RADIUS OF ANY POINT OF A PROPOSED STRUCTURE'S BUILDING PAD WITHIN THE CONSTRUCTION LIMITS OF THIS SET OF PLANS.





**BENCHMARK**  
 ELEVATIONS WERE OBTAINED WITH REAL TIME KINETIC GLOBAL POSITIONING SATELLITE EQUIPMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION:  
 D6956 DW1 CLUTE COOP CORS ARP  
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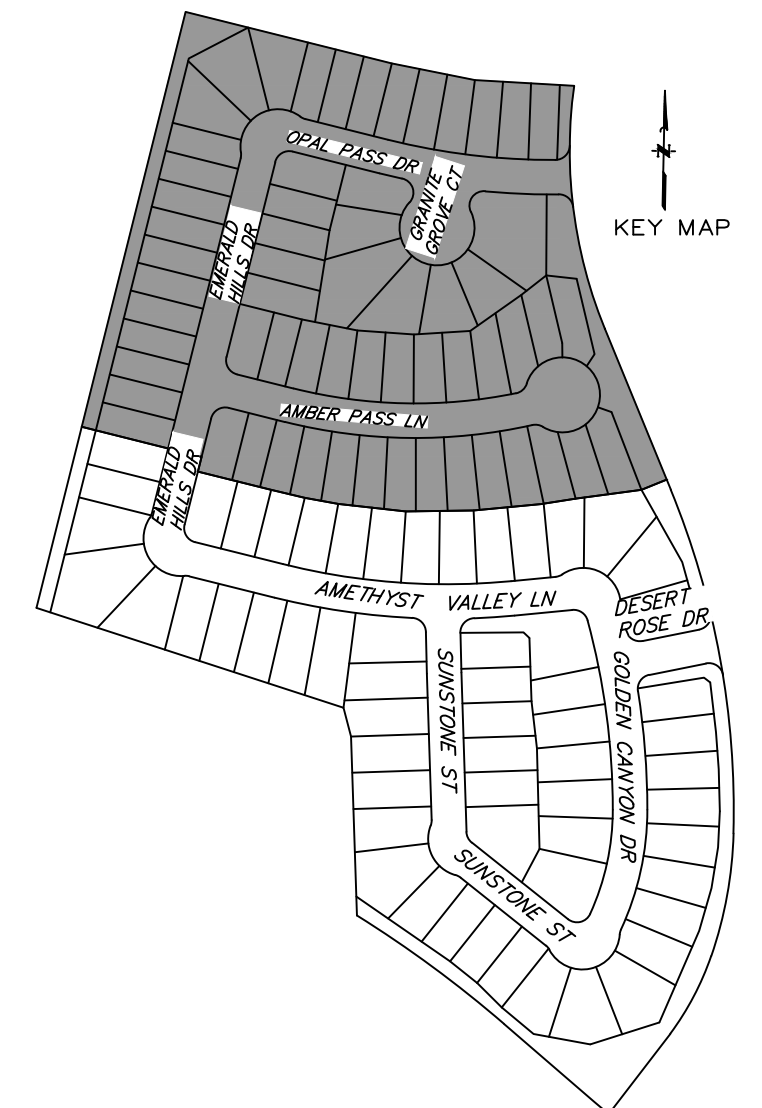
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**SANITARY SEWER NOTE**  
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**LEGEND**

EXISTING	PROPOSED	
		WATERLINE w/ GATE VALVE
		FLUSH VALVE w/ GATE VALVE
		PLUG & CLAMP w/ BLOW OFF
		WATERLINE LEAD
		SANITARY SEWER w/ MANHOLE
		SANITARY STACK
		SANITARY LEAD
		STORM SEWER w/ MANHOLE
		STORM SEWER w/ INLET
		GASLINE
		SWALE CENTERLINE
		NATURAL GROUND CONTOUR
		UTILITY EASEMENT
		WATERLINE EASEMENT
		SANITARY SEWER EASEMENT
		STORM SEWER EASEMENT
		DRAINAGE EASEMENT
		AERIAL EASEMENT
		RESTRICTED RESERVE



**NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION**

NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
 BRAZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2  
 GENERAL CONSTRUCTION LAYOUT

**WATER & SEWER II**



SCALE: 1"=60'  
 DATE: OCTOBER 2024  
 JOB NO. 16759-0010-12  
 SUBMITTED:  
 DGN. BY: AHR  
 DWN. BY: JWS  
 DWG. NO.:  
 SURV. BY:  
 F.B. NO.:



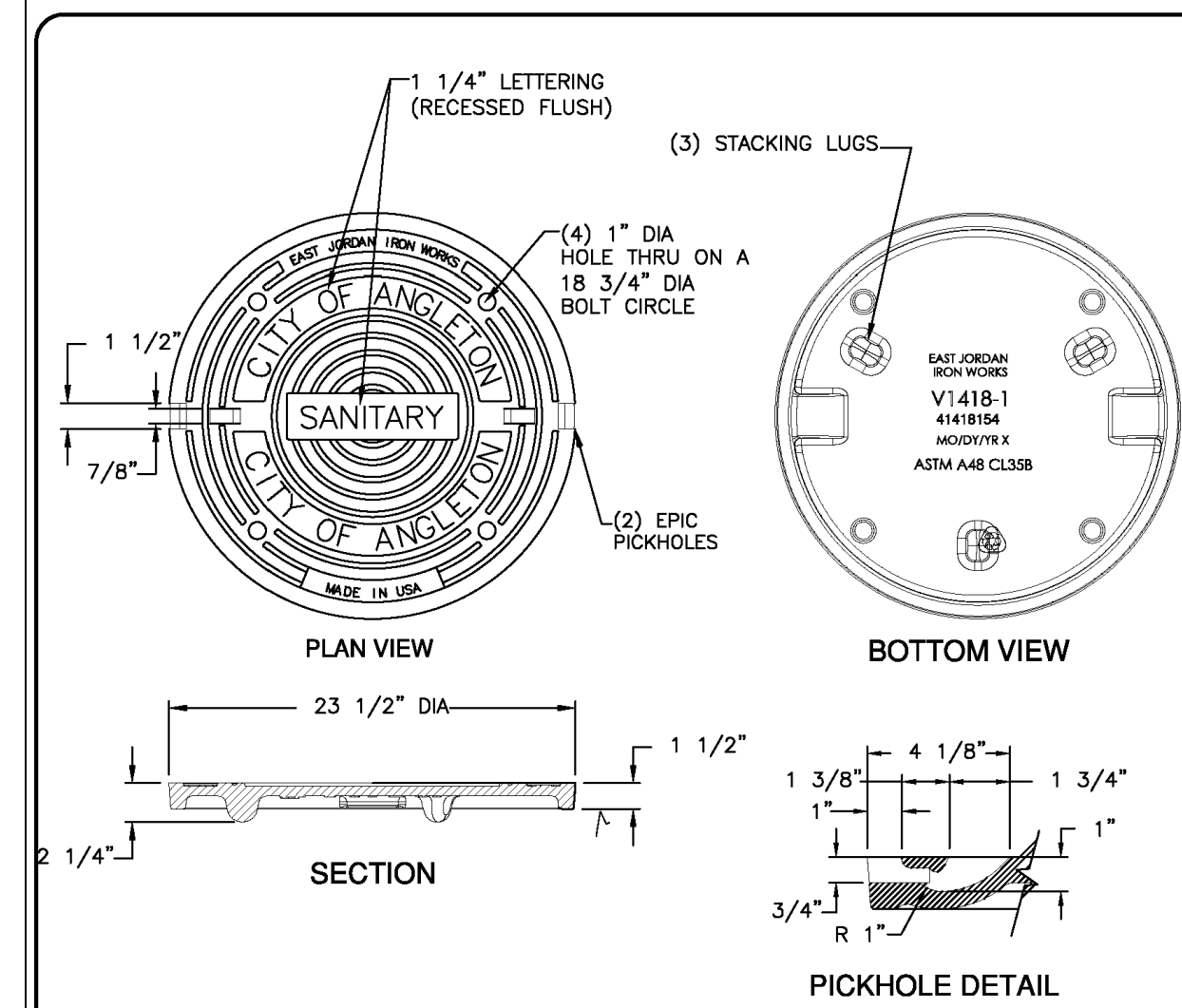
SHEET NO. 8 OF 30

**500 YEAR NOTE**  
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MATCHLINE SEE SHEET 7



<b>EDIW EAST JORDAN</b>	
300-826-4653 www.ediw.com MADE IN USA	
PRODUCT NUMBER	41418154
CATALOG NUMBER	V1418-1
<b>MANHOLE COVER</b>	
LOAD RATING	HEAVY DUTY
COATING	UNDIPPED
MATERIAL SPECIFICATION	
COVER - GRAY IRON	ASTM A48 CL358
OPEN AREA	N/A
DESIGNATES MACHINED SURFACE	
DRAWN	DATE
TCL	05/04/04
LAST REVISED	DATE
DW	07/25/07
REFERENCE INFORMATION	
41418039.1C	
41418040.1D	

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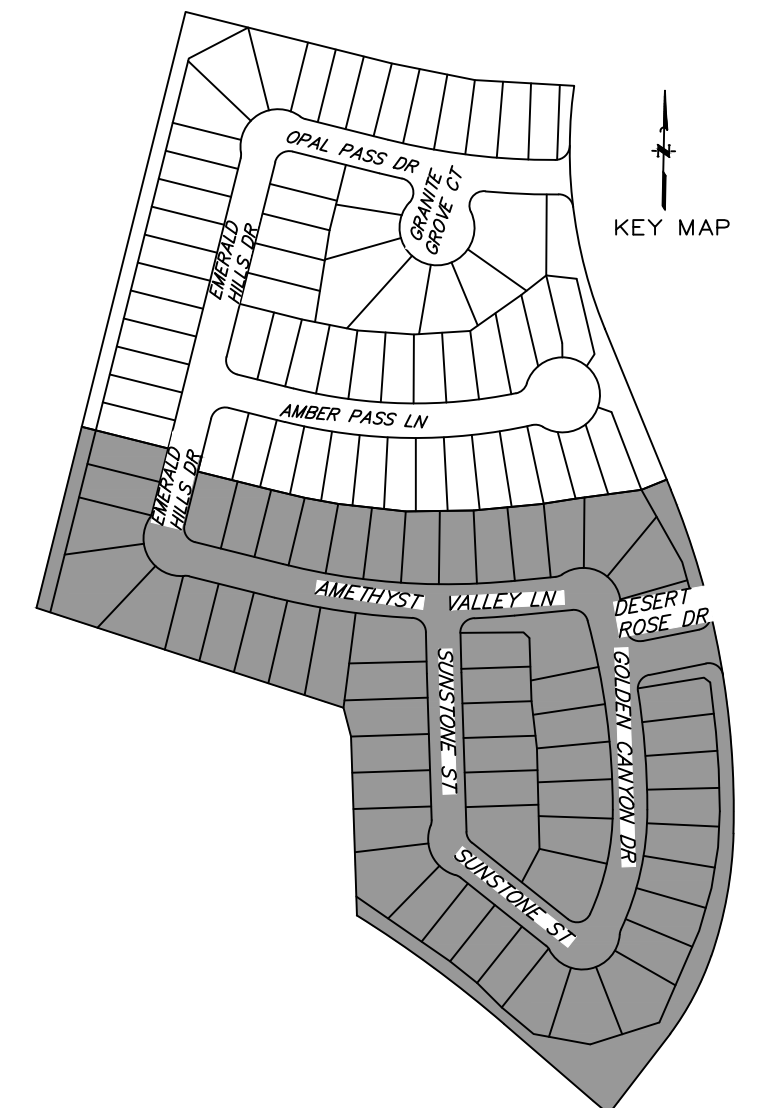
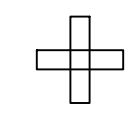
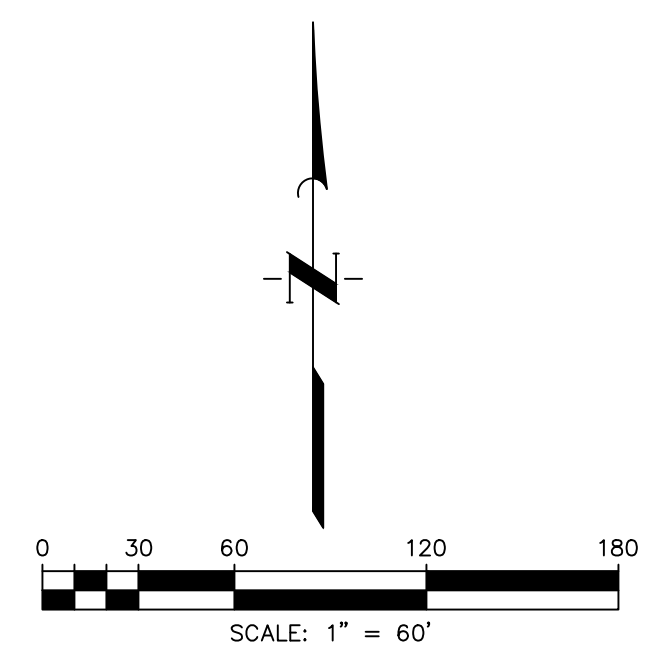
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**SANITARY SEWER NOTE**  
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NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
 BRAZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2  
 GENERAL CONSTRUCTION LAYOUT

PAVING & DRAINAGE I



SCALE: 1"=60' DGN. BY: AHR  
 DATE: OCTOBER 2024 DWN. BY: JWS  
 JOB NO. 16759-0010-12 DWG. NO. \_\_\_\_\_  
 SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
 F.B. NO. \_\_\_\_\_



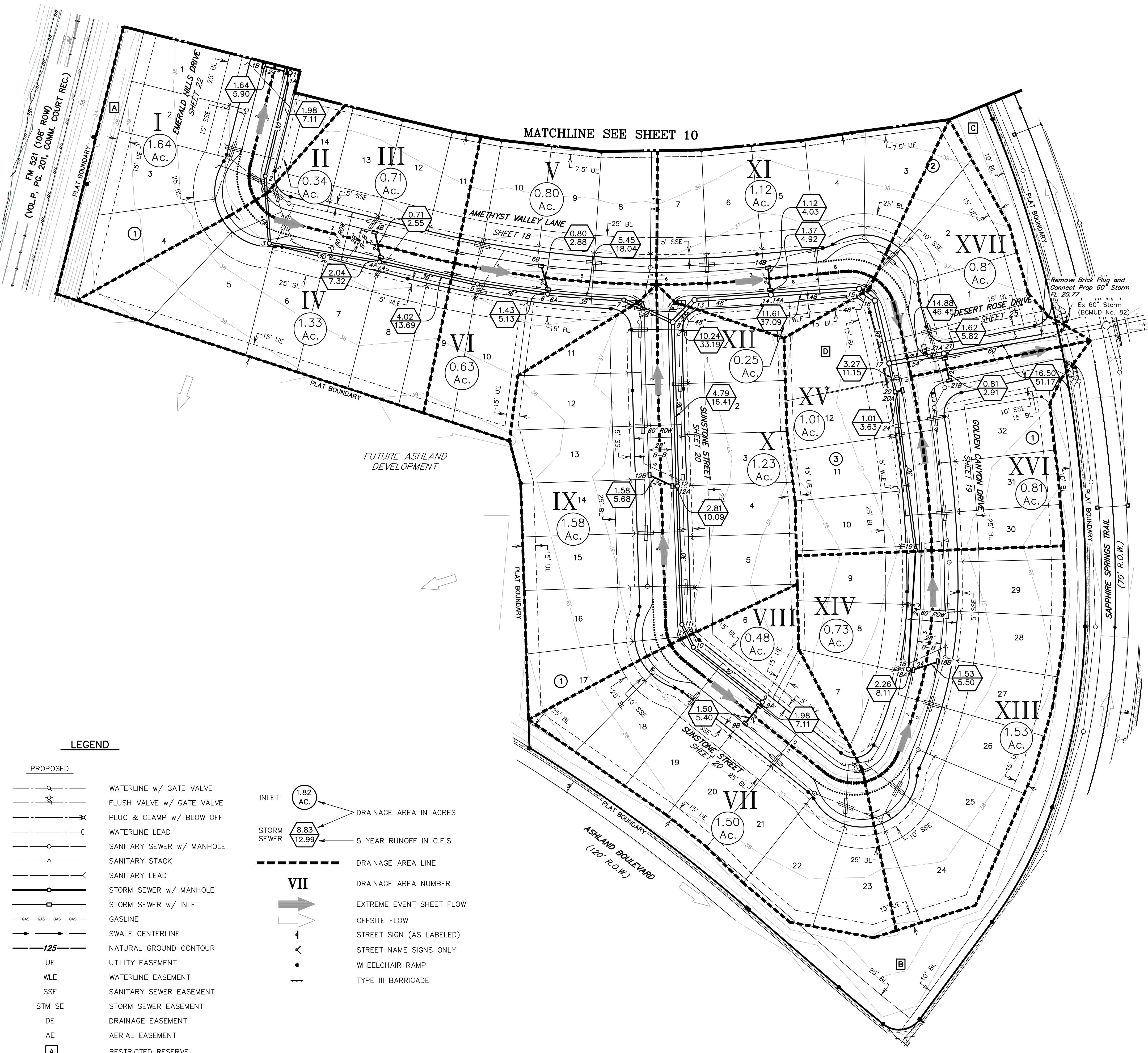
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SHEET NO.  
**9**  
 OF 30

MATCHLINE SEE SHEET 10



**LEGEND**

- | EXISTING | PROPOSED |                           |
|----------|----------|---------------------------|
|          |          | WATERLINE w/ GATE VALVE   |
|          |          | FLUSH VALVE w/ GATE VALVE |
|          |          | PLUG & CLAMP w/ BLOW OFF  |
|          |          | WATERLINE LEAD            |
|          |          | SANITARY SEWER w/ MANHOLE |
|          |          | SANITARY STACK            |
|          |          | SANITARY LEAD             |
|          |          | STORM SEWER w/ MANHOLE    |
|          |          | STORM SEWER w/ INLET      |
|          |          | GASLINE                   |
|          |          | SWALE CENTERLINE          |
|          |          | NATURAL GROUND CONTOUR    |
|          |          | UTILITY EASEMENT          |
|          |          | WATERLINE EASEMENT        |
|          |          | SANITARY SEWER EASEMENT   |
|          |          | STORM SEWER EASEMENT      |
|          |          | DRAINAGE EASEMENT         |
|          |          | AERIAL EASEMENT           |
|          |          | RESTRICTED RESERVE        |
- 
- |  |                          |  |                         |
|--|--------------------------|--|-------------------------|
|  | INLET                    |  | DRAINAGE AREA IN ACRES  |
|  | STORM SEWER              |  | 5 YEAR RUNOFF IN C.F.S. |
|  | DRAINAGE AREA LINE       |  | DRAINAGE AREA NUMBER    |
|  | EXTREME EVENT SHEET FLOW |  | OFFSITE FLOW            |
|  | STREET SIGN (AS LABELED) |  | STREET NAME SIGNS ONLY  |
|  | WHEELCHAIR RAMP          |  | TYPE III BARRICADE      |

©2023 Quiddity



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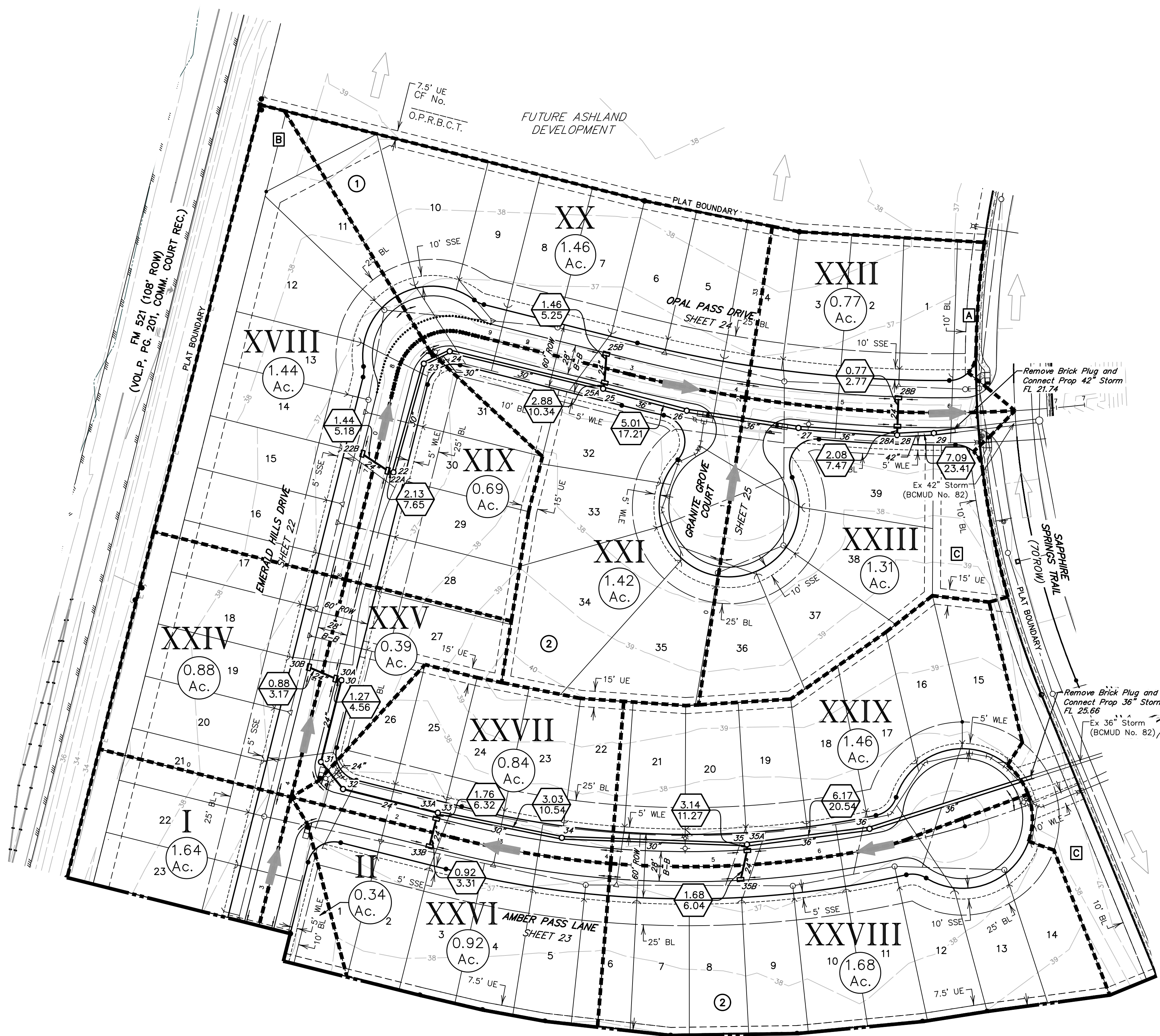
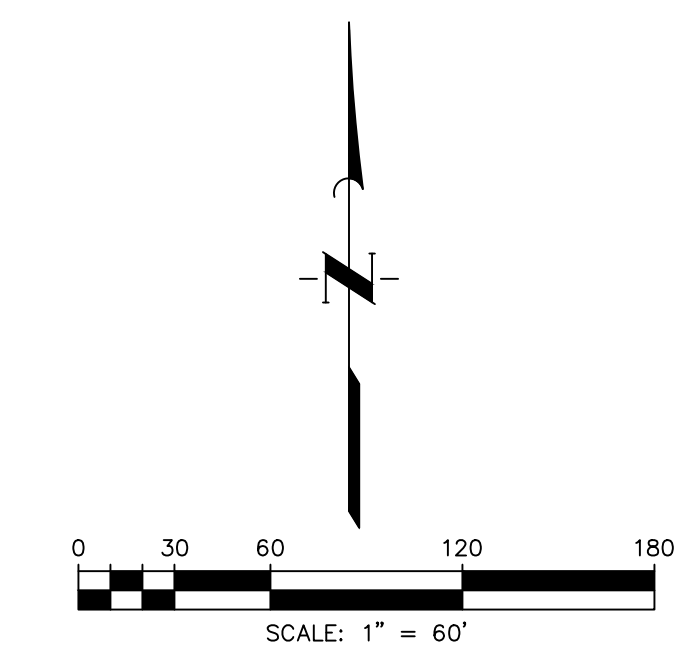
TBM B BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, 3130 FEET NORTH FROM THE INTERSECTION OF ANCHOR ROAD, 2.7' FROM THE EDGE OF ASPHALT AND 36' NORTHWEST FROM A POWER POLE  
 ELEVATION = 36.59 FEET, NAVD 88.

**FLOODPLAIN**  
 THIS TRACT LIES WITHIN ZONES "X-SHADED" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY NO. 485458, MAP NUMBER 48039C0430K, PANEL 430, SUFFIX "K" DATED DECEMBER 30, 2020, FOR BRAZORIA COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "X-SHADED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

**WATER LINE-SANITARY SEWER CROSSING**  
 PLACE ONE FULL 18" SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE CENTERED AT CROSSING. EMBED SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PROVIDE RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24" INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY (SEE SANITARY SEWER CONSTRUCTION NOTES - SHEET 2 - PROTECTION REQUIREMENTS AT WATERLINE - SANITARY SEWER CROSSING), 24" MIN CLEARANCE. NO SEPARATE PAY.

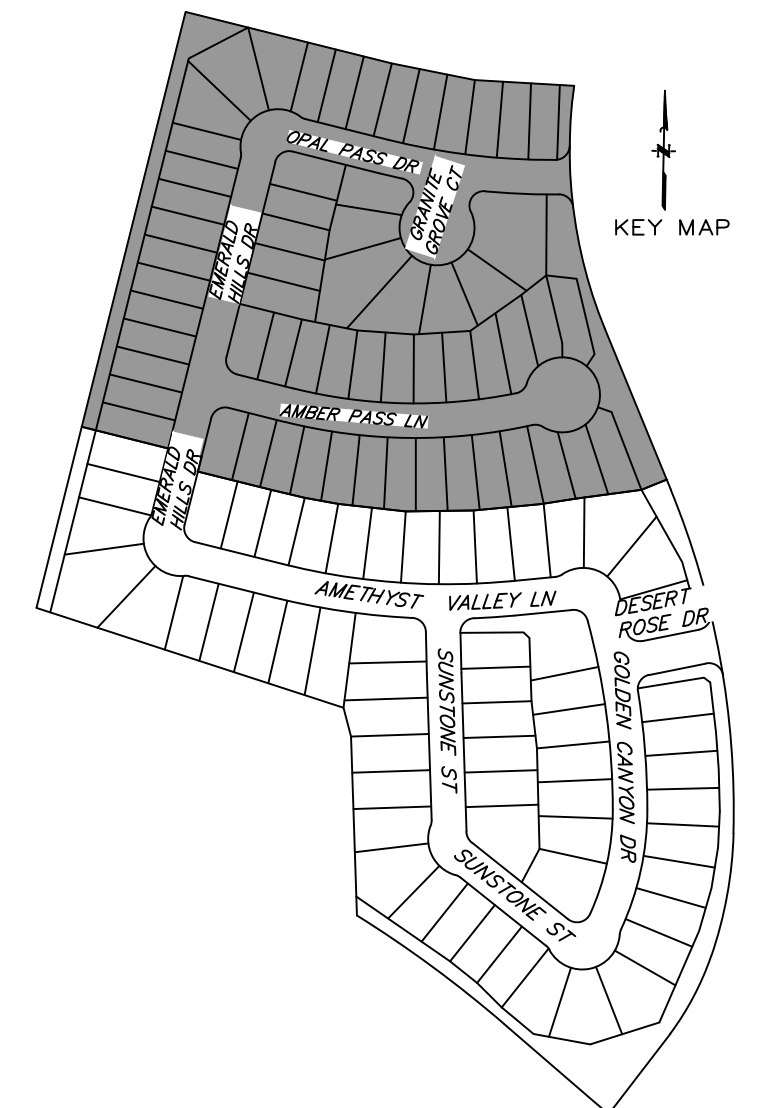
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**SANITARY SEWER NOTE**  
 ALL GRAVITY SANITARY SEWER PIPE SHALL BE SDR 26 PVC.



**LEGEND**

EXISTING	PROPOSED	DESCRIPTION
		WATERLINE w/ GATE VALVE
		FLUSH VALVE w/ GATE VALVE
		PLUG & CLAMP w/ BLOW OFF
		WATERLINE LEAD
		SANITARY SEWER w/ MANHOLE
		SANITARY STACK
		SANITARY LEAD
		STORM SEWER w/ MANHOLE
		STORM SEWER w/ INLET
		GASLINE
		SWALE CENTERLINE
		NATURAL GROUND CONTOUR
		UTILITY EASEMENT
		WATERLINE EASEMENT
		SANITARY SEWER EASEMENT
		STORM SEWER EASEMENT
		DRAINAGE EASEMENT
		AERIAL EASEMENT
		RESTRICTED RESERVE
		INLET
		STORM SEWER
		DRAINAGE AREA LINE
		DRAINAGE AREA NUMBER
		EXTREME EVENT SHEET FLOW
		OFFSITE FLOW
		STREET SIGN (AS LABELED)
		STREET NAME SIGNS ONLY
		WHEELCHAIR RAMP
		TYPE III BARRICADE



**500 YEAR NOTE**  
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**ADDITIONAL NOTES:**  
 IN AREAS WHERE THE PROJECT DESIGN INCORPORATES FILL ADJACENT TO NEIGHBORING LANDOWNERS, THE CONTRACTOR SHALL IMPLEMENT GRADING AND/OR PERIMETER RUNOFF CATCHMENT DEVICES (E.G.-PERIMETER DITCHES) DURING CONSTRUCTION TO ENSURE THAT ADJACENT PARCELS BORDERING THE PROJECT SITE DO NOT EXPERIENCE INTERIM DRAINAGE FLOWS THAT EXCEED PRE-DEVELOPMENT CONDITIONS FOR STORM EVENTS UP TO AND INCLUDING THE CURRENT STORM DRAINAGE DESIGN CRITERIA AT THE TIME OF THE PERMIT OR CARRY SEDIMENT GENERATED AS PART OF CONSTRUCTION ACTIVITIES. WHERE APPLICABLE, THESE PRACTICES ARE IN ADDITION TO THE STANDARD STORM WATER POLLUTION PREVENTION PLAN DESIGN AND SHALL INCLUDE ADDITIONAL DITCHES REDIRECTION SITE DRAINAGE OR TEMPORARY PIPING. THIS NOTE IS NOT INTENDED TO ADDRESS ANY LIABILITY OR RESPONSIBILITY UNDER TEXAS WATER CODE 11.086

FOR STORM EVENTS UP TO AND INCLUDING THE 100 YR STORM, IT HAS BEEN DETERMINED THAT THE RESULTING SHEET FLOW PONDING WILL NOT ENCR OACH WITHIN A TEN FOOT RADIUS OF ANY POINT OF A PROPOSED STRUCTURE'S BUILDING PAD WITHIN THE CONSTRUCTION LIMITS OF THIS SET OF PLANS.

NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
 BRAZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2  
 GENERAL CONSTRUCTION LAYOUT

PAVING & DRAINAGE II

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 3102 Arroyo Grande Blvd, Suite 1504 Austin, Texas 78746-2124-24923

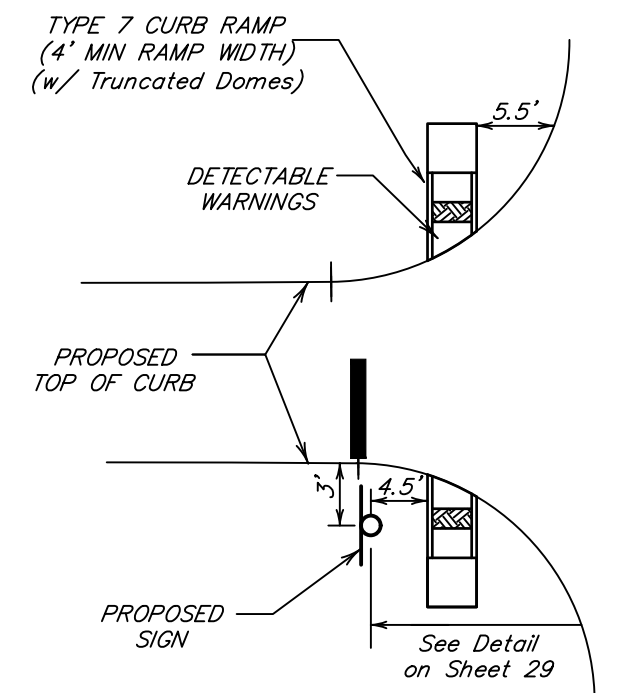
SCALE: 1"=60' DGN. BY: AHR  
 DATE: OCTOBER 2024 DWN. BY: JWS  
 JOB NO. 16759-0010-12 DWG. NO. \_\_\_\_\_  
 SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
 F.B. NO. \_\_\_\_\_

STATE OF TEXAS  
 DARREN J. MCAFEE  
 10/1/2024  
 137808  
 LICENSED PROFESSIONAL ENGINEER

SHEET NO. 10 OF 30

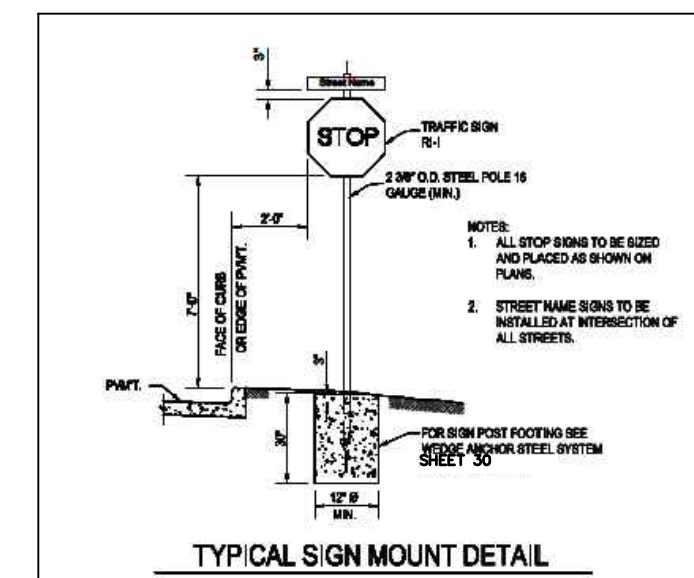
MATCHLINE SEE SHEET #





**SIGN LOCATION & WHEELCHAIR RAMP DETAIL**  
N.T.S.

- NOTE:**
- All Combination Street and Regulatory Signs Shall be Located at Curb Returns Unless Otherwise Noted.
  - See Sheet 30 for Sign Construction Details



**SPECIAL NOTES:**

- BLUE REFLECTOR BUTTONS SHALL BE PLACED 6" OFF OF THE CENTERLINE OF THE SIDE FLUSH VALVE.
- ALL R1-1 STOP SIGNS SHALL BE 30"x30" DIAMOND GRADE SHEETING.
- ALL STREET NAME SIGNS SHALL BE ON 8-INCH BLADES.
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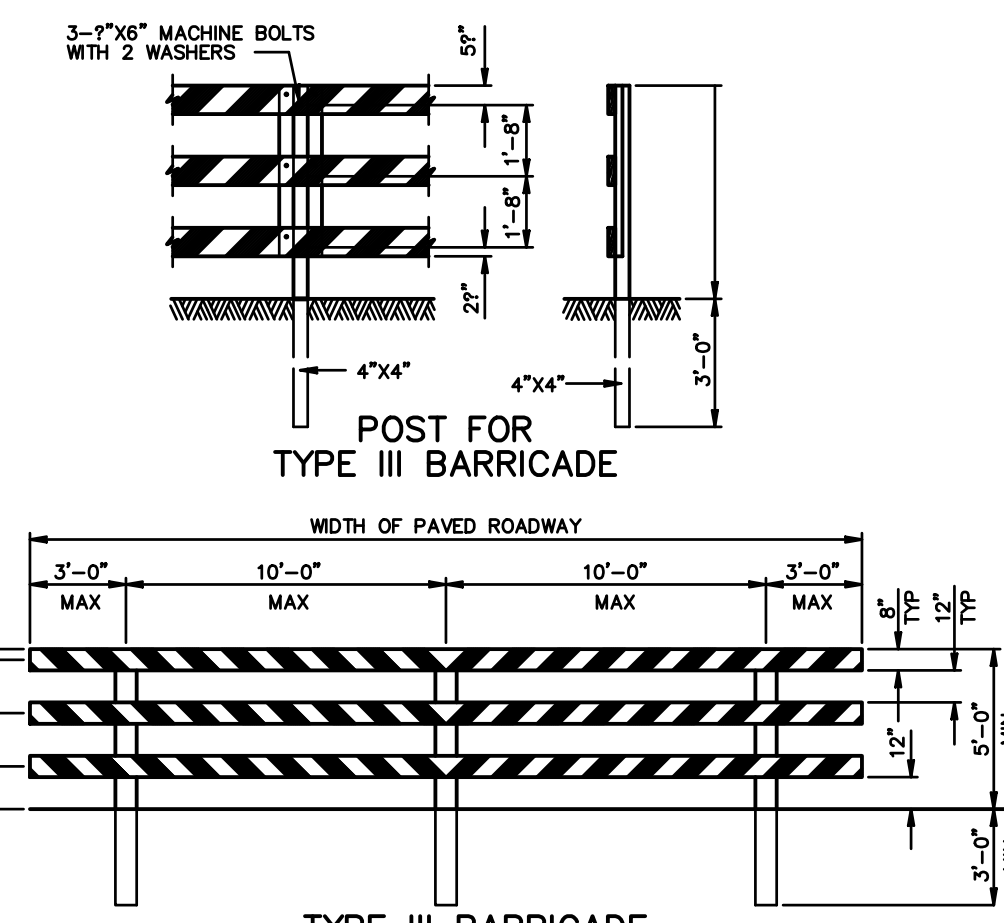
**LEGEND**

- STOP SIGN
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- TYPE III BARRICADE
- SPEED LIMIT SIGN
- 6" CURB (TRANSITION BETWEEN 6" CURB AND 4"x12" CURB AT WHEEL CHAIR RAMP OR LOT LINES)
- TYPE 7 ADA RAMP
- RESTRICTED RESERVE

**LEGEND**

- TYPE II A-A  
YELLOW  
Button With Reflector in Both Directions
- TYPE Y  
YELLOW  
Button (Non-Reflective)
- TYPE I-C  
WHITE  
Facing Traffic  
Button With Reflector in One Direction
- TYPE W  
WHITE  
Button (Non-Reflective)

**BUTTON LEGEND**  
N.T.S.



**TYPE III BARRICADE FOR END OF ROAD**

FOR TYPE III BARRICADE FOR END OF ROAD, THE THREE (3) RAILS SHALL BE REFLECTIVE RED AND REFLECTIVE WHITE STRIPES ON SIDE FACING TRAFFIC.

**TRAFFIC BUTTON PLACEMENT**

- PROPOSED REFLECTORIZED TRAFFIC BUTTONS TO BE PLACED AS FOLLOWS:
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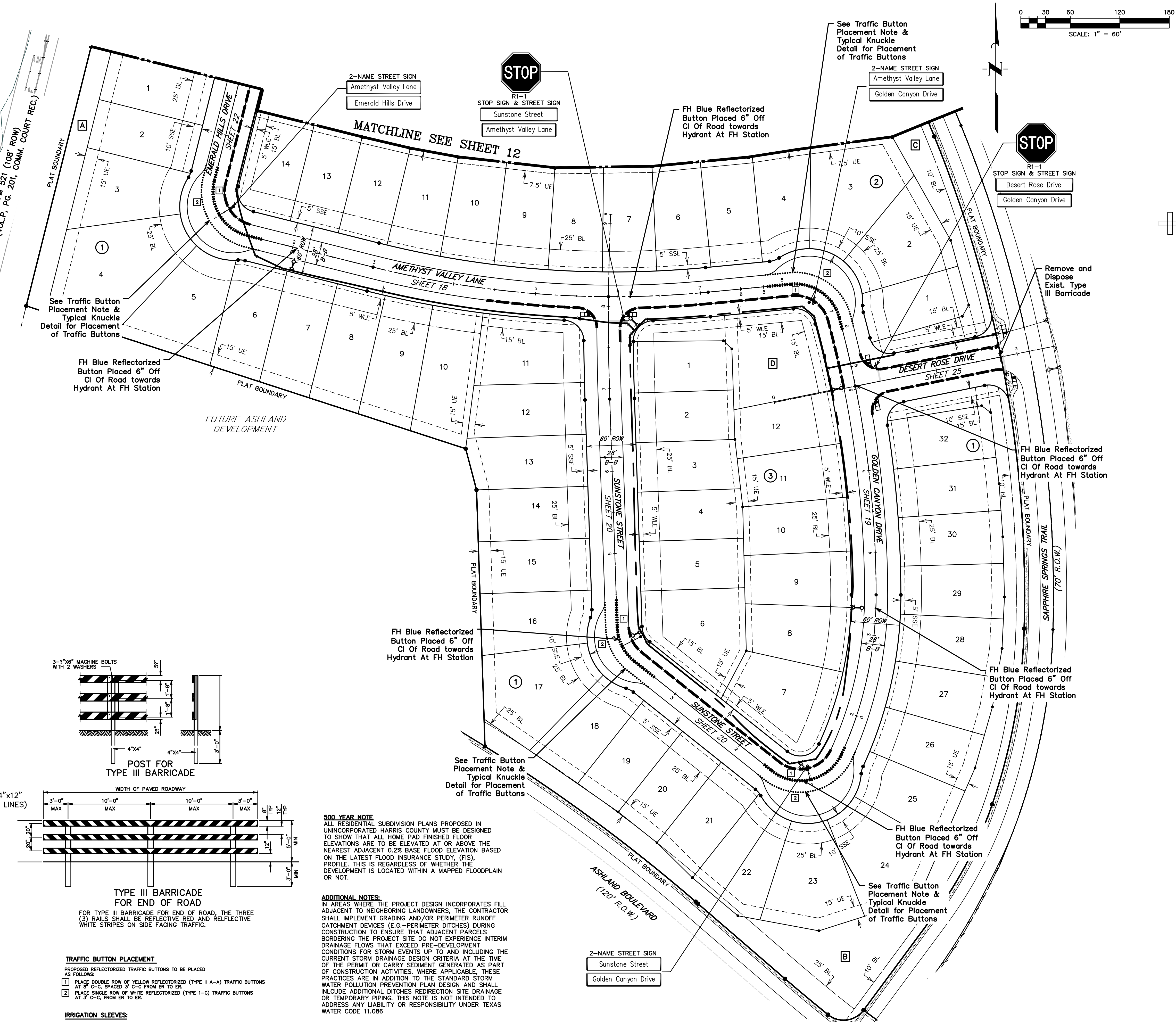
**IRRIGATION SLEEVES:**

- SLEEVES SHALL BE GLASS 200 PVC EXTENDING A MIN. 2' BEYOND BACK OF CURB WITH ENDS CAPPED.
- INSTALL A MIN. 24" BELOW TOP OF PAINT, TO TOP OF PIPE.
- CONTRACTOR TO MARK LOCATION ON CURB WITH CHISELED MARK PAINTED GREEN.

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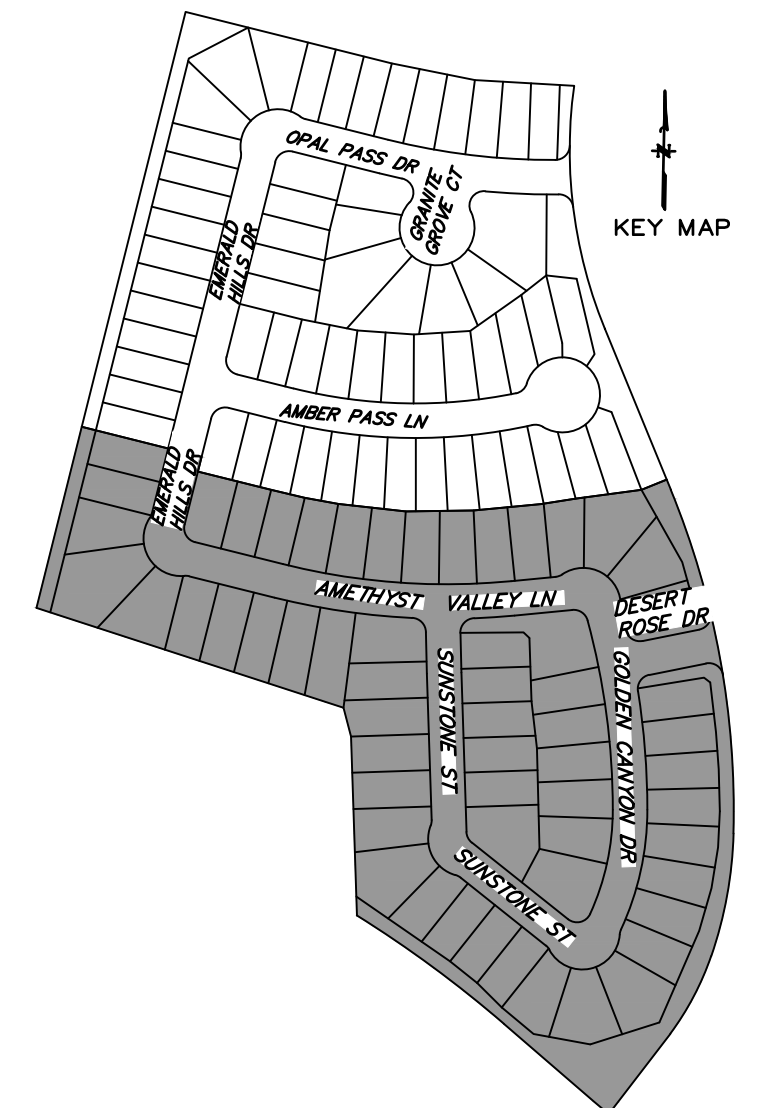
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NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
BRAZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2  
GENERAL CONSTRUCTION LAYOUT

**SIGNS & BARRICADES I**

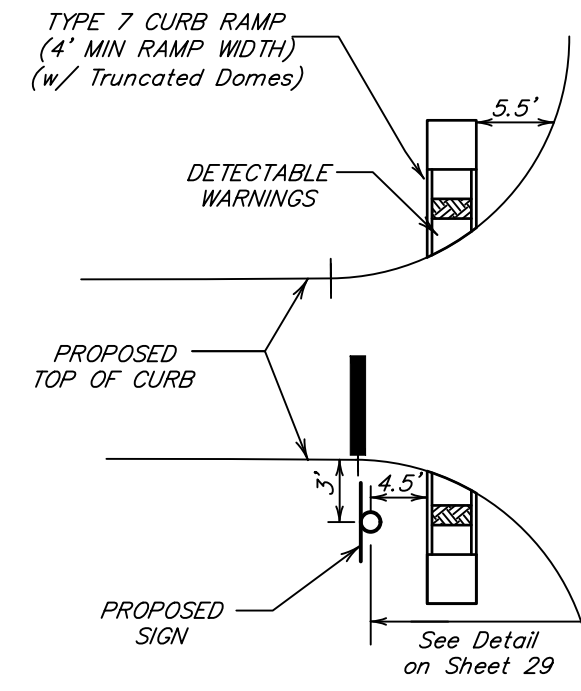


SCALE: 1"=60'  
DATE: OCTOBER 2024  
JOB NO. 16759-0010-12  
SUBMITTED:

DGN. BY: AHR  
DWN. BY: JWS  
DWG. NO.:  
SURV. BY:  
F.B. NO.:







- SPECIAL NOTES**
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**LEGEND**

- ⊥ STOP SIGN
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- ⊥ 6" CURB (TRANSITION BETWEEN 6" CURB AND 4"x12" CURB AT WHEEL CHAIR RAMP OR LOT LINES)
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**LEGEND**

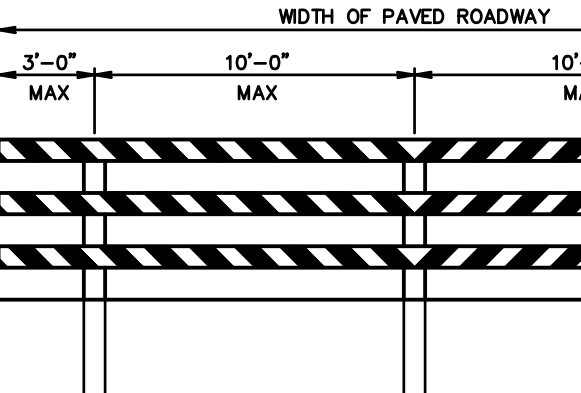
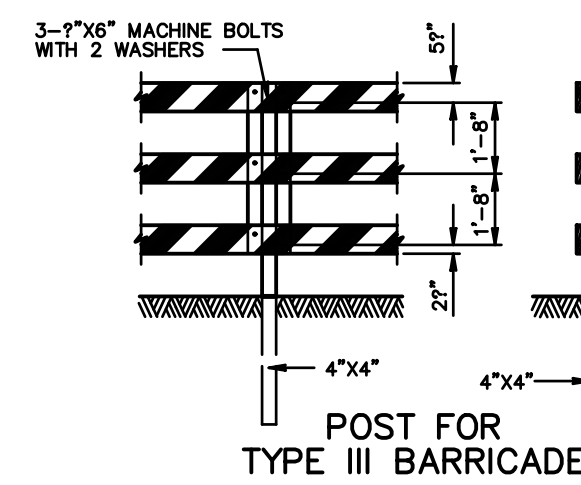
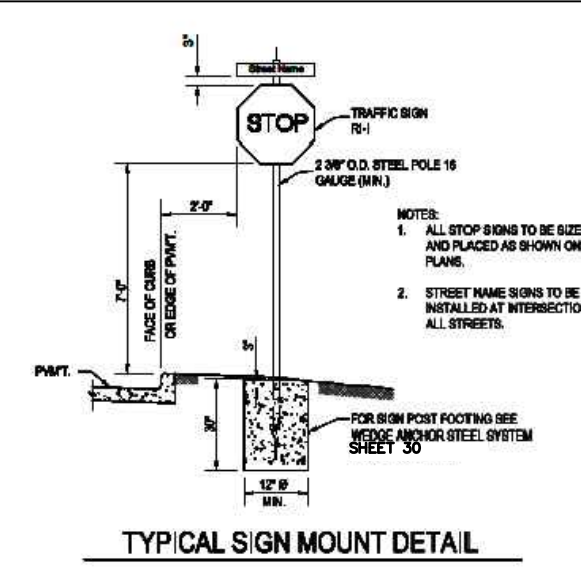
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**BUTTON LEGEND**

N.T.S.

**SIGN LOCATION & WHEELCHAIR RAMP DETAIL N.T.S.**

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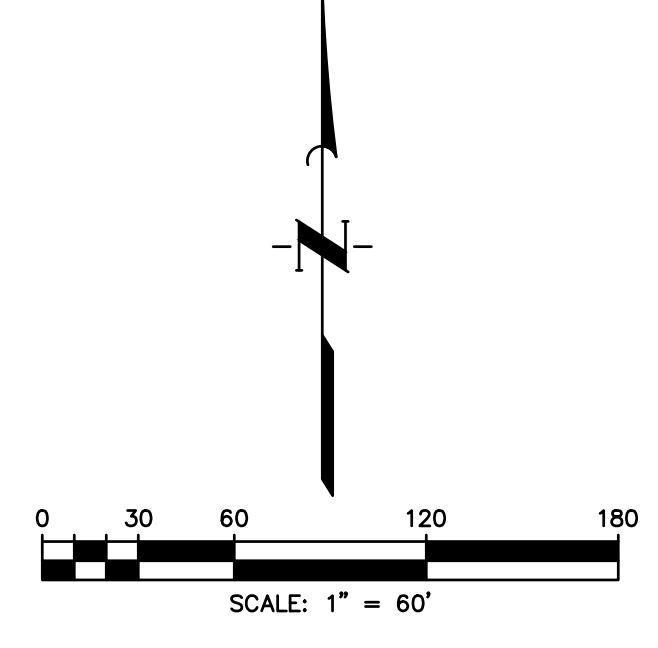
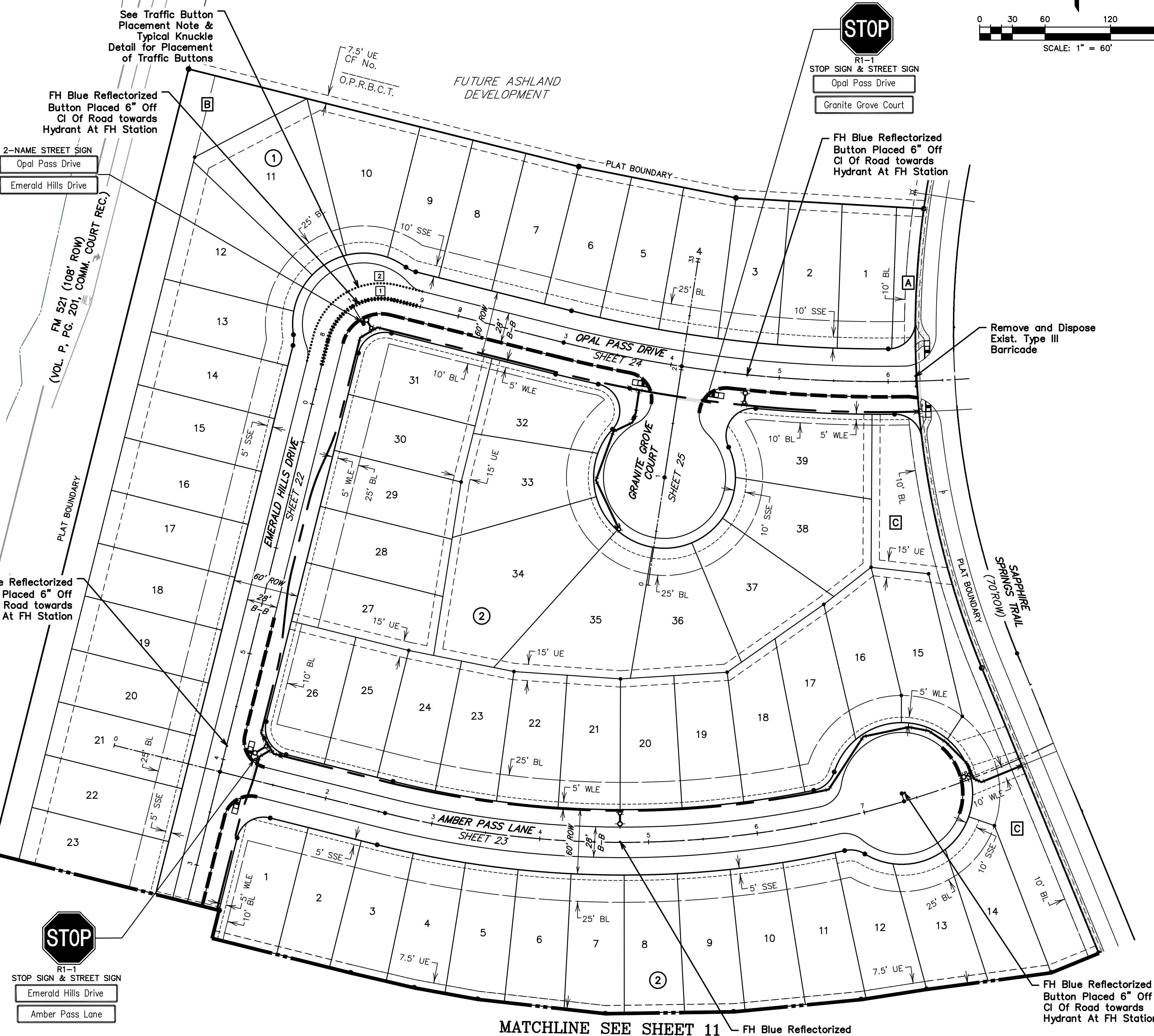
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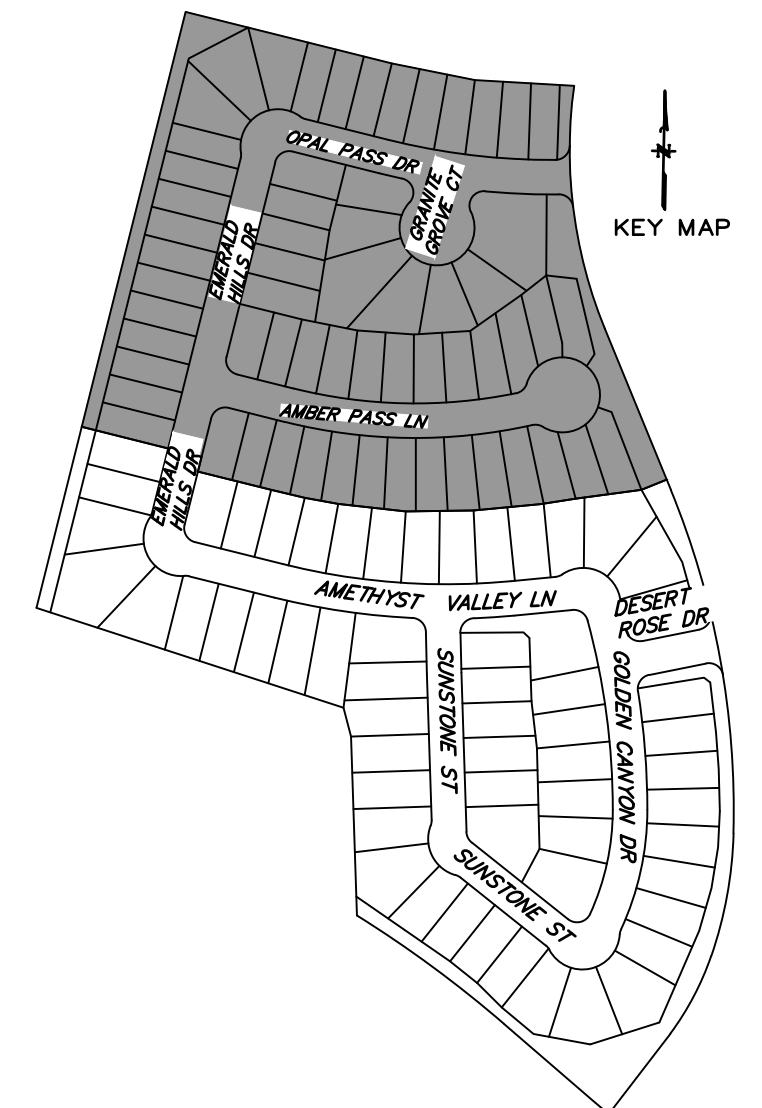
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NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
BARZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2  
GENERAL CONSTRUCTION LAYOUT

**SIGNS & BARRICADES II**

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
3102 Arroyo Grande Blvd, Suite 1504 Austin, Texas 78741 (512) 441-2923

SCALE: 1"=60' DGN. BY: AHR  
DATE: OCTOBER 2024 DWN. BY: JWS  
JOB NO. 16759-0010-12 DWG. NO. \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
F.B. NO. \_\_\_\_\_

10/11/2024

Darren J. McAfee  
137808  
LICENSED PROFESSIONAL ENGINEER

SHEET NO. 12 OF 30







**EROSION AND SEDIMENTATION CONTROL NOTES**

- PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS AT LOCATION SHOWN ON PLANS.
- CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENTATION CONTROL SYSTEMS SPECIFIED HEREIN, AT A MINIMUM OF ONCE EVERY CALENDAR DAY.
- CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EROSION AND SEDIMENTATION CONTROL SYSTEM THROUGHOUT THE DURATION OF THE CONTRACT. (NO SEPARATE PAY).
- CONTRACTOR SHALL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
- CONTRACTOR SHALL LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. CONTRACTOR SHALL USE SILT FENCING, HAY BALES, OR BERMS AROUND FUEL STORAGE AREAS. (NO SEPARATE PAY).
- CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY, AND IN WRITING, OF ANY FUEL OR TOXIC MATERIAL SPILLS ONTO THE PROJECT/CONSTRUCTION AREA AND THE ACTION TAKEN TO REMEDY THE PROBLEM.
- CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF HIS FUELS, MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER. (NO SEPARATE PAY).
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE ENVIRONMENTAL LAWS.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATELY MAINTAINED SANITARY FACILITIES.
- AT COMPLETION OF THE CONTRACT, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL EXAMINE EROSION AND SEDIMENTATION CONTROL SYSTEM BEFORE RELIEVING CONTRACTOR OF HIS MAINTENANCE RESPONSIBILITIES.
- IF EROSION AND SEDIMENTATION CONTROL SYSTEM IS EXISTING FROM PRIOR CONTRACTS, OWNER AND/OR OWNER'S REPRESENTATIVES WITH THE CONTRACTOR SHALL EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEM FOR DAMAGE PRIOR TO CONTRACTOR STARTING CONSTRUCTION OF THE CONTRACT. ANY DAMAGE NOTED AT THIS TIME SHALL BE REPAIRED AT OWNER'S EXPENSE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR STREET CLEANING, ON A DAILY BASIS, ALL MUD AND DIRT DEPOSITED ON THE EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY.
- IF PAVING CONTRACTOR REMOVES OR PUNCTURES TIMBER GRATE TO ESTABLISH DRAINAGE, INLET MUST BE SURROUNDED BY FILTER FABRIC FENCE AS SHOWN IN DETAIL ON THIS SHEET.

**MANHOLE/INLET PROTECTION NOTES**



- INLETS AND MANHOLES THAT ARE NOT COMPLETE AND/OR ARE SUBJECT TO CONVEYING STORM WATER FLOWS ARE TO BE PROTECTED TO PREVENT SEDIMENT FROM ENTERING THE PROPOSED OR EXISTING STORM SEWER SYSTEM.
- PROTECTION SHALL CONSIST OF ONE LAYER OF 3x12-INCH OAK TIMBERS, ONE (1) INCH APART, COVERED WITH ONE LAYER OF WOVEN POLYPROPYLENE OR POLYESTER FILTER FABRIC (EXON GTF 100s, PHILLIPS SUPAC 4WS(U) OR APPROVED EQUAL) HELD IN PLACE WITH 1/2" STAPLES. TIMBERS SHALL BE HELD IN PLACE WITH TWO (2) 2x4's NAILED SECURELY TO EACH TIMBER OVER THE FILTER FABRIC. THE FILTER FABRIC SHALL EXTEND BEYOND THE PERIMETER OF THE OAK TIMBERS AS TO ENSURE ONE (1) FOOT OF BURY BETWEEN THE MANHOLE OR INLET AND THE SURROUNDING SOIL AS SHOWN.
- FILTER FABRIC TO BE CLEANED OR REPLACED WHEN IT CEASES TO FUNCTION PROPERLY OR AS DIRECTED BY THE ENGINEER.
- CONTRACTOR MAY SUBMIT PLANS FOR ALTERNATE METHODS OF PROTECTION. THESE ALTERNATE METHODS MUST BE APPROVED PRIOR TO USE IN THE FIELD.
- NO SEPARATE PAYMENT SHALL BE MADE FOR INLET AND MANHOLE PROTECTION. INCLUDE THE COST IN THE UNIT PRICE FOR THE INLETS AND MANHOLES.

**LEGEND**


-  INLET PROTECTION BARRIERS FOR STAGE I & II INLETS
-  REINFORCED FILTER FABRIC BARRIER
-  STABILIZED CONSTRUCTION ENTRANCE
-  CONCRETE TRUCK WASHOUT AREA

**INSTALLATION SEQUENCE**



**SWPPP CONTRACTOR:**

- Install  at start of construction.
- Install  at designated locations.
- Install Gravel Bags at existing inlets.
- Install other Best Management Practices needed prior to construction.



**UTILITY CONTRACTOR:**

- Maintain existing facilities.
- Install  for Stage I inlets.
- Install IPB for Stage I inlets.
- Install Filter Fabric below manhole covers and inlet grates.

**PAVING CONTRACTOR:**

- Maintain existing Best Management Practices.
- Repair Stage I inlet protection as needed.
- Install  behind Stage I inlets immediately upon completion of paving.
- Coordinate/Request  installed by SWPPP Contractor upon completion of curb.
- Sweep existing streets during construction.

**SWPPP CONTRACTOR:**

- Install  at designated locations.
- Install  for Stage II inlets upon completion of paving
- Area within ROW and Adjacent Easements Disturbed during Construction of Utilities to be Hydro-Mulch Seeded upon completion of Utilities.
- Broadcast Seeding of disturbed areas after final grading
- Install rock filter dam or velocity dissipation devices if needed.

**SWPPP CONSTRUCTION NOTES**

- CONTRACTOR SHALL IMPLEMENT INLET PROTECTION DEVICES AND REINFORCED FILTER FABRIC BARRIER ALONG ROAD AND SIDE DITCHES AT LOCATIONS SHOWN ON THE TYPICAL STORM WATER POLLUTION PREVENTION (SWPPP) PLANS TO KEEP SILT AND OR EXCAVATED MATERIALS FROM ENTERING INTO THE STORM WATER INLETS AND DITCHES EVENTUALLY POLLUTING THE RECEIVING STORM.
- DURING THE EXCAVATING PHASE OF THE PROJECT, CONTRACTOR SHALL SCHEDULE THE WORK IN SHORT SEGMENTS SO THAT EXCAVATION MATERIAL CAN BE QUICKLY HAULED AWAY FROM THE SITE AND TO PREVENT IT FROM STAYING UNCOLLECTED ON THE EXISTING PAVEMENT. ANY LOOSE EXCAVATED MATERIAL WHICH FALLS ON PAVEMENTS OR DRIVEWAYS SHALL BE SWEEPED BACK INTO THE EXCAVATED AREAS.
- CONTRACTOR SHALL CLEAN UP THE EXISTING STREET INTERSECTIONS AND DRIVEWAYS DAILY, AS NECESSARY, TO REMOVE ANY EXCESS MUD, SILT OR ROCK TRACKED FROM THE EXCAVATED AREA.
- CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING THE CONSTRUCTION OF THE PROJECT, ALWAYS CLEANING UP DIRT AND LOOSE MATERIAL AS CONSTRUCTION PROGRESSES.
- CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN(14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF THE STORM EVENT OF 0.5 INCHS OR GREATER.
  - DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
  - AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
  - STRUCTURAL CONTROL MEASURES.
  - LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
- CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SOODING IS DISTURBED BY EXCAVATION ON BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SOODING. SLOPES 4:1 OR STEEPER SHALL BE REPLACED BY BLOCK SOODING.

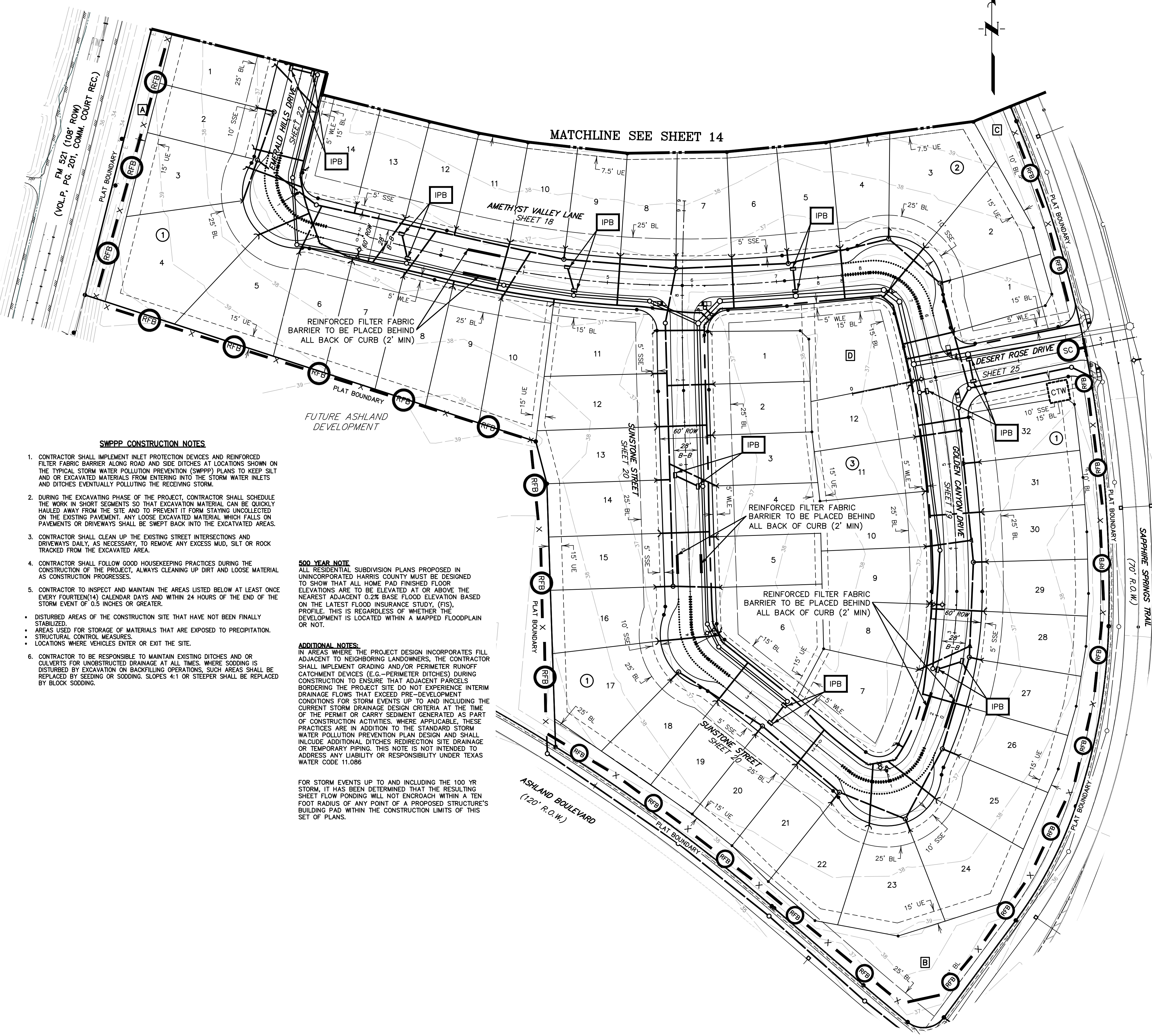
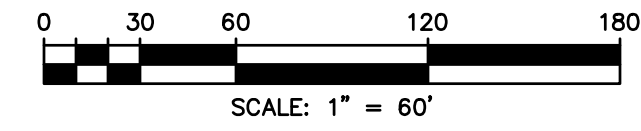
**500 YEAR NOTE**

ALL RESIDENTIAL SUBDIVISION PLANS PROPOSED IN UNINCORPORATED HARRIS COUNTY MUST BE DESIGNED TO SHOW THAT ALL HOME PAD FINISHED FLOOR ELEVATIONS ARE TO BE ELEVATED AT OR ABOVE THE NEAREST ADJACENT 0.2% BASE FLOOD ELEVATION BASED ON THE LATEST FLOOD INSURANCE STUDY, (FIS), PROFILE. THIS IS REGARDLESS OF WHETHER THE DEVELOPMENT IS LOCATED WITHIN A MAPPED FLOODPLAIN OR NOT.

**ADDITIONAL NOTES:**

IN AREAS WHERE THE PROJECT DESIGN INCORPORATES FILL ADJACENT TO NEIGHBORING LANDOWNERS, THE CONTRACTOR SHALL IMPLEMENT GRADING AND/OR PERIMETER RUNOFF CATCHMENT DEVICES (E.G. - PERIMETER DITCHES) DURING CONSTRUCTION TO ENSURE THAT ADJACENT PARCELS BORDERING THE PROJECT SITE DO NOT EXPERIENCE INTERIM DRAINAGE FLOWS THAT EXCEED PRE-DEVELOPMENT CONDITIONS FOR STORM EVENTS UP TO AND INCLUDING THE CURRENT STORM DRAINAGE DESIGN CRITERIA AT THE TIME OF THE PERMIT OR CARRY SEDIMENT GENERATED AS PART OF CONSTRUCTION ACTIVITIES, WHERE APPLICABLE. THESE PRACTICES ARE IN ADDITION TO THE STANDARD STORM WATER POLLUTION PREVENTION PLAN DESIGN AND SHALL INCLUDE ADDITIONAL DITCHES REDIRECTION SITE DRAINAGE OR TEMPORARY PIPING. THIS NOTE IS NOT INTENDED TO ADDRESS ANY LIABILITY OR RESPONSIBILITY UNDER TEXAS WATER CODE 11.086

FOR STORM EVENTS UP TO AND INCLUDING THE 100 YR STORM, IT HAS BEEN DETERMINED THAT THE RESULTING SHEET FLOW PONDING WILL NOT ENCRACH WITHIN A TEN FOOT RADIUS OF ANY POINT OF A PROPOSED STRUCTURE'S BUILDING PAD WITHIN THE CONSTRUCTION LIMITS OF THIS SET OF PLANS.



**BENCHMARK**  
ELEVATIONS WERE OBTAINED WITH REAL TIME KINETIC GLOBAL POSITIONING SATELLITE EQUIPMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION: D66956 DW1 CLUTE COOP CORS ARP DL3490 TXBC BAY CITY CORS ARP DH3614 TXLM LA MARQUE CORS ARP

TBM A BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, APPROXIMATELY 1600 ± SOUTH FROM FM 521, AT THE NORTHWEST CORNER OF THE SUBJECT TRACT, 4.0' FROM THE EDGE OF ASPHALT AND 37' NORTHWEST FROM A POWER POLE. ELEVATION = 40.01 FEET, NAVD 88.

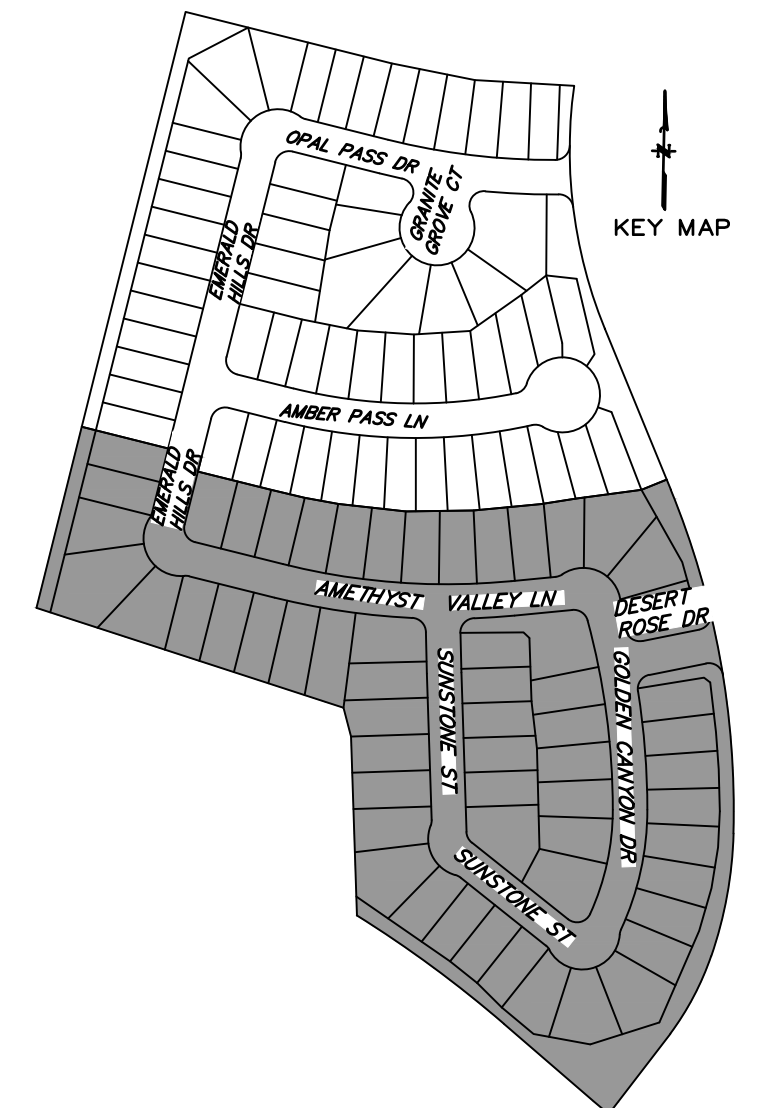
TBM B BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, 3130 FEET NORTH FROM THE INTERSECTION OF ANCHOR ROAD, 2.7' FROM THE EDGE OF ASPHALT AND 36' NORTHWEST FROM A POWER POLE. ELEVATION = 36.59 FEET, NAVD 88.

**FLOODPLAIN**  
THIS TRACT LIES WITHIN ZONES "X-SHADED" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY NO. 485458, MAP NUMBER 4803900430K, PANEL 430, SUFFIX "K" DATED DECEMBER 30, 2020, FOR BRAZORIA COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "X-SHADED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

**WATER LINE-SANITARY SEWER CROSSING**  
PLACE ONE FULL 18" SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE CENTERED AT CROSSING. EMBED SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PROVIDE RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24" INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY (SEE SANITARY SEWER CONSTRUCTION NOTES - SHEET 2 - PROTECTION REQUIREMENTS AT WATERLINE - SANITARY SEWER CROSSING), 24" MIN CLEARANCE. NO SEPARATE PAY.

**SANITARY SEWER MANHOLES**  
ALL SANITARY SEWER MANHOLES SHALL BE COATED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD SPECIFICATIONS AND APPROVED PRODUCTS LIST.

**SANITARY SEWER NOTE**  
ALL GRAVITY SANITARY SEWER PIPE SHALL BE SDR 26 PVC.



NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
BRAZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2  
GENERAL CONSTRUCTION LAYOUT

**STORM WATER POLLUTION PREVENTION PLAN I**



SCALE: 1"=60' DGN. BY: AHR  
DATE: OCTOBER 2024 DWN. BY: JWS  
JOB NO. 16759-0010-12 DWG. NO. \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
F.B. NO. \_\_\_\_\_

State of Texas seal and signature of **Darren J. McAfee**, dated 10/11/2024. License number 137808. SHEET NO. 13 OF 30.



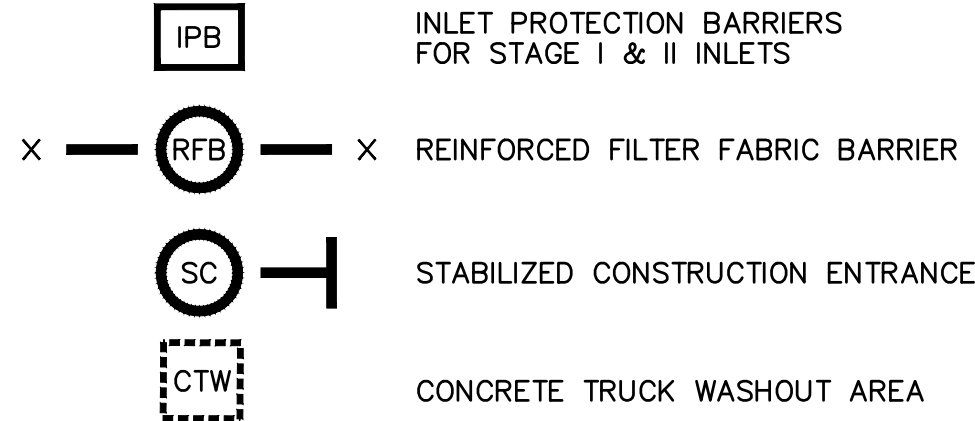
**EROSION AND SEDIMENTATION CONTROL NOTES**

- PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS AT LOCATION SHOWN ON PLANS.
- CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENTATION CONTROL SYSTEMS SPECIFIED HEREIN, AT A MINIMUM OF ONCE EVERY CALENDAR DAY.
- CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EROSION AND SEDIMENTATION CONTROL SYSTEM THROUGHOUT THE DURATION OF THE CONTRACT. (NO SEPARATE PAY).
- CONTRACTOR SHALL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
- CONTRACTOR SHALL LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. CONTRACTOR SHALL USE SILT FENCING, HAY BALES, OR BERMS AROUND FUEL STORAGE AREAS. (NO SEPARATE PAY).
- CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY, AND IN WRITING, OF ANY FUEL OR TOXIC MATERIAL SPILLS ONTO THE PROJECT/CONSTRUCTION AREA AND THE ACTION TAKEN TO REMEDY THE PROBLEM.
- CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF HIS FUELS, MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER. (NO SEPARATE PAY).
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE ENVIRONMENTAL LAWS.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATELY MAINTAINED SANITARY FACILITIES.
- AT COMPLETION OF THE CONTRACT, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL EXAMINE EROSION AND SEDIMENTATION CONTROL SYSTEM BEFORE RELIEVING CONTRACTOR OF HIS MAINTENANCE RESPONSIBILITIES.
- IF EROSION AND SEDIMENTATION CONTROL SYSTEM IS EXISTING FROM PRIOR CONTRACTS, OWNER AND/OR OWNER'S REPRESENTATIVES WITH THE CONTRACTOR SHALL EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEM FOR DAMAGE PRIOR TO CONTRACTOR STARTING CONSTRUCTION OF THE CONTRACT. ANY DAMAGE NOTED AT THIS TIME SHALL BE REPAIRED AT OWNER'S EXPENSE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR STREET CLEANING, ON A DAILY BASIS, ALL MUD AND DIRT DEPOSITED ON THE EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY.
- IF PAVING CONTRACTOR REMOVES OR PUNCTURES TIMBER GRATE TO ESTABLISH DRAINAGE, INLET MUST BE SURROUNDED BY FILTER FABRIC FENCE AS SHOWN IN DETAIL ON THIS SHEET.

**MANHOLE/INLET PROTECTION NOTES**

- INLETS AND MANHOLES THAT ARE NOT COMPLETE AND/OR ARE SUBJECT TO CONVEYING STORM WATER FLOWS ARE TO BE PROTECTED TO PREVENT SEDIMENT FROM ENTERING THE PROPOSED OR EXISTING STORM SEWER SYSTEM.
- PROTECTION SHALL CONSIST OF ONE LAYER OF 3x12-INCH OAK TIMBERS, ONE (1) INCH APART, COVERED WITH ONE LAYER OF WOVEN POLYPROPYLENE OR POLYESTER FILTER FABRIC (EXXON GTF 100s, PHILLIPS SUPAC 4WS(UV) OR APPROVED EQUAL) HELD IN PLACE WITH 1/2" STAPLES. TIMBERS SHALL BE HELD IN PLACE WITH TWO (2) 2x4's NAILED SECURELY TO EACH TIMBER OVER THE FILTER FABRIC. THE FILTER FABRIC SHALL EXTEND BEYOND THE PERIMETER OF THE OAK TIMBERS AS TO ENSURE ONE (1) FOOT OF BURY BETWEEN THE MANHOLE OR INLET AND THE SURROUNDING SOIL AS SHOWN.
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**LEGEND**



**INSTALLATION SEQUENCE**

**SWPPP CONTRACTOR:**

- Install at start of construction.
- Install at designated locations.
- Install Gravel Bags at existing inlets.
- Install other Best Management Practices needed prior to construction.

**UTILITY CONTRACTOR:**

- Maintain existing facilities.
- Install for Stage I inlets.
- Install IPB for Stage II inlets.
- Install Filter Fabric below manhole covers and inlet grates.

**PAVING CONTRACTOR:**

- Maintain existing Best Management Practices.
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- Install behind Stage II inlets immediately upon completion of paving.
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- Sweep existing streets during construction.

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- Broadcast Seeding of disturbed areas after final grading.
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ALL RESIDENTIAL SUBDIVISION PLANS PROPOSED IN UNINCORPORATED HARRIS COUNTY MUST BE DESIGNED TO SHOW THAT ALL HOME PAD FINISHED FLOOR ELEVATIONS ARE TO BE ELEVATED AT OR ABOVE THE NEAREST ADJACENT 0.2% BASE FLOOD ELEVATION BASED ON THE LATEST FLOOD INSURANCE STUDY, (FIS), PROFILE. THIS IS REGARDLESS OF WHETHER THE DEVELOPMENT IS LOCATED WITHIN A MAPPED FLOODPLAIN OR NOT.

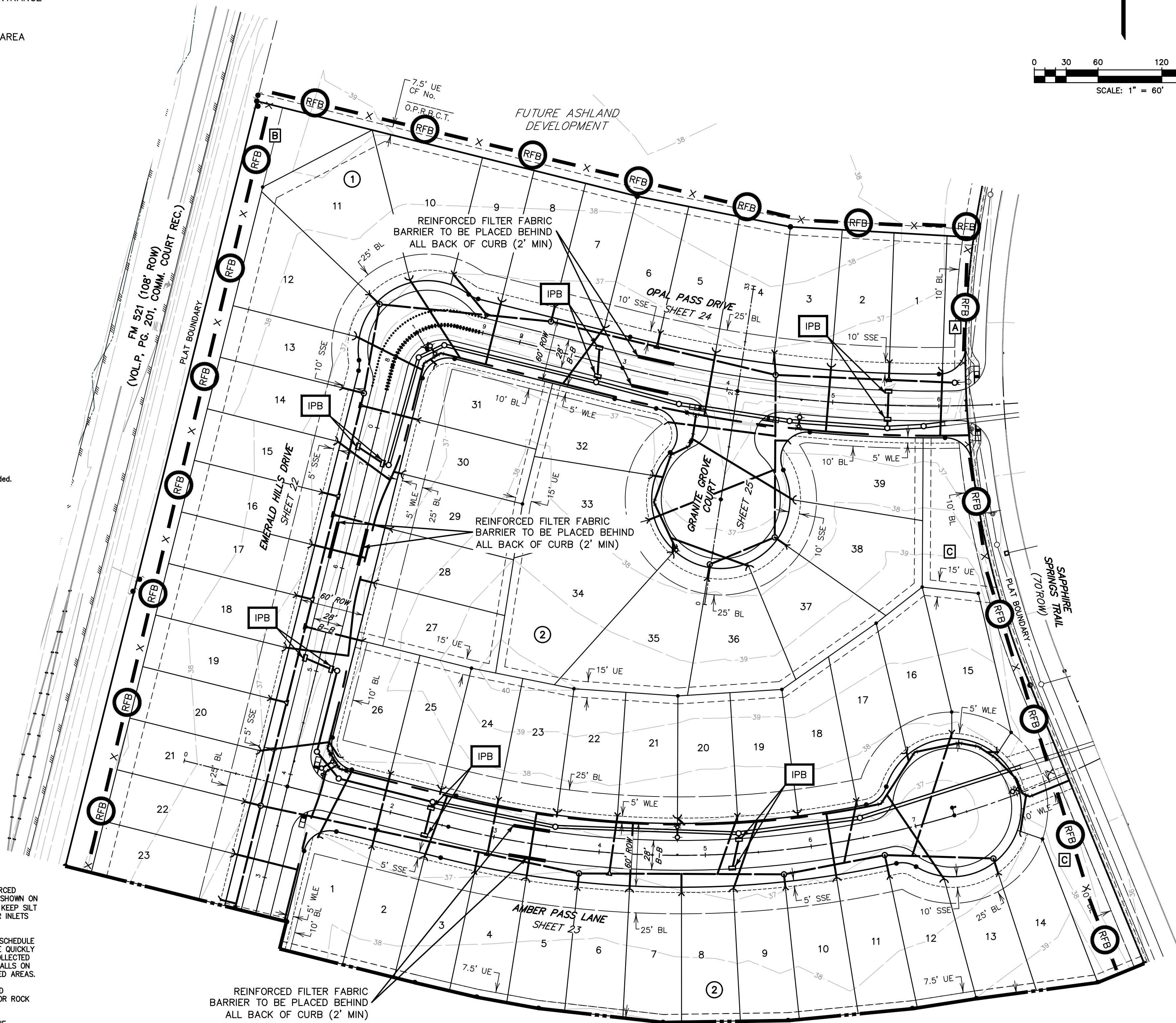
**ADDITIONAL NOTES:**

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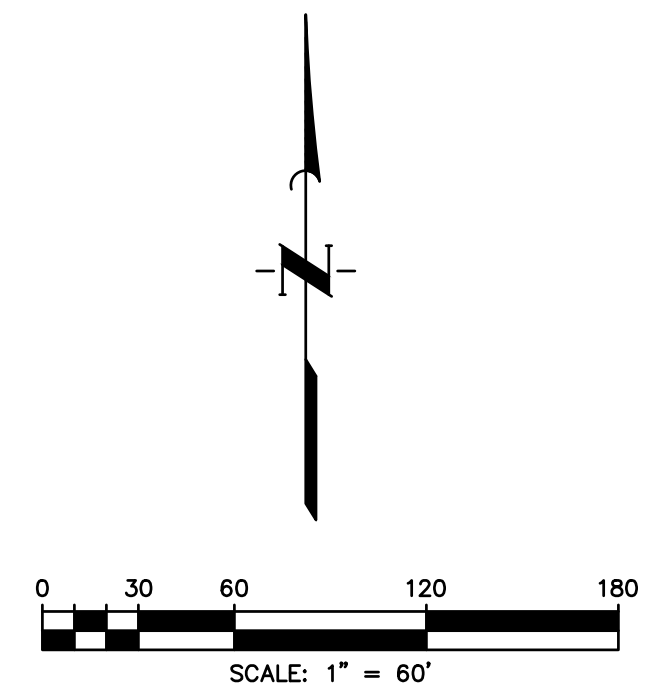
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- CONTRACTOR TO INSPECT AND MAINTAIN THE AREAS LISTED BELOW AT LEAST ONCE EVERY FOURTEEN(14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF THE STORM EVENT OF 0.5 INCHES OR GREATER.
  - DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
  - AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION.
  - STRUCTURAL CONTROL MEASURES.
  - LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE.
- CONTRACTOR TO BE RESPONSIBLE TO MAINTAIN EXISTING DITCHES AND OR CULVERTS FOR UNOBSTRUCTED DRAINAGE AT ALL TIMES. WHERE SODDING IS DISTURBED BY EXCAVATION OR BACKFILLING OPERATIONS, SUCH AREAS SHALL BE REPLACED BY SEEDING OR SODDING. SLOPES 4:1 OR STEEPER SHALL BE REPLACED BY BLOCK SODDING.



MATCHLINE SEE SHEET 13



**BENCHMARK**  
ELEVATIONS WERE OBTAINED WITH REAL TIME KINETIC GLOBAL POSITIONING SATELLITE EQUIPMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION: D66956 DW1 CLUTE COOP CORS ARP DL3490 TXBC BAY CITY CORS ARP DH3614 TXLM LA MARQUE CORS ARP

TBM A BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, APPROXIMATELY 1600 ± SOUTH FROM FM 521, AT THE NORTHWEST CORNER OF THE SUBJECT TRACT, 4.0' FROM THE EDGE OF ASPHALT AND 37' NORTHWEST FROM A POWER POLE. ELEVATION = 40.01 FEET, NAVD 88.

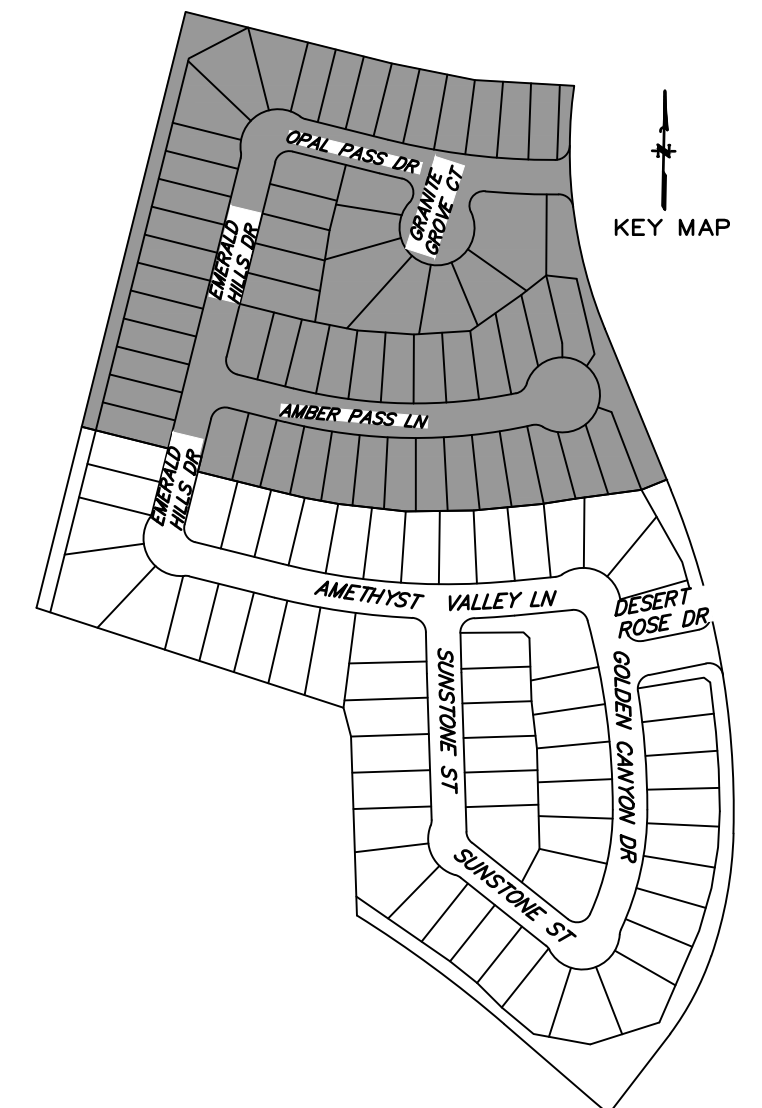
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**FLOODPLAIN**  
THIS TRACT LIES WITHIN ZONES "X-SHADED" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY NO. 485458, MAP NUMBER 4803900430K, PANEL 430, SUFFIX "K" DATED DECEMBER 30, 2020, FOR BRAZORIA COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "X-SHADED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

**WATER LINE-SANITARY SEWER CROSSING**  
PLACE ONE FULL 18" SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE CENTERED AT CROSSING. EMBED SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PROVIDE RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24" INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY (SEE SANITARY SEWER CONSTRUCTION NOTES - SHEET 2 - PROTECTION REQUIREMENTS AT WATERLINE - SANITARY SEWER CROSSING), 24" MIN CLEARANCE. NO SEPARATE PAY.

**SANITARY SEWER MANHOLES**  
ALL SANITARY SEWER MANHOLES SHALL BE COATED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD SPECIFICATIONS AND APPROVED PRODUCTS LIST.

**SANITARY SEWER NOTE**  
ALL GRAVITY SANITARY SEWER PIPE SHALL BE SDR 26 PVC.



NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
BARZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2  
GENERAL CONSTRUCTION LAYOUT

**STORM WATER POLLUTION PREVENTION PLAN II**



SCALE: 1"=60' DGN. BY: AHR  
DATE: OCTOBER 2024 DWN. BY: JWS  
JOB NO. 16759-0010-12 DWG. NO.  
SUBMITTED: SURV. BY:  
F.B. NO.





- LOT GRADING NOTES:**
- THE LINES AND GRADES ON THIS GRADING PLAN DO NOT IMPLY AUTHORIZATION TO PERFORM ANY GRADING WORK ON OTHER PROPERTIES, NOR DOES THIS PLAN INDICATE GRADING APPROVAL FOR WORK SHOWN IN UTILITY EASEMENTS. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN SUCH APPROVALS PRIOR TO COMMENCING WORK.
  - THE CONTRACTOR SHALL COMPLETE ALL EXCAVATION ACTIVITIES TO THE LINES AND GRADES SHOWN BY THIS PLAN. UNIFORM SMOOTH GRADING OF ALL AREAS SHALL BE ACCOMPLISHED. THE FINISHED SURFACE SHALL BE REASONABLY SMOOTH AND FREE FROM IRREGULARITIES.
  - THE CONTRACTOR SHALL FIELD ADJUST THE PROPOSED LOCATION AND ROUTING OF SURFACE DRAINAGE SWALES TO OPTIMIZE DRAINAGE, AS REQUIRED. CONTRACTOR TO OBTAIN APPROVAL FROM ENGINEER PRIOR TO MAKING ADJUSTMENTS (NO SEPARATE PAY).
  - LOT AREAS THAT ARE TO RECEIVE FILL SHALL BE PREPARED AS FOLLOWS (NO SEPARATE PAY).
    - AREAS TO RECEIVE FILL WITH EXISTING GRASS OR SHRUBBERY HIGHER THAN 2 FEET MUST BE MOVED PRIOR TO THE PLACEMENT OF FILL STAKES.
    - CLEARING OF SCATTERED TREES UP TO 4 INCH CALIPER IN AREAS DESIGNATED TO RECEIVE FILL IS INCIDENTAL TO THE CONTRACT. INCLUDE COSTS IN PRICE BID FOR LOT GRADING.
    - AREAS THAT ARE TO RECEIVE FILL WILL BE STRIPPED TO A DEPTH OF 3". STRIPPINGS SHALL BE STOCK PILED AND THEN SPREAD EVENLY ON SURFACE OF FILL AREAS.
    - CONTRACTOR TO PROOF ROLL ALL LOTS WITHIN THE PROJECT BOUNDARY AS PART OF LOT GRADING. PRIOR TO THE PLACEMENT OF ANY MATERIAL ON NATIVE EARTH, THE AREA SHALL BE PROOF ROLLED. THE NATIVE SOIL SHALL BE ROLLED WITH SUFFICIENT INTENSITY TO BRING OUT WEAK SPOTS IN THE SUBGRADE WHICH WOULD OTHERWISE FAIL DURING THE CONSTRUCTION PROCESS. THE PROOF ROLLING SHALL BE COMPLETED WITH EQUIPMENT WEIGHING AT LEAST 20 TONS WITH TIRE PRESSURES BETWEEN 50 PSI AND 150 PSI. A MINIMUM OF TWO COVERAGE'S OF THE PROOF ROLLER WILL BE REQUIRED. EACH SUCCEEDING TRIP OF THE PROOF ROLLER SHALL BE OFFSET BY NOT GREATER THAN ONE TIRE WIDTH. ROLLERS SHALL BE OPERATED AT SPEEDS BETWEEN 2 AND 6 MPH. SHOULD SOFT UNSTABLE AREAS APPEAR IN THE LOTS, THE CONTRACTOR SHALL REMOVE THE UNSTABLE MATERIAL AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL REPLACE THIS WITH A SUITABLE MATERIAL COMPACTED AS REQUIRED (NO SEPARATE PAY FOR A DEPTH UP TO 1.5 FOOT).
  - PLACEMENT OF FILL SHALL NOT CREATE PONDING ON ADJACENT LOTS OF PROPERTY.
  - LOT FILL SHALL BE PLACED IN MAXIMUM LOOSE LIFTS OF EIGHT INCHES (8") OR LESS AND COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM TO +5% MOISTURE CONTENT AS DETERMINED BY AASHTO TEST METHOD T-99.
  - ALL EXISTING DRAINAGE SWALES IN FILL AREAS SHALL BE STRIPPED OF ANY VEGETATION, CLEANED AND MUCKED OUT TO SUITABLE SUBGRADE MATERIAL AND THEN FILLED AS SHOWN WITH EXCAVATION MATERIAL IN MAXIMUM EIGHT INCH (8") LOOSE LIFTS, WITH EACH LIFT COMPACTED TO AT LEAST 95% PROCTOR DENSITY AS DETERMINED BY AASHTO TEST METHOD T-99.
  - ENGINEER WILL PROVIDE APPROXIMATE BACK LOT LINE FINISH ELEVATIONS. CONTRACTOR SHALL VERIFY FINAL LOT GRADES AND ELEVATIONS TIED TO PROJECT BENCH MARK. CONTRACTOR SHALL INCLUDE COST IN ITEM BID FOR LOT GRADING.
  - FINAL PAYMENT SHALL BE CONTINGENT ON THE ENGINEER'S VERIFICATION THAT LOT GRADING IS IN ACCORDANCE WITH THE GRADING PLAN, AND THAT SOIL COMPACTION TESTS WERE PERFORMED AS REQUIRED.
  - ALL LOTS SHALL BE GRADED SO THAT NO PORTION OF ANY LOT SHALL DRAIN ONTO OR ACROSS AN OTHER LOT, BUT SHALL DRAIN DIRECTLY TO STREET UNLESS DESIGNATED AS OTHER THAN TYPE "A" GRADING.

**NOTE:**  
FOR STORM EVENTS UP TO AND INCLUDING THE 100 YR STORM, IT HAS BEEN DETERMINED THAT THE RESULTING SHEET FLOW PONDING WILL BE CONTAINED WITHIN THE STREET RIGHT OF WAY. THE TOP OF SLAB ELEVATION AT ANY POINT ON THE PERIMETER OF THE SLAB SHALL NOT BE LESS THAN TWELVE (12) INCHES ABOVE LOWEST FINISHED GRADE.

**ADDITIONAL NOTES:**  
IN AREAS WHERE THE PROJECT DESIGN INCORPORATES FILL ADJACENT TO NEIGHBORING LANDOWNERS, THE CONTRACTOR SHALL IMPLEMENT GRADING AND/OR PERIMETER RUNOFF CATCHMENT DEVICES (E.G. PERIMETER DITCHES) DURING CONSTRUCTION TO ENSURE THAT ADJACENT PARCELS BORDERING THE PROJECT SITE DO NOT EXPERIENCE INTERIM DRAINAGE FLOWS THAT EXCEED PRE-DEVELOPMENT CONDITIONS FOR STORM EVENTS UP TO AND INCLUDING THE CURRENT STORM DRAINAGE DESIGN CRITERIA AT THE TIME OF THE PERMIT OR CARRY SEDIMENT GENERATED AS PART OF CONSTRUCTION ACTIVITIES. WHERE APPLICABLE, THESE PRACTICES ARE IN ADDITION TO THE STANDARD STORM WATER POLLUTION PREVENTION PLAN DESIGN AND SHALL INCLUDE ADDITIONAL DITCHES REDIRECTION SITE DRAINAGE OR TEMPORARY PIPING. THIS NOTE IS NOT INTENDED TO ADDRESS ANY LIABILITY OR RESPONSIBILITY UNDER TEXAS WATER CODE 11.086

**500 YEAR NOTE:**  
ALL RESIDENTIAL SUBDIVISION PLANS PROPOSED IN UNINCORPORATED HARRIS COUNTY MUST BE DESIGNED TO SHOW THAT ALL HOME PAD FINISHED FLOOR ELEVATIONS ARE TO BE ELEVATED AT OR ABOVE THE NEAREST ADJACENT 0.2% BASE FLOOD ELEVATION BASED ON THE LATEST FLOOD INSURANCE STUDY (FIS). PROFILE. THIS IS REGARDLESS OF WHETHER THE DEVELOPMENT IS LOCATED WITHIN A MAPPED FLOODPLAIN OR NOT.

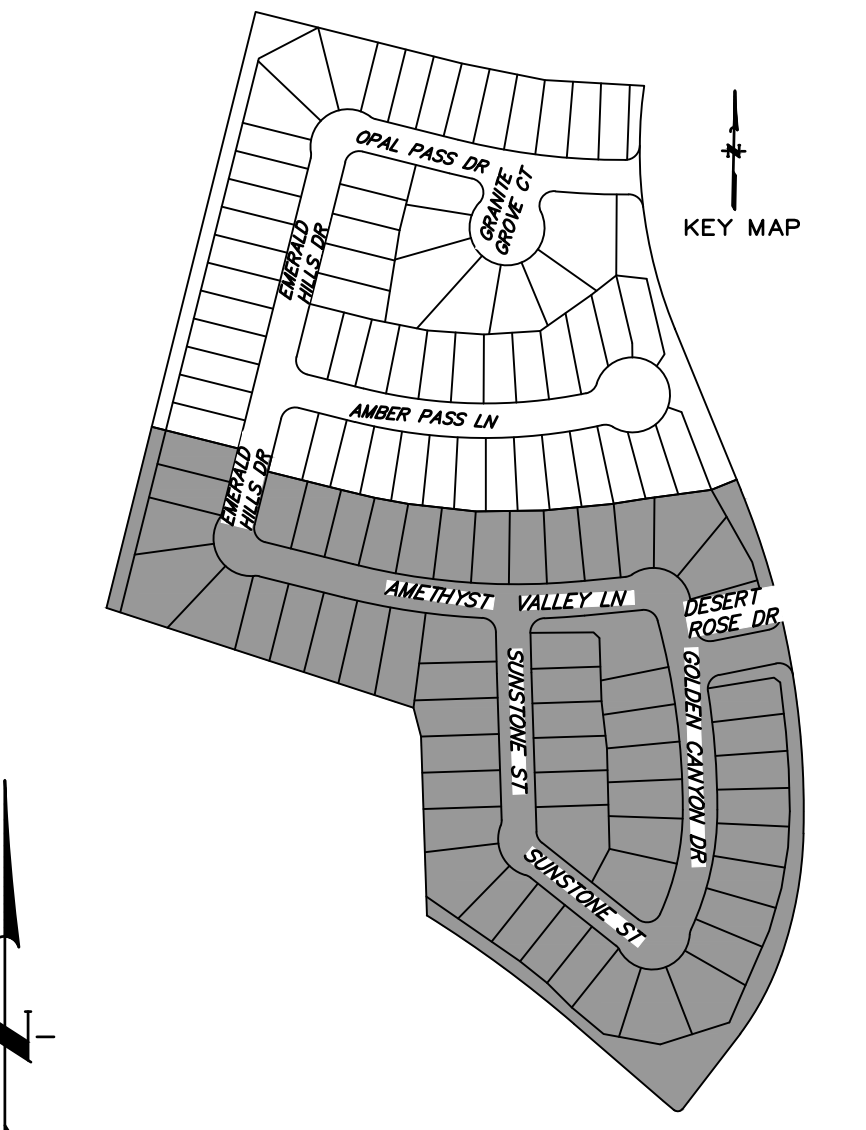
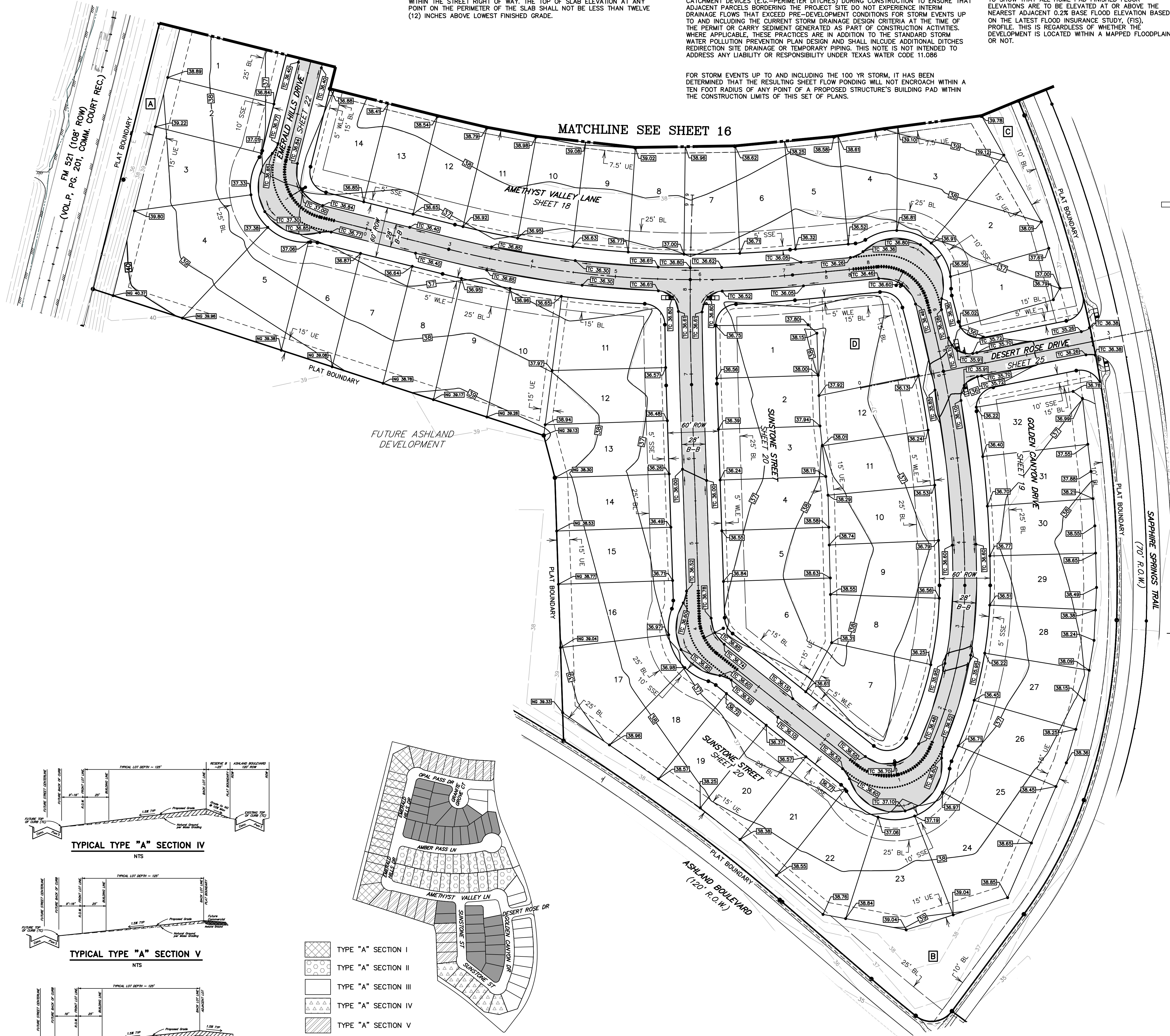
**BENCHMARK:**  
ELEVATIONS WERE OBTAINED WITH REAL TIME KINETIC GLOBAL POSITIONING SATELLITE EQUIPMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION: D6956 DMI CLUTE COOP CORRS ARP DL3490 TXBC BAY CITY CORRS ARP D43614 TXLM LA MARQUE CORRS ARP  
TBM A BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, APPROXIMATELY 1600 ± SOUTH FROM FM 32, AT THE NORTHWEST CORNER OF THE SUBJECT TRACT, 4.0' FROM THE EDGE OF ASPHALT AND 37' NORTHWEST FROM A POWER POLE ELEVATION = 40.01 FEET, NAVD 88.  
TBM B BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, 3130 FEET NORTH FROM THE INTERSECTION OF ANCHOR ROAD, 2.7' FROM THE EDGE OF ASPHALT AND 36' NORTHWEST FROM A POWER POLE ELEVATION = 36.59 FEET, NAVD 88.

**FLOODPLAIN:**  
THIS TRACT LIES WITHIN ZONES "X-SHADED" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY NO. 485458, MAP NUMBER 4803900430K, PANEL 430, SUFFIX "K" DATED DECEMBER 30, 2020, FOR BRAZORIA COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "X-SHADED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

**WATER LINE-SANITARY SEWER CROSSING:**  
PLACE ONE FULL 18" SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY PIPE CENTERED AT CROSSING. EMBED SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PROVIDE RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24" INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY (SEE SANITARY SEWER CONSTRUCTION NOTES - SHEET 2 - PROTECTION REQUIREMENTS AT WATERLINE - SANITARY SEWER CROSSING), 24" MIN CLEARANCE. NO SEPARATE PAY.

**SANITARY SEWER MANHOLES:**  
ALL SANITARY SEWER MANHOLES SHALL BE COATED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD SPECIFICATIONS AND APPROVED PRODUCTS LIST.

**SANITARY SEWER NOTE:**  
ALL GRAVITY SANITARY SEWER PIPE SHALL BE SDR 26 PVC.



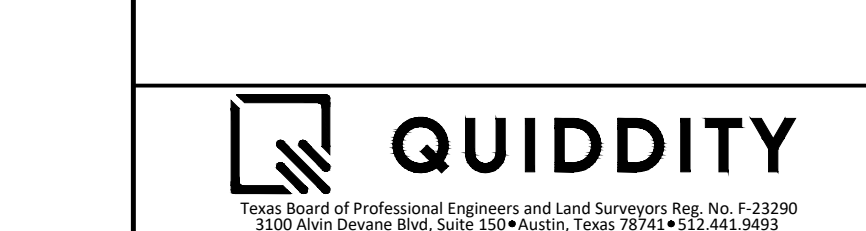
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SCALE: 1" = 60'  
NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
BARZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2  
GENERAL CONSTRUCTION LAYOUT

**GRADING PLAN I**

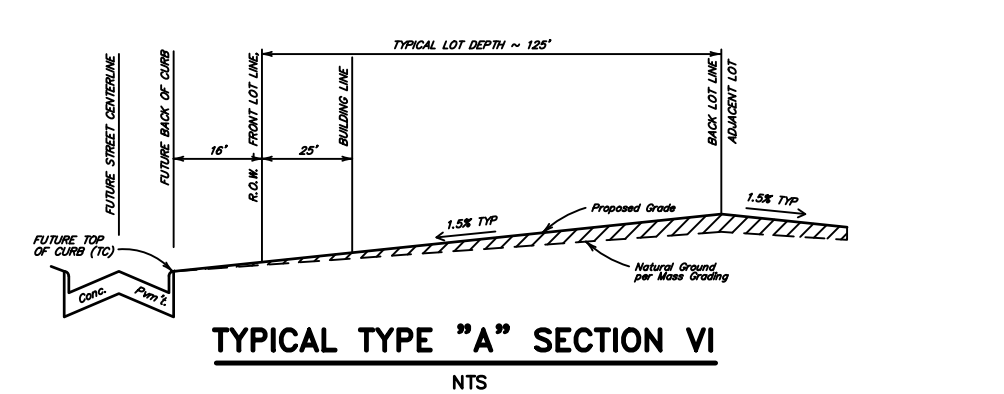
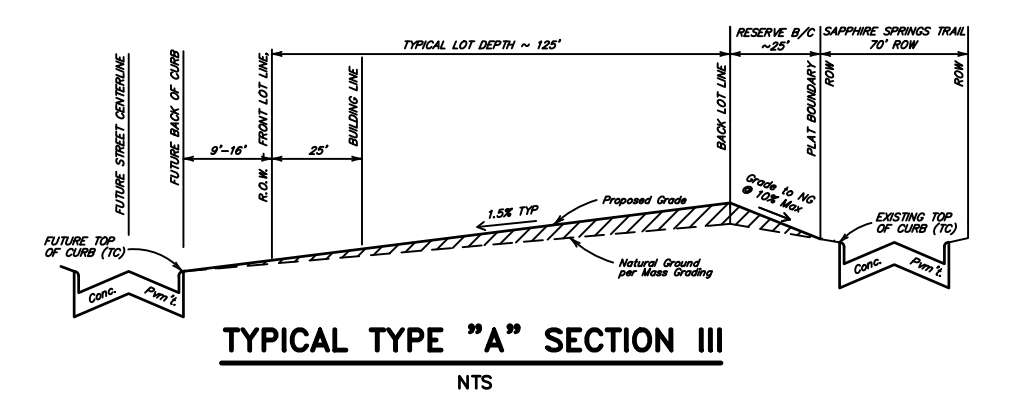
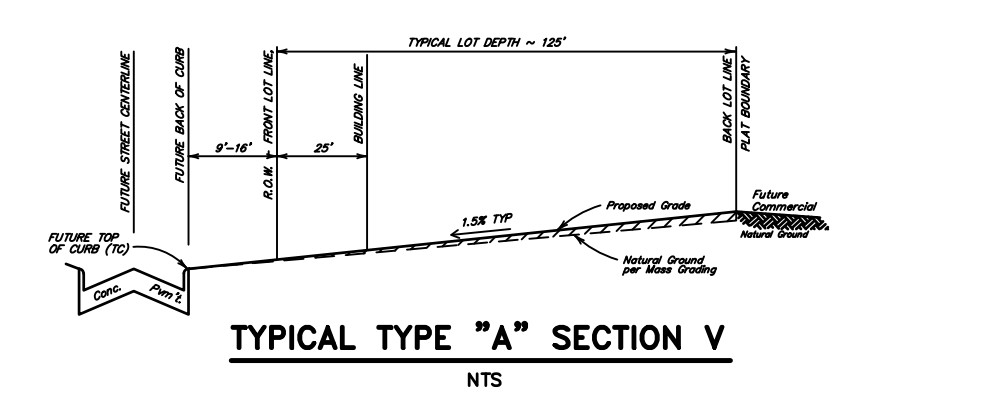
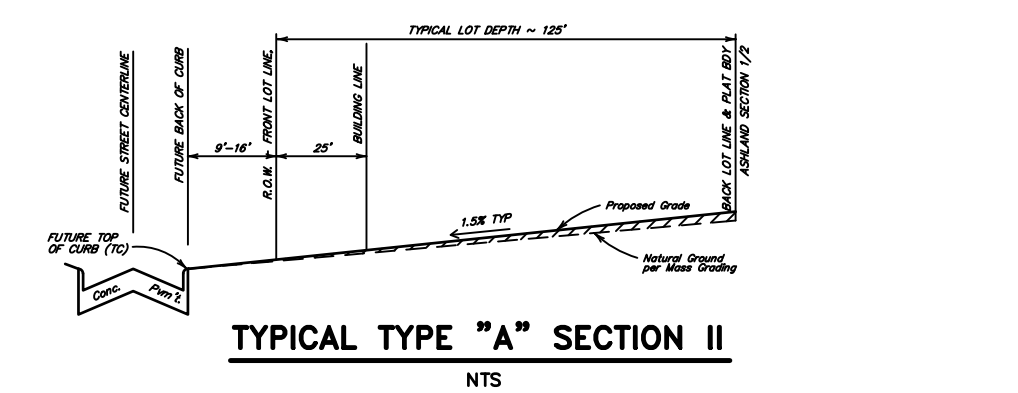
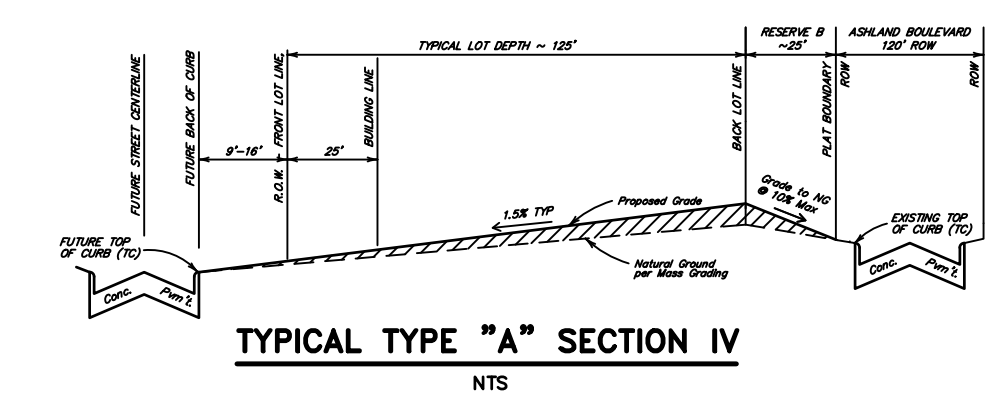
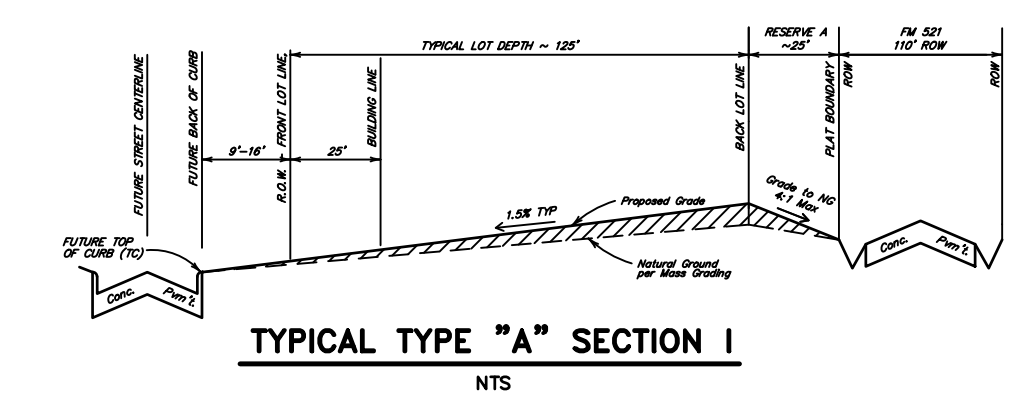


SCALE: 1"=60'  
DATE: OCTOBER 2024  
JOB NO. 16759-0010-12  
SUBMITTED:  
DGN. BY: AHR  
DWN. BY: JWS  
DWG. NO.  
SURV. BY:  
F.B. NO.



**LEGEND**

EXISTING	PROPOSED	
194	194	GROUND CONTOUR
TC 196.0	TC 196.0	PROPOSED TOP OF CURB FINISH ELEVATIONS
	196.0	PROPOSED PAVEMENT



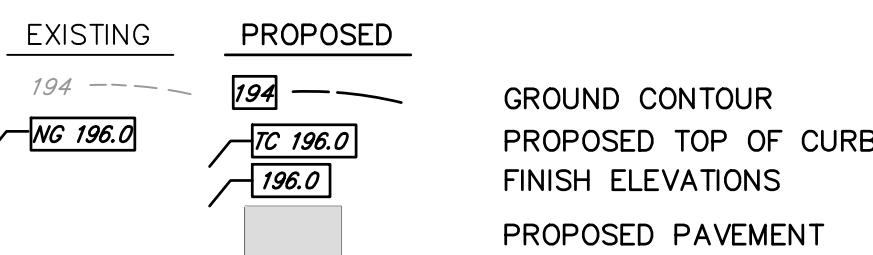
- TYPE "A" SECTION I
- TYPE "A" SECTION II
- TYPE "A" SECTION III
- TYPE "A" SECTION IV
- TYPE "A" SECTION V
- TYPE "A" SECTION VI



**LOT GRADING NOTES:**

- THE LINES AND GRADES ON THIS GRADING PLAN DO NOT IMPLY AUTHORIZATION TO PERFORM ANY GRADING WORK ON OTHER PROPERTIES, NOR DOES THIS PLAN INDICATE GRADING APPROVAL FOR WORK SHOWN IN UTILITY EASEMENTS. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN SUCH APPROVALS PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL COMPLETE ALL EXCAVATION ACTIVITIES TO THE LINES AND GRADES SHOWN BY THIS PLAN. UNIFORM SMOOTH GRADING OF ALL AREAS SHALL BE ACCOMPLISHED. THE FINISHED SURFACE SHALL BE REASONABLY SMOOTH AND FREE FROM IRREGULARITIES.
- THE CONTRACTOR SHALL FIELD ADJUST THE PROPOSED LOCATION AND ROUTING OF SURFACE DRAINAGE SWALES TO OPTIMIZE DRAINAGE, AS REQUIRED. CONTRACTOR TO OBTAIN APPROVAL FROM ENGINEER PRIOR TO MAKING ADJUSTMENTS (NO SEPARATE PAY).
- LOT AREAS THAT ARE TO RECEIVE FILL SHALL BE PREPARED AS FOLLOWS (NO SEPARATE PAY).
  - AREAS TO RECEIVE FILL WITH EXISTING GRASS OR SHRUBBERY HIGHER THAN 2 FEET MUST BE MOWED PRIOR TO THE PLACEMENT OF FILL STAKES.
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**LEGEND**



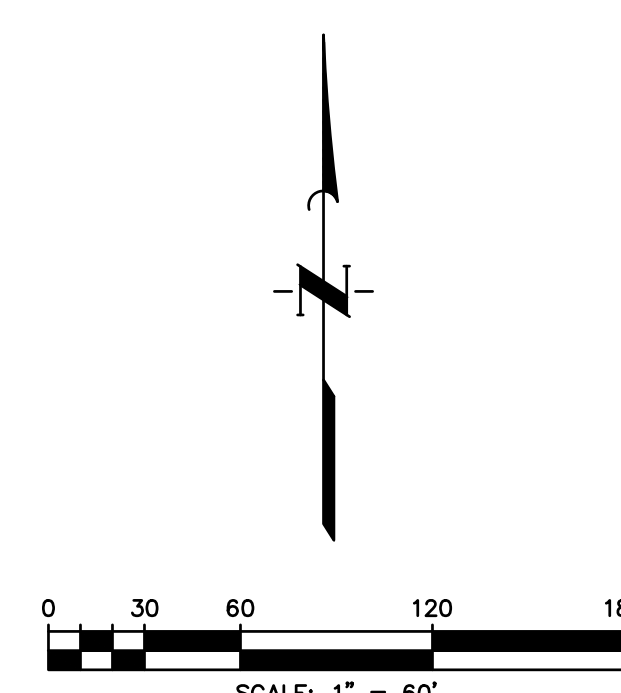
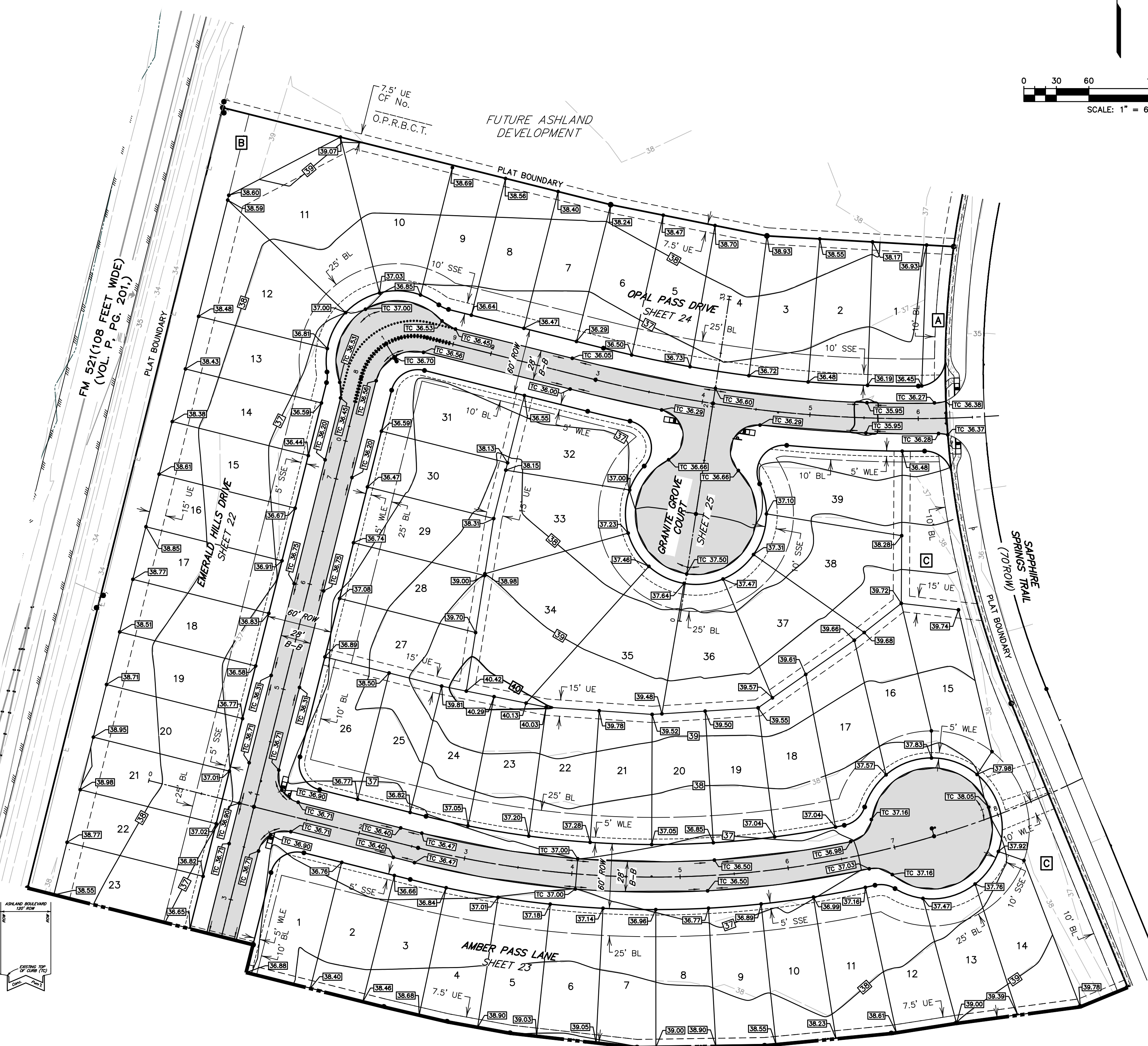
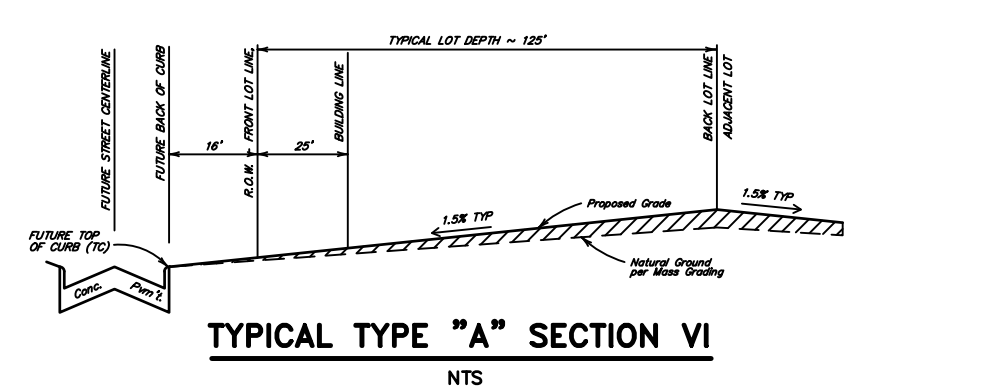
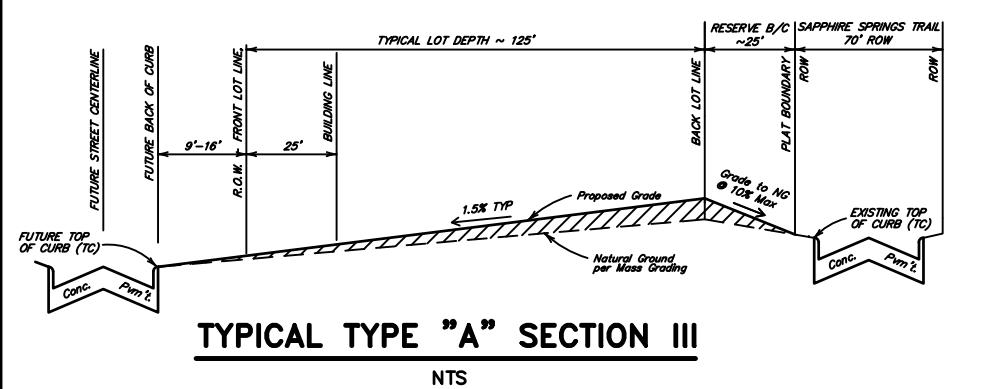
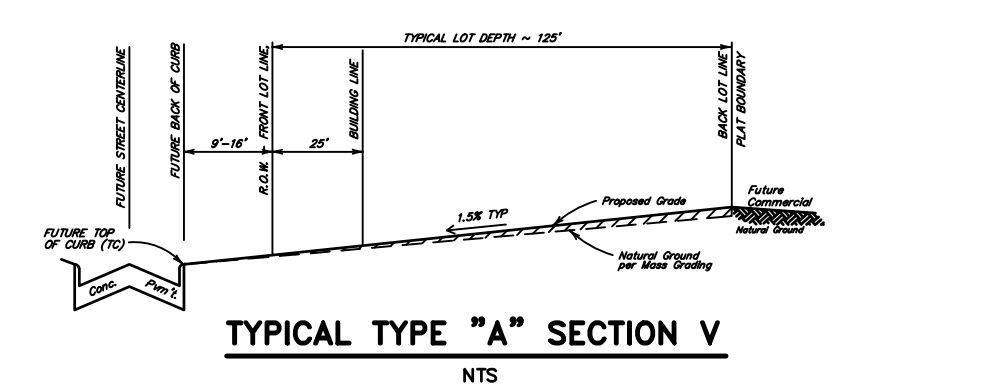
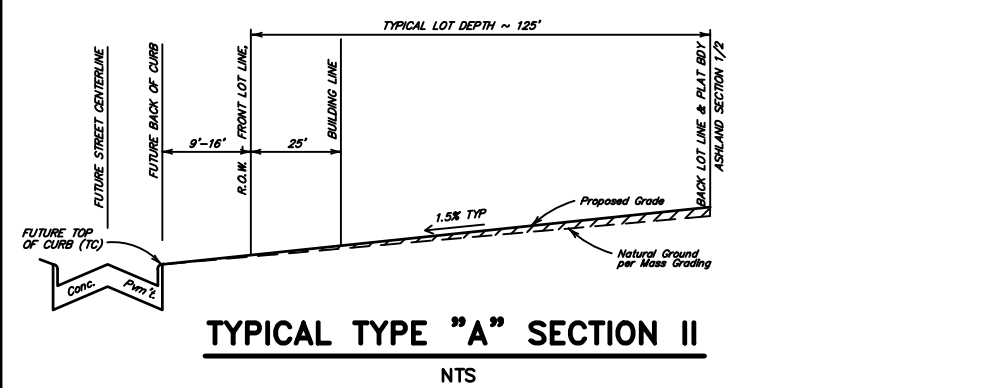
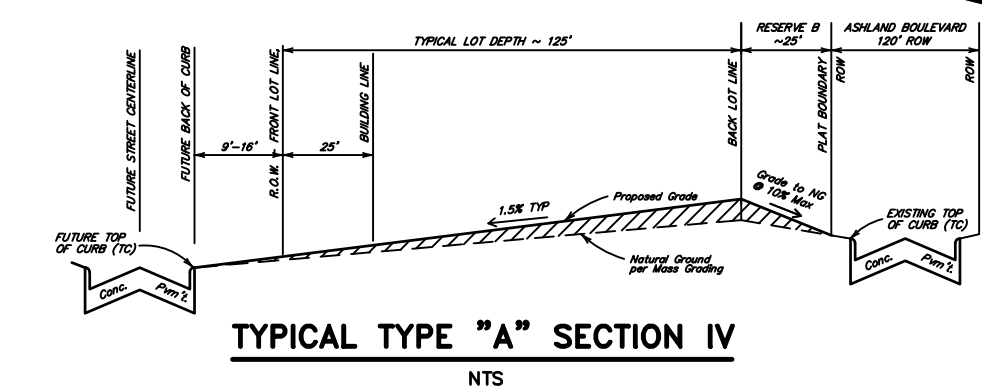
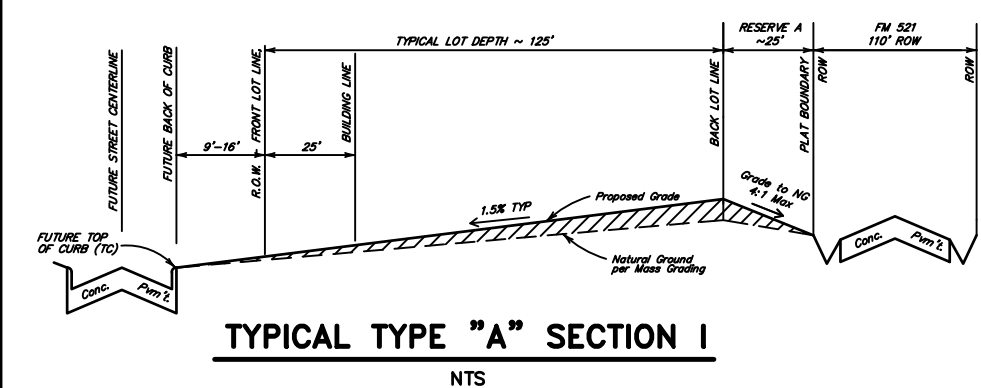
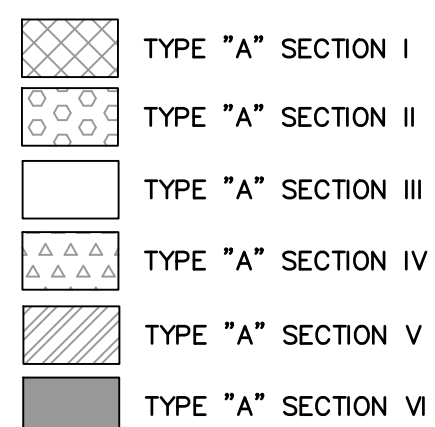
**500 YEAR NOTE**

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**ADDITIONAL NOTES:**

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FOR STORM EVENTS UP TO AND INCLUDING THE 100 YR STORM, IT HAS BEEN DETERMINED THAT THE RESULTING SHEET FLOW PONDING WILL NOT ENCRUCH WITHIN A TEN FOOT RADIUS OF ANY POINT OF A PROPOSED STRUCTURE'S BUILDING PAD WITHIN THE CONSTRUCTION LIMITS OF THIS SET OF PLANS.



**BENCHMARK**  
ELEVATIONS WERE OBTAINED WITH REAL TIME KINETIC GLOBAL POSITIONING SATELLITE EQUIPMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION: D66956 DW1 CLUTE COOP CORS ARP DL3490 TXBC BAY CITY CORS ARP D43614 TXLM LA MARQUE CORS ARP

TBM A BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, APPROXIMATELY 1600 ± SOUTH FROM FM 32, AT THE NORTHWEST CORNER OF THE SUBJECT TRACT, 4.0' FROM THE EDGE OF ASPHALT AND 37' NORTHWEST FROM A POWER POLE  
ELEVATION = 40.01 FEET, NAVD 88.

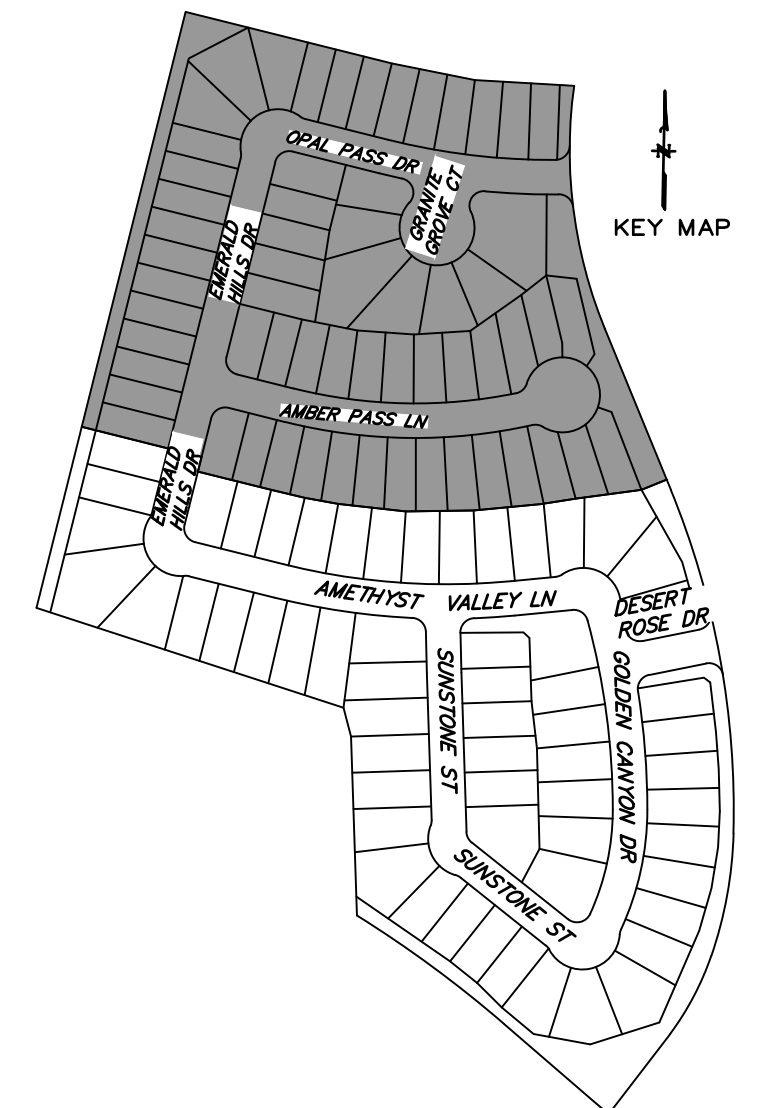
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ELEVATION = 36.59 FEET, NAVD 88.

**FLOODPLAIN**  
THIS TRACT LIES WITHIN ZONES "X-SHADED" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY NO. 485458, MAP NUMBER 4803900430K, PANEL 430, SUFFIX "K" DATED DECEMBER 30, 2020, FOR BRAZORIA COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "X-SHADED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

**WATER LINE-SANITARY SEWER CROSSING**  
PLACE ONE FULL 18" SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE CENTERED AT CROSSING. EMBED SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PROVIDE RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24" INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY (SEE SANITARY SEWER CONSTRUCTION NOTES - SHEET 2 - PROTECTION REQUIREMENTS AT WATERLINE - SANITARY SEWER CROSSING), 24" MIN CLEARANCE. NO SEPARATE PAY.

**SANITARY SEWER MANHOLES**  
ALL SANITARY SEWER MANHOLES SHALL BE COATED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD SPECIFICATIONS AND APPROVED PRODUCTS LIST.

**SANITARY SEWER NOTE**  
ALL GRAVITY SANITARY SEWER PIPE SHALL BE SDR 26 PVC.



NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
BARZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2  
GENERAL CONSTRUCTION LAYOUT

GRADING PLAN II



SCALE: 1"=60' DGN. BY: AHR  
DATE: OCTOBER 2024 DWN. BY: JWS  
JOB NO. 16759-0010-12 DWG. NO.  
SUBMITTED: SURV. BY:  
F.B. NO.



SHEET NO. 16 OF 30

**NOTE:**  
FOR STORM EVENTS UP TO AND INCLUDING THE 100 YR STORM, IT HAS BEEN DETERMINED THAT THE RESULTING SHEET FLOW PONDING WILL BE CONTAINED WITHIN THE STREET RIGHT OF WAY. THE TOP OF SLAB ELEVATION AT ANY POINT ON THE PERIMETER OF THE SLAB SHALL NOT BE LESS THAN TWELVE (12) INCHES ABOVE LOWEST FINISHED GRADE.



Project: ASHLAND SECTION 1  
 Date: 8/30/2024  
 Job No: 16759-0010-12  
 System: 5-YEAR STORM  
 By: AHR  
 Checked By: CBI

Flowline  
 Outfall\_1 20.77 5-yr HGL 32.25 100-yr HGL 34.80

5-yr HGL Starting Elevation = 2-yr WSE  
 Region 1 Design Storm = 2-YEAR STORM 5-YEAR STORM 10-YEAR STORM 25-YEAR STORM 100-YEAR STORM  
 b = 57.44 58.019 57.515 52.78 46.316  
 d = 11.511 9.236 7.777 5.022 1.555  
 e = 0.754 0.712 0.676 0.618 0.533

100-yr HGL Starting Elevation = 25-yr WSE

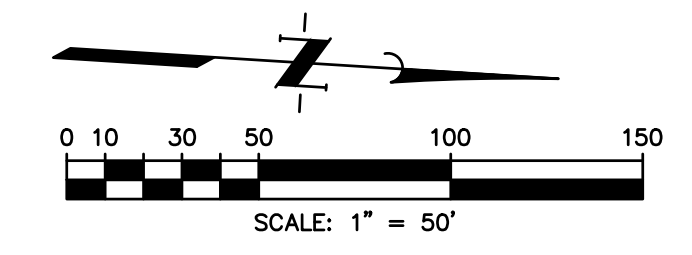
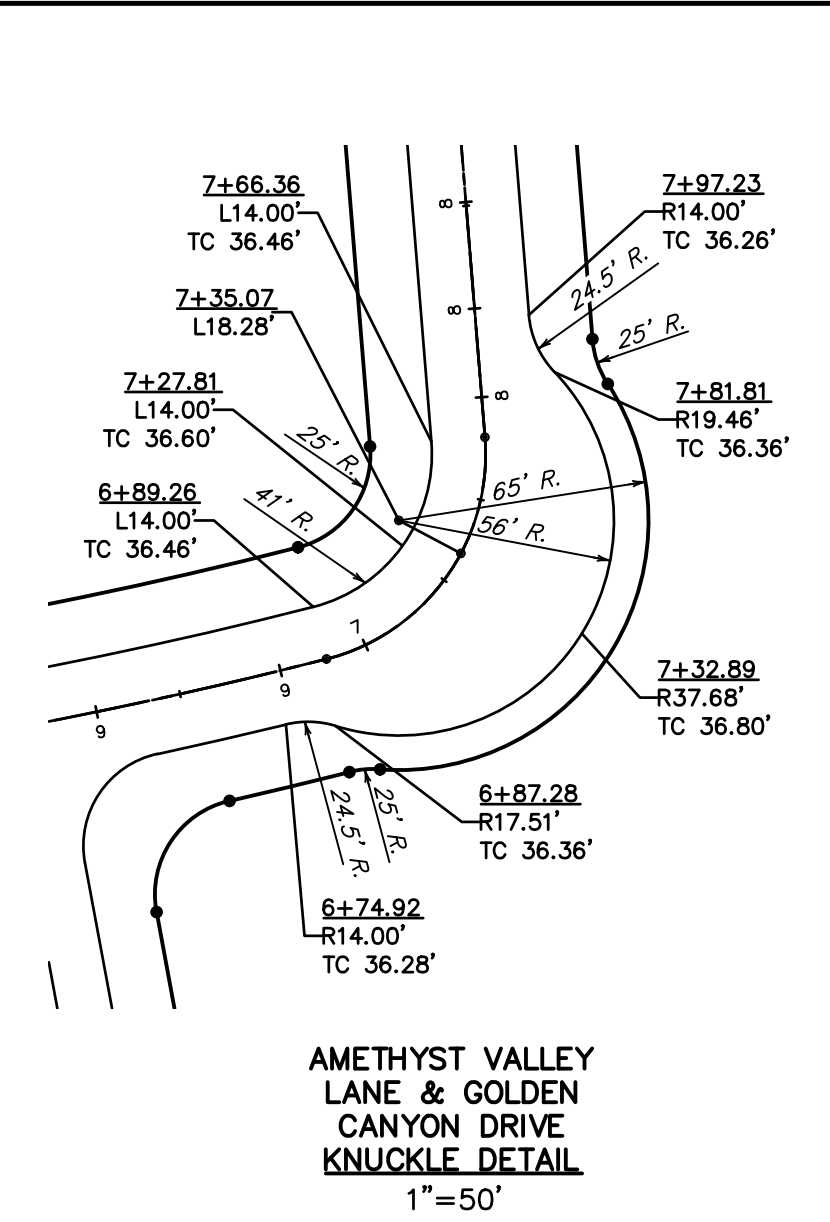
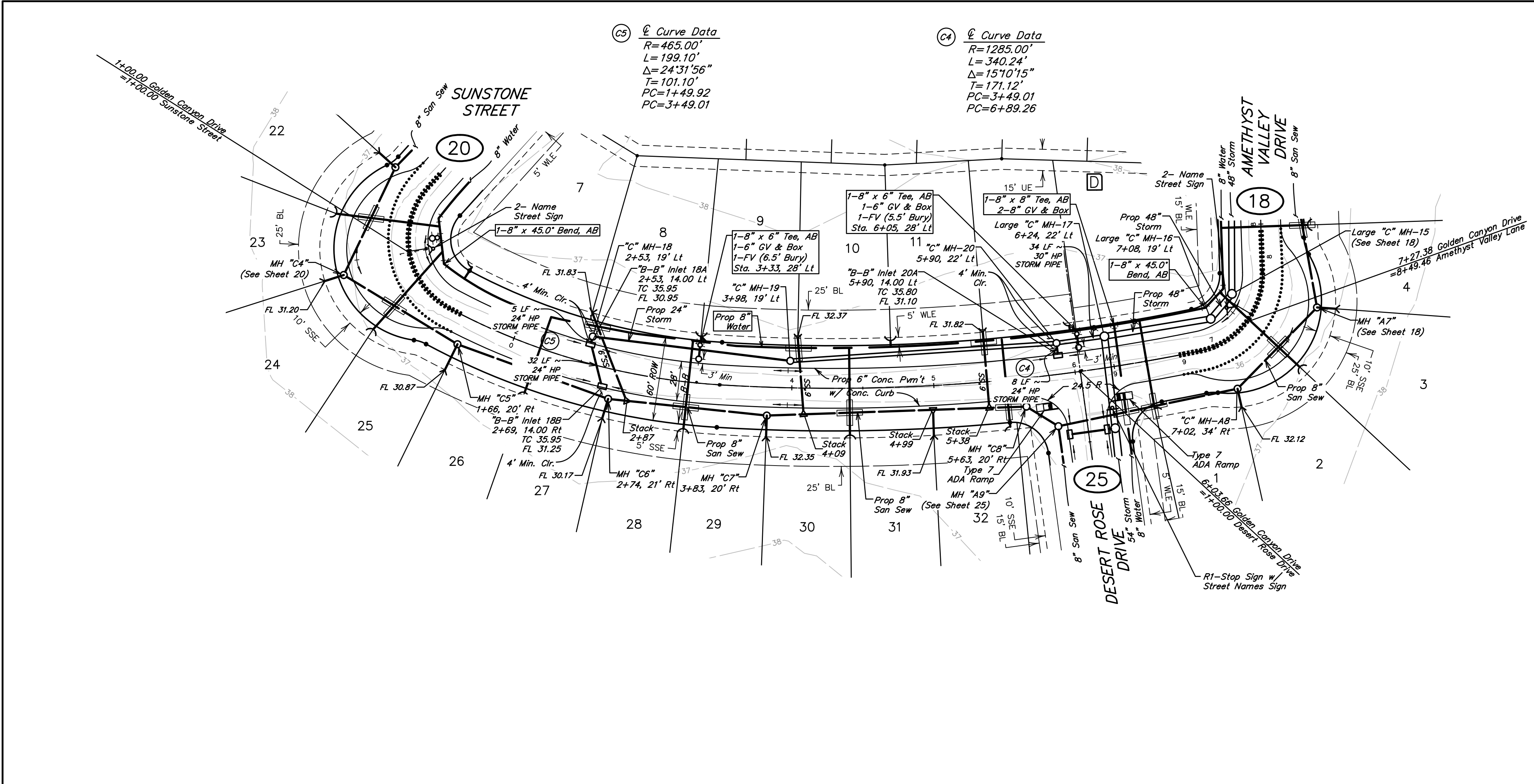
Design criteria adheres to the Brazoria County Design Criteria Manual dated May 2022

Drainage Area	Member From	Member To	Contributing Area (Acres)	Total Area (Acres)	Runoff Coefficient C	Intensity (in/hr)				Flow (ft <sup>3</sup> /s)				Time of Concentration (min)	Pipe Length (ft)	Pipe Diameter (in)	Slope (ft)	Manning "n"	Design Capacity (ft <sup>3</sup> /s)	Design Velocity (ft/s)	Full (ft)	Mach No Drop (ft)	Elevation (ft)	Elevation (ft)	Elevation (ft)	Actual Velocity (ft/s)	Hydraulic Gradient (%)	Change in Head (ft)	Elevation of Hydr. Control (ft)	Elevation of Hydr. Control (ft)	Elevation of Hydr. Control (ft)	Top of Outfall (ft)			
						5-yr	100-yr	5-yr	100-yr	5-yr	100-yr	5-yr	100-yr																						
I	1B	1A	1.64	1.64	0.60	1.0	6.00	10.38	5.90	10.21	15.00	0.06	28	24	1.07	0.013	23.40	7.45	0.30			31.70	31.40	1.88	0.07	0.02	33.70	33.40	35.90	3.25	0.20	0.06	36.60	36.55	36.40
II	1A	1	0.34	1.98	0.60	1.2	5.99	10.36	7.11	12.30	15.06	0.01	5	24	1.98	0.013	31.83	10.13	0.10	0.50		31.40	31.30	2.26	0.10	0.00	35.40	33.30	35.90	3.92	0.30	0.01	36.55	36.53	36.40
	1	2		1.98	0.60	1.2	5.98	10.35	7.11	12.30	15.07	0.69	125	30	0.13	0.013	14.79	3.01	0.16	3.06	30.80	30.64	1.45	0.03	0.04	33.30	32.80	36.03	2.51	0.09	0.11	36.53	36.42	36.53	
	2	3		1.98	0.60	1.2	5.87	10.13	7.11	12.30	15.76	0.44	79	30	0.13	0.013	14.79	3.01	0.10	2.60	27.58	27.48	1.45	0.03	0.02	32.80	32.77	36.43	2.51	0.09	0.07	36.42	36.35	36.93	
	3	4		1.98	0.60	1.2	5.79	10.00	7.11	12.30	16.20	0.73	131	30	0.13	0.013	14.79	3.01	0.17	0.50	24.87	24.70	1.45	0.03	0.04	32.77	32.73	36.53	2.51	0.09	0.12	36.35	36.23	37.03	
III	4B	4A	0.71	0.71	0.60	0.4	6.00	10.38	2.55	4.42	15.00	0.07	31	24	0.96	0.013	22.17	7.06	0.30			31.70	31.40	0.81	0.01	0.00	33.70	33.40	35.90	1.41	0.04	0.01	36.26	36.25	36.40
IV	4A	4	1.33	2.04	0.60	1.2	5.98	10.35	7.52	12.67	15.07	0.01	5	24	2.00	0.013	31.99	10.18	0.10	7.10		31.40	31.30	2.33	0.10	0.01	35.40	32.73	35.90	4.03	0.31	0.02	36.25	36.23	36.40
	4	5		4.02	0.60	2.4	5.68	9.78	13.69	23.60	16.93	0.63	118	36	0.11	0.013	22.12	3.13	0.13			24.20	24.07	1.94	0.04	0.05	32.73	32.69	35.97	3.34	0.13	0.15	36.23	36.08	36.47
	5	6		4.02	0.60	2.4	5.58	9.61	13.69	23.60	17.56	0.44	84	36	0.11	0.013	22.12	3.13	0.09			24.07	23.98	1.94	0.04	0.04	32.69	32.65	36.29	3.34	0.13	0.10	36.08	35.98	36.79
V	6B	6A	0.80	0.80	0.60	0.5	6.00	10.38	2.88	4.98	15.00	0.07	30	24	0.99	0.013	22.51	7.16	0.30			31.60	31.30	0.92	0.02	0.00	33.60	33.30	35.80	1.59	0.05	0.01	36.00	35.99	36.30
VI	6A	6	0.63	1.43	0.60	0.9	5.98	10.35	5.13	8.88	15.07	0.01	5	24	2.00	0.013	31.99	10.18	0.10	7.22		31.30	31.20	1.63	0.05	0.00	33.30	33.65	35.80	2.83	0.15	0.01	35.99	35.98	36.30
	6	7		5.45	0.60	3.3	5.52	9.49	18.04	31.05	18.00	0.48	90	36	0.11	0.013	22.12	3.13	0.10			23.98	23.88	2.55	0.07	0.07	32.65	32.58	35.89	4.39	0.22	0.19	35.98	35.78	36.39
	7	8		5.45	0.60	3.3	5.45	9.37	18.04	31.05	18.48	0.34	63	36	0.11	0.013	22.12	3.13	0.07	1.00		23.88	23.81	2.55	0.07	0.05	32.58	32.54	36.21	4.39	0.22	0.14	35.78	35.65	36.71
VII	9B	9A	1.50	1.50	0.60	0.9	6.00	10.38	5.40	9.34	15.00	0.06	28	24	1.07	0.013	23.40	7.45	0.30			31.40	31.10	1.72	0.06	0.02	33.40	33.10	35.60	2.97	0.17	0.05	36.32	36.27	36.10
VIII	9A	9	0.48	1.98	0.60	1.2	5.99	10.36	7.11	12.30	15.06	0.01	5	24	2.00	0.013	31.99	10.18	0.10	0.50		31.10	31.00	2.26	0.10	0.00	33.10	33.00	35.65	3.92	0.30	0.01	36.27	36.26	36.15
	9	10		1.98	0.60	1.2	5.98	10.35	7.11	12.30	15.07	0.57	103	30	0.13	0.013	14.79	3.01	0.14	2.57	30.50	30.37	1.45	0.03	0.03	33.00	32.71	35.79	2.51	0.09	0.09	36.26	36.17	36.29	
	10	11		1.98	0.60	1.2	5.89	10.17	7.11	12.30	15.64	0.17	30	30	0.13	0.013	14.79	3.01	0.04			27.80	27.76	1.45	0.03	0.01	32.71	32.70	36.35	2.51	0.09	0.03	36.17	36.14	36.85
	11	12		1.98	0.60	1.2	5.86	10.12	7.11	12.30	15.91	0.30	163	30	0.13	0.013	14.79	3.01	0.21	0.50		27.76	27.55	1.45	0.03	0.05	32.70	32.65	36.34	2.51	0.09	0.15	36.14	35.99	36.84
IX	12B	12A	1.58	1.58	0.60	0.9	6.00	10.38	5.68	9.84	15.00	0.07	31	24	0.96	0.013	22.11	7.04	0.30			31.30	31.00	1.81	0.06	0.02	33.30	33.00	35.50	3.13	0.19	0.06	36.08	36.02	36.00
X	12A	12	1.23	2.81	0.60	1.7	5.98	10.35	10.09	17.46	15.07	0.01	5	24	2.00	0.013	31.99	10.18	0.10	3.85		31.00	30.90	3.21	0.20	0.01	33.00	32.65	35.50	5.56	0.60	0.03	36.02	35.99	36.00
	12	8		4.79	0.60	2.9	5.71	9.85	16.41	28.30	16.71	1.03	193	36	0.11	0.013	22.12	3.13	0.22	4.02		27.05	26.83	2.32	0.06	0.12	32.65	32.54	35.58	4.00	0.18	0.35	35.99	35.65	36.08
	8	13		10.24	0.60	6.1	5.40	9.29	33.19	57.07	18.82	0.17	37	48	0.10	0.013	45.42	3.61	0.04			22.81	22.78	2.64	0.05	0.02	32.54	32.52	36.15	4.54	0.16	0.06	35.65	35.59	36.65
	13	14		10.24	0.60	6.1	5.38	9.25	33.19	57.07	18.99	0.41	90	48	0.10	0.013	45.42	3.61	0.09			22.78	22.69	2.64	0.05	0.05	32.52	32.47	36.18	4.54	0.16	0.14	35.59	35.45	36.68
XI	14B	14A	1.12	1.12	0.60	0.7	6.00	10.38	4.03	6.97	15.00	0.06	28	24	1.07	0.013	23.40	7.45	0.30			31.35	31.05	1.28	0.03	0.01	33.35	33.05	35.55	2.22	0.10	0.03	35.48	35.45	36.05
XII	14A	14	0.25	1.37	0.60	0.8	5.99	10.36	4.92	8.51	15.06	0.01	5	24	2.00	0.013	31.99	10.18	0.10	8.26		31.05	30.95	1.57	0.05	0.00	33.05	32.47	35.55	2.71	0.14	0.01	35.45	35.45	36.05
	14	15		11.61	0.60	7.0	5.32	9.15	37.09	63.75	19.40	0.68	104	48	0.10	0.013	45.42	3.61	0.10			22.69	22.58	2.95	0.07	0.07	32.47	32.40	35.74	5.07	0.20	0.21	35.45	35.24	36.24
	15	16		11.61	0.60	7.0	5.26	9.04	37.09	63.75	19.88	0.11	23	48	0.10	0.013	45.42	3.61	0.02			22.58	22.56	2.95	0.07	0.02	32.40	32.39	36.10	5.07	0.20	0.05	35.24	35.19	36.60
	16	17		11.61	0.60	7.0	5.25	9.02	37.09	63.75	19.99	0.35	76	48	0.10	0.013	45.42	3.61	0.08	1.03		22.56	22.48	2.95	0.07	0.05	32.39	32.33	36.05	5.07	0.20	0.15	35.19	35.05	36.55
XIII	18B	18A	1.53	1.53	0.60	0.9	6.00	10.38	5.50	9.53	15.00	0.08	32	24	0.94	0.013	21.93	6.98	0.30			31.25	30.95	1.75	0.06	0.02	33.25	32.95	35.45	3.03	0.18	0.06	35.96	35.90	35.95
XIV	18A	18	0.73	2.26	0.60	1.4	5.98	10.35	8.11	14.03	15.08	0.01	5	24	2.00	0.013	31.99	10.18	0.10	3.64		30.95	30.85	2.58	0.13	0.01	32.95	32.61	35.45	4.47	0.38	0.02	35.90	35.88	35.95
	18	19		2.26	0.60	1.4	5.98	10.35	8.11	14.03	15.09	0.76	140	24	0.18	0.013	9.60	3.06	0.25	0.50		27.21	26.95	2.58	0.13	0.18	32.61	32.43	35.54	4.47	0.38	0.54	35.88	35.34	36.04
	19	20		2.26	0.60	1.4	5.85	10.10	8.11	14.03	15.85	0.76	188	30	0.13	0.013	14.79	3.01	0.24			26.45	26.21	1.65	0.04	0.07	32.43	32.36	36.17	2.86	0.12	0.22	35.34	35.12	36.67
XV	20A	20	1.01	1.01	0.60	0.6	6.00	10.38	3																										









**Special Geotechnical Note**  
**For Utilities under Cul-De-Sac and/or Knuckles**  
 All utilities under pavement in Cul-De-Sac and/or Knuckles to be backfilled with cement stabilized sand up to pavement subgrade

**BENCHMARK**  
 ELEVATIONS WERE OBTAINED WITH REAL TIME KINETIC GLOBAL POSITIONING SATELLITE EQUIPMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION: D6956 DMI CLUTE COOP CORS ARP DL3490 TXBC BAY CITY CORS ARP D3514 TXLM LA MARQUE CORS ARP

**TBM A** BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, APPROXIMATELY 160' ± SOUTH FROM FM 32, AT THE NORTHWEST CORNER OF THE SUBJECT TRACT, 4.0' FROM THE EDGE OF ASPHALT AND 37' NORTHWEST FROM A POWER POLE ELEVATION = 40.01 FEET, NAVD 88.

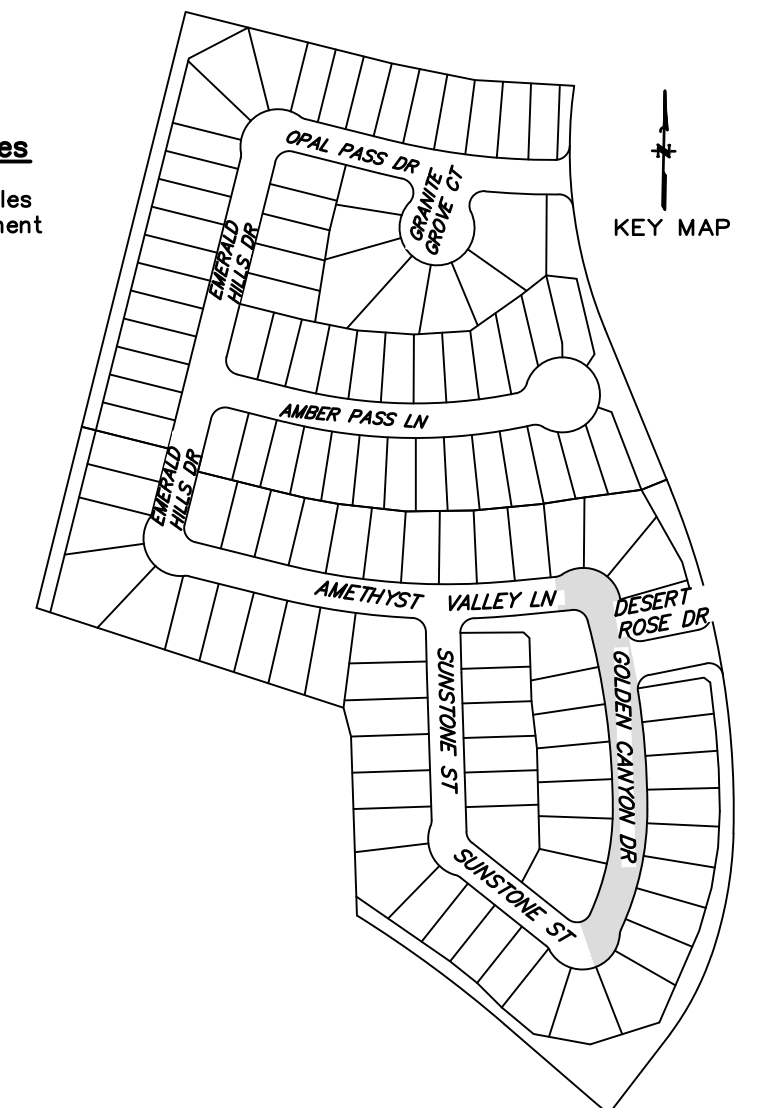
**TBM B** BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, 3130 FEET NORTH FROM THE INTERSECTION OF ANCHOR ROAD, 2.7' FROM THE EDGE OF ASPHALT AND 36' NORTHWEST FROM A POWER POLE ELEVATION = 36.59 FEET, NAVD 88.

**FLOODPLAIN**  
 THIS TRACT LIES WITHIN ZONES "X-SHADED" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY NO. 485458, MAP NUMBER 4803900430K, PANEL 430, SUFFIX "K" DATED DECEMBER 30, 2020, FOR BRAZORIA COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "X-SHADED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

**WATER LINE-SANITARY SEWER CROSSING**  
 PLACE ONE FULL 18" SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE CENTERED AT CROSSING. EMBED SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PROVIDE RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24" INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY (SEE SANITARY SEWER CONSTRUCTION NOTES - SHEET 2 - PROTECTION REQUIREMENTS AT WATERLINE - SANITARY SEWER CROSSING), 24" MIN CLEARANCE. NO SEPARATE PAY.

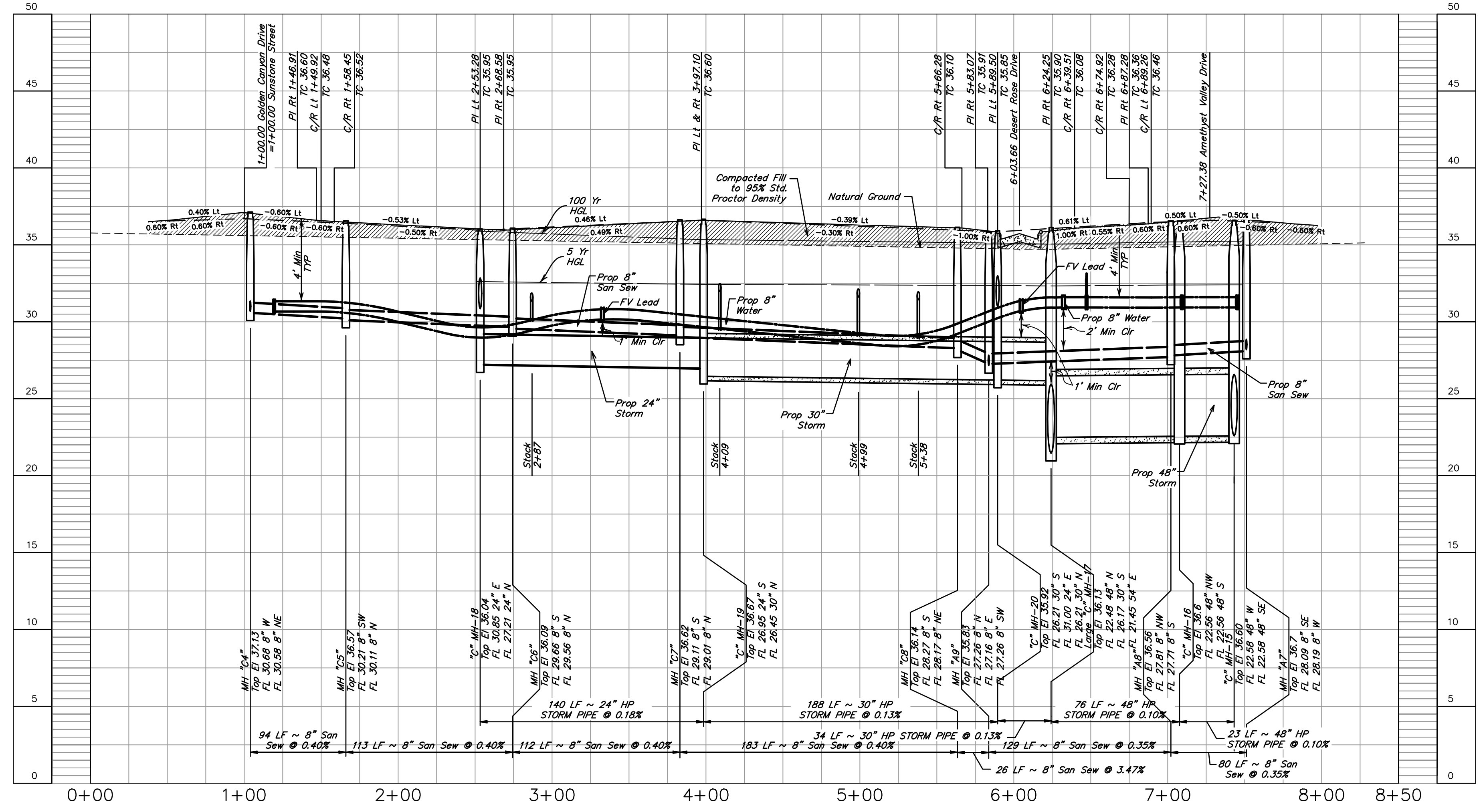
**SANITARY SEWER MANHOLES**  
 ALL SANITARY SEWER MANHOLES SHALL BE COATED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD SPECIFICATIONS AND APPROVED PRODUCTS LIST.

**SANITARY SEWER NOTE**  
 ALL GRAVITY SANITARY SEWER PIPE SHALL BE SDR 26 PVC.



NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

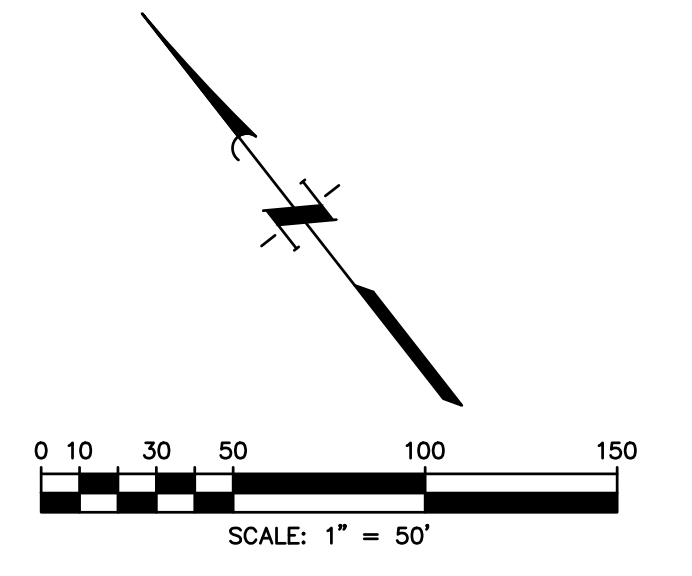
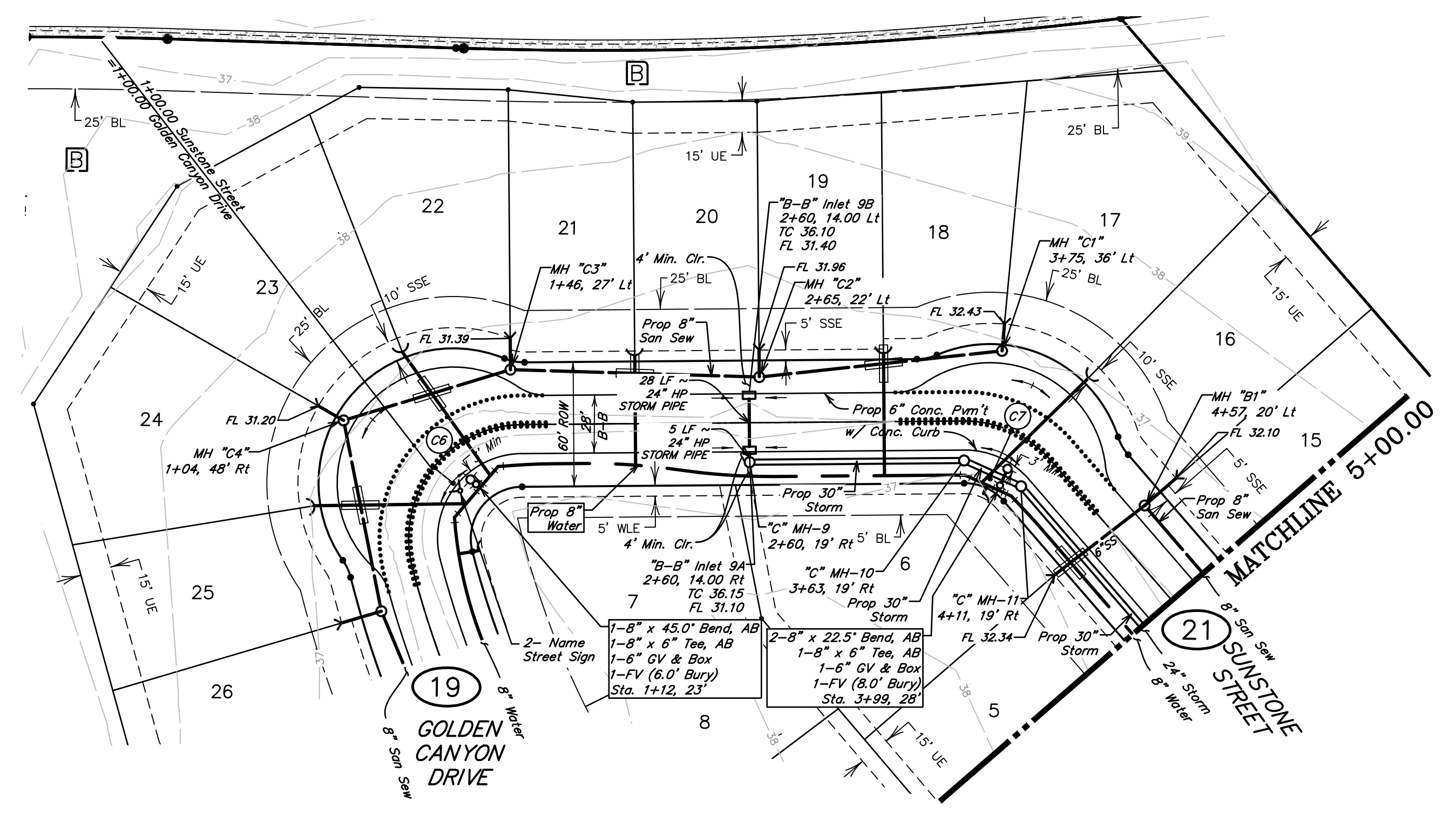
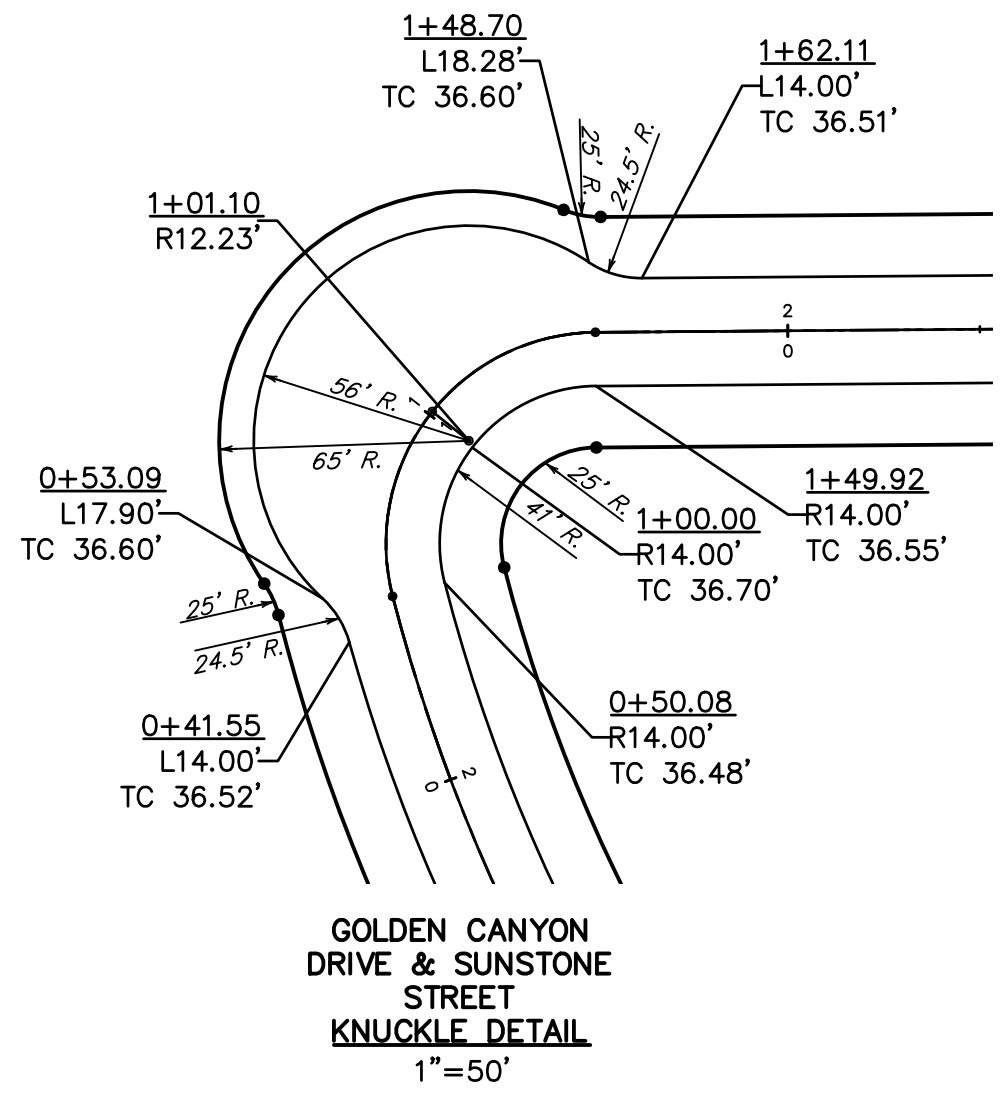
GOLDEN CANYON DRIVE



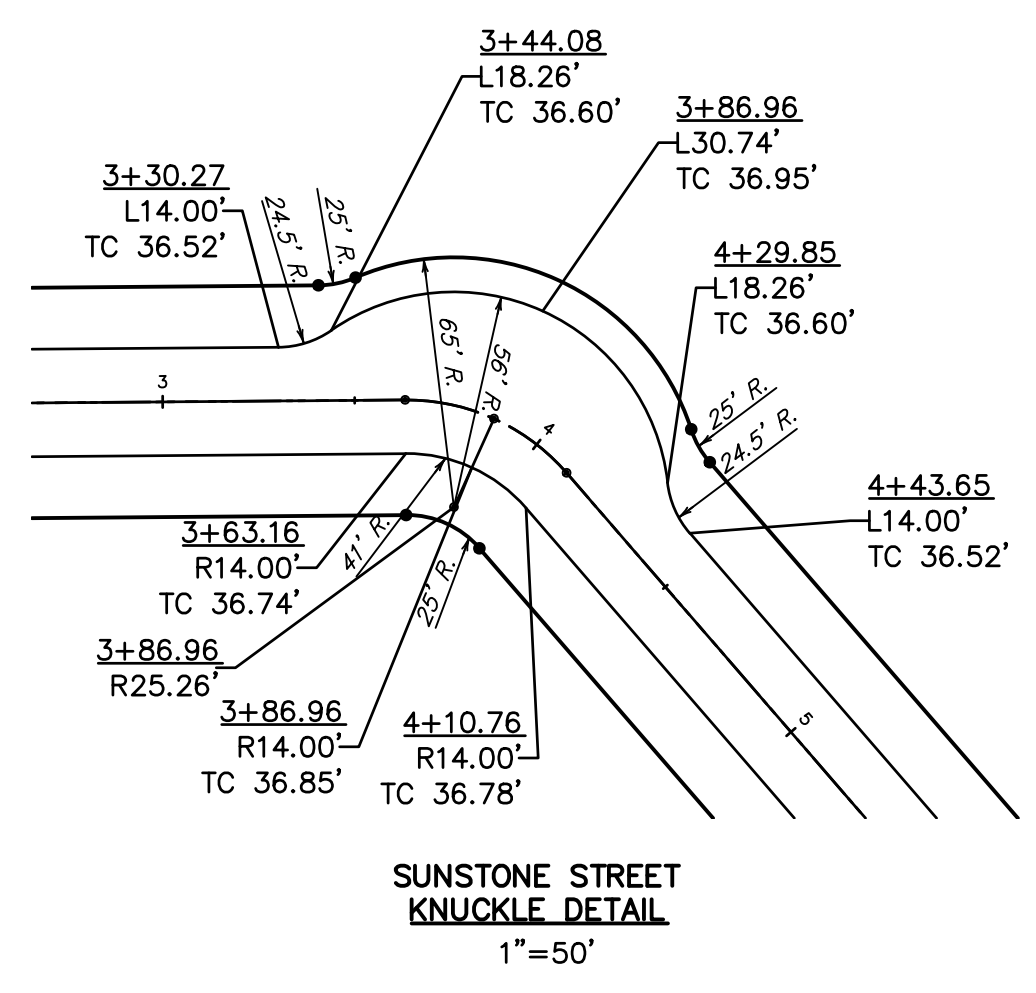
NO.	DATE	REVISIONS	APP.
BRAZORIA COUNTY MUD NO. 82 BARZORIA COUNTY, TEXAS ASHLAND SECTIONS 1 & 2 <b>GOLDEN CANYON DRIVE</b> <b>STA 0+00.00 TO STA 8+27.81</b>			
SCALE: 1"=50' H, 1"=5' V. DGN. BY: AHR DATE: OCTOBER 2024 DWN. BY: JWS JOB NO. 16759-0010-12 DWG. NO.: SUBMITTED: SURV. BY: F.B. NO.:			
SHEET NO. <b>19</b> OF 30			



(C6) $\curvearrowright$ Curve Data	(C7) $\curvearrowright$ Curve Data
R=55.00'	R=55.00'
L=99.83'	L=47.60'
$\Delta=103^{\circ}59'59''$	$\Delta=49^{\circ}34'58''$
T=70.40'	T=25.40'
PC=0+50.08	PC=3+63.16
PT=1+49.92	PT=4+10.76



NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION



**BENCHMARK**  
ELEVATIONS WERE OBTAINED WITH REAL TIME KINETIC GLOBAL POSITIONING SATELLITE EQUIPMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION: D66956 DWM1 CLUTE COOP CORS ARP DL3490 TXBC BAY CITY CORS ARP DH3514 TXLM LA MARQUE CORS ARP

TBM A BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, APPROXIMATELY 1600' SOUTH FROM FM 32, AT THE NORTHWEST CORNER OF THE SUBJECT TRACT, 4.0' FROM THE EDGE OF ASPHALT AND 37' NORTHWEST FROM A POWER POLE  
ELEVATION = 40.01 FEET, NAVD 88.

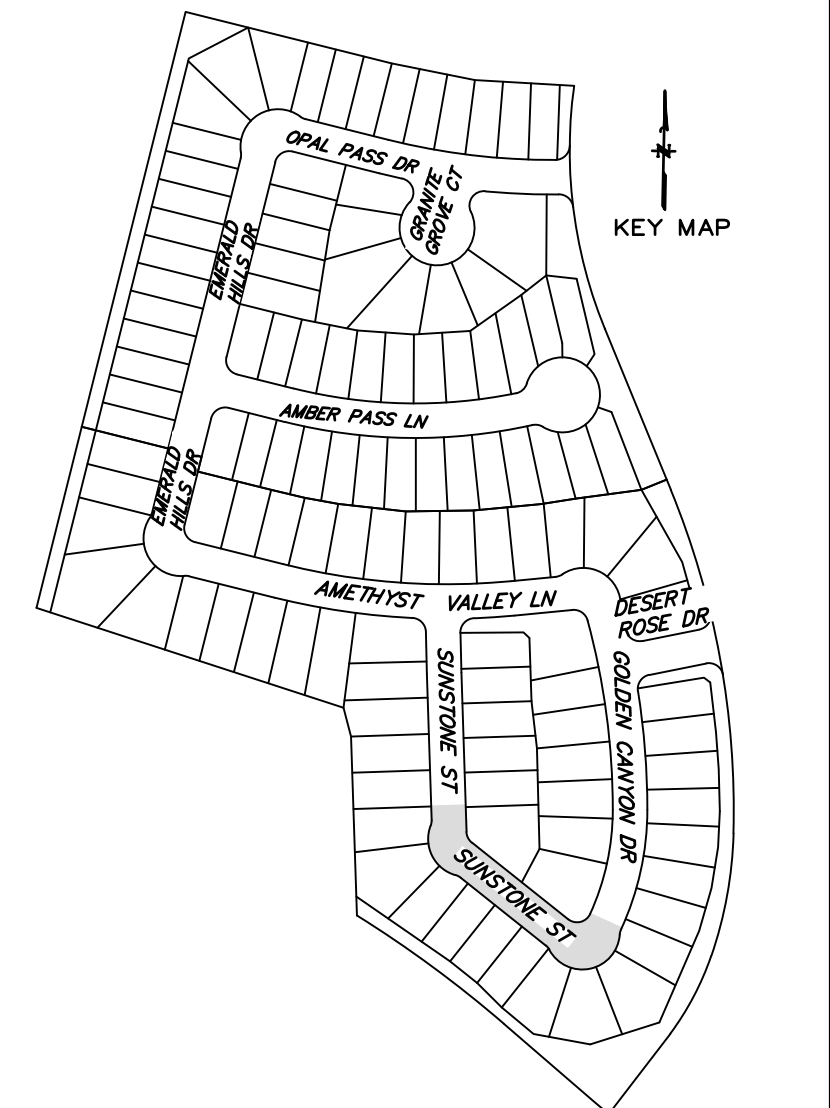
TBM B BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, 3130 FEET NORTH FROM THE INTERSECTION OF ANCHOR ROAD, 2.7' FROM THE EDGE OF ASPHALT AND 36' NORTHWEST FROM A POWER POLE  
ELEVATION = 36.59 FEET, NAVD 88.

**FLOODPLAIN**  
THIS TRACT LIES WITHIN ZONES "X-SHADED" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY NO. 485458, MAP NUMBER 480390A030K, PANEL 430, SUFFIX "K" DATED DECEMBER 30, 2020, FOR BRAZORIA COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "X-SHADED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

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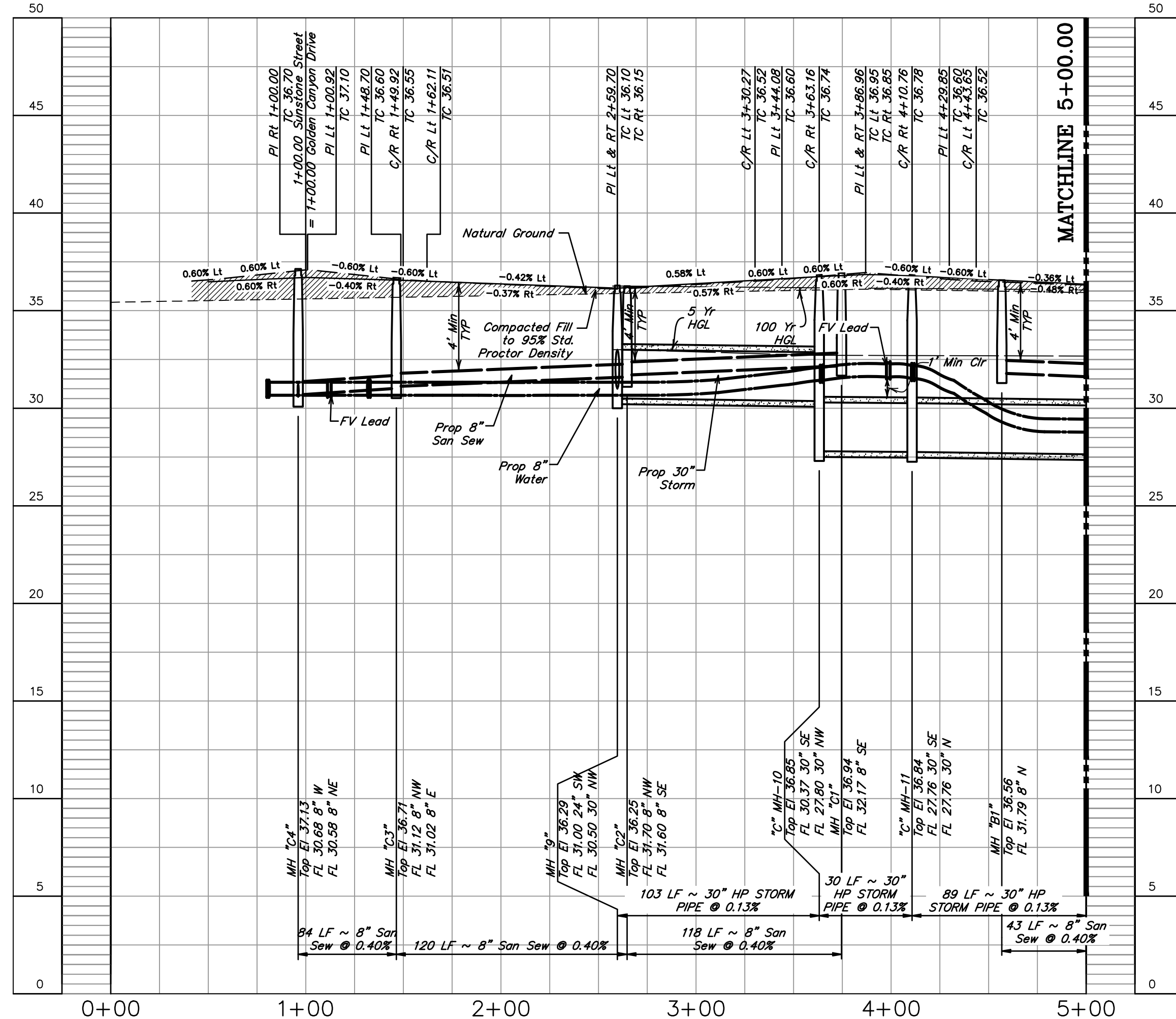
**SANITARY SEWER MANHOLES**  
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**SANITARY SEWER NOTE**  
ALL GRAVITY SANITARY SEWER PIPE SHALL BE SDR 26 PVC.



**Special Geotechnical Note**  
For Utilities under Cul-De-Sac and/or Knuckles  
All utilities under pavement in Cul-De-Sac and/or Knuckles to be backfilled with cement stabilized sand up to pavement subgrade

SUNSTONE STREET



NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
BARZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2

SUNSTONE STREET 1 OF 2  
STA 0+00.00 TO STA 5+00.00



SCALE: 1"=50' H. 1"=5' V. DGN. BY: AHR  
DATE: OCTOBER 2024 DWN. BY: JWS  
JOB NO. 16759-0010-12 DWG. NO. \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
F.B. NO. \_\_\_\_\_

10/11/2024

Darren J. McAfee  
137808  
LICENSED PROFESSIONAL ENGINEER

SHEET NO. 20 OF 30

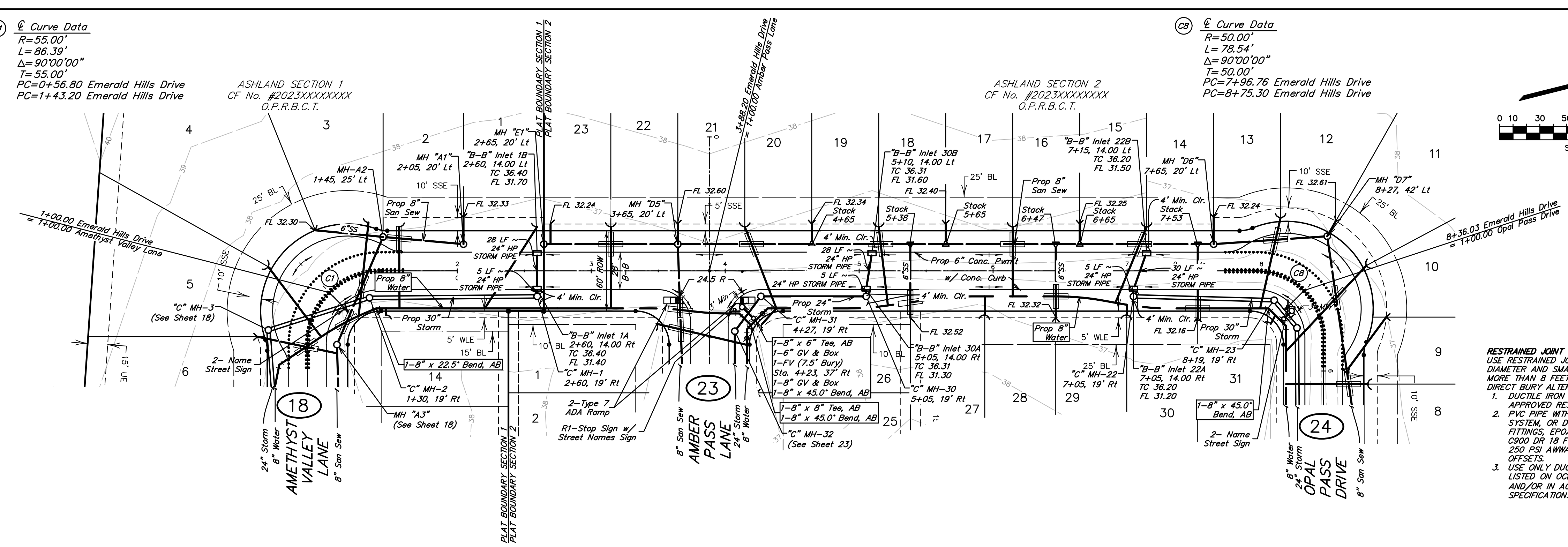
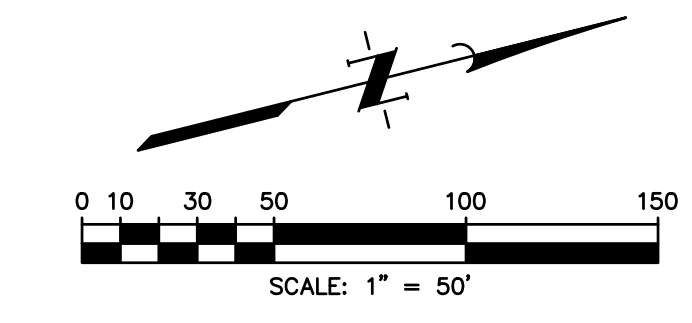






① Curve Data  
 R=55.00'  
 L=86.39'  
 Δ=90°00'00"  
 T=55.00'  
 PC=0+56.80 Emerald Hills Drive  
 PC=1+43.20 Emerald Hills Drive

② Curve Data  
 R=50.00'  
 L=78.54'  
 Δ=90°00'00"  
 T=50.00'  
 PC=7+96.76 Emerald Hills Drive  
 PC=8+75.30 Emerald Hills Drive



**BENCHMARK**  
 ELEVATIONS WERE OBTAINED WITH REAL TIME KINETIC GLOBAL POSITIONING SATELLITE EQUIPMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION: D6956 DW1 CLUTE COOP CORS ARP DL3490 TXBC BAY CITY CORS ARP D3514 TXLM LA MARQUE CORS ARP

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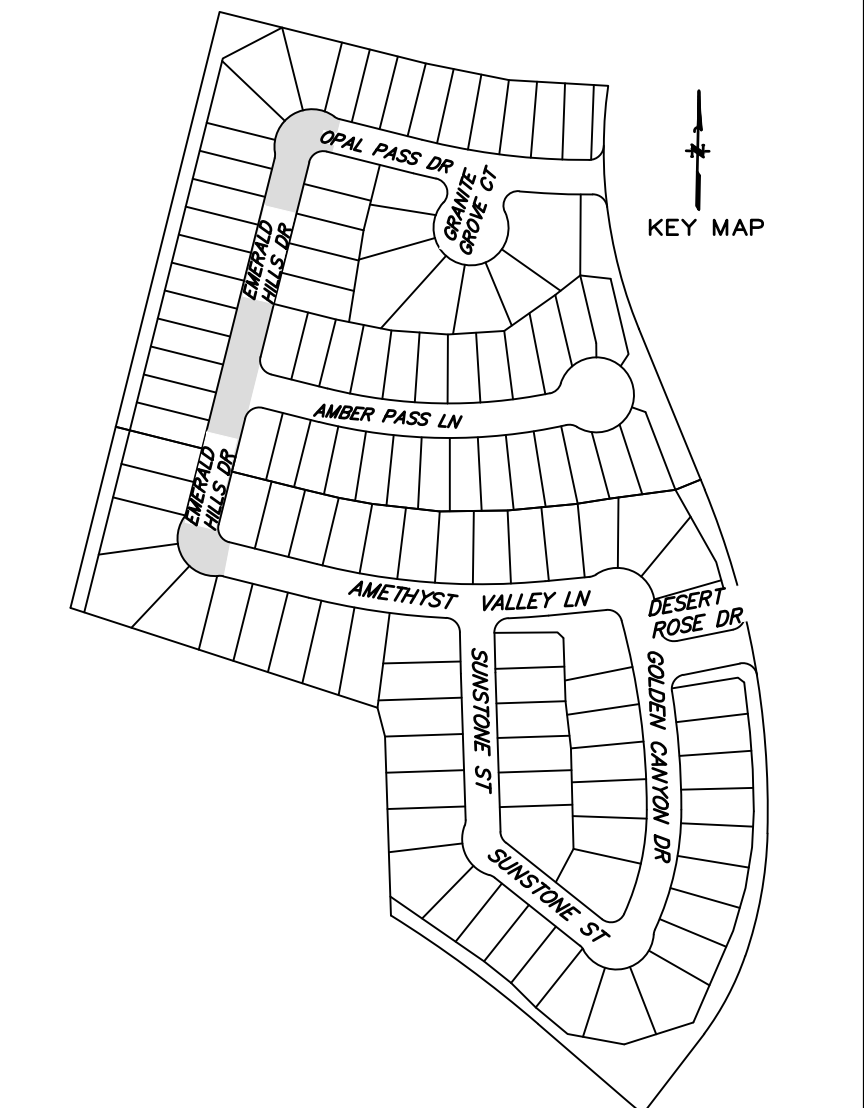
**WATER LINE-SANITARY SEWER CROSSING**  
 PLACE ONE FULL 18" SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE CENTERED AT CROSSING. EMBED SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PROVIDE RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24" INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY (SEE SANITARY SEWER CONSTRUCTION NOTES - SHEET 2 - PROTECTION REQUIREMENTS AT WATERLINE - SANITARY SEWER CROSSING), 24" MIN CLEARANCE. NO SEPARATE PAY.

**SANITARY SEWER MANHOLES**  
 ALL SANITARY SEWER MANHOLES SHALL BE COATED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD SPECIFICATIONS AND APPROVED PRODUCTS LIST.

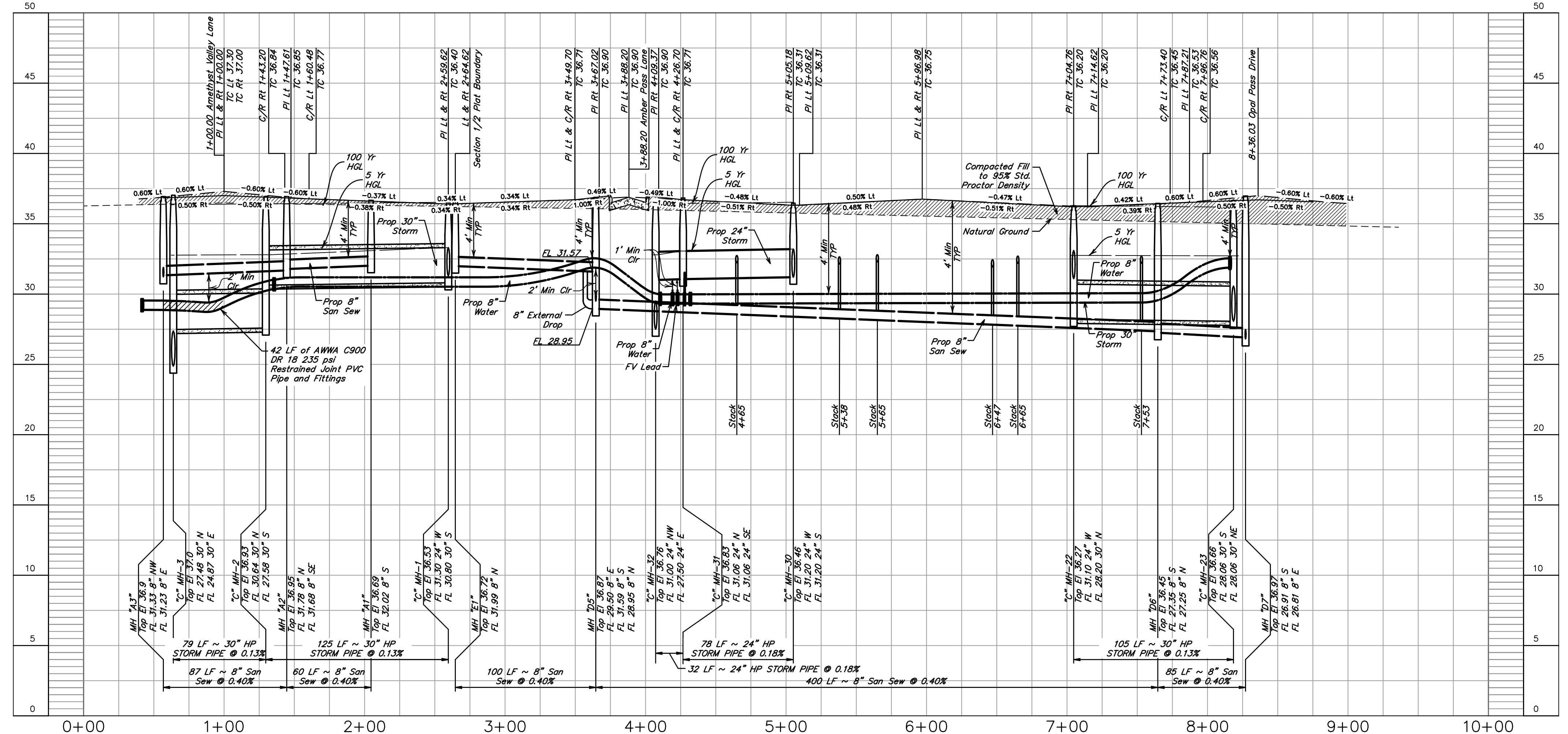
**SANITARY SEWER NOTE**  
 ALL GRAVITY SANITARY SEWER PIPE SHALL BE SDR 26 PVC.

**RESTRAINED JOINT**  
 USE RESTRAINED JOINT PIPE FOR LINES 20-INCH DIAMETER AND SMALLER WITH LESS THAN 4 FEET OR MORE THAN 8 FEET OF COVER. THE FOLLOWING DIRECT BURY ALTERNATES MAY BE USED:

- DUCTILE IRON PIPE PRESSURE 250 PSI WITH APPROVED RESTRAINED JOINTS.
- PVC PIPE WITH INTEGRAL RESTRAINED JOINT SYSTEM, OR DUCTILE IRON RESTRAINED JOINTS FITTINGS, EPOXY LINED AND COATED, USE AWWA C900 DR 18 FOR PVC RESTRAINED JOINTS. USE 250 PSI AWWA C900 DR 14 FOR VERTICAL OFFSETS.
- USE ONLY DUCTILE IRON AND PVC PRODUCTS LISTED ON OCE APPROVED PRODUCTS LIST AND/OR IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS.



EMERALD HILLS DRIVE



NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
 BRAZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2

EMERALD HILLS DRIVE  
 STA 0+00.00 TO STA 9+36.03



SCALE: 1"=50' H. 1"=5' V. DGN. BY: AHR  
 DATE: OCTOBER 2024 DWN. BY: JWS  
 JOB NO. 16759-0010-12 DWG. NO. \_\_\_\_\_  
 SUBMITTED: SURV. BY: \_\_\_\_\_  
 F.B. NO. \_\_\_\_\_



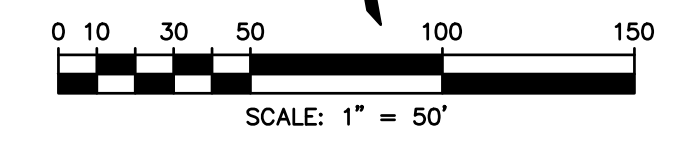
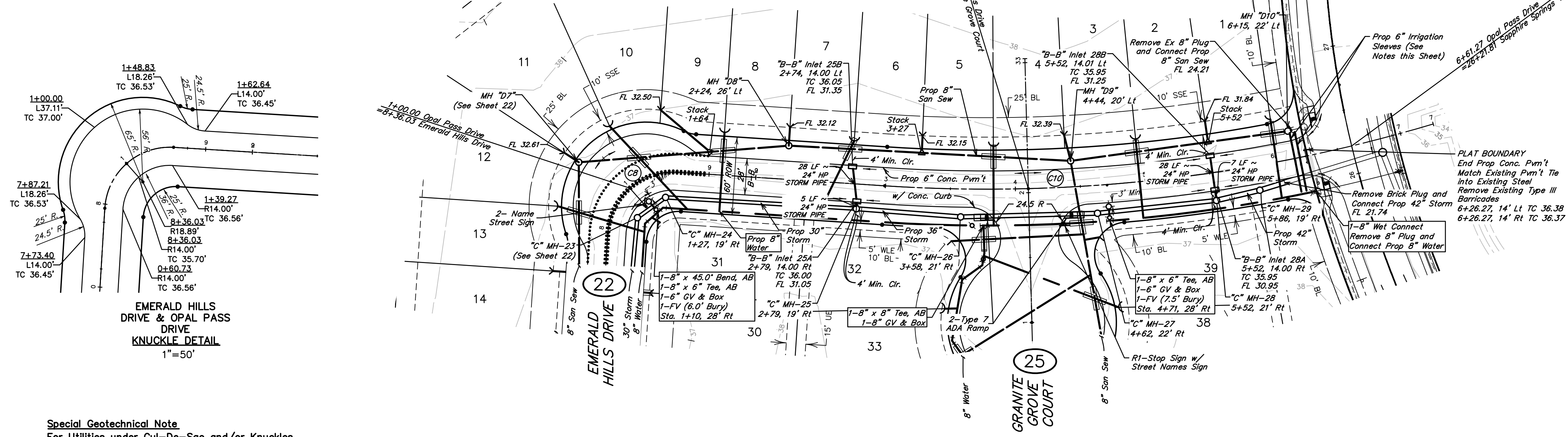






**(C9) Curve Data**  
 R=50.00'  
 L=78.54'  
 Δ=90°00'00"  
 T=50.00'  
 PC=0+60.72 Opal Pass Drive  
 PT=1+39.27 Opal Pass Drive

**(C10) Curve Data**  
 R=1200.00'  
 L=426.85'  
 Δ=20°22'50"  
 T=215.71'  
 PC=2+29.41  
 PT=7+26.27



NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

- IRRIGATION SLEEVES**
- Sleeves Shall be Schedule 40 PVC Extending a min 2' Beyond Back of Curb, install 90 Deg bend and riser to a min. 24" above back of curb with ends capped.
  - Install a min. 24" Below Top of Pvm't to Top of Pipe.

**BENCHMARK**  
 ELEVATIONS WERE OBTAINED WITH REAL TIME KINETIC GLOBAL POSITIONING SATELLITE EQUIPMENT AND ARE BASED ON NATIONAL GEODETIC SURVEY MONUMENT DESIGNATION: D66956 DMI CLUTE COOP CORS ARP DL3490 TXBC BAY CITY CORS ARP D3514 TXLM LA MARQUE CORS ARP

TBM A BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, APPROXIMATELY 1600 SOUTH FROM FM 32, AT THE NORTHWEST CORNER OF THE SUBJECT TRACT, 4.0' FROM THE EDGE OF ASPHALT AND 37' NORTHWEST FROM A POWER POLE  
 ELEVATION = 40.01 FEET, NAVD 88.

TBM B BEING A PK NAIL IN ASPHALT LOCATED ON THE EAST SIDE OF FM 521, 3130 FEET NORTH FROM THE INTERSECTION OF ANCHOR ROAD, 2.7' FROM THE EDGE OF ASPHALT AND 36' NORTHWEST FROM A POWER POLE  
 ELEVATION = 36.59 FEET, NAVD 88.

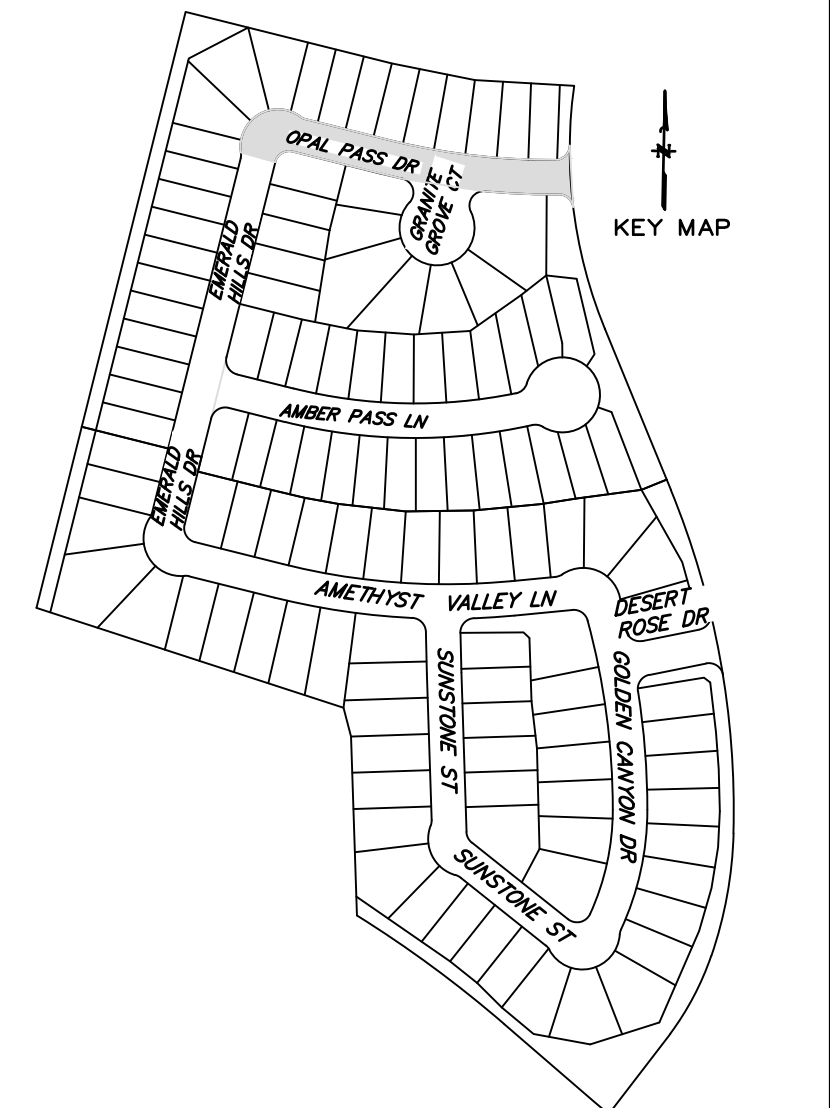
**FLOODPLAIN**  
 THIS TRACT LIES WITHIN ZONES "X-SHADED" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY NO. 485458, MAP NUMBER 48039C0430K, PANEL 430, SUFFIX "K" DATED DECEMBER 30, 2020, FOR BRAZORIA COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "X-SHADED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

**WATER LINE-SANITARY SEWER CROSSING**  
 PLACE ONE FULL 18" SECTION OF RESTRAINED JOINT WATERLINE AND SANITARY SEWER PIPE CENTERED AT CROSSING. EMBED SANITARY SEWER PIPE WITH CEMENT STABILIZED SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS ONE FOOT BEYOND THE JOINTS ON EACH END. FOR CROSSINGS WHERE PROPOSED WATERLINE IS UNDER PROPOSED SANITARY SEWER, PROVIDE RESTRAINED JOINT DUCTILE IRON PIPE WATERLINE (FOR DIAMETERS LESS THAN 24" INCHES) AND RESTRAINED JOINT PRESSURE RATED (MIN 150 PSI) SANITARY (SEE SANITARY SEWER CONSTRUCTION NOTES - SHEET 2 - PROTECTION REQUIREMENTS AT WATERLINE - SANITARY SEWER CROSSING), 24" MIN CLEARANCE. NO SEPARATE PAY.

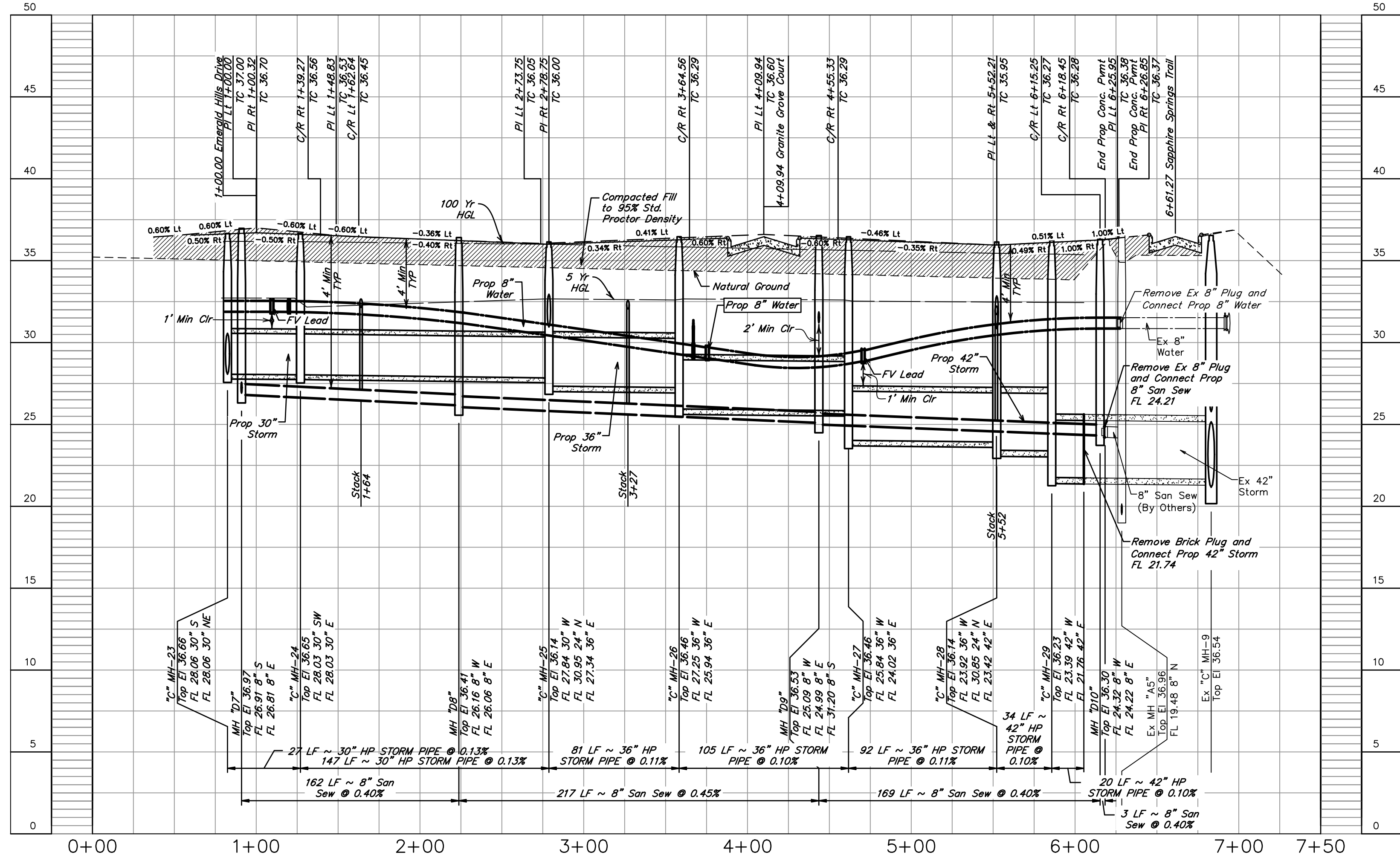
**SANITARY SEWER MANHOLES**  
 ALL SANITARY SEWER MANHOLES SHALL BE COATED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD SPECIFICATIONS AND APPROVED PRODUCTS LIST.

**SANITARY SEWER NOTE**  
 ALL GRAVITY SANITARY SEWER PIPE SHALL BE SDR 26 PVC.

**Special Geotechnical Note**  
**For Utilities under Cul-De-Sac and/or Knuckles**  
 All utilities under pavement in Cul-De-Sac and/or Knuckles to be backfilled with cement stabilized sand up to pavement subgrade



OPAL PASS DRIVE



NO.	DATE	REVISIONS	APP.
BRAZORIA COUNTY MUD NO. 82 BRAZORIA COUNTY, TEXAS			
ASHLAND SECTIONS 1 & 2			
OPAL PASS DRIVE STA 0+00.00 TO 7+26.27			
<b>QUIDDITY</b>			
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290 3102 Ann Drive, Suite 3104 Austin, Texas 78741 (512) 441-9933			
SCALE: 1"=50' H. 1"=5' V.		DGN. BY: AHR	
DATE: OCTOBER 2024		DWN. BY: JWS	
JOB NO. 16759-0010-12		DWG. NO. _____	
SUBMITTED: _____		SURV. BY: _____	
		F.B. NO. _____	
SHEET NO. <b>24</b> OF 30			

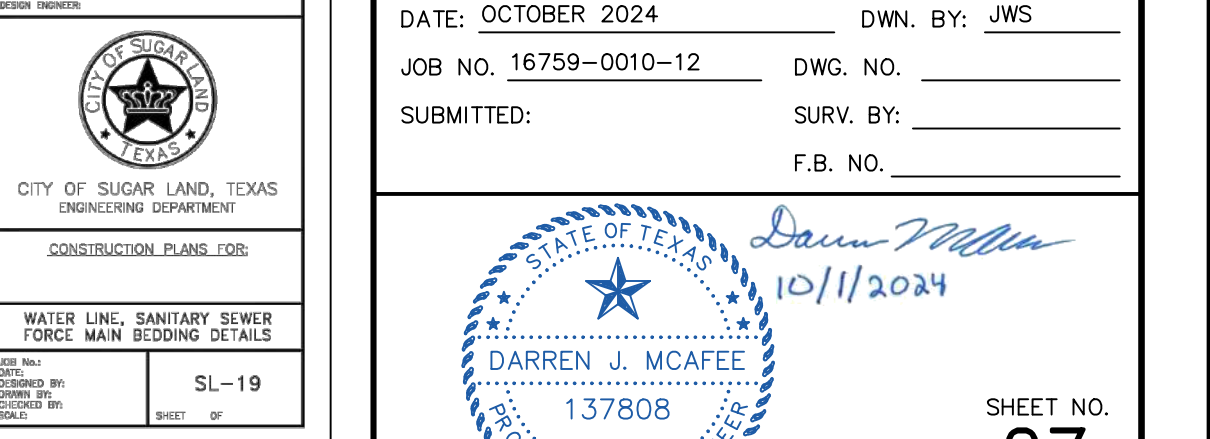
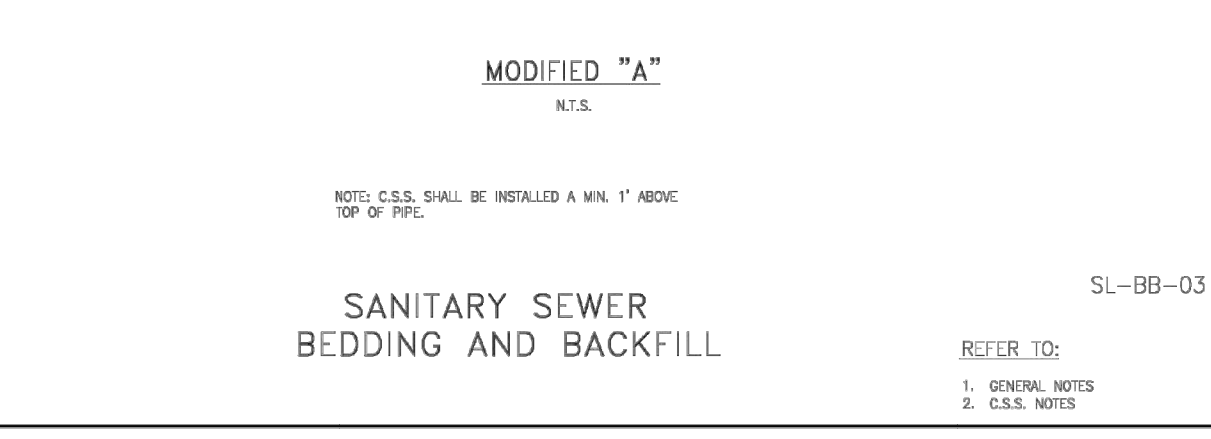
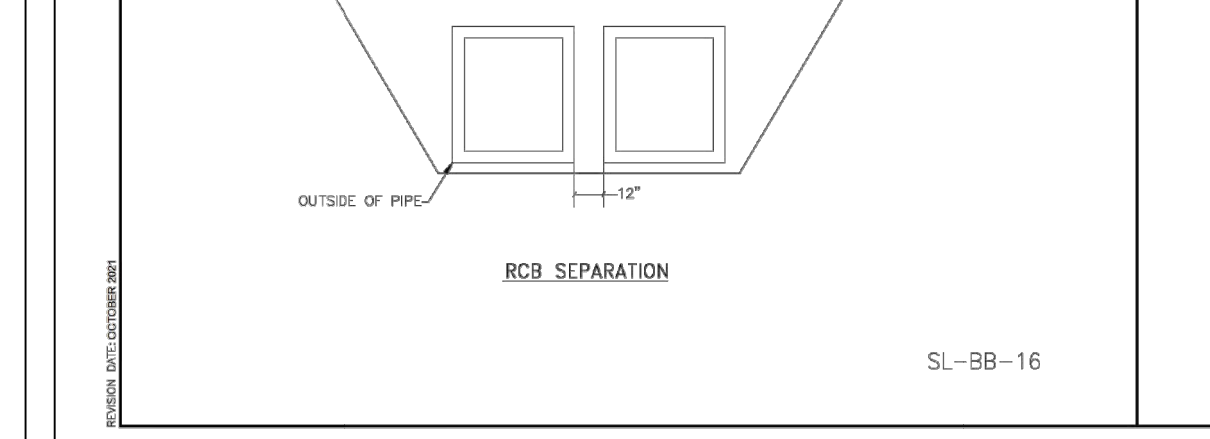
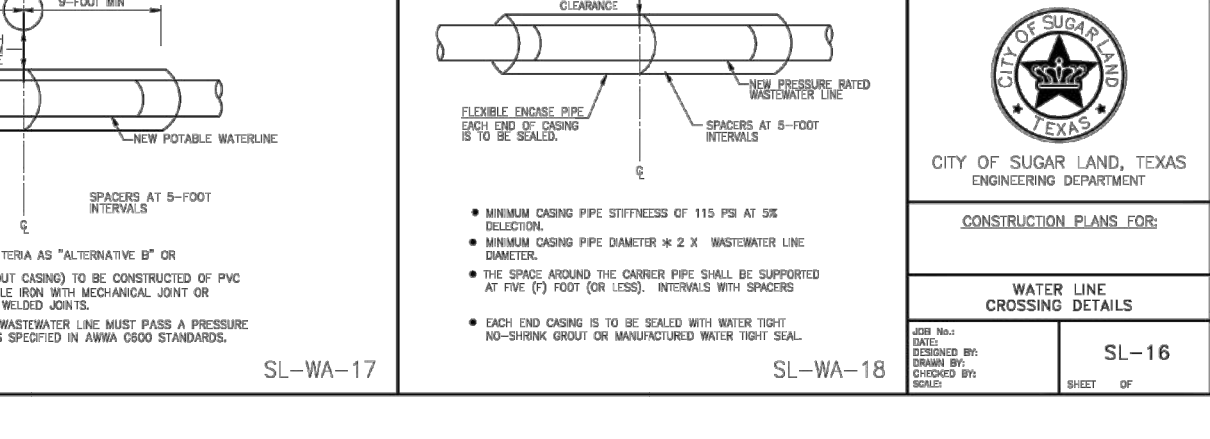
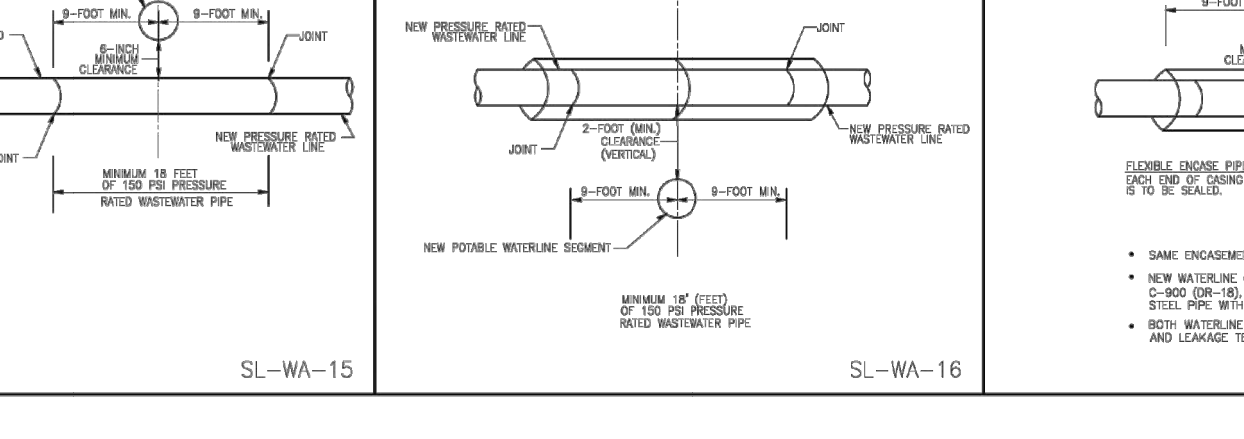
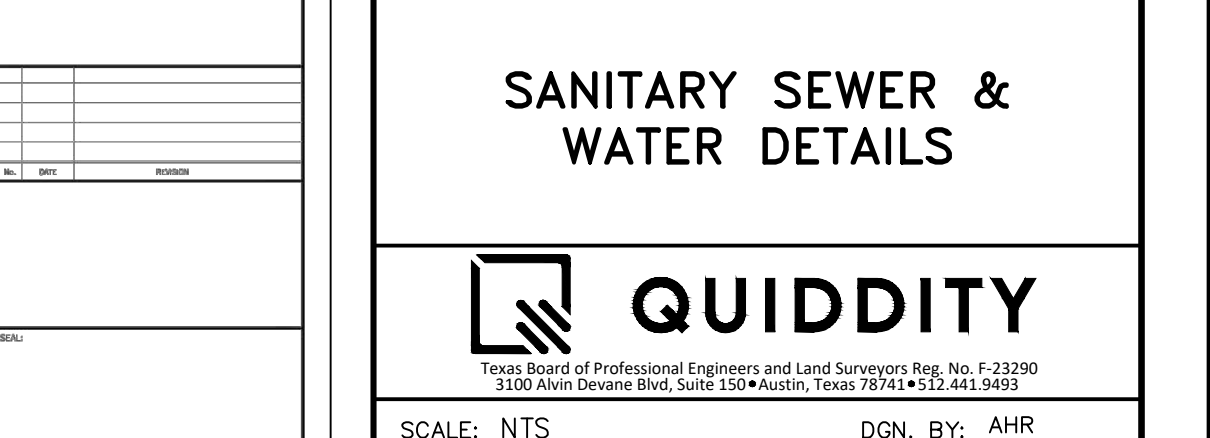
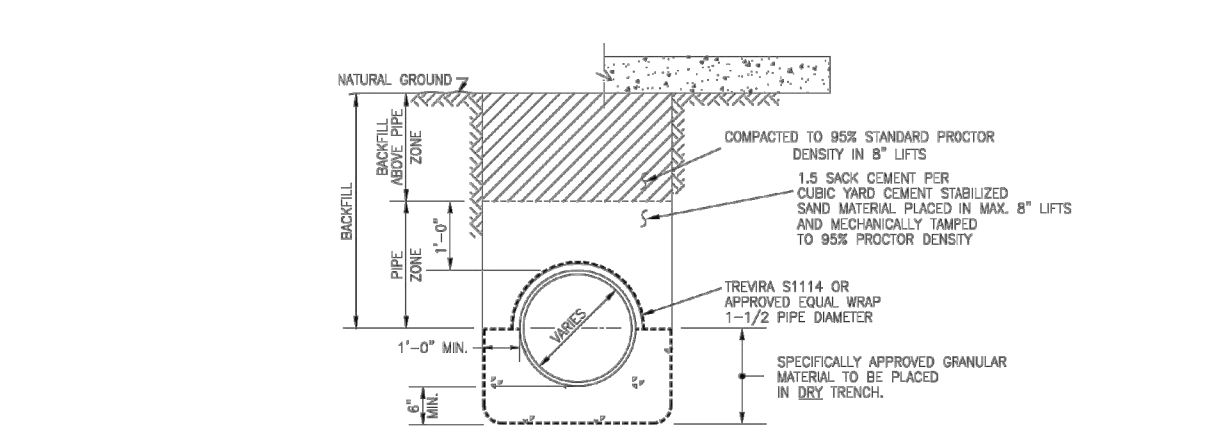
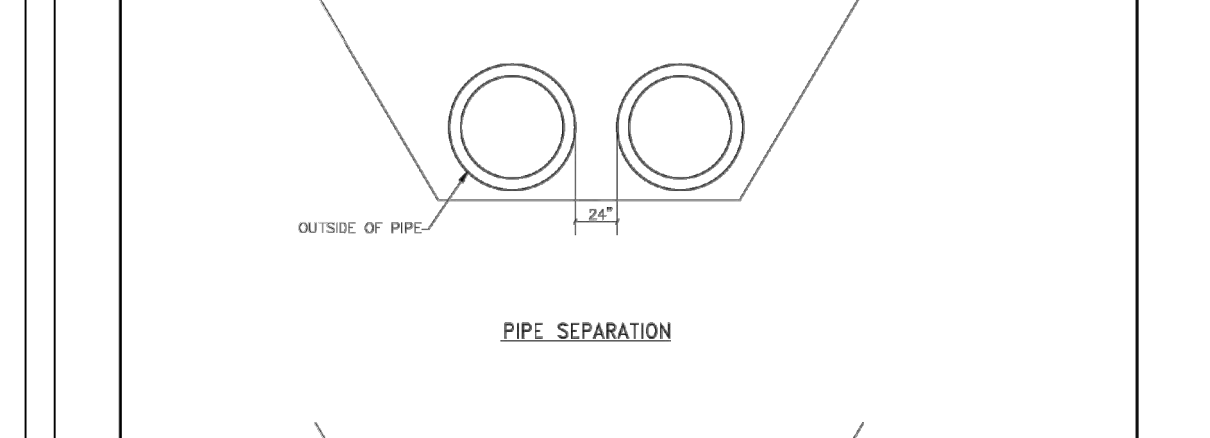
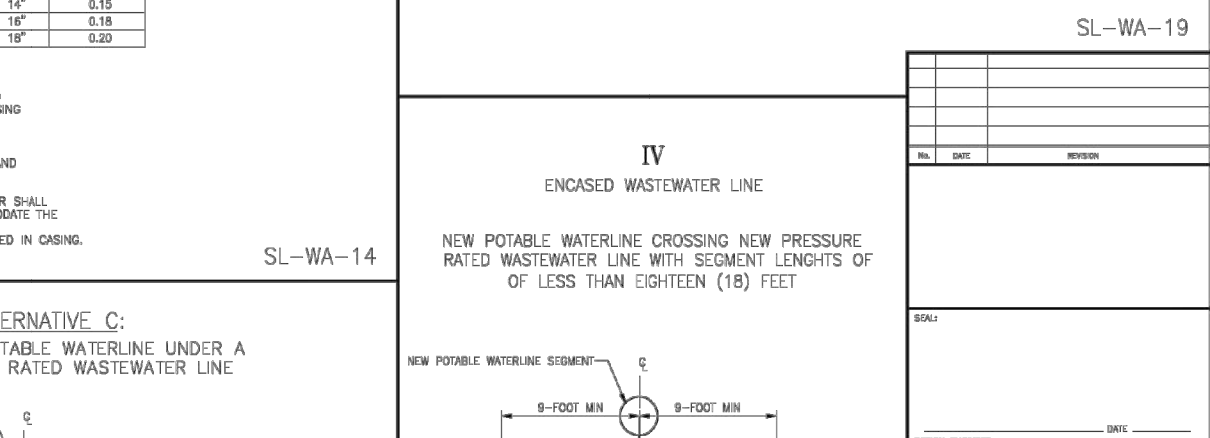
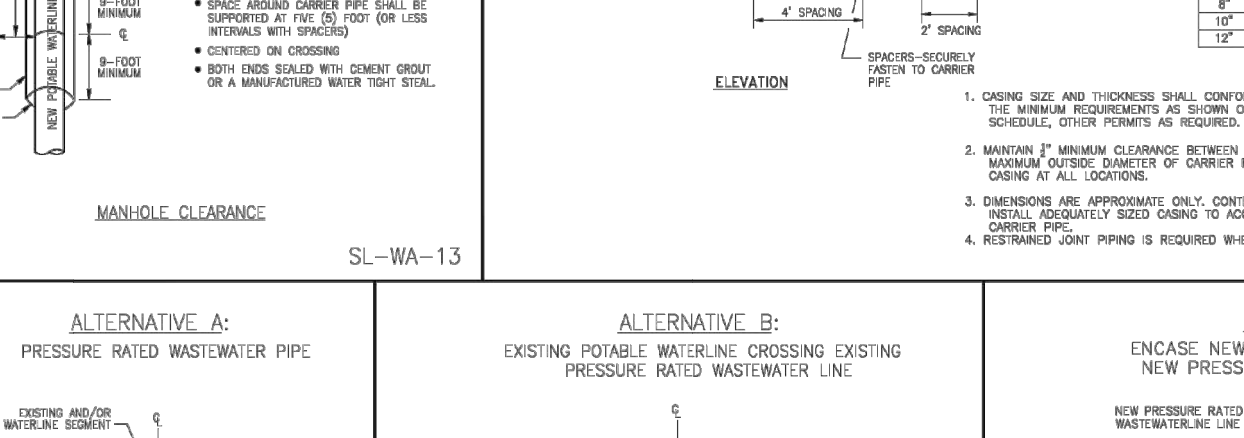
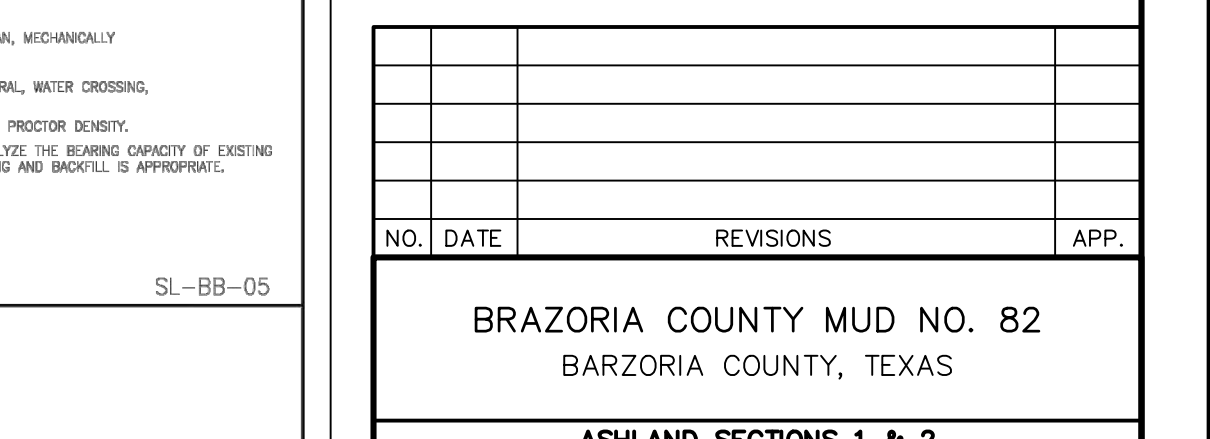
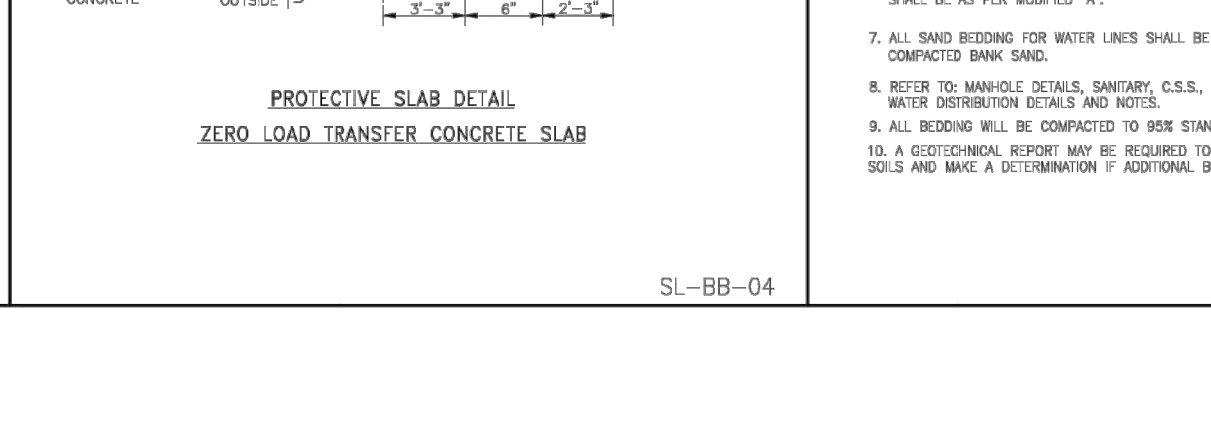
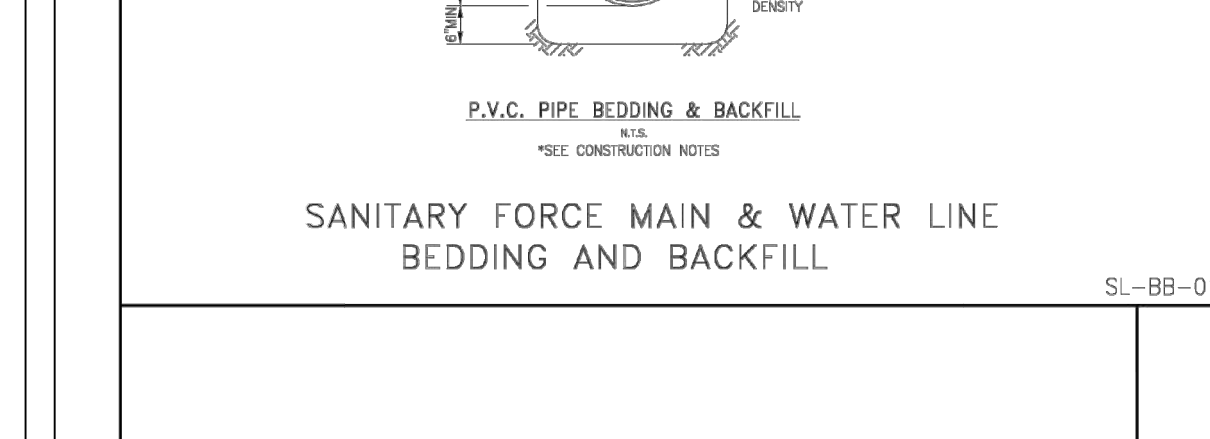
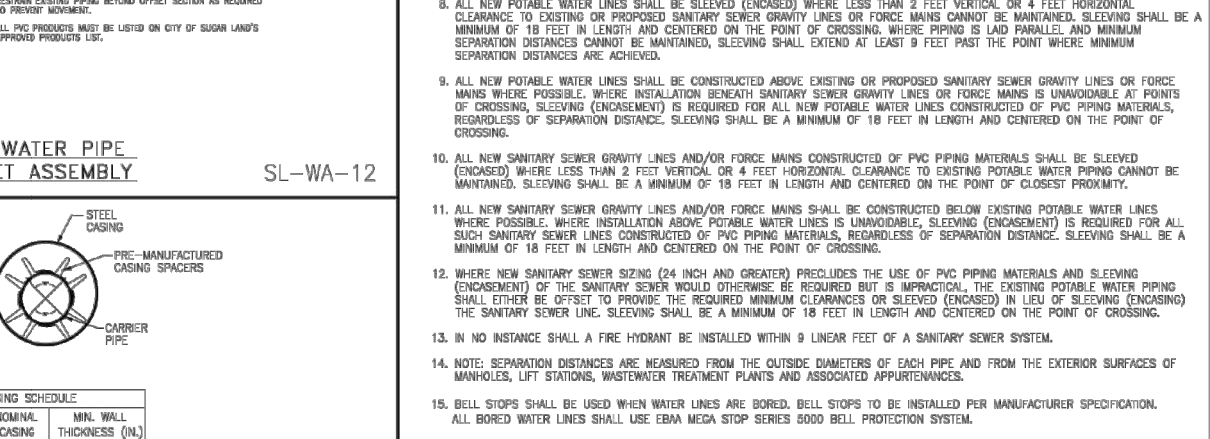
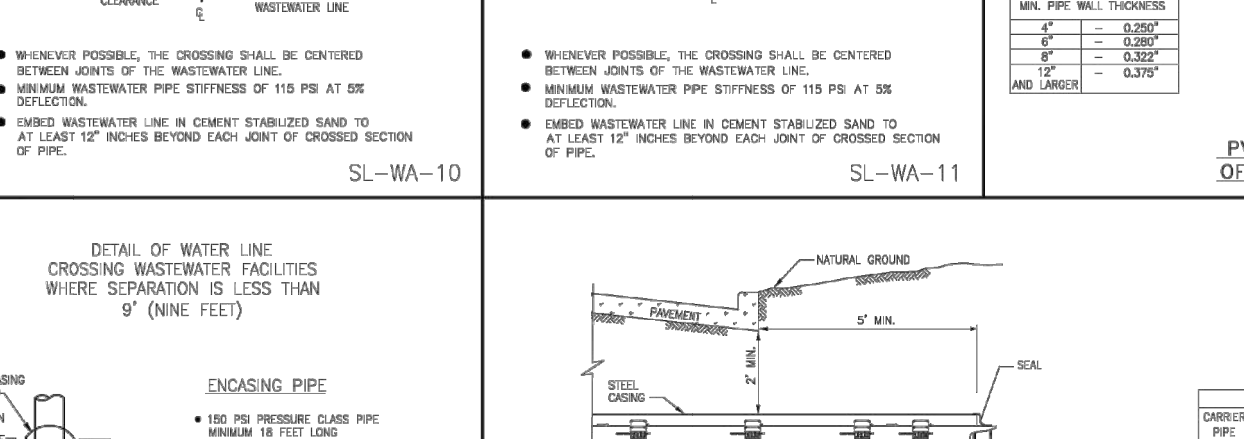
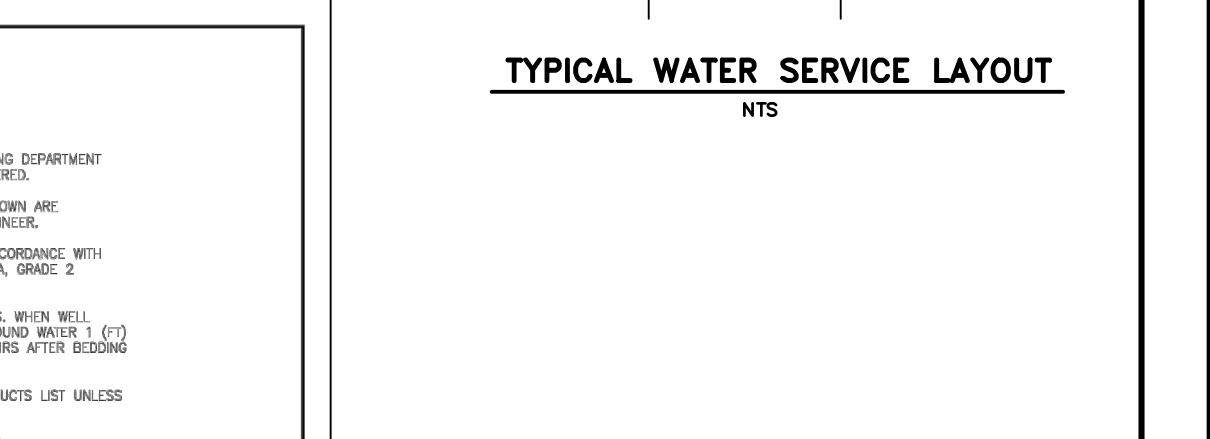
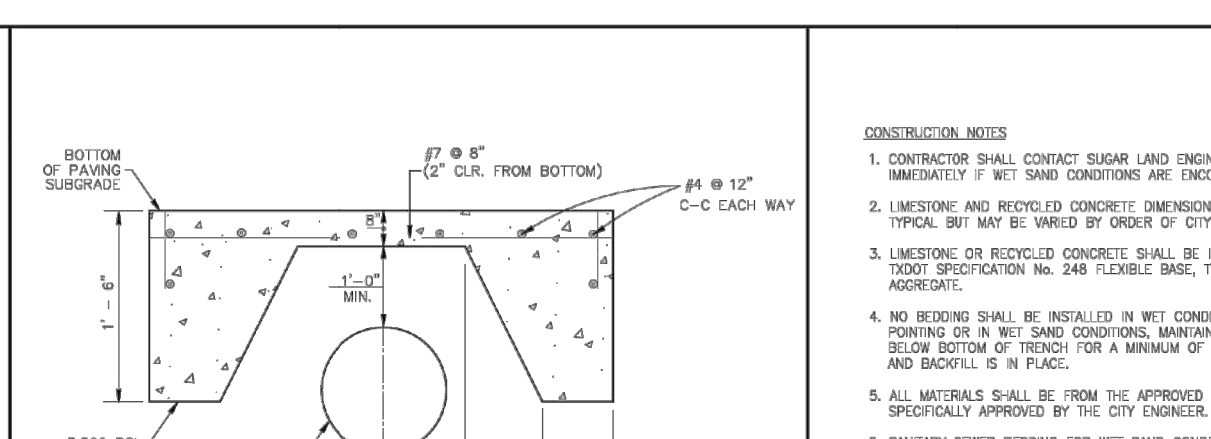
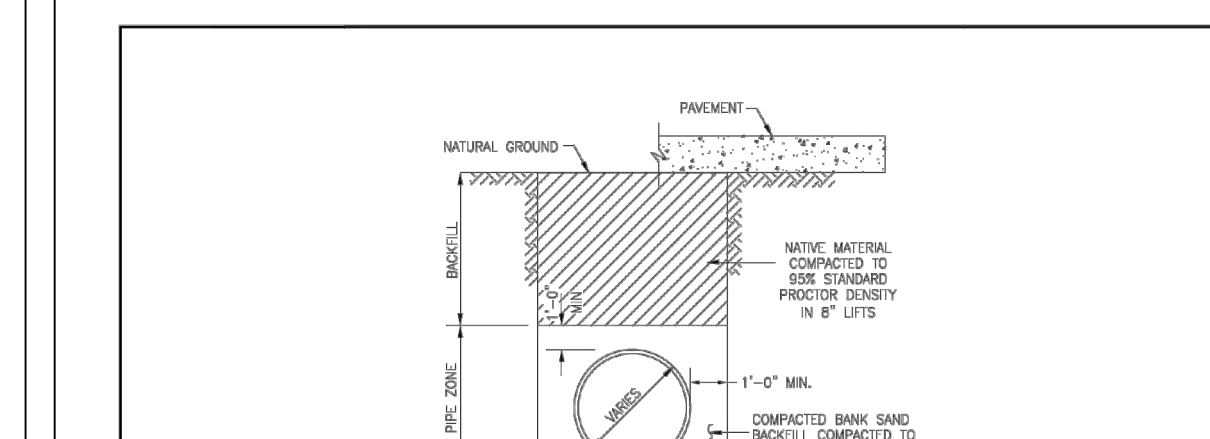
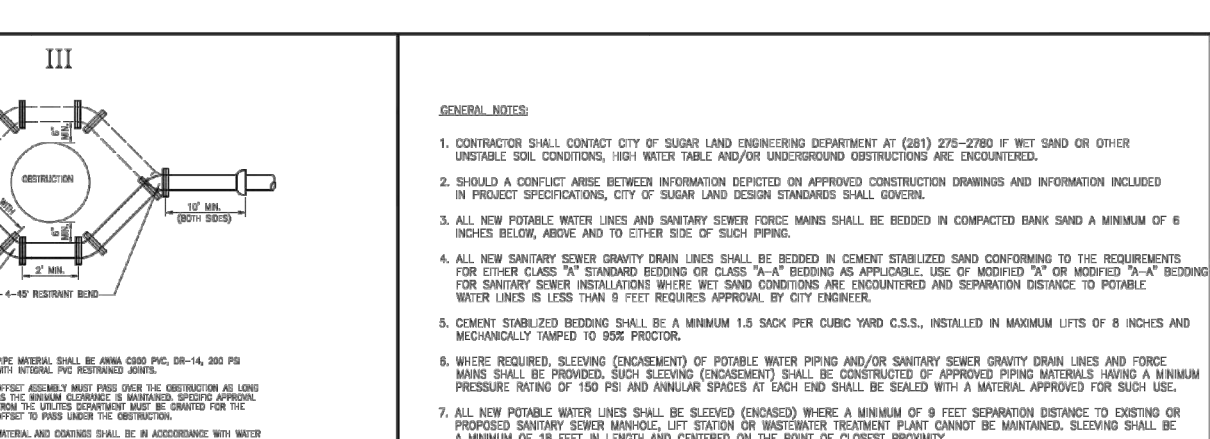
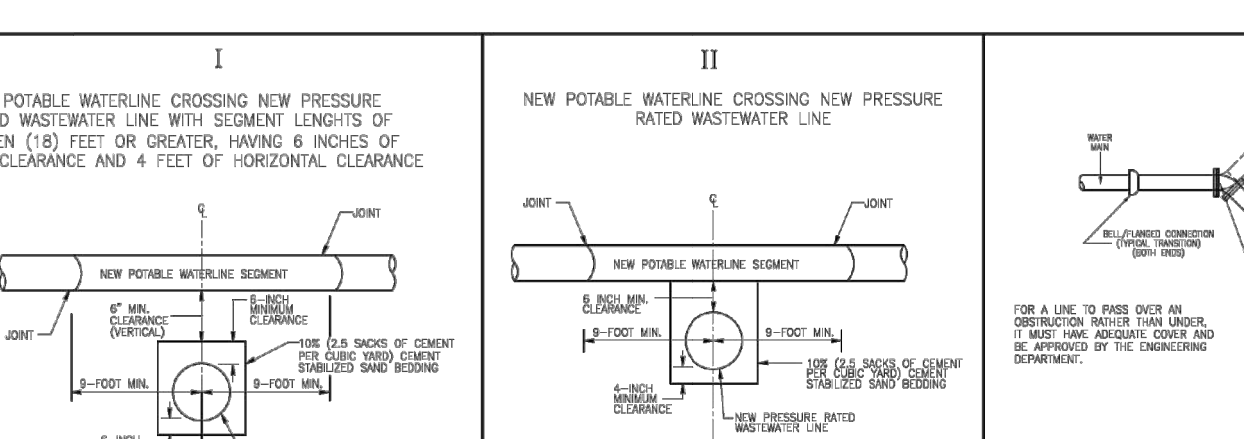
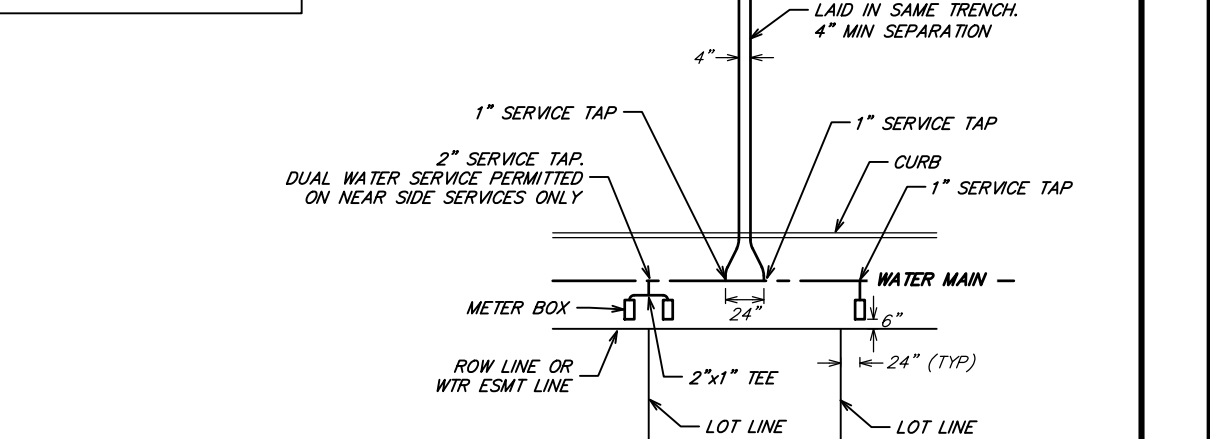
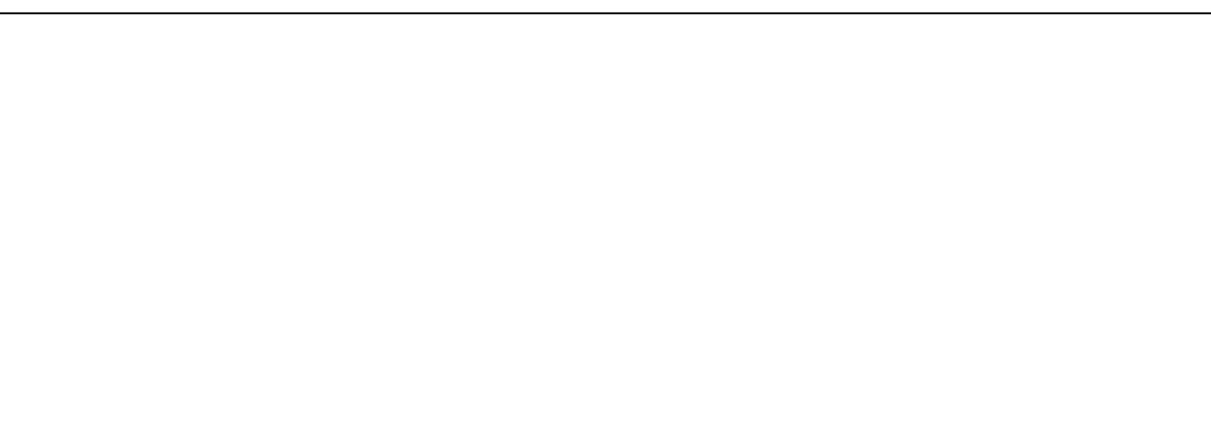
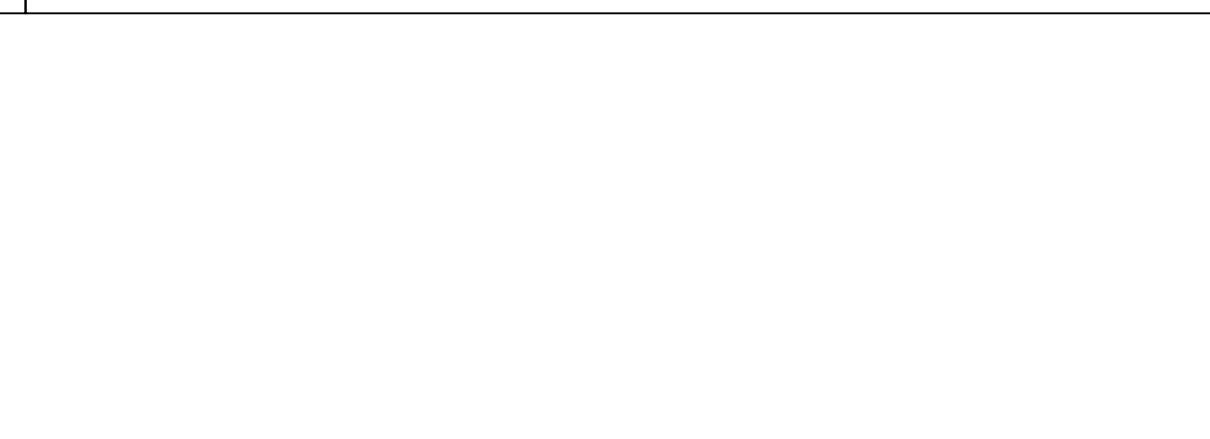
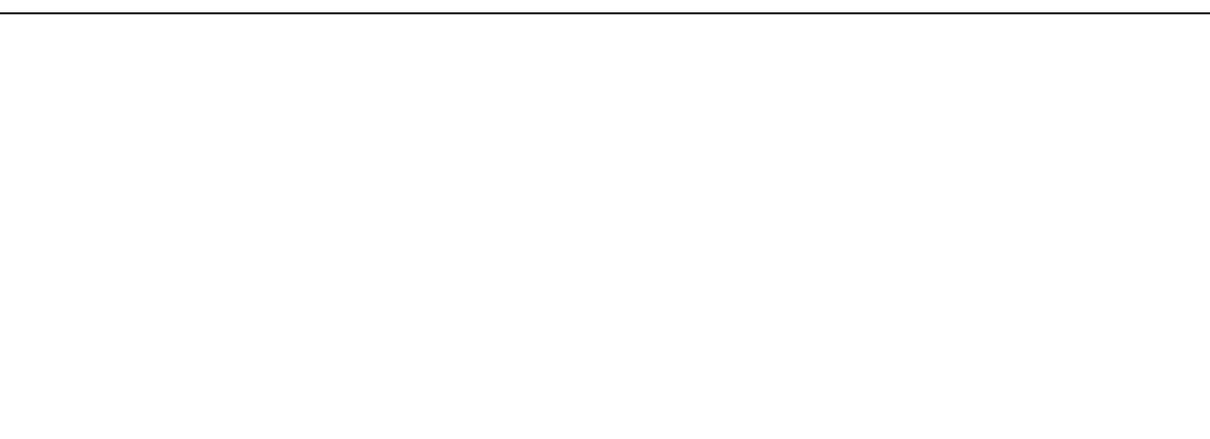
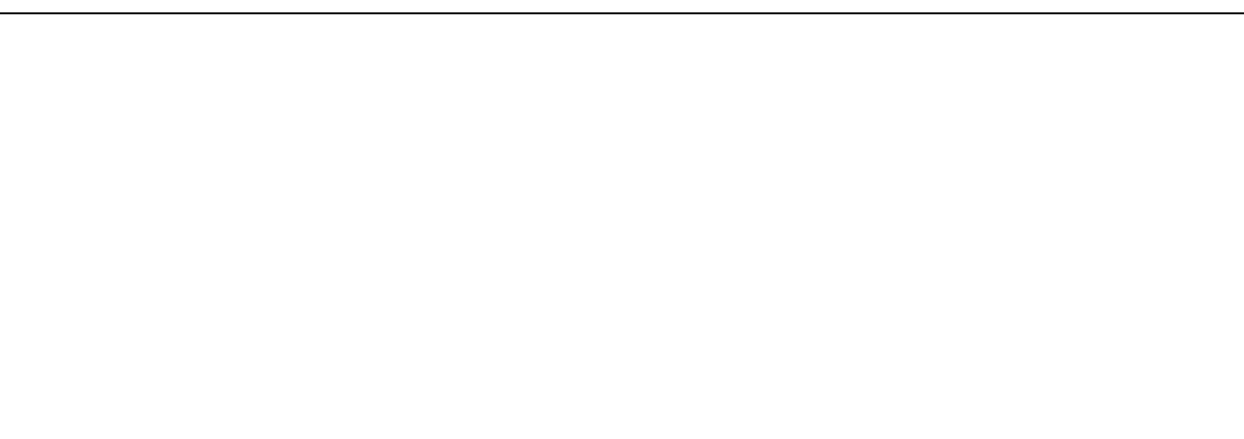
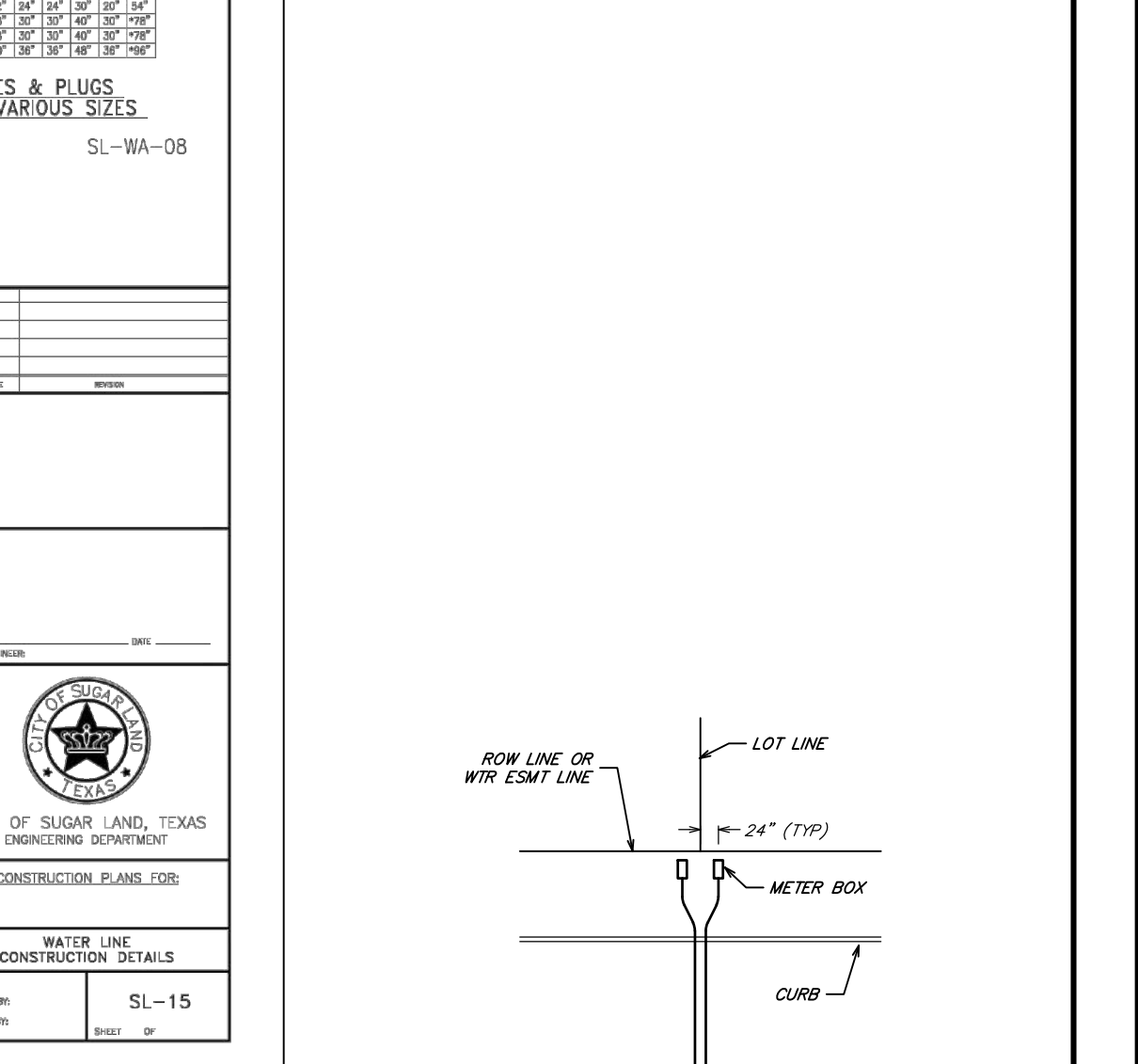
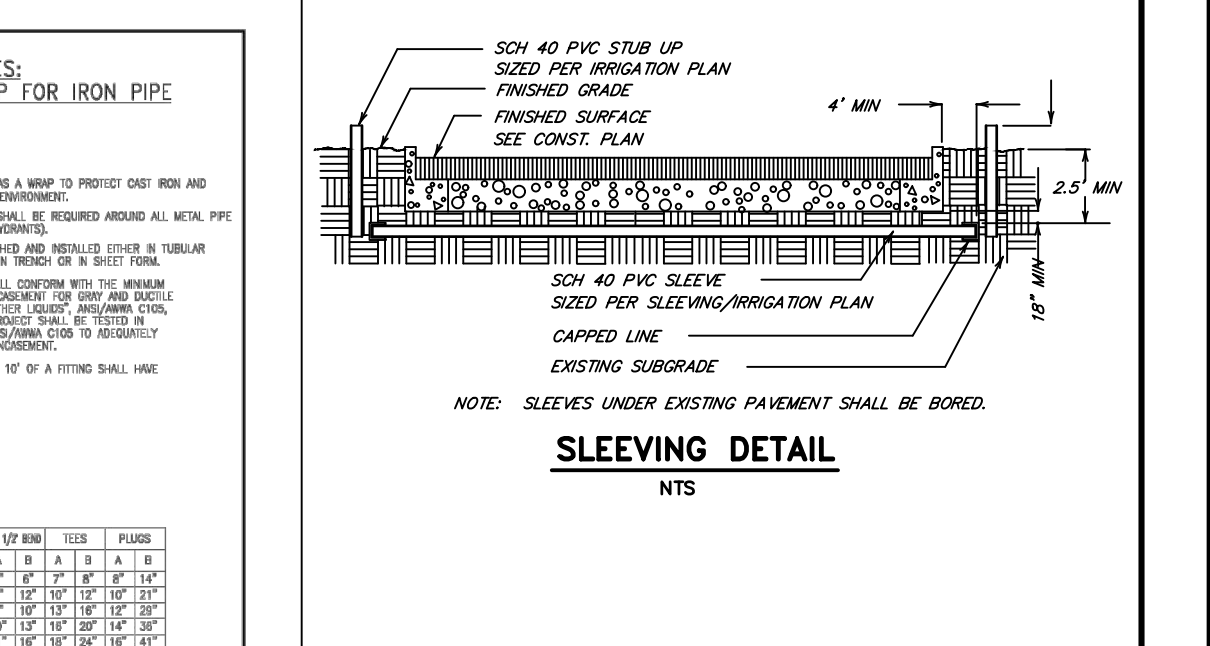
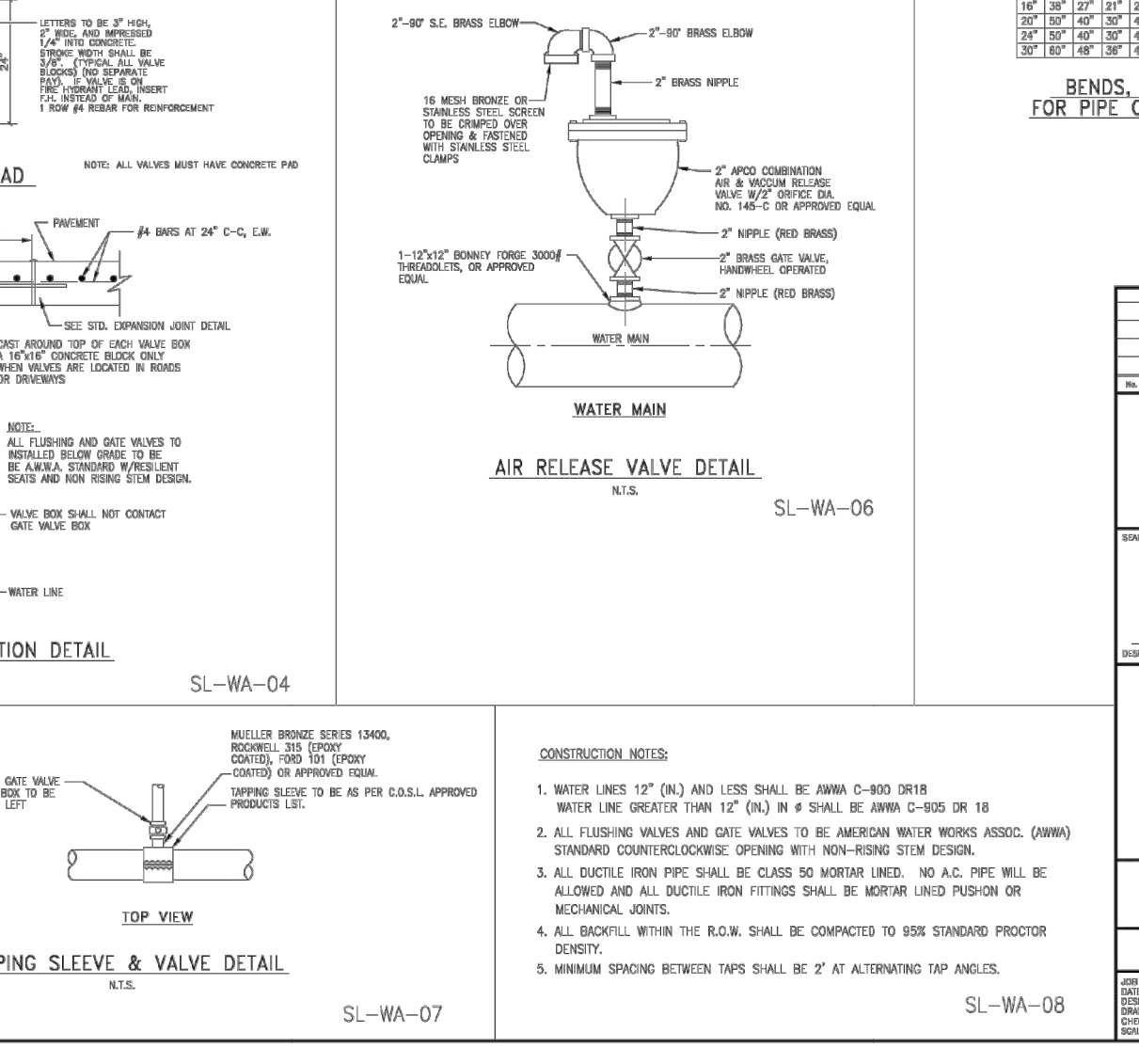
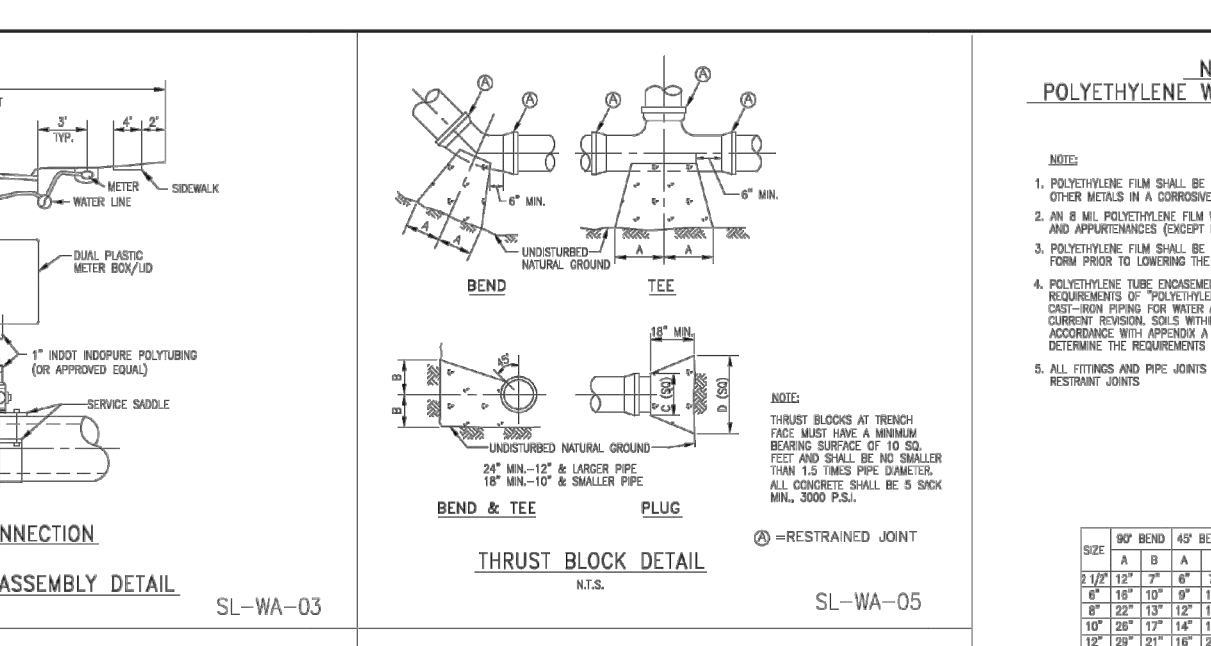
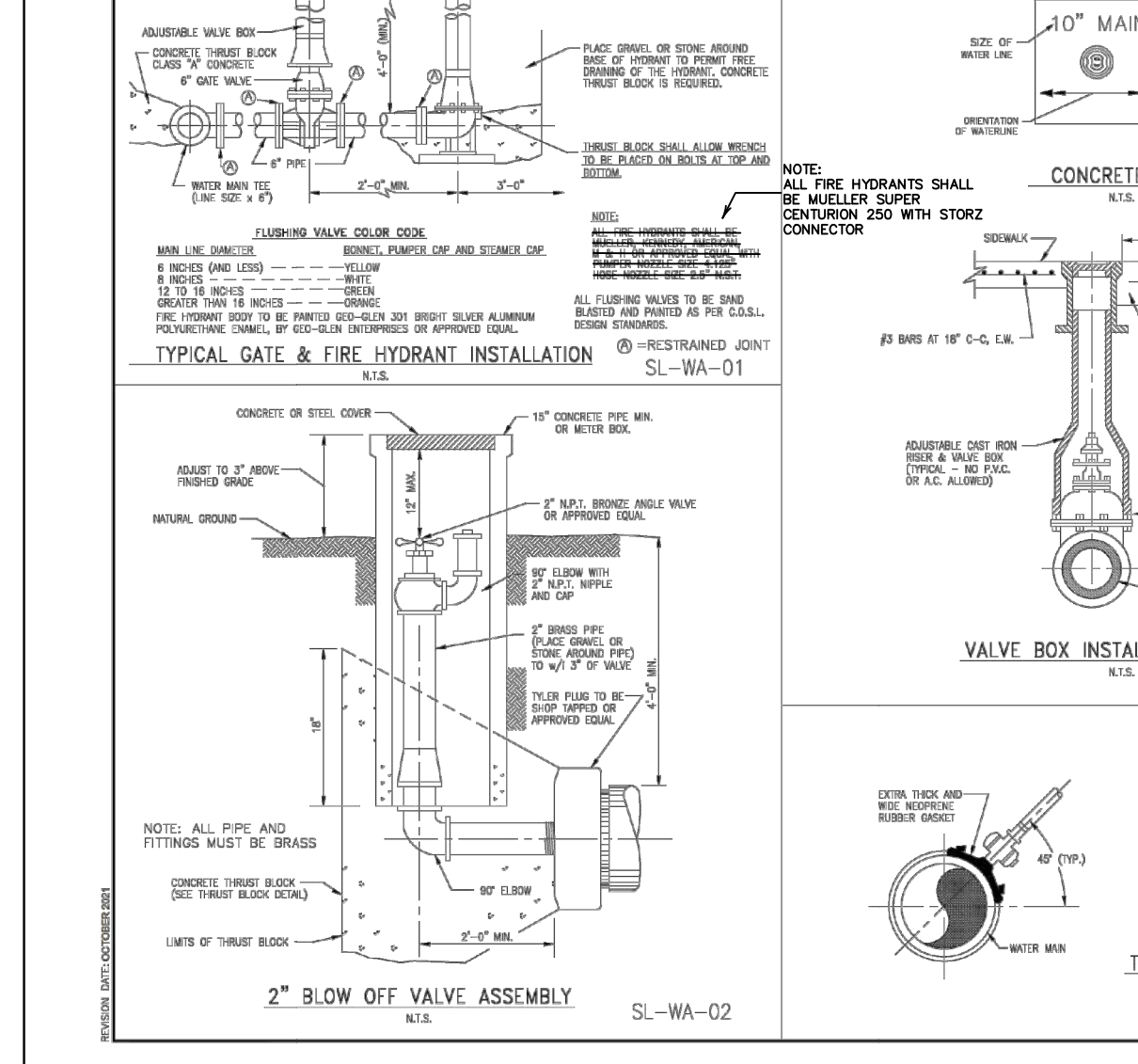
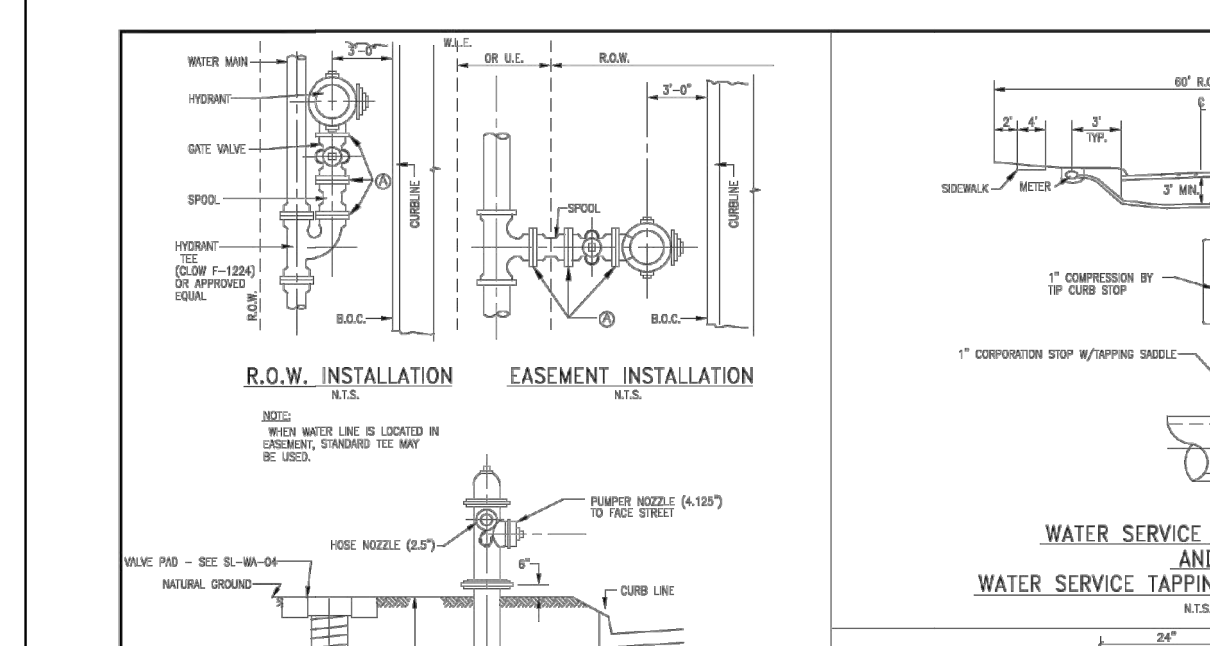
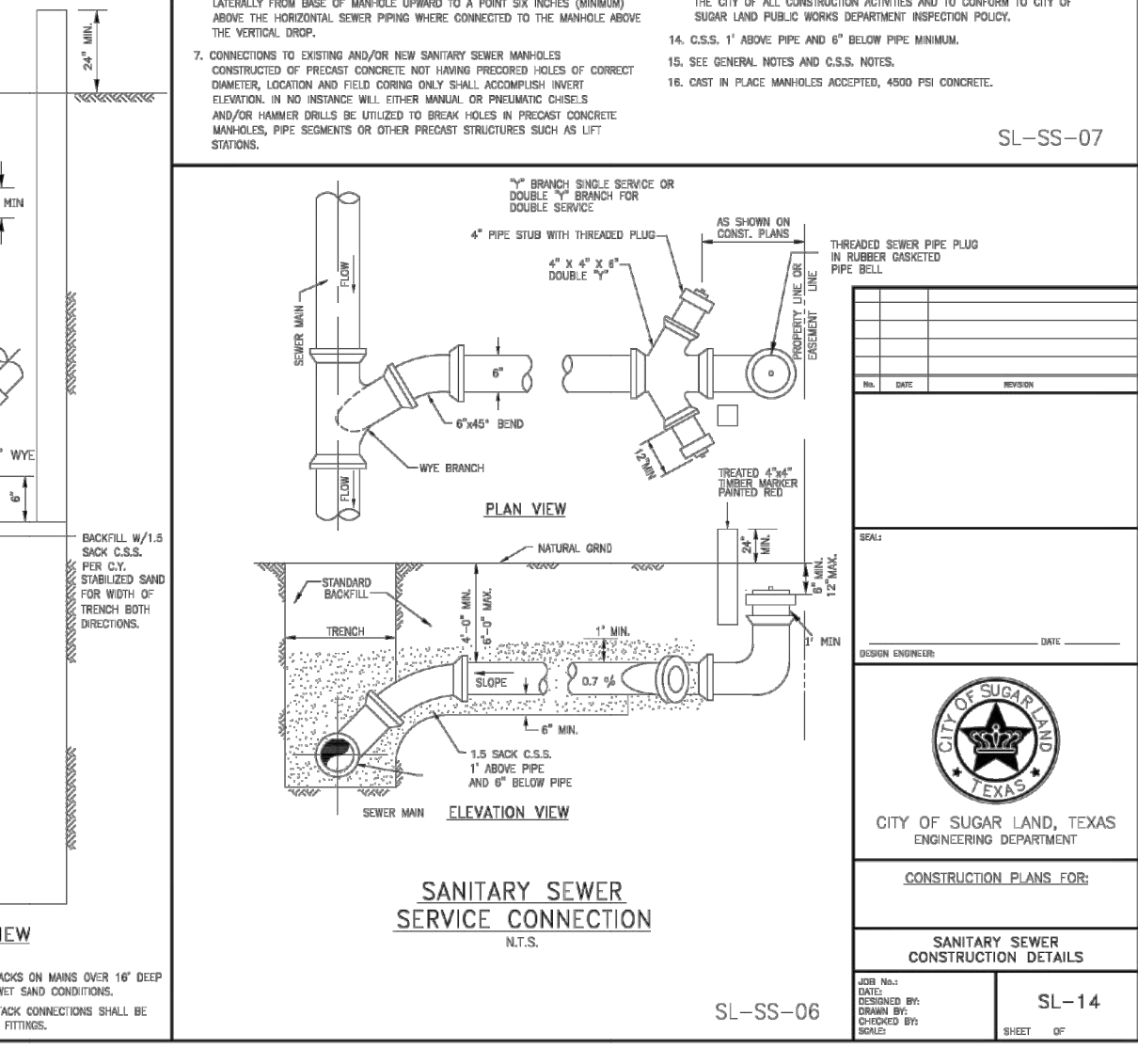
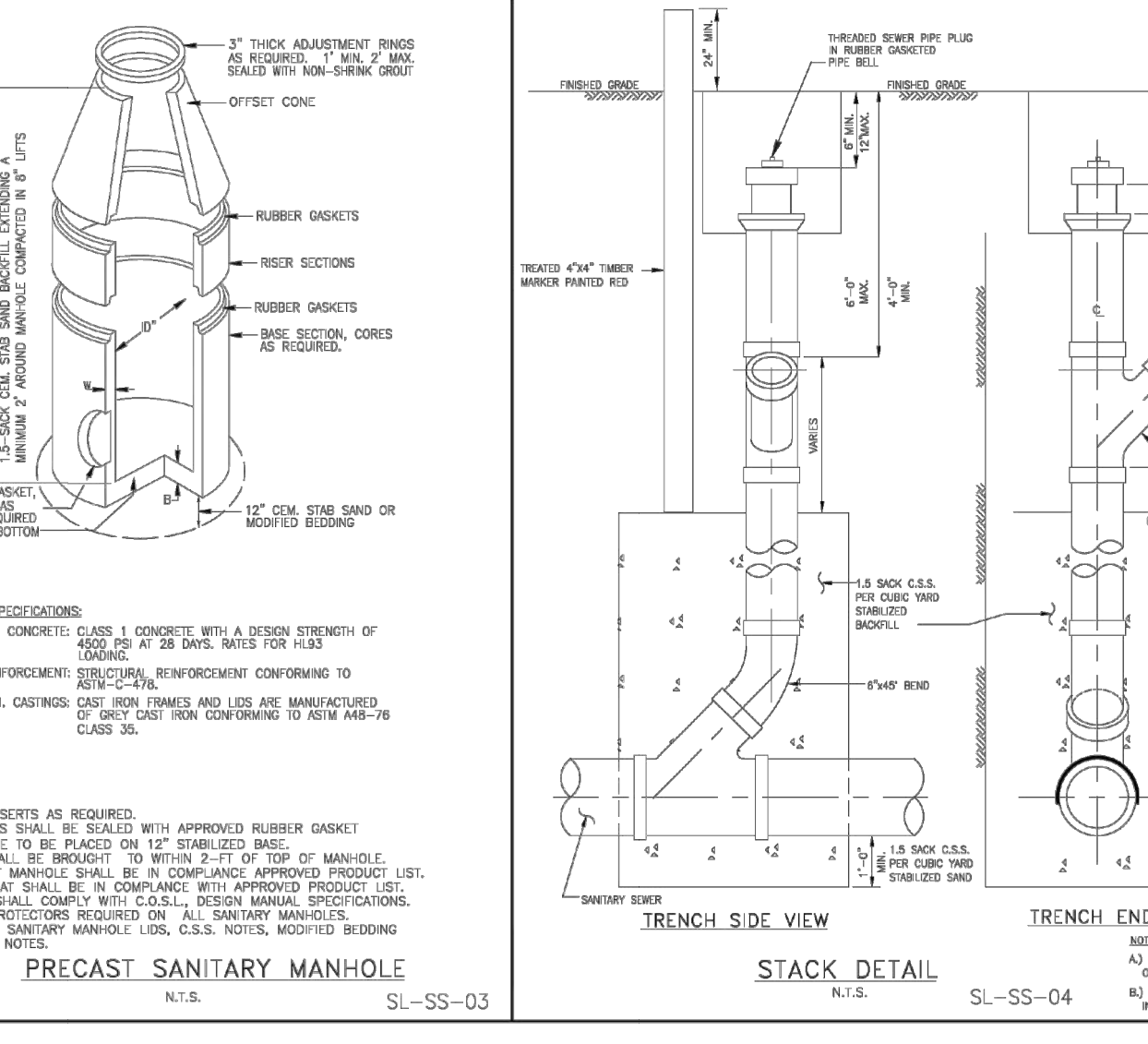
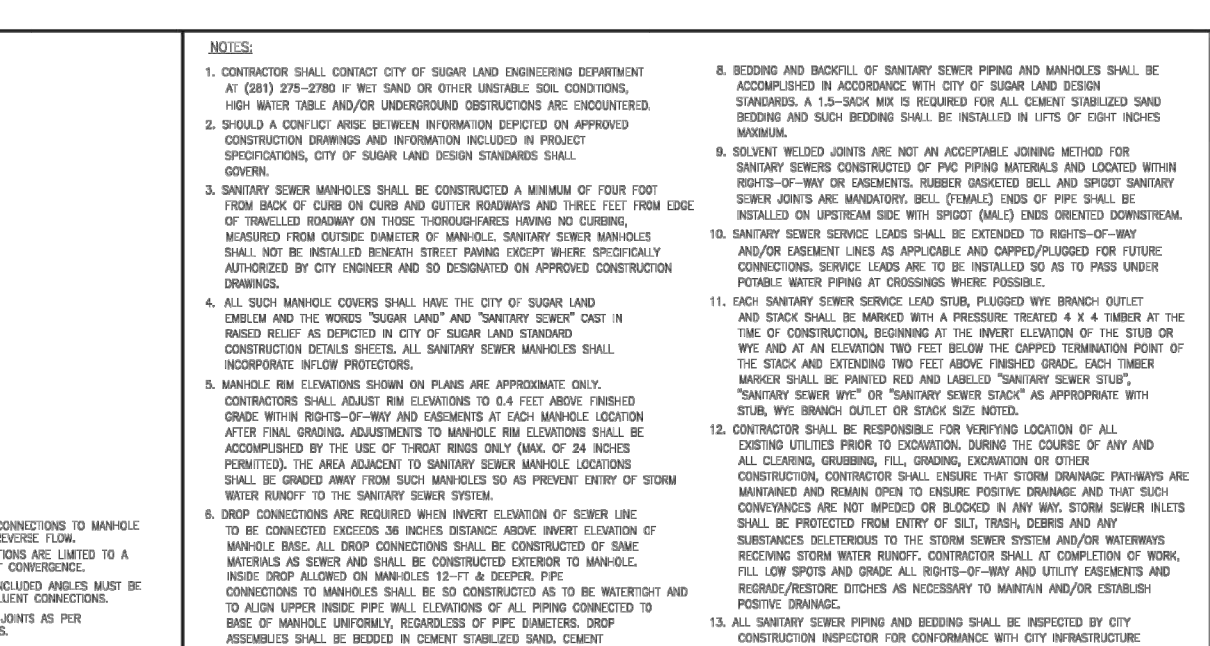
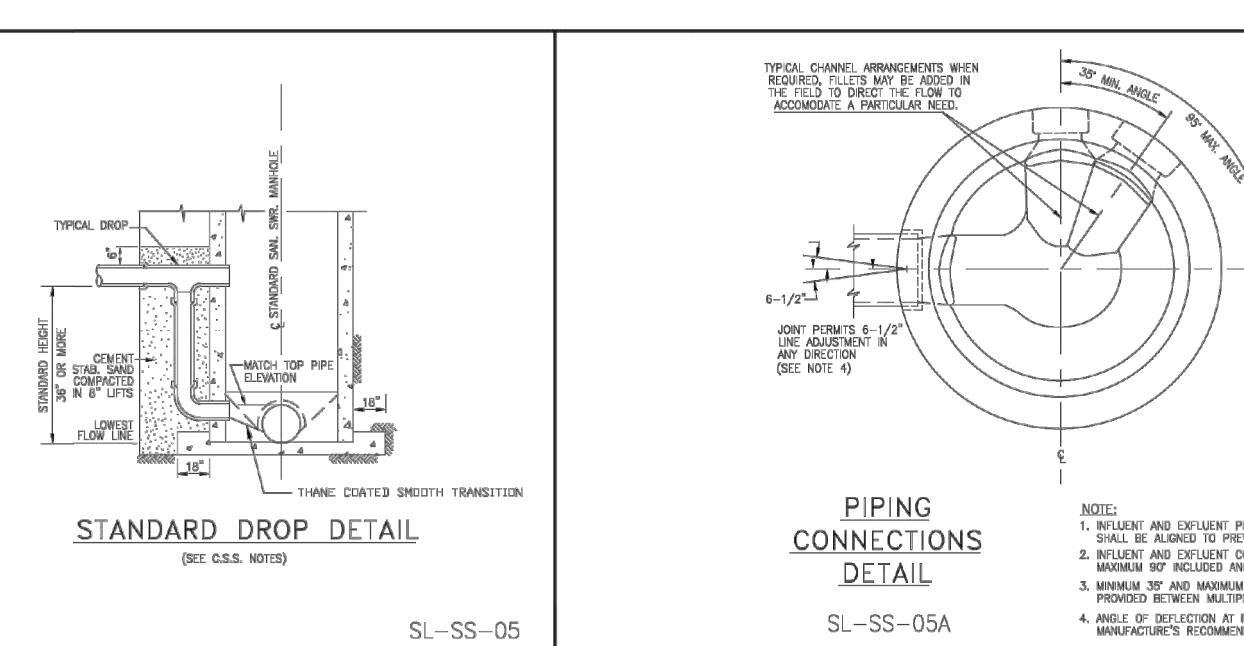




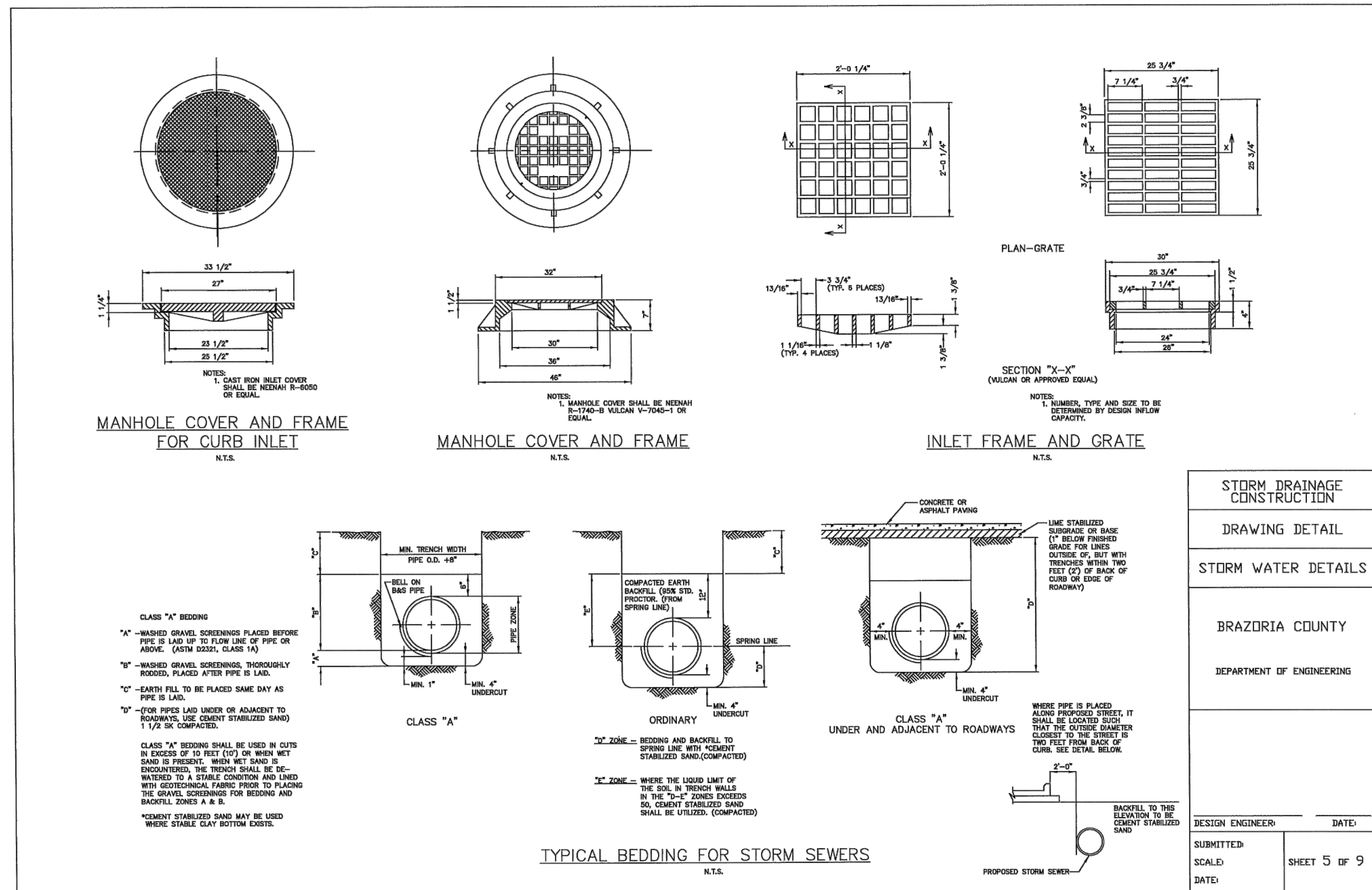
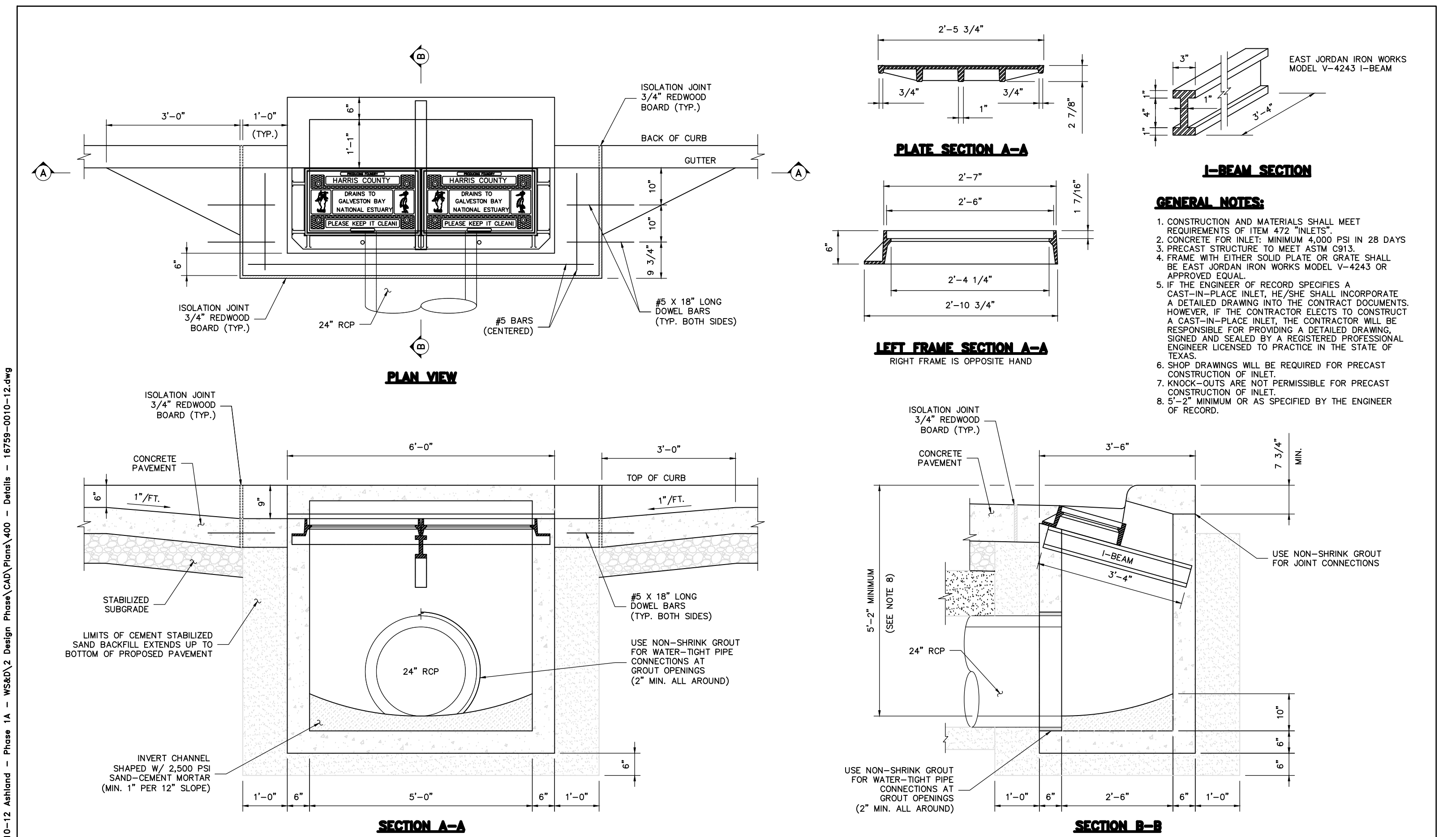
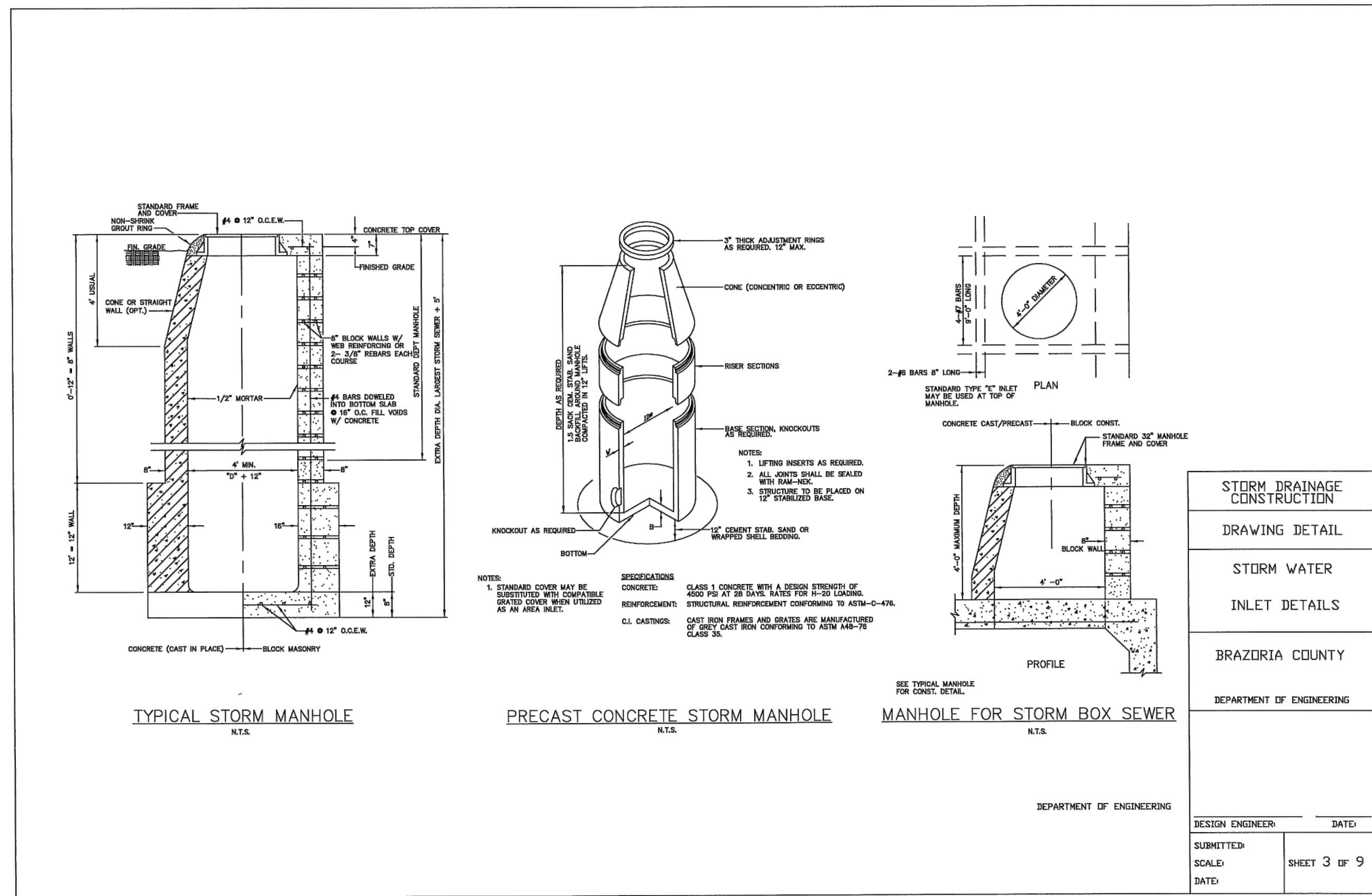












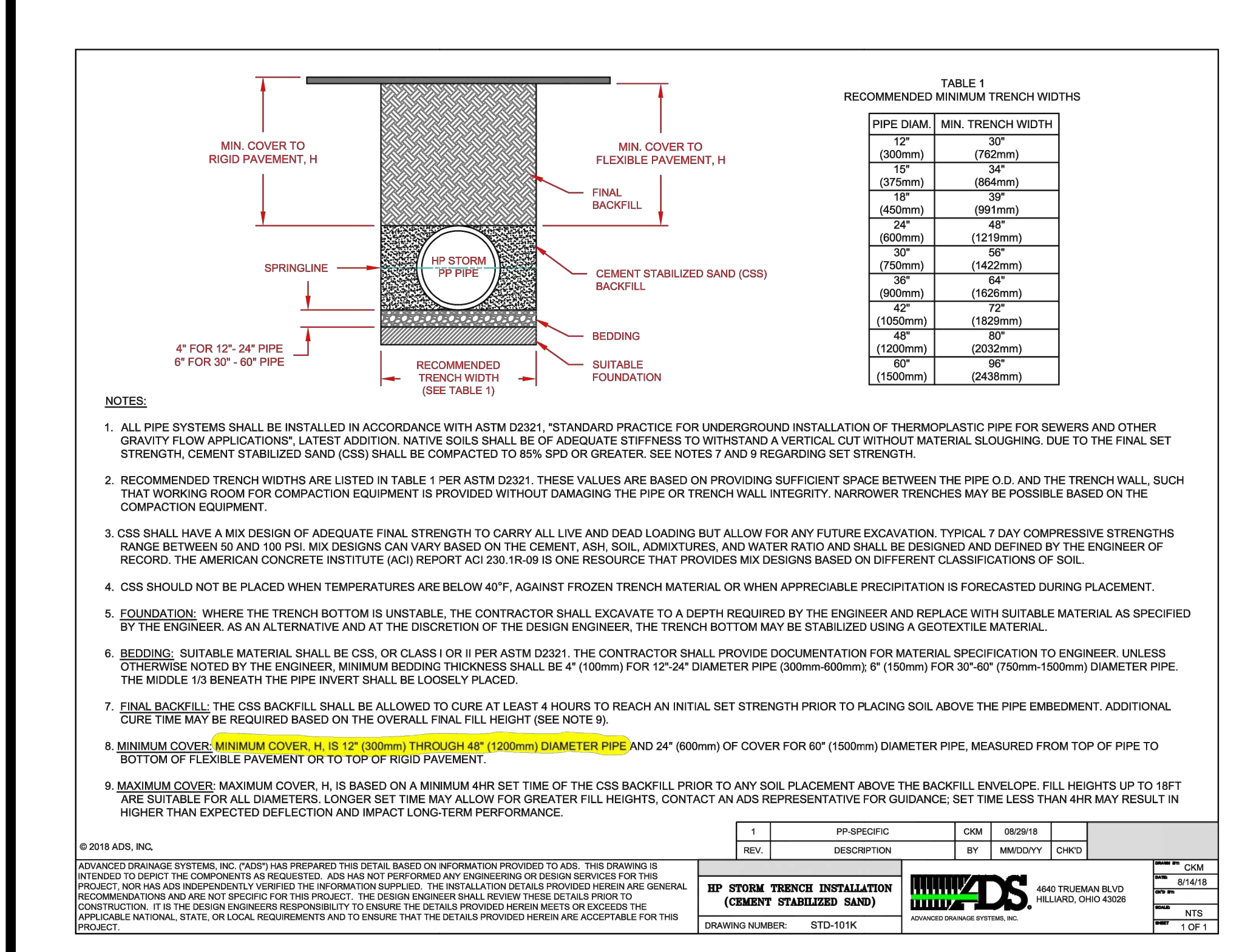
NO.	REVISIONS	DATE	NAME

PROJECT TITLE: **TYPICAL "B-B" INLET DETAILS**

FOR INTERNAL REVIEW ONLY  
DOCUMENT COMPLETE: \_\_\_\_\_  
NOT INTENDED FOR CONSTRUCTION: \_\_\_\_\_  
REVISION OR PERMIT PURPOSES: \_\_\_\_\_

DESIGNER: \_\_\_\_\_ DATE: \_\_\_\_\_  
CHECKER: \_\_\_\_\_ DATE: \_\_\_\_\_

SCALE: 1" = 1'-0"



NO.	DATE	REVISIONS	APP.

BRAZORIA COUNTY MUD NO. 82  
BRAZORIA COUNTY, TEXAS

ASHLAND SECTIONS 1 & 2

**STORM WATER DRAINAGE DETAILS**

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
3100 Avon Grove Blvd, Suite 100-Austin, Texas 78741 (512) 441-2423

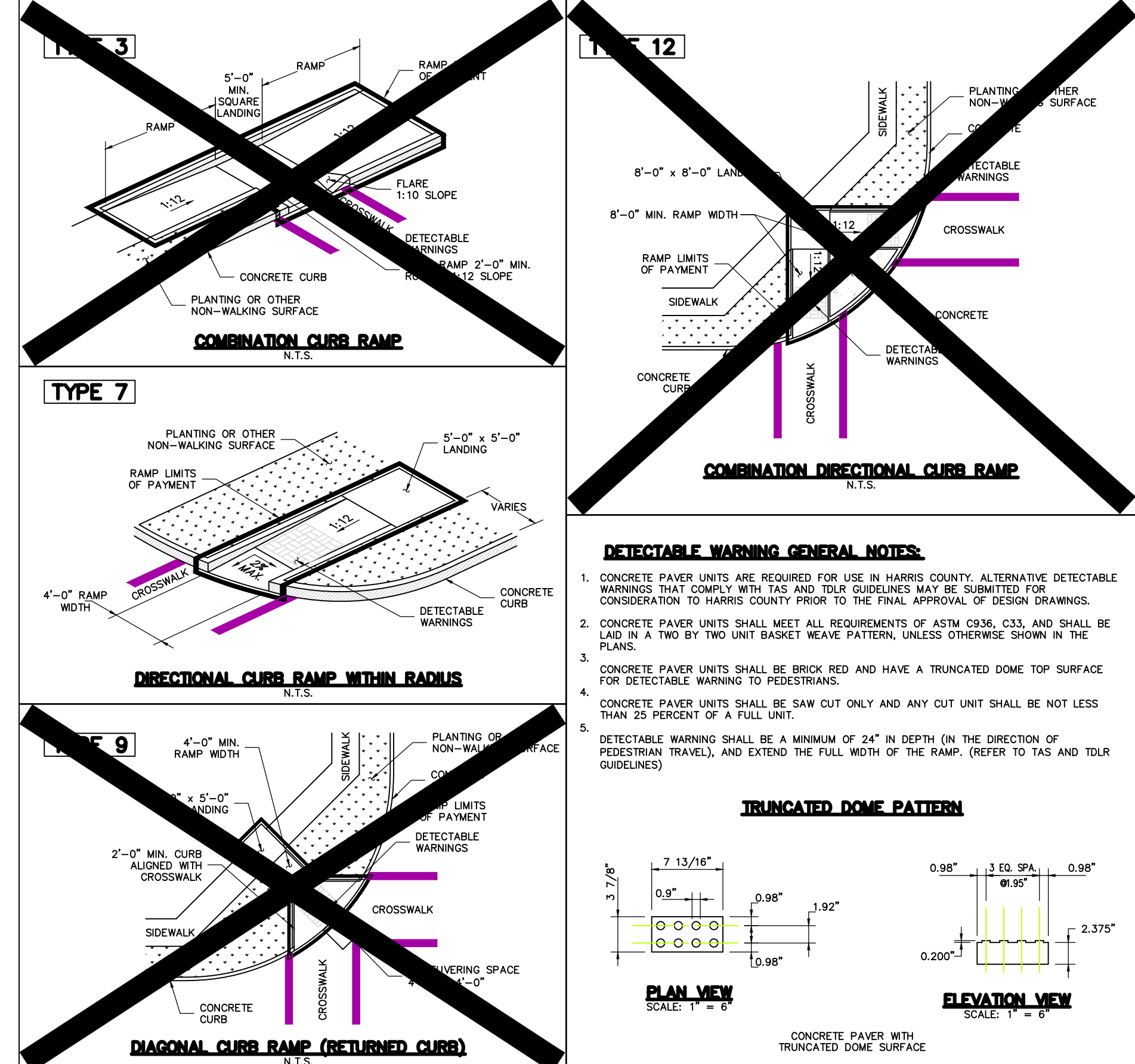
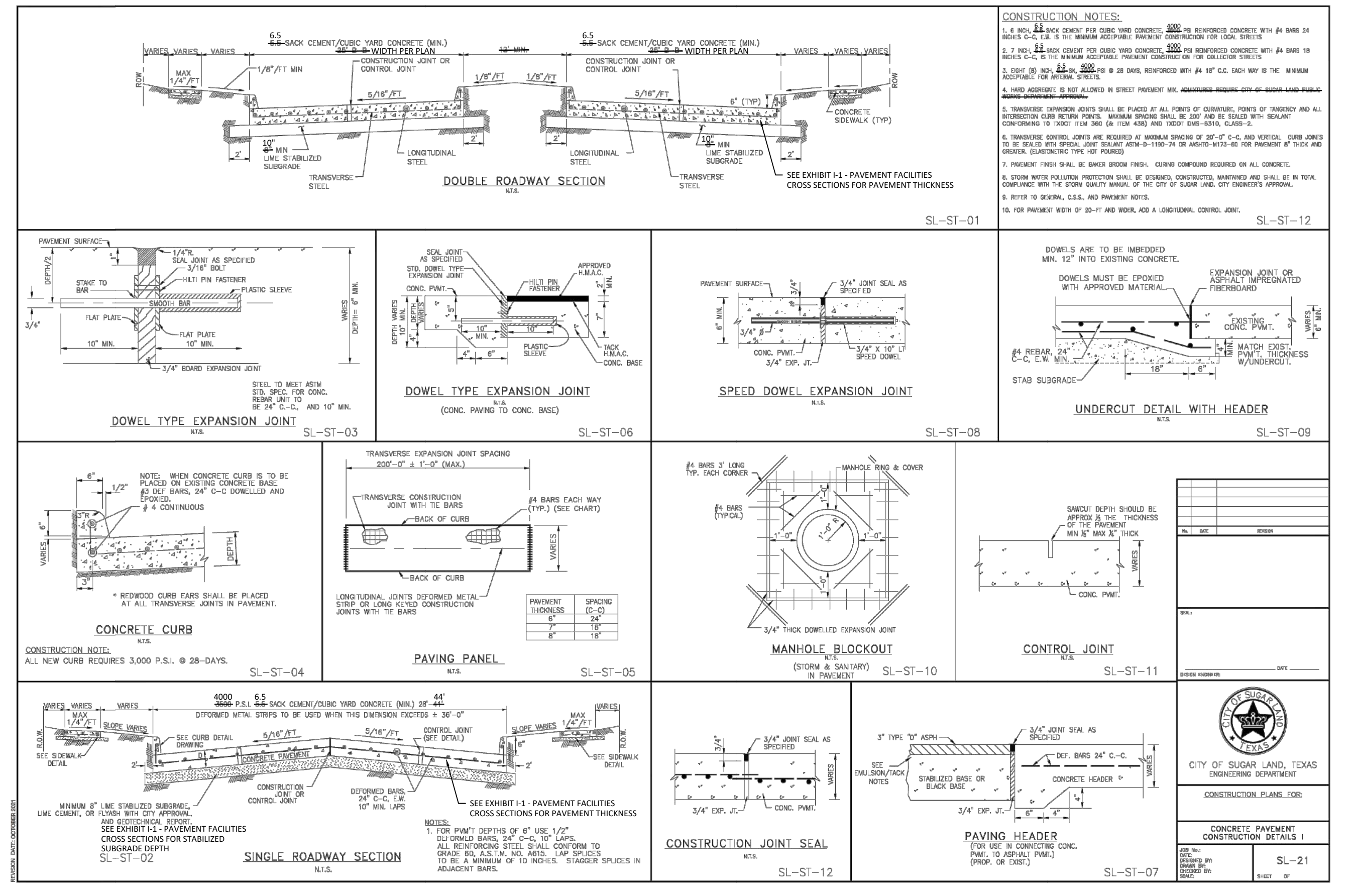
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DATE: OCTOBER 2024 DWN. BY: JWS  
JOB NO. 16759-0010-12 DWG. NO.: \_\_\_\_\_  
SUBMITTED: \_\_\_\_\_ SURV. BY: \_\_\_\_\_  
F.B. NO.: \_\_\_\_\_

10/11/2024

DARREN J. MCAFEE  
137808  
LICENSED PROFESSIONAL ENGINEER

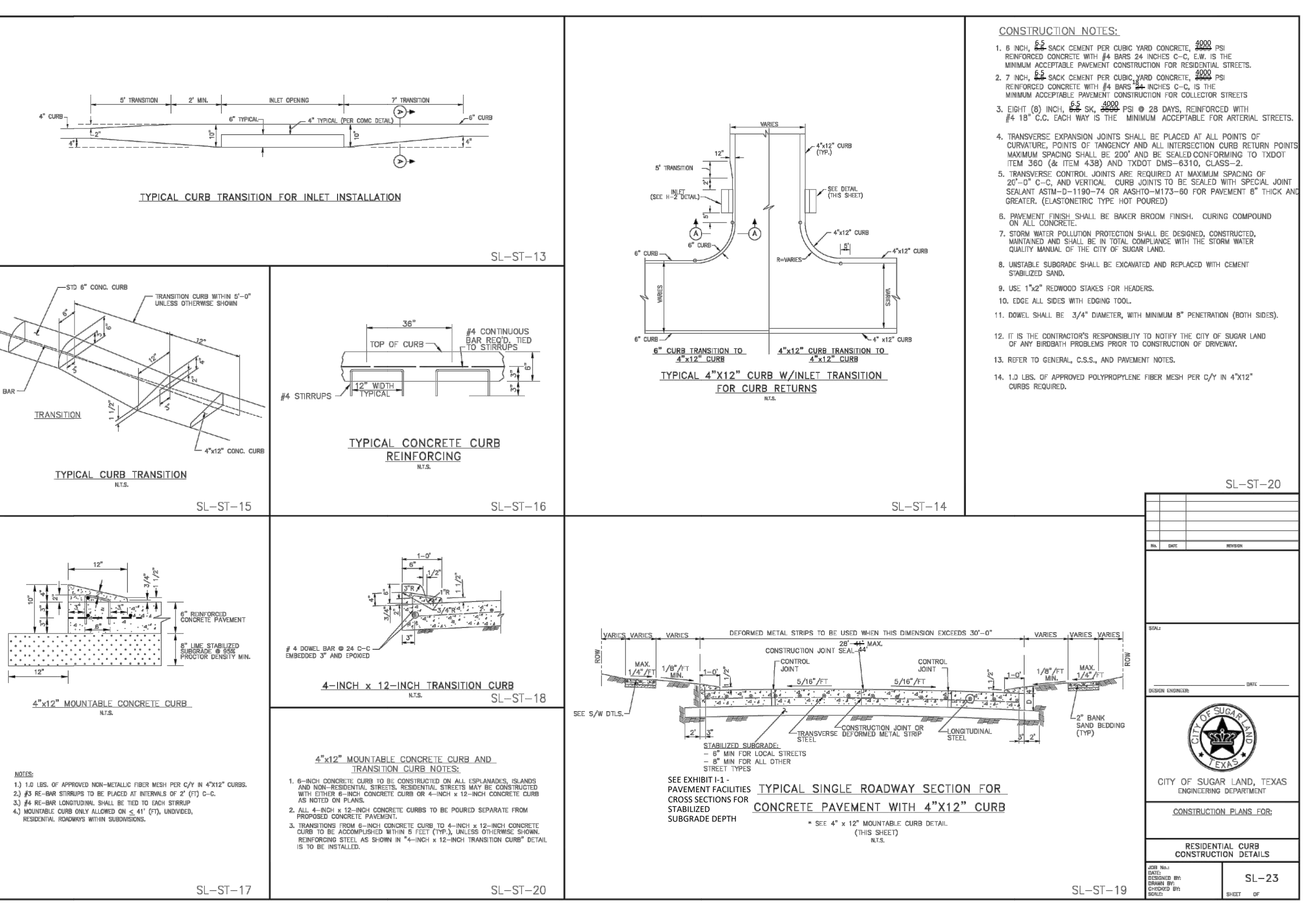
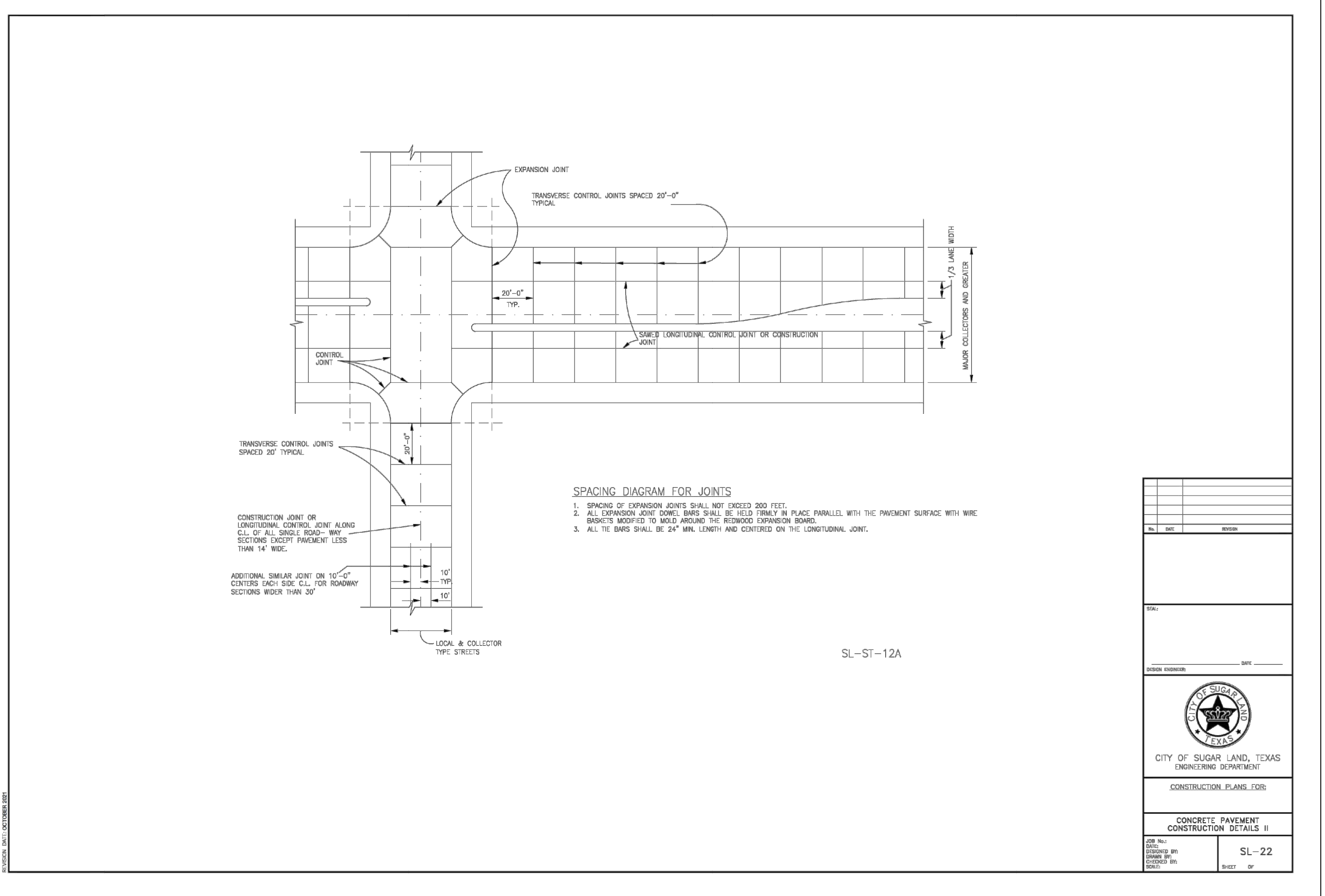
SHEET NO. 28 OF 30





**ACCESSIBLE CURB RAMPES AND LANDINGS GENERAL NOTES:**

- THE DESIGN AND CONSTRUCTION OF ALL ELEMENTS OF PEDESTRIAN FACILITIES SHALL MEET THE CRITERIA ESTABLISHED IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS), AS PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TLDR), UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- PEDESTRIAN FACILITIES AT SIGNALIZED INTERSECTION SHALL BE IN ACCORDANCE WITH APPLICABLE TRAFFIC SIGNAL DESIGN DRAWINGS.
- ADJUSTMENT TO SIDEWALKS THAT CONNECT TO WHEELCHAIR RAMPS AND LANDINGS MAY BE NECESSARY TO MATCH BOTH THE GRADE AND THE WIDTH OF THE LANDINGS. THESE ADJUSTMENTS MAY NOT BE SHOWN ON THE DRAWINGS. WHEN DEEMED NECESSARY BY THE ENGINEER, FIELD ADJUSTMENT TO THE SIDEWALK SHALL BE MADE AS DIRECTED BY THE ENGINEER AND PAID FOR SEPARATELY, AS DIRECTED BY THE ENGINEER.
- ALL ITEMS NECESSARY FOR THE CONSTRUCTION OF THE WHEELCHAIR RAMPS AND LANDINGS WITHIN THE "LIMITS OF PAYMENT" INDICATED ON APPROPRIATE WHEELCHAIR RAMP DETAILS AND DESIGN DRAWINGS (I.E., SAW CUT OF PAVEMENT, REPAIRS, RECONSTRUCTION, DISPOSAL OF MATERIALS, ETC.) SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WHEELCHAIR RAMP FOR PROJECTS THAT ARE DESIGNATED AND/OR CONSTRUCTED USING HARRIS COUNTY RESOURCES.
- FLATTER SLOPES THAT WILL STILL DRAIN PROPERLY MAY BE USED WHERE APPROPRIATE, SUBJECT TO THE REQUIREMENT OF NOTES 7, 8, AND 9.
- RAMPS AND LANDINGS WITH DROP-OFFS GREATER THAN 6 INCHES IN HEIGHT SHALL HAVE CURB, RAILINGS, OR PROJECTING SURFACES. REFER TO TEXAS ACCESSIBILITY STANDARDS (TAS) AND THE ENGINEER.
- ALL SLOPES SHOWN ARE MAXIMUM ALLOWABLE. THE CROSS SLOPE OF AN ACCESSIBLE ROUTE AND/OR LANDING MUST NOT EXCEED 1:50 (2%). ANY PART OF THE ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:50 (2%) SHALL BE CONSIDERED A RAMP.
- IF A RAMP HAS A RISE GREATER THAN 6 INCHES, OR A HORIZONTAL PROJECTION GREATER THAN 72 INCHES, THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES. THE ONLY EXCEPTIONS SHALL BE AT CURB RAMPS. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS.
- RAMP LENGTH OF GRADE OF APPROACH SIDEWALK SHALL BE SUBJECT TO ADJUSTMENT IN THE FIELD BY THE ENGINEER.
- THE MAXIMUM ALLOWABLE CROSS SLOPE ON A SIDEWALK SHALL BE 2%.
- THE MINIMUM THICKNESS FOR CURB RAMPS SHALL BE 4-1/2 INCHES.
- CURB RAMPS WITH RETURN CURB MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. OTHERWISE, FLARED SIDES SHALL BE PROVIDED.
- CURB RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS. FLARED SIDES ASSOCIATED WITH CURB RAMPS ARE EXCLUDED FROM THIS REQUIREMENT.
- A SMOOTH TRANSITION, IN ACCORDANCE WITH APPROPRIATE CONSTRUCTION DETAILS OR AS DIRECTED BY THE ENGINEER, AND SHALL BE PROVIDED WHERE CURB RAMPS CONNECT TO ADJACENT ROADWAY.
- MANEUVERING SPACES AT THE BOTTOM OF THE CURB RAMPS SHALL BE A MINIMUM 4 FOOT X 4 FOOT CLEAR AREA. SHALL BE WHOLLY CONTAINED WITHIN THE CROSSWALK OUTSIDE OF THE PARALLEL.
- A MINIMUM WIDTH OF 36 INCHES SHALL BE PROVIDED LANDINGS AROUND OBSTRUCTIONS (I.E., SIGN SUPPORTS, SIGNAL SUPPORTS, POLES, ETC.) LOCATED TO ADJACENT TO THE PEDESTRIAN ROUTE.
- MINIMUM SIDEWALK WIDTH OF 4 FEET UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- CROSSWALKS WILL NOT BE REQUIRED AT UNSIGNALIZED INTERSECTIONS, UNLESS DIRECTED BY THE ENGINEER.
- DETECTABLE WARNINGS ARE PLACED WHERE A PEDESTRIAN ACCESS ROUTE ENTERS THE ROADWAY, CROSSWALK, OR OTHER VEHICULAR AREA.
- A MINIMUM OF 32 INCHES OF CLEARANCE IS REQUIRED FOR OBSTRUCTIONS LESS THAN 24 INCHES IN LENGTH, AND A MINIMUM OF 36 INCHES OF CLEARANCE IS REQUIRED FOR OBSTRUCTIONS GREATER THAN OR EQUAL TO 24 INCHES IN LENGTH.

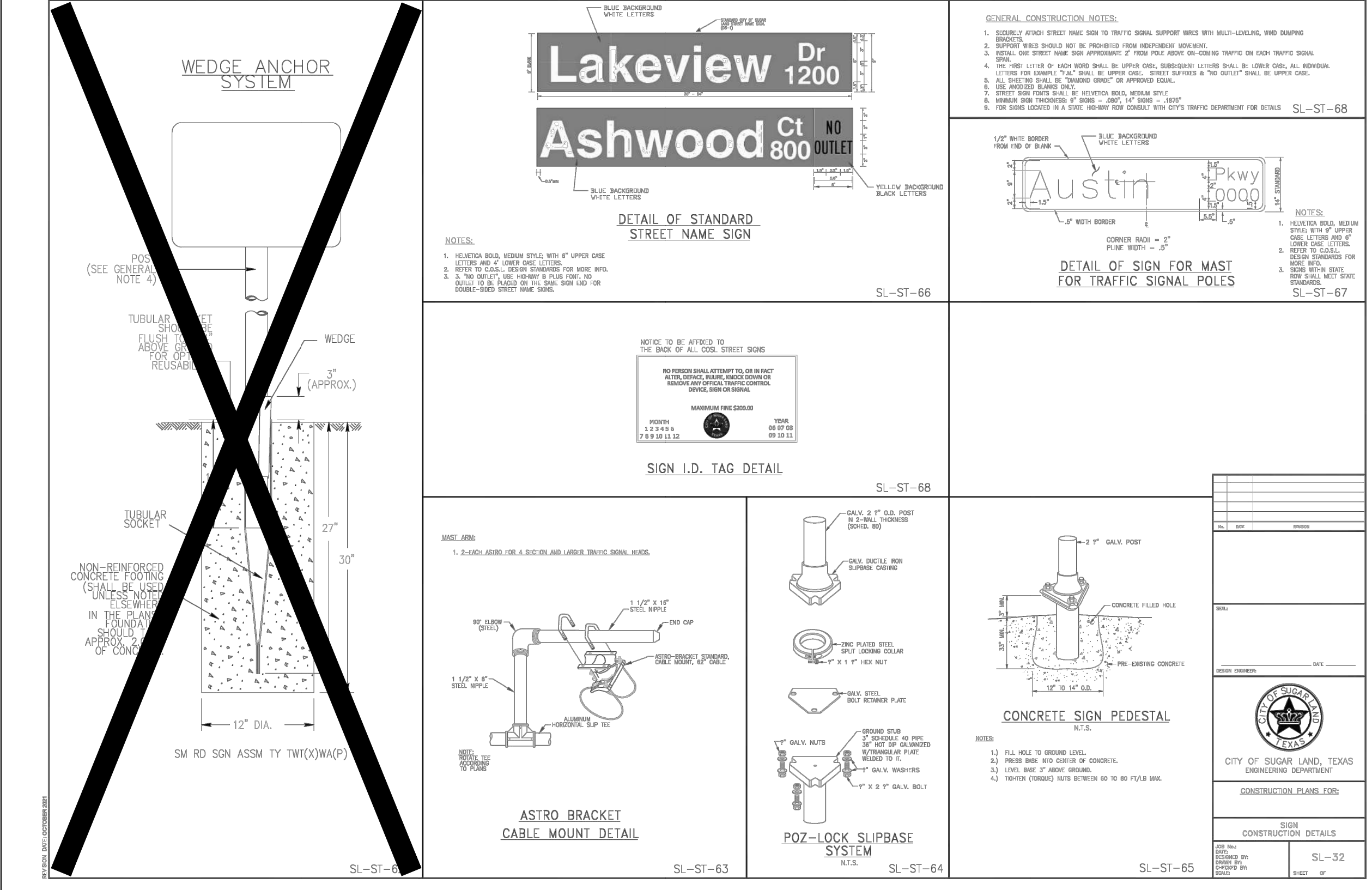
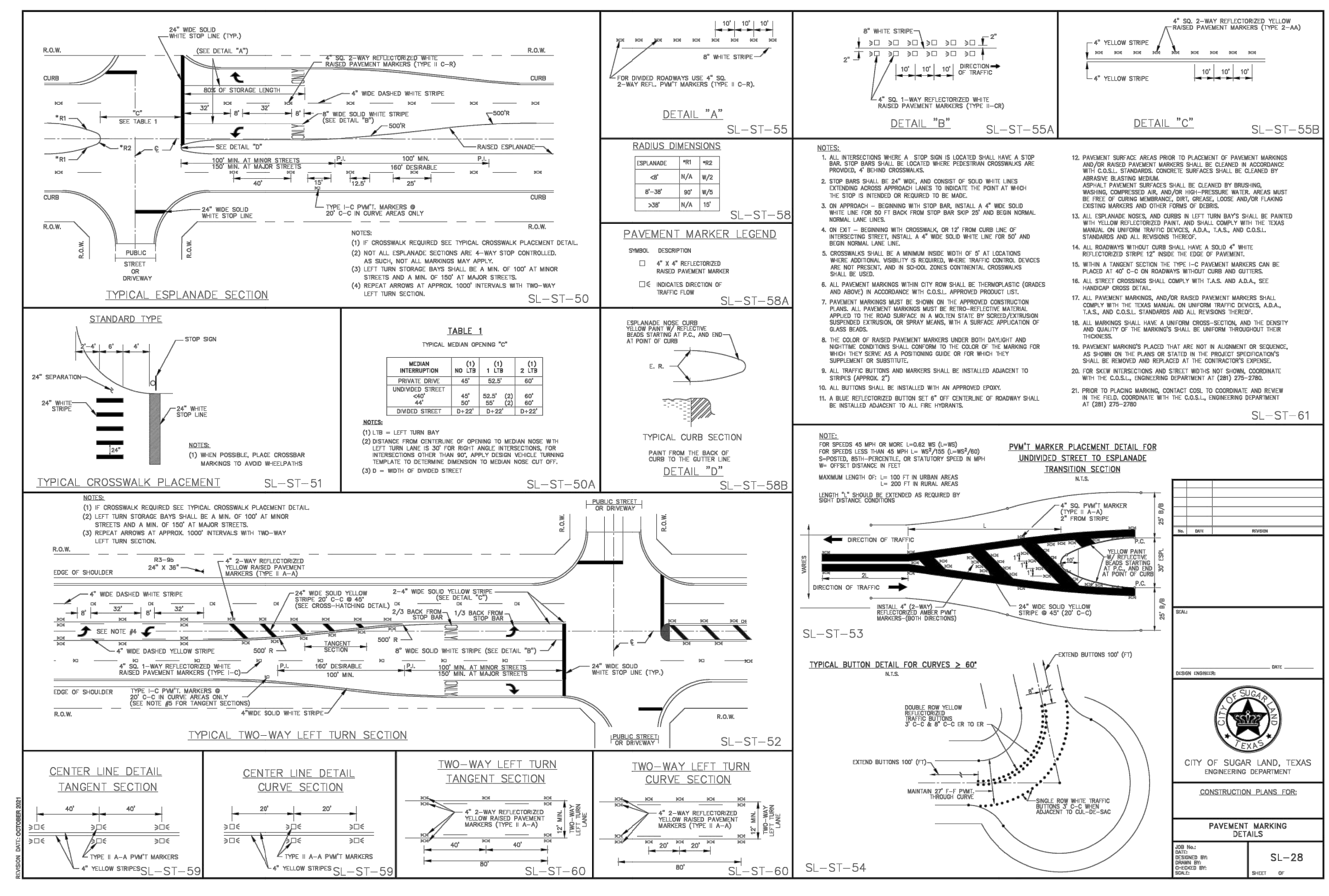
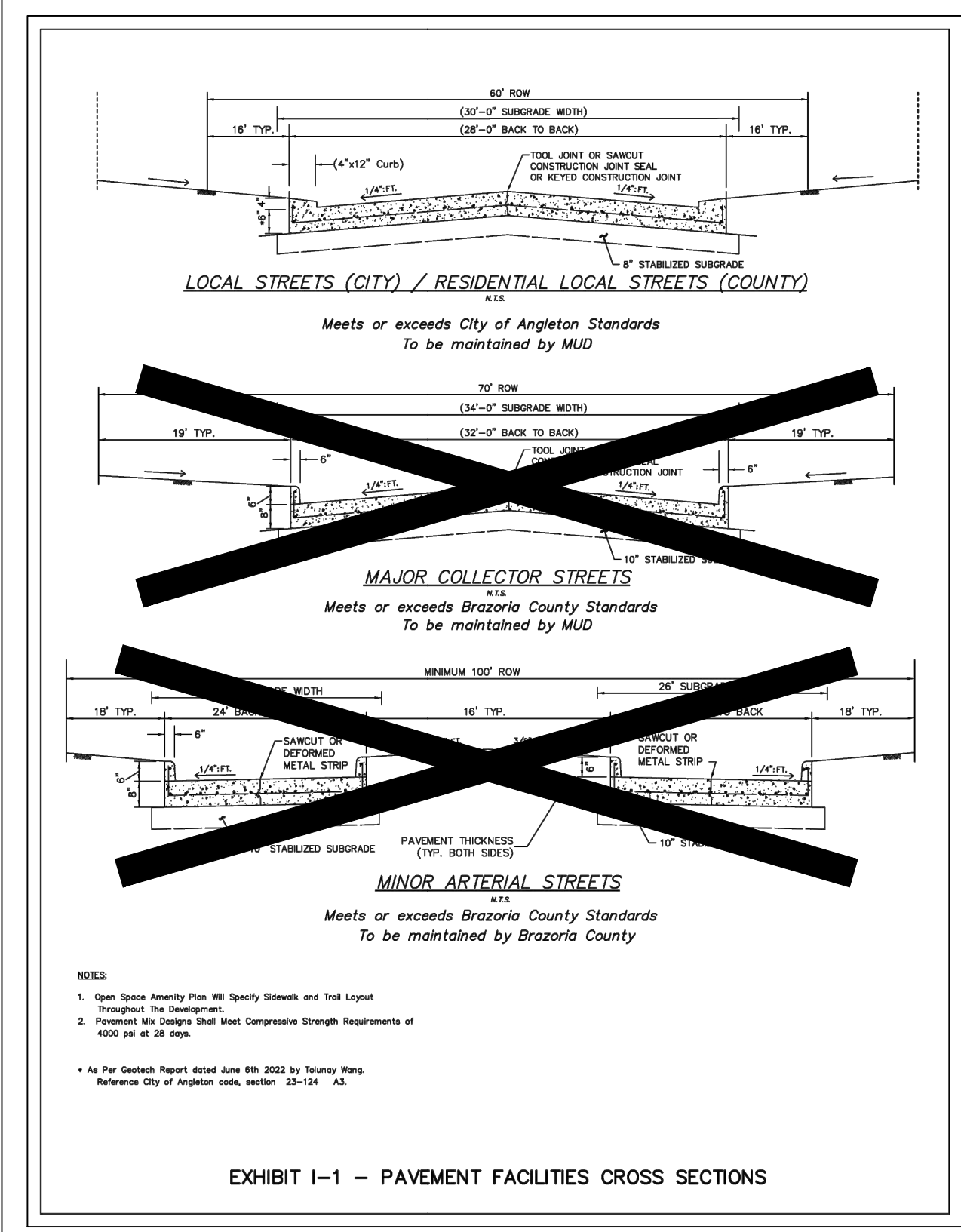
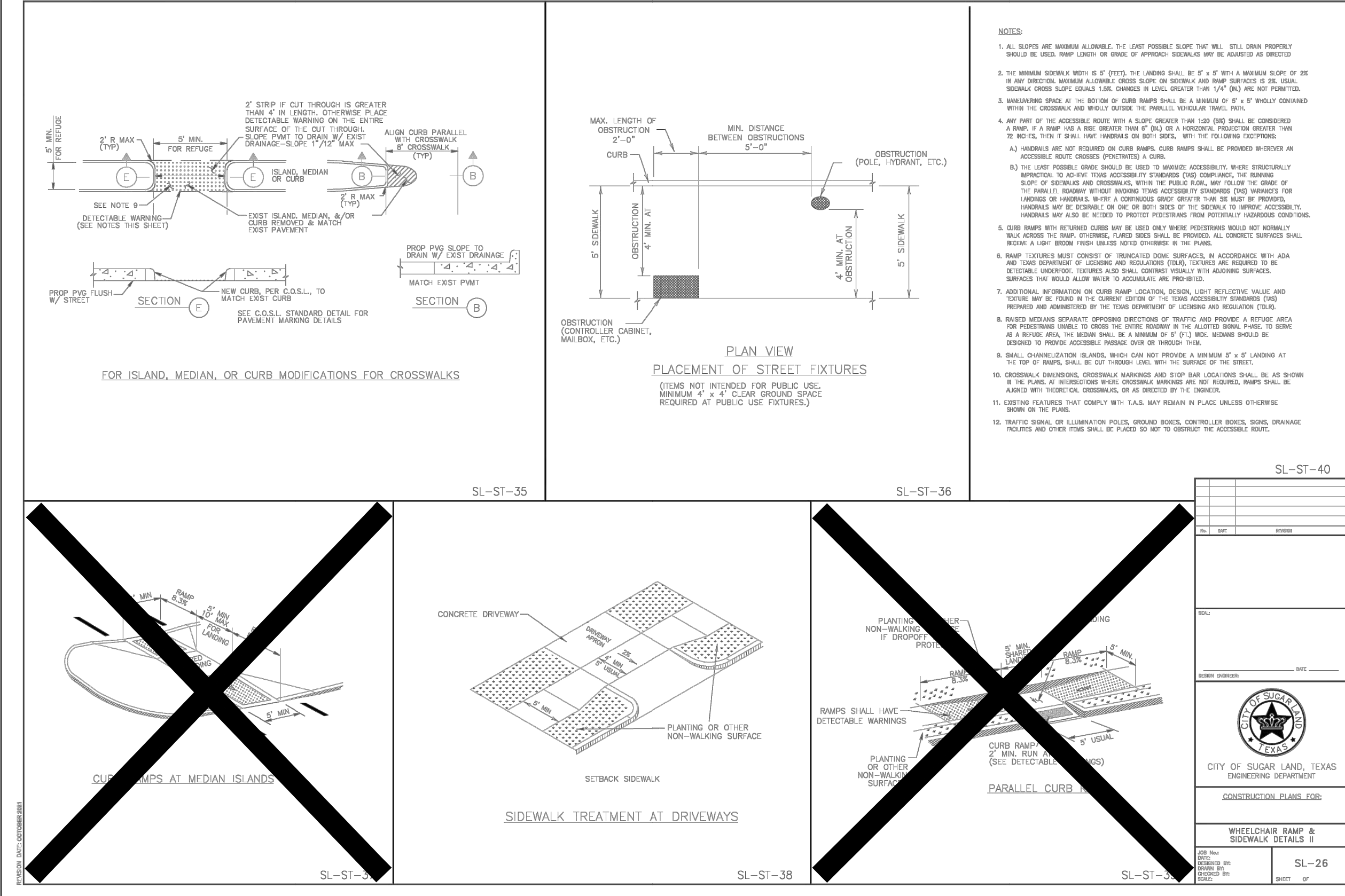
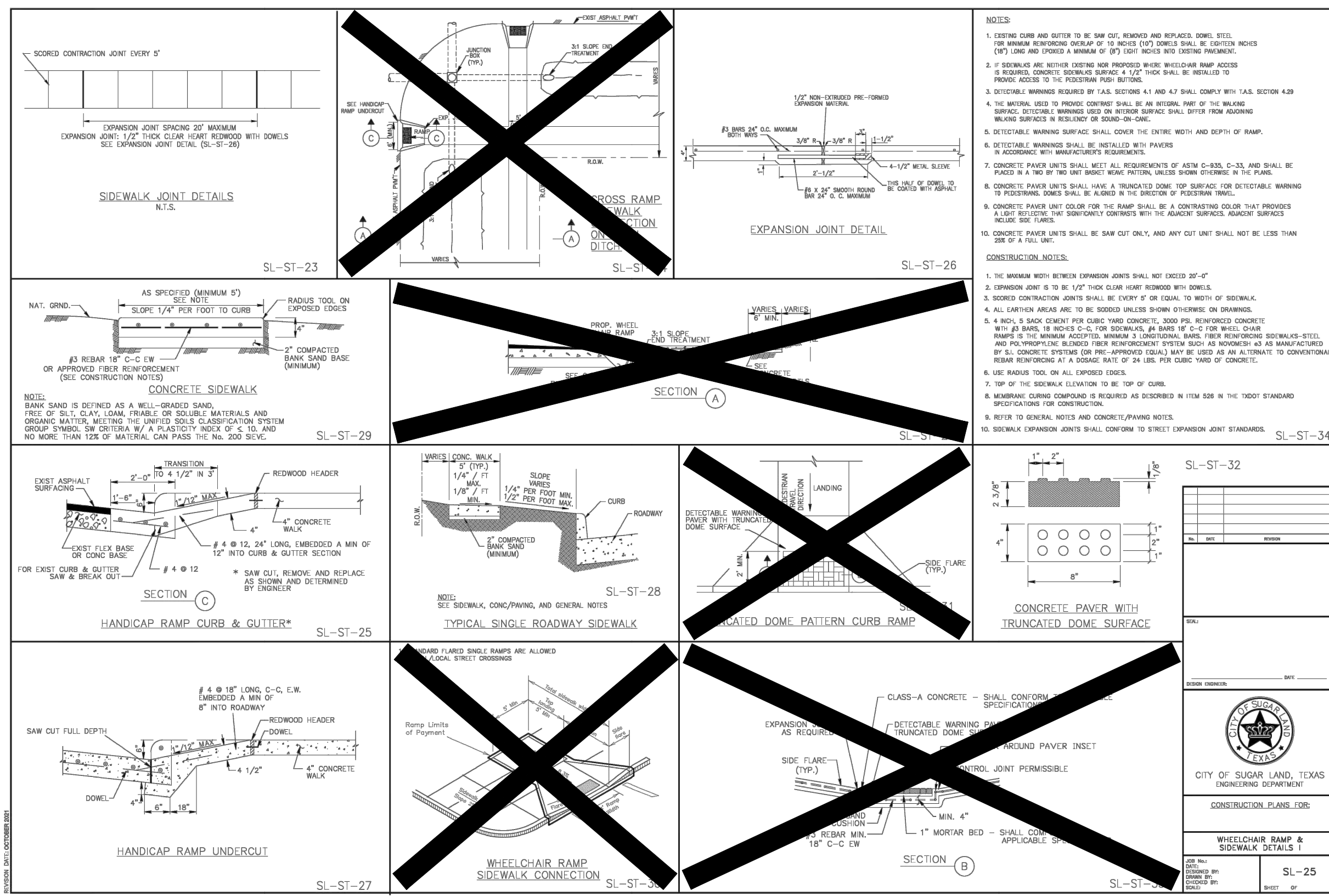


NO.	DATE	REVISIONS	APP.
BRAZORIA COUNTY MUD NO. 82 BARZORIA COUNTY, TEXAS			
ASHLAND SECTIONS 1 & 2			
PAVEMENT DETAILS			
<b>QUIDDITY</b>			
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-33290 3100 Ann Deane Blvd, Suite 104 Austin, Texas 78741 (512) 441-2423			
SCALE: NTS	DGN. BY: AHR		
DATE: OCTOBER 2024	DWN. BY: JWS		
JOB NO. 16759-0010-12	DWG. NO.		
SUBMITTED:	SURV. BY:		
	F.B. NO.		

Darren J. McAfee  
 10/11/2024

SHEET NO. 29 OF 30





NO.	DATE	REVISIONS	APP.

**BRAZORIA COUNTY MUD NO. 82**  
BARZORIA COUNTY, TEXAS

**ASHLAND SECTIONS 1 & 2**

**MISCELLANEOUS DETAILS**

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-32320  
3100 Avon Drive, Suite 104 Austin, Texas 78741 (512) 441-2423

SCALE: NTS  
DATE: OCTOBER 2024  
JOB NO. 16759-0010-12  
SUBMITTED:

DGN. BY: AHR  
DWN. BY: JWS  
DWG. NO.:  
SURV. BY:  
F.B. NO.:

**Darren J. McAfee**  
10/11/2024  
137808  
LICENSED PROFESSIONAL ENGINEER

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