

# HIGHLAND GARDENS UNIT 1A

## NEW BRAUNFELS, TEXAS STREETS, DRAINAGE, WATER AND SANITARY SEWER IMPROVEMENT PROJECT

BEING 10.087 ACRE OF LAND OUT OF A 17.389 ACRE TRACT OF LAND SITUATED IN THE JOHN THOMPSON SURVEY NO. 21, ABSTRACT NO. 608, COMAL COUNTY, TEXAS AS DESCRIBED IN DOCUMENT NO. 2017 OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS AND ALSO BEING OUT OF A 38.063 ACRE TRACT OF LAND SITUATED IN THE WILLIAM H. PATE SURVEY NO. 22, ABSTRACT NO. 269 AND RAFAEL XIMENEZ SURVEY, ABSTRACT NO. 347 AS DESCRIBED IN VOLUME 2773, PAGE 98 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS.

OWNER/DEVELOPER:  
BELLA VISTA HOMES  
TIM PRUSKI  
2174 N 1604 LOOP, SUITE 105  
SAN ANTONIO, TX 78232  
(210) 402-0642

ENGINEER/SURVEYOR:  
INK CIVIL  
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D.A. MAWYER LAND SURVEYING, INC.  
DREW MAWYER, R.P.L.S. - SURVEYOR  
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(210) 325-0858

| Project Control Points |                 |           |               |              |
|------------------------|-----------------|-----------|---------------|--------------|
| Point #                | Raw Description | Elevation | Northing      | Easting      |
| 1668                   | TBM             | 696.71    | 13789422.7617 | 2243233.2374 |
| 1742                   | TBM             | 700.15    | 13789272.8179 | 2243118.3806 |

DESIGN SPEED = 30 MPH

PLEASE NOTE: NBU REQUIRES GPS POINTS FOR CERTAIN ELECTRIC, WATER AND WASTEWATER ATTRIBUTES, SOME OF WHICH MUST BE TAKEN PRIOR TO BACKFILL DURING CONSTRUCTION.

GPS POINTS SHALL BE REQUIRED FROM THE DEVELOPER CONTRACTOR'S OR ENGINEER. A MINIMUM OF THREE COORDINATE POINTS FOR GEOREFERENCING SHALL BE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE. THE ELECTRIC GPS POINTS SHALL BE TO MAP GRADE.

**WATER**  
VERTICAL BENDS AND EDGE OF STEEL CASING (IF APPLICABLE) PRIOR TO BACKFILL  
HORIZONTAL BENDS PRIOR TO BACKFILL  
TEES PRIOR TO BACKFILL  
FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL  
FIRE HYDRANTS (TOP OF FLANGE)  
VALVES  
METERS (TOP CENTER OF BOX)  
BLOW OFF ASSEMBLY  
CORNER SLAB OF WATER TANK & GATE VALVE ON WATER TANK

**WASTEWATER**  
MANHOLES  
CLEANOUTS CORNER  
SLAB OF LIFT STATION

**ELECTRIC**  
POLES TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)  
PULL BOXES  
STREET LIGHTS

COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

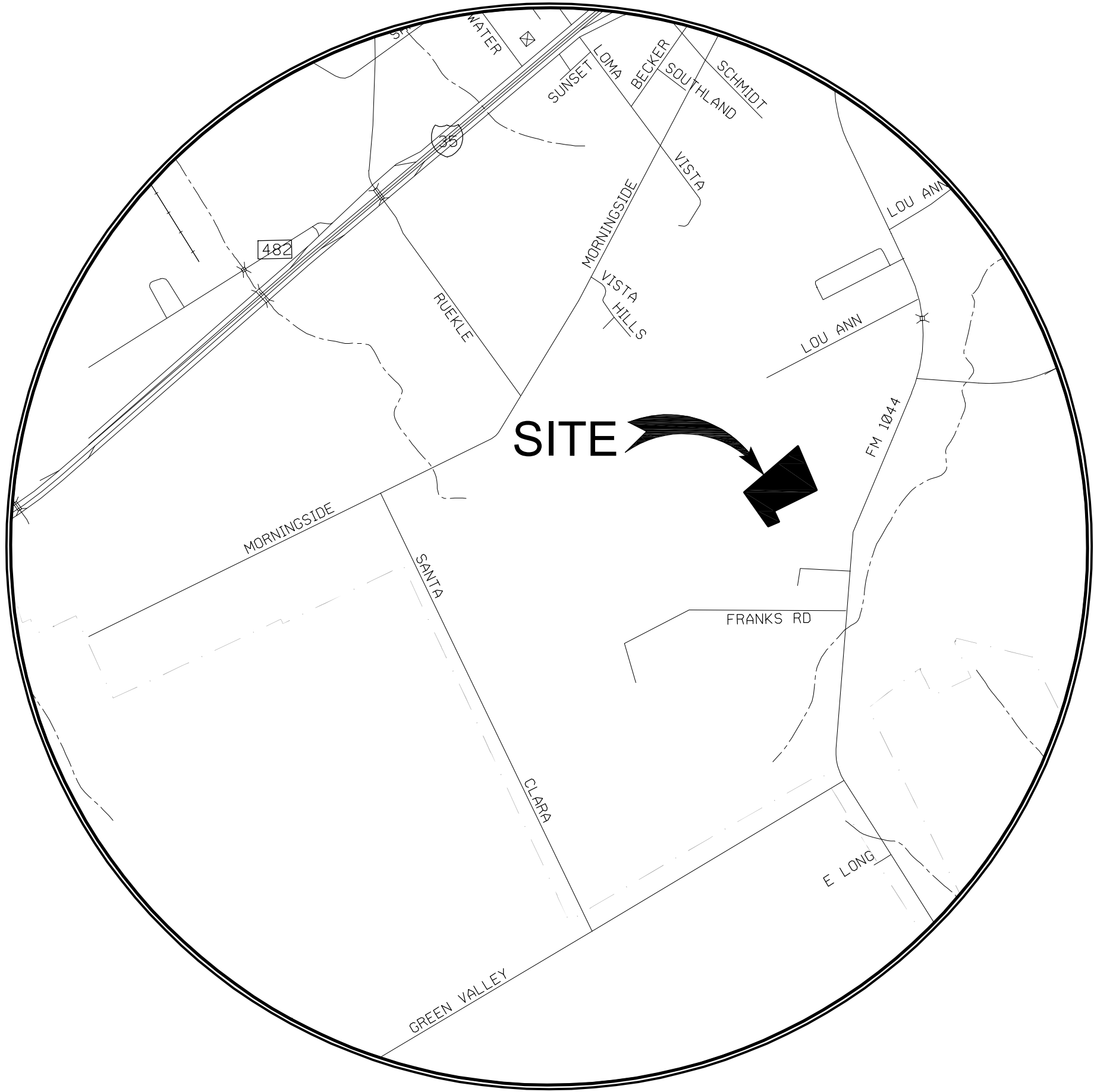
### GENERAL NOTES:

- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY OF NEW BRAUNFELS AND NEW BRAUNFELS UTILITIES (NBU) APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
- NO PORTION OF THE PROJECT IS LOCATED WITHIN THE EXISTING SPECIAL FLOOD HAZARD ZONE A, 100-YEAR FLOOD BOUNDARY, AS DEFINED BY THE COMAL COUNTY, TEXAS MAP NUMBER 48187C0120F, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, EFFECTIVE DATE NOVEMBER 2, 2007.
- THIS PROJECT IS NOT LOCATED WITHIN THE EAA JURISDICTIONAL BOUNDARY AND IS NOT LOCATED WITHIN ANY EDWARDS AQUIFER RECHARGE ZONES.
- THIS PROJECT IS A RESIDENTIAL SUBDIVISION, DEVELOPMENT TYPE 3.
- PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS (CONB) AND NEW BRAUNFELS UTILITIES (NBU) TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED.
  - ALL CONB INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 (PHONE)
  - FAXED IN AT 830-608-2117 (FAX)
  - EMAILED AT [inspections@nbtexas.com](mailto:inspections@nbtexas.com) (EMAIL)
  - NBU INSPECTIONS ARE TO BE CALLED AT 830-608-8971
- THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
- GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.

### NOTE TO CONTRACTOR:

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH OF THE INDIVIDUAL UTILITIES FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.



PREPARED BY:



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SUBMITTED BY:  
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SUBMITTAL DATE: 2-10-2022

| Sheet List Table |                                       |
|------------------|---------------------------------------|
| SHEET NUMBER     | SHEET TITLE                           |
| 1                | GENERAL NOTES                         |
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| 3                | SUBDIVISION PLAT                      |
| 4                | SUBDIVISION PLAT II                   |
| 5                | MONTROSE AND ARALIA LN PLAN & PROFILE |
| 6                | DAISY MEADOW PLAN & PROFILE           |
| 7                | STREET SECTIONS AND DETAILS I         |
| 8                | STREET SECTIONS AND DETAILS II        |
| 9                | TRAFFIC SIGNAGE & SIDEWALK PLAN       |
| 10               | TRAFFIC SIGNAGE AND SIDEWALK DETAILS  |
| 11               | DRAINAGE AREA MAP - SCS EXISTING      |
| 12               | DRAINAGE AREA MAP - SCS PROPOSED      |
| 13               | DRAINAGE AREA MAP - RATIONAL PROPOSED |
| 14               | GRADING PLAN                          |
| 15               | OVERALL UTILITY PLAN                  |
| 16               | EROSION CONTROL PLAN                  |
| 17               | EROSION CONTROL DETAILS               |

HIGHLAND GARDENS UNIT 1A  
PERMIT SET

| NO | DATE      | ISSUES AND REVISIONS      |
|----|-----------|---------------------------|
| 1  | 1-13-2022 | UPDATED PER CONB COMMENTS |
| 2  |           |                           |
| 3  |           |                           |
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CITY OF NEW BRAUNFELS – CONSTRUCTION NOTES – REV 3–2020

1. IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
2. THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
3. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.

4. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SCHEDULE A PRECONSTRUCTION MEETING.

FOR PUBLIC INFRASTRUCTURE PERMIT (SC) OR SITE PREP PERMIT (SD) PROJECTS:

4.1 FOR INSPECTIONS, YOU MUST CALL BEFORE 12:00 P.M., 48 HOURS PRIOR TO YOUR INSPECTION REQUEST.

4.2 EACH INSPECTION WILL BE ALLOTTED 1 HOUR UNLESS YOU REQUEST FOR MORE TIME.

4.3 ONCE YOUR REQUEST HAS BEEN ACCEPTED, YOU WILL RECEIVE A CALL FROM THE CITY OF NEW BRAUNFELS INSPECTOR.

FOR COMMERCIAL PERMIT (CP) PROJECTS:

4.4 ALL INSPECTIONS ARE TO BE CALLED IN AT 830–221-4068 OR,

4.5 FAXED IN AT 830–608–2117 OR,

4.6 E-MAILED AT INSPECTIONS@NBUTEXAS.ORG.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON TEMPORARY TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

6. A TYPED UTILITY II 8-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS. IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FRONT THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TxDOT MATERIAL, EPOXY AND ADHESIVE SPECIFICATIONS.

GROUNDWATER

7. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEO-TECHNICAL ENGINEER, AND PROJECT ENGINEER TO IMMEDIATELY NOTIFY THE OFFICE OF THE CITY ENGINEER/PROJECT ENGINEER IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION THE PROJECT ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. THE CITY ENGINEER SHALL RESPOND WITHIN TWO (2) BUSINESS DAYS UPON RECEIPT OF THE MITIGATION PLAN. ALL CONSTRUCTION ACTIVITY, IMPACTED BY THE DISCOVERY OF GROUNDWATER, SHALL BE SUSPENDED UNTIL THE CITY ENGINEER GRANTS A WRITTEN APPROVAL OF THE GROUNDWATER MITIGATION PLAN.

RECORD DRAWINGS

8. AS PER PLATTING ORDINANCE SECTION 118-38M.: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS AND UPON RECEIPT OF ONE SET OF "RECORD DRAWING" PLANS, AND A DIGITAL COPY OF ALL PLANS (PDF COPY) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

CONSTRUCTION NOTE

9. ENGINEER OF RECORD IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL SUFFICIENT TO MITIGATE OFF SITE IMPACTS ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.

DRAINAGE NOTE

10. DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE THE IMPACT OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ADDING IMPROVED COVER.

FINISHED FLOOR ELEVATIONS

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

SOILS TESTING

12. PROCTORS SHALL BE SAMPLED FROM ON-SITE MATERIAL (ON-SITE IS DEFINED AS LIMITS OF CONSTRUCTION FOR THIS PLAN SET) AND A COPY OF THE PROCTOR RESULTS SHALL BE DELIVERED TO THE CITY OF NEW BRAUNFELS STREET INSPECTOR PRIOR TO ANY DENSITY TESTS.

ROADWAY

13. ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FLEXIBLE BASE OR FILL/EMBANKMENT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. THE REQUIRED DENSITY FOR THE FILL/EMBANKMENT MATERIAL SHALL MEET THE REQUIREMENTS OF TxDOT'S SPECIFICATION ITEM 132. THE REQUIRED DENSITY FOR THE FLEXIBLE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF TxDOT'S SPECIFICATION ITEM 247. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX–113–E, TEX–114–E, TEX–115–E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT UPON COMPLETION OF TESTING. THE CITY ENGINEER WILL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE BASE, AND FILL MATERIAL AND SUBGRADE, HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

ITEM 340

14. ASPHALTIC CONCRETE PAVEMENT SHALL BE THE TYPE OF HOT MIX ASPHALT AS DEFINED IN TxDOT'S STANDARD SPECIFICATIONS FOR CURRENT TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.

15. THE CITY OF NEW BRAUNFELS WILL NOT ACCEPT THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) OR RECYCLED ASPHALT SHINGLES (RAS) IN ASPHALT MIXTURES FOR NEW ROADWAYS. ANY DEBRIS INCLUSIONS WITHIN NEW ASPHALT PAVEMENTS WILL RESULT IN ASPHALT REMOVAL AND REPLACEMENT FROM CURB TO CURB FOR LIMITS TO BE DETERMINED BY THE CITY OF NEW BRAUNFELS.

16. THE ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE "D" MEETING THE SPECIFICATION REQUIREMENTS OF TxDOT ITEM 340. THE ASPHALTIC CONCRETE PAVEMENT SUB-SURFACE COURSES SHALL BE PLANT MIXED, HOT LAID TYPE "B" MEETING THE SPECIFICATION REQUIREMENTS OF TxDOT ITEM 340. THE MIXTURE SHALL BE DESIGNED PER THE DESIGN REQUIREMENTS SPECIFIED IN TxDOT ITEM 340 AND SHALL BE COMPACTED TO BETWEEN 91 AND 95 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY TxDOT TEST METHOD TEX–227–F. PLACE THE MIXTURE WHEN THE ROADWAY SURFACE TEMPERATURE IS AT OR ABOVE 60°F. COMPLETE ALL COMPACTION OPERATIONS BEFORE THE PAVEMENT TEMPERATURE DROPS BELOW 160°F. THE ASPHALT CEMENT CONTENT BY PERCENT OF TOTAL MIXTURE WEIGHT SHALL FALL WITHIN A TOLERANCE OF +0.5 PERCENT FROM A SPECIFIC MIX DESIGN.

UTILITY TRENCH COMPACTION (ADDED TO THE CONSTRUCTION PLANS ON ALL UTILITY PLAN SHEETS).

17. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTION OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX–113–E, TEX–114–E, TEX–115–E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

CURB OUT DUE TO CONSTRUCTION OF NEW RIGHT-OF-WAY CONSTRUCTION

18. CURB CUTS SHALL BE THE FOLLOWING METHODS AND INDICATED ON THE PLANS IN DETAIL WHERE APPLICABLE.

18.1 SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.

18.2 SAWCUT EXISTING CURB TO THE INTO EXISTING CONSTRUCTION.

CONSTRUCTION STABILIZED ENTRANCE

19. SAWCUT CURB FOR CONSTRUCTION ENTRANCE.

20. STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3'x5' ROCK TO BE PLACED A MINIMUM LENGTH OF 25-FT. AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. RIGHT-OF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.

SIGNING AND PAVEMENT MARKING PLAN NOTES

21. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CITY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

22. THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

23. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

SEEDING AND ESTABLISHMENT OF VEGETATION WITHIN EARTHEN CHANNELS, STORMWATER BASINS AND DISTURBED AREAS

1. SEEDING FOR THE PURPOSE OF ESTABLISHING VEGETATION WITHIN CONSTRUCTED EARTHEN CHANNELS, BASINS AND DISTURBED AREAS SHALL BE CONDUCTED IN ACCORDANCE WITH ITEM 164 (SEEDING FOR EROSION CONTROL) OF TxDOT'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES MANUAL. ONLY SEED TYPES AND MIXES SPECIFIED FOR THE SAN ANTONIO DISTRICT (DISTRICT 15) IN TABLES 1 AND 2 UNDER ITEM 164 SHALL BE UTILIZED. DURING THE COOL SEASON (SEPT 1–NOV 30), CEREAL RYE AND SEED SPECIES SPECIFIED FOR THE SAN ANTONIO DISTRICT IN TABLE 3 MAY BE USED. FOR COOL SEASON SEEDING APPLICATIONS, COOL SEASON SEED MIXES SHALL BE USED IN CONJUNCTION WITH SEED MIXES FOR THE SAN ANTONIO DISTRICT AS SPECIFIED IN TABLE 1 AND 2 UNDER ITEM 164.

2. IT MAY BE DEEMED NECESSARY TO INCORPORATE TOPSOIL AND SOIL AMENDMENTS (I.E. COMPOST/ FERTILIZER) INTO EXISTING SOIL IN ORDER TO FACILITATE VEGETATION GROWTH. TOPSOIL, COMPOST AND FERTILIZER ADDITIONS SHALL BE CONDUCTED ACCORDING TO ITEMS 160, 161 AND 166 OF TxDOT'S STANDARD SPECIFICATIONS MANUAL, RESPECTIVELY.

3. AREAS REQUIRING PERMANENT VEGETATION (EARTHEN CHANNELS, PONDS, ETC.) ARE REQUIRED TO MEET TxDOT SPECIFICATIONS FOR ITEM 160 TOPSOIL. TESTING PER TEX–128–E WILL BE REQUIRED AT THE CITY'S REQUEST.

4. WATERING MAY ALSO BE NECESSARY TO FACILITATE AND EXPEDITE THE SPROUTING AND GROWTH OF VEGETATION. ITEM 168 OF TxDOT'S STANDARD SPECIFICATIONS MANUAL SHALL BE ADHERED TO FOR VEGETATIVE WATERINGS.

5. IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACT/ DEVELOPER SHALL PROVIDE A PLAN TO THE CITY OF NEW BRAUNFELS DESCRIBING THE MEASURES THAT WILL BE TAKEN TO STABILIZE EARTHEN DRAINAGE INFRASTRUCTURE UNTIL A TIME WHEN GROWING CONDITIONS BECOME MORE FAVORABLE.

NEW BRAUNFELS UTILITIES – GENERAL NOTES – REV 4–2020

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL BE APPROVED BY NEW BRAUNFELS UTILITIES AND COMPLY WITH THE CURRENT 'NEW BRAUNFELS UTILITIES WATER SYSTEMS CONNECTION/CONSTRUCTION POLICY'.

2. CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBW WATER SYSTEMS ENGINEERING AT 830–608–8971 WITH AT LEAST TWO (2) WORKING DAYS (48 HOURS) NOTICE. WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED A NOTICE TO PROCEED FROM NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

3. THE DEVELOPER DEDICATES THE WATER / WASTEWATER MAINS UPON COMPLETION BY THE CONTRACTOR AND ACCEPTANCE BY THE NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEER. NBW WILL OWN AND MAINTAIN SAID WATER / WASTEWATER MAINS WHICH ARE LOCATED WITHIN PLATTED UTILITY EASEMENTS OR PUBLIC ROW OF PROPOSED DEVELOPMENTS. (AS APPLICABLE).

4. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS, OFFICERS, DIRECTORS, AND CONSULTANTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.

5. CONTRACTOR AND / OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES, AND EXISTING UTILITIES (NOT ADJUSTED ON PLANS). COST OF RESTORATIONS, IF ANY, SHALL BE THE CONTRACTOR'S ENTIRE EXPENSE.

7. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VIOLENT OF TREES SHALL PROCEED WITH CAUTION.

8. CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES AND TAXES AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.

9. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.

10. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

11. THE CONTRACTOR SHALL NOT PLACE ANY MATERIALS ON THE RECHARGE ZONE OF THE EDWARDS AQUIFER WITHOUT AN APPROVED WATER POLLUTION ABATEMENT PLAN FROM THE TCEQ 31 TAC 313.4 AND 31 TAC 313.9.

12. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.

13. CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.

14. THE LOCATION OF UTILITIES, EITHER UNDERGROUND OR OVERHEAD, SHOWN WITHIN THE RIGHT OF WAY ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION OPERATIONS.

15. OSHA REGULATIONS PROHIBIT OPERATIONS THAT WILL BRING PERSONS OR EQUIPMENT WITHIN 10 FEET OF AN ENERGIZED LINE, WHERE WORKMEN AND/OR EQUIPMENT HAVE TO WORK CLOSE TO AN ENERGIZED ELECTRICAL LINE. THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL POWER COMPANY INVOLVED AND MAKE WHATEVER ADJUSTMENTS NECESSARY TO ENSURE THE SAFETY OF THOSE WORKMEN.

16. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION. UTILITY COMPANIES ARE ALSO PREVIOUSLY MENTIONED IN "UTILITY COMPACTION NOTIFICATION".

17. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192 (b), GAS COMPANIES MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

18. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGERS. THE CONSTRUCTION METHODS SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC SO AS TO PERMIT THE CONTINUOUS MOVEMENT OF THE TRAFFIC IN ONE DIRECTION AT ALL TIMES. THE CONTRACTOR SHALL CLEAR UP AND REMOVE FROM THE WORK AREA ANY LOOSE MATERIAL RESULTING FROM CONTRACT OPERATIONS AT THE END OF EACH WORKDAY.

19. PRIOR TO ORDERING MATERIALS TO BE USED IN CONSTRUCTION, CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FOUR (4) COPIES OF THE SOURCE, TYPE, GRADATION, MATERIAL SPECIFICATION DATA AND / OR SHOP DRAWINGS, AS APPLICABLE, TO SATISFY THE REQUIREMENTS OF THE FOLLOWING ITEMS AND ALL MATERIAL ITEMS REFERRED TO IN THESE LISTED ITEMS:

19.1. WATER MAINS AND SERVICES

19.2. SEWER MAINS AND SERVICES

20. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.

21. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF SEWER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ.

22. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION (THE ANTICIPATED INSTALLATION SITES) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLEMENTS AND MEETS ALL OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

23. UTILITY TRENCH COMPACTION WITH STREET R.O.W.

a. ALL UTILITY TRENCH COMPACTION TEST WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER.

b. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE.

c. EACH LAYER OF MATERIAL SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX–113–E, TEX– 114–E, TEX–115–E.

d. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR.

e. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

24. WATER IS A PRECIOUS COMMODITY IN THE STATE OF TEXAS AND NEW BRAUNFELS UTILITIES (NBW) IS PASSIONATE ABOUT PROTECTING THE LOCAL RESOURCE. NBW'S CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ACQUIRING A FIRE HYDRANT METER SO THAT ALL WATER USED FOR CONSTRUCTION OR TESTING PURPOSES ARE PROPERLY ACCOUNTED FOR. NBW WILL NOT TOLERATE ANY WATER THEFT, REGARDLESS OF THE AMOUNT, IF WATER THEFT IS DISCOVERED NBW'S CONTRACTOR SHALL BE SUBJECT TO MONETARY PENALTIES, CRIMINAL CHARGES, AND STOPPAGE OF ALL CONSTRUCTION ACTIVITIES RELATED TO THE PROJECT. ANY DEBRIS OR WASTE MATERIAL STORAGE RESULTING FROM WATER THEFT SHALL BE AT THE FULL EXPENSE OF THE CONTRACTOR.

NBW WATER NOTES – REV 5-2019

1. ALL WATER MAINS SHALL BE AWWA C900 (CLASS 150 OR GREATER).

2. WATER SERVICES SHALL BE SINGLE 1" COPPER TUBING.

3. WATER LINE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE NBW SYSTEMS CONNECTION & CONSTRUCTION POLICY.

4. WATER MAIN SHALL HAVE A MINIMUM OF 42 INCHES OF COVER, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.

5. EACH UNIT IN A DUPLEX, TRIPLEX, FOURPLEX, OR CONDOMINIUM SHALL BE PROVIDED WITH AN INDIVIDUAL WATER METER. A MASTER METER CAN BE CONSIDERED FOR SEPARATE BUILDINGS, HOWEVER, THOSE BUILDINGS MUST BE PLUMBED TO ALLOW SEPARATE METERS FOR FUTURE CONSIDERATION.

6. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.

7. INITIAL BACKFILL OF WATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBW SYSTEMS CONNECTION & CONSTRUCTION POLICY.

8. SECONDARY BACKFILL OF WATER LINES SHALL GENERALLY CONSIST OF MATERIAL REMOVED FROM THE TRENCH AND SHALL BE FREE FROM BRUSH, DEBRIS AND TRASH OR STONES HAVING ANY DIMENSION LARGER THAN 6" INCHES AT THE LARGEST DIMENSION.

9. HYDROSTATIC TESTING IS DONE FROM VALVE TO VALVE.

10. NO METER BOXES TO BE SET IN DRIVEWAYS OR SIDEWALKS. ANY METER BOXES SET IN DRIVEWAYS OR SIDEWALKS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.

11. METER BOXES MUST BE SET AT THE PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.

12. ACCEPTABLE METER BOXES ARE D13-BAMR AND D15-BAMR. NEW RESIDENTIAL LOTS ARE REQUIRED TO USE THE D15-BAMR METER BOXES (DOUBLE AMR). COMMERCIAL LOTS SHOULD CHOOSE WHICH BOX APPLIES TO THE DOMESTIC AND/OR IRRIGATION METER LAYOUT.

13. THURST BLOCKS WILL NOT BE ALLOWED ON THE SYSTEM WITHOUT SPECIAL APPROVAL. JOINTS WILL BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBW AND RESTRAINT LENGTH SHALL BE SUBMITTED TO NBW AT THE TIME OF PLAN SUBMITTAL.

14. CONTRACTOR SHALL PLACE TRACER WIRE ON TOP OF THE WATER MAINS. TRACER WIRE SHOULD RUN FROM VALVE TO VALVE AND EXIT AT THE VALVE BOX. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE. EXCESS WIRE SHOULD BE LEFT WITHIN VALVE BOXES TO BE PLACED WITHIN LID OF COVER.

15. WATER QUALITY SHALL BE PROTECTED WITH APPROPRIATE BACKFLOW PREVENTION ASSEMBLIES INSTALLED ON ALL IRRIGATION SYSTEMS, FIRE SUPPRESSION SYSTEMS AND MULTI-UNIT COMPLEXES ALONG WITH MULTI-LEVEL PROPERTIES ON DOMESTIC METER CONTAINMENT. NBW CAN ASSIST WITH THE DECISION ON APPROPRIATE BACKFLOW ASSEMBLIES ON A CASE BY CASE BASIS. CONTACT NBW BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM.

16. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED UPON INSTALLATION AND REPORT SENT TO NBW VIA THE ONLINE TRACKING SYSTEM, CONTACT NBW BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM.

17. ALL RESIDENTIAL AND COMMERCIAL PROPERTIES SHALL HAVE A CUSTOMER SERVICE INSPECTION CERTIFICATE (CSi INSPECTION ) COMPLETED UPON COMPLETION OF THE BUILDING OR HOME STRUCTURE. CONTACT NBW BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM.

18. THE ENGINEER OF RECORD MUST ACKNOWLEDGE THAT THE POINT OF DELIVERY FOR AN NBW WATER SYSTEM IS THE MAIN SIDE OF THE SERVICE/LATERAL/LEAD FROM THE CUSTOMER'S METER/BACKFLOW/EASEMENT AND THE MAIN SIDE OF THE SERVICE AND THE MAIN SIDE OF THE CUSTOMER'S CLEANTOUT OR PROPERTY LINE FOR AN NBW WASTEWATER SYSTEM. THE CUSTOMER IS RESPONSIBLE FOR DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER THE CUSTOMER'S INSTALLATION INCLUDING REVIEW, PERMITTING, AND COMPLIANCE WITH ALL CITY PLUMBING CODES OR OTHER APPLICABLE CODES.

NBW WASTEWATER NOTES

1. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING CONSTRUCTION.

2. A MINIMUM OF 8" WASTEWATER PIPE AND FITTINGS (P.V.C. SDR–26, ASTM, D– 3034, D–3212, F–477) ARE REQUIRED ON NEW INSTALLATION.

3. ALL RESIDENTIAL WASTEWATER SERVICE LATERALS SHALL BE EXTENDED TO THE PROPERTY LINE AND A CLEANTOUT SHALL BE INSTALLED AT THE PROPERTY LINE. SERVICES TO LOTS WILL EXTEND FOUR (4) FEET PAST THE UNDERGROUND ELECTRIC CONDUIT IF ELECTRIC IS INSTALLED IN THE FRONT EASEMENT. ALL WELLS COVERED THAT LEAD TO NEW MAINS SHALL BE INSTALLED WITH A PROTECTIVE UTILITY SHOULDER AND PIVOTING MARKER POLE DURING THE TIME OF CONSTRUCTION.

4. PIPE BEDDING OF WASTEWATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBW SPECIFICATIONS.

5. SECONDARY BACKFILL OF WASTEWATER LINES SHALL GENERALLY CONSIST OF MATERIALS REMOVED FROM THE TRENCH AND SHALL BE FREE FROM BRUSH, DEBRIS AND TRASH, NO ROCKS OR STONES HAVING ANY DIMENSION LARGER THAN 6 INCHES AT THE LARGEST DIMENSION.

6. ALL WASTEWATER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS AS PER 30 TAC §217.53 (C) (2).

7. FOR WASTEWATER LINES LESS THAN 24" IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO LIFTS.

a. THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE AND UNDER THE SHOULDERS OF THE PIPE TO THE MID POINT OR SPRING LINE OF THE PIPE.

b. THE SECOND LIFT SHALL BE PLACED TO A DEPTH AS SHOWN ON THE PIPE BACKFILL DETAIL. FOR PIPES LARGER THAN 24", 12" MAXIMUM LIFTS SHALL BE USED.

8. ALL MANHOLES MUST BE WATER TIGHT, EITHER MONOLITHIC, CAST-IN-PLACE CONCRETE STRUCTURES OR PREFABRICATED MANHOLES SPECIFICALLY APPROVED BY NBW. THE MANHOLES SHALL HAVE WATER-TIGHT RINGS AND COVERS. WHEREVER THEY ARE WITHIN THE 100 YEAR FLOODPLAIN, THE MANHOLE COVERS SHALL BE BOLTED EVERY THIRD MANHOLE IN SEQUENCE SHALL HAVE AN ALTERNATE MEANS OF VENTING, 30 TAC §213.5 (C) (3) (A) AND 30 TAC §217.55 (O).

9. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS TWO INCHES (2") ABOVE SURROUNDING GROUND EXCEPT WHEN LOCATED IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.

10. ALL NEW MANHOLES, UNLESS APPROVED BY NBW ENGINEERING, ARE TO HAVE COVERS WITH 32" OPENINGS.

11. WASTEWATER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS OR MECHANICAL "BOOT TYPE" JOINT AS APPROVED BY NBW.

12. WASTEWATER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE.

13. IN AREAS WHERE A NEW WASTEWATER MANHOLE IS TO BE CONSTRUCTED OVER AN EXISTING WASTEWATER SYSTEM, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TEST THE EXISTING MANHOLE BEFORE CONSTRUCTION. AFTER THE PROPOSED MANHOLE(S) HAS BEEN BUILT, THE CONTRACTOR SHALL RE-TEST THE EXISTING SYSTEM TO THE SATISFACTION OF THE CONSTRUCTION INSPECTOR. (NO SEPARATE PAY ITEM).

14. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING THE ASTM SPECIFICATION FOR BOTH PIPES AND JOINTS OF 150 PSI AND SHALL BE IN ACCORDANCE WITH 30 TAC §217.53 (D) (3) (A) (I).

15. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM COMPLETE INSTALLATION OF THE WASTEWATER LINES. THE FOLLOWING SEQUENCE WILL BE STRICTLY ADHERED TO:

a. PULL MANDREL

b. PERFORM AIR TEST

c. CLEANING OF ANY DEBRIS

d. FLUSHING OF SYSTEM

e. TV INSPECTION (WITHIN 72 HOURS OF FLUSHING)

16. A MINIMUM OF 3 FEET OF COVER IS TO BE MAINTAINED OVER THE WASTEWATER MAIN AND LATERALS AT SUBGRADE, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.

17. WASTEWATER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF THE MANHOLE IN ACCORDANCE WITH NBW CONNECTION & CONSTRUCTION POLICY MANUAL.

18. TCEQ AND EPA REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF WASTEWATER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY NBW WATER SYSTEMS.

19. ALL MANHOLES NOT WITHIN PAVED STREETS SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBW DETAIL DRAWING #329.

20. ALL MANHOLES OVER THE EDWARDS AQUIFER RECHARGE ZONE SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBW DETAIL DRAWING #329.

EROSION / SEDIMENTATION CONTROL.

1. AT A MINIMUM, THESE CONTROLS SHALL CONSIST OF ROCK BERMS AND/OR SILT FENCES CONSTRUCTED PARALLEL TO AND DOWN GRADIENT FROM THE TRENCHES. THE ROCK BERM OR SILT FENCES SHALL BE INSTALLED IN A MANNER SUCH THAT ANY RAINFALL RUNOFF SHALL BE FILTERED. HAY BALES SHALL NOT BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROLS.

2. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED DURING CONSTRUCTION BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CONTROLS WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED. ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.

3. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER/ENGINEER.

4. PLACEMENT OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS. THE CONTRACTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE DISTURBANCE OF THE STRUCTURES HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN ENGINEER APPROVED DESIGNATED DISPOSAL AREA.

5. ADDITIONAL CONTROLS MAY BE REQUIRED FOR PROJECTS OVER THE EDWARDS AQUIFER RECHARGE ZONE. REFERENCE 30 TAC 213 CHAPTER A.

6. CONTRACTOR OR CONTRACTOR'S CONSULTANT SHALL HAVE A STORM WATER POLLUTION PREVENTION PLAN PREPARED



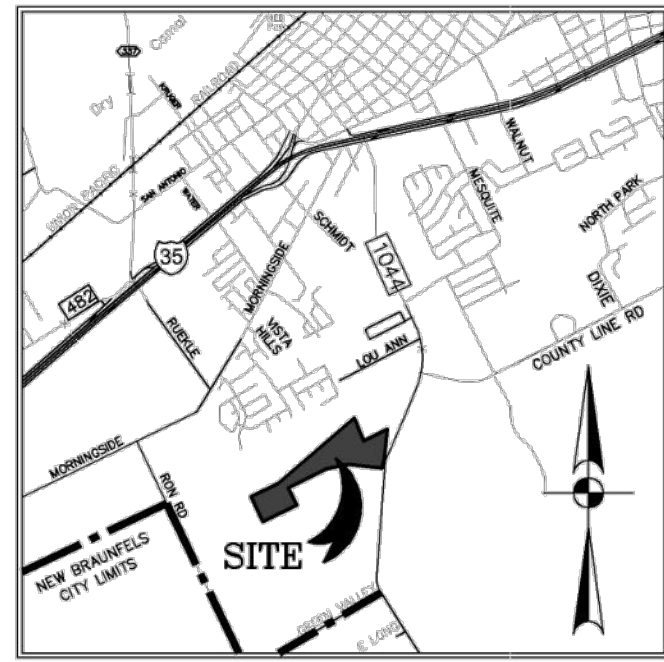
- NOTES:
1. THE PROPOSED USE OF THE SUBDIVISION IS FOR SINGLE FAMILY RESIDENTIAL.
  2. THE PROPERTY IS INSIDE THE CITY LIMITS OF NEW BRAUNFELS.
  3. THE UNIT NUMBERS SHOWN REPRESENT THE AREA OF THE UNITS TO BE DEVELOPED AND PLATTED. THE ACTUAL AREA OF EACH UNIT AND THE LENGTH OF STREETS MAY VARY. IN NO EVENT SHALL THE NUMBER OF TOTAL RESIDENTIAL LOTS OF ALL UNITS EXCEED 128. UNITS MAY BE PLATTED AND DEVELOPED OUT OF THE NUMBERED SEQUENCE.
  4. 4" SIDEWALKS WILL BE CONSTRUCTED FOR THIS DEVELOPMENT AT THE BACK OF CURB.
  5. ALL STREETS WILL BE DEDICATED AS PUBLIC RIGHT OF WAYS.
  6. ALL STREETS ARE PROPOSED TO BE OF A LOCAL AND COLLECTOR TYPE FUNCTIONAL CLASSIFICATION.
  7. THE LOTS DESIGNATED AS DRAINAGE LOTS (D.L.) WILL NOT BE AVAILABLE FOR RESIDENTIAL USE. THESE LOTS WILL BE MAINTAINED BY THE PROPERTY OWNER'S ASSOCIATION.
  8. NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN THE EXISTING SPECIAL FLOOD HAZARD ZONE A, 100-YEAR FLOOD BOUNDARY, AS DEFINED BY THE GUADALUPE COUNTY, TEXAS COMMUNITY MAP NUMBER 4818702008F, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, EFFECTIVE DATE NOVEMBER 2, 2007 AND AS DEFINED BY THE COMAL COUNTY, TEXAS COMMUNITY MAP NUMBER 480300485F, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, EFFECTIVE DATE SEPTEMBER 2, 2009.
  9. THE PROPERTY IS NOT LOCATED OVER THE EDWARDS AQUIFER ZONE.
  10. ALL LOTS WITHIN THE SUBDIVISION WILL BE SERVED PUBLIC WATER AND SEWER BY GREEN VALLEY SPECIAL UTILITY DISTRICT (GVSD), AND ELECTRIC SERVICE BY NEW BRAUNFELS UTILITIES (NBU) AND GUADALUPE VALLEY ELECTRIC COOPERATIVE (GVEC) AS IDENTIFIED ON THE PLATS.
  11. ALL DRAINAGE LOTS CAN BE USED FOR DRAINAGE CONVEYANCE.
  12. ALL STREETS WILL HAVE CURB AND GUTTER AND WILL PROVIDE STORMWATER CAPACITY PER CITY OF NEW BRAUNFELS DRAINAGE REQUIREMENTS.
  13. THE ENTIRE SUBDIVISION FALLS WITHIN COMAL INDEPENDENT SCHOOL DISTRICT.
  14. THIS SUBDIVISION IS SUBJECT TO THE 2006 CITY OF NEW BRAUNFELS PARK LAND DEDICATION AND DEVELOPMENT ORDINANCE. THIS MASTER PLAN IS APPROVED FOR 1 DWELLING UNIT PER BUILDABLE LOT WITH A MAXIMUM OF 161 DWELLING UNITS AT SUCH TIME THAT ADDITIONAL DWELLING UNITS ARE CONSTRUCTED. THE OWNER OF THE LOT SHALL CONTACT THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH DWELLING UNIT.
  15. THIS PROPERTY IS CURRENTLY ZONED "HIGHLAND GARDENS" PLANNED DEVELOPMENT DISTRICT AND IS SUBJECT TO THE DEVELOPMENT STANDARDS ADOPTED WITH CITY ORDINANCE NO. 2018-7.
  16. CONTOURS SHOWN ARE BASED ON THE CITY OF NEW BRAUNFELS AND BASED ON TOPOGRAPHIC SURVEY PROVIDED BY TNRS DATED 2011.
  17. THE HIGHLAND GARDENS SUBDIVISION WILL HAVE A NEIGHBORHOOD PARK AND AMENITY CENTER THAT WILL BE OWNED AND MAINTAINED BY THE P.O.A. THE AMENITY CENTER AND PARK AREA WILL BE IN THE LOCATION SHOWN ON THE APPROVED MASTER PLAN.
  18. THE HIGHLAND GARDENS DETENTION POND CLOSEST TO FM 1044 WILL BE DESIGNED TO REDUCE THE PEAK STORM WATER DISCHARGE FLOW RATE, FOR THE 2-YEAR, 5-YEAR, 10-YEAR, 25-YEAR, 50-YEAR AND 100-YEAR STORM EVENTS, BY GREATER THAN OR EQUAL TO 10% BELOW THE CALCULATED EXISTING PEAK STORM WATER FLOW RATE, BASED ON THE RAINFALL INTENSITIES IN THE CITY OF NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL AT THE TIME OF APPROVAL OF THE "HIGHLAND GARDENS" PLANNED DEVELOPMENT DISTRICT.
  19. NO DWELLING UNITS OR HABITABLE STRUCTURES WILL BE CONSTRUCTED WITHIN AN APPROXIMATE OFFSET OF 75 FEET BOTH SIDES OF THE EXISTING AIRSTRIP CENTERLINE.

| LOT SUMMARY |             |          |        |        |        |       |  |
|-------------|-------------|----------|--------|--------|--------|-------|--|
| UNIT        | RESIDENTIAL | DRAINAGE | HOA    | O.S.   | U.L.   | TOTAL |  |
| UNIT 1A     | 34 LOTS     | 1 LOTS   | 0 LOTS | 0 LOTS | 0 LOTS | 35    |  |
| UNIT 1B     | 29 LOTS     | 0 LOTS   | 1 LOTS | 0 LOTS | 0 LOTS | 30    |  |
| UNIT 2      | 59 LOTS     | 3 LOTS   | 0 LOTS | 2 LOTS | 1 LOTS | 65    |  |
| UNIT 3      | 39 LOTS     | 2 LOTS   | 2 LOTS | 0 LOTS | 0 LOTS | 43    |  |
| TOTAL       | 161 LOTS    | 6 LOTS   | 3 LOTS | 2 LOTS | 1 LOTS | 173   |  |

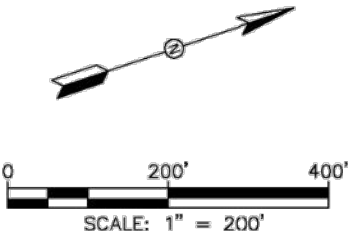
OWNER/DEVELOPER:  
DIRT DEALERS XII, LTD  
JACK SCANO  
660 LAKEFRONT AVE  
NEW BRAUNFELS, TX 78130  
(210) 496-7775

ENGINEER/SURVEYOR:  
MOELLER & ASSOCIATES  
JAMES INGALLS, P.E. - ENGINEER  
2021 SH 46 W, STE 105  
NEW BRAUNFELS, TX 78130  
(830) 358-7127

D.A. MAWYER LAND SURVEYING, INC.  
DREW MAWYER, R.P.L.S. - SURVEYOR  
132 CADDELL LANE  
NEW BRAUNFELS, TEXAS 78130  
(210) 325-0858



LOCATION MAP  
SCALE: 1"=400'



LEGEND

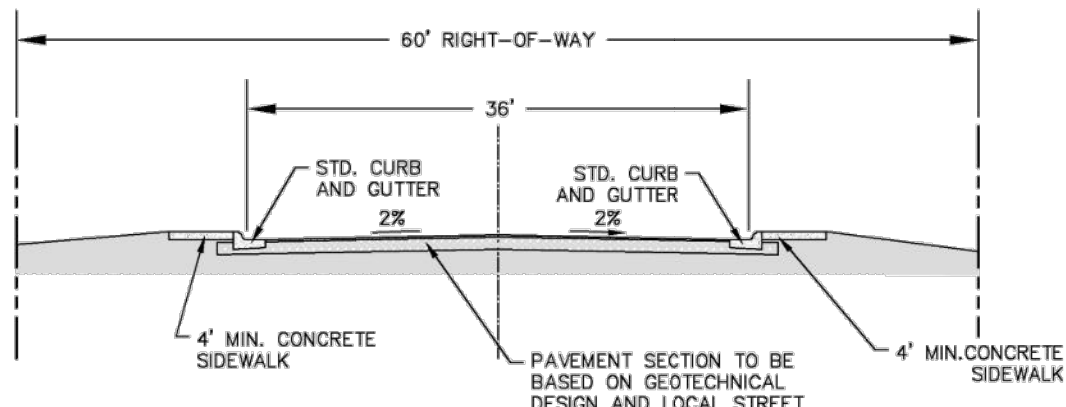
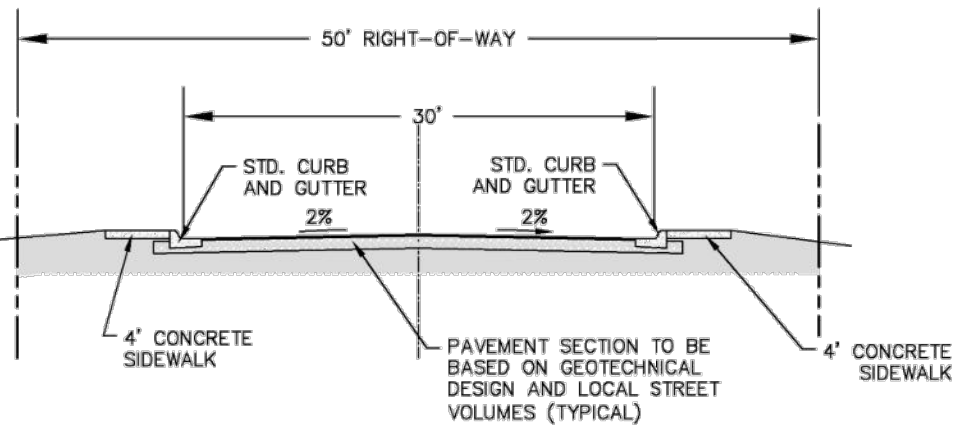
- UNIT BOUNDARY
- DRAINAGE LOT
- RIGHT-OF-WAY DEDICATION (ROW)
- HOME OWNER'S ASSOCIATION PARK (HOA)
- OPEN SPACE (O.S.)
- UTILITY LOT (U.L.)
- PROPOSED 6" FORCE MAIN
- PROPOSED 8" WATER MAIN
- PROPOSED 8" SANITARY SEWER
- EXISTING 8" WATER MAIN
- EXISTING 8" SANITARY SEWER

ACREAGE SUMMARY (APPROX.)

|                                                                           |                |
|---------------------------------------------------------------------------|----------------|
| RESIDENTIAL LOTS AND STREETS                                              | 48.44 ACRES    |
| *HOA                                                                      | 2.11 ACRES     |
| *DRAINAGE                                                                 | 4.53 ACRES     |
| U.L. (UTILITY LOT)                                                        | 0.11 ACRES     |
| *O.S. (OPEN SPACE)                                                        | 0.26 ACRES     |
| TOTAL ACREAGE:                                                            | 55.45 ACRES    |
| RESIDENTIAL LOT DENSITY (161 MAX/55.45):                                  | 2.90 LOTS/ACRE |
| *ALL LOTS SHALL BE OWNED & MAINTAINED BY THE PROPERTY OWNERS ASSOCIATION. |                |

| LINE TABLE |         |             |
|------------|---------|-------------|
| LINE       | LENGTH  | BEARING     |
| L1         | 125.93' | S23°09'24"E |
| L2         | 120.42' | S23°05'24"E |
| L3         | 31.40'  | S05°16'42"W |
| L4         | 52.40'  | N79°53'18"E |

| CURVE TABLE |         |          |           |         |               |
|-------------|---------|----------|-----------|---------|---------------|
| CURVE       | LENGTH  | RADIUS   | DELTA     | TANGENT | CHORD BEARING |
| C1          | 292.77' | 2332.00' | 71°1'36"  | 146.58' | 292.58'       |
| C2          | 222.61' | 250.00'  | 51°01'10" | 119.30' | 215.33'       |
| C3          | 222.61' | 250.00'  | 51°01'10" | 119.30' | 215.33'       |



THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF JAMES INGALLS, P.E. #07418 ON May 21, 2019. IT IS TO BE USED FOR BIDDING AND PERMITTING PURPOSES ONLY. NOT TO BE USED FOR CONSTRUCTION.

| NO | DATE | ISSUES AND REVISIONS |
|----|------|----------------------|
|    |      |                      |
|    |      |                      |
|    |      |                      |

**MOELLER & ASSOCIATES**  
*Engineering Solutions*  
2021 W SH46, STE 105, NEW BRAUNFELS, TX 78132  
PH: 830-358-7127  
F: 830-358-7127  
TBPE FIRM F-13351

MASTER PLAN

HIGHLAND GARDENS  
SUBDIVISION

NEW BRAUNFELS, TEXAS

SHEET  
**MP-1**  
1



**BELLA VISTA HOMES**  
2714 N LOOP 1604 E, SUITE 105  
SAN ANTONIO, TX 782332

**HIGHLAND GARDENS  
UNIT 1A**

MASTER PLAN

SHEET  
**2** OF **17**

NO DATE ISSUES AND REVISIONS

1-13-2022 UPDATED PER COMB COMMENTS



2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351

MASTER PLAN  
APPROVED 6/14/19



STATE OF TEXAS  
COUNTY OF COMAL

I, THE UNDERSIGNED OWNER OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE **HIGHLAND GARDENS SUBDIVISION, UNIT 1A**, SUBDIVISION TO THE CITY OF NEW BRAUNFELS, COUNTY OF COMAL, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

**BELLA VISTA**  
C/O TIM PRUSKI  
2174 N LOOP 1604, SUITE 105  
SAN ANTONIO, TX 78232

STATE OF TEXAS  
COUNTY OF COMAL

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_.

BY \_\_\_\_\_

NOTARY PUBLIC, STATE OF TEXAS  
MY COMMISSION EXPIRES: \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS:

I, THE UNDERSIGNED, **DREW A. MAWYER**, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE UNDER MY SUPERVISION AND IN COMPLIANCE WITH CITY AND STATE SURVEY REGULATIONS AND LAWS AND MADE ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

**DREW A. MAWYER**  
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5348  
D.A. MAWYER LAND SURVEYING  
5151 W. SH46  
NEW BRAUNFELS, TEXAS 78132  
FIRM #0191500

**INK**  
CIVIL  
2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351

LEGEND:  
P.O.B. = POINT OF BEGINNING  
B.L. = BUILDING SETBACK LINE  
D.E. = DRAINAGE EASEMENT  
U.E. = UTILITY EASEMENT  
R.O.W. = RIGHT-OF-WAY  
O.S. = OPEN SPACE LOT  
D.L. = DRAINAGE LOT  
P.M. = PACE MATCH LINE  
O = 1/2" IRON PIN SET  
● = IRON PIN FOUND

## FINAL PLAT ESTABLISHING HIGHLAND GARDENS SUBDIVISION UNIT 1A

BEING 10.087 ACRE OF LAND OUT OF A 17.389 ACRE TRACT OF LAND SITUATED IN THE JOHN THOMPSON SURVEY NO. 21, ABSTRACT NO. 608, COMAL COUNTY, TEXAS AS DESCRIBED IN DOCUMENT NO. 2017 OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS AND ALSO BEING OUT OF A 38.063 ACRE TRACT OF LAND SITUATED IN THE WILLIAM H. PATE SURVEY NO. 22, ABSTRACT NO. 259 AND RAFAEL XIMENEZ SURVEY, ABSTRACT NO. 347 AS DESCRIBED IN VOLUME 2773, PAGE 98 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS.

### NOTES:

- ALL LOTS WITHIN THE SUBDIVISION WILL BE PROVIDED WATER, SEWER AND ELECTRICAL BY NEW BRAUNFELS UTILITIES (NBU).
- ALL STREETS ARE PROPOSED TO BE OF A LOCAL TYPE FUNCTIONAL CLASSIFICATION WITH 50 FOOT RIGHT-OF-WAYS UNLESS NOTED OTHERWISE.
- SIDEWALK NOTES:
  - FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED AT THE BACK OF CURB BY THE HOME BUILDER PER CITY STANDARDS AT THE TIME OF BUILDING CONSTRUCTION, UNLESS OTHERWISE NOTED ON THE PLAT, ALONG:  
-DAISY MEADOW, MONTROSE, ARAJIA LN
  - FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED AT THE BACK OF CURB BY THE DEVELOPER PER CITY STANDARDS AT THE TIME OF SUBDIVISION STREET CONSTRUCTION ALONG:  
-MONTROSE - LOT 901, BLOCK 1  
-DAISY MEADOW - BOTH SIDES OF 120' ROW DEDICATION
- LOT 901 BLOCK 1 IS A DRAINAGE LOT. THIS LOT IS A NON-BUILDABLE LOT. THIS LOT WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER'S ASSOCIATION, THEIR SUCCESSORS OR ASSIGNS, AND SHALL NOT BE THE RESPONSIBILITY OF THE CITY OF NEW BRAUNFELS OR COMAL COUNTY.

5. THE SUBDIVISION IS WITHIN THE COMAL INDEPENDENT SCHOOL DISTRICT.

6. ALL BEARINGS AND COORDINATES SHOWN HEREON ARE IN GRID BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1983. DISTANCES SHOWN HEREON ARE SURFACE USING COMBINED SCALE FACTOR OF 1.00015.

7. MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION. MONUMENTS AND MARKERS WILL BE SET WITH 1/2" IRON PIN WITH PLASTIC CAP STAMPED "DAM #5348 PROP. COR." IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.

8. **HIGHLAND GARDENS SUBDIVISION UNIT 1A**, DOES FALL WITHIN THE CITY LIMITS OF THE CITY OF NEW BRAUNFELS.

9. THE PROPOSED USE OF THE SUBDIVISION IS FOR SINGLE FAMILY RESIDENTIAL.

10. **HIGHLAND GARDENS SUBDIVISION UNIT 1A**, ESTABLISHING A TOTAL OF 35 LOTS, WITH 34 BEING BUILDABLE.

11. THIS SUBDIVISION IS SUBJECT TO THE 2006 CITY OF NEW BRAUNFELS PARK LAND DEDICATION AND DEVELOPMENT ORDINANCE. THIS PLAT IS APPROVED FOR 1 DWELLING UNIT PER BUILDABLE LOT WITH A MAXIMUM OF 34 BUILDABLE LOTS AT SUCH TIME THAT ADDITIONAL DWELLING UNITS ARE CONSTRUCTED; THE OWNER OF THE LOT SHALL CONTACT THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH DWELLING UNIT.

12. NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT, NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASES THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS AND GUADALUPE COUNTY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTORS ADJACENT PROPERTY TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.

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

14. NO STRUCTURES IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC WATER AND SEWER SYSTEM WHICH HAS BEEN APPROVED BY NEW BRAUNFELS UTILITIES.

15. MAINTENANCE OF DRAINAGE EASEMENT DESIGNATED WITHIN A LOT SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS ASSOCIATION.

16. NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN THE EXISTING SPECIAL FLOOD HAZARD ZONE A, 100-YEAR FLOOD BOUNDARY, AS DEFINED BY THE COMAL COUNTY, TEXAS COMMUNITY PANEL NUMBER 48091C0445F, REVISED SEPTEMBER 2, 2009 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

17. EACH LOT OWNER SHALL BE RESPONSIBLE FOR VERIFYING THE DEPTH OF THE SEWER SERVICE STUB OUT AND DETERMINING THE MINIMUM SERVICEABLE FINISH FLOOR ELEVATION.

18. FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS, AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.

19. NO PORTION OF THIS PROPERTY IS WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.

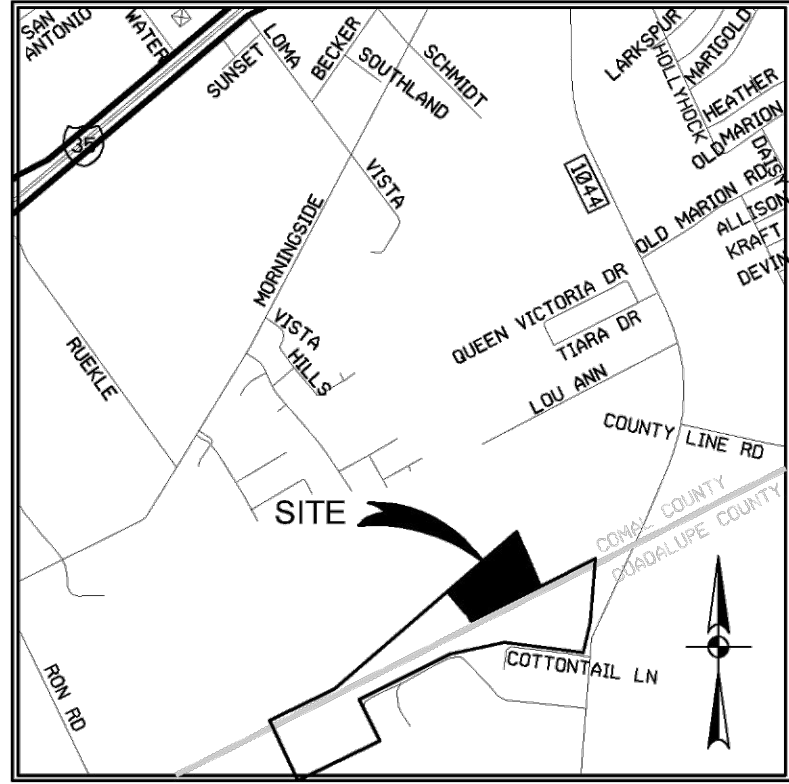
20. PERMANENT WATER QUALITY CONTROLS ARE REQUIRED FOR THIS SUBDIVISION PLAT IN ACCORDANCE WITH THE CITY OF NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL.

21. 5' CONTOURS ARE SOURCED FROM THE CITY OF NEW BRAUNFELS LIDAR GIS DATABASE AND ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1986.

22. ALL RESIDENTIAL LOTS MEET THE MINIMUM SQUARE FOOTAGE AS DEFINED IN THE HIGHLAND GARDENS PLANNED DEVELOPMENT DISTRICT STANDARDS.

### NEW BRAUNFELS UTILITIES NOTES:

- MAINTENANCE OF DEDICATED UTILITY EASEMENTS IS THE RESPONSIBILITY OF THE PROPERTY OWNER. ANY USE OF AN EASEMENT, OR ANY PORTION OF IT, INCLUDING LANDSCAPING OR DRAINAGE FEATURES, IS SUBJECT TO AND SHALL NOT CONFLICT WITH THE TERMS AND CONDITIONS IN THE EASEMENT, MUST NOT ENDANGER OR INTERFERE WITH THE RIGHTS GRANTED BY THE EASEMENT TO NEW BRAUNFELS UTILITIES, ITS SUCCESSORS AND ASSIGNS, AND SHALL BE SUBJECT TO APPLICABLE PERMIT REQUIREMENTS OF THE CITY OF NEW BRAUNFELS OR ANY OTHER GOVERNING BODY. THE PROPERTY OWNER MUST OBTAIN, IN ADVANCE, WRITTEN AGREEMENT WITH THE UTILITIES TO UTILIZE THE EASEMENT, OR ANY PART OF IT.
- UTILITIES WILL POSSESS A 5' WIDE SERVICE EASEMENT TO THE BUILDING STRUCTURE ALONG THE SERVICE LINE TO THE SERVICE ENTRANCE. THIS EASEMENT WILL VARY DEPENDING UPON LOCATION OF DWELLING AND SERVICE.
- UTILITIES SHALL HAVE ACCESS TO THE METER LOCATIONS FROM THE FRONT YARD AND METER LOCATIONS SHALL NOT BE LOCATED WITHIN A FENCED AREA.
- EACH LOT MUST HAVE ITS OWN WATER AND SEWER SERVICE AT THE OWNER'S/DEVELOPER'S EXPENSE.
- DO NOT COMBINE ANY NEW UTILITY EASEMENTS (U.E.) WITH DRAINAGE EASEMENTS (D.E.) OR MAKE CHANGES IN GRADE WITHIN THE UTILITY EASEMENTS (U.E.) WITHOUT WRITTEN APPROVAL FROM NEW BRAUNFELS UTILITIES.



LOCATION MAP  
SCALE: 1"=2,000'

APPROVED THIS THE \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_ BY THE  
PLANNING COMMISSION OF THE CITY OF NEW BRAUNFELS, TEXAS.

CHAIRMAN \_\_\_\_\_

APPROVED FOR ACCEPTANCE

DATE \_\_\_\_\_ PLANNING DIRECTOR \_\_\_\_\_

DATE \_\_\_\_\_ CITY ENGINEER \_\_\_\_\_

DATE \_\_\_\_\_ NEW BRAUNFELS UTILITIES \_\_\_\_\_

FOR COMAL COUNTY

I, \_\_\_\_\_ DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT WAS FILED FOR  
RECORD IN THE MAP AND PLAT RECORDS, BOOK \_\_\_\_ OF COMAL  
COUNTY THE \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_ AT \_\_\_\_\_ M.

WITNESS MY HAND OFFICIAL SEAL, THIS THE \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_

COUNTY CLERK, COMAL COUNTY, TEXAS

DEPUTY



**BELLA VISTA HOMES**  
2714 N LOOP 1604 E, SUITE 105  
SAN ANTONIO, TX 782332

**HIGHLAND GARDENS  
UNIT 1A**

**SUBDIVISION PLAT**

SHEET

3 of 17

| NO | DATE      | ISSUES AND REVISIONS      |
|----|-----------|---------------------------|
| 1  | 1-13-2022 | UPDATED PER COMB COMMENTS |
|    |           |                           |
|    |           |                           |
|    |           |                           |

**INK**  
CIVIL

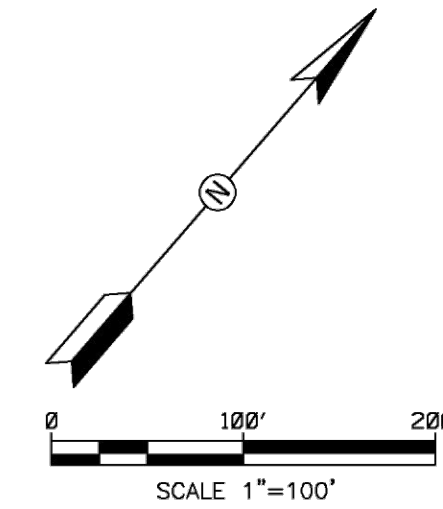
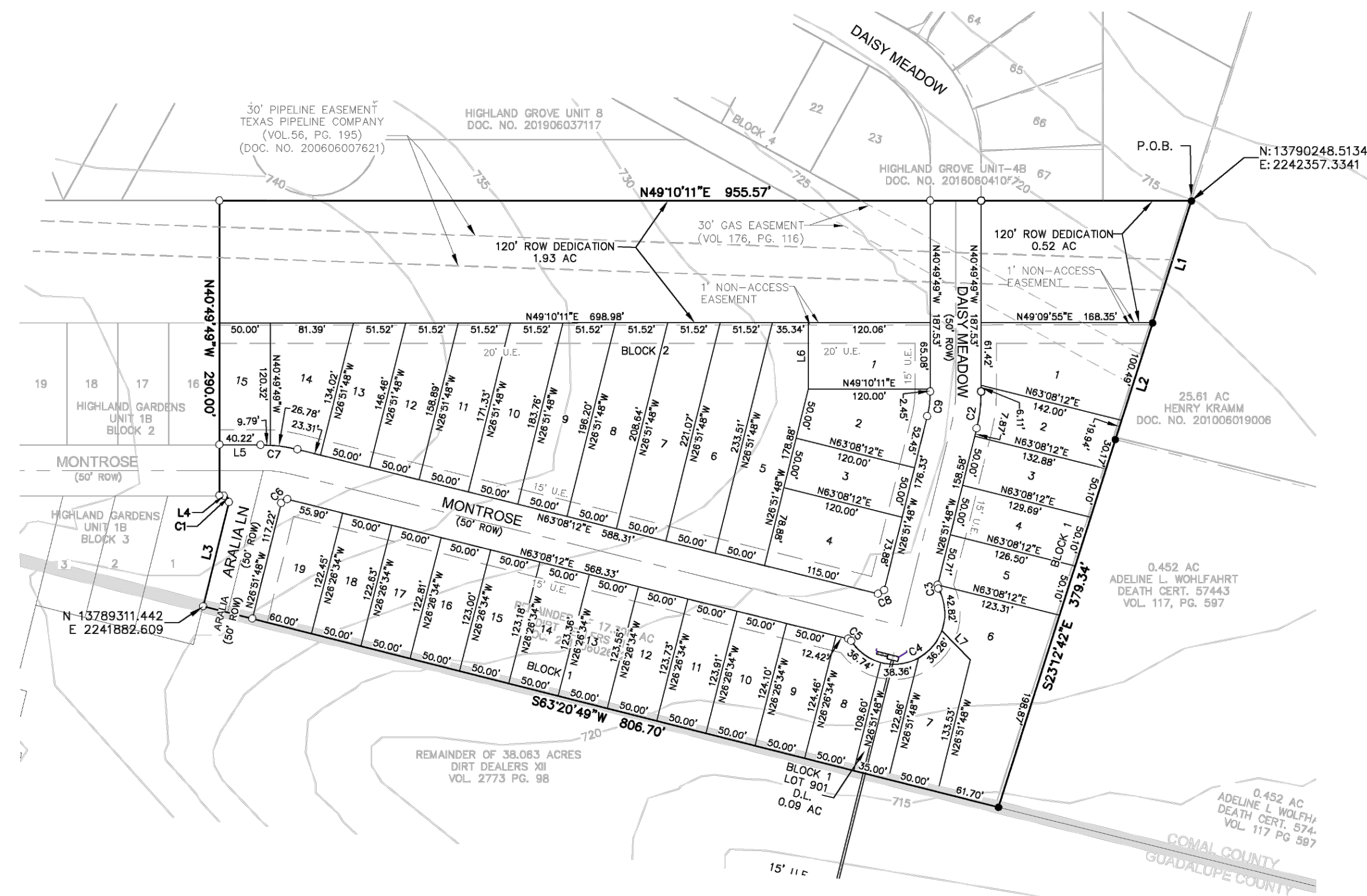
2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351

PRELIMINARY PLAT  
APPROVED 6/14/19

FINAL PLAT NOT  
APPROVED



BEING 10.087 ACRE OF LAND OUT OF A 17.389 ACRE TRACT OF LAND SITUATED IN THE JOHN THOMPSON SURVEY NO. 21, ABSTRACT NO. 608, COMAL COUNTY, TEXAS AS DESCRIBED IN DOCUMENT NO. 2017 OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS AND ALSO BEING OUT OF A 38.063 ACRE TRACT OF LAND SITUATED IN THE WILLIAM H. PATE SURVEY NO. 22, ABSTRACT NO. 259 AND RAFAEL XIMENEZ SURVEY, ABSTRACT NO. 347 AS DESCRIBED IN VOLUME 2773, PAGE 98 OF THE OFFICIAL PUBLIC RECORDS OF GUADALUPE COUNTY, TEXAS.



| LINE TABLE |         |             |
|------------|---------|-------------|
| LINE       | LENGTH  | BEARING     |
| L1         | 125.93' | S23°09'24"E |
| L2         | 120.42' | S23°05'24"E |
| L3         | 105.57' | N26°51'48"W |
| L4         | 4.32'   | S49°10'11"W |
| L5         | 40.22'  | S49°10'11"W |
| L6         | 65.08'  | N40°49'49"W |
| L7         | 40.15'  | N85°12'17"W |

| CURVE TABLE |         |         |            |          |              |               |
|-------------|---------|---------|------------|----------|--------------|---------------|
| CURVE       | LENGTH  | RADIUS  | DELTA      | TANGENT  | CHORD LENGTH | CHORD BEARING |
| C1          | 9.07'   | 150.00' | 103°59'00" | 6.40'    | 7.88'        | N78°50'49"W   |
| C2          | 36.58'  | 5.00'   | 13°58'00"  | 18.37'   | 36.47'       | N33°50'49"W   |
| C3          | 3.78'   | 5.00'   | 43°20'30"  | 1.99'    | 3.69'        | S84°28'04"E   |
| C4          | 154.19' | 5.00'   | 176°41'01" | 1727.12' | 99.96'       | N81°08'12"E   |
| C5          | 3.78'   | 5.00'   | 43°20'30"  | 1.99'    | 3.69'        | S84°28'04"E   |
| C6          | 7.85'   | 5.00'   | 90°00'00"  | 5.00'    | 7.07'        | S18°01'28"W   |
| C7          | 36.56'  | 150.00' | 13°58'00"  | 18.37'   | 36.47'       | S56°09'11"W   |
| C8          | 7.85'   | 5.00'   | 90°00'00"  | 5.00'    | 7.07'        | N18°01'28"E   |
| C9          | 24.38'  | 100.00' | 13°58'00"  | 12.25'   | 24.32'       | N33°50'49"W   |



2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 [link-civil.com](mailto:link-civil.com)  
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**LEGEND:**  
P.O.B. = POINT OF BEGINNING  
B.L. = BUILDING SETBACK LINE  
D.E. = DRAINAGE EASEMENT  
U.E. = UTILITY EASEMENT  
R.O.W. = RIGHT-OF-WAY  
O.S. = OPEN SPACE LOT  
D.L. = DRAINAGE LOT  


---

 = PAGE MATCH LINE  
 = 1/2" IRON PIN SET  
 = IRON PIN FOUND

PREPARED: January 14, 2022

PAGE 2 OF 2

PRELIMINARY PLAT  
APPROVED 6/14/19



**BELLA VISTA HOMES**  
2714 N LOOP 1604 E, SUITE 105  
SAN ANTONIO, TX 782332

HIGHLAND GARDENS  
UNIT 1A

SUBDIVISION PLAT II

SHEET

4 OF 17

| NO                                                                                    | DATE      | ISSUES AND REVISIONS      |
|---------------------------------------------------------------------------------------|-----------|---------------------------|
|  | 1-13-2022 | UPDATED PER CONB COMMENTS |
|                                                                                       |           |                           |
|                                                                                       |           |                           |
|                                                                                       |           |                           |

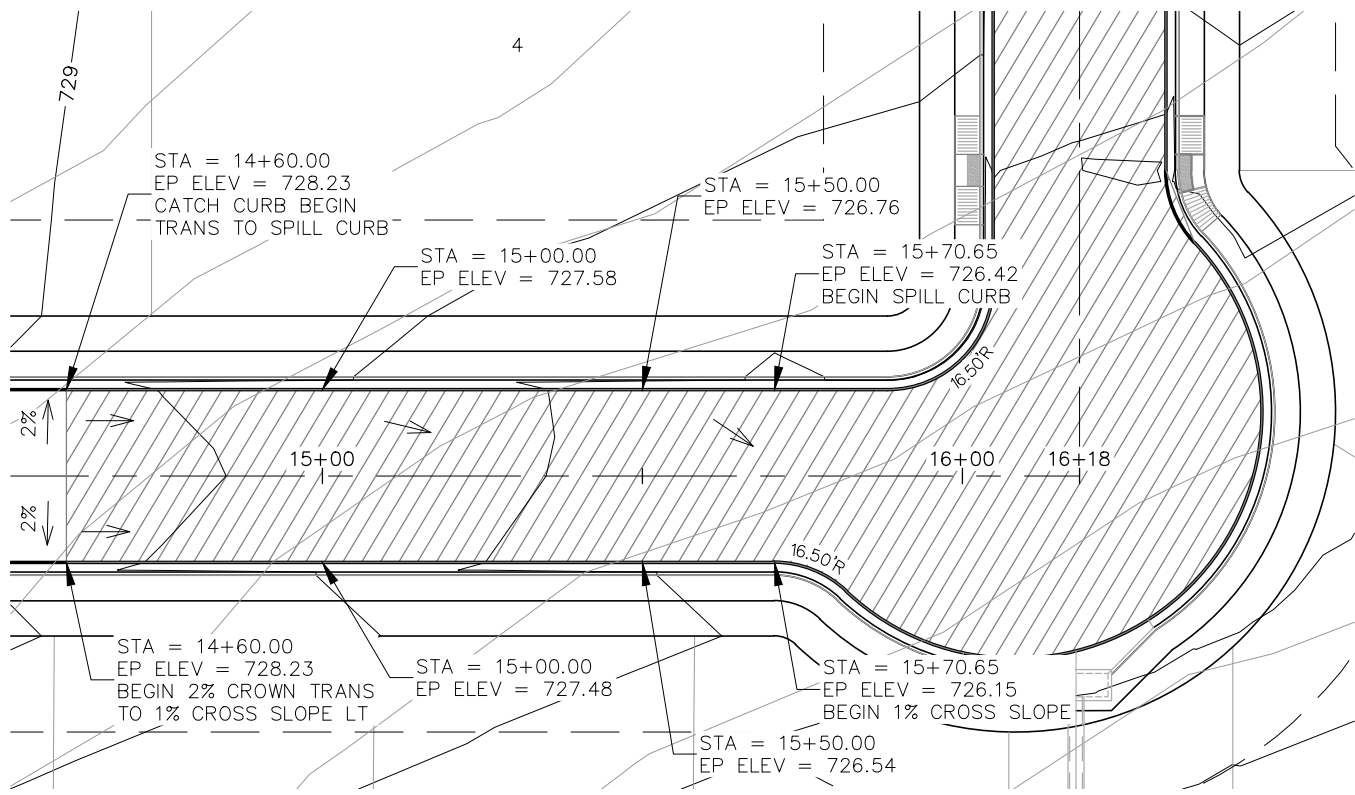


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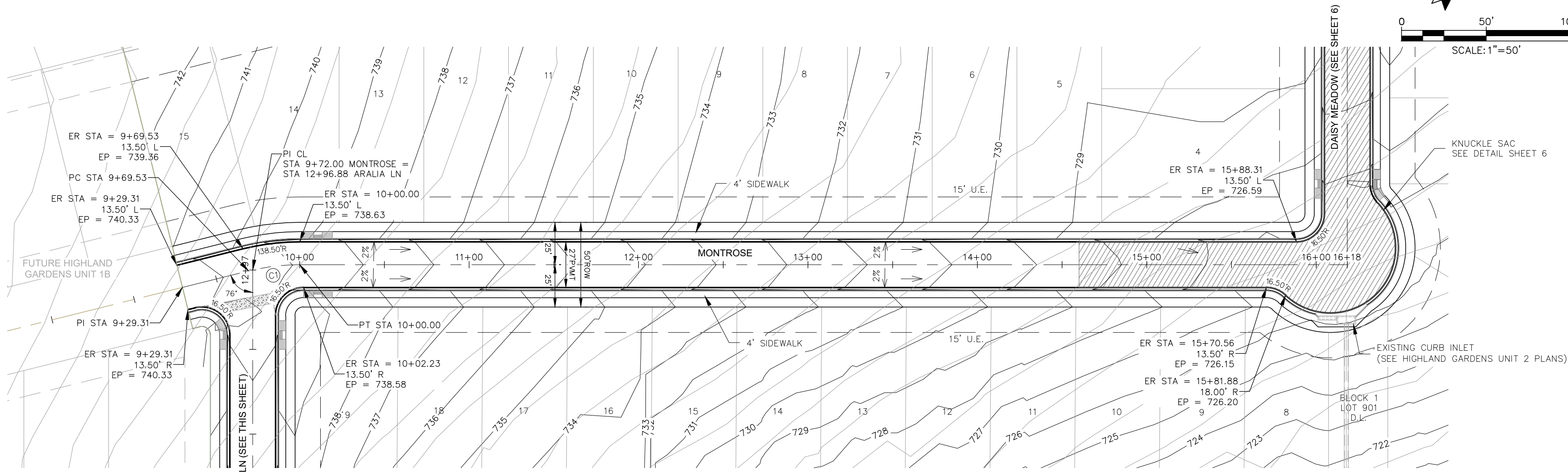


- CONSTRUCTION NOTES:
- DIMENSIONS SHOWN ARE TYPICALLY TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. SEE STREET SECTIONS AND CURB DETAILS FOR ADDITIONAL DETAIL.
  - SEE SHEET 7 FOR STREET SECTIONS AND DETAILS.
  - SEE SHEET 9 FOR STREET SIGNAGE.
  - SEE SHEET 10 FOR SIDEWALK RAMP DETAILS.
  - SIDEWALKS AND SIDEWALK RAMPS SHOWN SHALL BE CONSTRUCTED WITH STREET CONSTRUCTION.
  - ALL CURB & GUTTER IS CATCH CURB UNLESS OTHERWISE NOTED.
  - ALL RAMPS AND ANY SIDEWALKS THAT DO NOT FRONT PROPOSED RESIDENTIAL LOTS ARE REQUIRED TO BE CONSTRUCTED WITH STREET CONSTRUCTION.

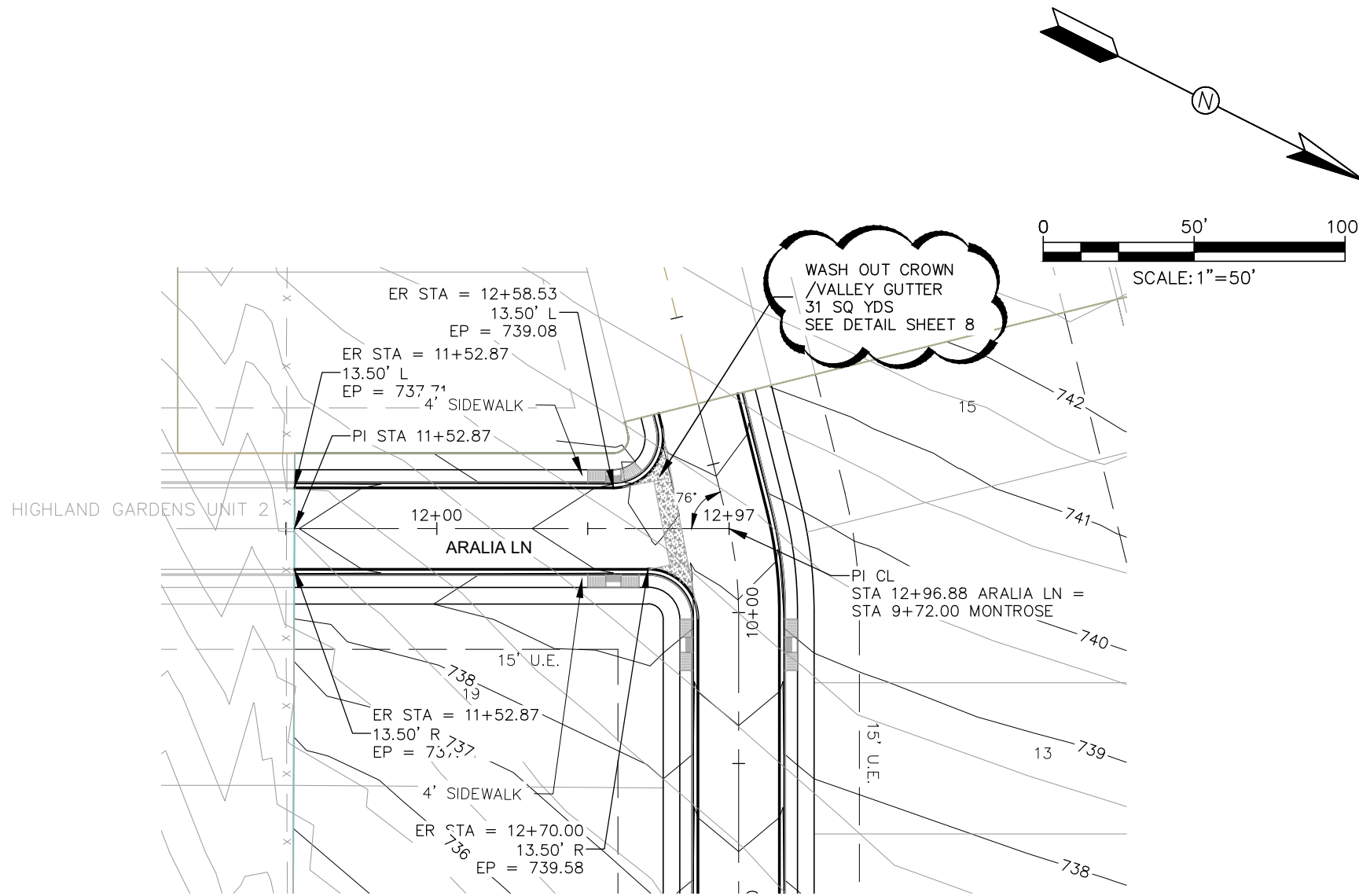
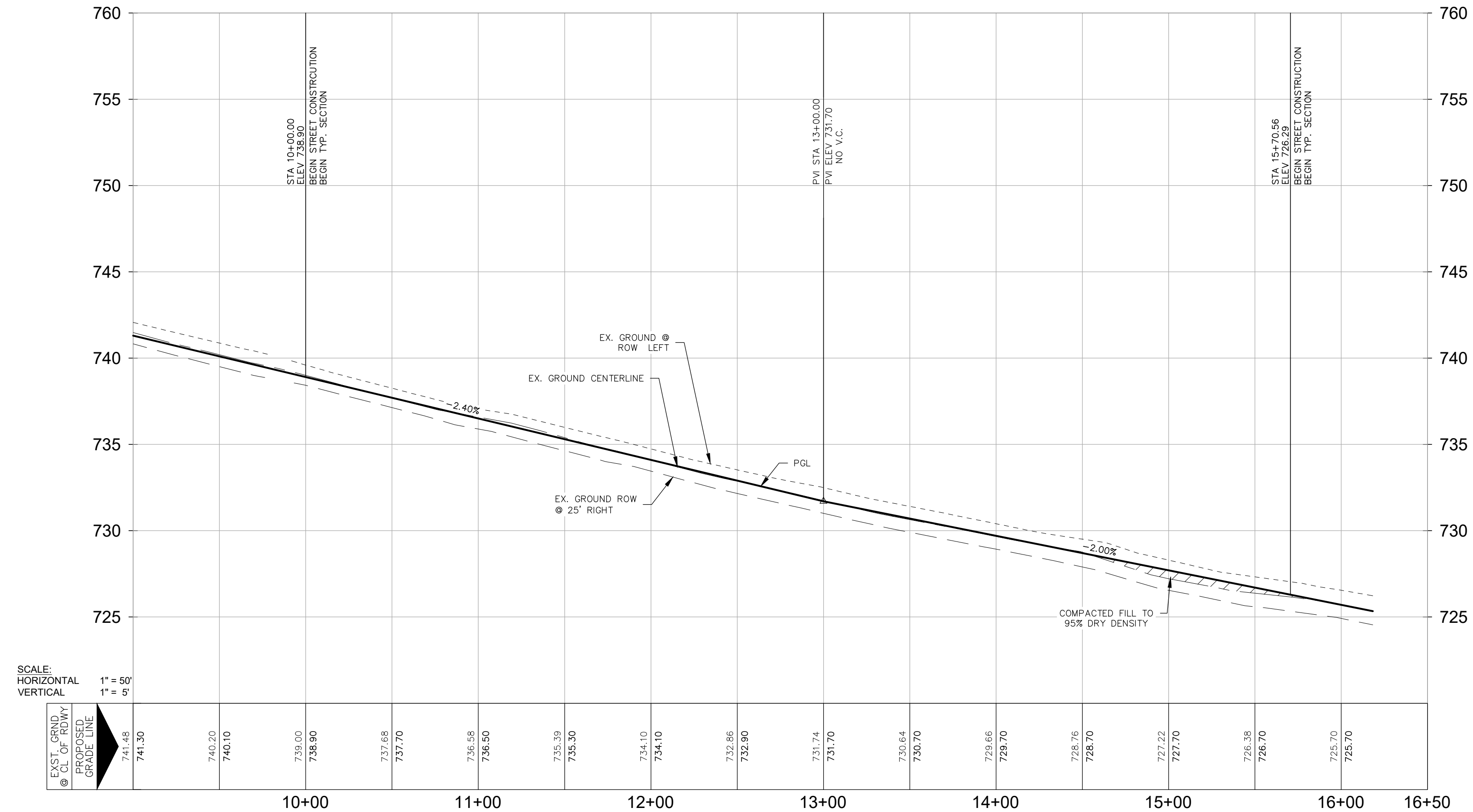
| Curve Table |        |        |           |         |              |
|-------------|--------|--------|-----------|---------|--------------|
| Curve #     | Radius | Length | Delta     | Tangent | Chord Length |
| C1          | 125.00 | 30.471 | 13°58'00" | 15.31'  | 30.40'       |



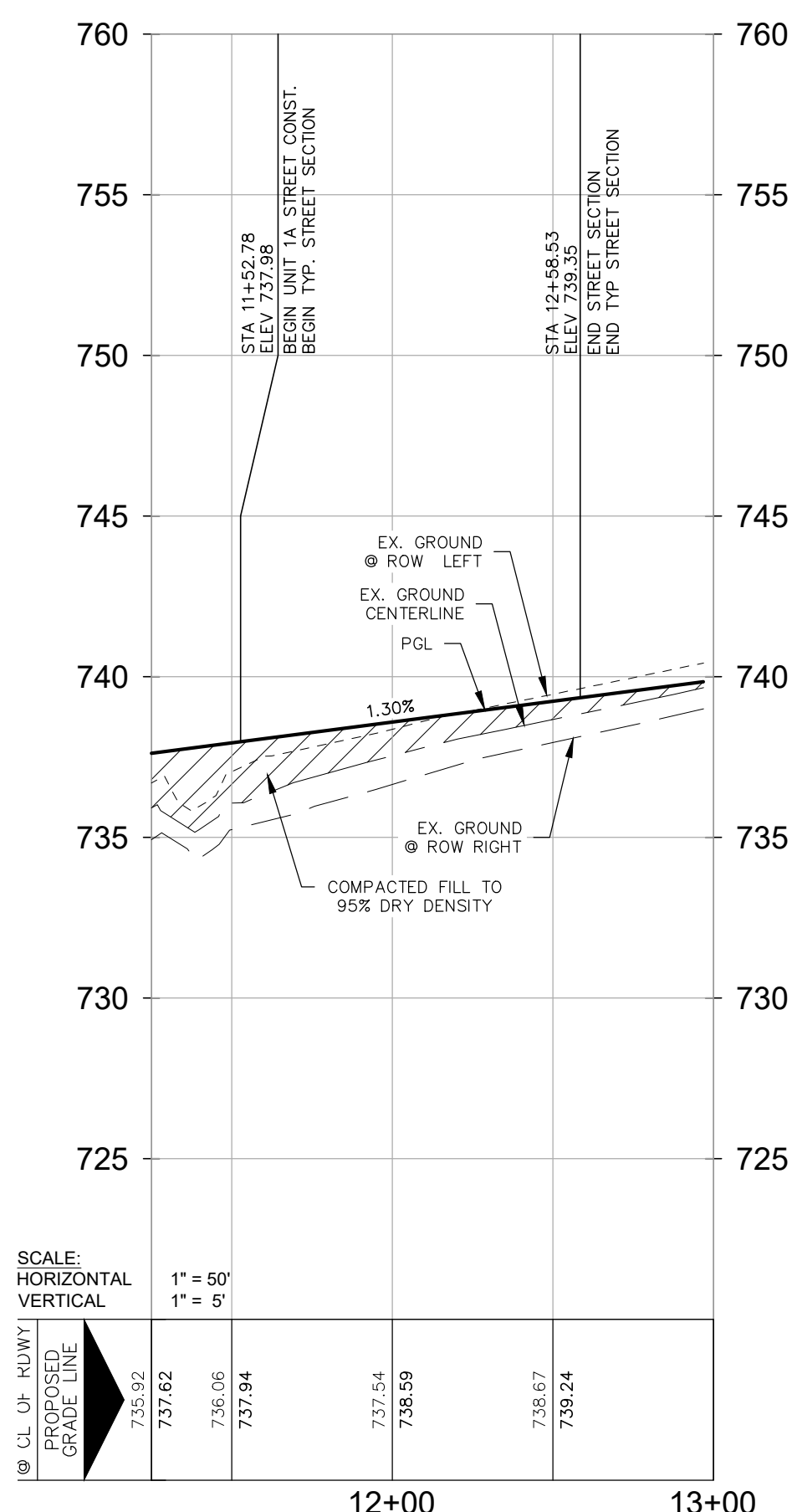
PAVEMENT TRANSITION DETAIL  
SCALE: 1" = 30'



MONTROSE



ARALIA LN



LEGEND

- VERTICAL PAVEMENT TRANSITION (WASHOUT CROWN)
- VALLEY GUTTER



BELLA VISTA HOMES  
2714 N LOOP 1604 E, SUITE 105  
SAN ANTONIO, TX 782332

HIGHLAND GARDENS  
UNIT 1A

MONTROSE AND ARALIA LN  
PLAN & PROFILE

SHEET  
5 OF 17

| NO | DATE      | ISSUES AND REVISIONS       |
|----|-----------|----------------------------|
| 1  | 1-13-2022 | UPDATED PER CON'S COMMENTS |



2021 W SH46, STE 105  
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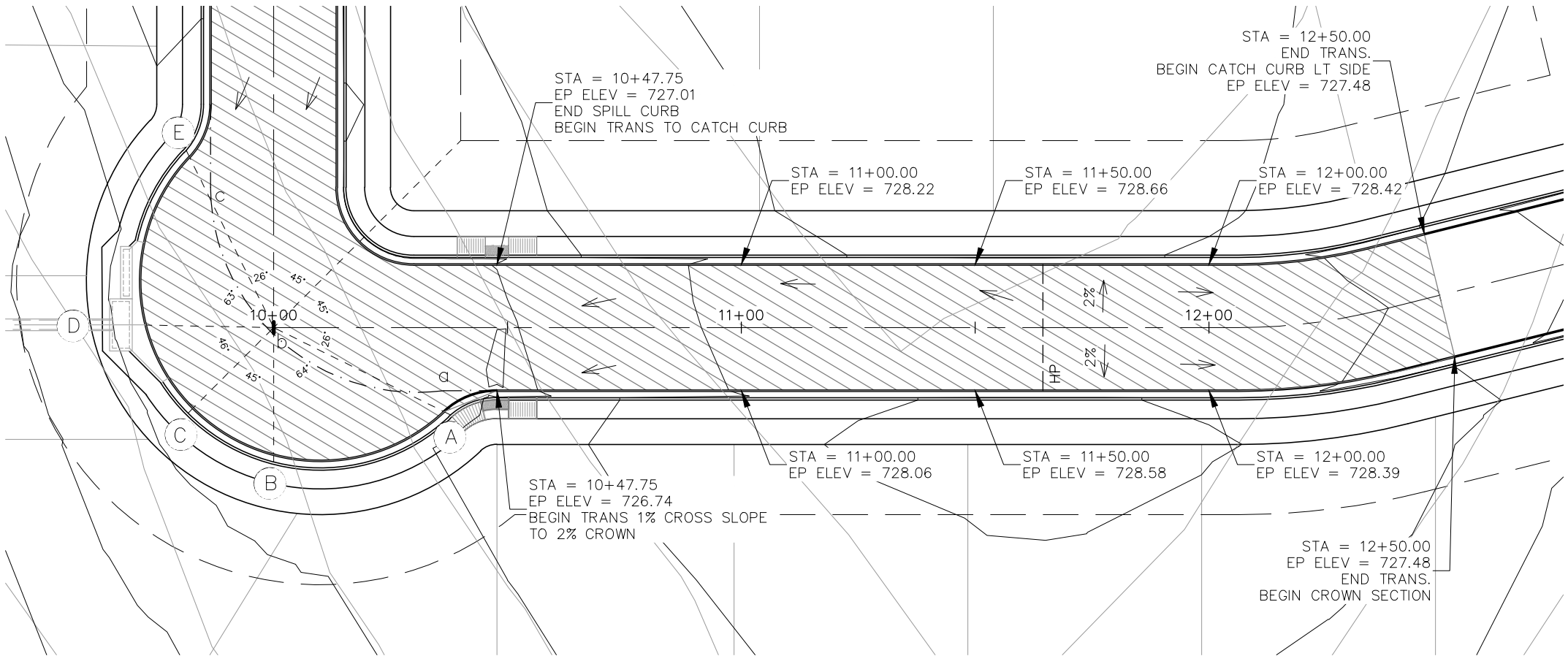


- CONSTRUCTION NOTES:
- DIMENSIONS SHOWN ARE TYPICALLY TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. SEE STREET SECTIONS AND CURB DETAILS FOR ADDITIONAL DETAIL.
  - SEE SHEET 7 FOR STREET SECTIONS AND DETAILS.
  - SEE SHEET 9 FOR STREET SIGNAGE.
  - SEE SHEET 10 FOR SIDEWALK RAMP DETAILS.
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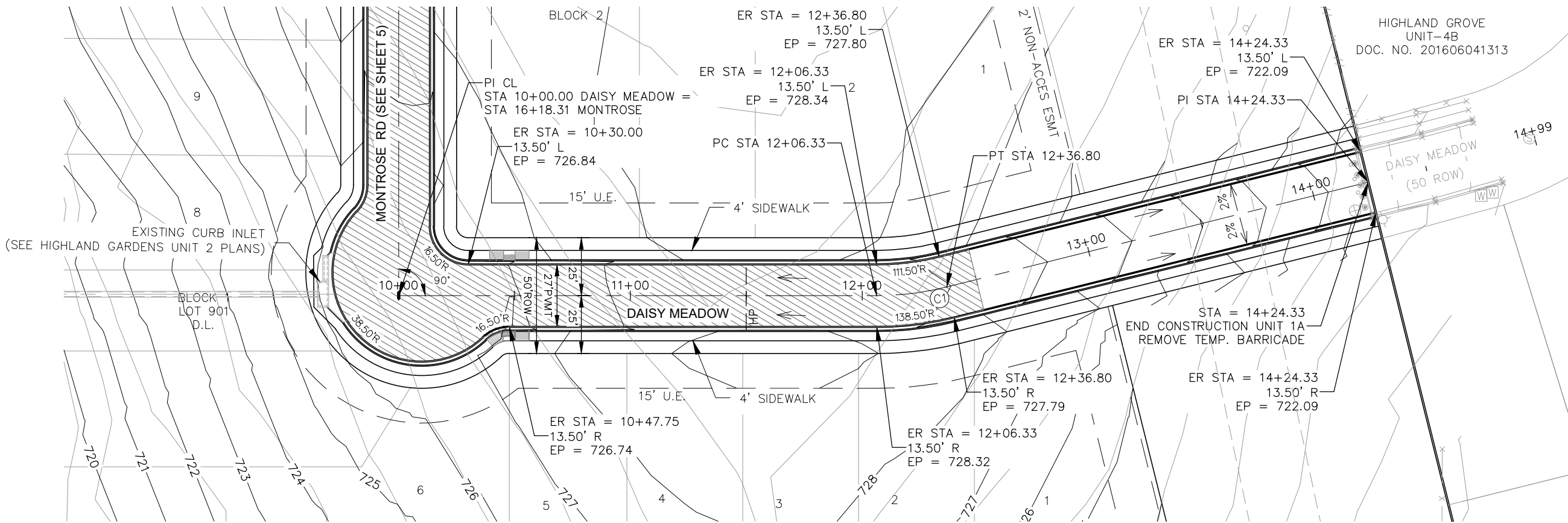
| Curve Table |        |        |           |         |              |
|-------------|--------|--------|-----------|---------|--------------|
| Curve #     | Radius | Length | Delta     | Tangent | Chord Length |
| C1          | 125.00 | 30.471 | 13°58'00" | 15.31'  | 30.40'       |

| Chord Direction  |  |
|------------------|--|
| N33° 50' 48.51"W |  |

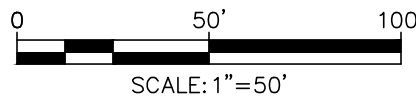
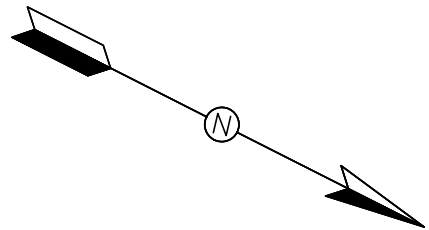
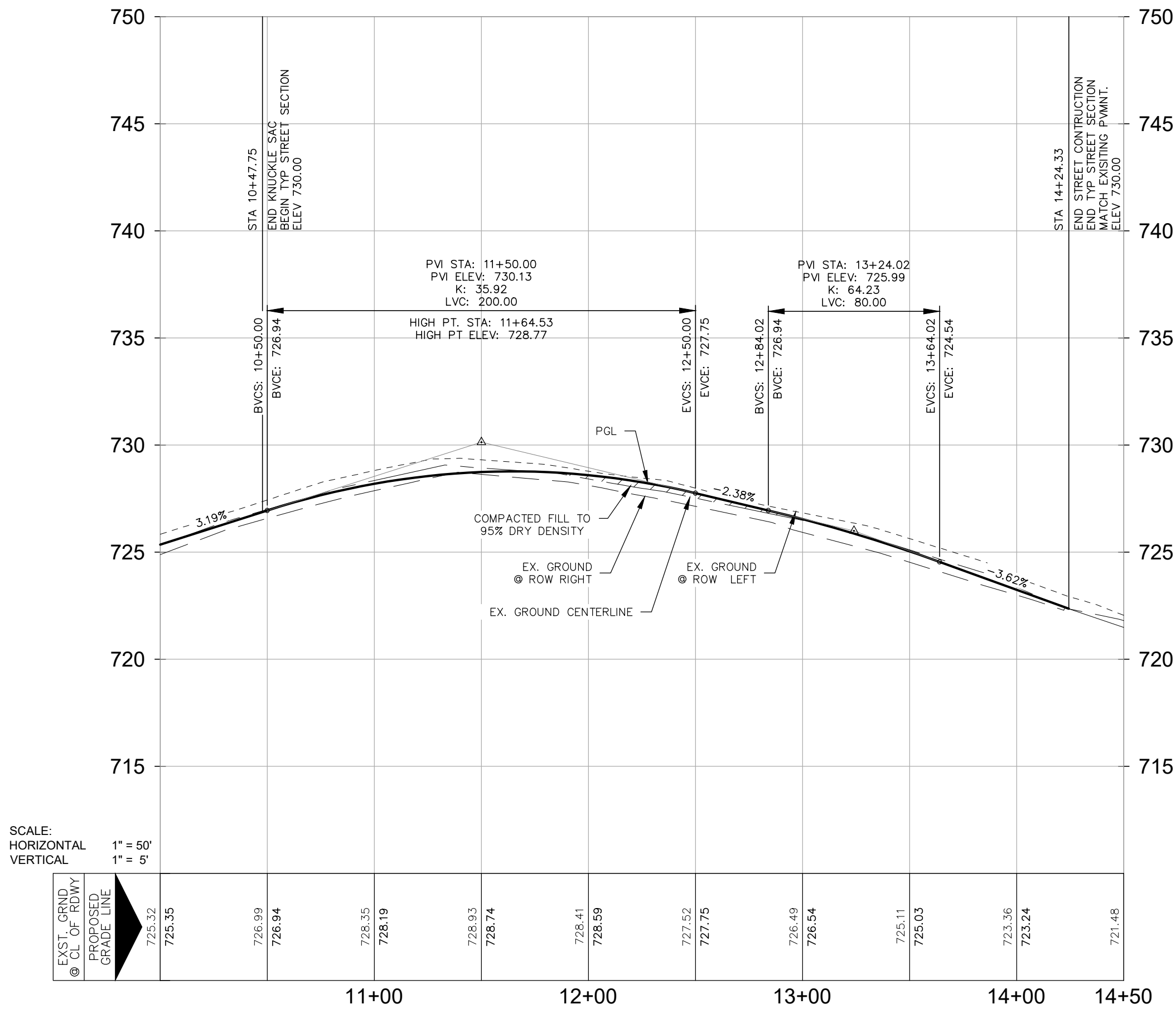
| KNUCKLE SAC HUB ELEV |        |
|----------------------|--------|
| HUB                  | EP     |
| A                    | 726.69 |
| B                    | 726.53 |
| C                    | 726.45 |
| D                    | 726.35 |
| E                    | 726.20 |
| F                    | 636.91 |
| a                    | 726.68 |
| b                    | 726.46 |
| c                    | 726.25 |



KNUCKLE SAC AND PAVEMENT TRANSITION DETAIL  
SCALE: 1" = 30'



DAISY MEADOW  
SCALE: 1" = 30'



LEGEND



VERTICAL PAVEMENT TRANSITION  
(WASHOUT CROWN)



VALLEY GUTTER



BELLA VISTA HOMES  
2714 N LOOP 1604 E, SUITE 105  
SAN ANTONIO, TX 782332

HIGHLAND GARDENS  
UNIT 1A

DAISY MEADOW PLAN & PROFILE

SHEET  
6 OF 17

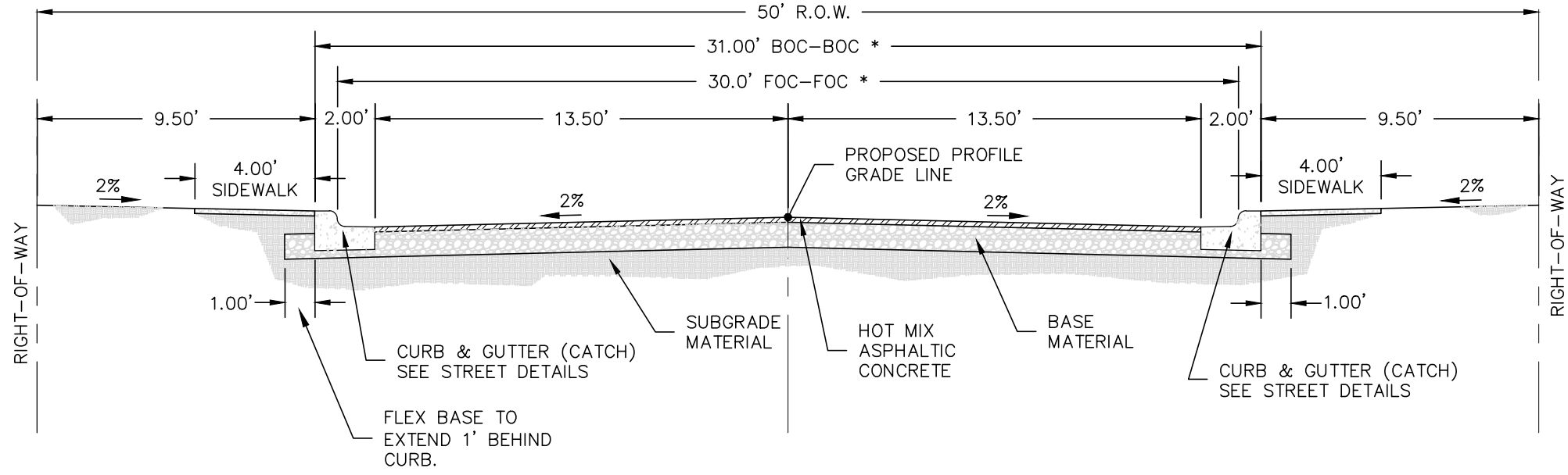
| NO | DATE      | ISSUES AND REVISIONS       |
|----|-----------|----------------------------|
| 1  | 1-13-2022 | UPDATED PER CON'S COMMENTS |



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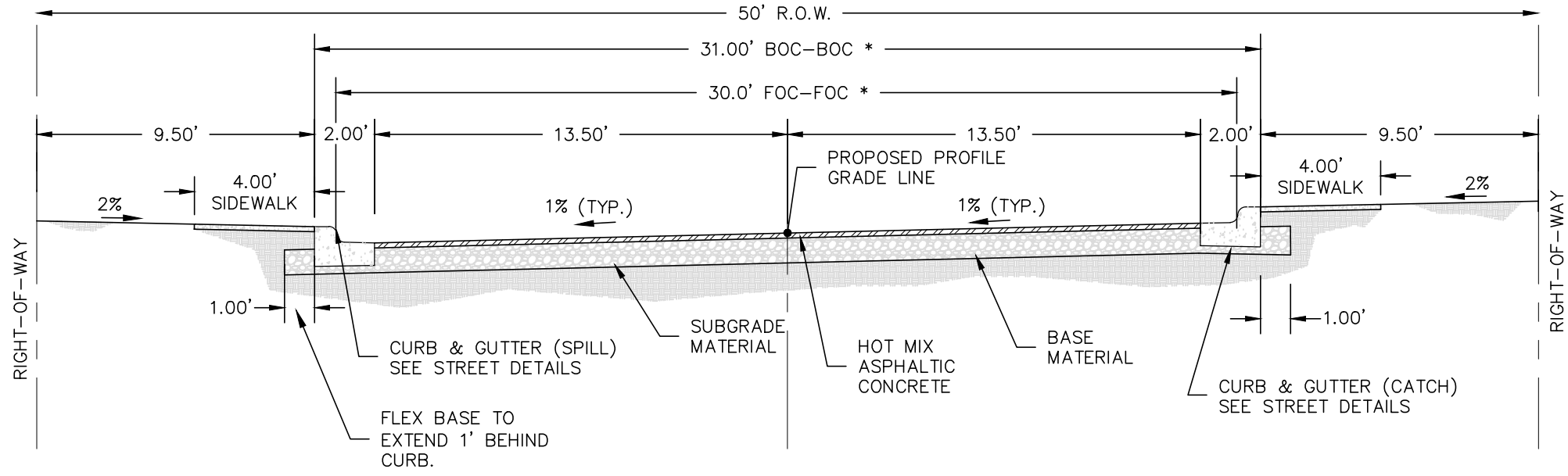
Drawing Name: N:\Projects\BHW003 Highland Gardens 1 - 3\Civil\Construction Drawings\Unit 1A\N STREET SECTIONS AND DETAILS I.dwg User: brittanibetser Jan 14, 2022 - 10:08am



CROWN SECTION 50' R.O.W.

Scale: 1" = 5'

\*FOC - FACE OF CURB  
\*BOC- BACK OF CURB



CROSS SLOPE SECTION 50' R.O.W.

Scale: 1" = 5'

TYPICAL STREET CROSS SECTIONS

| Pavement Constituent                                          | Layer Coefficient (a) |
|---------------------------------------------------------------|-----------------------|
| Lime Treated Subgrade                                         | 0.08                  |
| New Crushed Limestone Base (TxDOT Item 247 Type A, Grade 1-2) | 0.14                  |
| Type D HMAc                                                   | 0.44                  |

The recommended hot mixed asphaltic concrete (HMAc) pavement sections are provided in the following tables:

| "ONE AND TWO FAMILY RESIDENTIAL"<br>(Required AASHTO 18-KIP ESAL = 58,000) |        |  |  |
|----------------------------------------------------------------------------|--------|--|--|
| Hot Mix Asphaltic Concrete                                                 | 2"     |  |  |
| Crushed Limestone Base Material (TxDOT Item 247 Type A, Gr. 2)             | 6"     |  |  |
| TENSAR Geogrid                                                             | TX-5   |  |  |
| Lime Treated Subgrade                                                      | ---    |  |  |
| Moisture Conditioned Subgrade                                              | 6"     |  |  |
| Calculated AASHTO 18-kip ESAL                                              | 99,000 |  |  |

Moisture Conditioned Subgrade

After all surface organics and deleterious materials have been removed and the desired subgrade elevation has been achieved, the upper 6-inches of exposed subgrade soils should be compacted to a minimum density of 95-percent of the maximum dry unit weight of the subgrade soils as determined by TEX 114E and at or above the optimum moisture content. Any fill required to achieve the final subgrade elevation shall be placed in maximum 8-inch loose lifts and compacted as specified above.

NOTE:

1. RESIDENTIAL LOCAL PAVEMENT SECTION LIMITS - ALL STREETS

CONTRACTOR TO REFERENCE GEOTECHNICAL ENGINEERING STUDY FOR THE "PROPOSED HIGHLAND GARDENS SUBDIVISION ROADWAYS UNIT 1, 2 AND 3."

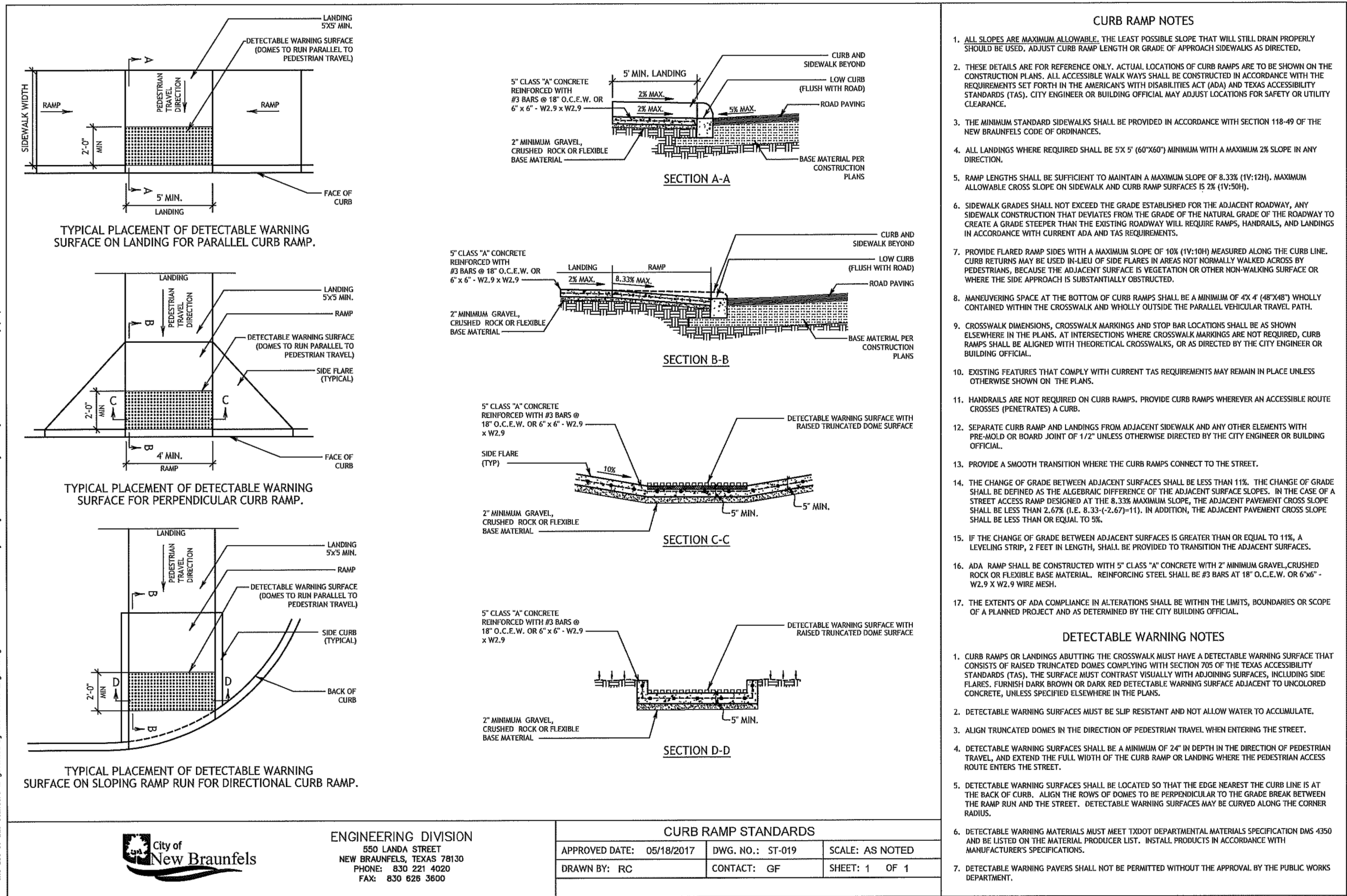
ACCORDING TO THE GEOTECHNICAL ENGINEERING STUDY FOR THE "PROPOSED HIGHLAND GARDENS SUBDIVISION ROADWAYS UNIT 1, 2 AND 3" PREPARED BY: ROCK ENGINEERING AND TESTING LABORATORY RETL PROJECT NO.: C218116 DATED: FEBRUARY 27, 2018

THE SUBGRADE SOILS SHALL BE TESTED AT TIME OF CONSTRUCTION TO DETERMINE THE LIME REQUIREMENT TO ACHIEVE A PH VALUE OF 12.4 OR GREATER.

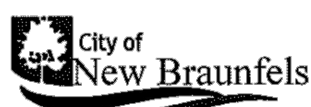
3. SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULFATE CONTENT PRIOR TO TREATMENT.

STREET SECTION NOTES:

- ALL CONCRETE CURBING SHALL BE CONCRETE CURB AND GUTTER, (I.E. CATCH OR SPILL) UNLESS OTHERWISE SPECIFIED ON THE PLANS (I.E. RIBBON CURB)
- CROSS SLOPE VARIES WITHIN VERTICAL TRANSITIONS. THE TYPICAL CROSS SLOPE SHALL BE 1% UNLESS OTHERWISE SPECIFIED ON PLANS.
- BASE MATERIAL SHALL EXTEND 12" BEHIND BACK OF CURB.
- SEE GRADING PLAN FOR LOT GRADING BEYOND RIGHT OF WAY LINE.



DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by the City of New Braunfels for any purpose whatsoever.



ENGINEERING DIVISION  
850 LANDA STREET  
NEW BRAUNFELS, TEXAS 78130  
PHONE: 830 221 4020  
FAX: 830 626 3600

| CURB RAMP STANDARDS       |                  |                 |
|---------------------------|------------------|-----------------|
| APPROVED DATE: 05/18/2017 | DWG. NO.: ST-019 | SCALE: AS NOTED |
| DRAWN BY: RC              | CONTACT: GF      | SHEET: 1 OF 1   |



BELLA VISTA HOMES  
2714 N LOOP 1604 E, SUITE 105  
SAN ANTONIO, TX 782332

HIGHLAND GARDENS  
UNIT 1A

STREET SECTIONS AND DETAILS I

SHEET  
7 OF 17

| NO | DATE      | ISSUES AND REVISIONS      |
|----|-----------|---------------------------|
| 1  | 1-13-2022 | UPDATED PER CORB COMMENTS |



2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351



The image contains three technical drawings of a concrete sidewalk joint:

- PLAN VIEW:** A top-down view of a 24'-0" long sidewalk section. It shows two 4'-0" expansion joints, one at the beginning and one at the end. A 1/2" expansion joint is also indicated at the 24'-0" interval. The drawing shows cut joints or weakened joints every 4'-0". A 6"x6" - W2.8xW2.9 welded wire flat sheet is shown reinforcing the concrete, with reinforcing steel #4 @ 18" ON CENTER EACH WAY.
- WEAKENED PLANE JOINT:** A cross-section view of the joint. It shows a 1/8" R radius on the top surface and a 1/4" R radius on the bottom surface. The joint is 1/2" wide. The drawing shows two 1/2"x18" smooth dowels and a 9" of dowel to be greased. The joint is 1/2" T thick.
- TYPICAL SECTION:** A cross-section view of the sidewalk. It shows a 1/2" R radius on the top surface and a 1/2" R radius on the bottom surface. The joint is 1/2" wide. The drawing shows a 2" sand base and a 4'-0" class A concrete sidewalk. The sidewalk is 1/2" off property line or adjacent to curb, as noted per plat.

1. EXPANSION JOINTS ARE TO BE USED BETWEEN CONCRETE DRIVEWAY AND SIDEWALK.
2. SCORED JOINTS DENOTE SIDEWALK ACROSS THE DRIVEWAY AND ARE TO BE PLACED AT LEAST 1/3 rd. THROUGH THE SLAB THICKNESS.
3. ALL SIDEWALK AND DRIVEWAY CONSTRUCTION SHALL MEET A.D.A. SPECIFICATIONS.

|                                        |                 |               |                                                                                   |                                   |
|----------------------------------------|-----------------|---------------|-----------------------------------------------------------------------------------|-----------------------------------|
| DATE APPROVED: 7/08                    | DWG. NO: ST-016 | SCALE: N.T.S. |  | <b>ENGINEERING<br/>DEPARTMENT</b> |
| DRAWN BY: RAS                          | SHEET: 1 OF 1   |               |                                                                                   |                                   |
| FILENAME: SIDEWALK (Residential)       |                 |               |                                                                                   |                                   |
| P:\CURRENT NEW BRAUNFELS DETAILS\2008\ |                 |               |                                                                                   |                                   |

[illegible]

**NOTES:**

- 1. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 18".**
- 2. CURB AND GUTTER SHALL HAVE FORMED TOOLED OR SAWED CONTRACTION JOINTS AT  $\pm 10'$ . THE DEPTH OF THESE JOINTS SHALL BE SUFFICIENT TO ENSURE CRACKING AT THE JOINTS.**
- 3. CURB OR CURB AND GUTTER SHALL HAVE EXPANSION JOINTS AT POINTS OF CURVATURE, AT INTERVALS NO GREATER THAN 10' AND AT ALL ADJACENT STRUCTURES.**
- 4. UNLESS OTHERWISE SHOWN, TRANSITIONS BETWEEN CURBS OR CURB AND GUTTER OF DIFFERING CROSS SECTION SHALL BE ACCOMPLISHED OVER A 10' LENGTH OR AS APPROVED BY THE CITY ENGINEER.**
- 5. ALL CONCRETE TO BE CLASS "A" 3000 PSI CONCRETE.**
- 6. ALL EXPOSED CONCRETE SURFACES TO BE BRUSHED SMOOTH AND UNIFORM.**

|                                                                   |                 |               |                                                                                     |                                   |
|-------------------------------------------------------------------|-----------------|---------------|-------------------------------------------------------------------------------------|-----------------------------------|
| DATE APPROVED: 7/08                                               | DWG. NO: ST-013 | SCALE: N.T.S. |  | <b>ENGINEERING<br/>DEPARTMENT</b> |
| DRAWN BY: RAS                                                     | SHEET: 1 OF 1   |               |                                                                                     |                                   |
| FILENAME: Curb & Gutter<br>P:\CURRENT NEW BRAUNFELS DETAILS\2008\ |                 |               |                                                                                     |                                   |

**RADIUS PLAN VIEW**

PROPERTY LINE

DRIVEWAY

12" MIN. - 30" MAX.  
THROAT AT PROPERTY LINE

HIGH POINT  
SEE NOTE #5

WEAKENED PLANE JOINT

CONCRETE

14% MAX.

2% MAX.

SIDEWALK SLOPE  
1:12 MAX

TERMINATION OF RADIUS  
SEE NOTE #8

DUMMY JOINT  
SEE NOTE #4

EXPANSION JOINT  
SEE NOTE #7

CURB CUT  
SEE NOTE #3

R.O.W. LINE VARIES

# SIDEWALK (TYP.)

This diagram illustrates the plan view of a curved driveway and sidewalk. The driveway is shown with a throat at the property line, ranging from 12 inches to 30 inches. The sidewalk is shown with a slope of 1:12 maximum. The diagram includes various engineering details such as weakened plane joints, concrete sections, and expansion joints. Notes refer to specific details and standards, including the termination of the radius, high points, and curb cuts.

|                                                      |                   |               |                                                                                     |                           |
|------------------------------------------------------|-------------------|---------------|-------------------------------------------------------------------------------------|---------------------------|
| DATE APPROVED: 04/2016                               | DWG. NO: ST-014.1 | SCALE: N.T.S. |  | ENGINEERING<br>DEPARTMENT |
| DRAWN BY: RAS                                        | SHEET: 1 OF 2     |               |                                                                                     |                           |
| FILENAME: DRIVEWAY (RESIDENTIAL - ONE OR TWO FAMILY) |                   |               |                                                                                     |                           |

1/2" MAX.

4" SIDEWALK

APRON LENGTH AS REQUIRED

14" MAX.

5" THICK 3,000 P.S.I. MINIMUM 28 DAY COMPRESSIVE STRENGTH CONCRETE

4" MINIMUM COMPACTED FLEXIBLE BASE MATERIAL

2" MAX.

1/2" DOWELS 8" INTO EXISTING GUTTER 16" O.C.

#3 BARS 12" O.C. BOTH WAYS OR 6"x6" W/D5xW/D5 WELDED WIRE FLAT SHEETS

STRUCTURAL SECTION

4" SIDEWALK

APRON LENGTH AS REQUIRED

14" MAX.

5" THICK 3,000 P.S.I. MINIMUM 28 DAY COMPRESSIVE STRENGTH CONCRETE

4" MINIMUM COMPACTED FLEXIBLE BASE MATERIAL

2" MAX.

#3 BARS @ 12" O.C.

16"

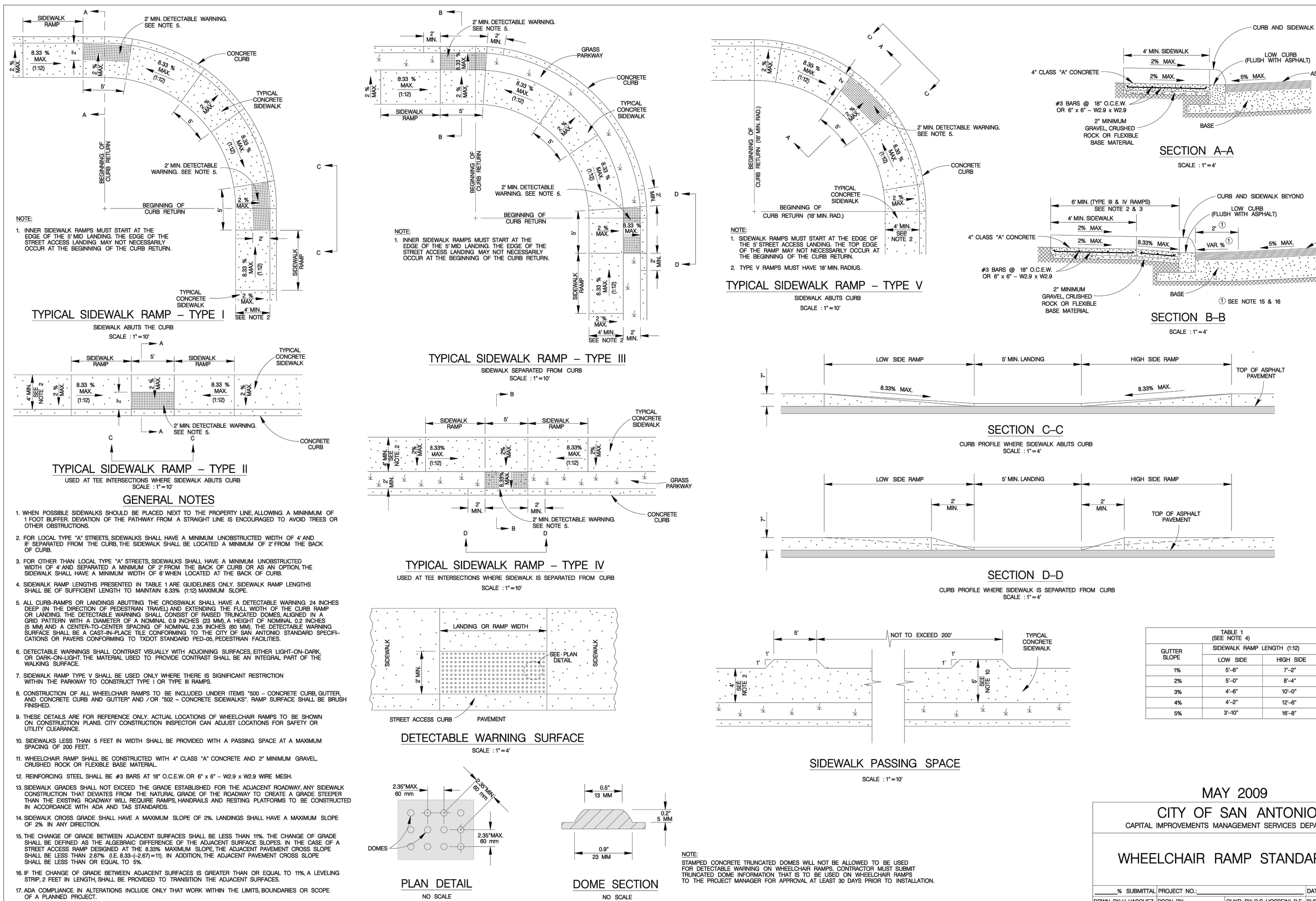
9"

#3 BARS 12" O.C. BOTH WAYS OR 6"x6" W/D5xW/D5 WELDED WIRE FLAT SHEETS

NO EXISTING CURB STRUCTURAL SECTION

1. WHERE CUTOVER DOES NOT EXIST DRIVEWAY APRON SHALL EXTEND TO EDGE OF ASPHALT AND SHALL HAVE A MINIMUM 6" WIDE 1" DEEP GRADE BEAM MONOLITHIC AND REINFORCED SIMILAR TO APRON.
2. PLACEMENT OF SIDEWALK SHOWN IS TYPICAL, HOWEVER, ALTERNATIVE SIDEWALK PLACEMENT COMMON TO DRIVEWAY APRON WILL BE CONSIDERED PROVIDED CROSS SLOPE OF SIDEWALK IS NO GREATER THAN 2%.
3. CURB CUT LENGTH NO GREATER THAN AS REQUIRED TO MATCH SLOPE OF ADJACENT SIDEWALK.
4. DUMMY JOINTS TO BE PROVIDED AT MINIMUM 4'-0" INTERVALS PERPENDICULAR TO THE CURB LINE WITHIN THE SIDEWALK AREA AND PARALLEL TO THE SIDEWALK AREA.
5. PROVIDE A MINIMUM 7" HIGH POINT. HIGH POINT HEIGHT SHALL BE MEASURED FROM THE GUTTER FLOW LINE TO THE DRIVEWAY APRON. NOTE HIGH POINT MAY OCCUR OUTSIDE OF ROW.
6. DRIVEWAY THROAT TRANSITION MAY OCCUR OUTSIDE OF ROW.
7. PROVIDE EXPANSION JOINTS AT ALL SIDEWALK AND DRIVEWAY THROAT JOINTS. EXPANSION JOINTS SHALL BE PLACED USING 1/2" ASPHALTIC MATERIAL WITH 1/2" DOWELS 16" O.C.
8. THE TANGENT POINT OF THE DRIVEWAY CURB RETURN AT THE PUBLIC ROADWAY LINE OR FLARE SHALL BE A MINIMUM DISTANCE OF 1' OFF THE PROPERTY PROJECTED PERPENDICULAR TO THE STREET CENTERLINE.
9. THE FACE OF THE DRIVEWAY CURB OR FLARE SHALL BE THE FAMILY ZERO LOT LINE. LOTS WHERE THE DRIVEWAY IS ON THE ZERO LOT LINE, THE TANGENT POINT OR FLARE SHALL BE NO GREATER THAN 3' BEYOND THE ADJOINING PROPERTY LINE PROJECTED PERPENDICULAR TO THE STREET CENTERLINE.

|                                                      |                   |               |                                                                                     |                           |
|------------------------------------------------------|-------------------|---------------|-------------------------------------------------------------------------------------|---------------------------|
| DATE APPROVED: 04/2016                               | DWG. NO: ST-014.2 | SCALE: N.T.S. |  | ENGINEERING<br>DEPARTMENT |
| DRAWN BY: RAS                                        | SHEET: 2 OF 2     |               |                                                                                     |                           |
| FILENAME: DRIVEWAY (RESIDENTIAL - ONE OR TWO FAMILY) |                   |               |                                                                                     |                           |



1/2" EXPANSION JOINT  
SILICONE SEALANT

STANDARD 1/2" GALVANIZED PIPE WITH  
END PLUG. GREASE REINFORCING STEEL  
PRIOR TO PIPE INSTALLATION.

NO. 4 BARS @ 12" CENTERS  
BOTH WAYS SUPPORTED BY  
NON-FERROUS CHAIRS APPROVED BY  
THE CITY ENGINEER

2'-0"

2'-0"

6'-0"

2'-0"

JOINT DETAIL

1/2"

1'-0"

1/4"

BOND BREAKER OR  
5/8" BACKING ROD

SEALANT DETAIL

3'-0"

3'-0"

3/4"

1"

5"

2" CLEAR (TYP)

10" AGGREGATE BASE

NO. 4 BARS @ 12" ON  
CENTERS, BOTH WAYS

SECTION A-A

PROPOSED STREET

30' MIN.

6'-0"

1-1/2%

1% MAX

1% MAX

TYPICAL PROFILE AT LOCAL RESIDENTIAL STREET INTERSECTION

1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI.
2. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
3. CONSTRUCTION OF CROSS GUTTER IS NOT ALLOWED ACROSS MAJOR COLLECTOR OR ARTERIAL STREETS.
4. ADJACENT SPANDREL SHALL BE 9" THICK CLASS "A" 3,000 PSI CONCRETE.

|                                                                  |                 |               |                                                                                       |                                   |
|------------------------------------------------------------------|-----------------|---------------|---------------------------------------------------------------------------------------|-----------------------------------|
| DATE APPROVED: 7/08                                              | DWG. NO: ST-020 | SCALE: N.T.S. |  | <b>ENGINEERING<br/>DEPARTMENT</b> |
| DRAWN BY: RAS                                                    | SHEET: 1 OF 1   |               |                                                                                       |                                   |
| FILENAME: CROSS GUTTER<br>P:\CURRENT NEW BRAUNFELS DETAILS\2008\ |                 |               |                                                                                       |                                   |



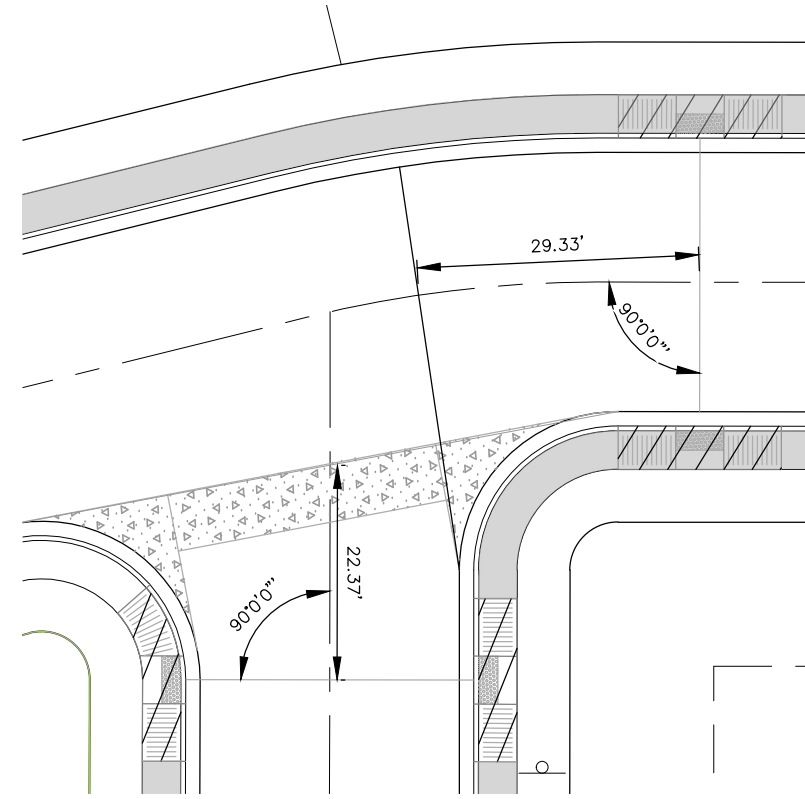
SHEET 8 OF 17

| NO                                                                                    | DATE      | ISSUES AND REVISIONS      |
|---------------------------------------------------------------------------------------|-----------|---------------------------|
|  | 1-13-2022 | UPDATED PER CONB COMMENTS |

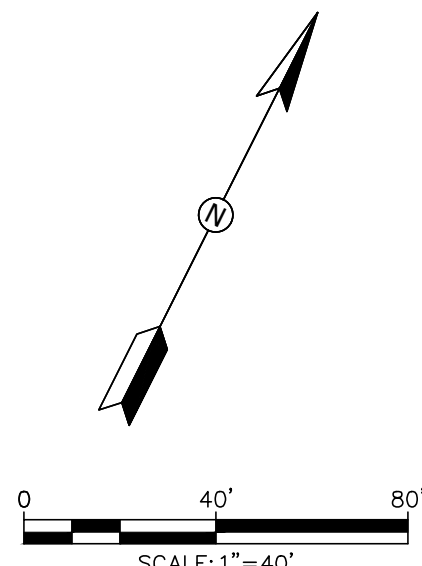


2021 W SH46, STE 105  
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DETAIL "A"  
SCALE: 1" = 20'



### LEGEND

- 4' SIDEWALK TO BE INSTALLED BY THE DEVELOPER
- 4' SIDEWALK TO BE INSTALLED BY THE HOME BUILDER

ALL PROPOSED SIDEWALKS ARE 4' IN WIDTH.

NOTE:  
THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CITY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

ALL RAMPS AND ANY PROPOSED SIDEWALKS THAT DO NOT FRONT PROPOSED RESIDENTIAL LOTS ARE REQUIRED TO BE CONSTRUCTED WITH THE STREET CONSTRUCTION.



**BELLA VISTA HOMES**  
2714 N LOOP 1604 E, SUITE 105  
SAN ANTONIO, TX 782332

**HIGHLAND GARDENS  
UNIT 1A**

**TRAFFIC SIGNAGE &  
SIDEWALK PLAN**

SHEET  
**9** OF **17**

| NO | DATE      | ISSUES AND REVISIONS      |
|----|-----------|---------------------------|
| 1  | 1-13-2022 | UPDATED PER COMB COMMENTS |
|    |           |                           |
|    |           |                           |
|    |           |                           |



2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351



STREET SIGN DETAIL - GROUND MOUNT

-24"-48" VARIES BY 6"

|                     |                                                                                                                                                                                                                        |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Height              | 9"                                                                                                                                                                                                                     |
| Length              | 24" min<br>48" max<br>6" increments in length                                                                                                                                                                          |
| Thickness           | 0.080"                                                                                                                                                                                                                 |
| Substrate           | Flat aluminum sheeting with $\frac{3}{16}$ " radius circular fillets at corners conforming to the requirements of ASTM B 209, Alloys 6061-T-6, or 5052-H38.                                                            |
| Sign Face Materials | Green film over High Intensity Prismatic sheeting                                                                                                                                                                      |
| Legend              | Legends shall be Clearview 1-W font style. Reduced spacing between the letters or words should not be used as a means of reducing the overall size of a street name sign unless approved by the City Traffic Engineer. |
| Color               | White legend on green background                                                                                                                                                                                       |

**Notes:**

- Street name signs shall be double sided when center mounted on top of sign post. Only one street name sign should be installed on top of sign post with STOP or YIELD sign.
- When two sets of street name signs are required (e.g. at "T" intersections), one double-sided street name sign shall be mounted on sign post. The sign assembly shall meet minimum height requirements as required in the Texas Manual on Uniform Traffic Control Devices (TMUTCD). When required, DEAD END (W14-1a) or NO OUTLET (W14-2a) signs shall also be mounted on the sign post.
- Street name signs greater than 36" long and center mounted on top of sign post shall be mounted on post top bracket with 12" slot. All other street name signs center mounted on top of sign post shall be mounted on post top bracket with 5½" slot.
- Street name signs mounted on sign post shall be mounted with double-sided round pole brackets. Two holes should be punched in the center of the 9" street name sign blank 1" from edge of the blank with 7-spacing between holes.
- The lettering for names of streets shall be composed of a combination of lower-case letters with initial upper-case letters. Acceptable abbreviations per TMUTCD may be used except for the street name itself.
- Red background (red film over High Intensity Prismatic) should be used for private street name signs.

**Street Sign Detail - Ground Mount**

|                           |                  |               |
|---------------------------|------------------|---------------|
| ISSUE DATE: February 2013 | DWG. NO.: SF-024 | SCALE: N.T.S. |
| DRAWN BY: BAS             | CHECKED: GF      | SHEET: 1 OF 1 |

**ENGINEERING DIVISION**

424 S. CASTELL AVE.  
NEW BRAUNFELS, TEXAS 78130  
PHONE: 830.221.4000  
FAX: 830.253.5600

P:\31019 ENGINEERING-AUTOCAD\DETAILS\NB-PUBLIC WORKS DETAILS\SUB-UNAPPROVED DETAILS-2013\ST-2013.024 STREET SIGN DETAIL - GROUND MOUNT.DWG

**SIGN REQUIREMENTS**

1. TRAFFIC SIGNS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND WHERE JUSTIFIED BY ENGINEERING JUDGMENT OR STUDY. TRAFFIC SIGNS INCLUDE REGULATOR SIGNS, WARNING SIGNS, STREET NAME SIGNS AND OBJECT MARKERS.
2. ALL SIGNS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN AND PROFILE SHEET OR SEPARATE SIGNING AND PAVEMENT MARKING LAYOUT SHEET. THE ENGINEERING PLANS SHALL INCLUDE SIGN LOCATION, NAME, DESIGNATION AND SIZE. SIGN STANDARDS SHALL BE INCLUDED IN THE ENGINEERING PLANS.

**INSTALLATION**

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATOR, WARNING AND STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

**MOUNTING**

1. THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD(GEN)-08 AND SMD(TM)-08.
2. THE TRIANGULAR SLIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS SMD(GEN)-08 AND SMD(SLIP)-13-08.
3. OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D&OM(1-5)-10.

**MATERIALS**

1. SIGN MATERIALS INCLUDING ALUMINUM SIGN BLANKS AND SIGN FACE MATERIALS SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS TSR(1-5)-08 AND DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-7110 AND DMS-8300.
2. THE CITY OF NEW BRAUNFELS WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

**PAVEMENT MARKING REQUIREMENTS**

1. PAVEMENT MARKINGS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND WHERE JUSTIFIED BY ENGINEERING JUDGMENT OR STUDY.
2. ALL PAVEMENT MARKINGS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN AND PROFILE SHEET OR SEPARATE SIGNING AND PAVEMENT MARKING LAYOUT SHEET. DESIGN, MATERIALS AND INSTALLATION SHOULD FOLLOW TXDOT TRAFFIC STANDARDS PM(1-4)-12. CITY OF SAN ANTONIO TRAFFIC ENGINEERING STANDARDS FOR PAVEMENT MARKINGS DESIGNATING TRAFFIC LANES, LANE USAGE AND LANE REGULATIONS AND PEDESTRIAN/BICYCLIST ACCOMMODATIONS MAY BE USED FOR ADDITIONAL STANDARD DESIGN DETAILS. MARKING STANDARDS SHALL BE INCLUDED IN THE ENGINEERING PLANS.
3. ALL PAVEMENT MARKINGS SHALL BE TYPE 1 HOT APPLIED THERMOPLASTIC AND MEET TXDOT DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-8200.
4. THE CONTRACTOR SHALL NOTIFY THE CITY OF NEW BRAUNFELS AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CONTRACTOR MAY BE RESPONSIBLE FOR PLACING SPOT TABS BEFORE MARKING APPLICATION. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

OM4-3 REFLECTOR

6" x BARRICADE POSTS PLACED & 6" BACK OF CURB @ 5'-0" O.C. TYP.

6"

SECTION

OM4-4 REFLECTOR

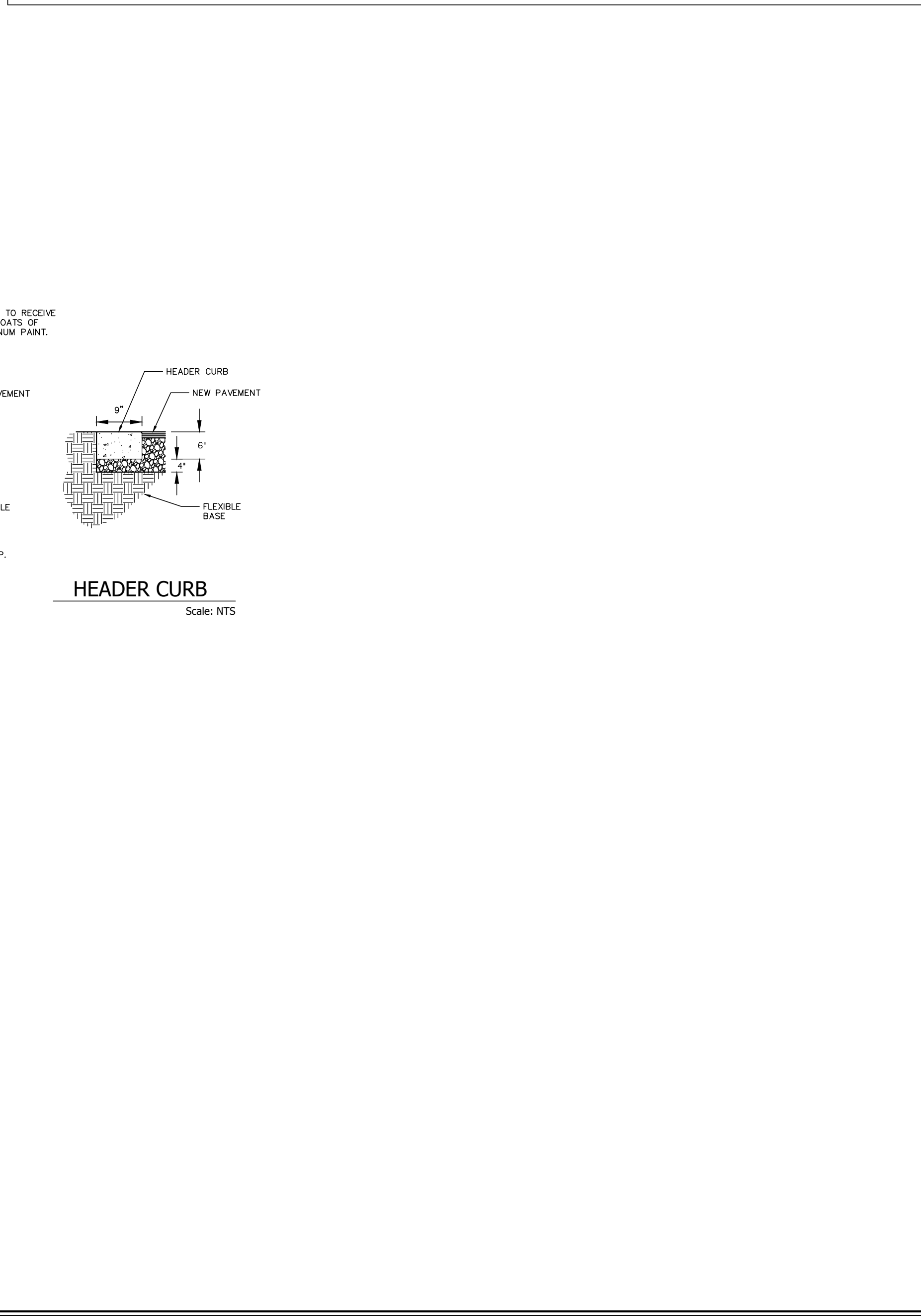
6"

9"

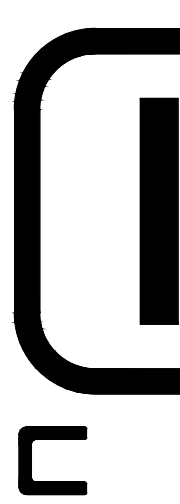
6"

END OF ROADWAY MARKER

Scale: NTS



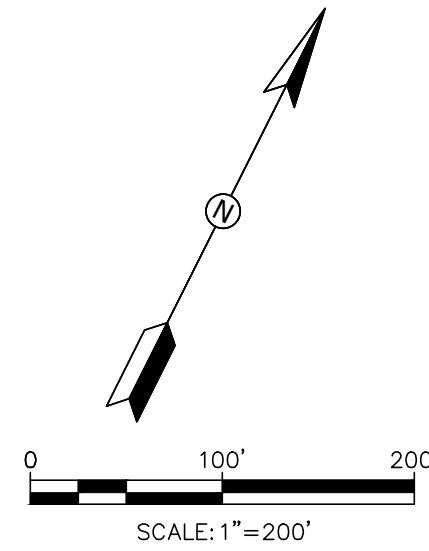
|                      |           |
|----------------------|-----------|
| BEL<br>2714 N<br>SAN |           |
| HIGH                 |           |
| TRAFFIC              |           |
| SHEET                |           |
| NO                   | DATE      |
| △                    | 1-13-2022 |
|                      |           |
|                      |           |
|                      |           |
|                      |           |



20  
 NEW  
 PH: 830-  
 1



Drawing Name: N:\Projects\BVA003 Highland Gardens 1 - 3 Civil\Construction Drawings\Unit 1A\3 DRAINAGE AREA MAP - RATIONAL PROPOSED.dwg User: brittanylester Jan 14, 2022 - 10:10m



#### LEGEND

- LIMITS OF DRAINAGE AREA
- LIMITS OF SUB-DRAINAGE AREA
- TIME OF CONCENTRATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- FLOW ARROWS
- DRAINAGE BASIN LABEL  
BASIN AREA (AC)
- SUB-DRAINAGE AREA LABEL  
SUB-DRAINAGE AREA (AC)
- INLET LABEL
- ANALYSIS POINT LABEL



**BELLA VISTA HOMES**  
2714 N LOOP 1604 E, SUITE 105  
SAN ANTONIO, TX 782332

**HIGHLAND GARDENS  
UNIT 1A**

**DRAINAGE AREA MAP - SCS EXISTING**

**SHEET**  
**11** of **17**

| NO | DATE      | ISSUES AND REVISIONS       |
|----|-----------|----------------------------|
| 1  | 1-13-2022 | UPDATED PER CON'S COMMENTS |
|    |           |                            |
|    |           |                            |
|    |           |                            |



2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351

#### Highland Gardens Unit 1A - Existing SCS Conditions Hydrology Calculations

| Point | Area (ac) | CN | T <sub>c</sub> (min) | Q <sub>2</sub> (cfs) | Q <sub>10</sub> (cfs) | Q <sub>25</sub> (cfs) | Q <sub>50</sub> (cfs) | Q <sub>100</sub> (cfs) | Location                                     |
|-------|-----------|----|----------------------|----------------------|-----------------------|-----------------------|-----------------------|------------------------|----------------------------------------------|
| EX-A0 | 1.56      | 74 | 20                   | 0.46                 | 2.22                  | 3.79                  | 4.90                  | 6.17                   | Undeveloped Highland Gardens Unit 1A, 1B & 2 |
| EX-A1 | 40.33     | 73 | 34                   | 8.49                 | 42.56                 | 73.44                 | 95.69                 | 121.16                 | Undeveloped Highland Gardens Unit 1A, 1B & 2 |

\*NOTE: EXISTING DRAINAGE AREAS WERE PREVIOUSLY APPROVED WITH HIGHLAND GARDENS UNIT 2 AS THE MASTER DRAINAGE REPORT FOR UNITS 1A, 1B, AND 2. EXISTING DRAINAGE AREAS SHOWN AND ANALYZED USING THE NRCS SCS METHOD.

#### Highland Gardens Unit 1A - Existing Rational Conditions Hydrology Calculations

| Point | Area (ac) | C    | T <sub>c</sub> (min) | Q <sub>2</sub> (cfs) | Q <sub>10</sub> (cfs) | Q <sub>25</sub> (cfs) | Q <sub>100</sub> (cfs) | Location              |
|-------|-----------|------|----------------------|----------------------|-----------------------|-----------------------|------------------------|-----------------------|
| DA-23 | 10.30     | 0.55 | 21                   | 19.71                | 30.22                 | 40.12                 | 59.72                  | Highland Grove Unit 8 |

\*NOTE: EXISTING DRAINAGE AREAS WERE PREVIOUSLY APPROVED WITH HIGHLAND GROVE UNIT 4A, 4B, AND U8 USING THE RATIONAL METHOD.

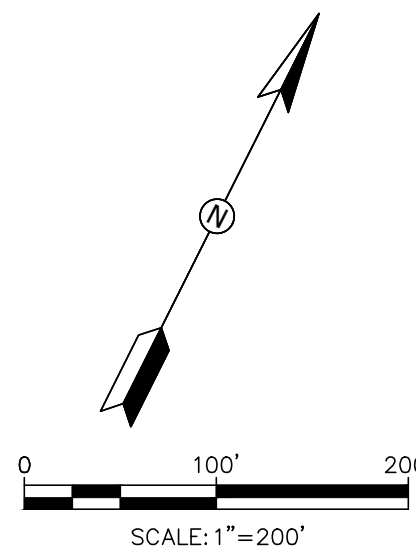
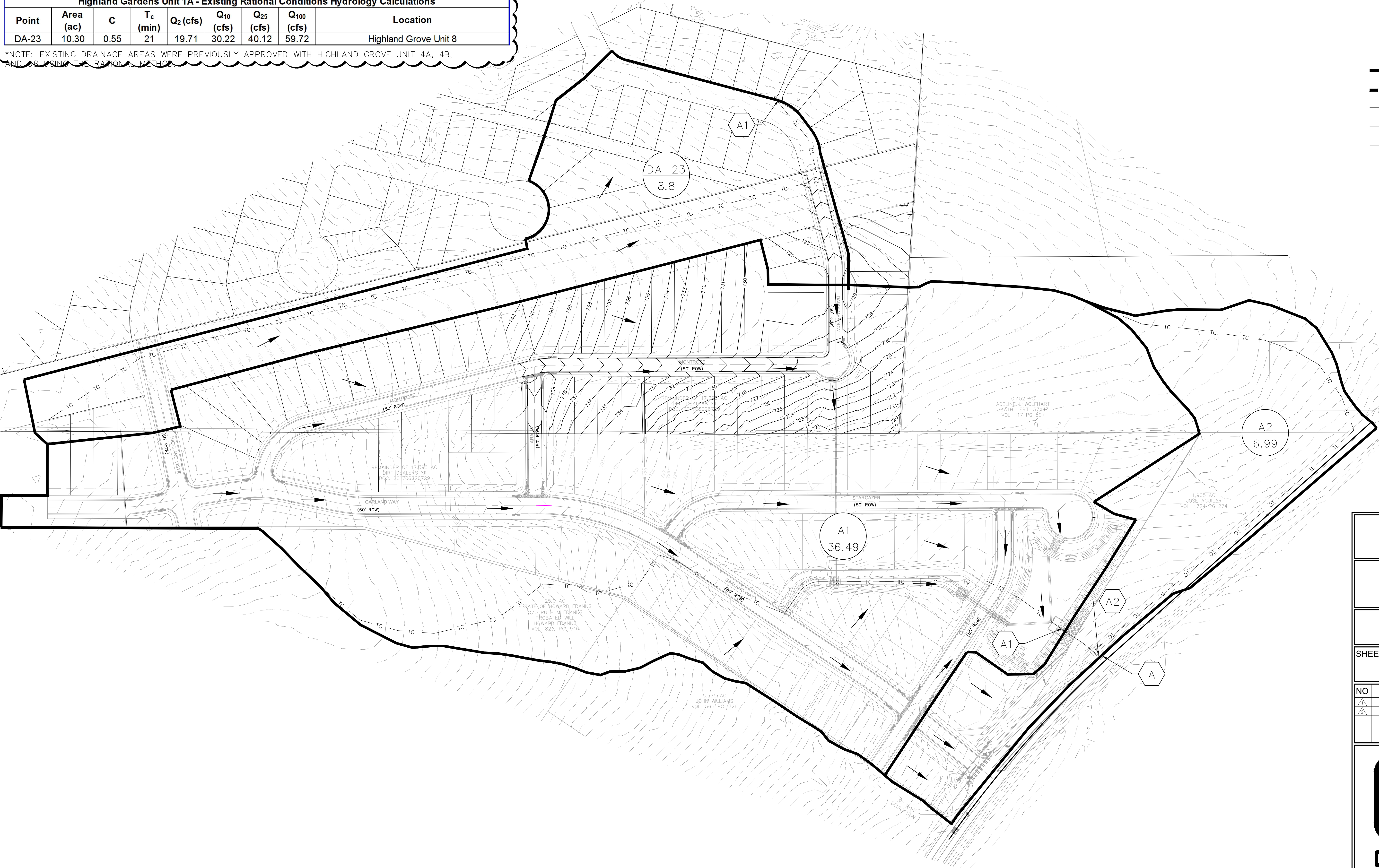


| Highland Gardens Unit 1A - Proposed SCS Conditions Hydrology Calculations |           |    |                      |                      |                       |                       |                       |                        |                                   |
|---------------------------------------------------------------------------|-----------|----|----------------------|----------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------------------|
| Point                                                                     | Area (ac) | CN | T <sub>c</sub> (min) | Q <sub>2</sub> (cfs) | Q <sub>10</sub> (cfs) | Q <sub>25</sub> (cfs) | Q <sub>50</sub> (cfs) | Q <sub>100</sub> (cfs) | Location                          |
| PRO-A1                                                                    | 36.49     | 75 | 29                   | 10.02                | 45.54                 | 77.23                 | 99.74                 | 125.37                 | Unit 2 Proposed Detention Pond    |
| PRO-A2                                                                    | 6.99      | 89 | 29                   | 5.67                 | 14.48                 | 21.08                 | 25.53                 | 30.47                  | Unit 2 Undetained Flow            |
| PRO-A                                                                     | 43.49     |    |                      | 7.28                 | 34.75                 | 63.86                 | 84.58                 | 108.07                 | Existing Culvert Crossing FM 1044 |

\*NOTE: EXISTING DRAINAGE AREAS WERE PREVIOUSLY APPROVED WITH HIGHLAND GARDENS UNIT 2 AS THE MASTER DRAINAGE REPORT FOR UNITS 1A, 1B, AND 2. EXISTING DRAINAGE AREAS SHOWN AND ANALYZED USING THE NRCS SCS METHOD.

| Highland Gardens Unit 1A - Existing Rational Conditions Hydrology Calculations |           |      |                      |                      |                       |                       |                        |
|--------------------------------------------------------------------------------|-----------|------|----------------------|----------------------|-----------------------|-----------------------|------------------------|
| Point                                                                          | Area (ac) | C    | T <sub>c</sub> (min) | Q <sub>2</sub> (cfs) | Q <sub>10</sub> (cfs) | Q <sub>25</sub> (cfs) | Q <sub>100</sub> (cfs) |
| DA-23                                                                          | 10.30     | 0.55 | 21                   | 19.71                | 30.22                 | 40.12                 | 59.72                  |

\*NOTE: EXISTING DRAINAGE AREAS WERE PREVIOUSLY APPROVED WITH HIGHLAND GROVE UNIT 4A, 4B, AND 4C USING THE RATIONAL METHOD.



### LEGEND

- LIMITS OF DRAINAGE AREA
- - - LIMITS OF SUB-DRAINAGE AREA
- TC — TC — TIME OF CONCENTRATION
- 900 — EXISTING CONTOURS
- 900 — PROPOSED CONTOURS
- ← FLOW ARROWS
- A 9.0 DRAINAGE BASIN LABEL  
BASIN AREA (AC)
- A1 2.0 SUB-DRAINAGE AREA LABEL  
SUB-DRAINAGE AREA (AC)
- A1 INLET LABEL
- A1 ANALYSIS POINT LABEL



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HIGHLAND GARDENS  
UNIT 1A

DRAINAGE AREA MAP -  
SCS PROPOSED

SHEET  
12 OF 17

| NO | DATE      | ISSUES AND REVISIONS      |
|----|-----------|---------------------------|
| 1  | 1-13-2022 | UPDATED PER COMB COMMENTS |
| 2  | 2-10-2022 | UPDATED PER COMB COMMENTS |

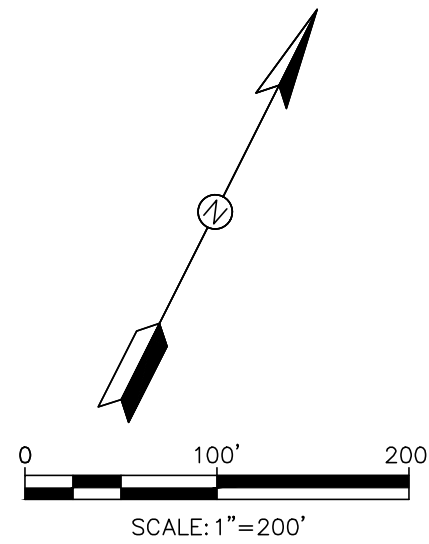


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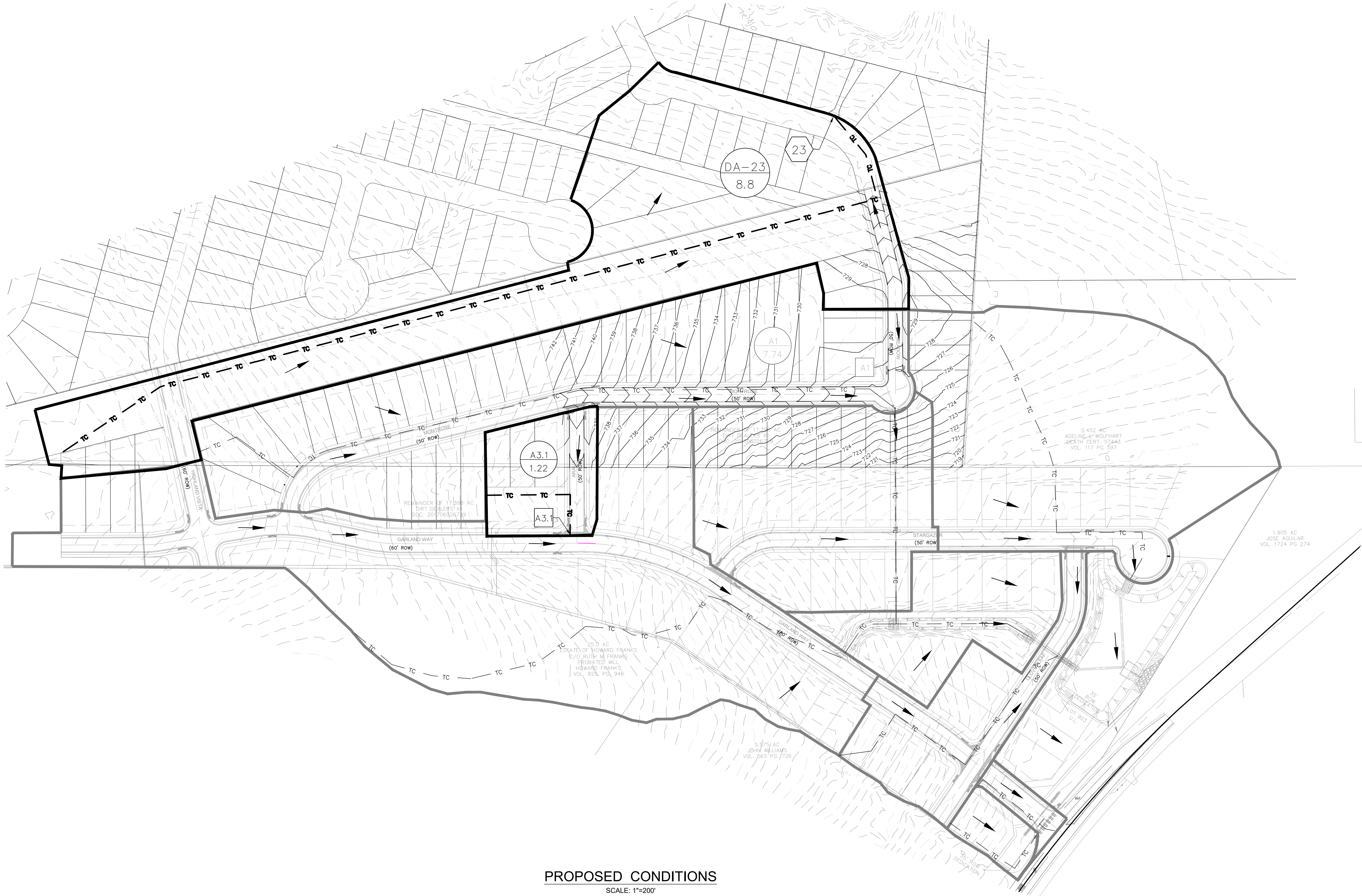
| Highland Gardens Unit 1A - Proposed Rational Conditions Hydrology Calculations |           |      |                      |                      |                       |                       |                        |                                          |
|--------------------------------------------------------------------------------|-----------|------|----------------------|----------------------|-----------------------|-----------------------|------------------------|------------------------------------------|
| Point                                                                          | Area (ac) | C    | T <sub>c</sub> (min) | Q <sub>2</sub> (cfs) | Q <sub>10</sub> (cfs) | Q <sub>25</sub> (cfs) | Q <sub>100</sub> (cfs) | Location                                 |
| A1                                                                             | 7.74      | 0.75 | 30.56                | 16.95                | 21.23                 | 27.40                 | 40.22                  | Montrose Curb Inlet & Storm Drain Line A |
| A3.1                                                                           | 1.22      | 0.75 | 20.21                | 2.42                 | 4.17                  | 5.36                  | 7.87                   | Aralia Ln Street Capacity                |
| DA-23                                                                          | 8.80      | 0.46 | 21                   | 14.18                | 21.74                 | 28.85                 | 42.95                  | Highland Grove Unit 8                    |

\*NOTE: THE RATIONAL ANALYSIS FOR DRAINAGE AREA 11 & 12 IS PART OF THE HIGHLAND GARDENS UNIT 4A MASTER DRAINAGE PLAN AND REPORT. THE RATIONAL ANALYSIS FOR DRAINAGE AREAS A1 IS PART OF THE HIGHLAND GARDENS UNIT 2 DRAINAGE REPORT.



#### LEGEND

- LIMITS OF DRAINAGE AREA
- LIMITS OF SUB-DRAINAGE AREA
- TIME OF CONCENTRATION
- EXISTING CONTOURS
- PROPOSED CONTOURS
- FLOW ARROWS
- DRAINAGE BASIN LABEL
- BASIN AREA (AC)
- SUB-DRAINAGE AREA LABEL
- SUB-DRAINAGE AREA (AC)
- INLET LABEL
- ANALYSIS POINT LABEL



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HIGHLAND GARDENS  
UNIT 1A

DRAINAGE AREA MAP -  
RATIONAL PROPOSED

SHEET  
13 OF 17

| NO | DATE      | ISSUES AND REVISIONS      |
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PROPOSED CONDITIONS  
SCALE: 1"=200'

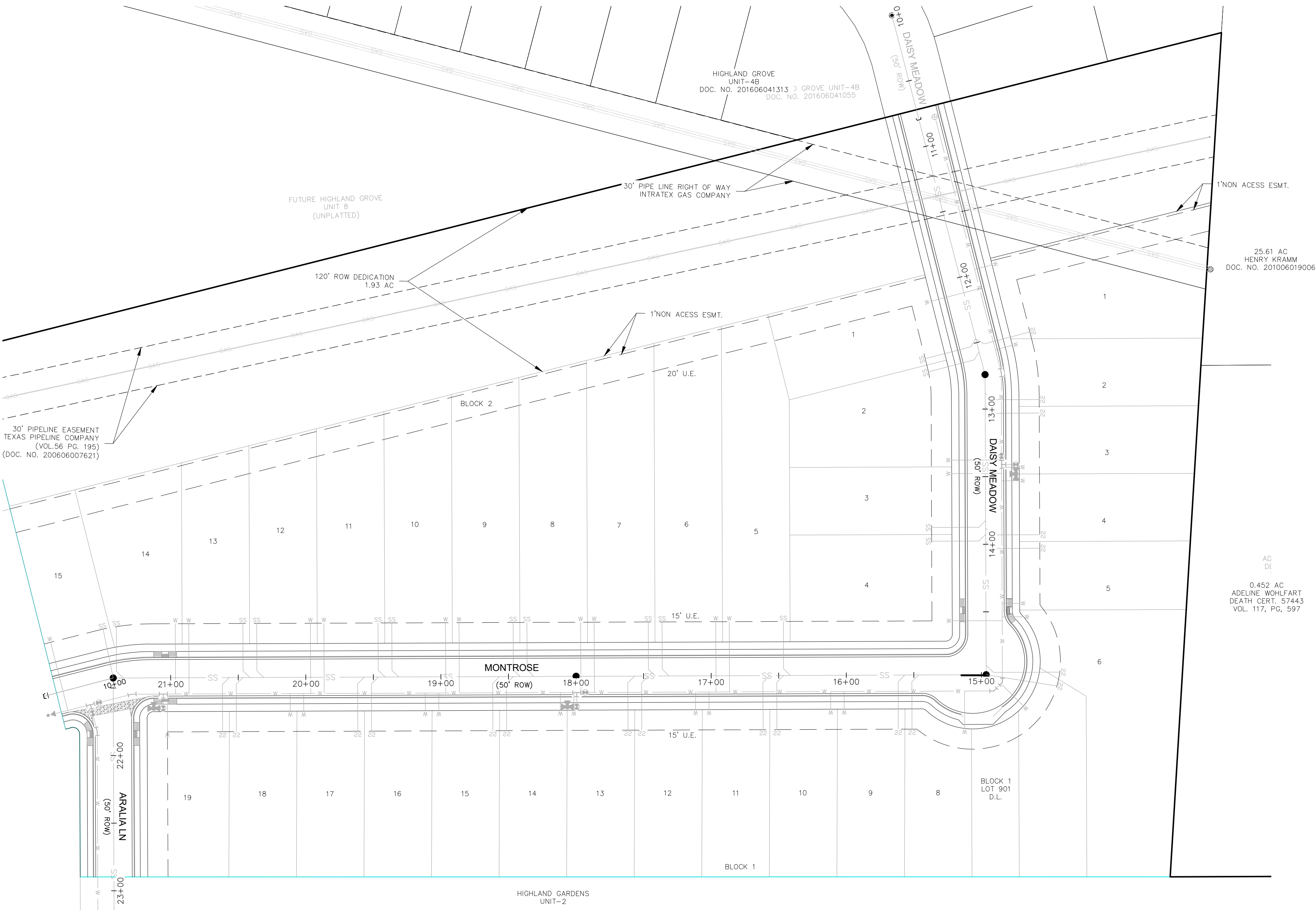


### Drawing



CONSTRUCTION NOTES:

- WHERE WATER LINES AND NEW SEWER LINES 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).
- WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER/SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
- WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
- ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(i). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
- FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
- METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COSTS.
- CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
- ALL UTILITIES SHALL BE CONSTRUCTED PRIOR TO STREETS.
- ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.
- NO VALVES, FIRE HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
- ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
- THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5- FEET IN DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.



NOTE:  
ALL SANITARY SEWER MANHOLES, GRAVITY MAIN, AND  
SERVICE LATERALS ARE PROPOSED TO BE CONSTRUCTED  
WITH HIGHLAND GARDENS SUBDIVISION UNIT 2.

CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

|                                |              |
|--------------------------------|--------------|
| New Braunfels Utilities        | 830-629-8400 |
| Spectrum Cable                 | 830-625-3408 |
| Centerpoint Gas                | 830-643-6434 |
| Robert Sanders                 | 830-643-6903 |
| Damaged Line                   | 868-876-5786 |
| AT&T Telephone                 | 830-303-1333 |
| Erick White PM                 | 210-283-1706 |
| Scott McBrearty (Construction) | 210-658-4866 |
| Texas One Call                 | 830-545-6005 |

C.P.E. LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

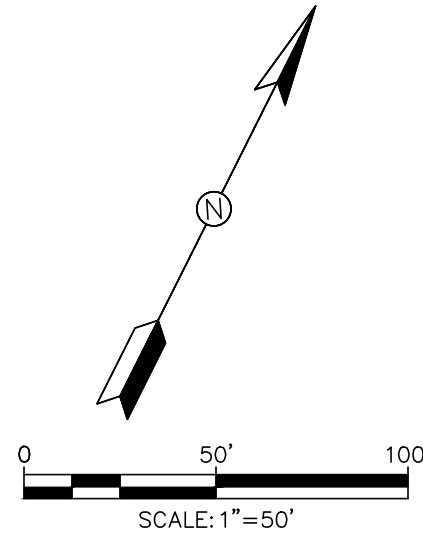
TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

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

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



LEGEND

- |    |                                  |
|----|----------------------------------|
| SS | NEW SANITARY SEWER               |
| ●  | NEW MANHOLE                      |
| —  | NEW SEWER LATERAL                |
| —  | NEW WATER SERVICE                |
| —  | NEW SINGLE METERED WATER SERVICE |
| ■  | NEW FIRE HYDRANT                 |



**BELLA VISTA HOMES**  
2714 N LOOP 1604 E, SUITE 105  
SAN ANTONIO, TX 782332

**HIGHLAND GARDENS  
UNIT 1A**

**OVERALL UTILITY PLAN**

SHEET  
**15** OF **17**

| NO | DATE      | ISSUES AND REVISIONS      |
|----|-----------|---------------------------|
| 1  | 1-13-2022 | UPDATED PER COMB COMMENTS |
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1. OBTAIN CITY APPROVED SITE PREPARATION PLANS, AND TPDES PERMIT (NOT A COPY OF THE TPDES APPLICATION TO TCEQ), IF APPLICABLE.
2. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
3. BEGIN DEMOLITION ACTIVITIES, IF APPLICABLE.
4. BEGIN SITE CLEARING AND GRADING.
5. RESTORE AND REVEGETATE ALL DISTURBED AREAS NOT UNDER IMPERMEABLE IMPROVEMENTS.
6. COMPLETE ANY REMAINING "PUNCH LIST" ITEMS.
7. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROLS AFTER PERMANENT STABILIZATION IS AT LEAST 70% EVENLY ESTABLISHED. RYE IS NOT ACCEPTED.

1. CURLEX BLANKET (I) (4' MIN WIDTH) OR ENGINEER APPROVED EQUAL
2. CURLEX MUST BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
3. MAX SLOPE FOR CURLEX (I) < 2H : 1V

PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.

SUBSTANTIAL GRADING IS PROPOSED WITH THIS UNIT. PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 13.2(N), STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE TIME.

1. LIMITS OF CONSTRUCTION AND OTHER EROSION CONTROL IMPROVEMENTS SHOWN ON THE ATTACHED PROPERTY ARE SHOWN FOR GRAPHICAL PURPOSE ONLY. IF NEAR PROPERTY LINE, THE INTENT IS TO BE PLACED NEAR THE PROPERTY LINE, NOT ON THE ADJACENT PROPERTY.
2. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
3. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
4. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED IN THE SWPPP DOCUMENTS AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
5. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
6. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITION AT ALL TIMES.
7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY PERMANENT COVER SUCH AS TREES, GRASS, OR CONCRETE, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COME WITH THE DISTURBANCE OF UP-GRADIENT AREAS.
10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED, BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPO REQUIREMENTS.
11. UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL EROSION CONTROL MEASURES ARE REMOVED, SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.
12. STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME. SEE THE NEW BRAUNFELS EROSION AND EROSION CONTROL DESIGN MANUAL, SEC. 12.2(N).

**MATERIALS:**

**HYDRAULIC MULCHES:** WOOD FIBER MULCH CAN BE APPLIED ALONE OR AS A COMPONENT OF HYDRAULIC MATRICES. WOOD FIBER APPLIED ALONE IS TYPICALLY APPLIED AT THE RATE OF 2,000 TO 4,000 LB/ACRE. WOOD FIBER MULCH IS MANUFACTURED FROM WOOD OR WOOD WASTE FROM LUMBER MILLS OR FROM URBAN SOURCES.

**HYDRAULIC MATRICES:** HYDRAULIC MATRICES INCLUDE A MIXTURE OF WOOD FIBER AND ACRYLIC POLYMER OR OTHER TACKIFIER AS BINDER. APPLIED AS A LIQUID SLURRY USING A HYDRAULIC APPLICATION MACHINE (I.E., HYDRO SEEDER) AT THE FOLLOWING MINIMUM RATES: 1.0 TO 2.0 TONS PER ACRE. THE TACKIFIER SHOULD BE APPLIED AT A MINIMUM OF THE TARGET AREA: 2,000 TO 4,000 LB/ACRE WOOD FIBER MULCH, AND 5 TO 10% (BY WEIGHT) OF TACKIFIER (ACRYLIC COPOLYMER, GUAR, PSYLLIUM, ETC.).

BONDED FIBER MATR BONDED FIBER MATRIX (BFM) IS A HYDRAULICALLY APPLIED SYSTEM OF FIBERS AND ADHESIVES THAT WHEN DRYING FORMS AN EROSION RESISTANT BLANKET THAT PROMOTES VEGETATION, AND PREVENTS SOIL EROSION. BFM'S ARE AVAILABLE IN TWO TYPES: 1) BONDING TO EXISTING SOIL, 2) BONDING TO NEW SOIL. MANUFACTURER'S RECOMMENDATION. A BIODEGRADABLE BFM IS COMPOSED OF MATERIALS THAT ARE 100% BIODEGRADABLE. THE BINDER IN THE BFM SHOULD ALSO BE BIODEGRADABLE AND SHOULD NOT DISSOLVE OR DISPERSE UPON RE-WETTING. TYPICALLY, BFM'S ARE APPLIED TO SOILS THAT ARE NOT SATURATED WITH WATER. DURING THE FIRST 12 TO 24 HOURS AFTER APPLICATION, THE BFM SHOULD BE KEPT MOIST. IMMEDIATELY AFTER RAINFALL IF THE SOIL IS SATURATED, DEPENDING ON THE PRODUCT, BFM'S TYPICALLY REQUIRE 12 TO 24 HOURS TO DRY AND BECOME EFFECTIVE.

1. PRIOR TO APPLICATION, ROUGHEN EMBANKMENT AND FILL AREAS BY ROLLING WITH A CRIMPING OR PUNCHING TYPE ROLLER OR BY TRACK WALKING. TRACK WALKING SHALL ONLY BE USED WHERE OTHER METHODS ARE IMPRACTICAL.
2. TO BE EFFECTIVE, HYDRAULIC MATRICES REQUIRE 24 HOURS TO DRY BEFORE RAINFALL OCCURS.
3. AVOID MULCH OVER SPRAY ONTO ROADS, SIDEWALKS, DRAINAGE CHANNELS, EXISTING VEGETATION, ETC.
4. 4" OF TOP SOIL SHALL BE PLACED.

1. MULCHED AREAS SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.
2. AREAS DAMAGED BY STORMS OR NORMAL CONSTRUCTION ACTIVITIES SHOULD BE REGRADED AND HYDRAULIC MULCH REAPPLIED AS SOON AS PRACTICAL.

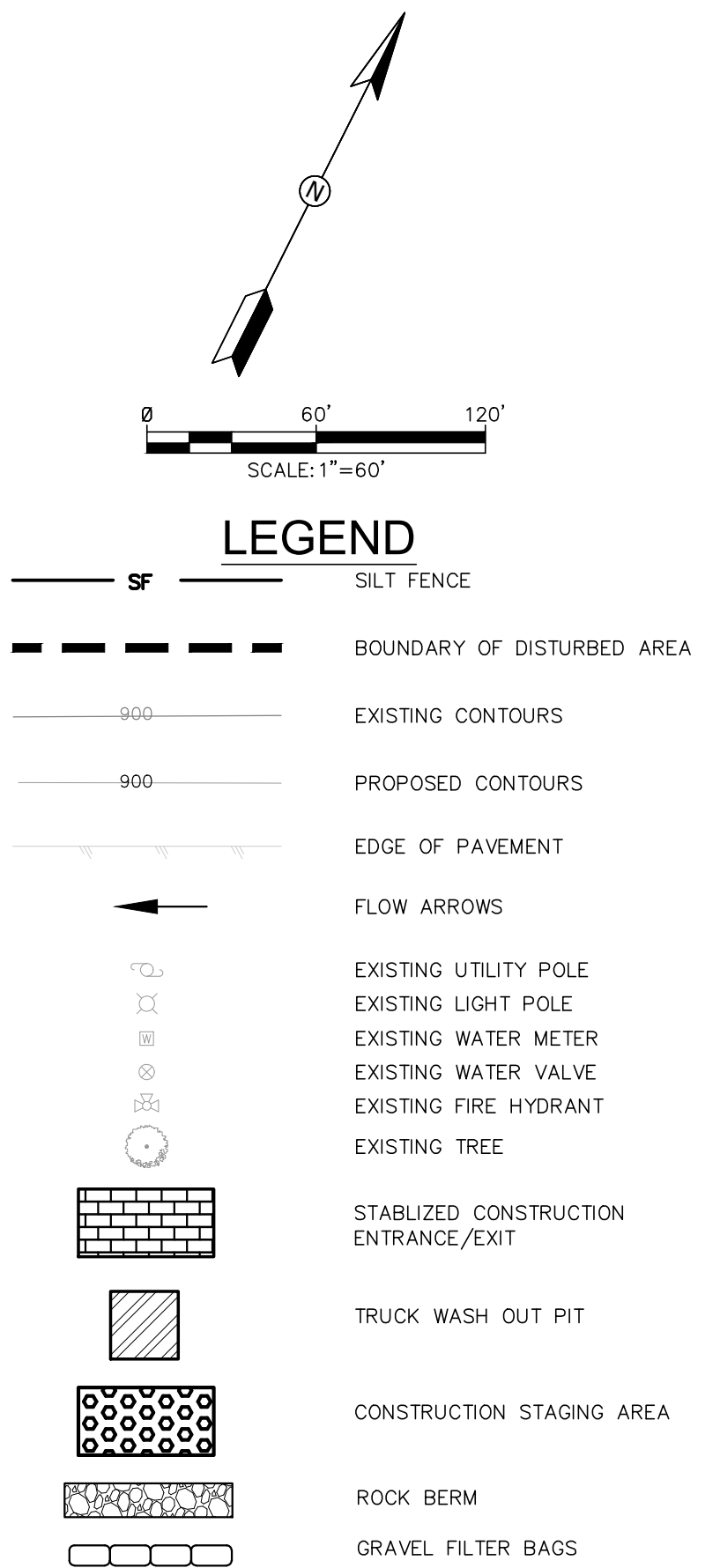
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| AT&T Telephone                 | 830-303-1333 |
| Erick White PM                 | 210-283-1706 |
| Scott McBrearty (Construction) | 210-658-4886 |
| Texas One Call                 | 830-545-6005 |

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

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CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THIS DESIGN AND AVAILABLE GEOTECHNICAL INFORMATION FOR ANY ANOMALIES AT THE WORKING SITE WITH THE PROJECT OWNER. THERE IS NO ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTORS' IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL BE IN ACCORDANCE WITH THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND ABOUT TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA REGULATIONS AND THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND ABOUT TRENCH EXCAVATIONS.

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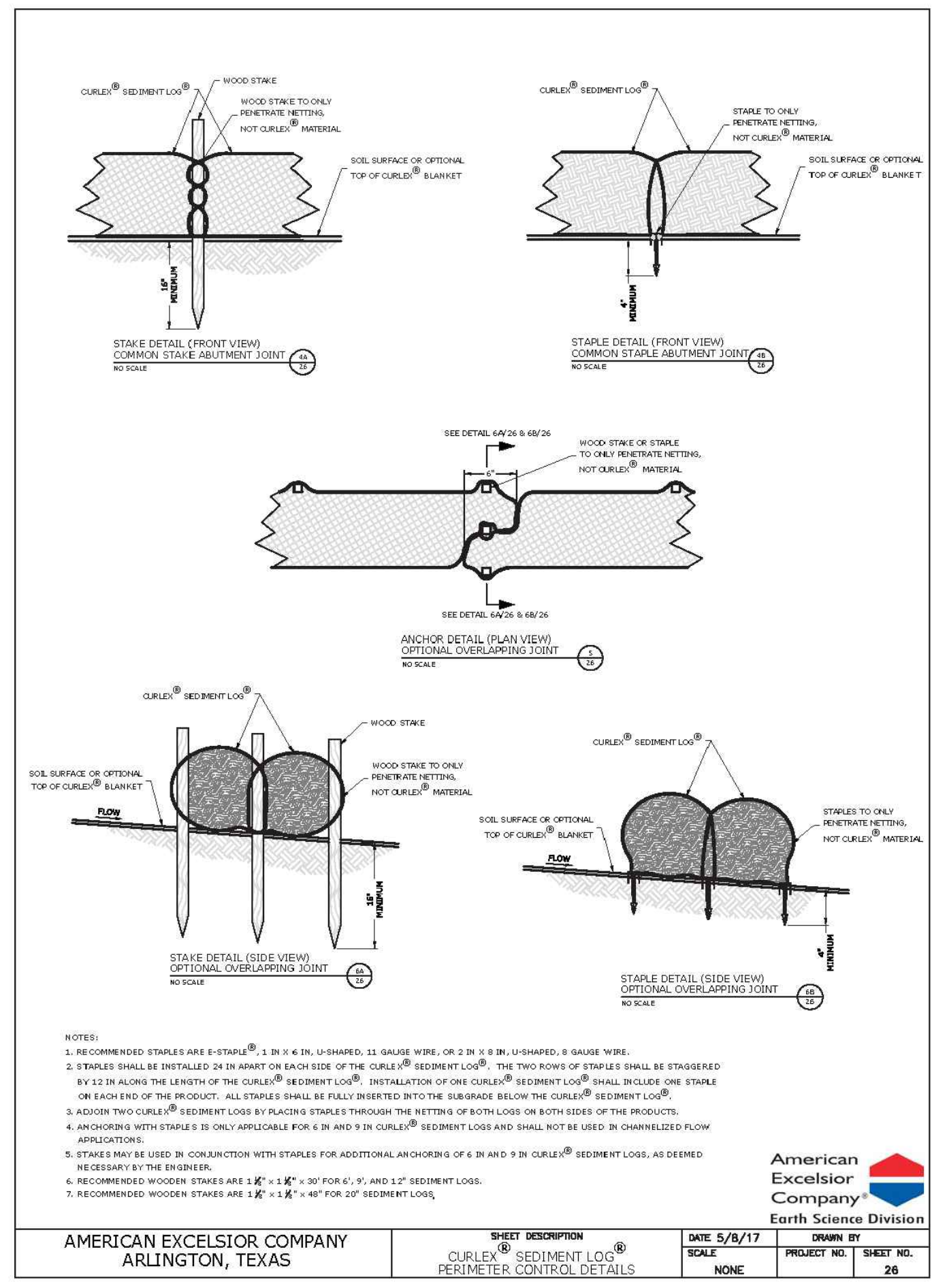
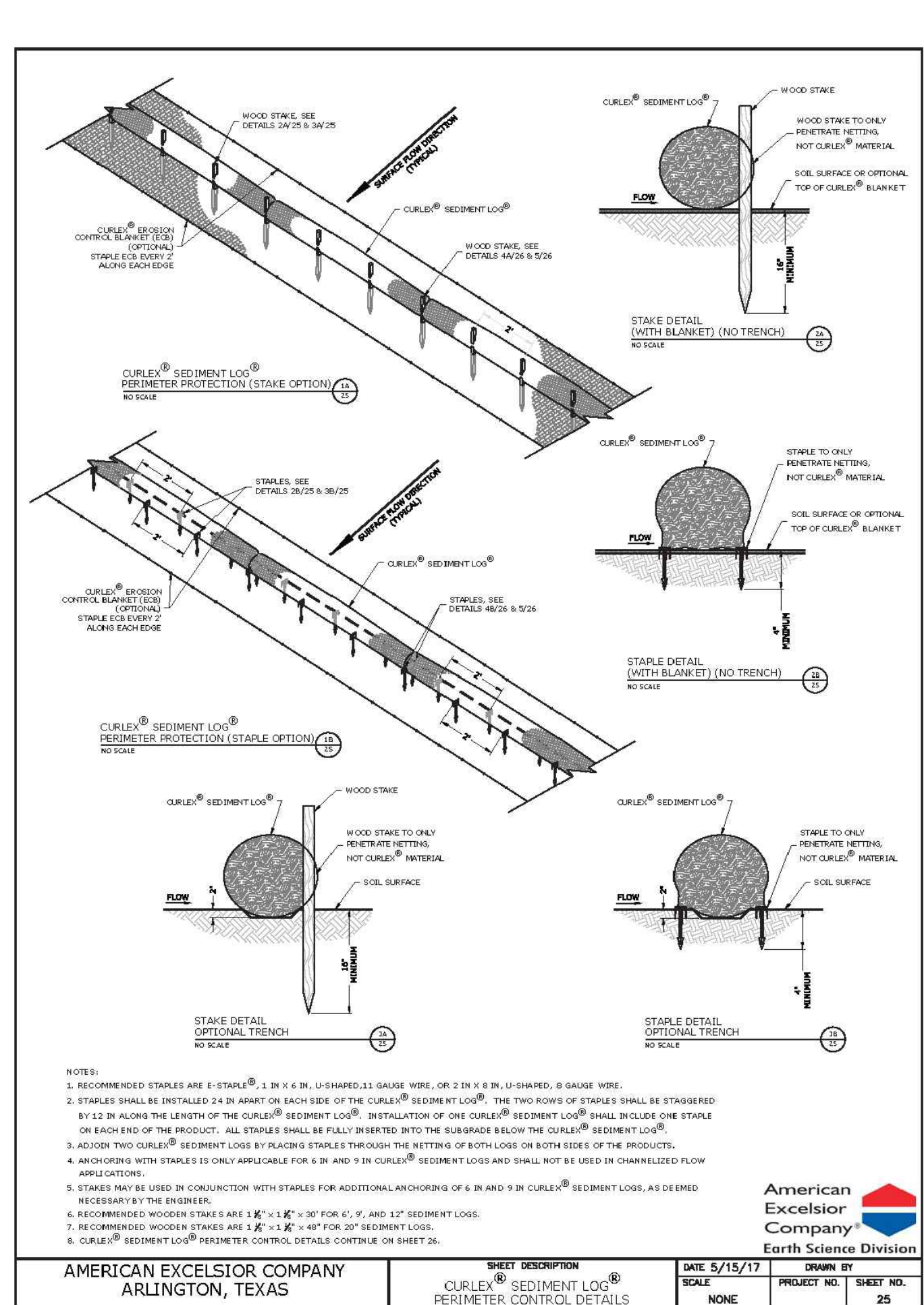
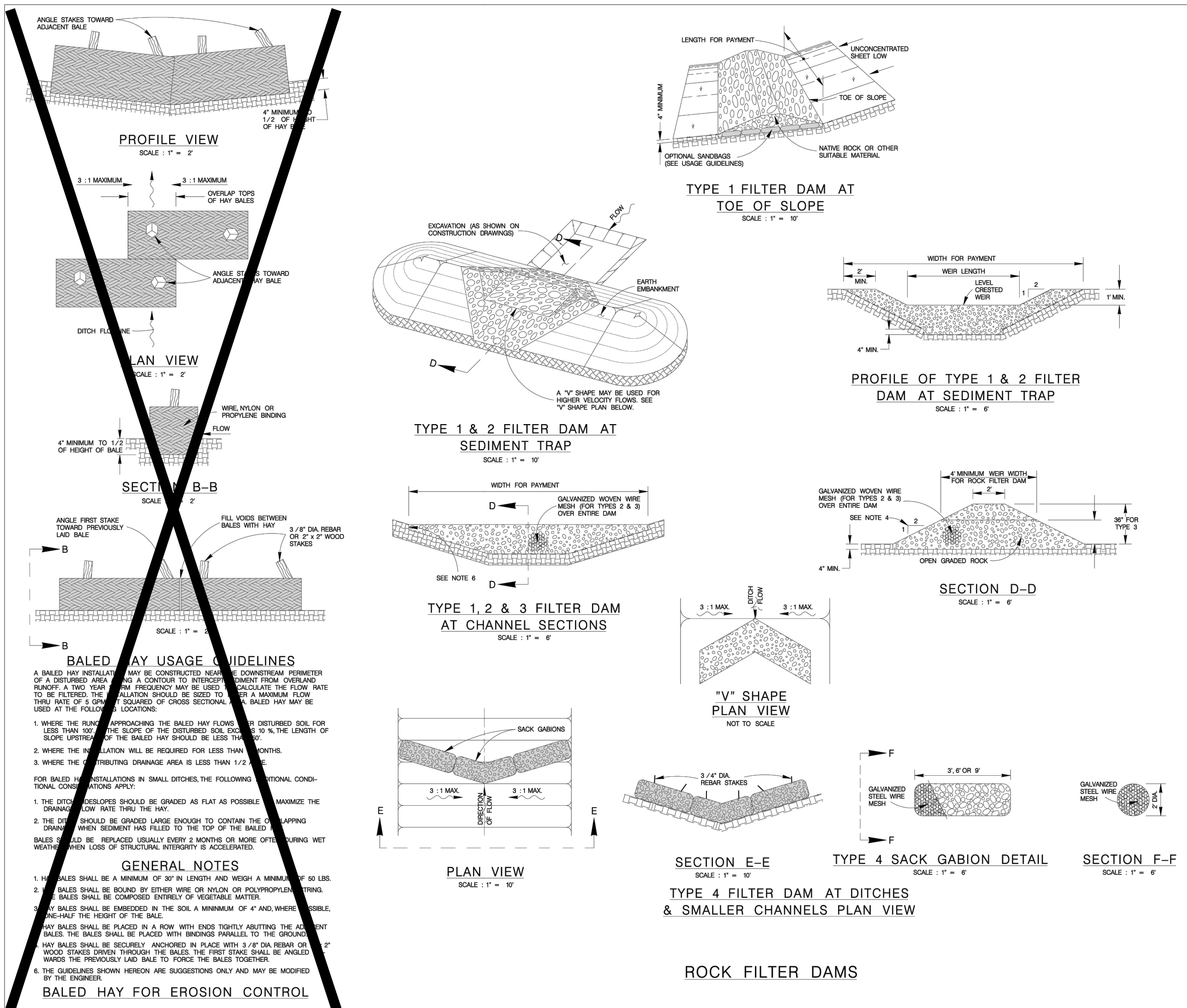
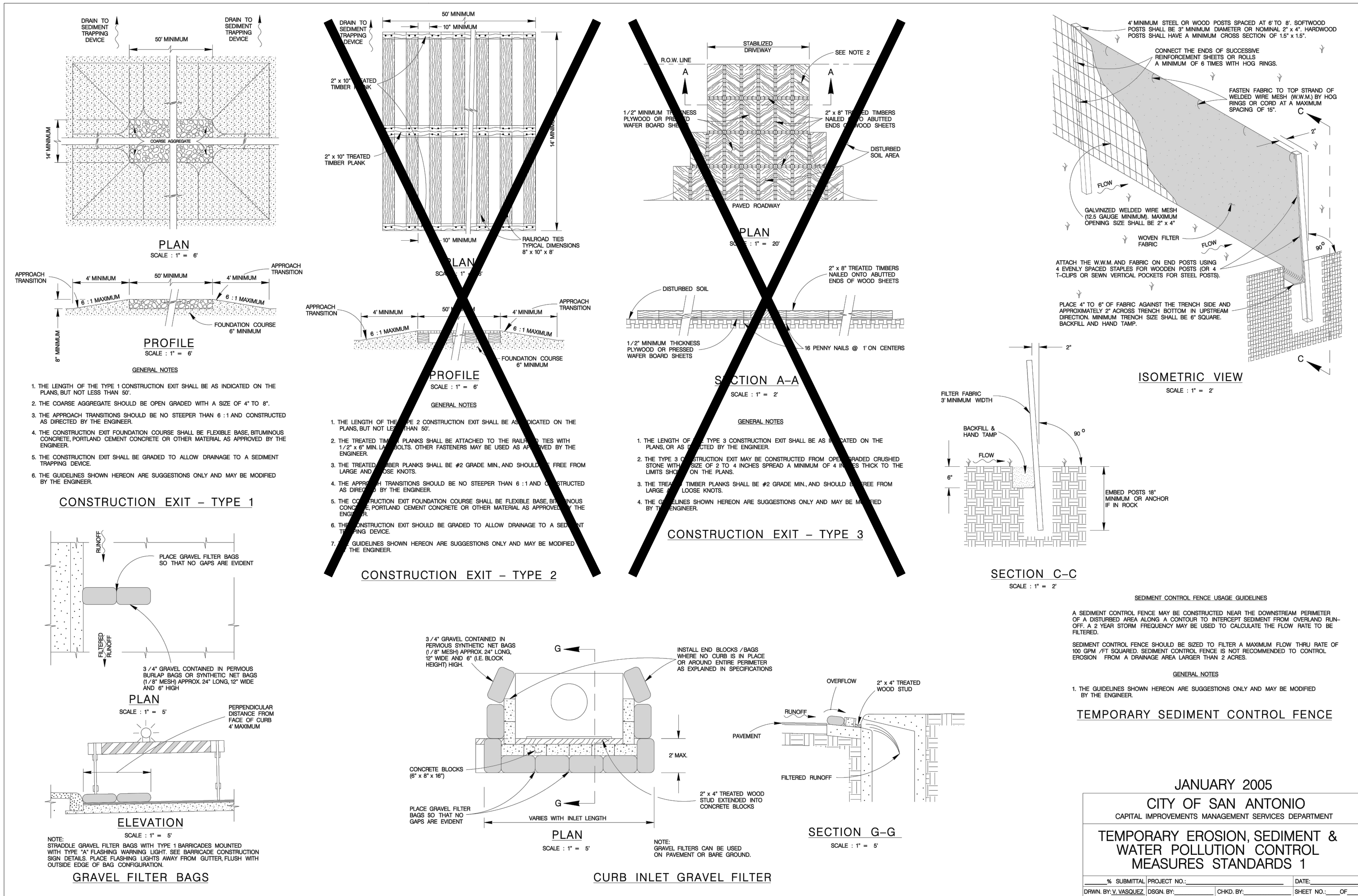
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| 1  | 1-13-2022 | UPDATED PER CONB COMMENTS |
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|    |           |                           |

The logo for INK CIVIL. It features the word "INK" in a large, bold, black sans-serif font, enclosed within a thick black rounded rectangular border. Below this, the word "CIVIL" is written in a smaller, black, spaced-out sans-serif font.

2021 W SH46, STE 105  
NEW BRAUNFELS, TX. 78132  
PH: 830-358-7127 ink-civil.com  
TBPE FIRM F-13351



Drawing Name: N:\Projects\BVA003 Highland Gardens Unit 1A\7 EROSION CONTROL DETAILS.dwg User: billyj@esd.com Jan 14, 2022 - 10:45am



STATE OF TEXAS

JAMES INGALLS

107416

LICENSED PROFESSIONAL ENGINEER

1-15-22

BELLA VISTA HOMES

2714 N LOOP 1604 E, SUITE 105

SAN ANTONIO, TX 782332

HIGHLAND GARDENS

UNIT 1A

EROSION CONTROL DETAILS

SHEET

17 OF 17

| NO | DATE      | ISSUES AND REVISIONS       |
|----|-----------|----------------------------|
| 1  | 1-13-2022 | UPDATED PER CON'S COMMENTS |

INK CIVIL

2021 W SH46, STE 105

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