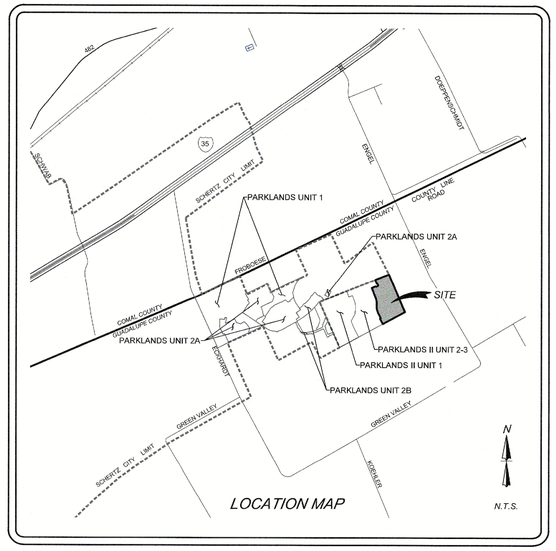
THE PARKLANDS II SUBDIVISION - UNIT 4

SCHERTZ, TEXAS

STREET, DRAINAGE, WATER, SANITARY SEWER, AND UTILITY IMPROVEMENTS



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STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

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AS SHOWN	1/3/2024	TDM	WF

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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

GENERAL NOTES

1. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER 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.
2. CONTRACTOR SHALL NOTIFY THE ENGINEER AND ALL RESPECTIVE GOVERNMENTAL OR UTILITY AGENCIES AFFECTED BY CONSTRUCTION 72 HOURS PRIOR TO STARTING CONSTRUCTION. ANY TIE-IN SHALL BE COORDINATED BY THE CONTRACTOR WITH THE PUBLIC WORKS DEPARTMENT, AT LEAST 48 HOURS IN ADVANCE.
3. CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY VERTICAL AND HORIZONTAL ALIGNMENT.
4. ANY DISCREPANCY OR CONFLICT WITHIN THE DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE CITY. DISCREPANCIES OR CONFLICTS NOT BROUGHT TO THE ENGINEERS ATTENTION AND CLARIFIED DURING BIDDING OF THE PROJECT WILL BE DEEMED TO HAVE BEEN BID OR PROPOSED IN THE MORE COSTLY MANNER, AND THE BETTER QUALITY OR GREATER QUANTITY OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH ENGINEERS INTERPRETATION. ALL ITEMS, WORK, AND IMPROVEMENTS SHOWN OR INDICATED IN THE CONSTRUCTION DOCUMENTS SHALL BE COMPLETED FOR THE PRICES BID, WHETHER OR NOT A SEPARATE PAY ITEM IS INCLUDED IN THE CONTRACT.
5. THE CONTRACTOR SHALL MAINTAIN "AS-BUILT" DRAWINGS THROUGH THE COURSE OF CONSTRUCTION AND SHALL SUBMIT SAME TO THE ENGINEER FOR APPROVAL PRIOR TO FINAL ACCEPTANCE OF THE WORK BY OWNER.
6. THE CONTRACTOR WILL SELECT, EMPLOY, AND PAY FOR SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM INSPECTION AND TESTING IDENTIFIED IN THE PUBLIC WORKS TECHNICAL SPECIFICATION SECTION 01452. EMPLOYMENT OF A TESTING LABORATORY BY THE CONTRACTOR SHALL NOT RELIEVE CONTRACTOR OF ITS OBLIGATION TO PERFORM WORK IN ACCORDANCE WITH REQUIREMENTS OF CONTRACT DOCUMENTS. COPIES OF REPORTS TO BE SUBMITTED TO THE CITY FOR REVIEW.
7. THE CONTRACTOR SHALL FURNISH ALL ASSISTANCE REQUIRED OF HIM BY ALL INSPECTORS IN OBTAINING SAMPLES AT THE EXPENSE OF THE CONTRACTOR.
8. IF IN THE OPINION OF THE INSPECTOR, BASED ON TESTING SERVICE REPORTS AND INSPECTION, MATERIALS, COMPACTION OR ANY OTHER SPECIFICATIONS ARE BELOW THE SPECIFIED REQUIREMENTS THE CONTRACTOR SHALL CORRECT THE DEFICIENCY AND RE-TEST TO OBTAIN THE SPECIFIED PARAMETERS AT NO ADDITIONAL EXPENSE.
9. FOR ALL PAVEMENT LAYERS, A PASSING TEST RESULT IS REQUIRED WITHIN 48 HOURS OF PLACING THE NEXT LAYER OR RETESTING WILL BE REQUIRED.
10. DESIGN AND CONSTRUCTION STANDARDS REQUIRED:
    A. PROJECT CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS, & DESIGN REPORTS.
    B. CITY OF SCHERTZ PUBLIC WORKS SPECIFICATION MANUAL.
        1. PUBLIC WORKS DESIGN GUIDE.
        2. PUBLIC WORKS TECHNICAL SPECIFICATIONS.
        3. STANDARD DETAILS.
11. UNLESS OTHERWISE SHOWN IN THESE PLANS, SIDEWALKS WILL BE CONSTRUCTED CONCURRENT WITH MAIN LOT STRUCTURE.
12. ROUGH GRADING MUST BE DONE ON ALL LOTS PRIOR TO SUBDIVISION PRELIMINARY ACCEPTANCE.
13. ALL PAVEMENTS, DRIVEWAYS, SIDEWALKS, CURBING, GUTTERS, FENCES, POLES, MAILBOXES, SIGNS, TREES, SHRUBBERY, LAWNS, SOD OR OTHER PROPERTY AND SURFACE STRUCTURES ON OR ADJACENT TO THE PROJECT SITE NOT SHOWN TO BE REMOVED IN PLANS, THAT ARE DAMAGED, DISTURBED, REMOVED OR DESTROYED BY THE CONTRACTOR DURING THE WORK, SHALL BE REPLACED OR RETURNED TO A CONDITION EQUAL TO THAT BEFORE THE WORK BEGAN. CONTRACTOR TO SUPPORT AND KEEP INTACT STORM DRAINS AND INLET STRUCTURES. ANY DAMAGES INCURRED WILL BE AT CONTRACTOR'S EXPENSE.

SCHERTZ COMMUNITY★SERVICE★OPPORTUNITY

GENERAL NOTES

PUBLIC WORKS CONSTRUCTION SPECIFICATIONS

ENGINEERING AND PUBLIC WORKS | SCALE: N.T.S. | DESIGN BY: ENG | DRAWN BY: BCP | DATE: 7/1/19 | SHEET NO.: 1 of 6

TREES & VEGETATION

30. THE CONTRACTOR SHALL VERIFY WHICH TREES ARE TO BE SAVED AND PROTECTED PRIOR TO COMMENCING CONSTRUCTION. DURABLE FENCE PROTECTION BARRIERS SHALL BE INSTALLED AROUND ALL TREES TO BE SAVED WITH FENCE PLACEMENT A MINIMUM OF 10 FEET FROM TREE CANOPY OR THE DRIP LINE, WHICHEVER IS GREATER.
31. THE CONTRACTOR SHALL NOT DISTURB AREAS AROUND EXISTING TREES TO BE SAVED.
32. THE CONTRACTOR SHALL PROTECT EXISTING GRASS, LANDSCAPING AND TREES NOT IN DIRECT CONFLICT WITH PROPOSED IMPROVEMENTS DURING CONSTRUCTION. GRASSED AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR WITH TOPSOIL AND SODDED.
33. THE CONTRACTOR SHALL REMOVE ALL VEGETATION, TREES, STUMPS, GRASSES, ORGANIC SOIL, DEBRIS, AND DELETERIOUS MATERIALS IN CONFLICT WITH IMPROVEMENTS.
34. AFTER THE CONTRACTOR HAS REMOVED MATERIALS AS DESCRIBED ABOVE, HE SHALL STRIP SUITABLE TOPSOIL AND STOCKPILE FOR LANDSCAPING USE.
35. THE CONTRACTOR SHALL EXERCISE EXTRA CARE TO AVOID DAMAGE TO TREES AND ORNAMENTAL SHRUBS PLANTED AND MAINTAINED BY PROPERTY OWNERS IN THE TERRACES FRONTING THEIR PROPERTY.
36. CONTRACTOR SHALL COMPENSATE OWNER FOR DAMAGE TO TREES NOT SHOWN TO BE REMOVED IN PLANS.
37. OAK TREES DAMAGED DURING CONSTRUCTION SHALL BE SEALED WITHIN SIX HOURS OF DAMAGE TO PREVENT INFECTION BY OAK WILT.

NPDES

38. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), INCLUDING COMPLYING WITH ALL APPLICABLE REGULATIONS RELATED TO NPDES & TPDES, AND SUBMITTING REQUIRED NOTIFICATION OF INTENT AND TERMINATION. THIS IS TO BE PAID FOR UNDER "STORM WATER POLLUTION PREVENTION PLAN" ITEM.
39. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SITE CONDITIONS DURING CONSTRUCTION AND UNTIL THE PROJECT IS ACCEPTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE STORMWATER POLLUTION PREVENTION PLAN, UNDERSTAND THE REQUIREMENTS FOR THE PLAN, AND SHALL BE RESPONSIBLE FOR IMPLEMENTING THE PLAN. THIS IS TO BE INCLUDED UNDER SECTION 01410 "STORM WATER POLLUTION PREVENTION PLAN". ALL FINES IMPOSED FOR NOT IMPLEMENTING OR MAINTAINING SWPPP MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SITE RESTORATION:

40. RESTORATION OF PROJECT AREA AFFECTED BY CONSTRUCTION ACTIVITIES IN PUBLIC AND PRIVATE PROPERTY, INCLUDING RIGHT-OF-WAYS AND EASEMENTS (TOPSOIL AND HYDROMULCH), PAVEMENT, DRIVEWAYS, DRAINAGE STRUCTURES, FENCES, LAWNS (TOPSOIL AND BLOCK SODDING), AND LANDSCAPING WILL BE COVERED BY SPECIFICATION AND BID ITEM "SITE RESTORATION" AND SPECIFICATION 01740.
41. PAYMENT FOR RESTORATION OF PROJECT SITE DISTURBED BY UTILITY CONSTRUCTION OPERATIONS IS ON A LINEAR FOOT.
42. MEASUREMENT WILL BE AS PROVIDED FOR CORRESPONDING UTILITY IN EACH SPECIFICATION SECTION. NO SEPARATE PAYMENT MADE FOR BRANCH PIPE, VALVES, SERVICES, YARD PIPING AND OTHER ASSOCIATED WORK FOR UTILITIES. MEASUREMENT FOR RESTORATION WITH MULTIPLE UTILITIES WITHIN THE SAME RIGHT-OF-WAY WILL BE ON A LINEAR FOOT BASIS FOR ONLY ONE UTILITY.
43. PAYMENT INCLUDES REQUIRED SITE RESTORATION WITHIN THE RIGHT-OF-WAY OR EASEMENT REGARDLESS OF SIZE OR TYPE OF PIPE, METHOD OF CONSTRUCTION, PAVED OR UNPAVED AREAS OR THICKNESS AND WIDTH OF PAVEMENT.
44. NO SEPARATE PAYMENT MADE FOR SITE RESTORATION FOR SERVICE CONNECTIONS OR YARD PIPING UNDER THIS SECTION. INCLUDE COST IN APPROPRIATE ITEM.
45. ALL DISTURBED AREAS TO BE RE-VEGETATED TO 85% OF APPROVED GRASSES ACCORDING TO THE UDC PRIOR TO THE ACCEPTANCE OF PERMIT CLOSEOUT.
46. ROUGH GRADING, INCLUDING TREE REMOVAL MUST BE DONE ON ALL LOTS PRIOR TO SUBDIVISION PRELIMINARY ACCEPTANCE.

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TPDES

TECHNICAL SPECIFICATION SECTION 01410 & 01740

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TRAFFIC

47. THE CONTRACTOR SHALL PROVIDE ACCESS FOR RESIDENCES AND BUSINESSES.
48. THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
49. THE CONTRACTOR WILL BE REQUIRED TO FURNISH BARRICADES, WARNING SIGNS, LIGHTS, FLARES, FLAGS, FLAGMEN, ETC. WHERE NECESSARY AND AS DIRECTED BY THE ENGINEER, PARTICULARLY IN THOSE AREAS OF IMMEDIATE WORK.
50. BATTERY FLASHERS SHALL BE USED AND NUMBER SHALL BE EQUAL OR GREATER THAN INDICATED ON BARRICADING STANDARDS. WHEN A CLASS I BARRICADE PANEL OR CLASS II BARRICADE IS USED, EACH SHOULD BE EQUIPPED WITH A MINIMUM OF TWO (2) LIGHTS. ALL WARNING SIGNS NOT MOUNTED ON BARRICADES SHALL HAVE ONE (1) LIGHT.
51. BATTERY FLASHERS SHALL CONFORM TO PART V, SECTION D, LIGHTING DEVICES, TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
52. CONTRACTOR RESPONSIBLE FOR SUBMITTING A TRAFFIC CONTROL PLAN, PREPARED BY A REGISTERED PROFESSIONAL ENGINEER, TO THE CITY FOR APPROVAL 5 WORKING DAYS PRIOR TO COMMENCING WORK. PLAN SHOULD FOLLOW REQUIREMENTS OF TMUTCD, LATEST EDITION.
53. ALL TRENCHING AND CUT PAVEMENT SHALL BE RESTORED SUCH THAT LOCAL ACCESS MAY BE RESUMED AS SOON AS POSSIBLE.
54. RESTRICT TOTAL LENGTH OF DISTRIBUTED MATERIALS ALONG THE ROUTE OF CONSTRUCTION TO 1,000 LINEAR FEET UNLESS OTHERWISE APPROVED IN WRITING BY PUBLIC WORKS.
55. MAINTAIN THROUGH TRAFFIC ALONG ALONG ANY PUBLIC ROADWAYS FOR THE DURATION OF THE PROJECT.
56. COORDINATE SHUT DOWN ROAD WITH CITY OF SCHERTZ 5 DAYS PRIOR TO SHUTDOWN. SEE SPEC 01555.

TxDOT NOTE:

57. NO WORK AND NO STORAGE OF MATERIALS WILL BE PERFORMED IN TxDOT RIGHT-OF-WAY, UNLESS THE APPROPRIATE DENSITIES HAVE BEEN OBTAINED.
58. ALL TxDOT REQUIRED PERMITS MUST BE OBTAINED AND PROVIDED BY THE CITY BY THE CONTRACTOR. ALL PERMITS FOR UTILITY WORK WITHIN THE TxDOT R.O.W. WILL BE OBTAINED AND PROVIDED TO THE CITY. ALL PLANS AND REQUIRED SUBMITTALS WILL BE PROVIDED BY THE CONTRACTOR AT REQUEST OF THE CITY.

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TRAFFIC

TECHNICAL SPECIFICATION SECTION 01555

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UTILITIES

14. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, C.P.S. 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.
15. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED IN THESE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO, AND FOR MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. CONTRACTOR SHALL CONTACT ANY UTILITIES ENCOUNTERED FORTY-EIGHT HOURS (48) HOURS PRIOR TO EXCAVATION OPERATION.
16. THE FOLLOWING IS A LIST OF TELEPHONE NUMBERS OF THE UTILITY LOCATORS FOR THE VARIOUS UTILITIES THAT MAY BE ENCOUNTERED:

TEXAS ONE CALL	1-800-245-4545 (1-800-DIG-TESS)
C.C.M.A.	210-658-6241
CITY PUBLIC SERVICE	1-800-545-6005
CENTERPOINT ENERGY ENTEX	(210)-659-6788
G.V.E.C.	(210)-672-2871
NEW BRAUNFELS UTILITY	(830)-629-8400
TIME WARNER CABLE	(210)-352-4472
AT&T	1-800-828-5127
TxDOT NEW BRAUNFELS	1-800-644-4773
CITY OF SCHERTZ PUBLIC WORKS DEPT	(210)-619-1800
GREEN VALLEY WATER DISTRICT	(830)-914-2330
SCHERTZ SEGUIN LOCAL GOV'T CORP	(830)-401-2409
GREEN VALLEY TELEPHONE COMPANY	(830)-885-8277
GREEN VALLEY SPECIAL UTILITY DISTRICT	(831)-914-2330

17. NO VALVES IN THE OWNER'S WATER DISTRIBUTION SYSTEM SHALL BE OPERATED BY THE CONTRACTOR WITHOUT PRIOR PERMISSION OF THE OWNER. THE CONTRACTOR SHALL NOTIFY THE OWNER WHEN A VALVE IS TO BE OPERATED AND SHALL ONLY OPERATE THE VALVE IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. COORDINATE ALL SHUTDOWN OF MAINS FOR TIE-INS WITH OWNER 72 HOURS PRIOR TO WORK BEING COMPLETED. THE CONTRACTOR SHALL INSPECT THE MATERIALS FOR DEFECTS AT THE TIME THEY ARE UNLOADED, AND ANY MATERIALS FOUND DEFECTIVE SHALL BE REMOVED FROM THE SITE. ALL WATER WORKS MATERIAL OR SCRAP OF WHATEVER NATURE REMOVED BY THE CONTRACTOR IN THE COURSE OF THE WORK SHALL REMAIN THE PROPERTY OF THE OWNER. SALVAGED MATERIALS SHALL BE DELIVERED TO AND UNLOADED AT THE CITY PUBLIC WORKS DEPARTMENT BY THE CONTRACTOR UNDER OBSERVATION OF AND AT THE DIRECTION OF THE OWNER. ITEMS TOO HEAVY TO BE HANDLED MANUALLY WILL BE UNLOADED BY EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS UNTIL THEY HAVE BEEN TURNED IN TO THE OWNER AND UNTIL A RECEIPT FOR THEM HAS BEEN ISSUED BY THE OWNER.
18. NO TIE-IN SHALL BE MADE TO THE EXISTING UTILITY SYSTEM UNTIL ALL TEST RESULTS HAVE BEEN PROVIDED TO THE CITY AND ARE VERIFIED.
19. PRIOR TO TESTING, ANY CONNECTION TO THE CITY'S WATER SUPPLY SHALL BE THROUGH AN APPROVED AND TESTED BACKFLOW DEVICE.
20. PLUG EXISTING SEWER BEFORE INSTALLING ANY NEW SEWER MAIN.
21. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT EXISTING SANITARY SEWER LATERALS AND WATER SERVICES SHOWN IN PLANS. ANY REPAIRS TO BE MADE AT CONTRACTORS EXPENSE.
22. PROVIDE BLUE PANTED "V" ETCHED IN CURB TO IDENTIFY VALVES.
    PROVIDE BLUE PANTED "X" ETCHED IN CURB TO IDENTIFY METER BOXES.
23. NEW WATER MAINS TO BE PVC C900 DR14, UNLESS OTHERWISE SHOWN IN PLANS AND APPROVED BY PUBLIC WORKS OR ENGINEERING. HYDROSTATIC TESTING WILL BE PERFORMED UNDER THE SUPERVISION OF THE CITY INSPECTOR, PER STANDARD SPECIFICATION 02515 AT 200 PSI FOR 4 HOURS.
24. CONTRACTORS SHOULD USE HTH FOR DISINFECTION OF WATER LINES (NOT CHLORINE INJECTION) UNLESS APPROVED OTHERWISE PRIOR TO ISSUANCE OF PERMIT.
25. NEW WATERLINES SHALL BE TIED INTO EXISTING WATER SYSTEM UNDER THE SUPERVISION OF CITY PERSONNEL NO LATER THAN 14 DAYS AFTER PASSING BACTERIOLOGICAL TESTS.
26. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO OVERFLOWS OR SPILLAGE OF SEWER OCCURS. SHOULD THIS OCCUR, THE CONTRACTOR SHALL:
    A. IDENTIFY THE SOURCE OF THE SPILL AND ATTEMPT TO ELIMINATE ANY ADDITIONAL SPILLAGE.
    B. NOTIFY THE CITY OF SCHERTZ PUBLIC WORKS.
    C. CONTAIN THE SPILL IN PLACE AND AVOID CONTAMINATION OF STREAMS.
    D. DISINFECT THE AREA OF THE SPILL WITH A MIXTURE OF HTH CHLORINE AND WATER.
    E. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND THE CITY OF SCHERTZ.
27. CONTRACTOR TO PROVIDE NOTICE TO RESIDENTS OF SHUTDOWN OF MAIN. CONTRACTOR TO NOTIFY RESIDENTS OF WORK WITHIN THEIR PROPERTY AND OF THE RELOCATION OF METERS. ANY COMPLAINTS BY RESIDENTS ARE TO BE PASSED IMMEDIATELY TO THE CITY INSPECTOR OR TO THE MAIN PUBLIC WORKS OFFICE. TAKE APPROPRIATE MEASURES TO PROTECT EXISTING SANITARY SEWER LATERALS SHOWN IN PLANS. ANY REPAIRS TO BE MADE AT CONTRACTORS EXPENSE.
28. ABANDONED CUSTOMER LINES SHALL BE CAPPED OR PLUGGED AT THE PROPERTY LINE.
29. ASBESTOS PIPE REMOVAL AND DISPOSAL IS THE CONTRACTORS RESPONSIBILITY.

SCHERTZ COMMUNITY★SERVICE★OPPORTUNITY

GENERAL NOTES - UTILITIES

TECHNICAL SPECIFICATION SECTION 01732

ENGINEERING AND PUBLIC WORKS | SCALE: N.T.S. | DESIGN BY: ENG | DRAWN BY: BCP | DATE: 7/1/19 | SHEET NO.: 5 of 6

CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY EXTREME CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY THE APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER".

59. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERMITTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THEM TO AVOID ANY UNAUTHORIZED CLEARING. BARRICADES AND OTHER PROTECTIVE FENCING ARE TO BE LOCATED AT THE DRIP LINE OF EXISTING NATIVE TREES OR A MINIMUM OF 10 FEET FROM TREE CANOPY OR THE DRIP LINE, WHICHEVER IS GREATER.
60. SPECIMEN AND HISTORIC TREES, CONSERVATION EASEMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING. BARRICADES ARE TO BE SET AT THE DRIP LINE OF THE TREES AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. BARBED WIRE IS NOT PERMITTED AS A PROTECTIVE BARRIER.
61. WHERE A CHANGE OF GRADE OCCURS AT THE DRIP LINE OF A SPECIMEN TREE, SILT FENCES WILL BE REQUIRED DURING CONSTRUCTION AND RETAINING WALLS MUST BE INSTALLED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
62. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL PROTECTIVE VEGETATION BARRICADES AND EROSION CONTROL STRUCTURES AND MEASURES IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK, INCLUDING PRELIMINARY GRUBBING. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY CONSTRUCTION FENCES, SYNTHETIC JUTE BALES, WATTLES, &/OR HAVE BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED, SILT FENCES, AND FLOATING TURBIDITY BARRIERS. FURTHER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES THROUGHOUT THE DURATION OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PERIODIC INSPECTION AND REMOVAL OF DEBRIS ABUTTING EROSION CONTROL DEVICES.
63. PRIOR TO THE INSTALLATION OF ANY FILL MATERIALS ON SUBJECT SITE, SILT FENCES SHALL BE INSTALLED (1) ALONG SUBJECT SITE BOUNDARY AND PROPERTY LINES, (2) AT THE EDGE OF ANY CONSERVATION EASEMENTS AND WETLANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS, (4) AROUND THE PERIMETER OF EXISTING STORM WATER TREATMENT FACILITIES, AND (5) AT ANY ADDITIONAL AREAS THAT THE CITY DEEMS NECESSARY TO BE PROTECTED FROM POTENTIAL EROSION IMPACTS DURING CONSTRUCTION. THESE CONDITIONS SHALL APPLY IN ALL INSTANCES WHERE FILL MATERIAL IS BEING INSTALLED WITHIN 25 FEET OF ANY OF THE AFOREMENTIONED LOCATIONS. WHILE THESE ITEMS REPRESENT THE MINIMUM REQUIREMENTS, THE CITY RESERVES THE RIGHT TO IMPOSE ADDITIONAL PROTECTIVE MEASURES, AS DETERMINED DURING ACTUAL SITE VISITS CONDUCTED AS PART OF THE STANDARD REVIEW OF THE SITE THROUGHOUT PROJECT CONSTRUCTION.
64. AT A MINIMUM, THE CONTRACTOR SHALL SEED AND/OR MULCH ALL DISTURBED AREAS. **85% SUFFICIENT GRASS** COVERAGE IS TO BE ESTABLISHED BEFORE PERMIT EXPIRATION.
65. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEEN BROUGHT TO THEIR PROPOSED FINAL GRADE. WITHIN SEVEN (7) DAYS OF BRINGING A SUBJECT AREA TO ITS FINAL GRADE OR INACTIVITY IN CONSTRUCTION, THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOD, AS REQUIRED. ANY PROJECT THAT IS INACTIVE FOR A PERIOD OF 30 DAYS OR MORE SHALL BE STABILIZED TO THE SATISFACTION OF THE CITY OF SCHERTZ.
66. ONCE AN AREA IS SEEDED OR SODDED, IT MUST BE MAINTAINED BY THE CONTRACTOR TO ALLOW THE GRASS TO BECOME ESTABLISHED. IF THE GRASS IS NOT ESTABLISHED WITHIN **TWO WEEKS** THE CITY MAY REQUIRE THE CONTRACTOR TO RE-SEED OR A NON-VEGETATIVE OPTION MAY BE EMPLOYED.
67. ABSOLUTELY NO BURYING OF CLEARED MATERIALS IS PERMITTED.
68. THE REMOVAL OF ALL VEGETATION AND TOPSOIL ON THE FUTURE ROADWAY, PARKING AND BUILDING LOT AREAS IS REQUIRED TO BE COMPLETED PRIOR TO THE PLACEMENT OF FILL ON THOSE AREAS. THE TOPSOIL MAY BE TEMPORARILY STOCKPILED AND USED AS TOPSOIL OVER OVER PROPOSED GREEN AREAS SUCH AS PLANT BEDS, SODDED AREAS, AND WHERE TREES ARE TO BE INSTALLED OR RELOCATED.
69. FILL MATERIAL IS TO BE PLACED IN ONE FOOT LIFTS AND COMPACTED TO THE APPROPRIATE DENSITY (95% FOR PAVED AREAS AND 95% FOR BUILDING PADS AND ALL OTHER AREAS AS PER ASTM D-698).
70. DURING SUBDIVISION DEVELOPMENT WHEN FUTURE BUILDING LOTS ARE FILLED AS PART OF THE OVERALL SUBDIVISION IMPROVEMENTS, COMPACTION TEST REPORTS MUST BE PERFORMED ON THE BUILDING LOTS AT 300 FOOT INTERVALS. THESE TESTS ARE TO BE PERFORMED IN ONE-FOOT VERTICAL INCREMENTS. THE RESULTS OF THESE TESTS ARE TO BE SUBMITTED TO THE CITY UPON COMPLETION OF THE TESTS.
71. IF ANY MUCK MATERIAL IS DISCOVERED, IT SHALL BE REQUIRED TO BE REMOVED AND REPLACED WITH A SUITABLE MATERIAL THAT IS PROPERLY BACKFILLED, COMPACTED AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
72. STOCKPILING IS NOT GENERALLY PERMITTED BY THE CITY. WHEN ALLOWED, **STOCKPILES SHALL NOT EXCEED SIX FEET IN HEIGHT** MEASURED FROM THE ORIGINAL GRADE AT A MINIMUM. STOCK PILES THAT WILL REMAIN IN PLACE IN EXCESS OF TWENTY DAYS SHOULD BE SEEDED AND MULCHED IMMEDIATELY UPON PLACEMENT OF THE FINAL LIFT.
73. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES. ADEQUATE WATERING METHODS SHOULD BE EMPLOYED TO ALLOW DAILY COVERAGE OF THE ENTIRE LIMITS OF ALL AREAS THAT DO NOT HAVE AN ESTABLISHED VEGETATIVE COVER. METHODS TO BE EMPLOYED INCLUDE, BUT ARE NOT LIMITED TO, WATER TRUCKS, PERMANENT IRRIGATION SYSTEMS, TEMPORARY SPRINKLER SYSTEMS OPERATED BY PUMPING UNITS CONNECTED TO WET RETENTION PONDS, WATER CANNONS, TEMPORARY IRRIGATION SYSTEMS MOUNTED ATOP STOCKPILE AREAS, AND OTHER METHODS AS DEEMED NECESSARY BY THE CITY.

SCHERTZ COMMUNITY★SERVICE★OPPORTUNITY

CLEARING & GRADING

TECHNICAL SPECIFICATION SECTION 01410 & 01570

ENGINEERING AND PUBLIC WORKS | SCALE: N.T.S. | DESIGN BY: ENG | DRAWN BY: BCP | DATE: 7/1/19 | SHEET NO.: 5 of 6

CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY EXTREME CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY THE APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER".

74. ALL FILL MATERIALS LOCATED BENEATH STRUCTURES AND PAVEMENT SHALL CONSIST OF CLEAN GRANULAR SAND FREE FROM ORGANICS AND SIMILAR MATERIAL THAT COULD DECOMPOSE.
75. ALL FILL TO BE PLACED IN LANDSCAPED AREAS SHALL HAVE A Ph RANGE BETWEEN 5.5 AND 6.5, BE ORGANIC IN NATURE, FREE OF ROCKS AND DEBRIS, OR MATCH NATIVE EXISTING SOILS.
76. OWNER/CONTRACTOR SHALL FILE A **"NOTICE OF INTENT"** TO USE GENERAL PERMIT FOR STORM WATER DISCHARGE FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES" WITH THE TEXAS POLLUTION DISCHARGE ELIMINATION SYSTEM IN COORDINATION WITH THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY. CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH ALL PROVISIONS OF THE GENERIC PERMIT INCLUDING BUT NOT LIMITED TO:
    A. PROVIDE SUCH EROSION AND SEDIMENT CONTROL MEASURES AS MAY BE NECESSARY TO PREVENT DISCHARGE OF POLLUTANTS FROM THE SITE FROM THE START OF CONSTRUCTION UNTIL THE FINAL GROUND COVER HAS BEEN ESTABLISHED.
    B. WORK WITH CITY INSPECTORS TO MAKE WEEKLY INSPECTIONS/REPORTS OF THE CONDITION OF EROSION AND SEDIMENT CONTROL MEASURES.
    C. WORK WITH CITY INSPECTORS TO MAKE INSPECTIONS/REPORTS OF THE CONDITION OF EROSION AND SEDIMENT CONTROL MEASURES WITHIN 24 HOURS OF EVERY RAINFALL EVENT EXCEEDING ONE-HALF INCH.
    D. MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION.
    E. ADD EROSION AND SEDIMENT CONTROL MEASURES AS SITE CONDITIONS CHANGE.
    F. REMOVE TEMPORARY EROS/ON/SEDIMENT CONTROL MEASURES AFTER SUBSTANTIAL RE-VEGETATION AND/OR PRIOR TO THE END OF THE PERMIT EXPIRATION.

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CLEARING & GRADING

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ENGINEERING AND PUBLIC WORKS | SCALE: N.T.S. | DRAWN BY: ENG | DRAWN BY: BCP | DATE: 7/1/19 | SHEET NO.: 6 of 6

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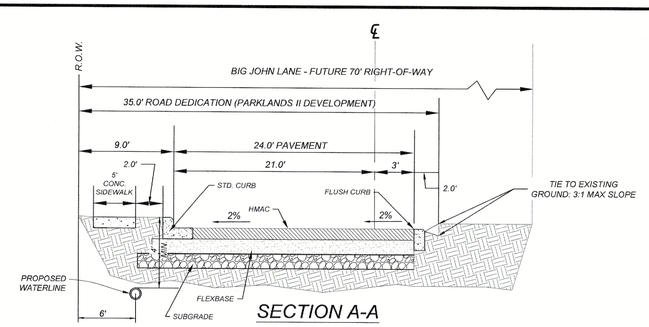
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TRENCH EXCAVATION SAFETY PROTECTION

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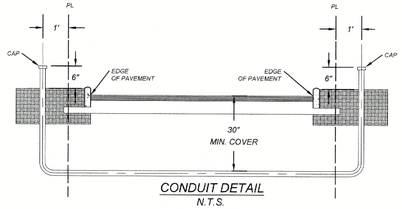
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* *WATER METER NOTE:*
ALL ELECTRIC IMPROVEMENTS INCLUDING STREET LIGHTS MUST BE PLACED A MINIMUM OF 4 FEET FROM THE METER BOX.



SECTION A-A
(NOT TO SCALE)

NOTE:
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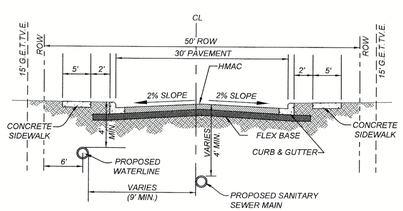


CONDUIT DETAIL
N.T.S.

**PVC SCHED. 40 OR 80 CONDUIT*
SEE PLAN SHEETS FOR SIZE LOCATION AND NUMBER OF CONDUITS

NOTE:

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- *CONTRACTOR TO CONTACT ENGINEER FOR APPROPRIATE NUMBER AND SIZE OF CONDUITS FOR TELECOMMUNICATIONS*
- *CONTRACTOR TO CONTACT ENGINEER FOR ELECTRICAL PLANS*



TYPICAL 50' ROW STREET CROSS SECTION - LOCAL ST.
N.T.S.



LOCATION MAP
N.T.S.

LEGEND

PROPOSED WATER MAIN	8"W
PROPOSED WATER SERVICE & METER BOX	W
PROPOSED DUAL WATER SERVICE & METER BOX	W W
PROPOSED WATER 1" IRRIGATION SERVICE & W/ 3/4" WATER METER & METER BOX	3/4" HYD
PROPOSED FIRE HYDRANT	
GAS, ELECTRIC, TELEPHONE, CABLE T.V., EASEMENT	G.E.T.TV.E.
VEHICULAR NON-ACCESS EASEMENT	V.N.A.E.
RIGHT OF WAY	R.O.W.
PROPOSED 8" SANITARY SEWER MAIN	8"SS
PROPOSED 8" SANITARY SEWER MANHOLE	S
PROPOSED SANITARY SEWER LATERAL	S
PROPOSED STREET LIGHT POLE (SUBJECT TO GVEC APPROVAL)	
PROPOSED TEE & WATER VALVE	
SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION	
SIDEWALK TO BE CONSTRUCTED BY DEVELOPER	
EXISTING WATER VALVE	
EXISTING FIRE HYDRANT	
EXISTING WATER MAIN	E. 8" W
EXISTING SANITARY SEWER MAIN	E. 8"SS
EXISTING SANITARY SEWER MANHOLE	S
OVERHEAD UTILITY LINE	OHU
EXISTING POWER POLE	PP

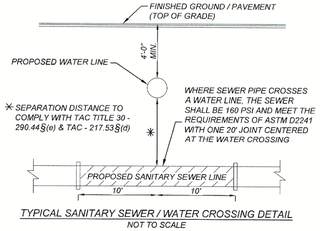
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167.89 ACRE TRACT OWNER: WESTON RANCH FOUNDATION (VOL. 2338 PG. 451 O.P.R.) ZONING - N/A (OUTSIDE CITY LIMITS)

SCALE : 1"=50'
0' 50' 150'
100'



TYPICAL SANITARY SEWER / WATER CROSSING DETAIL
NOT TO SCALE

MATCHLINE 'A' SEE SHEET 1.1

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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN
FOR
PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm# F-1480
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 1.1 OVERALL UTILITY PLAN

SHEET TITLE: *OVERALL UTILITY PLAN*

SHEET NUMBER: 1.0

Date: May 07, 2024, 11:04am User ID: dgonzalez
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By: DGONZALEZ

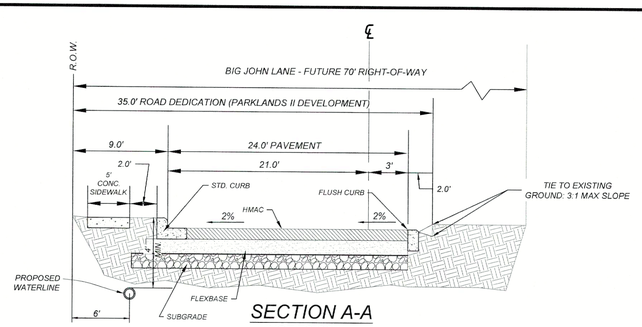
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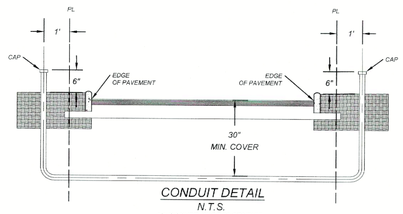
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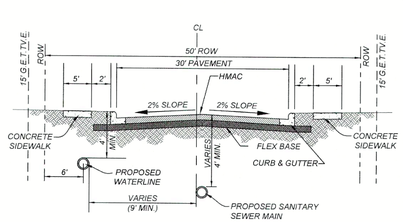


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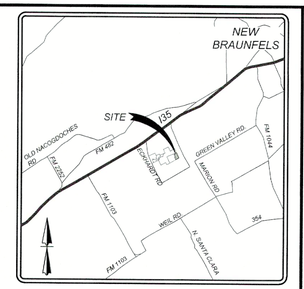
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TYPICAL 50' ROW STREET CROSS SECTION - LOCAL ST.
N.T.S.



LOCATION MAP
N.T.S.

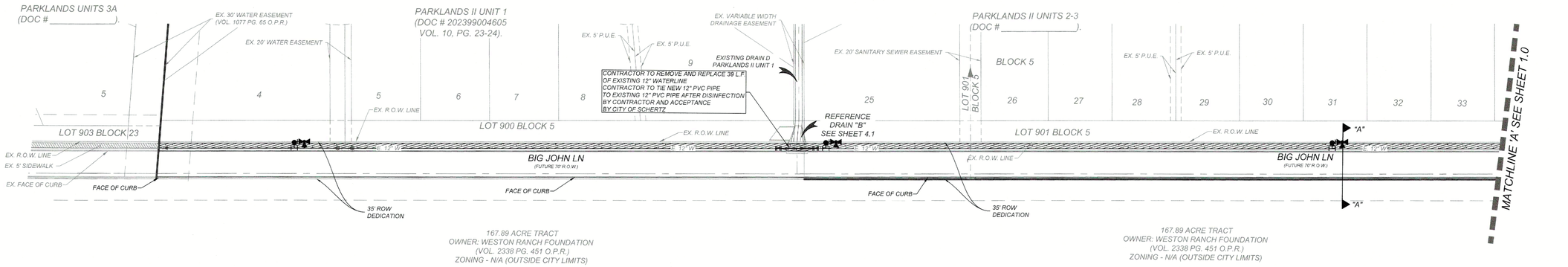


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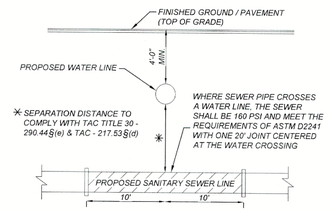
LEGEND

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PROPOSED WATER SERVICE & METER BOX	W
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OVERHEAD UTILITY LINE	OHU
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(VOL. 2338 PG. 451 O.P.R.)
ZONING - N/A (OUTSIDE CITY LIMITS)

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AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER:	DRAWING NAME:
23008197A	1.1 OVERALL UTILITY PLAN

SHEET TITLE:
OVERALL UTILITY PLAN

SHEET NUMBER:
1.1

Date: May 07, 2024, 11:05am User ID: dgonzalez
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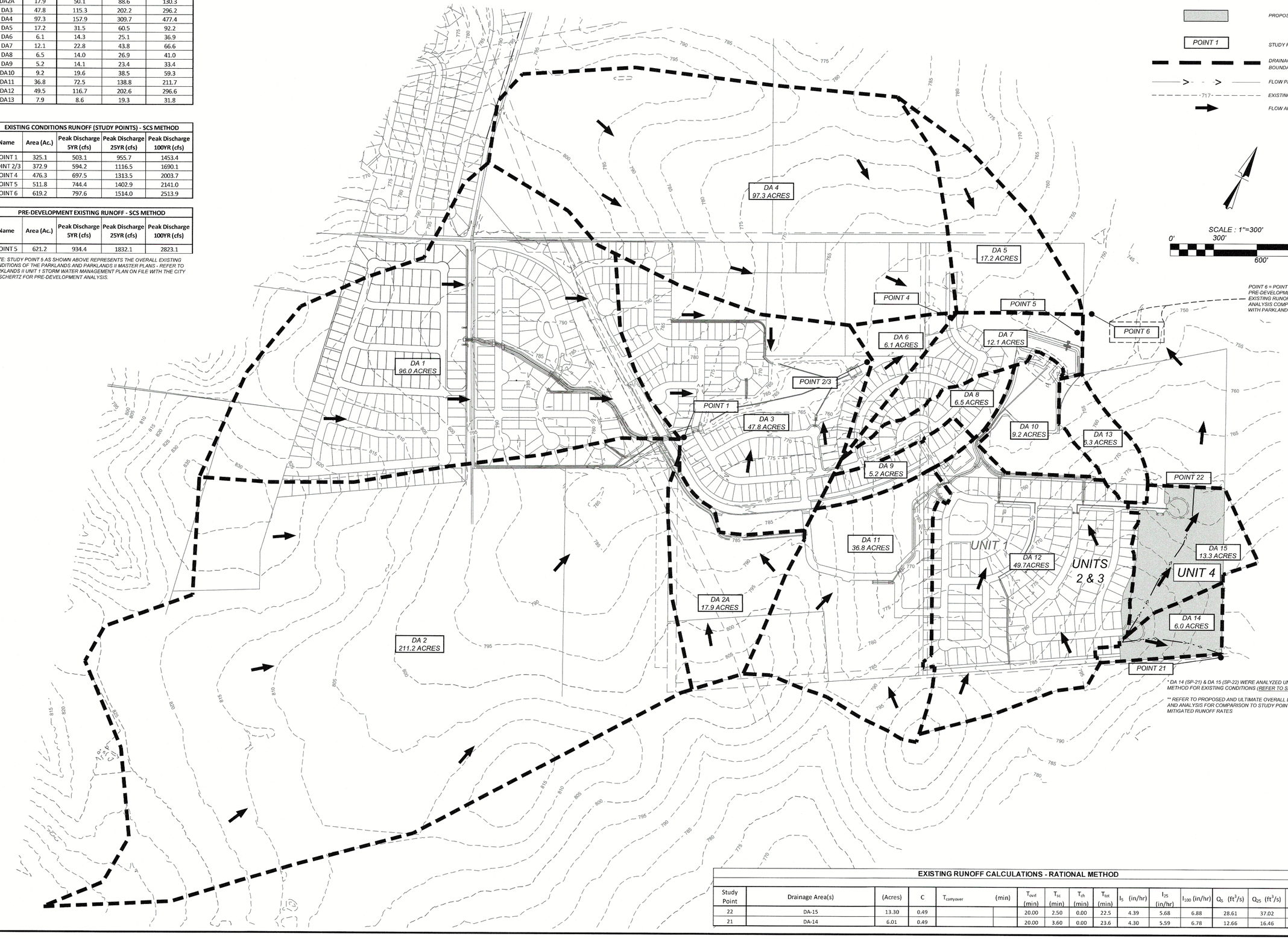
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EXISTING CONDITIONS RUNOFF (DRAINAGE AREAS) - SCS METHOD				
Name	Area (Ac.)	Peak Discharge 5YR (cfs)	Peak Discharge 25YR (cfs)	Peak Discharge 100YR (cfs)
DA1	96.0	172.8	321.6	485.7
DA2	211.2	315.4	607.0	926.9
DA2A	17.9	50.1	88.6	130.3
DA3	47.8	115.3	202.2	296.2
DA4	97.3	157.9	309.7	477.4
DA5	17.2	31.5	60.5	92.2
DA6	6.1	14.3	25.1	36.9
DA7	12.1	22.8	43.8	66.6
DA8	6.5	14.0	26.9	41.0
DA9	5.2	14.1	23.4	33.4
DA10	9.2	19.6	38.5	59.3
DA11	36.8	72.5	138.8	211.7
DA12	49.5	116.7	202.6	296.6
DA13	7.9	8.6	19.3	31.8

EXISTING CONDITIONS RUNOFF (STUDY POINTS) - SCS METHOD				
Name	Area (Ac.)	Peak Discharge 5YR (cfs)	Peak Discharge 25YR (cfs)	Peak Discharge 100YR (cfs)
POINT 1	325.1	503.1	955.7	1453.4
POINT 2/3	372.9	594.2	1116.5	1690.1
POINT 4	476.3	697.5	1313.5	2003.7
POINT 5	511.8	744.4	1402.9	2141.0
POINT 6	619.2	797.6	1514.0	2513.9

PRE-DEVELOPMENT EXISTING RUNOFF - SCS METHOD				
Name	Area (Ac.)	Peak Discharge 5YR (cfs)	Peak Discharge 25YR (cfs)	Peak Discharge 100YR (cfs)
POINT 5	621.2	934.4	1832.1	2823.1

NOTE: STUDY POINT 5 AS SHOWN ABOVE REPRESENTS THE OVERALL EXISTING CONDITIONS OF THE PARKLANDS AND PARKLANDS II MASTER PLANS - REFER TO PARKLANDS II UNIT 1 STORM WATER MANAGEMENT PLAN ON FILE WITH THE CITY OF SCHERTZ FOR PRE-DEVELOPMENT ANALYSIS.



** DA 14 (SP-21) & DA 15 (SP-22) WERE ANALYZED UNDER RATIONAL METHOD FOR EXISTING CONDITIONS (REFER TO SHEET 2.3)*

*** REFER TO PROPOSED AND ULTIMATE OVERALL DRAINAGE MAPS AND ANALYSIS FOR COMPARISON TO STUDY POINT 6 FOR MITIGATED RUNOFF RATES*

EXISTING RUNOFF CALCULATIONS - RATIONAL METHOD														
Study Point	Drainage Area(s)	(Acres)	C	$T_{canyover}$	(min)	T_{ovd} (min)	T_{sc} (min)	T_{ch} (min)	T_{tot} (min)	I_5 (in/hr)	I_{25} (in/hr)	I_{100} (in/hr)	Q_5 (ft^3/s)	Q_{25} (ft^3/s)	Q_{100} (ft^3/s)
22	DA-15	13.30	0.49			20.00	2.50	0.00	22.5	4.39	5.68	6.88	28.61	37.02	44.84
21	DA-14	6.01	0.49			20.00	3.60	0.00	23.6	4.30	5.59	6.78	12.66	16.46	19.97

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FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
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640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm# F-14909
TBPLS Firm# 10194356

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER:	DRAWING NAME:
23008197A	EXISTING OVERALL

SHEET TITLE:
EXISTING CONDITIONS OVERALL DRAINAGE PLAN

SHEET NUMBER:
2.0

Date: Apr 10, 2024, 3:59pm User ID: tmiller
File: U:\Projects\205\29\05\Design\Civil\Drainage\EXISTING OVERALL.dwg
Drawing/Drainage/EXISTING OVERALL.dwg LD EXISTING CONDITIONS OVERALL DRAINAGE PLAN by TMILLER

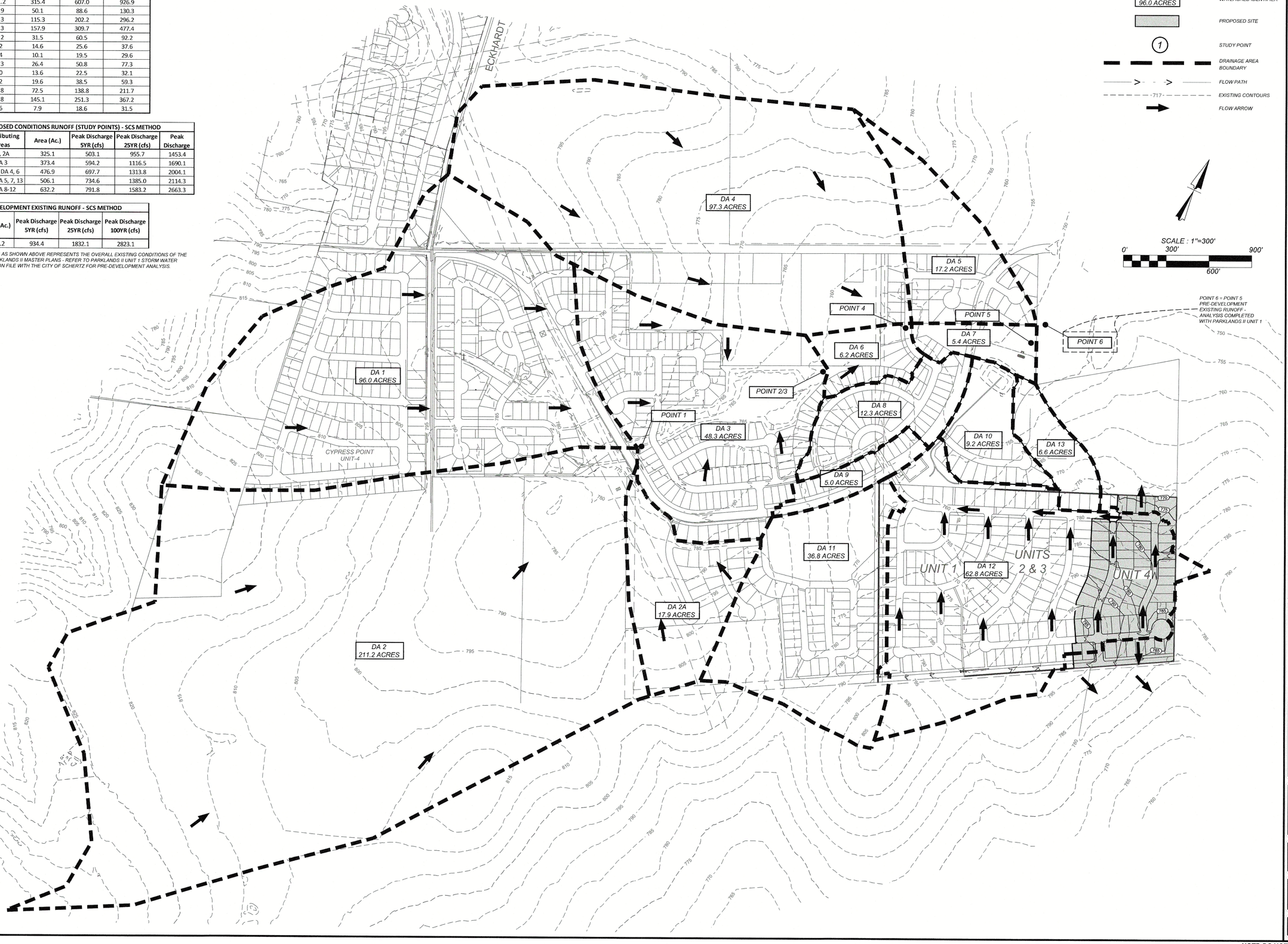
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

PROPOSED CONDITIONS RUNOFF (DRAINAGE AREAS) - SCS METHOD				
Name	Area (Ac.)	Peak Discharge 5YR (cfs)	Peak Discharge 25YR (cfs)	Peak Discharge 100YR (cfs)
DA1	96.0	172.8	321.6	485.7
DA2	211.2	315.4	607.0	926.9
DA2A	17.9	50.1	88.6	130.3
DA3	48.3	115.3	202.2	296.2
DA4	97.3	157.9	309.7	477.4
DA5	17.2	31.5	60.5	92.2
DA6	6.2	14.6	25.6	37.6
DA7	5.4	10.1	19.5	29.6
DA8	12.3	26.4	50.8	77.3
DA9	5.0	13.6	22.5	32.1
DA10	9.2	19.6	38.5	59.3
DA11	36.8	72.5	138.8	211.7
DA12	62.8	145.1	251.3	367.2
DA13	6.6	7.9	18.6	31.5

PROPOSED CONDITIONS RUNOFF (STUDY POINTS) - SCS METHOD					
Name	Contributing Areas	Area (Ac.)	Peak Discharge 5YR (cfs)	Peak Discharge 25YR (cfs)	Peak Discharge
POINT 1	DA 1, 2, 2A	325.1	503.1	955.7	1453.4
POINT 2/3	PT 1, DA 3	373.4	594.2	1116.5	1690.1
POINT 4	PT 2/3, DA 4, 6	476.9	697.7	1313.8	2004.1
POINT 5	PT 4, DA 5, 7, 13	506.1	734.6	1385.0	2114.3
POINT 6	PT 5, DA 8-12	632.2	791.8	1583.2	2663.3

PRE-DEVELOPMENT EXISTING RUNOFF - SCS METHOD				
Name	Area (Ac.)	Peak Discharge 5YR (cfs)	Peak Discharge 25YR (cfs)	Peak Discharge 100YR (cfs)
POINT 5	621.2	934.4	1832.1	2823.1

NOTE: STUDY POINT 5 AS SHOWN ABOVE REPRESENTS THE OVERALL EXISTING CONDITIONS OF THE PARKLANDS AND PARKLANDS II MASTER PLANS - REFER TO PARKLANDS II UNIT 1 STORM WATER MANAGEMENT PLAN ON FILE WITH THE CITY OF SCHERTZ FOR PRE-DEVELOPMENT ANALYSIS.



LEGEND

- DA 1 / 96.0 ACRES — WATERSHED IDENTIFIER
- PROPOSED SITE
- 1 — STUDY POINT
- DRAINAGE AREA BOUNDARY
- FLOW PATH
- 717 — EXISTING CONTOURS
- FLOW ARROW

SCALE : 1"=300'

0' 300' 600' 900'

Date: Jan 24, 2024, 2:31pm User ID: dgonzalez
File: U:\Projects\205\29\05\Design\Civil\Drainage\PROPOSED OVERALL.dwg
Design\Civil\Drainage\PROPOSED OVERALL.dwg,1 PROPOSED CONDITIONS OVERALL DRAINAGE PLAN By:DGONZALEZ

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FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
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COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14935
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 2308197A
DRAWING NAME: PROPOSED OVERALL

SHEET TITLE:
PROPOSED CONDITIONS OVERALL DRAINAGE PLAN

SHEET NUMBER:
2.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

ULTIMATE CONDITIONS RUNOFF (DRAINAGE AREAS) - SCS METHOD				
Name	Area (Ac.)	Peak Discharge 5YR (cfs)	Peak Discharge 25YR (cfs)	Peak Discharge 100YR (cfs)
DA1	96.0	220.5	369.2	530.7
DA2	211.2	447.8	735.6	1045.7
DA2A	17.9	55.0	92.9	133.8
DA3	48.3	116.6	203.4	297.4
DA4	97.3	157.9	309.7	477.4
DA5	17.2	31.5	60.5	92.2
DA6	6.2	15.0	26.0	38.0
DA7	5.4	13.0	24.2	36.3
DA8	12.3	46.8	77.2	109.9
DA9	5.0	13.6	22.5	32.1
DA10	30.3	68.2	117.2	171.2
DA11	36.8	82.6	148.8	220.9
DA12	62.8	149.0	255.1	370.7

ULTIMATE CONDITIONS RUNOFF (STUDY POINTS) - SCS METHOD					
Name	Contributing Areas	Area (Ac.)	Peak Discharge 5YR (cfs)	Peak Discharge 25YR (cfs)	Peak Discharge 100YR (cfs)
POINT 1	DA 1, 2, 2A	325.1	686.9	1136.2	1621.5
POINT 2/3	PT 1, DA 3	373.4	781.5	1301.0	1862.0
POINT 4	PT 2/3, DA 4, 6	476.9	843.0	1443.9	2103.3
POINT 5	PT 4, DA 5, 7	499.5	866.9	1489.9	2174.2
POINT 6	PT 5, DA 8-12	646.7	933.6	1827.1	2781.2

PRE-DEVELOPMENT EXISTING RUNOFF - SCS METHOD				
Name	Area (Ac.)	Peak Discharge 5YR (cfs)	Peak Discharge 25YR (cfs)	Peak Discharge 100YR (cfs)
POINT 5	621.2	934.4	1832.1	2823.1

NOTE: STUDY POINT 5 AS SHOWN ABOVE REPRESENTS THE OVERALL EXISTING CONDITIONS OF THE PARKLANDS AND PARKLANDS II MASTER PLANS - REFER TO PARKLANDS II UNIT 1 STORM WATER MANAGEMENT PLAN ON FILE WITH THE CITY OF SCHERTZ FOR PRE-DEVELOPMENT ANALYSIS.



LEGEND

- DA 1 / 96.0 ACRES — WATERSHED IDENTIFIER
- PROPOSED SITE
- 1 — STUDY POINT
- DRAINAGE AREA BOUNDARY
- FLOW PATH
- 717 — EXISTING CONTOURS
- FLOW ARROW

SCALE : 1"=300'

0' 300' 900' 600'

Date: Jan 24, 2024, 2:33pm User ID: dgonzalez
File: U:\Projects\205\29\08\Design\Civil\Drainage\ULTIMATE OVERALL.dwg
Design\Drainage\ULTIMATE OVERALL.dwg,2.2 ULTIMATE CONDITIONS OVERALL DRAINAGE PLAN By:DGONZALEZ

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FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
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AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER:	DRAWING NAME:
23008197A	ULTIMATE OVERALL

SHEET TITLE:
ULTIMATE CONDITIONS OVERALL DRAINAGE PLAN

SHEET NUMBER:
2.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

PROPOSED RUNOFF CALCULATIONS - RATIONAL METHOD

Study Point	Drainage Area(s)	(Acres)	C	$T_{carryover}$ (min)		T_{ovrl} (min)	T_{sc} (min)	T_{ch} (min)	T_{tot} (min)	I_5 (in/hr)	I_{25} (in/hr)	I_{100} (in/hr)	Q_5 (ft^3/s)	Q_{25} (ft^3/s)	Q_{100} (ft^3/s)
1*	DA-1	7.73	0.53			20.0	3.2	0.1	23.3	4.30	5.59	6.78	17.56	22.83	27.69
	DA-2	2.52	0.67			18.8		1.5	20.3	4.56	5.86	7.09	7.70	9.89	11.97
2*	DA-2 + SP-1	10.25	0.56	SP-1	23.3			1.6	24.9	4.22	5.50	6.68	24.36	31.75	38.56
3*	DA-3	5.65	0.67			18.8	6.5	1.5	26.8	4.06	5.33	6.49	15.37	20.18	24.57
ST1*	SP-2 + SP-3	15.90	0.54	SP-3	26.8			0.2	27.0	3.98	5.24	6.39	33.86	44.58	54.36
	DA-4	9.36	0.67			20.0	4.8	1.6	26.4	4.06	5.33	6.49	25.46	33.43	40.70
	DA-5	3.85	0.67			20.0	3.4		23.4	4.30	5.59	6.78	11.09	14.42	17.49
	DA-6	4.60	0.67			20.0	6.8		26.8	4.06	5.33	6.49	12.51	16.43	20.00
5A	DA-6 INTRECEPTED FLOW (ON-GRADE INLET)	REFER TO SWMP FOR INLET ANALYSIS											4.69	5.46	6.05
5B	DA-6 BYPASS FLOW (ON-GRADE INLET)	REFER TO SWMP FOR INLET ANALYSIS											1.57	2.76	3.95
5C	DA-5 + HALF OF DA-6	6.15	0.67	DA-6	26.8			0.4	27.2	3.98	5.24	6.39	16.40	21.59	26.33
6	DA-4 + SP-5B	SIMPLY SUMMED											27.03	36.19	44.65
	DA-7	3.59	0.67			20.0	3.2		23.2	4.30	5.59	6.78	10.34	13.45	16.31
	DA-8	0.94	0.67			20.0	1.4		21.4	4.48	5.77	6.99	2.82	3.63	4.40
7	HALF OF ((DA-4 + DA-7 + DA-8) + SP-5B)	6.95	0.67	DA-4	26.4				26.4	4.06	5.33	6.49	19.68	26.18	32.17
8	HALF OF ((DA-4 + DA-7 + DA-8) + SP-5B)	6.95	0.67	DA-4	26.4				26.4	4.06	5.33	6.49	19.68	26.18	32.17
ST2*	ST1 + SP-7	22.85	0.58	ST1	27.0			1.9	28.9	3.91	5.16	6.30	52.24	69.29	84.89
9*	SP-8 + ST2	29.79	0.60	ST2	28.9				28.9	3.91	5.16	6.30	71.22	94.68	116.18
10*	DA-9	4.87	0.67			16.8	5.3	1.7	23.8	4.30	5.59	6.78	14.03	18.24	22.12
	DA-10	8.84	0.66			16.8	6.2	1.7	24.7	4.22	5.50	6.68	24.54	31.98	38.84
11*	DA-10 + SP-10	13.71	0.67	DA-10	24.7				24.7	4.22	5.50	6.68	38.76	50.52	61.36
12A*	SP-11 + SP-5C	19.86	0.67	SP-5C	27.2			0.4	27.6	3.98	5.24	6.39	52.96	69.72	85.03
12B*	SP-12A + SP-5A	19.86	0.67	SP-12A	27.6			0.1	27.7	3.98	5.24	6.39	57.65	75.18	91.08
	DA-12A	2.24	0.67			20.0		1.4	21.4	4.48	5.77	6.99	6.72	8.66	10.49
	DA-12B	0.46	0.67			20.0		0.1	20.1	4.56	5.86	7.09	1.41	1.81	2.19
22	DA-13	3.67	0.62			16.2			16.2	4.94	6.26	7.53	11.20	14.19	17.07
21	DA-14	2.69	0.67			20.0			20.0	4.56	5.86	7.09	8.22	10.56	12.78
13	DA-12(A+B) + SP-12B	22.56	0.67	SP-12B	27.7			2.0	29.7	3.83	5.08	6.21	62.58	82.25	99.92
14	DA-(1 -10) + DA-12(A+B)	54.65	0.65	DA-3	26.8			2.6	29.4	3.83	5.08	6.21	136.04	180.45	220.58
15	DA-11	5.72	0.67			20.0	6.8		26.8	4.06	5.33	6.49	15.56	20.43	24.87
OS-1	OS-DA-1	23.04	0.59			19.5	2.8	2.4	24.7	4.22	5.50	6.68	57.64	75.12	91.24
	OS-DA-2	12.02	0.49	OS-1	24.7			2.1	26.8	4.06	5.33	6.49	23.91	31.39	38.22
16	OS-DA-1 + OS-DA-2 + DA-11	40.78	0.52	SP-15	26.8			0.5	27.3	3.98	5.24	6.39	83.63	110.10	134.27
17	DA-15	0.33	0.67			5.0	1.6		6.6	6.73	8.48	10.10	1.49	1.87	2.23
18	SP-16 + SP-17	41.11	0.52	SP-16	27.3			0.2	27.5	3.98	5.24	6.39	84.51	111.26	135.68
	DA-16	2.87	0.67			20.0		1.1	21.1	4.48	5.77	6.99	8.61	11.10	13.44
	OS-DA-3	17.35	0.67			19.7	8.3	0.0	28.0	3.91	5.16	6.30	45.45	59.98	73.23
19*	DA-16 + SP-14 + SP-18 + OS-DA-3	115.98	0.61	SP-14	29.4			1.2	30.6	3.76	5.00	6.12	264.33	351.51	430.24
	OS-DA-4	8.72	0.67			20.0	6.1	1.4	27.5	3.98	5.24	6.39	23.25	30.61	37.33
20	SP-19+ OS-DA-4	124.70	0.61	SP-19	30.6			1.5	32.1	3.62	4.85	5.95	275.64	369.30	453.05

ULTIMATE RUNOFF CALCULATIONS - RATIONAL METHOD - PARKLANDS II UNITS 2 & 3

Study Point	Drainage Area(s)	(Acres)	C	$T_{carryover}$ (min)		T_{ovrl} (min)	T_{sc} (min)	T_{ch} (min)	T_{tot} (min)	I_5 (in/hr)	I_{25} (in/hr)	I_{100} (in/hr)	Q_5 (ft^3/s)	Q_{25} (ft^3/s)	Q_{100} (ft^3/s)
1*	DA-1	7.55	0.67			20.0	3.2	0.1	23.3	4.30	5.59	6.78	21.75	28.28	34.30
2*	DA-2 + SP-1	10.07	0.67	SP-1	23.3			1.6	24.9	4.22	5.50	6.68	28.47	37.11	45.07
3*	DA-3	5.65	0.67			18.8	6.5	1.5	26.8	4.06	5.33	6.49	15.37	20.18	24.57
ST1*	SP-2 + SP-3	15.72	0.67	SP-3	26.8			0.2	27.0	3.98	5.24	6.39	41.92	55.19	67.30
ST2*	ST1 + SP-7	22.67	0.67	ST1	27.0			1.9	28.9	3.91	5.16	6.30	60.16	79.74	97.64
9*	SP-8 + ST2	29.61	0.67	ST2	28.9				28.9	3.91	5.16	6.30	79.14	105.13	128.93
10*	DA-9	4.18	0.67			16.8	5.3	1.7	23.8	4.30	5.59	6.78	12.04	15.66	18.99
11*	DA-10 + SP-10	14.43	0.67	DA-10	24.7				24.7	4.22	5.50	6.68	40.80	53.17	64.58
12A*	SP-11 + SP-5C	20.58	0.67	SP-5C	27.2			0.4	27.6	3.98	5.24	6.39	54.88	72.25	88.11
12B*	SP-12A + SP-5A	20.58	0.67	SP-12A	27.6			0.1	27.7	3.98	5.24	6.39	59.57	77.71	94.16
19*	DA-16 + SP-14 + SP-18 + OS-DA-3	104.23	0.67	SP-14	29.4			1.2	30.6	3.76	5.00	6.12	262.58	349.17	427.38

THE ABOVE REFERENCED TABLE IS TO PROVIDE A COMPARISON TO THE DRAINAGE AREAS AND STUDY POINTS THAT WERE PREVIOUSLY USED IN THE DETERMINATION OF THE NOW CONSIDERED DOWNSTREAM DRAINAGE INFRASTRUCTURE. UPDATED CALCULATIONS FOR THE DRAINS/INLETS WITH INCREASED FLOW FROM PARKLANDS II UNITS 2 & 3 (SP-1, SP-2, S-3, SP-ST1, SP-ST2, SP-9, & SP-19) CAN BE FOUND IN THE SWMP. SP-10, SP-11, SP-12A, & SP-12B ARE FOR COMPARISON WITH DRAINS IN PARKLANDS II UNIT 4.

SCALE : 1"=200'

0' 200' 600'

400'



LEGEND

- DA 7 / 12.0 ACRES — WATERSHED IDENTIFIER / AREA (ACRES)
- DRAINAGE AREA BOUNDARY
- FLOW PATH
- 717 — EXISTING CONTOURS
- 717 — PROPOSED CONTOURS
- FLOW ARROW
- PROPOSED SITE
- 1 — STUDY POINT

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5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
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TBPE Firm#: F-14909
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
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PROJECT NUMBER: 23008197A
DRAWING NAME: 2.3 PROPOSED CONDITIONS ONSITE DRAINAGE PLAN

SHEET TITLE: *PROPOSED CONDITIONS ONSITE DRAINAGE PLAN*

SHEET NUMBER: 2.3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Apr 10, 2024, 3:59pm User ID: tmiller
File: U:\Projects\23008197A Parklands II Unit 4\Design\Civil\Drainage\2.3 PROPOSED CONDITIONS ONSITE DRAINAGE PLAN.dwg
\Design\Civil\Drainage\2.3 PROPOSED CONDITIONS ONSITE DRAINAGE PLAN - No Utils.dgn

ULTIMATE RUNOFF CALCULATIONS - RATIONAL METHOD

Study Point	Drainage Area(s)	(Acres)	C	$T_{carryover}$ (min)		T_{ovf} (min)	T_{sc} (min)	T_{ch} (min)	T_{tot} (min)	I_5 (in/hr)	I_{25} (in/hr)	I_{100} (in/hr)	Q_5 (ft^3/s)	Q_{25} (ft^3/s)	Q_{100} (ft^3/s)
1*	DA-1	7.73	0.67			20.0	3.9	0.1	24.0	4.22	5.50	6.68	21.86	28.49	34.60
	DA-2	2.52	0.67			18.8		1.5	20.3	4.56	5.86	7.09	7.70	9.89	11.97
2*	DA-2 + SP-1	10.25	0.67	SP-1	24.0			1.6	25.6	4.14	5.41	6.58	28.43	37.15	45.19
3*	DA-3	5.65	0.67			18.8	6.5	1.5	26.8	4.06	5.33	6.49	15.37	20.18	24.57
ST1*	SP-2 + SP-3	15.90	0.67	SP-3	26.8			0.2	27.0	3.98	5.24	6.39	42.40	55.82	68.07
	DA-4	9.36	0.67			20.0	4.8	1.6	26.4	4.06	5.33	6.49	25.46	33.43	40.70
	DA-5	3.85	0.67			20.0	3.4		23.4	4.30	5.59	6.78	11.09	14.42	17.49
	DA-6	4.60	0.67			20.0	6.8		26.8	4.06	5.33	6.49	12.51	16.43	20.00
5A	DA-6 INTRECEPTED FLOW (ON-GRADE INLET)	REFER TO SWMP FOR INLET ANALYSIS											4.69	5.46	6.05
5B	DA-6 BYPASS FLOW (ON-GRADE INLET)	REFER TO SWMP FOR INLET ANALYSIS											1.57	2.76	3.95
5C	DA-5 + HALF OF DA-6	6.15	0.67	DA-6	26.8			0.4	27.2	3.98	5.24	6.39	16.40	21.59	26.33
6	DA-4 + SP-5B	SIMPLY SUMMED											27.03	36.19	44.65
	DA-7	3.59	0.67			20.0	3.2		23.2	4.30	5.59	6.78	10.34	13.45	16.31
	DA-8	0.94	0.67			20.0	1.4		21.4	4.48	5.77	6.99	2.82	3.63	4.40
7	HALF OF ((DA-4 + DA-7 + DA-8) + SP-5B)	6.95	0.67	DA-4	26.4				26.4	4.06	5.33	6.49	19.68	26.18	32.17
8	HALF OF ((DA-4 + DA-7 + DA-8) + SP-5B)	6.95	0.67	DA-4	26.4				26.4	4.06	5.33	6.49	19.68	26.18	32.17
ST2*	ST1 + SP-7	22.85	0.67	ST1	27.0			1.9	28.9	3.91	5.16	6.30	60.63	80.36	98.40
9*	SP-8 + ST2	29.79	0.67	ST2	28.9				28.9	3.91	5.16	6.30	79.61	105.75	129.69
10*	DA-9	4.87	0.67			16.8	5.3	1.7	23.8	4.30	5.59	6.78	14.03	18.24	22.12
	DA-10	8.84	0.67			16.8	6.2	1.7	24.7	4.22	5.50	6.68	24.99	32.58	39.56
11*	DA-9 + DA-10	13.71	0.67	DA-10	24.7				24.7	4.22	5.50	6.68	38.76	50.52	61.36
12A*	SP-11 + SP-5C	19.86	0.67	SP-5C	27.2			0.4	27.6	3.98	5.24	6.39	52.96	69.72	85.03
12B*	SP-12A + SP-5A	19.86	0.67	SP-12A	27.6			0.1	27.7	3.98	5.24	6.39	57.65	75.18	91.08
	DA-12A	2.24	0.67			20.0		1.4	21.4	4.48	5.77	6.99	6.72	8.66	10.49
	DA-12B	0.46	0.67			20.0		0.1	20.1	4.56	5.86	7.09	1.41	1.81	2.19
22	DA-13	3.67	0.67			16.2			16.2	4.94	6.26	7.53	12.15	15.39	18.52
21	DA-14	2.69	0.67			20.0			20.0	4.56	5.86	7.09	8.22	10.56	12.78
13	DA-12(A+B) + SP-12B	22.56	0.67	SP-12B	27.7			2.0	29.7	3.83	5.08	6.21	62.58	82.25	99.92
14	DA-(1 -10) + DA-12(A+B)	54.65	0.67	DA-3	26.8			2.6	29.4	3.83	5.08	6.21	140.24	186.01	227.38
15	DA-11	5.72	0.67			20.0	6.8		26.8	4.06	5.33	6.49	15.56	20.43	24.87
OS-1	OS-DA-1	23.04	0.67			19.5	2.8	2.4	24.7	4.22	5.50	6.68	65.14	84.90	103.12
	OS-DA-2	12.02	0.67	OS-1	24.7			2.1	26.8	4.06	5.33	6.49	32.70	42.92	52.27
16	OS-DA-1 + OS-DA-2 + DA-11	40.78	0.67	SP-15	26.8			0.5	27.3	3.98	5.24	6.39	108.74	143.17	174.59
17	DA-15	0.33	0.67			5.0	1.6		6.6	6.73	8.48	10.10	1.49	1.87	2.23
18	SP-16 + SP-17	41.11	0.67	SP-16	27.3			0.2	27.5	3.98	5.24	6.39	109.62	144.33	176.00
	DA-16	2.87	0.67			20.0		1.1	21.1	4.48	5.77	6.99	8.61	11.10	13.44
	OS-DA-3	17.35	0.67			19.7	8.3	0.0	28.0	3.91	5.16	6.30	45.45	59.98	73.23
19*	DA-16 + SP-14 + SP-18 + OS-DA-3	115.98	0.67	SP-14	29.4			1.2	30.6	3.76	5.00	6.12	292.18	388.53	475.56
	OS-DA-4	8.72	0.67			20.0	6.1	1.4	27.5	3.98	5.24	6.39	23.25	30.61	37.33
20	SP-19+ OS-DA-4	REFER TO SWMP FOR POND ANALYSIS													

ULTIMATE RUNOFF CALCULATIONS - RATIONAL METHOD - PARKLANDS II UNITS 2 & 3

Study Point	Drainage Area(s)	(Acres)	C	$T_{carryover}$ (min)		T_{ovf} (min)	T_{sc} (min)	T_{ch} (min)	T_{tot} (min)	I_5 (in/hr)	I_{25} (in/hr)	I_{100} (in/hr)	Q_5 (ft^3/s)	Q_{25} (ft^3/s)	Q_{100} (ft^3/s)
1*	DA-1	7.55	0.67			20.0	3.2	0.1	23.3	4.30	5.59	6.78	21.75	28.28	34.30
2*	DA-2 + SP-1	10.07	0.67	SP-1	23.3			1.6	24.9	4.22	5.50	6.68	28.47	37.11	45.07
3*	DA-3	5.65	0.67			18.8	6.5	1.5	26.8	4.06	5.33	6.49	15.37	20.18	24.57
ST1*	SP-2 + SP-3	15.72	0.67	SP-3	26.8			0.2	27.0	3.98	5.24	6.39	41.92	55.19	67.30
ST2*	ST1 + SP-7	22.67	0.67	ST1	27.0			1.9	28.9	3.91	5.16	6.30	60.16	79.74	97.64
9*	SP-8 + ST2	29.61	0.67	ST2	28.9				28.9	3.91	5.16	6.30	79.14	105.13	128.93
10*	DA-9	4.18	0.67			16.8	5.3	1.7	23.8	4.30	5.59	6.78	12.04	15.66	18.99
11*	DA-10 + SP-10	14.43	0.67	DA-10	24.7				24.7	4.22	5.50	6.68	40.80	53.17	64.58
12A*	SP-11 + SP-5C	20.58	0.67	SP-5C	27.2			0.4	27.6	3.98	5.24	6.39	54.88	72.25	88.11
12B*	SP-12A + SP-5A	20.58	0.67	SP-12A	27.6			0.1	27.7	3.98	5.24	6.39	59.57	77.71	94.16
19*	DA-16 + SP-14 + SP-18 + OS-DA-3	104.23	0.67	SP-14	29.4			1.2	30.6	3.76	5.00	6.12	262.58	349.17	427.38

THE ABOVE REFERENCED TABLE IS TO PROVIDE A COMPARISON TO THE DRAINAGE AREAS AND STUDY POINTS THAT WERE PREVIOUSLY USED IN THE DETERMINATION OF THE NOW CONSIDERED DOWNSTREAM DRAINAGE INFRASTRUCTURE. UPDATED CALCULATIONS FOR THE DRAINS/INLETS WITH INCREASED FLOW FROM PARKLANDS II UNITS 2 & 3 (SP-1, SP-2, S-3, SP-ST1, SP-ST2, SP-9, & SP-19) CAN BE FOUND IN THE SWMP. SP-10, SP-11, SP-12A, & SP-12B ARE FOR COMPARISON WITH DRAINS IN PARKLANDS II UNIT 4.



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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED
PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14309
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A

DRAWING NAME: 2.4 ULTIMATE CONDITIONS ONSITE DRAINAGE PLAN

SHEET TITLE:
ULTIMATE CONDITIONS ONSITE DRAINAGE PLAN

SHEET NUMBER:
2.4

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Apr 10, 2024, 4:08pm User ID: tmiller
File: U:\Projects\205\29\05\Design\Civil\Drainage\2.4 ULTIMATE CONDITIONS ONSITE DRAINAGE PLAN.dwg
By: TMILLER

TRENCH EXCAVATION SAFETY PROTECTION

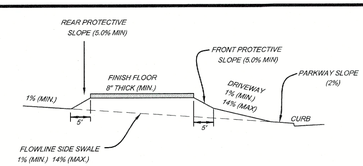
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

CAUTION!!!

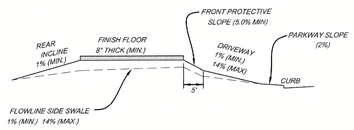
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

GENERAL NOTES:

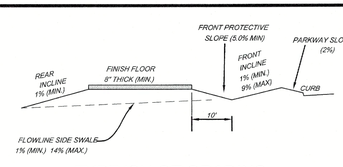
1. CONTRACTOR SHALL PROVIDE OWNER ALL NECESSARY DENSITY TESTS AND 79G LETTERS FOR FILL LOTS AS REQUIRED BY HUD SPECIFICATIONS.
2. HOME BUILDER SHALL REFER TO THE APPROVED SUBDIVISION PLAT TO CONFIRM ALL BUILDING SETBACKS PRIOR TO ANY FOUNDATION WORK.
3. AS SOON AS PRACTICAL HOME BUILDER SHALL ESTABLISH VEGETATION TO 85% (HYDROMULCH, SEEDING, SODDING, ETC...) TO PREVENT EROSION FROM OCCURRING.
4. CONTRACTOR SHALL CONTACT ENGINEER REGARDING ANY QUESTIONS ON THE INTENT OF THIS PLAN.
5. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS AND TOWARDS THE PROPER DRAINAGE EASEMENT OR STREET RIGHT OF WAY ACCORDING TO THE MASTER DRAINAGE PLAN FOR THE PROJECT. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW PONDING OF WATER.
6. ALL ELEVATIONS AND CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVEMENT, CURBS, SIDEWALKS, MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
7. GRADING PLAN IS INTENDED FOR USE IN LOT GRADING ONLY. CONTRACTOR SHOULD REFER TO CONSTRUCTION DRAWINGS FOR ALL OTHER GRADES, INCLUDING, BUT NOT LIMITED TO, CHANNELS, ROADS, AND DETENTION PONDS.
8. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ALL SWALES.
9. ALL LOTS SHALL BE IN GENERAL CONFORMANCE WITH THE INTENDED GRADING PLAN. AS REQUIRED BY THE CITY, ANY LOT NOT IN GENERAL CONFORMANCE WITH THE LOT GRADING TYPES (AS SHOWN) SHALL BE ROUGH GRADED PRIOR TO PRELIMINARY ACCEPTANCE OF PUBLIC INFRASTRUCTURE.
10. ALL DISTURBED AREAS SHALL BE REVEGETATED TO A MINIMUM OF 85% WITH THE EXCEPTION OF BUILDABLE RESIDENTIAL LOTS. EROSION AND SEDIMENTATION FROM BUILDABLE LOTS SHOULD BE PREVENTED THROUGH THE USE OF SILT FENCE, CONTROL MATTING, OR OTHER BMP AS APPROPRIATE.
11. ROUGH GRADING, INCLUDING TREE REMOVAL, MUST BE DONE ON ALL LOTS PRIOR TO SUBDIVISION PRELIMINARY ACCEPTANCE.



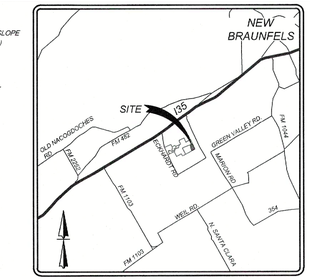
TYPE 'A' LOT GRADING



TYPE 'B' LOT GRADING



TYPE 'C' LOT GRADING



LOCATION MAP
N.T.S.

LEGEND

EXIST.	=	EXISTING
G.E.T.TV.E.	=	GAS, ELECTRIC, TELEPHONE, CABLE T.V. EASEMENT
	=	FLOW ARROW
A	=	LOT GRADE TYPE
	=	PROPOSED DRIVEWAY LOCATION
715	=	EXISTING CONTOUR
670	=	PROPOSED CONTOUR
643	=	PARKLANDS II UNIT 2 & 3 CONTOUR

80.00 ACRE TRACT
(VOL. 2944 PG. 640 O.P.R.)
OWNER: ROLAND K. & SUZANNE SCHOTT

REMAINDER OF 194.56 ACRE TRACT
(VOL. 2260 PG. 355 O.P.R.)
OWNER: ROLLING HILLS RANCH DEVELOPMENT, LTD
ZONING: PDD

40.00 ACRE TRACT
(VOL. 589 PG. 776 O.P.R.)
OWNER: WESTON RANCH FOUNDATION
(VOL. 2338 PG. 451 O.P.R.)
ZONING - N/A (OUTSIDE CITY LIMITS)

167.89 ACRE TRACT
OWNER: WESTON RANCH FOUNDATION
(VOL. 2338 PG. 451 O.P.R.)
ZONING - N/A (OUTSIDE CITY LIMITS)

SCALE : 1"=50'
0' 50' 150'
100'

MATCHLINE 'A' SEE SHEET 3.1

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REV	DESCRIPTION	DRAWN BY	DATE

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-9-24

FINAL SUBDIVISION PLAN
FOR
PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14099
TBPLS Firm#: 10194350

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 3.1 OVERALL GRADING PLAN

SHEET TITLE: OVERALL GRADING PLAN

SHEET NUMBER: 3.0

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: May 08, 2024, 12:07pm User ID: tmiller
File: U:\Projects\205\29\05\Design\Civil\GRADING\3.1 OVERALL GRADING PLAN.dwg

TRENCH EXCAVATION SAFETY PROTECTION

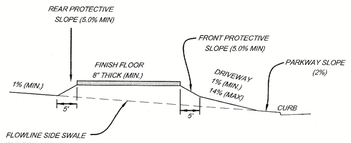
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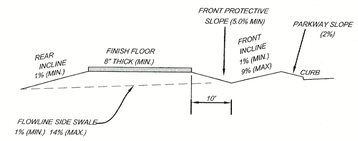
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GENERAL NOTES:

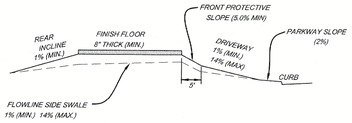
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7. GRADING PLAN IS INTENDED FOR USE IN LOT GRADING ONLY. CONTRACTOR SHOULD REFER TO CONSTRUCTION DRAWINGS FOR ALL OTHER GRADES, INCLUDING, BUT NOT LIMITED TO, CHANNELS, ROADS, AND DETENTION PONDS.
8. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ALL SWALES.
9. ALL LOTS SHALL BE IN GENERAL CONFORMANCE WITH THE INTENDED GRADING PLAN. AS REQUIRED BY THE CITY, ANY LOT NOT IN GENERAL CONFORMANCE WITH THE LOT GRADING TYPES (AS SHOWN) SHALL BE ROUGH GRADED PRIOR TO PRELIMINARY ACCEPTANCE OF PUBLIC INFRASTRUCTURE.
10. ALL DISTURBED AREAS SHALL BE REVEGETATED TO A MINIMUM OF 85% WITH THE EXCEPTION OF BUILDABLE RESIDENTIAL LOTS. EROSION AND SEDIMENTATION FROM BUILDABLE LOTS SHOULD BE PREVENTED THROUGH THE USE OF SILT FENCE, CONTROL MATTING, OR OTHER BMP AS APPROPRIATE.
11. ROUGH GRADING, INCLUDING TREE REMOVAL, MUST BE DONE ON ALL LOTS PRIOR TO SUBDIVISION PRELIMINARY ACCEPTANCE.



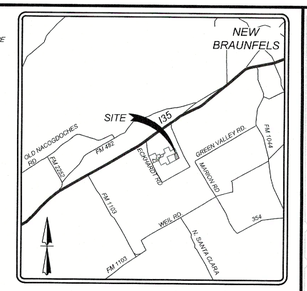
TYPE 'A' LOT GRADING



TYPE 'C' LOT GRADING

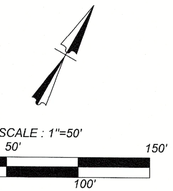


TYPE 'B' LOT GRADING



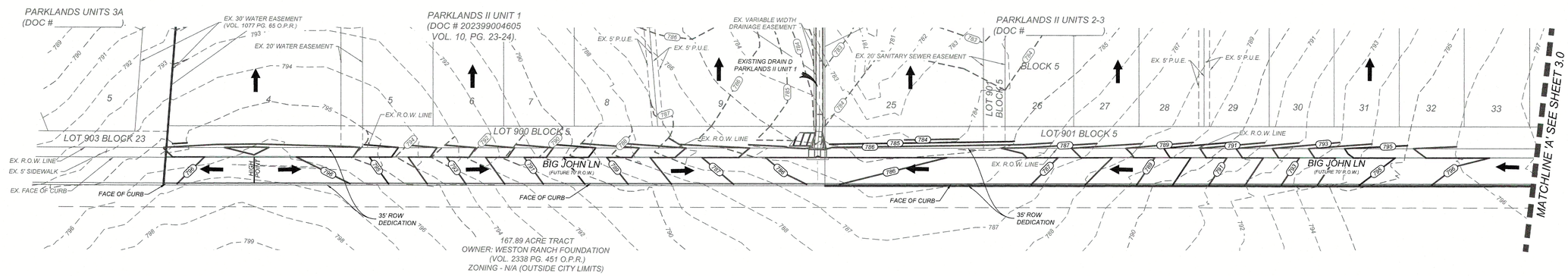
LOCATION MAP

N.T.S.



LEGEND

EXIST.	=	EXISTING
G.E.T.TV.E.	=	GAS, ELECTRIC, TELEPHONE, CABLE T.V. EASEMENT
	=	FLOW ARROW
A	=	LOT GRADE TYPE
	=	PROPOSED DRIVEWAY LOCATION
715	=	EXISTING CONTOUR
800	=	PROPOSED CONTOUR
645	=	PARKLANDS II UNIT 2 & 3 CONTOUR



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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED
PROFESSIONAL ENGINEER

5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KPW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-13909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A

DRAWING NAME: 3.1 OVERALL GRADING PLAN

SHEET TITLE: OVERALL GRADING PLAN

SHEET NUMBER: 3.1

Date: Apr 16, 2024, 4:40pm User ID: ASerna
File: J:\Projects\203\29\05\Design\Civil\GRADING\3.1 OVERALL GRADING PLAN.dwg
Plotted on HP DesignJet T1700dr PostScript (C) by HP DesignJet T1700dr PostScript

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

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

CAUTION!!:

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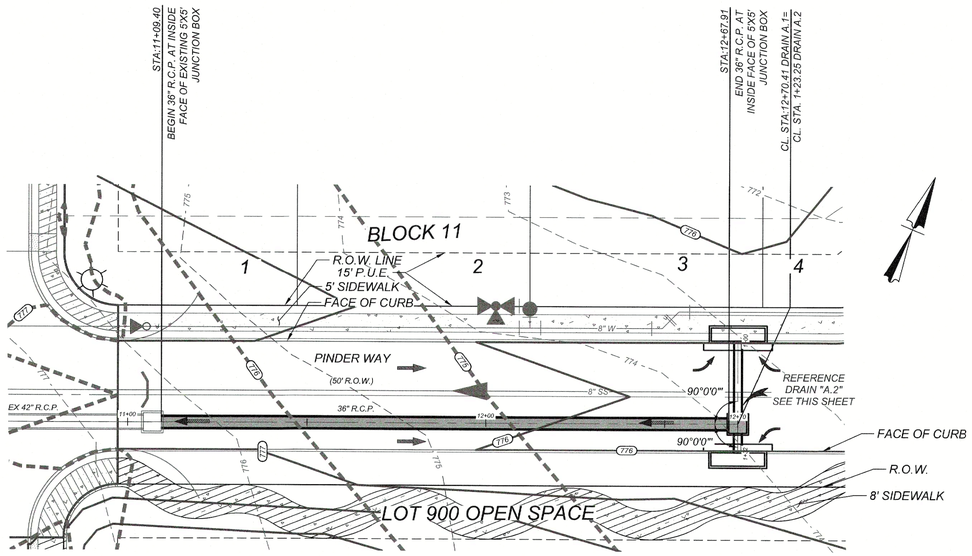
LEGEND

- = FLOW ARROW
- 715 = EXISTING CONTOUR
- 713 = PROPOSED CONTOUR
- 543 = PARKLANDS II UNIT 2 & 3 CONTOUR

SCALE : 1"=20'

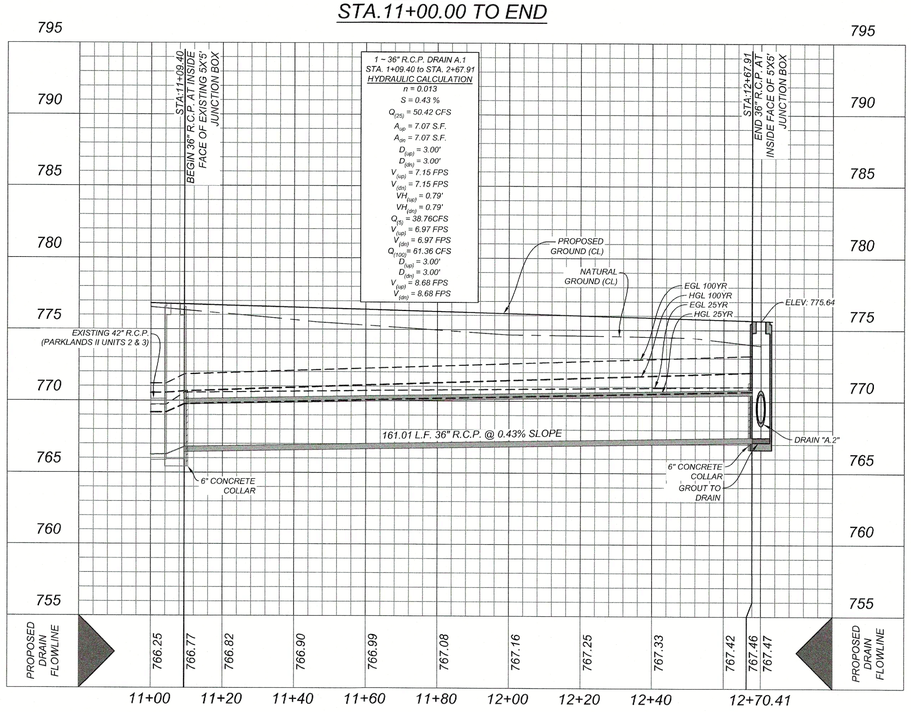
0' 20' 60'

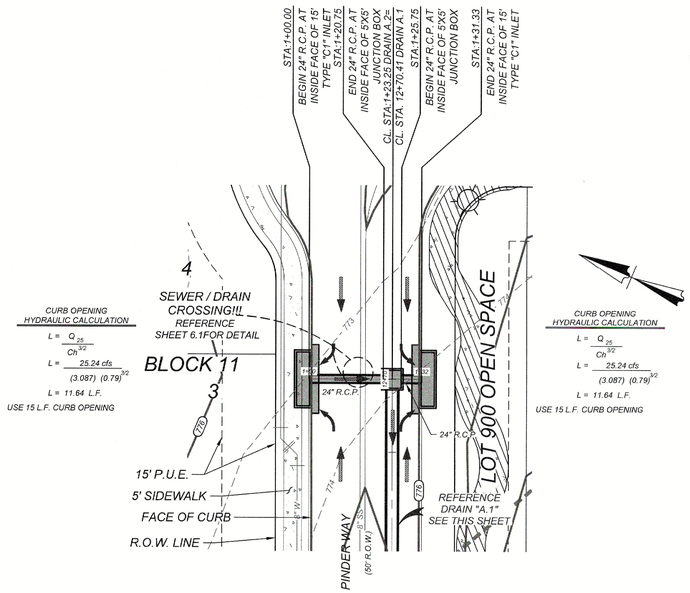
40'



HORZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

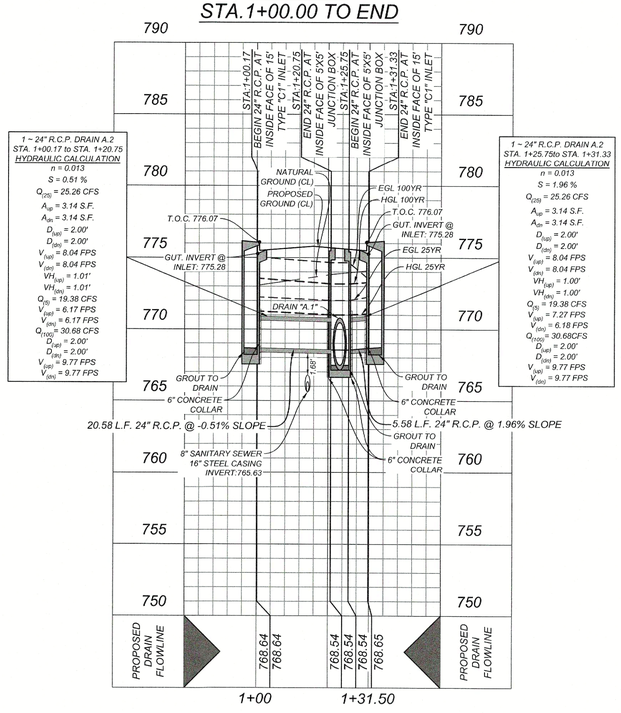
DRAIN A.1
STA.11+00.00 TO END





HORZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

DRAIN A.2
STA.1+00.00 TO END



NOTE:

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2. ALL DISTURBED AREAS SHALL BE REVEGETATED TO A MINIMUM OF 85% WITH THE EXCEPTION OF BUILDABLE RESIDENTIAL LOTS. EROSION AND SEDIMENTATION FROM BUILDABLE LOTS SHOULD BE PREVENTED THROUGH THE USE OF SILT FENCE, CONTROL MATTING, OR OTHER BMPS AS APPROPRIATE.

4. ROUGH GRADING, INCLUDING TREE REMOVAL, MUST BE DONE ON ALL LOTS PRIOR TO SUBDIVISION PRELIMINARY ACCEPTANCE.

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

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FOR

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Colliers Engineering & Design
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Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A

DRAWING NAME: 4.0 DRAIN A.1 & A.2 STA. 1+00.00 - END

SHEET TITLE: DRAIN A.1 & A.2 STA. 1+00.00 - END

SHEET NUMBER: 4.0

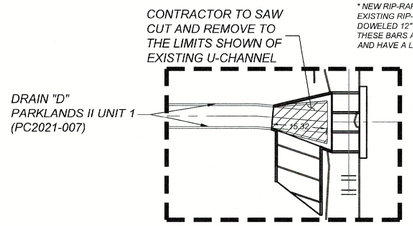
Date: Apr 12, 2024, 10:11am User ID: dgonzalez
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Design/Civil/Drains/4.0 DRAIN A.1 & A.2 STA. 1+00.00 - END.dwg Layout: 4.0 DRAIN A.1 & A.2 STA. 1+00.00 - END By: DGONZALEZ

TRENCH EXCAVATION SAFETY PROTECTION

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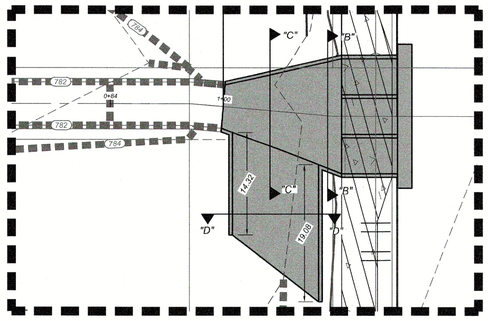
CAUTION!!:

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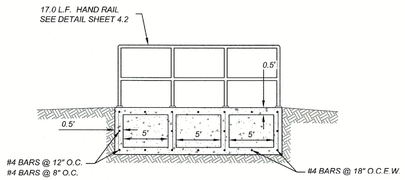


* NEW RIP-RAP SHOULD BE ATTACHED TO EXISTING RIP-RAP BY NO. 4 BARS DOWELED 12" INTO EXISTING RIP-RAP. THESE BARS ARE TO BE SPACED 18" O.C. AND HAVE A LENGTH OF 24"

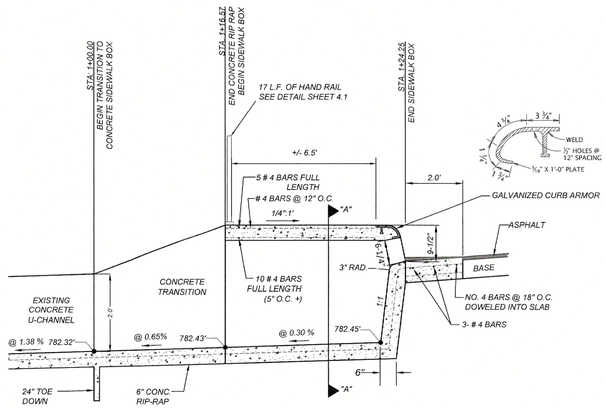
DETAIL "A"
N.T.S.

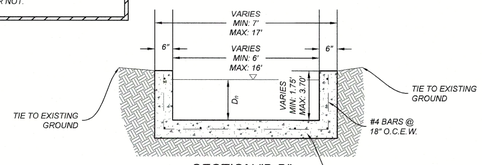


DETAIL "B"
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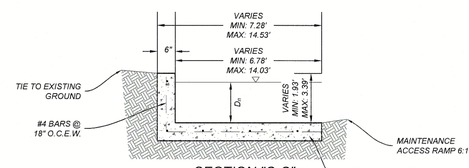


SECTION "A-A"
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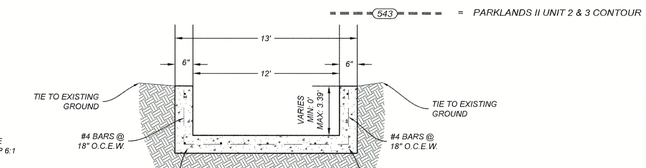




SECTION "B-B"
STA. 1+00.00 TO 1+01.57
STA. 1+13.92 TO 1+16.57
N.T.S.



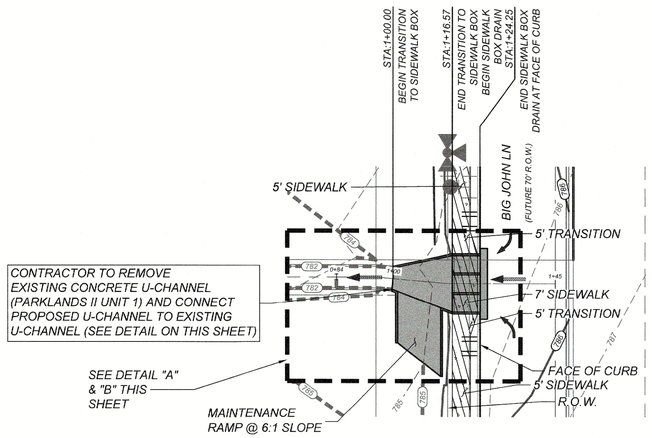
SECTION "C-C"
STA. 1+01.57 TO 1+13.92
N.T.S.

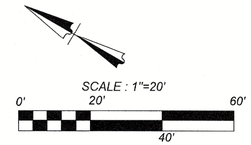


SECTION "D-D"

LEGEND

- = FLOW ARROW
- 715 = EXISTING CONTOUR
- 713 = PROPOSED CONTOUR
- 543 = PARKLANDS II UNIT 2 & 3 CONTOUR





CURB OPENING HYDRAULIC CALCULATION

$L = \frac{Q_{25}}{Ch^{3/2}}$

$L = \frac{28.71}{(3.087)\ (0.79)^{3/2}}$

$L = 13.25$ L.F.

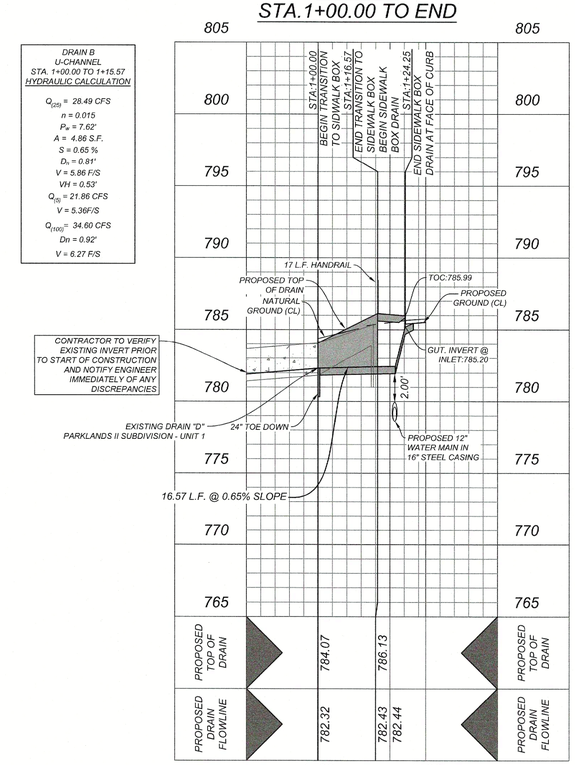
USE 15 L.F. CURB OPENING

HORZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

DRAIN B
STA.1+00.00 TO END

DRAIN B U-CHANNEL STA. 1+00.00 TO 1+15.57
HYDRAULIC CALCULATION

$Q_{(25)} = 28.49$ CFS
$n = 0.015$
$P_w = 7.62'$
$A = 4.86$ S.F.
$S = 0.65\ \%$
$D_n = 0.81'$
$V = 5.86$ F/S
$VH = 0.53'$
$Q_{(5)} = 21.86$ CFS
$V = 5.36$F/S
$Q_{(100)} = 34.60$ CFS
$Dn = 0.92'$
$V = 6.27$ F/S



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TBPLS Firm#: 10194350

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER:	DRAWING NAME:
23008197A	4.1 DRAIN B 1+00.00 - END

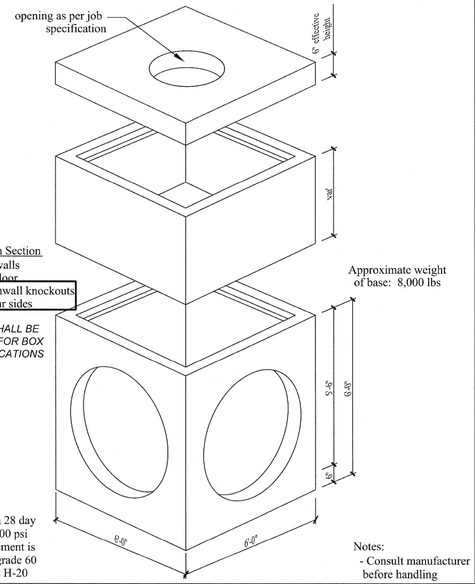
SHEET TITLE: *DRAIN B 1+00.00 - END*

SHEET NUMBER: **4.1**

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Design/Conditional Data/3 - 00.05 - Fill Image4, Default 1.00.00 - Fill1 by Default 1.0"

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

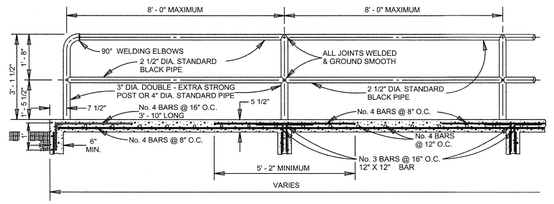
5' x 5' x var Junction Box



Specifications:
- Concrete has a 28 day strength of 5,000 psi
- Steel reinforcement is ASTM A615 grade 60
- Load design is H-20

Notes:
- Consult manufacturer before handling

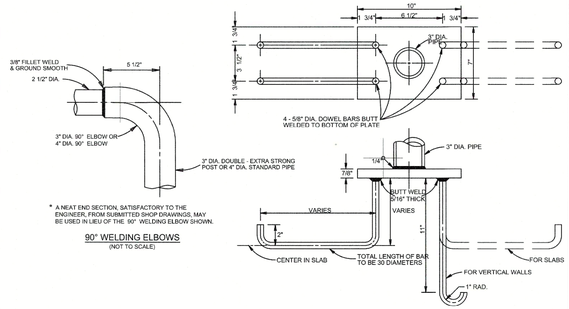
Capital Precast	CAPITAL PRECAST, INC. 6905 SOUTH OLD BASTROP HWY SAN MARCOS, TEXAS 78666 PH. (830) 606-6200	FOR 5' x 5' x var Junction Box		
		JOB		
		DRAWN RW	DATE 12/1/2015	Rev. No.
		FILE catalog/junction boxes/5x5JB		SHEET 1 OF 1



TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION
(NOT TO SCALE)

NOTES

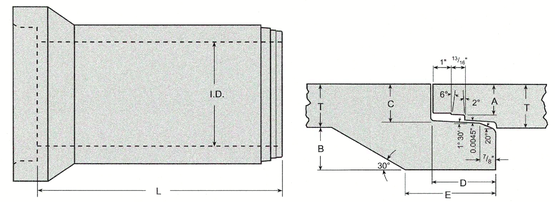
1. COLOR TO BE DETERMINED ON A JOB SPECIFIC BASIS TO BE APPROVED BY THE CITY THROUGH THE SUBMITTAL PROCESS.



PIPE ANCHORAGE DETAILS
(NOT TO SCALE)

SCHERTZ COMMUNITY★SERVICE★OPPORTUNITY	PIPE RAILING	
	TECHNICAL SPECIFICATION SECTION 03200	
	ENGINEERING AND PUBLIC WORKS	SCALE: AS SHOWN DATE: 2/1/19 DESIGN BY: ENG. DRAWN BY: SCP SHEET NO.: 1 of 2

Reinforced Concrete Pipe



JOINT DETAIL

PIPE & JOINT DATA										
I.D. (in.)	Metic Eq. (mm)	Area ($ft.^2$)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	L (ft.)	Weight (lbs./ft.)
12	300	0.8	2	1.293	2	1.641	3 5/8	5	8	105
15	375	1.2	2 1/4	1.543	2 1/4	1.891	3 5/8	5	8	140
18	450	1.8	2 1/2	1.730	2 1/2	2.079	3 5/8	5	8	180
21	525	2.4	2 3/4	1.971	2 5/8	2.319	3 7/8	6	8	228
24	600	3.1	3	1.221	2 3/4	2.569	3 7/8	6 1/2	8	286
27	675	4.0	3 1/4	2.404	2 7/8	2.753	4	6 1/2	8	334
30	750	4.9	3 1/2	2.654	3 1/8	3.003	4	7	8	402
36	900	7.1	4	3.092	3 5/8	3.440	4	7 1/2	8	566
42	1,050	9.6	4 1/2	3.684	4 1/8	4.097	4 5/8	8	8	686
48	1,200	12.6	5	4.185	4 1/2	4.602	4 3/4	8 1/2	8	884

Note:
1.) All dimensions are nominal and within the permissible variations of ASTM.
2.) Reinforced concrete pipe conforms to current ASTM C-76 Specification (Class III)
3.) Rubber gaskets conform to ASTM C-433 Specification.

-No Scale-
All dimensions subject to allowable specification tolerances.

TITLE	PLANT	STATE	SECTION-PAGE	DATE	
Circular Concrete Pipe, 12" - 48"		AR	3.1	2-1-05	FORTERRA

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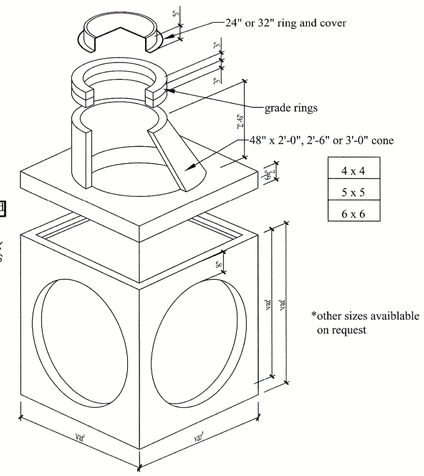
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REV	DESCRIPTION	DRAWN BY	DATE

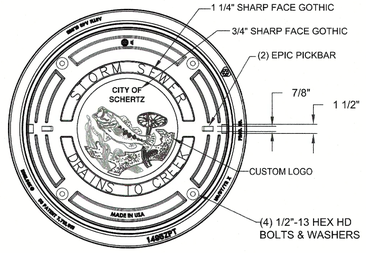
Junction Box / Eccentric Manhole



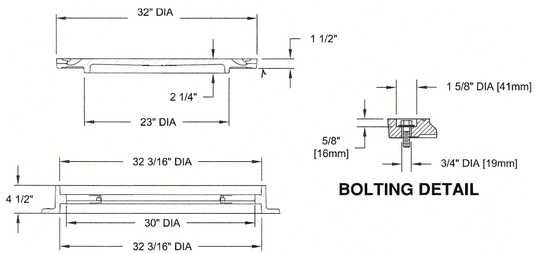
Specifications:
- Concrete has a 28 day strength of 5,000 psi
- Steel reinforcement is ASTM A615 grade 60
- Load design is H-20

Notes:
- Consult manufacturer before handling

Capital Precast	CAPITAL PRECAST, INC. 6905 SOUTH OLD BASTROP HWY SAN MARCOS, TEXAS 78666 PH. (830) 606-6200	FOR Junction Box / Eccentric Manhole		
		JOB		
		DRAWN RW	DATE 12/1/2015	Rev. No.
		FILE catalog/junction boxes/456 JB with ecc cone		SHEET 1 OF 1



PLAN VIEW

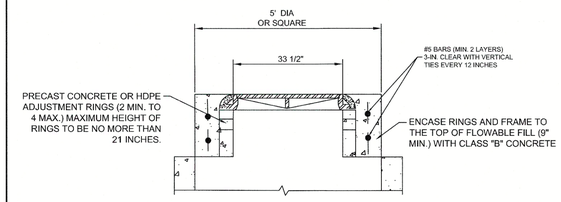


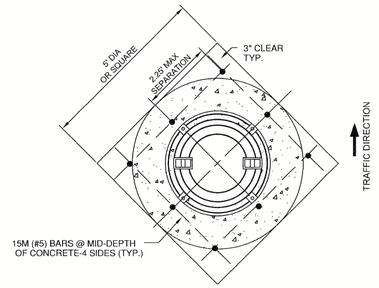
SECTION

BOLTING DETAIL

NOTE: FRAME IS REVERSIBLE CAN BE INSTALLED AS TOP OR BOTTOM FLANGE UNIT.

SCHERTZ COMMUNITY★SERVICE★OPPORTUNITY	STORM SEWER MANHOLE RING & COVER	
	TECHNICAL SPECIFICATION SECTION 02084	
	ENGINEERING AND PUBLIC WORKS	SCALE: N.T.S. DATE: 5/10/19 DESIGN BY: ENG. DRAWN BY: SCP SHEET NO.: 1 of 2





GENERAL NOTES

1. MANHOLE RING ENCASEMENT IS REQUIRED ON ALL MANHOLES.
2. PAYMENT FOR MANHOLE RING ENCASEMENT SHALL BE INCLUDED IN THE COST OF THE MANHOLE

SCHERTZ COMMUNITY★SERVICE★OPPORTUNITY	STANDARD DETAIL 02081.2	
	MANHOLE RING ENCASEMENT TECHNICAL SPECIFICATION SECTIONS 02081, 02082, & 02083	
	ENGINEERING AND PUBLIC WORKS	SCALE: N.T.S. DATE: 12/07/2021 DESIGN BY: ENG. DRAWN BY: TGW SHEET NO.: 1 of 1

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN
FOR
PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
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640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

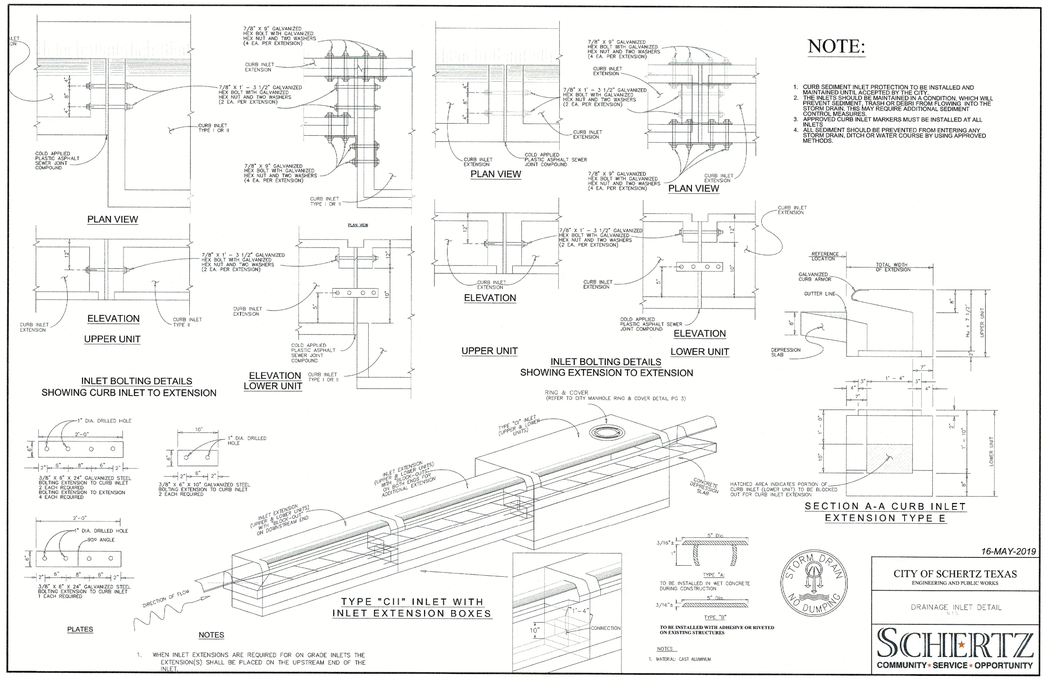
PROJECT NUMBER: 23008197A
DRAWING NAME: 4.2 DRAIN DETAILS

SHEET TITLE: *DRAIN DETAILS*

SHEET NUMBER: 4.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Jan 24, 2024, 3:45pm User ID: dgonzalez
File: U:\Projects\23008197A Schertz Parklands II\Civil\Design\4.2 DRAIN DETAILS.dwg
U:\Projects\23008197A Schertz Parklands II\Civil\Design\4.2 DRAIN DETAILS.dwg by DGONZALEZ



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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
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TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 4.2 DRAIN DETAILS

SHEET TITLE: *DRAIN DETAILS*

SHEET NUMBER: *4.3*

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Cad Version: AutoCAD Land Desktop 2023 (English) Plot Scale: 1.0000 Plot Offset: 0.00, 0.00

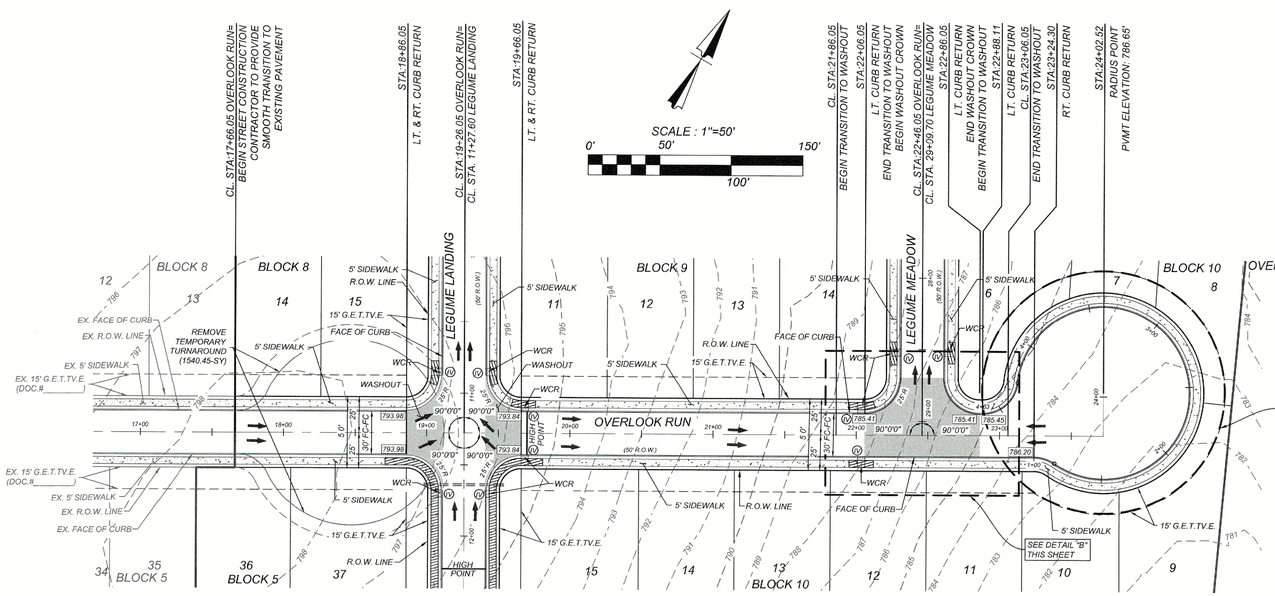
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

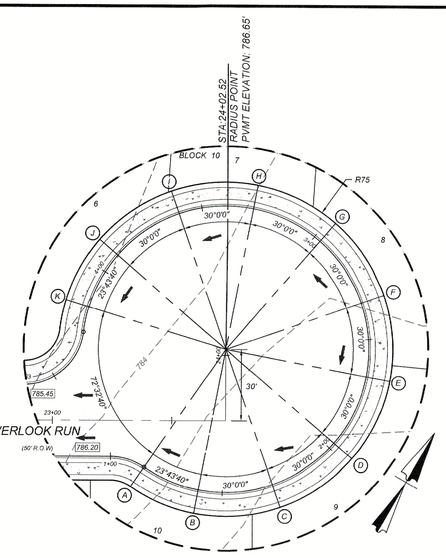
TRENCH EXCAVATION SAFETY PROTECTION

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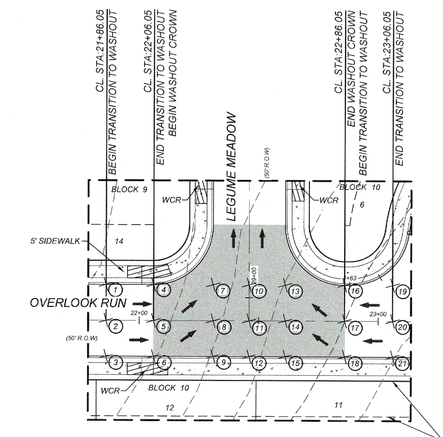
DETAIL 'A'
SCALE: 1" = 30'

80.00 ACRE TRACT
(VOL. 2944 PG. 640 O.P.R.)
OWNER: ROLAND K. & SUZANNE SCHOTT

CUL-DE-SAC STATION	TOP OF CURB ELEVATION
A	786.28
B	786.40
C	786.56
D	786.72
E	786.87
F	787.03
G	786.83
H	786.56
I	786.28
J	786.01
K	785.79

LEGEND

GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT	=	G.E.T.TV.E.
WHEELCHAIR RAMP	=	W.C.R.
RIGHT OF WAY	=	R.O.W.
EXISTING CONTOURS	=	298
PROPOSED FLOW ARROW	=	
TOP OF CURB ELEVATIONS	=	662.00
PROPOSED DRIVEWAY LOCATIONS	=	
PROPOSED WASHOUT CROWN	=	
LIMITS OF CONSTRUCTION	=	
WHEELCHAIR RAMP TYPE IV SEE SHEET 5.8	=	W
SIDEWALK TO BE CONSTRUCTED BY DEVELOPER	=	
SIDEWALK TO BE BUILT AT TIME OF CONSTRUCTION	=	



DETAIL 'B'
SCALE: 1" = 30'

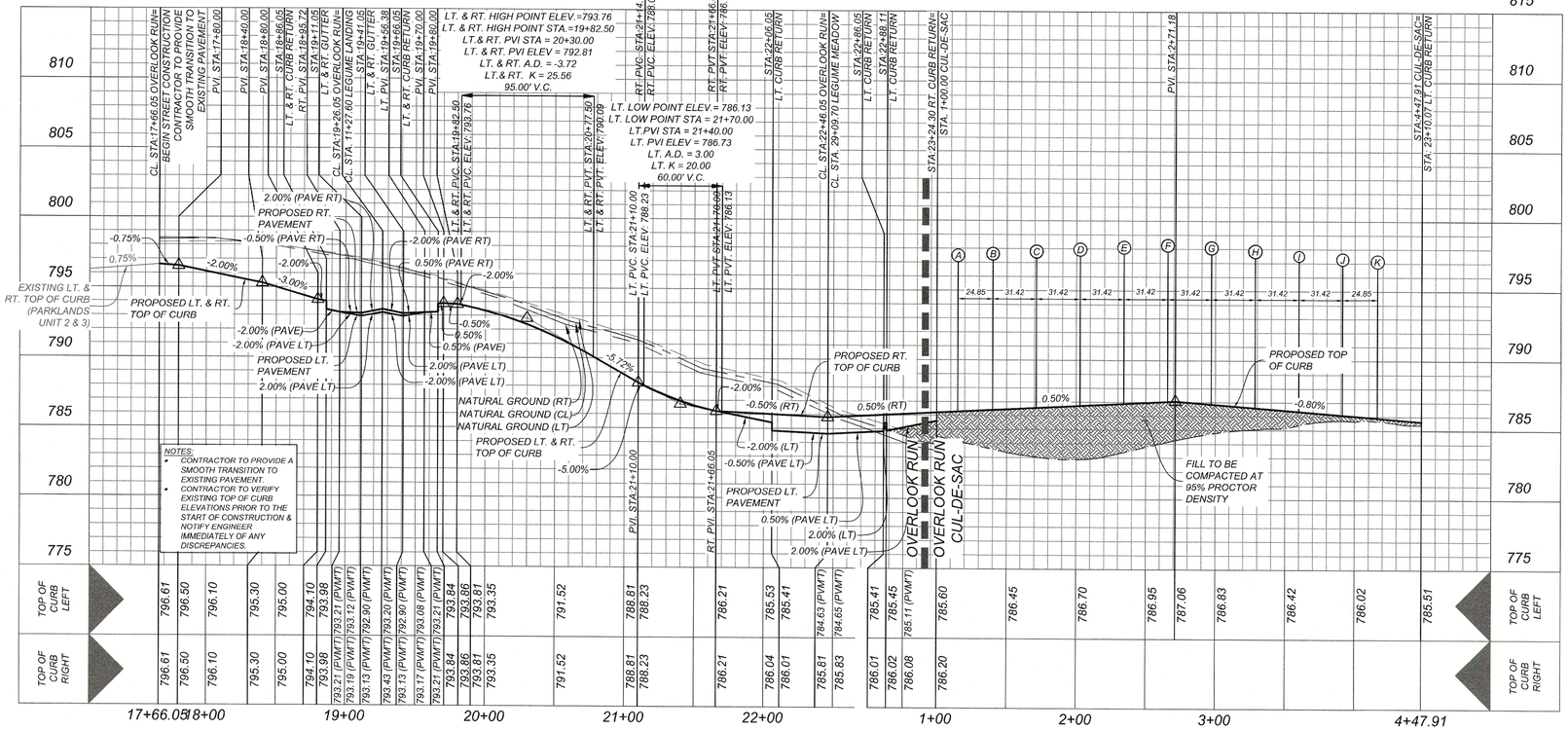
POINT #	NORTHING	EASTING	GUT/PAVEMENT ELEV.
1	13781609.77	2227915.79	785.23
2	13781596.76	2227923.25	785.83
3	13781583.75	2227930.72	785.53
4	13781619.72	2227933.14	784.83
5	13781606.71	2227940.60	785.13
6	13781593.69	2227948.06	785.43
7	13781632.16	2227954.83	784.71
8	13781619.14	2227962.29	785.01
9	13781606.13	2227969.75	785.31
10	13781639.62	2227967.84	784.63
11	13781626.61	2227975.30	784.93
12	13781613.59	2227982.76	785.23
13	13781647.08	2227980.85	784.71
14	13781634.07	2227988.31	785.01
15	13781621.06	2227995.77	785.31
16	13781659.52	2228002.54	784.83
17	13781646.51	2228010.00	785.13
18	13781633.49	2228017.46	785.43
19	13781669.47	2228019.89	785.23
20	13781656.46	2228027.35	785.83
21	13781643.44	2228034.81	785.53

OVERLOOK RUN
STA. 17+66.05 TO STA. 23+24.30

RT. LOW POINT ELEV.= 786.21
RT. LOW POINT STA = 21+66.00
RT.PVI STA = 21+40.00
RT. PVI ELEV = 786.73
RT. A.D. = 3.00
RT. K = 17.33
52.00' V.C.

OVERLOOK RUN CUL-DE-SAC
STA. 1+00.00 TO STA. 4+47.91

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



NOTES:
- CONTRACTOR TO PROVIDE A SMOOTH TRANSITION TO EXISTING PAVEMENT.
- CONTRACTOR TO VERIFY EXISTING TOP OF CURB ELEVATIONS PRIOR TO THE START OF CONSTRUCTION & NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

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5-8-24

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FOR
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TBPE Firm#: F-14909
TBPLS Firm#: 10194350

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 5.0 OVERLOOK RUN STA. 17+66.05 - END

SHEET TITLE: OVERLOOK WAY STA. 17+66.05 - END

SHEET NUMBER: 5.0

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: May 07, 2024, 11:08am User ID: dgonzalez
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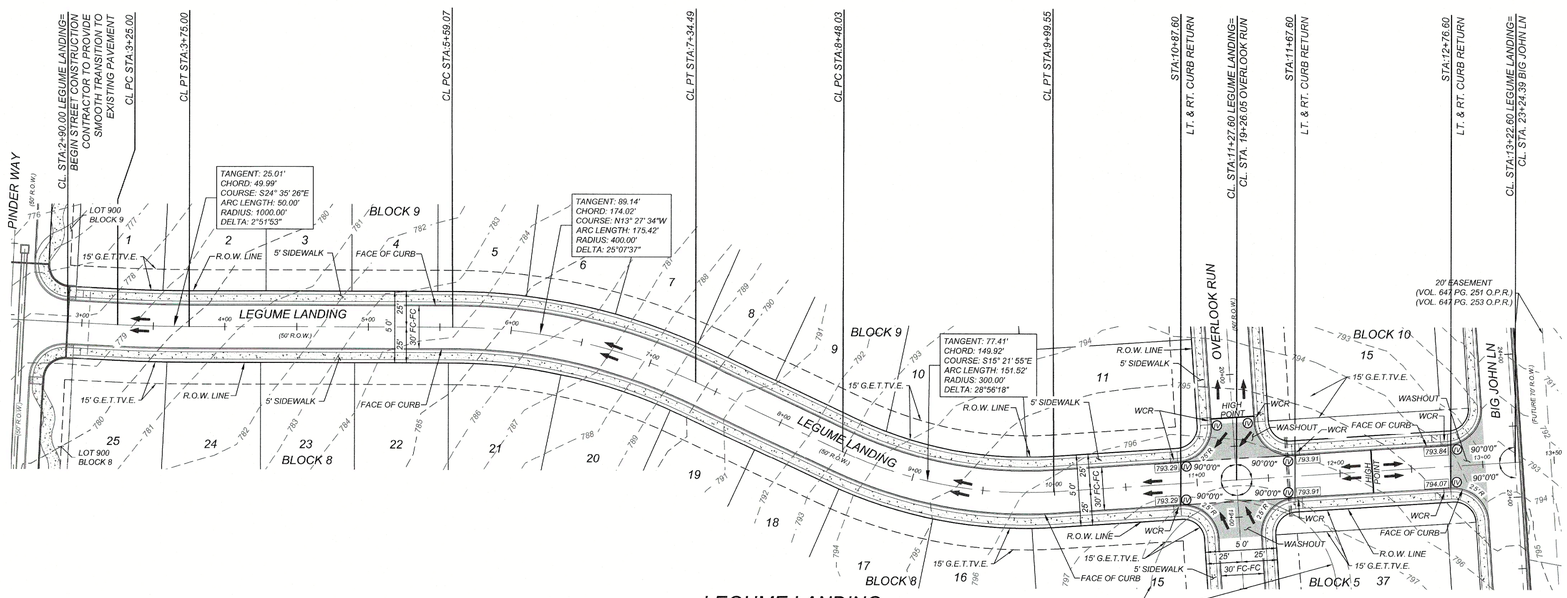
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LEGEND

GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT	=	G.E.T.T.V.E.
WHEELCHAIR RAMP	=	W.C.R.
RIGHT OF WAY	=	R.O.W.
EXISTING CONTOURS	=	298
PROPOSED FLOW ARROW	=	
TOP OF CURB ELEVATIONS	=	662.00
PROPOSED DRIVEWAY LOCATIONS	=	
PROPOSED WASHOUT CROWN	=	
LIMITS OF CONSTRUCTION	=	
WHEELCHAIR RAMP TYPE IV SEE SHEET 5.8	=	W
SIDEWALK TO BE CONSTRUCTED BY DEVELOPER	=	
SIDEWALK TO BE BUILT AT TIME OF CONSTRUCTION	=	

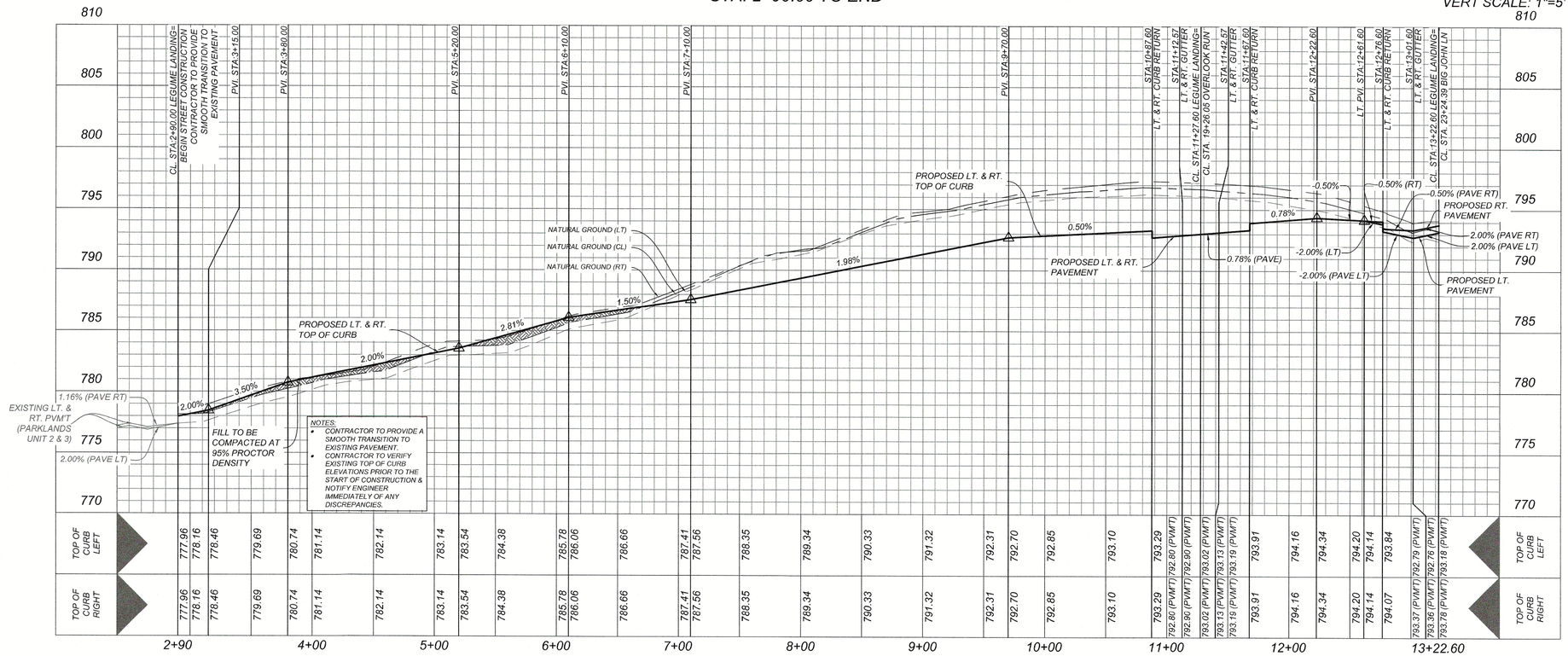


40.00 ACRE TRACT
(VOL. 589 PG. 776 O.P.R.)
OWNER: WESTON RANCH FOUNDATION
(VOL. 2338 PG. 451 O.P.R.)
ZONING - N/A (OUTSIDE CITY LIMITS)

SCALE : 1"=50'
0' 50' 100' 150'

LEGUME LANDING
STA. 2+90.00 TO END

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



	2+90	4+00	5+00	6+00	7+00	8+00	9+00	10+00	11+00	12+00	13+22.60
TOP OF CURB LEFT	777.96	778.16	778.46	779.69	780.74	781.14	782.14	783.14	783.54	784.38	785.78	786.06	786.66	787.41	787.56	788.35	789.34	790.33	791.32	792.31	792.70	792.85	793.10	793.29	792.86 (PVMT) 792.90 (PVMT)	793.02 (PVMT) 793.13 (PVMT) 793.19 (PVMT)	793.91	794.16	794.34	794.20	794.14	794.07	793.37 (PVMT) 793.36 (PVMT)	792.79 (PVMT) 792.76 (PVMT)	793.18 (PVMT)
TOP OF CURB RIGHT	777.96	778.16	778.46	779.69	780.74	781.14	782.14	783.14	783.54	784.38	785.78	786.06	786.66	787.41	787.56	788.35	789.34	790.33	791.32	792.31	792.70	792.85	793.10	793.29	792.86 (PVMT) 792.90 (PVMT)	793.02 (PVMT) 793.13 (PVMT) 793.19 (PVMT)	793.91	794.16	794.34	794.20	794.14	793.84	793.37 (PVMT) 793.36 (PVMT)	792.79 (PVMT) 792.76 (PVMT)	793.18 (PVMT)

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WAYNE FLORES
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COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 5.1 LEGUME LANDING STA. 2+90.00 - END

SHEET TITLE: LEGUME LANDING STA. 2+90.00 - END

SHEET NUMBER: 5.1

Date: May 07, 2024, 11:10am User ID: dgonzalez
File: J:\Projects\230081\97A\Civil\Design\5.1 LEGUME LANDING STA. 2+90.00 - END.dwg
Drawings\Civil\SHEETS\5.1 LEGUME LANDING STA. 2+90.00 - END.dwg 5.1 LEGUME LANDING STA. 2+90.00 - END By:DGONZALEZ

TRENCH EXCAVATION SAFETY PROTECTION

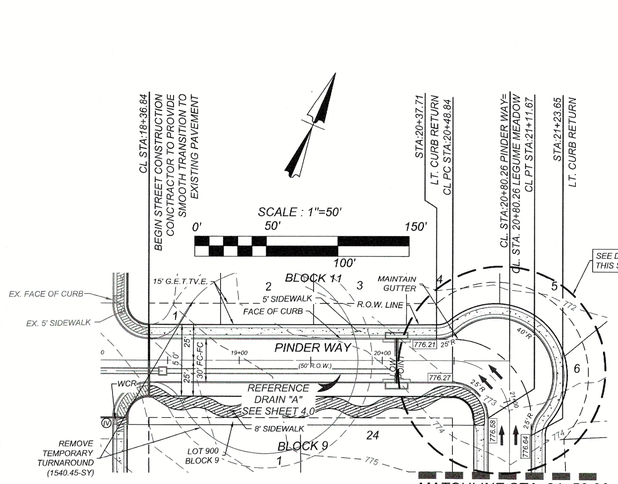
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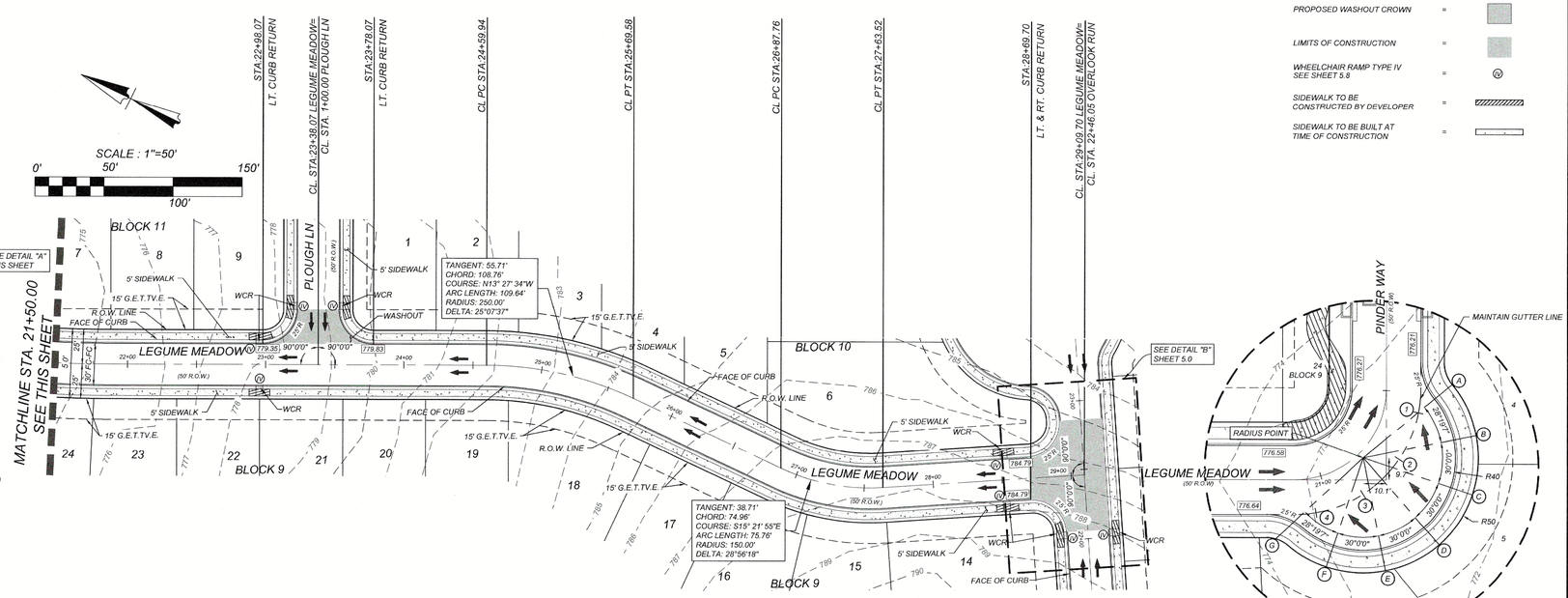
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LEGEND

GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT	=	G.E.T.TV.E.
WHEELCHAIR RAMP	=	W.C.R.
RIGHT OF WAY	=	R.O.W.
EXISTING CONTOURS	=	298
PROPOSED FLOW ARROW	=	
TOP OF CURB ELEVATIONS	=	662.00
PROPOSED DRIVEWAY LOCATIONS	=	
PROPOSED WASHOUT CROWN	=	
LIMITS OF CONSTRUCTION	=	
WHEELCHAIR RAMP TYPE IV SEE SHEET 5.8	=	W
SIDEWALK TO BE CONSTRUCTED BY DEVELOPER	=	
SIDEWALK TO BE BUILT AT TIME OF CONSTRUCTION	=	

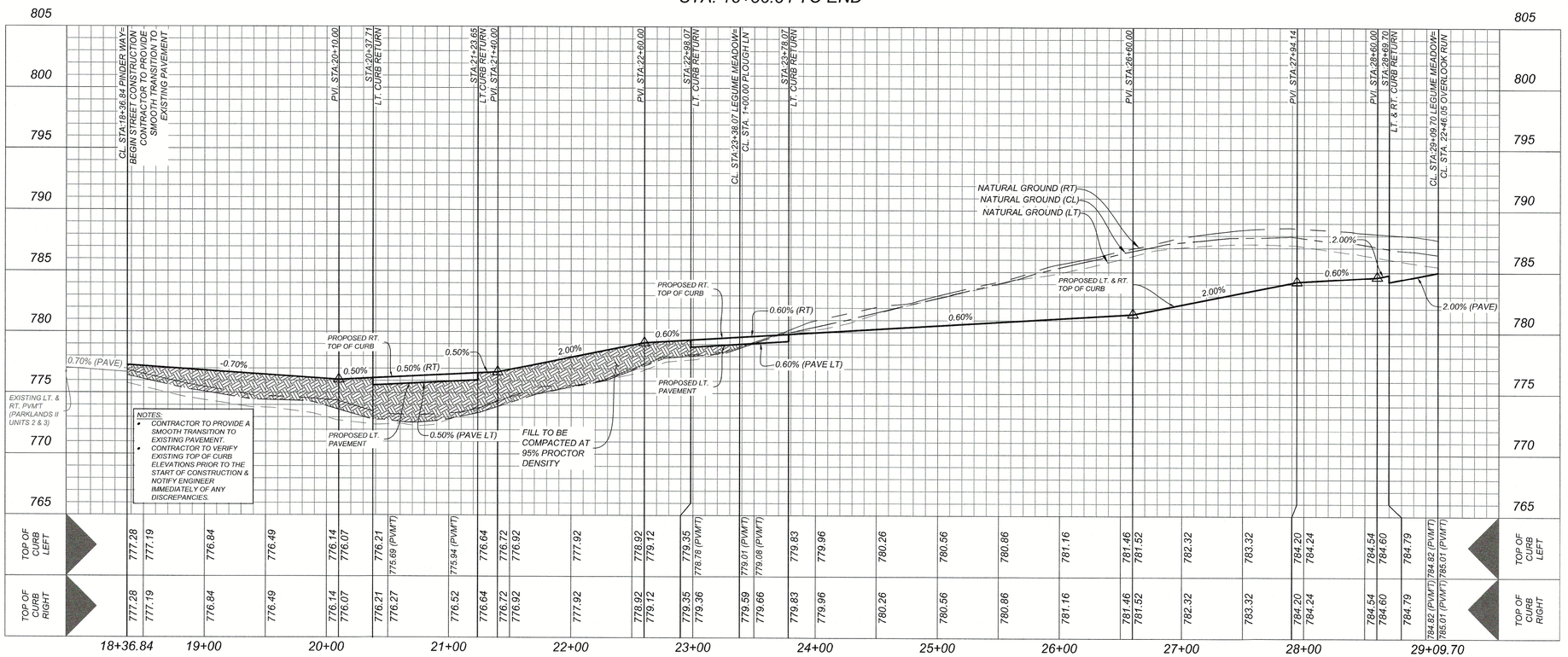




DETAIL "A"
SCALE: 1" = 30'

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'

PINDER WAY - LEGUME MEADOW
STA. 18+36.84 TO END



CUL-DE-SAC STATION	TOP OF CURB ELEVATION
A	776.56
B	776.75
C	776.85
D	776.96
E	777.06
F	776.99
G	776.78

POINT #	NORTHING	EASTING	GUT/PAVEMENT ELEV.
1	13782401.79	2227657.09	775.72
2	13782401.93	2227678.94	775.80
3	13782393.56	2227699.13	775.88
4	13782377.98	2227714.46	775.96

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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC
TBPE Firm#: F-14905
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 5.2 PINDER WAY - LEGUME MEADOW STA. 18+36.84 - END

SHEET TITLE: PINDER WAY - LEGUME MEADOW STA. 18+36.84 - END

SHEET NUMBER: 5.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

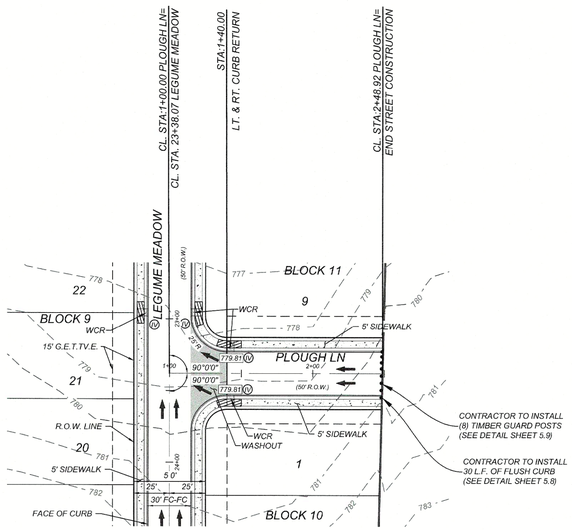
Date: May 07, 2024, 11:12am User ID: dgonzales
File: N:\Projects\230081\97-CIVIL\SHEETS\5.2 PINDER WAY – LEGUME MEADOW STA. 18+36.84 – END.dwg
Design\Civil\SHEETS\5.2 PINDER WAY - LEGUME MEADOW STA. 18+36.84 - END.dwg\5.2 PINDER WAY - LEGUME MEADOW STA. 18+36.84 - END By: JDOSHKAEE

TRENCH EXCAVATION SAFETY PROTECTION

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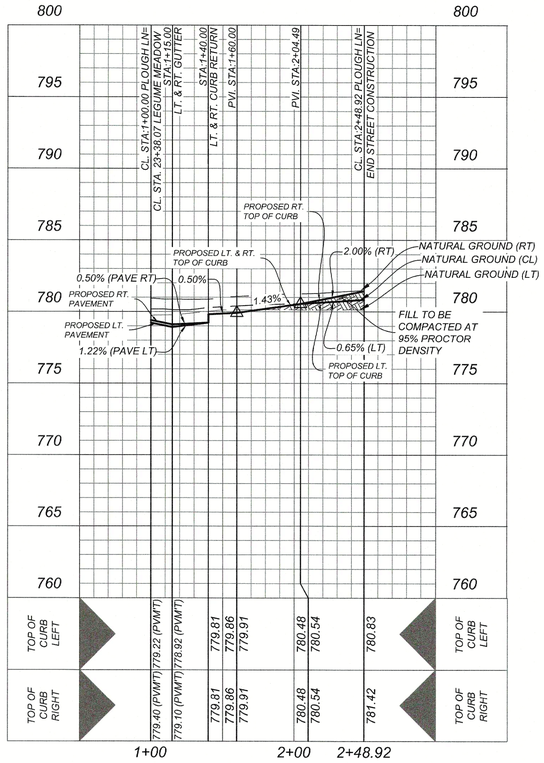
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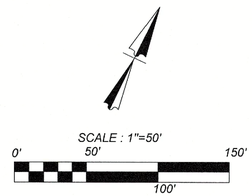
PLOUGH LN
STA. 1+00.00 TO END

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



LEGEND

GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT	=	G.E.T.T.V.E.
WHEELCHAIR RAMP	=	W.C.R.
RIGHT OF WAY	=	R.O.W.
EXISTING CONTOURS	=	298
PROPOSED FLOW ARROW	=	
TOP OF CURB ELEVATIONS	=	662.00
PROPOSED DRIVEWAY LOCATIONS	=	
PROPOSED WASHOUT CROWN	=	
LIMITS OF CONSTRUCTION	=	
WHEELCHAIR RAMP TYPE IV SEE SHEET 5.8	=	Ⓦ
SIDEWALK TO BE CONSTRUCTED BY DEVELOPER	=	
SIDEWALK TO BE BUILT AT TIME OF CONSTRUCTION	=	



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STATE OF TEXAS
WAYNE FLORES
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5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

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TEXAS

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New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 5.3 PLOUGH LN STA. 1+00.00 - END

SHEET TITLE: *PLOUGH LN STA. 1+00.00 - END*

SHEET NUMBER: **5.3**

Date: May 07, 2024, 11:13am User ID: dgonzalez
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Image(s): I:\Projects\23008197A - PARKLANDS II UNIT 4\Design\Civil\SHEETS\5.3 PLOUGH LN STA. 1+00.00 - END_Image(s).tif By: DGONZALEZ

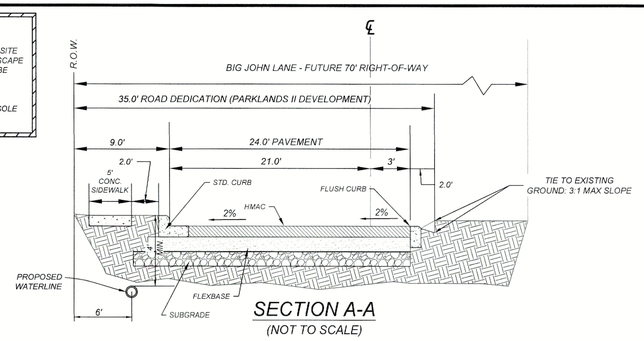
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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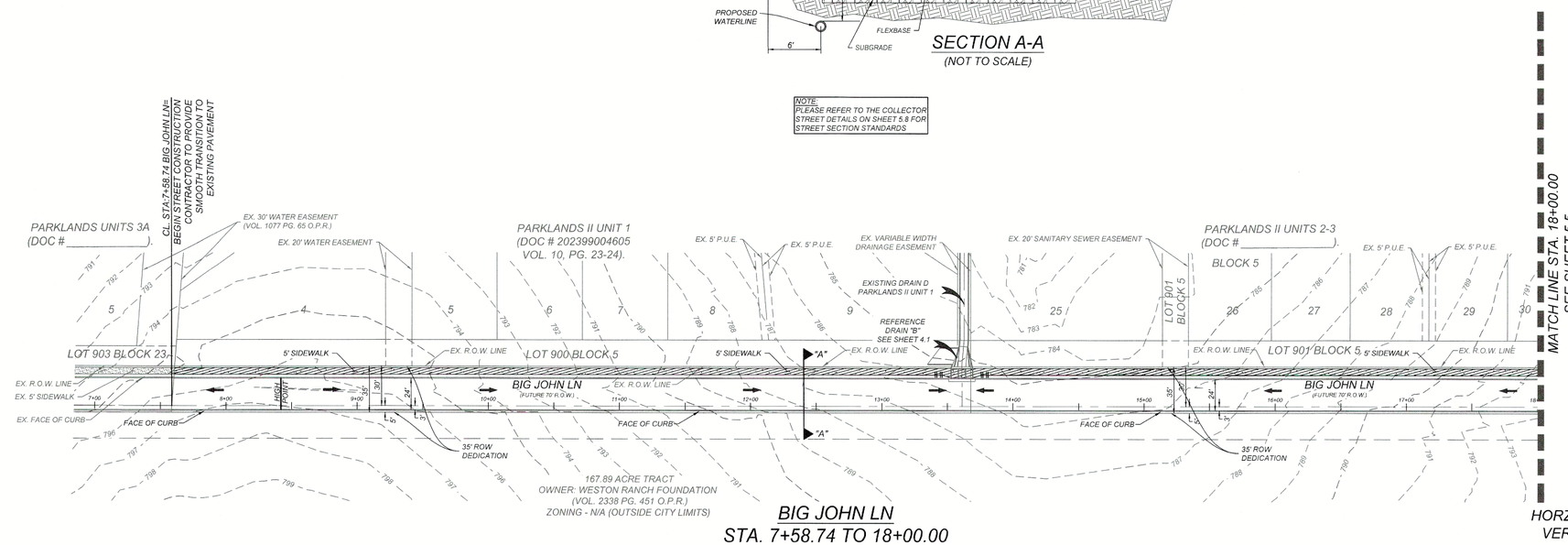


SECTION A-A
(NOT TO SCALE)

NOTE:
PLEASE REFER TO THE COLLECTOR STREET DETAILS ON SHEET 5.8 FOR STREET SECTION STANDARDS

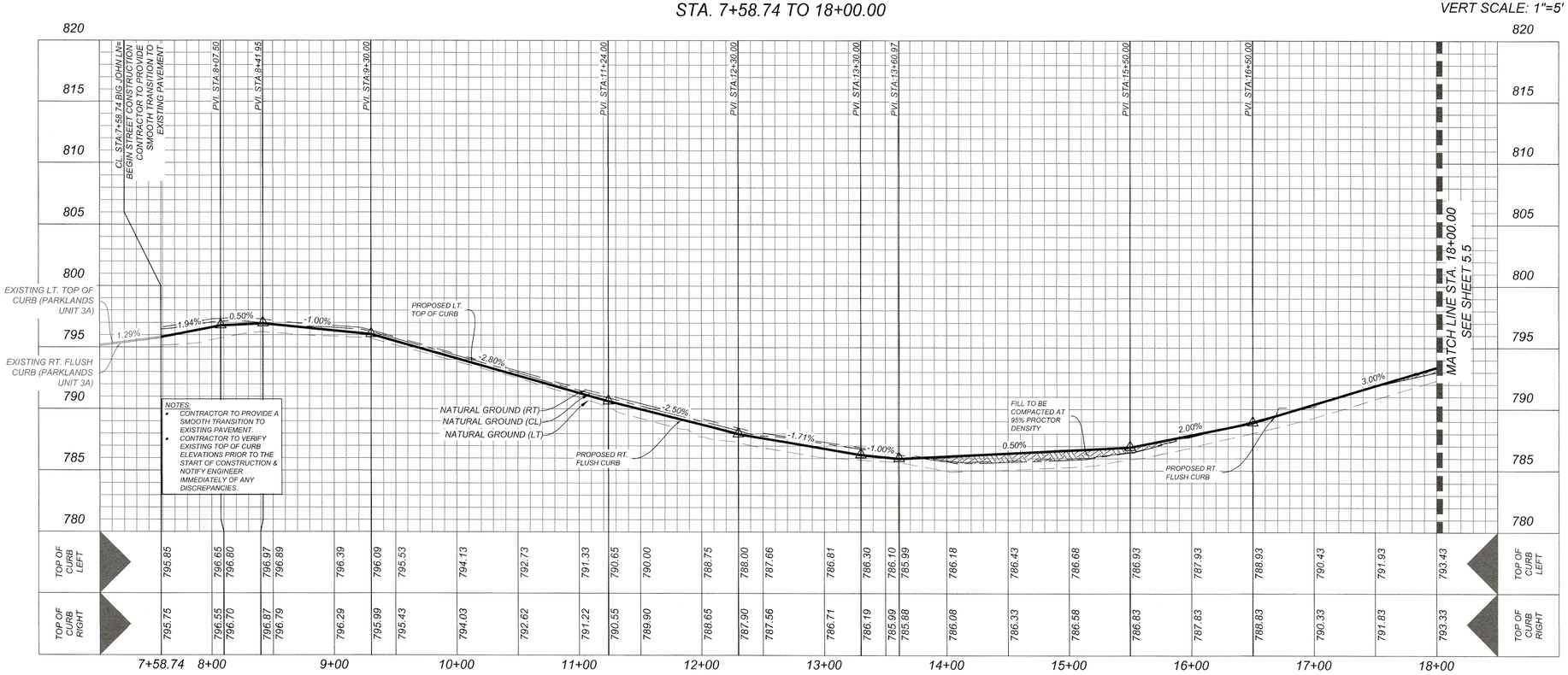
LEGEND

GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT	=	G.E.T.T.V.E.
WHEELCHAIR RAMP	=	W.C.R.
RIGHT OF WAY	=	R.O.W.
EXISTING CONTOURS	=	298
PROPOSED FLOW ARROW	=	
TOP OF CURB ELEVATIONS	=	662.00
PROPOSED DRIVEWAY LOCATIONS	=	
PROPOSED WASHOUT CROWN	=	
LIMITS OF CONSTRUCTION	=	
WHEELCHAIR RAMP TYPE IV SEE SHEET 5.6	=	(V)
SIDEWALK TO BE CONSTRUCTED BY DEVELOPER	=	
SIDEWALK TO BE BUILT AT TIME OF CONSTRUCTION	=	



BIG JOHN LN
STA. 7+58.74 TO 18+00.00

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



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SCALE : 1"=50'
0' 50' 150'
100'

REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-2024

FINAL SUBDIVISION PLAN
FOR
PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194050

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 5-5 BIG JOHN LN STA. 18+00.00 - END

SHEET TITLE:
BIG JOHN LN STA. 7+58.74 - 18+00.00

SHEET NUMBER: 5.4

Date: May 07, 2024 - 11:15am User ID: dgonzales
File: L:\Projects\23008197A\Civil\Design\Cover Sheet\5-5 BIG JOHN LN STA. 7+58.74 - 18+00.00 - END.dwg
By:DGONZALEZ

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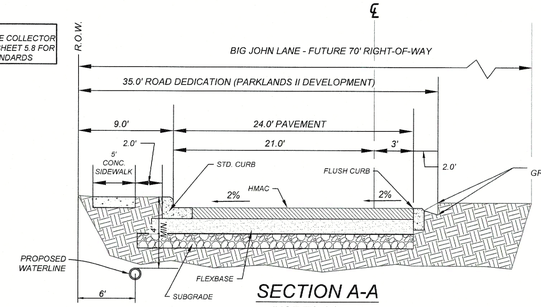
TRENCH EXCAVATION SAFETY PROTECTION

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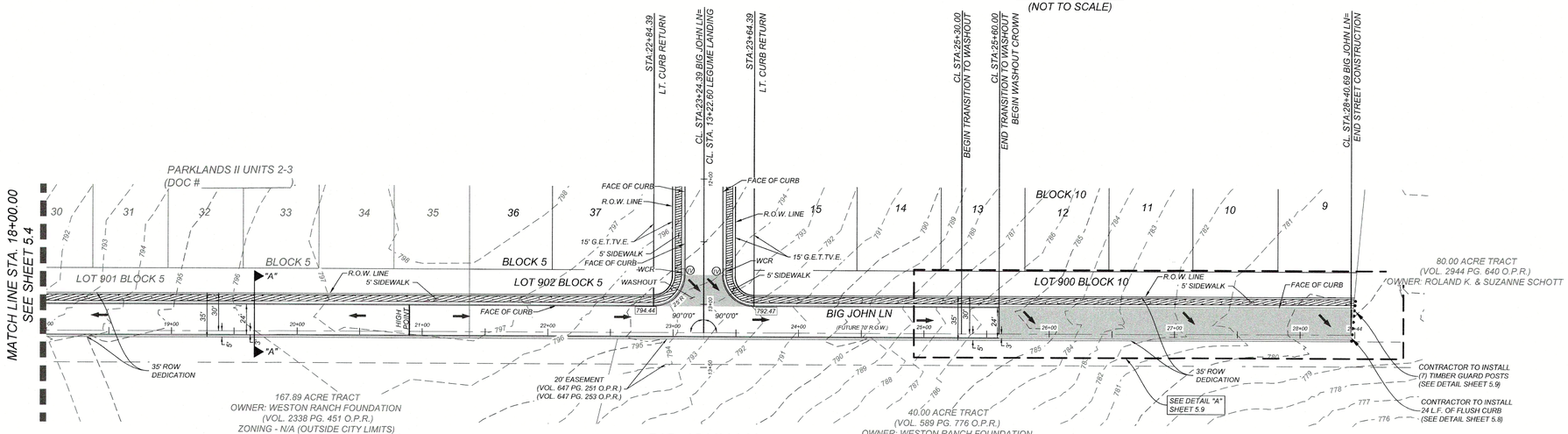
NOTE:
PLEASE REFER TO THE COLLECTOR STREET DETAILS ON SHEET 5.8 FOR STREET SECTION STANDARDS



SECTION A-A
(NOT TO SCALE)

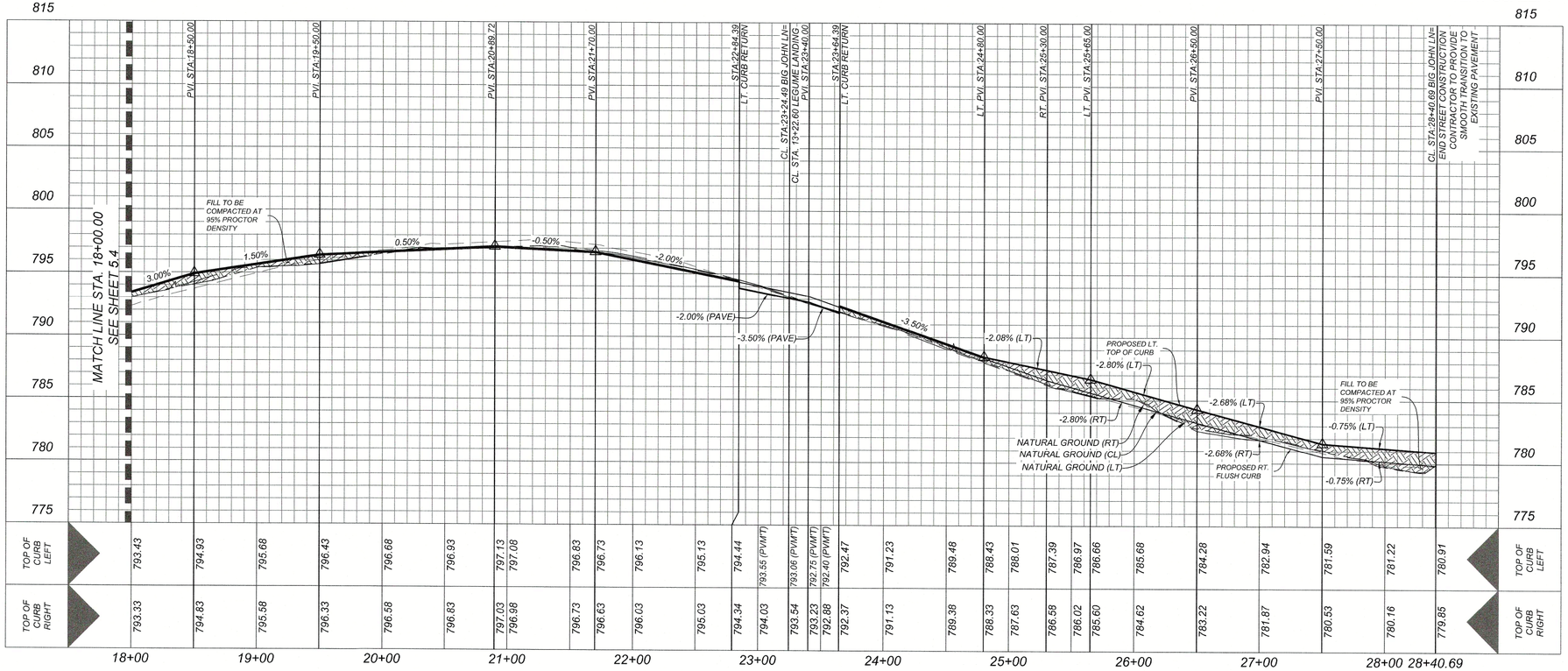
LEGEND

GAS, ELECTRIC, TELEPHONE & CABLE TV EASEMENT	=	G.E.T.TV.E.
WHEELCHAIR RAMP	=	W.C.R.
RIGHT OF WAY	=	R.O.W.
EXISTING CONTOURS	=	298
PROPOSED FLOW ARROW	=	
TOP OF CURB ELEVATIONS	=	662.00
PROPOSED DRIVEWAY LOCATIONS	=	
PROPOSED WASHOUT CROWN	=	
LIMITS OF CONSTRUCTION	=	
WHEELCHAIR RAMP TYPE IV SEE SHEET 5.8	=	W
SIDEWALK TO BE CONSTRUCTED BY DEVELOPER	=	
SIDEWALK TO BE BUILT AT TIME OF CONSTRUCTION	=	



BIG JOHN LN
STA. 18+00.00 TO END

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



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REV	DATE	DRAWN BY	DESCRIPTION

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STATE OF TEXAS
WAYNE FLORES
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 5.5 BIG JOHN LN STA. 18+00.00 - END

SHEET TITLE: *BIG JOHN LN STA. 18+00.00 - END*

SHEET NUMBER: 5.5

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: May 07, 2024, 11:16am User ID: dgonzalez
File: U:\Projects\205\29\GIS\Design\Civil\STREETS\5.5 BIG JOHN LN STA. 18+00.00 - END.dwg

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★ **WATER METER NOTE:**
ALL ELECTRIC IMPROVEMENTS INCLUDING STREET LIGHTS MUST BE PLACED A MINIMUM OF 4 FEET FROM THE METER BOX.

NOTES:
1) ALL SIGNAGE WITHIN SUBDIVISION SHALL COMPLY WITH THE CITY OF SCHERTZ STANDARD SIGN SPECIFICATIONS.

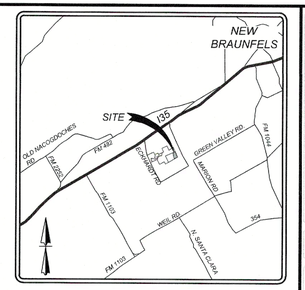
2) CONTRACTOR SHALL PURCHASE ALL STREET SIGNS PRIOR TO FINAL INSPECTION THROUGH THE CITY OF SCHERTZ PUBLIC WORKS DEPARTMENT BY CALLING (210) 619 1800.

3.) ALL SIGNAGE TO BE INSTALLED BY CITY OF SCHERTZ AFTER PURCHASED BY CONTRACTOR.

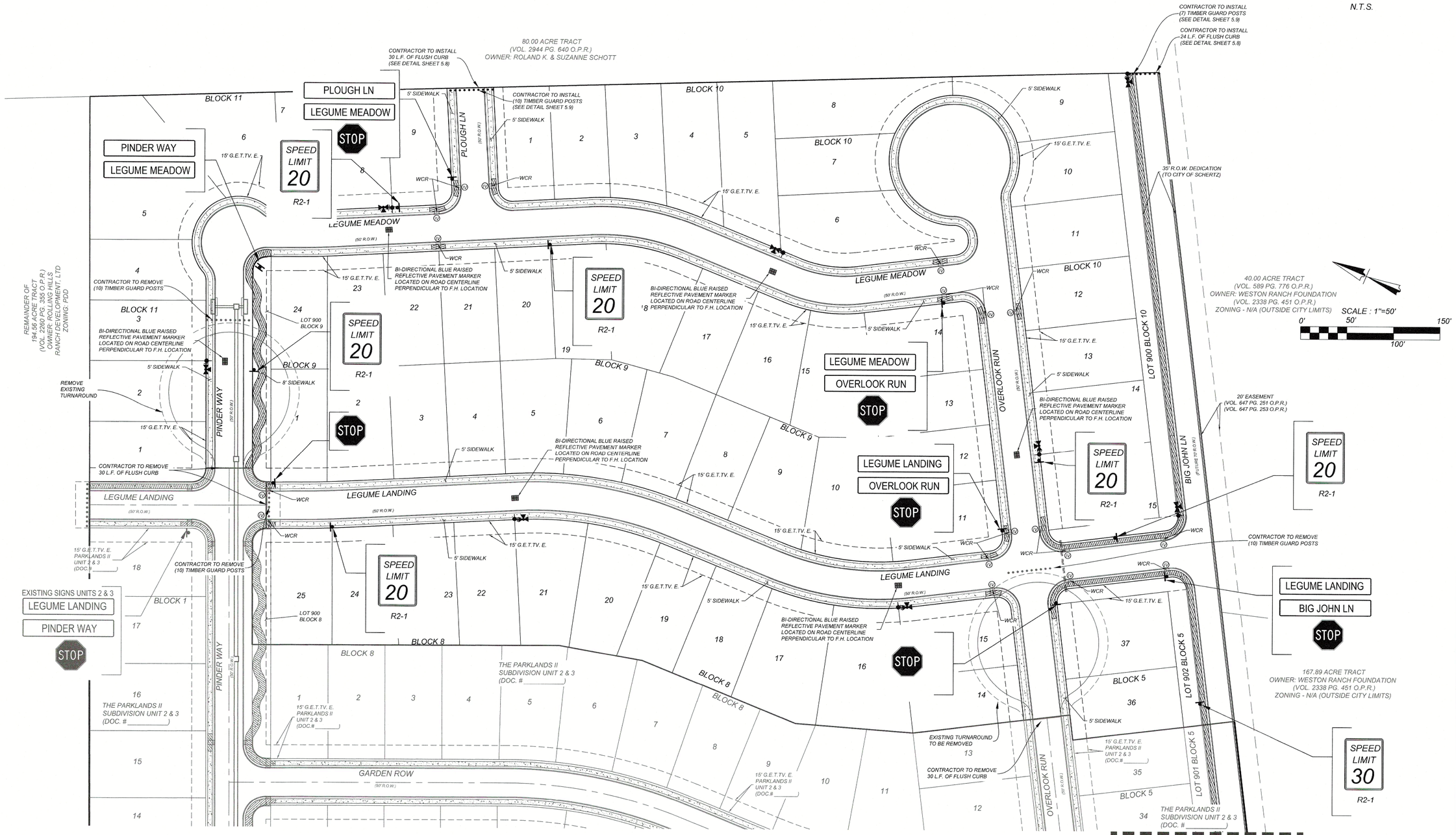
NOTE:
ALL RAMPS AND ANY PROPOSED SIDEWALKS THAT DO NOT FRONT PROPOSED RESIDENTIAL LOTS ARE REQUIRED TO BE CONSTRUCTED WITH THE STREET CONSTRUCTION.

LEGEND

- W.C.R. = WHEELCHAIR RAMPS SEE SHEET 5.8
- = PLAN TO REFLECT DEVELOPER SIDEWALKS
- = SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
- = BLUE RAISED REFLECTIVE PAVEMENT MARKER
- = PROPOSED FIRE HYDRANT
- = PROPOSED DRIVEWAY LOCATION



LOCATION MAP
N.T.S.



MATCHLINE 'A' SEE SHEET 5.7

Date: May 07, 2024, 11:18am User ID: dgonzalez
File: U:\Projects\205\29\05\Design\Civil\STREETS\5.7 TRAFFIC SIGNAGE AND PEDESTRIAN ACCESSIBILITY PLAN.dwg
Description: TRAFFIC SIGNAGE AND PEDESTRIAN ACCESSIBILITY PLAN, PAVING & TRAFFIC SIGNAGE AND PEDESTRIAN ACCESSIBILITY PLAN By: DGONZALEZ

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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194350

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER:	DRAWING NAME:
23008197A	5.7 TRAFFIC SIGNAGE AND PEDESTRIAN ACCESSIBILITY PLAN

SHEET TITLE:
TRAFFIC SIGNAGE AND PEDESTRIAN ACCESSIBILITY PLAN

SHEET NUMBER:
5.6

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

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

CAUTION!!:
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

* WATER METER NOTE:
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NOTES:
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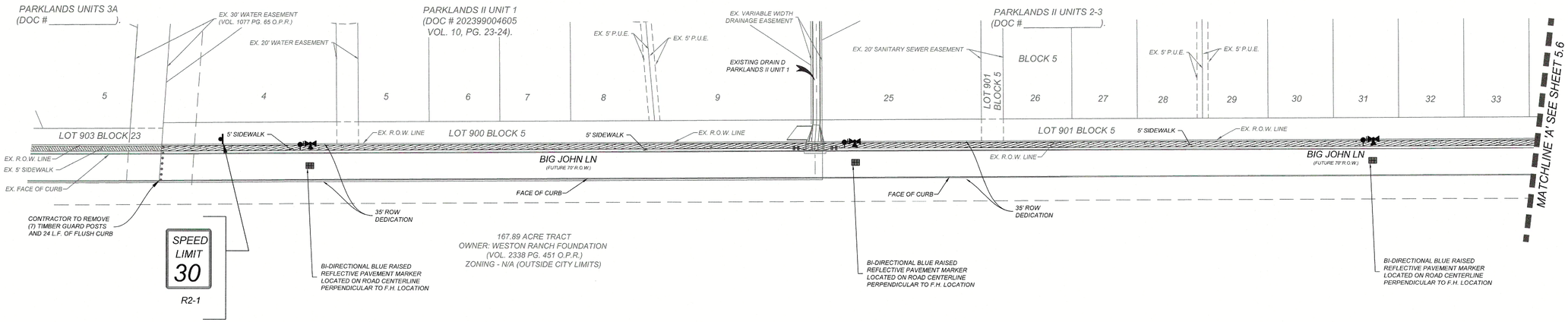
LEGEND

W.C.R.	=	WHEELCHAIR RAMPS SEE SHEET 5.8
	=	PLAN TO REFLECT DEVELOPER SIDEWALKS
	=	SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
	=	BLUE RAISED REFLECTIVE PAVEMENT MARKER
	=	PROPOSED FIRE HYDRANT
	=	PROPOSED DRIVEWAY LOCATION



LOCATION MAP
N.T.S.

SCALE : 1"=50'
0' 50' 150'
100'



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REV	DATE	DRAWN BY	DESCRIPTION

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER:	DRAWING NAME:
23008197A	5.7 TRAFFIC SIGNAGE AND PEDESTRIAN ACCESSIBILITY PLAN

SHEET TITLE:
TRAFFIC SIGNAGE AND PEDESTRIAN ACCESSIBILITY PLAN

SHEET NUMBER:
5.7

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

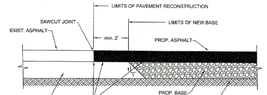
Date: May 07, 2024, 11:19am User ID: dgonzalez
File: U:\Projects\205\29\05\design\Civil\STREETS\5.7 TRAFFIC SIGNAGE AND PEDESTRIAN ACCESSIBILITY PLAN.dwg
Design\CIVIL\STREETS\5.7 TRAFFIC SIGNAGE AND PEDESTRIAN ACCESSIBILITY PLAN.dwg By: DGONZALEZ

NOTE:
1. FLUSH CURB TO BE A MINIMUM OF 12" DEEP. SEE FLUSH CURB DETAIL.

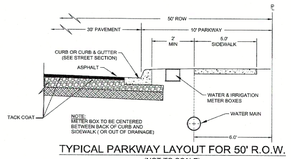
2. PAVEMENT COURSE AND DEPTHS SHOWN ARE A MINIMUM COMPACTED THICKNESS. ENGINEER TO DESIGN PAVEMENT TO ACHIEVE MINIMUM STRUCTURAL NUMBER 3.15.

3. SWELLING SOILS, SOILS WITH P.I. OF 20 OR MORE, SHALL BE TREATED BY REMOVAL AND REPLACEMENT, OR GEOGRID, OR CEMENT SOIL TREATMENT, OR DRAINS/BARRIERS, OR COMBINATION AS DETERMINED BY A PAVEMENT DESIGN.

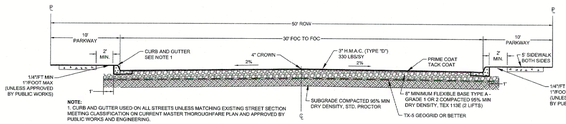
TYPICAL RURAL STREET PAVEMENT SECTION
(NOT TO SCALE)



PAVEMENT JUNCTION
(NOT TO SCALE)



TYPICAL PARKWAY LAYOUT FOR 50' R.O.W.
(NOT TO SCALE)

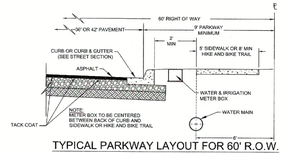


NOTE:
1. CURB AND GUTTER USED ON ALL STREETS UNLESS MATCHING EXISTING STREET SECTION MEETING CLASSIFICATION ON CURRENT MASTER THOROUGHFARE PLAN AND APPROVED BY PUBLIC WORKS AND ENGINEERING.

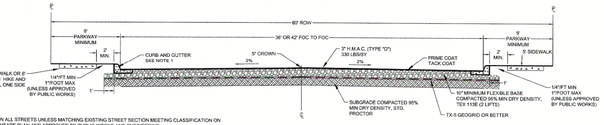
2. PAVEMENT COURSE AND DEPTHS SHOWN ARE A MINIMUM COMPACTED THICKNESS. ENGINEER TO DESIGN PAVEMENT TO ACHIEVE MINIMUM STRUCTURAL NUMBERS = 2.65.

3. SWELLING SOILS, SOILS WITH P.I. OF 20 OR MORE, SHALL BE TREATED BY REMOVAL AND REPLACEMENT, OR GEOGRID, OR CEMENT SOIL TREATMENT, OR DRAINS/BARRIERS, OR COMBINATION AS DETERMINED BY A PAVEMENT DESIGN.

TYPICAL 50' R.O.W. STREET SECTION
(NOT TO SCALE)



TYPICAL PARKWAY LAYOUT FOR 60' R.O.W.
(NOT TO SCALE)



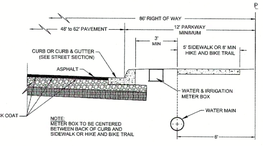
NOTE:

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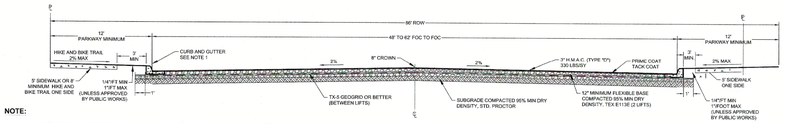
2. PAVEMENT COURSE AND DEPTHS SHOWN ARE A MINIMUM COMPACTED THICKNESS. ENGINEER TO DESIGN PAVEMENT TO ACHIEVE MINIMUM STRUCTURAL NUMBER = 2.90.

3. SWELLING SOILS, SOILS WITH P.I. OF 20 OR MORE, SHALL BE TREATED BY REMOVAL AND REPLACEMENT, OR GEOGRID, OR CEMENT SOIL TREATMENT, OR DRAINS/BARRIERS, OR COMBINATION AS DETERMINED BY A PAVEMENT DESIGN.

TYPICAL 60' R.O.W. STREET SECTION
(NOT TO SCALE)



TYPICAL PARKWAY LAYOUT FOR 86' R.O.W.
(NOT TO SCALE)



NOTE:

1. CURB AND GUTTER USED ON ALL STREETS UNLESS MATCHING EXISTING STREET SECTION MEETING CLASSIFICATION ON CURRENT MASTER THOROUGHFARE PLAN AND APPROVED BY PUBLIC WORKS AND ENGINEERING.

2. PAVEMENT COURSE AND DEPTHS SHOWN ARE A MINIMUM COMPACTED THICKNESS. ENGINEER TO DESIGN PAVEMENT TO ACHIEVE MINIMUM STRUCTURAL NUMBER= 3.25.

3. SWELLING SOILS, SOILS WITH P.I. OF 20 OR MORE, SHALL BE TREATED BY REMOVAL AND REPLACEMENT, OR GEOGRID, OR CEMENT SOIL TREATMENT, OR DRAINS/BARRIERS, OR COMBINATION AS DETERMINED BY A PAVEMENT DESIGN.

TYPICAL 86' R.O.W. STREET SECTION
(NOT TO SCALE)

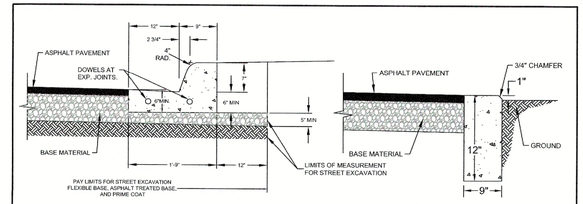
01-OCTOBER-2015

CITY OF SCHERTZ TEXAS
ENGINEERING AND PUBLIC WORKS

STREET SECTIONS

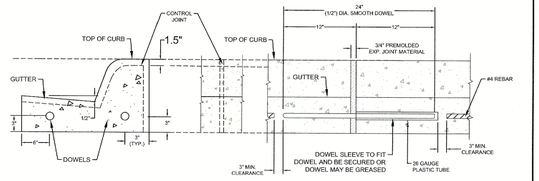
PROJECT NO:	DATE: 2015
DSGN. BY: BCP/LBJ	DRWN. BY: PW
CHKD. BY: KJL	SHEET NO.: 1 of 6

SCHERTZ
COMMUNITY★SERVICE★OPPORTUNITY



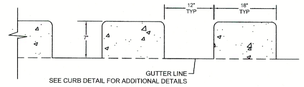
SPILL CURB
(NOT TO SCALE)

FLUSH CURB
(NOT TO SCALE)



CROSS SECTION

FRONT VIEW



SAWTOOTH CURB & GUTTER

CURB AND GUTTER NOTES

1. STEEL TO MEET ASTM STD SPECIFICATIONS FOR CONCRETE REINFORCING BARS.
2. PLACE PREFORMED EXPANSION JOINTS THROUGH CURB AND GUTTERS AT LOCATIONS OF EXPANSION AND CONTRACTION JOINTS IN PAVEMENT, AT END OF RADIUS RETURNS AT STREET INTERSECTIONS AND DRIVEWAYS, AND AT CURB INLETS. MAXIMUM SPACING SHALL BE 120 FEET.
3. MAXIMUM SPACING FOR CONTROL JOINTS 10 FEET.
4. CENTER DOWEL HORIZONTALLY ON JOINT.
5. CENTER DOWEL VERTICALLY IN CONCRETE AS NEEDED TO MAINTAIN 2" MIN. COVER.
6. REINFORCING STEEL SHALL BE #4 BARS (INLINE WITH DOWELS).
7. CONTROL JOINTS TO HAVE A DEPTH OF 1.5" INCLUDING DOWN BACK OF CURB.

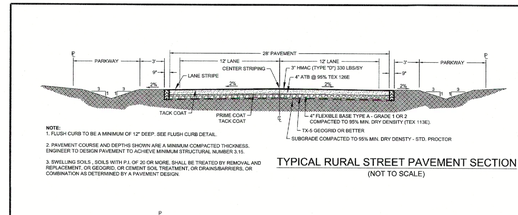
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CURB & GUTTER DETAIL

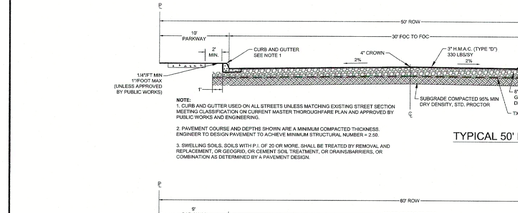
DETAIL SHEET

ENGINEERING AND PUBLIC WORKS

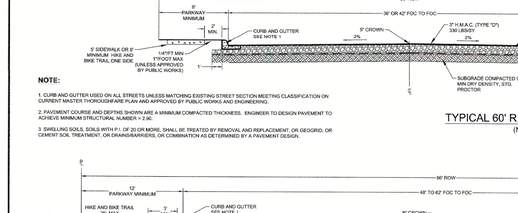
SCALE:	DSGN. BY: ENG.	DRWN BY: BCP	DATE: 10/21/19
			SHEET NO.: 1



DETAIL: 1B



DETAIL: 2B



DETAIL: 3B

SEE STANDARD DETAIL 2754.2 FOR ADDITIONAL INFORMATION

SCHERTZ
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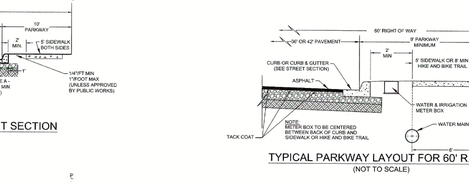
STANDARD DETAIL 2754.1

CONCRETE DRIVEWAY ENTRANCE
TECHNICAL SPECIFICATION SECTIONS 02754

ENGINEERING AND PUBLIC WORKS

SCALE:	DSGN. BY: ENG	DRWN BY: JRS	DATE: 12/14/2022
			SHEET NO.: 1 of 2

TYPICAL DRIVEWAY SECTION
WHERE SIDEWALK IS ABUTTING CURB



TYPICAL DRIVEWAY SECTION
WITH SIDEWALK SEPARATED FROM CURB

TYPE		MEASURED AT PROPERTY LINE WIDTHS MIN.	MAX.	MINIMUM CONCRETE THICKNESS	REINFORCEMENT	DRIVEWAY BASE
RESI-DENTIAL	SINGLE	10'	12'	5" CLASS A 4,000 PSI	#3 BARS 12" O.C. BOTH WAYS OR 6" x 6" W/ D4.7 x W/ D4.7 WELDED WIRE FLAT SHEETS	2" GRAVEL, CRUSHED ROCK OR FLEX BASE
	DOUBLE	10'	24'			
COMMERCIAL		24'	40'	6" CLASS C 4,000 PSI	#4 BARS 12" O.C. BOTH WAYS OR 6" x 6" W/ D7.5 x W/ D7.5 WELDED WIRE FLAT SHEETS	2" GRAVEL, CRUSHED ROCK OR FLEX BASE

NOTES:

1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE.
2. CURB SHALL BE TAPERED TO FINISH FLUSH WITH SIDEWALK.
3. BEGINNING RADIUS SHALL NOT ENCROACH ON ADJACENT PROPERTIES BASED ON A PROJECTION OF THE PROPERTY LINE FROM THE RIGHT OF WAY TO THE CURB LINE.
4. THE MINIMUM DRIVEWAY RADII IS 20 FEET FOR RESIDENTIAL DRIVEWAYS AND 30 FEET FOR COMMERCIAL DRIVEWAYS.
5. ALL PAVEMENTS ADJACENT TO DRIVEWAY CONSTRUCTION SHALL BE REPLACED OR RETURNED TO A CONDITION EQUAL TO THAT BEFORE THE WORK BEGAN. ANY DAMAGES INCURRED WILL BE AT THE CONTRACTOR'S EXPENSE.

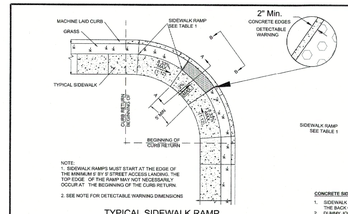
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STANDARD DETAIL 2754.2

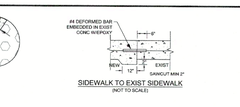
CONCRETE DRIVEWAY ENTRANCE
TECHNICAL SPECIFICATION SECTIONS 02754

ENGINEERING AND PUBLIC WORKS

SCALE:	DSGN. BY: ENG	DRWN BY: JRS	DATE: 12/14/2022
			SHEET NO.: 2 of 2



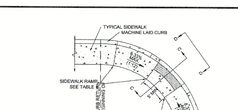
TYPICAL SIDEWALK RAMP
SIDEWALK SEPARATED FROM CURB
(NOT TO SCALE)



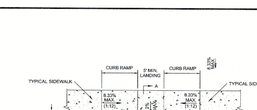
SIDEWALK TO EXIST SIDEWALK
(NOT TO SCALE)



SIDEWALK TO EXIST DRIVEWAY
(NOT TO SCALE)



ALTERNATIVE SIDEWALK RAMP
SIDEWALK ABUTS CURB
(NOT TO SCALE)



TYPICAL SIDEWALK RAMP - TYPE IV
USED AT TEE INTERSECTIONS WHERE SIDEWALK IS SEPARATED FROM CURB
(NOT TO SCALE)



TYPICAL SIDEWALK RAMP - TYPE II
USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB
(NOT TO SCALE)

CONCRETE SIDEWALK NOTES

1. SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 5' AND BE SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
2. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY.
3. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
4. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3/4" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
5. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. SIDEWALK RAMP SLOPES PERPENDICULAR TO SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
6. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.
7. CURB SHALL BE TAPERED TO FINISH FLUSH WITH SIDEWALK.
8. SIDEWALK SECTION SHALL BE REQUIRED ALONG ALL STREETS.

TABLE 1 - (SEE NOTE 4)

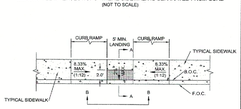
GUTTER SLOPE	SIDEWALK RAMP LENGTH (1':12') LOW SIDE	HIGH SIDE
1%	5'-6"	7'-2"
2%	6'-0"	6'-8"
3%	6'-6"	10'-0"
4%	7'-0"	12'-6"
5%	7'-10"	16'-8"



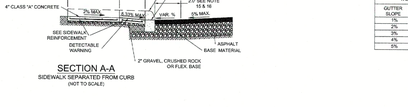
SECTION A-A
SIDEWALK SEPARATED FROM CURB
(NOT TO SCALE)



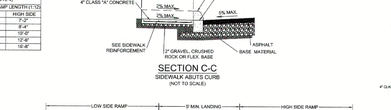
SECTION C-C
SIDEWALK ABUTS CURB
(NOT TO SCALE)



CONCRETE SIDEWALK SECTION

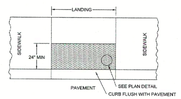


SECTION B-B
CURB PROFILE WHERE SIDEWALK SEPARATED FROM CURB
(NOT TO SCALE)

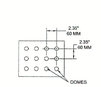


SECTION D-D
CURB PROFILE WHERE SIDEWALK ABUTS CURB
(NOT TO SCALE)

GENERAL NOTES
1. DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
2. WHERE THE SIDEWALK SHALL BE LOCATED A MINIMUM UNOBSTRUCTED WIDTH OF 5' AND 9' SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 2' FROM THE BACK OF CURB.
3. FOR OTHER THAN LOCAL STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 5' AND SEPARATED A MINIMUM OF 2' FROM THE BACK OF CURB OR AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 9' WHEN LOCATED AT THE BACK OF CURB.
4. SIDEWALK RAMP LENGTHS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE.
5. ALL CURB RAMPS OR LANDINGS ABUTTING THE CROSSWALK SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP ON THE DIRECTION OF PEDESTRIAN TRAVEL) AND EXTENDING THE FULL WIDTH OF THE CURB RAMP OR LANDING. THE DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES. ALIGNED IN A GRID PATTERN WITH A DIAMETER OF A NOMINAL 0.9 INCHES (23 MM), A HEIGHT OF NOMINAL 0.2 INCHES (5 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 MM).
6. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
7. TYPICAL SIDEWALK RAMP TO BE USED IN ALL NEW CONSTRUCTION.
8. CONCRETE, BRICK PAVERS, OR OTHER RIGID PAVEMENTS TO BE INCLUDED UNDER ITEMS FOR "CONCRETE CURBING", "MACHINE LAID CURB" AND/OR "CONCRETE SIDEWALKS". RAMP SURFACE SHALL BE BRUSH FINISHED.
9. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF WHEELCHAIR RAMPS TO BE SHOWN ON CONSTRUCTION PLANS. CITY CONSTRUCTION INSPECTOR CAN ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.
11. CONCRETE SHALL BE 3,000 PSI MINIMUM AT 28 DAYS. ALL BASE MATERIAL, INCLUDING CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
12. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" - W2.9 x W2.9 WIRE MESH.
13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY. ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEPPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.
14. SIDEWALKS SHALL HAVE A MAXIMUM SLOPE OF 2% IN THE CROSS SLOPE. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
15. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT A 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33-(-5.67)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 2%.
16. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION BETWEEN THE SLOPES.
17. ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.



DETECTABLE WARNING AREA
(NOT TO SCALE)



PLAN DETAIL
(NOT TO SCALE)



DOME SECTION
(NOT TO SCALE)

APPROVED CAST-IN-PLACE DETECTABLE WARNINGS

1. CAST-IN-PLACE DETECTABLE WARNING SYSTEMS MUST BE POLYMER COMPOSITE.
2. MATERIAL MUST BE "WET SET" INTO FRESHLY POURED CONCRETE.
3. PROTECT PRODUCT FROM DAMAGE UNTIL MATERIAL IS FULLY SET OR CURED.
4. PRODUCT MUST BE APPROVED BY THE ENGINEERING DEPARTMENT.

CITY OF SCHERTZ TEXAS
ENGINEERING AND PUBLIC WORKS

SIDEWALK DETAILS

PROJECT NO:	DATE: FEBRUARY 7, 2017
DRWN. BY: LBJ	DSGN. BY: KJL / BCP
CHKD. BY: LBJ	SHEET NO.: 1 of 1

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STATE OF TEXAS
WAYNE FLORES
90130
LICENSED
PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN
FOR
PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14900
TBPLS Firm#: 10194500

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

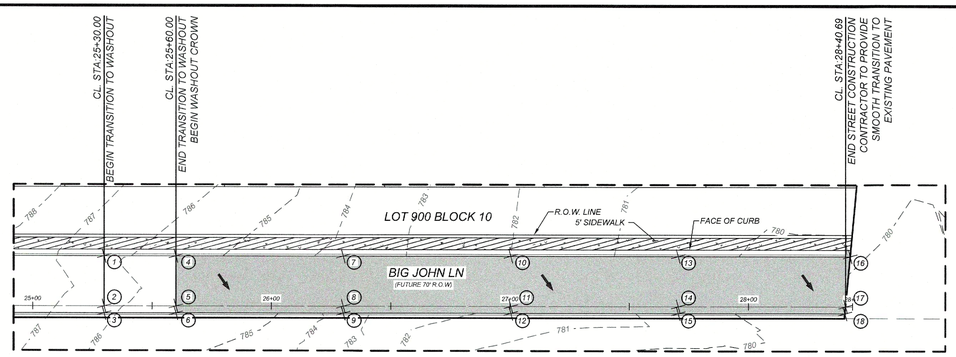
PROJECT NUMBER:	DRAWING NAME:
23008197A	5.8 STREET DETAIL SHEET

SHEET TITLE:
STREET DETAIL SHEET

SHEET NUMBER:
5.8

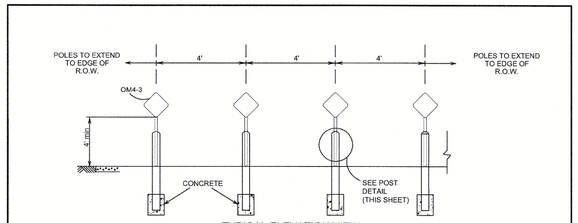
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Jan 24, 2024, 3:37pm User ID: ASerna
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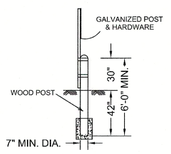


DETAIL 'A'
SCALE: 1" = 30'

POINT #	NORTHING	EASTING	GUT/PAVEMENT ELEV.
1	13781418.76	2227962.63	786.80
2	13781400.54	2227973.08	786.52
3	13781397.94	2227974.57	786.58
4	13781433.68	2227988.66	786.18
5	13781415.46	2227999.10	785.78
6	13781412.86	2228000.60	785.74
7	13781468.59	2228049.53	784.25
8	13781450.37	2228059.97	783.83
9	13781447.77	2228061.47	783.77
10	13781503.50	2228110.40	782.34
11	13781485.28	2228120.85	781.92
12	13781482.68	2228122.34	781.86
13	13781538.41	2228171.27	780.86
14	13781520.19	2228181.72	780.44
15	13781517.59	2228183.21	780.38
16	13781574.28	2228233.81	780.32
17	13781555.10	2228242.59	779.91
18	13781552.37	2228243.84	779.85



TYPICAL ELEVATION VIEW
(NOT TO SCALE)



OM4-3 SIGN TO ROUND WOOD POST DETAIL
(NOT TO SCALE)

GENERAL NOTES

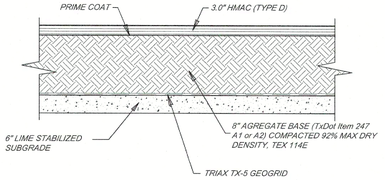
1. ALL DEAD END STREETS MUST HAVE APPROPRIATE BARRICADE AND HEADER CURB.
2. THE POSTS SHALL BE SET IN A MINIMUM OF 1' DEEP CLASS "A" CONCRETE (UNLESS OTHERWISE SHOWN ON PLANS) IN ACCORDANCE WITH ITEM, "PORTLAND CEMENT CONCRETE". CONCRETE SHALL BE SUBSIDIARY TO THE BID ITEM.
3. WHERE SOLID ROCK IS ENCOUNTERED OR WHERE SHOWN ON THE PLANS, THE DIAMETER OF THE HOLES SHALL BE APPROXIMATELY 12 INCHES, THE BACKFILLING SHALL BE WITH A COHESIONLESS MATERIAL, AND EMBEDMENT DEPTH SHALL BE 1'- 6" OR MORE AS DIRECTED BY THE CITY ENGINEER.

	STANDARD DETAIL 01504
	END OF STREET BARRICADE - TYPE 1 TECHNICAL SPECIFICATION SECTION 01504
ENGINEERING AND PUBLIC WORKS	SCALE: N.T.S. DATE: 12/07/2022 DESIGN BY: ENG DRAWN BY: BD SHEET NO: 1 of 1

Pavement Section

3.0" HMAC (TYPE "D")
8" Agregate Base (TxDot Item 247 A1 or A2)
TRIAX TX-5 GEOGRID
6" Lime Stabilized Subgrade
Total:17"
Structural No: 2.92
C.B.R = 2.0

NOTES:
1. PAVEMENT DESIGN THICKNESS BASED ON MINIMUM STREET STANDARD FOR 50' ROW STREET SECTION (SHOWN ABOVE), AND MEETS DESIGN THICKNESS FOR LOCAL STREET (WITHOUT BUS TRAFFIC) BASED ON GEOTECHNICAL REPORT BY INTEGRATED TESTING AND ENGINEERING COMPANY OF SAN ANTONIO, L.P. PROJECT NO. S191522-A1 DATED MAY 03, 2024.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIAL TESTING. TESTING TO BE PAID BY OWNER.

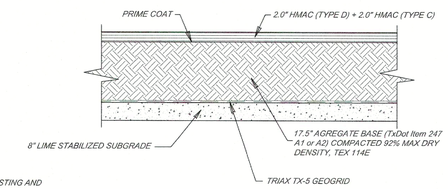


LOCAL STREET DETAIL (50' ROW)
NOT-TO-SCALE

Pavement Section

2.0" HMAC (TYPE "D") + 2.0" HMAC (TYPE C)
17.5" Agregate Base (TxDot Item 247 A1 or A2)
TRIAX TX-5 GEOGRID
8" Lime Stabilized Subgrade
Total: 29.5"
Structural No: 4.85
C.B.R = 2.0

NOTES:
1. PAVEMENT DESIGN THICKNESS BASED ON GEOTECHNICAL REPORT BY INTEGRATED TESTING AND ENGINEERING COMPANY OF SAN ANTONIO, L.P. PROJECT NO. S191522-A1 DATED MAY 03, 2024.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIAL TESTING. TESTING TO BE PAID BY OWNER.



COLLECTOR STREET DETAIL
NOT-TO-SCALE

BIG JOHN LN

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WAYNE FLORES
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LICENSED
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5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

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PROJECT NUMBER: 23008197A
DRAWING NAME: 5.8 STREET DETAIL SHEET

SHEET TITLE: STREET DETAIL SHEET

SHEET NUMBER: 5.9

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: May 07, 2024, 11:21am User ID: dgonzalez
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\Design\Civil\STREETS\5.8 STREET DETAIL SHEET.dwg
5.9 STREET DETAIL SHEET By: DGONZALEZ

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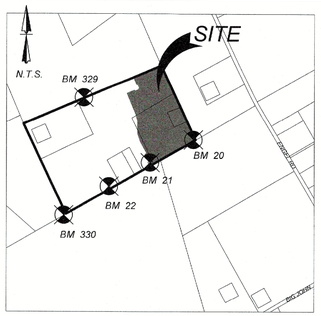
TRENCH EXCAVATION SAFETY PROTECTION

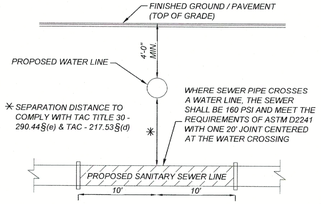
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

CAUTION!!:
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

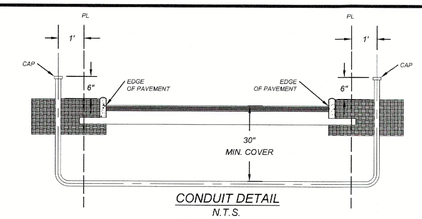
SITE BENCHMARKS (SURFACE)

BM #	ELEV.	DESCRIPTION
BM 20	780.29	SET ½" IRON ROD WITH "KFW" CAP N: 13781553.04, E: 2228215.38 (SURFACE)
BM 21	797.88	SET ½" IRON ROD WITH "KFW" CAP N: 13781235.65, E: 2227613.02 (SURFACE)
BM 22	784.17	SET ½" IRON ROD WITH "KFW" CAP N: 13780902.86, E: 2227039.13 (SURFACE)
BM 329	763.37	SET ½" IRON ROD WITH "KFW" CAP N: 13782144.45, E: 2226687.56
BM 330	796.04	SET ½" IRON ROD WITH "KFW" CAP N: 13780498.43, E: 2226408.86





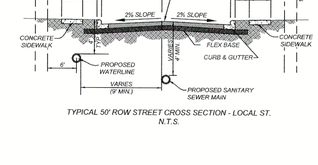
TYPICAL SANITARY SEWER / WATER CROSSING DETAIL
NOT TO SCALE



CONDUIT DETAIL
N.T.S.
"PVC SCHED. 40 OR 80 CONDUIT SEE PLAN SHEETS FOR SIZE LOCATION AND NUMBER OF CONDUITS

NOTE:

- *CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING CONDUIT SLEEVES FOR EACH GVEC FACILITY AT ALL STREETS AND DRAIN CROSSING CONSTRUCTION SLEEVES MUST ALSO BE LOCATED FOR GVEC CREWS DURING CONSTRUCTION. (SEPARATE ITEM) SEE THIS SHEET FOR CONDUIT CROSSING DETAIL AND SCHEDULE.*
- *CONTRACTOR TO CONTACT ENGINEER FOR APPROPRIATE NUMBER AND SIZE OF CONDUITS FOR TELECOMMUNICATIONS*
- *CONTRACTOR TO CONTACT ENGINEER FOR ELECTRICAL PLANS*



TYPICAL 50' ROW STREET CROSS SECTION - LOCAL ST.
N.T.S.

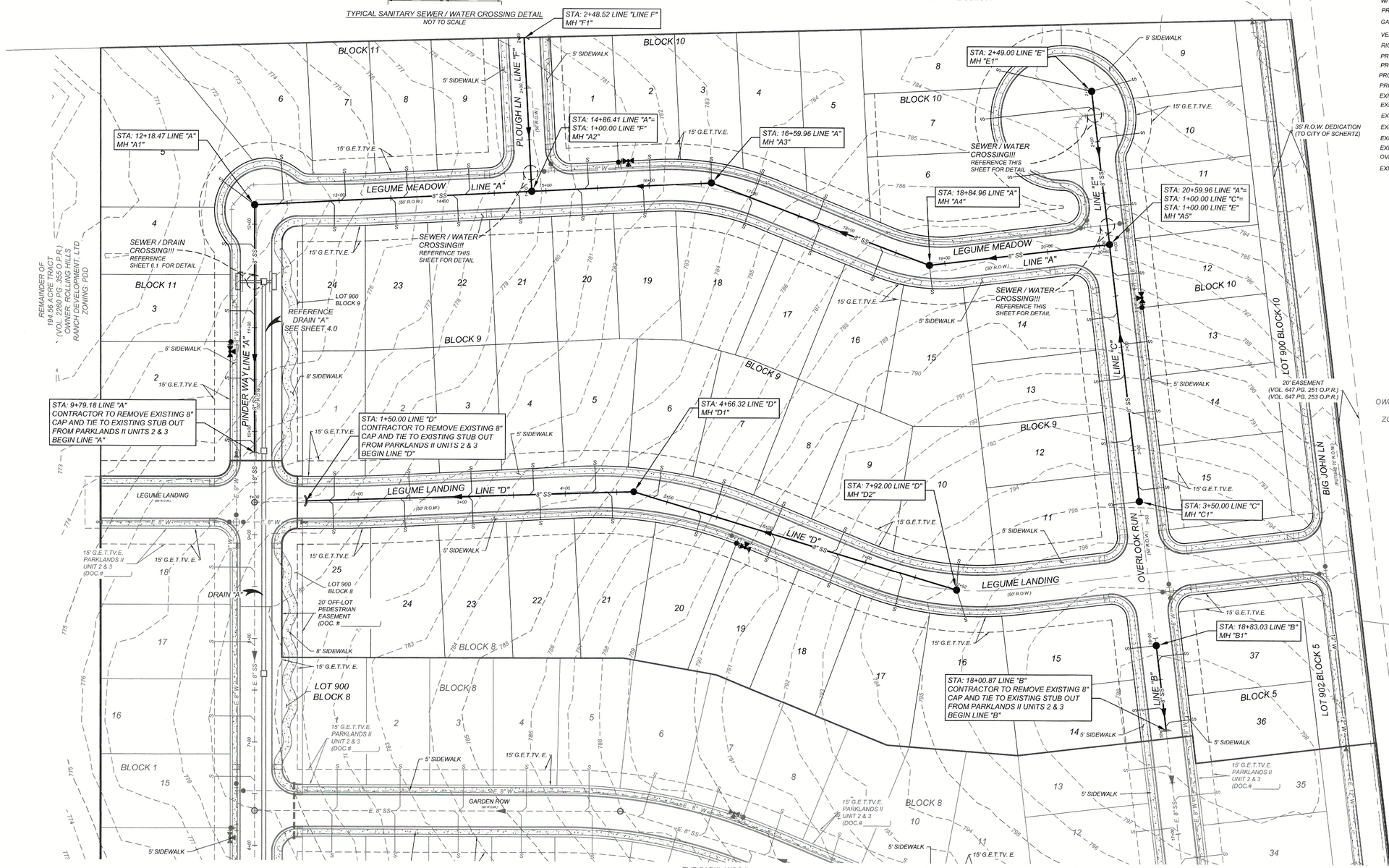


LOCATION MAP

N.T.S.

LEGEND

- PROPOSED WATER MAIN — 8"W
- PROPOSED WATER SERVICE & METER BOX — W
- PROPOSED WATER 1" IRRIGATION SERVICE & W/ 3/4" WATER METER & METER BOX — 3/4" W IRR
- PROPOSED FIRE HYDRANT
- GAS, ELECTRIC, TELEPHONE, CABLE T.V., EASEMENT — G.E.T.TV. E.
- VEHICULAR NON-ACCESS EASEMENT — V.N.A.E.
- RIGHT OF WAY — R.O.W.
- PROPOSED 8" SANITARY SEWER MAIN
- PROPOSED 8" SANITARY SEWER MANHOLE — S
- PROPOSED TEE & WATER VALVE
- PROPOSED SANITARY SEWER LATERAL — S
- EXISTING SANITARY SEWER LATERAL — S
- EXISTING WATER VALVE — DRO
- EXISTING FIRE HYDRANT
- EXISTING WATER MAIN — E. 8" W
- EXISTING SANITARY SEWER MAIN — E. 8"SS
- EXISTING SANITARY SEWER MANHOLE — (S)
- OVERHEAD UTILITY LINE — OHU
- EXISTING POWER POLE — PP



SCALE : 1"=50'
0' 50' 150'
100'

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LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14935
TBPLS Firm#: 10194350

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER:	DRAWING NAME:
23008197A	6.0

SHEET TITLE:
OVERALL SEWER PLAN

SHEET NUMBER:
6.0

Date: Jan 24, 2024, 3:38pm User ID: ASerna
File: U:\Projects\205\29\05\Design\Civil\SEWER\6.0.dwg
Style: CONSTRUCTION 6.0.ctb LAYOUT: SEWER PLAN By: ASERNA

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

CAUTION!!
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

TRENCH EXCAVATION SAFETY PROTECTION

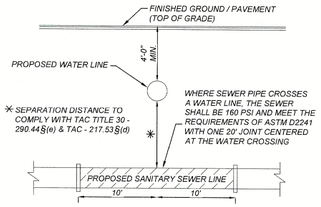
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

COMPACTION NOTE:

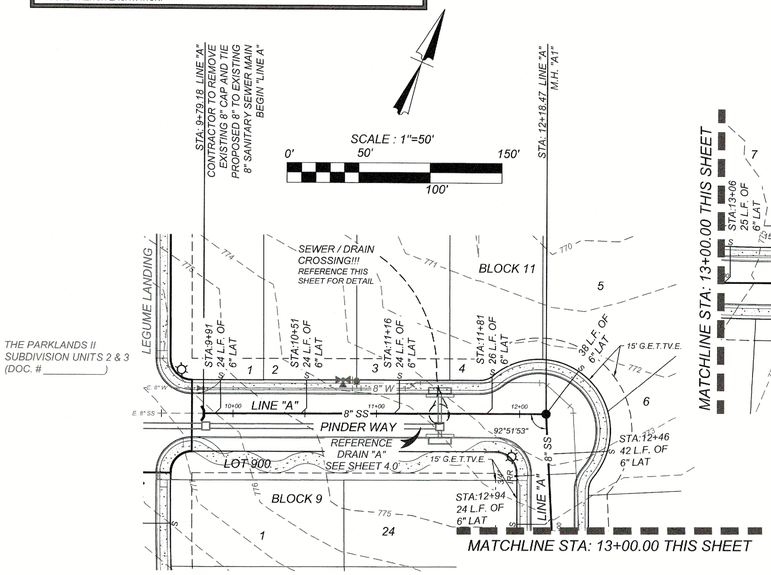
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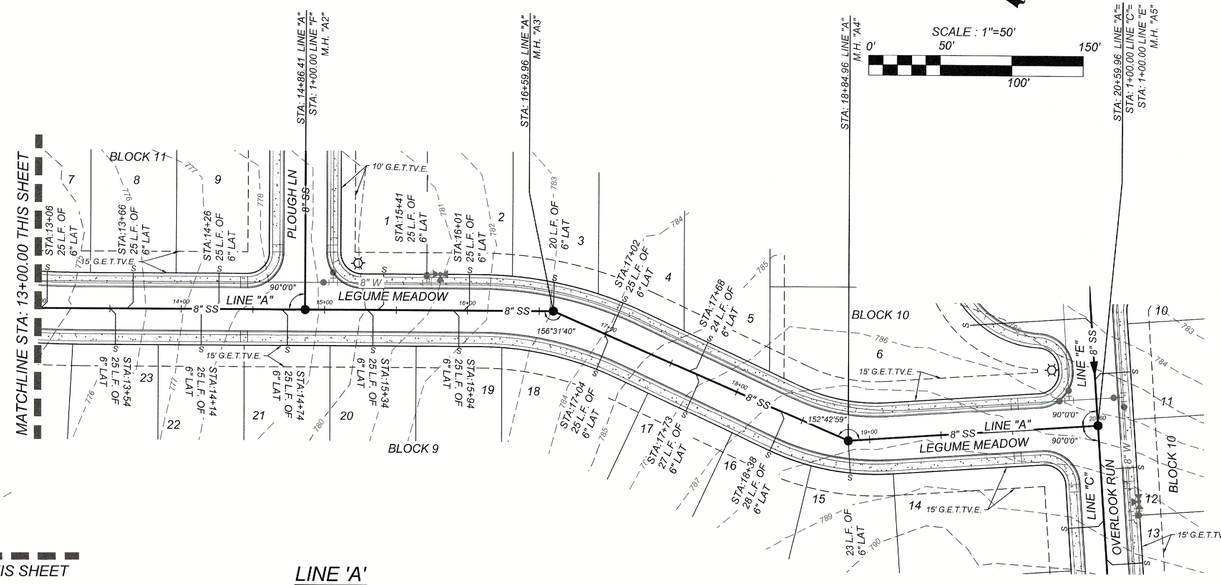
NOTE:

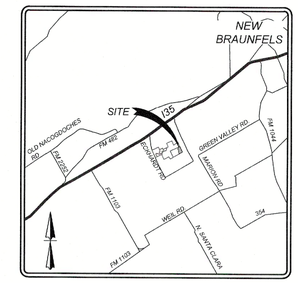
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2. PIPE TYPE DESIGNATIONS ARE SDR 26.
3. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
4. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER ALL MANHOLES SHALL BE 5' IN DIAMETER. SEE SHEET 6.4 FOR DETAILS.
5. SEE SHEET 6.0 FOR BENCHMARK INFORMATION.
6. ALL SANITARY SEWER LATERALS SHALL BE INSTALLED AT 2% UNLESS OTHERWISE SPECIFIED.



TYPICAL SANITARY SEWER / WATER CROSSING DETAIL
NOT TO SCALE







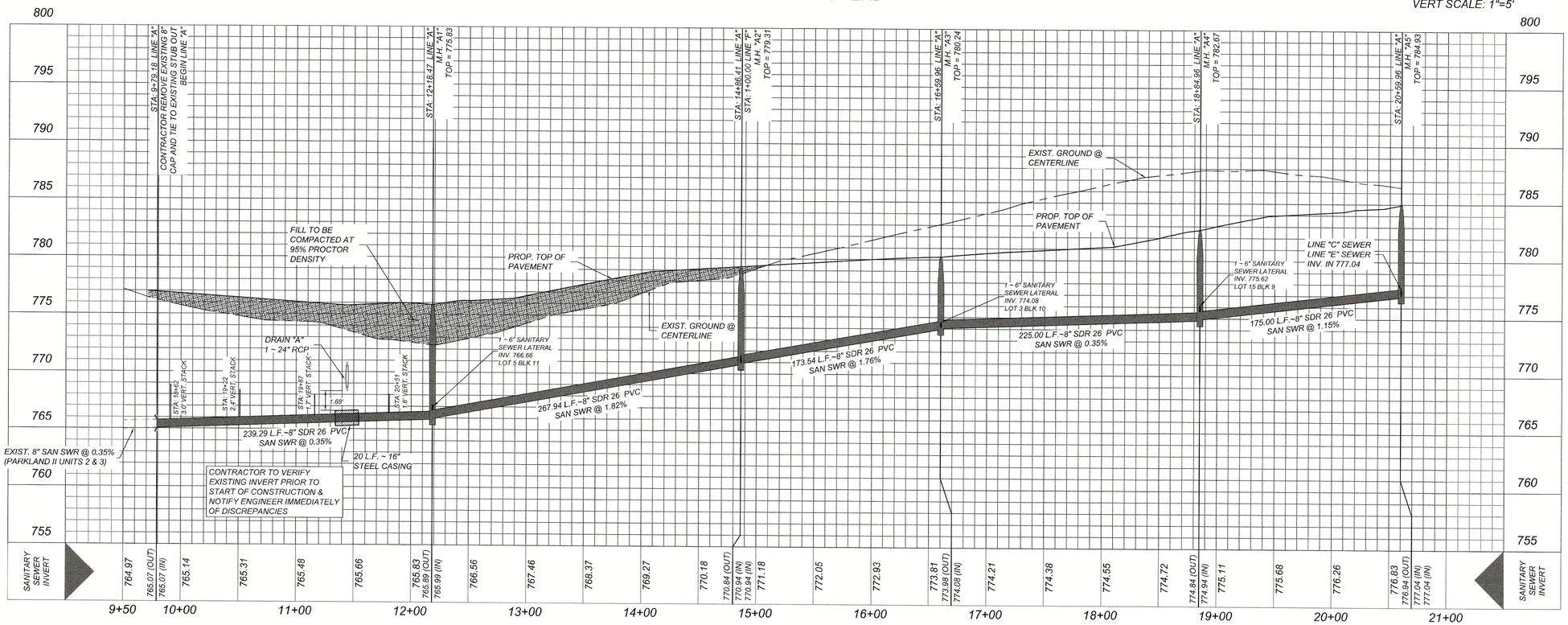
LOCATION MAP
N.T.S.

LEGEND

PROPOSED WATER MAIN	8"W
PROPOSED WATER SERVICE & METER BOX	W 3/4" HR
PROPOSED WATER 1" IRRIGATION SERVICE & W/ 3/4" WATER METER & METER BOX	
PROPOSED FIRE HYDRANT	
GAS, ELECTRIC, TELEPHONE, CABLE T.V., EASEMENT	G.E.T.TV. E.
VEHICULAR NON-ACCESS EASEMENT	V.N.A.E.
RIGHT OF WAY	R.O.W.
PROPOSED 8" SANITARY SEWER MAIN	
PROPOSED 8" SANITARY SEWER MANHOLE	
PROPOSED TEE & WATER VALVE	
PROPOSED SANITARY SEWER LATERAL	S
EXISTING SANITARY SEWER LATERAL	S
EXISTING WATER VALVE	
EXISTING FIRE HYDRANT	
EXISTING WATER MAIN	E. 8" W
EXISTING SANITARY SEWER MAIN	E. 8"SS
EXISTING SANITARY SEWER MANHOLE	
OVERHEAD UTILITY LINE	OHU
EXISTING POWER POLE	PP

LINE 'A'
STA: 9+79.18 - END

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 6.1

SHEET TITLE: LINE A STA. 9+79.18 - END

SHEET NUMBER: 6.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Jan 24, 2024, 2:58pm User ID: ASerna
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Xrefs: xrefs: logo1

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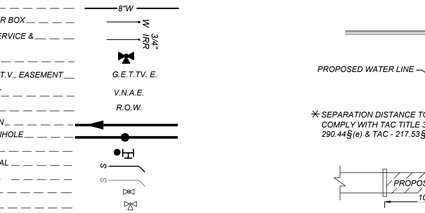
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LEGEND

PROPOSED WATER MAIN	8"W
PROPOSED WATER SERVICE & METER BOX	3/4" 1DR
PROPOSED WATER 1" IRRIGATION SERVICE & W/ 3/4" WATER METER & METER BOX	
PROPOSED FIRE HYDRANT	
GAS, ELECTRIC, TELEPHONE, CABLE T.V., EASEMENT	G.E.T.TV. E.
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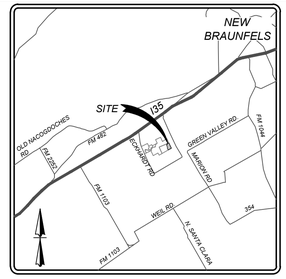
TYPICAL SANITARY SEWER / WATER CROSSING DETAIL
NOT TO SCALE

COMPACTION NOTE:

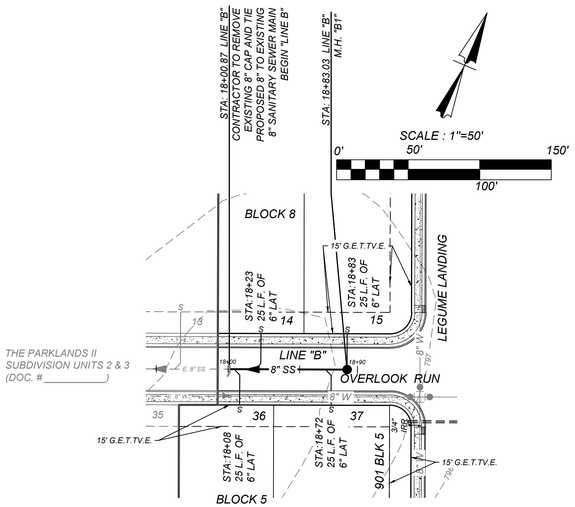
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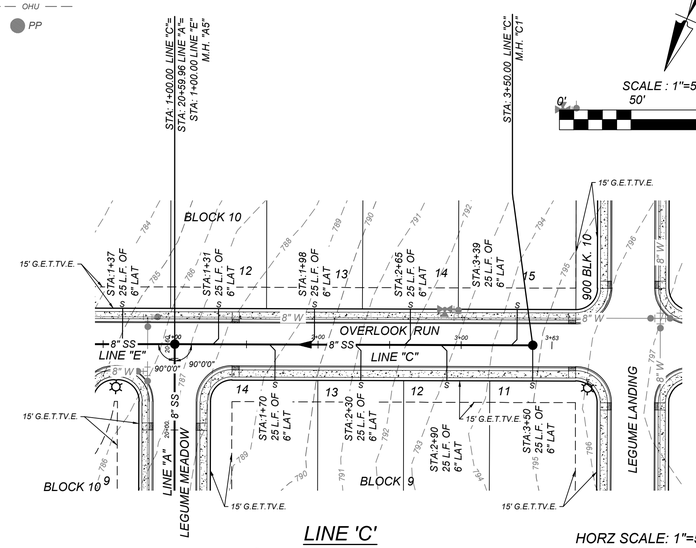


LOCATION MAP
N.T.S.



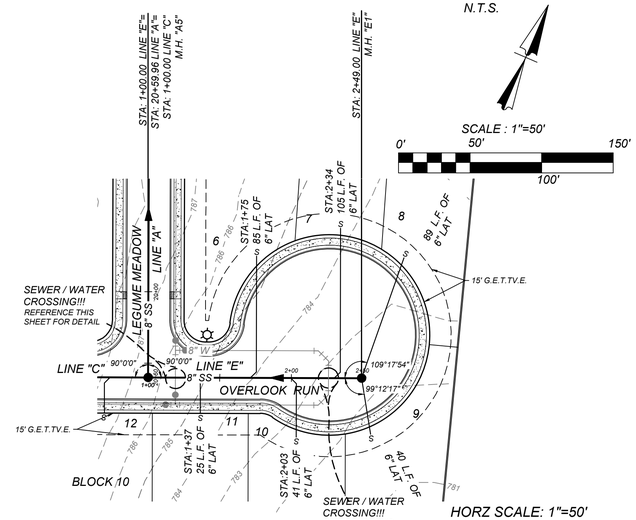
LINE 'B'
STA: 18+00.87 - END

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'



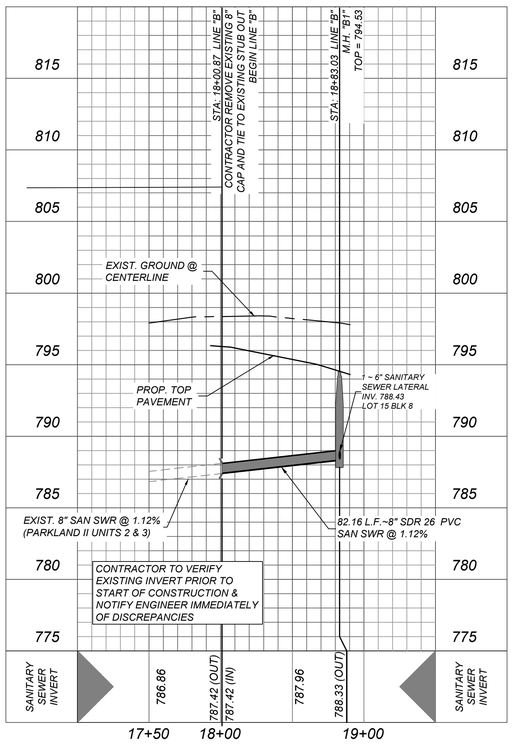
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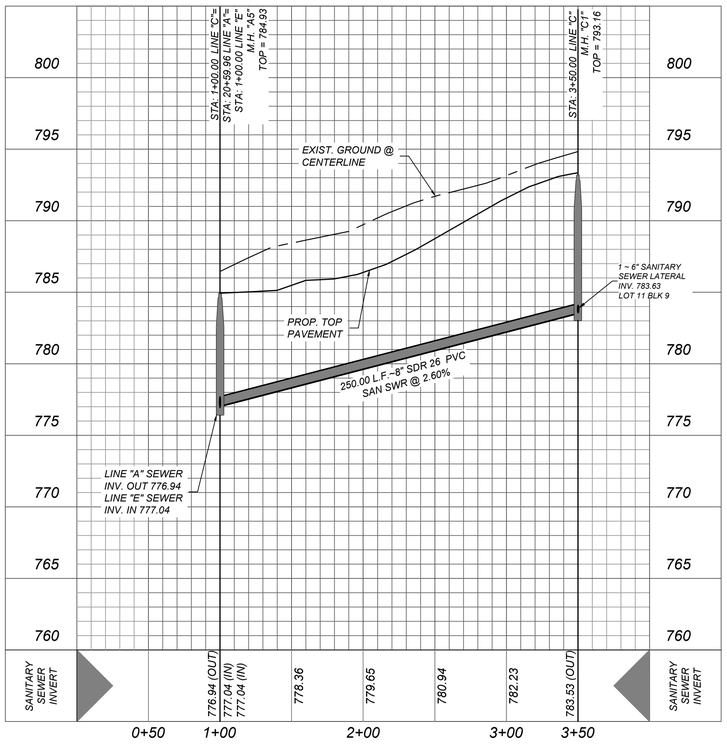
HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'

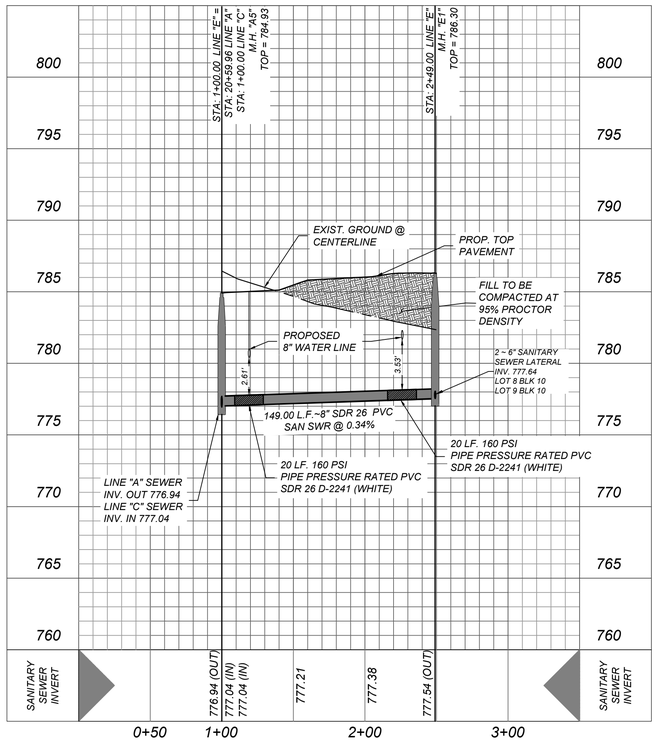


LINE 'E'
STA: 1+00.00 - END

HORZ SCALE: 1"=50'
VERT SCALE: 1"=5'







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6/18/2024

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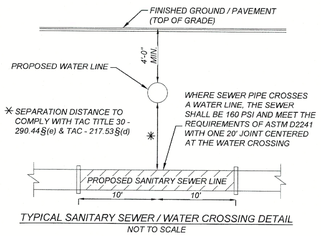
PROJECT NUMBER:	DRAWING NAME:
23008197A	6.2

SHEET TITLE:
LINE B STA. 18+00.87 - END, LINE C & E STA. 1+00.00 - END

SHEET NUMBER:
6.2

Date: Jun 18, 2024, 1:49pm User ID: mylen
File: U:\Projects\2305\23051\Design\Civil\SEWER\6.2.dwg
By: MyLENN

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



TYPICAL SANITARY SEWER / WATER CROSSING DETAIL

NOT TO SCALE

COMPACTION NOTE:

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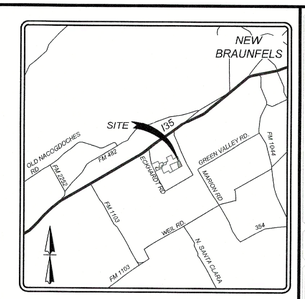
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3. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
4. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER ALL MANHOLES SHALL BE 9' IN DIAMETER. SEE SHEET 6.4 FOR DETAILS.
5. SEE SHEET 6.0 FOR BENCHMARK INFORMATION.
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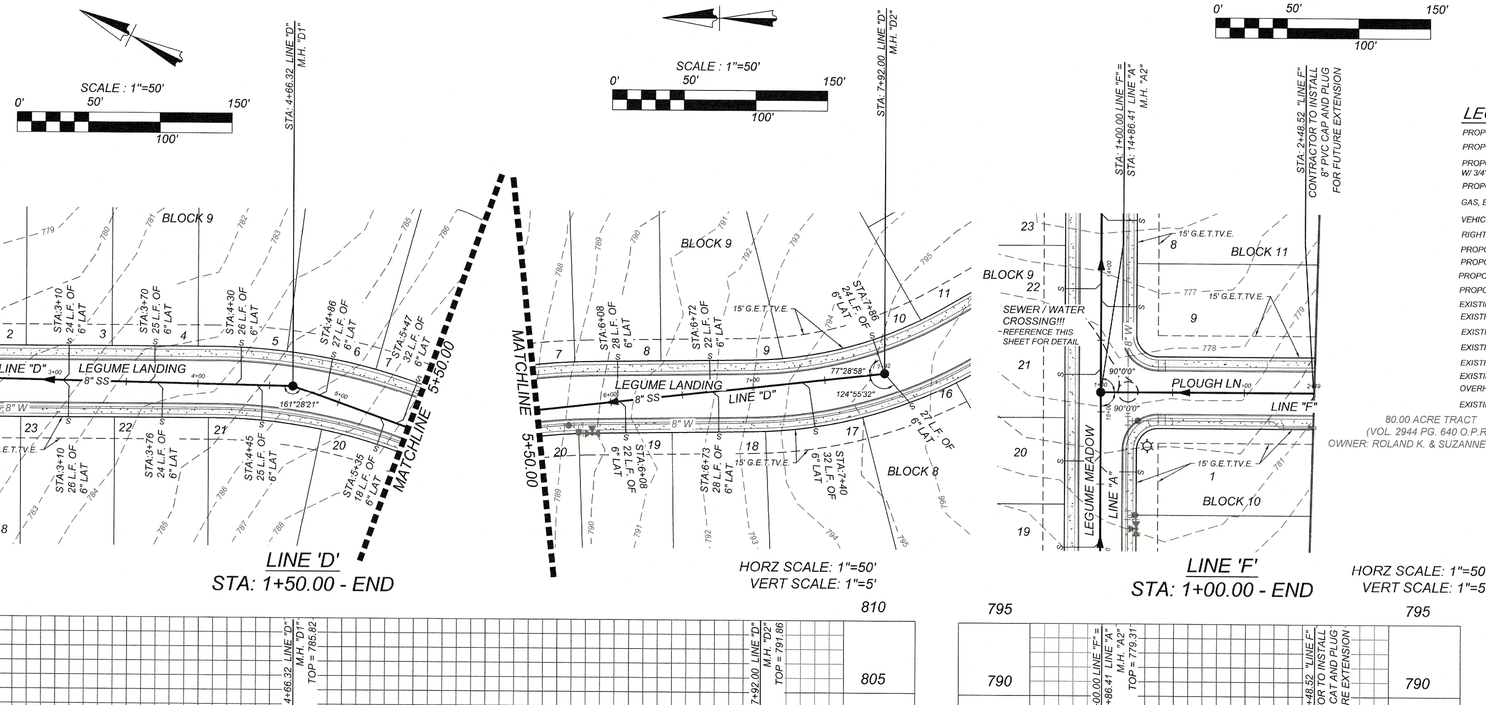
LOCATION MAP

N.T.S.

SCALE : 1"=50'

0' 50' 150'

100'



LINE 'D'

STA: 1+50.00 - END

SCALE : 1"=50'

0' 50' 150'

100'

HORZ SCALE: 1"=50'

VERT SCALE: 1"=5'

LINE 'F'

STA: 1+00.00 - END

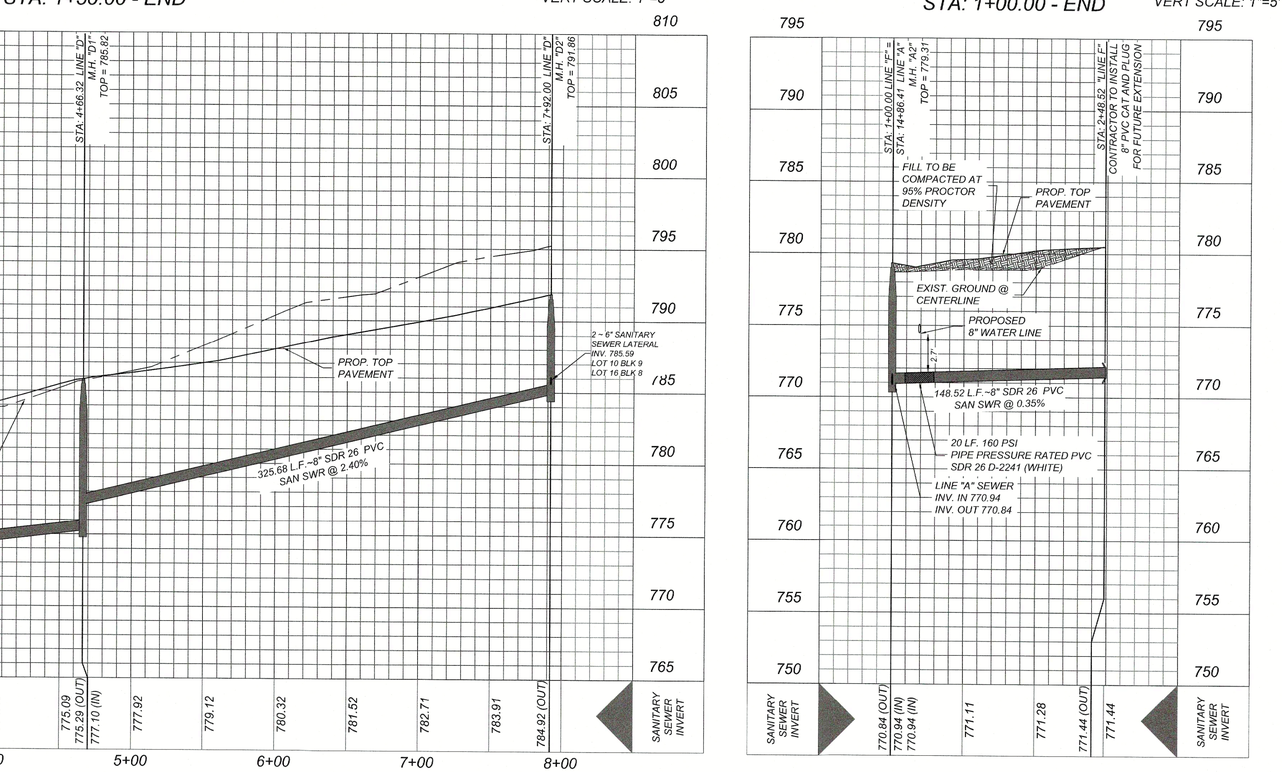
HORZ SCALE: 1"=50'

VERT SCALE: 1"=5'

LEGEND

PROPOSED WATER MAIN	8"W
PROPOSED WATER SERVICE & METER BOX	W
PROPOSED WATER 1" IRRIGATION SERVICE & W/ 3/4" WATER METER & METER BOX	3/4" IR
PROPOSED FIRE HYDRANT	
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EXISTING SANITARY SEWER LATERAL	
EXISTING WATER VALVE	
EXISTING FIRE HYDRANT	
EXISTING WATER MAIN	E. 8"W
EXISTING SANITARY SEWER MAIN	E. 8"SS
EXISTING SANITARY SEWER MANHOLE	
OVERHEAD UTILITY LINE	OHU
EXISTING POWER POLE	PP

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(VOL. 2944 PG. 640 O.P.R.)
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LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design

NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm# F-14909
TBPLS Firm# 10194050

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER:	DRAWING NAME:
23008197A	6.3

SHEET TITLE:

LINE D STA. 1+50.00 - END,
LINE F STA. 1+00.00 - END

SHEET NUMBER:

6.3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Jan 24, 2024, 3:08pm User ID: ASerna
XCP: 24x36 (1.00) 23.00 x 35.00 Design (Civil) (SEWER) 6.3.dwg
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By:ASERNA

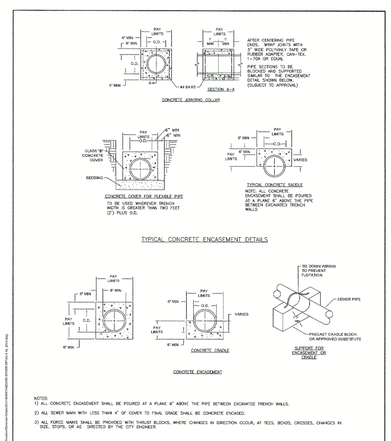
OSHA TRENCH SAFETY

1. TRENCH EXCAVATION SHALL COMPLY WITH MINIMUM STANDARDS AS SET FORTH BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, REGULATIONS STANDARDS – 29 CFR – "EXCAVATION" – 1926 SUBPART P.

2. TRENCH SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SHOP DRAWINGS FOR DETAIL PLANS AND SPECIFICATIONS TO PROVIDE ADEQUATE SHORING AND SHEETING STANDARDS THAT MEET THE OSHA STANDARDS AS SET OUT BY STANDARDS – 29 CFR – EXCAVATION" – 1926 SUBPART P FOR TRENCH SAFETY.

3. CONTINUOUS INSPECTION OF ALL TRENCH EXCAVATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR JOB SUPERINTENDENT. THE CONTRACTOR CONTROLS THE SIZE, WEIGHT, AND SPEED OF OPERATION OF EQUIPMENT AND PIPE INSTALLATION, WHICH DIRECTLY AFFECTS ALL SAFETY MEASURES IN A TRENCH. IF PROBABLE CAUSE OF UNSAFE TRENCH CONDITIONS EXIST, ALL WORK SHALL CEASE IMMEDIATELY UNTIL NECESSARY PRECAUTIONS TO SAFEGUARD EMPLOYEES ARE TAKEN.

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | OSHA TRENCH SAFETY | TECHNICAL SPECIFICATION SECTION 02260 | ENGINEERING AND PUBLIC WORKS



SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | CONCRETE ENCASEMENT | TECHNICAL SPECIFICATION SECTION 02511 | ENGINEERING AND PUBLIC WORKS

TCEQ RULES AND REGULATIONS, TAC TITLE 30, PART 1, CHAPTER 217.53.D, "SEPARATION DISTANCES"

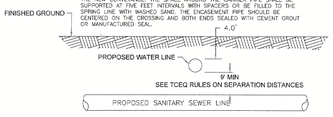
WHEN NEW SANITARY SEWERS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER TO WATERLINES THAN NINE FEET IN ALL DIRECTIONS. SEWERS THAT PARALLEL WATERLINES MUST BE INSTALLED IN SEPARATE TRENCHES, WHERE PRACTICABLE. THIS SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING GUIDELINES WILL APPLY:

(A) WHERE A SANITARY SEWER PARALLELS A WATERLINE, THE SEWER SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC MEETING ASTM SPECIFICATIONS WITH A PRESSURE RATING FOR BOTH THE PIPE AND JOINTS OF 150 PSI. THE VERTICAL SEPARATION SHALL BE A MINIMUM OF TWO FEET BETWEEN OUTSIDE DIAMETERS AND THE HORIZONTAL SEPARATION SHALL BE A MINIMUM OF FOUR FEET BETWEEN OUTSIDE DIAMETERS. THE SEWER SHALL BE LOCATED BELOW THE WATERLINE.

(B) WHERE A SANITARY SEWER CROSSES A WATERLINE AND THE SEWER IS CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, AN ABSOLUTE MINIMUM DISTANCE OF SIX INCHES BETWEEN OUTSIDE DIAMETERS SHALL BE MAINTAINED. IN ADDITION, THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATERLINE.

(C) WHERE A SEWER CROSSES UNDER A WATERLINE AND THE SEWER IS CONSTRUCTED OF ABS TRUSS PIPE, SMALL DIAMETER SOLID-ROD PLASTIC COMPOSITE PIPE, CLAY PIPE, OR CONCRETE PIPE WITH GASKETED JOINTS, A MINIMUM TWO-FOOT SEPARATION DISTANCE SHALL BE MAINTAINED. THE INITIAL BACKFILL SHALL BE CEMENT STABILIZED SAND (TWO OR MORE BAGS OF CEMENT PER CUBIC YARD OF SAND) FOR ALL SECTIONS OF SEWER WITHIN NINE FEET OF THE WATERLINE. THIS INITIAL BACKFILL SHALL BE FROM ONE QUARTER DIAMETER BELOW THE CENTERLINE OF THE PIPE TO ONE PIPE DIAMETER (BUT NOT LESS THAN 12 INCHES) ABOVE THE TOP OF THE PIPE.

(D) WHERE A SEWER CROSSES OVER A WATERLINE, ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE CROSSING SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. IN LIEU OF THIS PROCEDURE THE NEW CONVEYANCE MAY BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE FEET INTERVALS WITH SPACERS OR BE FILLED TO THE SPRING LINE WITH WASHED SAND. THE ENCASEMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.



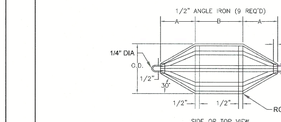
SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | OSHA TRENCH SAFETY | TECHNICAL SPECIFICATION SECTION 02260 | ENGINEERING AND PUBLIC WORKS

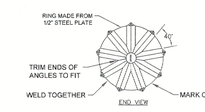
SIZE	A	6"	MANDREL O.D. (SDR-26)	RING O.D. (SDR-26)
6"	4.0"	4.5"	5.50	4.79
8"	5.5"	6.0"	7.57	6.66
10"	7.0"	7.5"	9.61	8.52
12"	8.0"	9.0"	10.96	10.25
15"	10.0"	11.0"	13.43	12.71
18"	12.0"	13.0"	—	—
21"	14.0"	15.0"	—	—
24"	16.0"	17.0"	—	—
27"	18.0"	20.0"	—	—

MINIMUM LENGTH

CHART

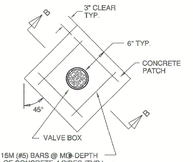
NOTES:
PVC PIPES AND FITTINGS SIX INCHES (6") TO FIFTEEN INCHES (15") IN DIAMETER SHALL CONFORM TO ASTM D-3034.
PVC PIPES AND FITTINGS EIGHTEEN INCHES (18") TO TWENTY-SEVEN INCHES (27") IN DIAMETER SHALL CONFORM TO ASTM F-679.
THIS INFORMATION IS PROVIDED AS A REFERENCE. ALL DEFLECTION TESTING SHALL BE DONE IN ACCORDANCE WITH TCEQ RULES AND REGULATIONS, TAC TITLE 30 PART 1 CHAPTER 217.57.



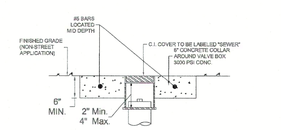


NOTE:
ALL MANDRELS MUST BE APPROVED BY CONSTRUCTION INSPECTIONS AND STAMPED BEFORE USE.

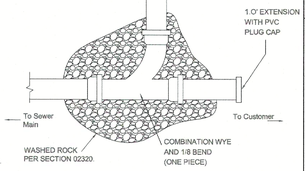
SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | DEFLECTION TESTING MANDREL | TECHNICAL SPECIFICATION SECTION 02260 | ENGINEERING AND PUBLIC WORKS



PLAN VIEW

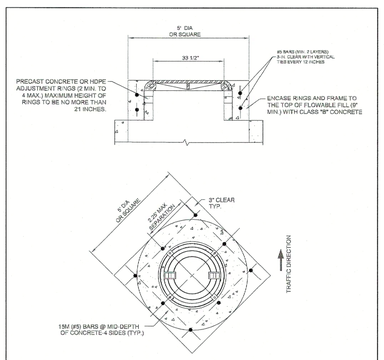


SECTION B-B



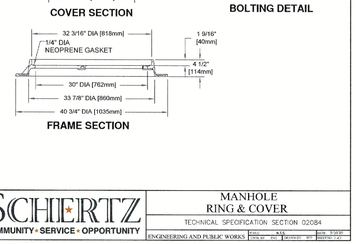
NOTES:
1. SUBGRADE SHALL BE COMPACTED AS PER SPECIFICATIONS.
2. VALVE BOX SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OR FINAL GRADE IS IN PLACE.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE BOTTOM OF BOX.
4. REINFORCING STEEL SHALL MEET SPECIFICATIONS.
5. CONCRETE COLLAR MUST BE ROUND OR SQUARE.

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | LATERAL VALVE BOX | TECHNICAL SPECIFICATION SECTION 02534 | ENGINEERING AND PUBLIC WORKS

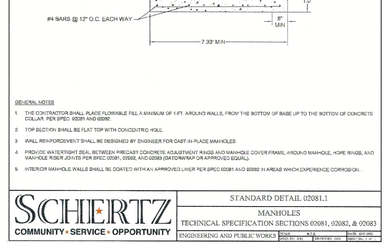


GENERAL NOTES
1. MANHOLE RING ENCASEMENT IS REQUIRED ON ALL MANHOLES.
2. PAYMENT FOR MANHOLE RING ENCASEMENT SHALL BE INCLUDED IN THE COST OF THE MANHOLE

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | STANDARD DETAIL 02081.2 | MANHOLE RING ENCASEMENT | TECHNICAL SPECIFICATION SECTIONS 02081, 02082, & 02083 | ENGINEERING AND PUBLIC WORKS

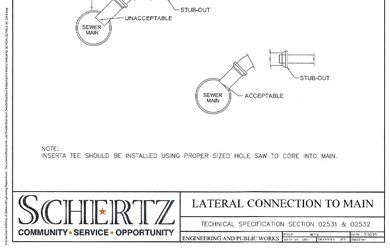


SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | MANHOLE RING & COVER | TECHNICAL SPECIFICATION SECTION 02084 | ENGINEERING AND PUBLIC WORKS



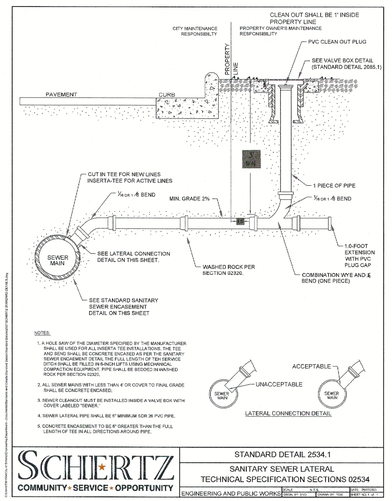
GENERAL NOTES
1. THE CONTRACTOR SHALL PLACE FLOWABLE FILL A MINIMUM OF 1-FT. AROUND WALLS, FROM THE BOTTOM OF BASE UP TO THE BOTTOM OF CONCRETE COLLAR. PER SPEC 02081 AND 02082
2. TOP SECTION SHALL BE FLAT TOP WITH CONCENTRIC HOLE.
3. WALL REINFORCEMENT SHALL BE DESIGNED BY ENGINEER FOR CAST-IN PLACE MANHOLES.
4. PROVIDE WATERTIGHT SEAL BETWEEN PRECAST CONCRETE ADJUSTMENT RINGS AND MANHOLE COVER FRAME, AROUND MANHOLE, HDPE RINGS, AND MANHOLE RISER JOINTS PER SPEC 02081, 02082, AND 02083 (GATOR/WRAP OR APPROVED EQUAL).
5. INTERIOR MANHOLE WALLS SHALL BE COATED WITH AN APPROVED LINER PER SPEC 02081 AND 02082 IN AREAS WHICH EXPERIENCE CORROSION.

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | STANDARD DETAIL 02081.1 | MANHOLES | TECHNICAL SPECIFICATION SECTIONS 02081, 02082, & 02083 | ENGINEERING AND PUBLIC WORKS

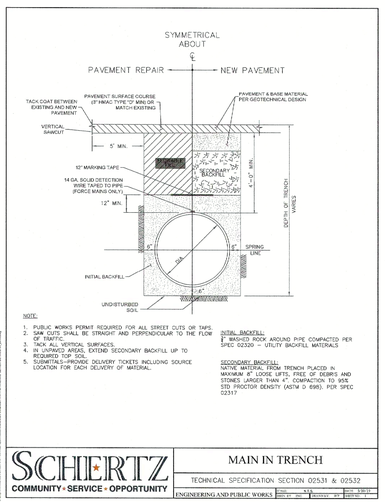


NOTE:
INSERTA TEE SHOULD BE INSTALLED USING PROPER SIZED HOLE SAW TO CORE INTO MAIN.

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | LATERAL CONNECTION TO MAIN | TECHNICAL SPECIFICATION SECTION 02531 & 02532 | ENGINEERING AND PUBLIC WORKS



SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | STANDARD DETAIL 2534.1 | SANITARY SEWER LATERAL | TECHNICAL SPECIFICATION SECTIONS 02534 | ENGINEERING AND PUBLIC WORKS

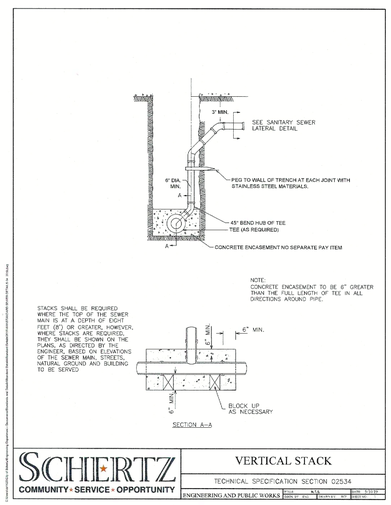


NOTE:
1. PUBLIC WORKS PERMIT REQUIRED FOR ALL STREET CUTS OR TAPS.
2. SAW CUTS SHALL BE STRAIGHT AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
3. TACK ALL VERTICAL SURFACES.
4. IN UNPAVED AREAS, EXTEND SECONDARY BACKFILL UP TO REQUIRED TOP SOIL.
5. SUBMITTALS—PROVIDE DELIVERY TICKETS INCLUDING SOURCE LOCATION FOR EACH DELIVERY OF MATERIAL.

INITIAL BACKFILL:
6" WASHED ROCK AROUND PIPE COMPACTED PER SPEC 02309 – UTILITY BACKFILL MATERIALS

SECONDARY BACKFILL:
NATIVE MATERIAL FROM TRENCH PLACED IN MAXIMUM 8" LOOSE LIFTS, FREE OF DEBRIS AND STONES LARGER THAN 4". COMPACTION TO 95% STD PROCTOR DENSITY (ASTM D 698). PER SPEC 02317

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | MAIN IN TRENCH | TECHNICAL SPECIFICATION SECTION 02531 & 02532 | ENGINEERING AND PUBLIC WORKS



SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY | VERTICAL STACK | TECHNICAL SPECIFICATION SECTION 02534 | ENGINEERING AND PUBLIC WORKS

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STATE OF TEXAS — WAYNE FLORES — 90130 — LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN
FOR
PARKLANDS II UNIT 4
CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
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TBPLS Firm# 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: SANITARY SEWER DETAIL SHEET

SHEET TITLE: *SANITARY SEWER DETAILS SHEET*

SHEET NUMBER: 6.4

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Jan 24, 2024, 4:30pm User ID: ASerna
Drawing: J:\Projects\23008197A\Civil\Design\Construction Plans\SANITARY SEWER DETAIL SHEET.dwg
Design/CIVIL/WWR/SANITARY SEWER DETAIL SHEET.dwg By: ASERNA

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 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 THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!!

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

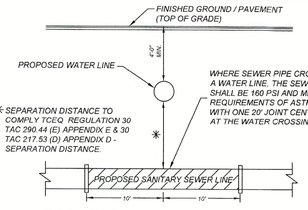
WATER PLAN NOTES:

1. ALL PVC PIPE 4", 8" AND 12" TO BE C-900 DR 14 CLASS 305.
2. FOR TYPICAL STREET SECTIONS SEE DETAIL THIS SHEET.
3. FOR ADDITIONAL WATER NOTES AND DETAILS SEE SHEET 7.2
4. WATER METER LOCATIONS ARE SHOWN SYMBOLICALLY TO SERVICE THE LOTS BUT SHALL BE LOCATED IN ACCORDANCE WITH THE STANDARD WATER DETAILS, SEE SHEET 7.2
5. FIRE HYDRANT LOCATIONS AND SYMBOLS HAVE BEEN SCALED AND SHOWN FOR CLARITY PURPOSES ONLY AND SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD WATER DETAILS, SEE SHEET 7.2

*** WATER METER NOTE:**
ALL ELECTRIC IMPROVEMENTS INCLUDING STREET LIGHTS MUST BE PLACED A MINIMUM OF 4 FEET FROM THE METER BOX.

OSHA TRENCH SAFETY

1. TRENCH EXCAVATION SHALL COMPLY WITH MINIMUM STANDARDS AS SET FORTH BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, REGULATIONS STANDARDS - 29 CFR - "EXCAVATION" - 1926 SUBPART P.
2. TRENCH SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SHOP DRAWINGS FOR DETAIL PLANS AND SPECIFICATIONS TO PROVIDE ADEQUATE SHORING AND SHEETING STANDARDS THAT MEET THE OSHA STANDARDS AS SET OUT BY STANDARDS - 29 CFR - EXCAVATION" - 1926 SUBPART P FOR TRENCH SAFETY. COST OF TRENCH SAFETY SHALL BE INCLUDED IN THE UNIT PRICE COST PER LINEAR FOOT OF PIPE AS BID.
3. CONTINUOUS INSPECTION OF ALL TRENCH EXCAVATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR JOB SUPERINTENDENT. THE CONTRACTOR CONTROLS THE SIZE, WEIGHT, AND SPEED OF OPERATION OF EQUIPMENT AND PIPE INSTALLATION, WHICH DIRECTLY AFFECTS ALL SAFETY MEASURES IN A TRENCH. IF PROBABLE CAUSE OF UNSAFE TRENCH CONDITIONS EXIST, ALL WORK SHALL CEASE IMMEDIATELY UNTIL NECESSARY PRECAUTIONS TO SAFEGUARD EMPLOYEES ARE TAKEN.

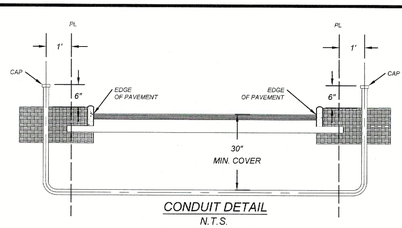


TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.

⊗ ENTIRE LENGTH OF PIPE TO BE RESTRAINT

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESS OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND OTHER JOINT RESTRAINING HARNESS AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

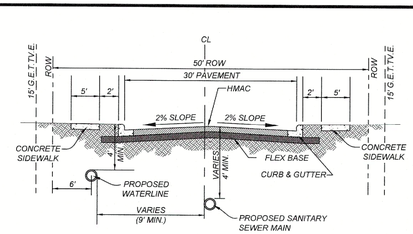


CONDUIT DETAIL
N.T.S.

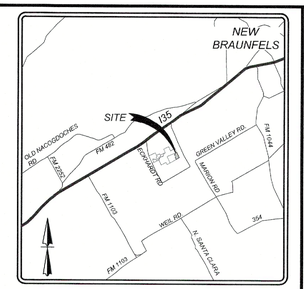
*PVC SCHED. 40 OR 80 CONDUIT
SEE PLAN SHEETS FOR SIZE LOCATION AND NUMBER OF CONDUITS

NOTE:

- CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING CONDUIT SLEEVES FOR EACH GVEC FACILITY AT ALL STREETS AND DRAIN CROSSING CONSTRUCTION SLEEVES MUST ALSO BE LOCATED FOR GVEC CREWS DURING CONSTRUCTION. (SEPARATE ITEM) SEE THIS SHEET FOR CONDUIT CROSSING DETAIL AND SCHEDULE.
- CONTRACTOR TO CONTACT ENGINEER FOR APPROPRIATE NUMBER AND SIZE OF CONDUITS FOR TELECOMMUNICATIONS
- CONTRACTOR TO CONTACT ENGINEER FOR ELECTRICAL PLANS



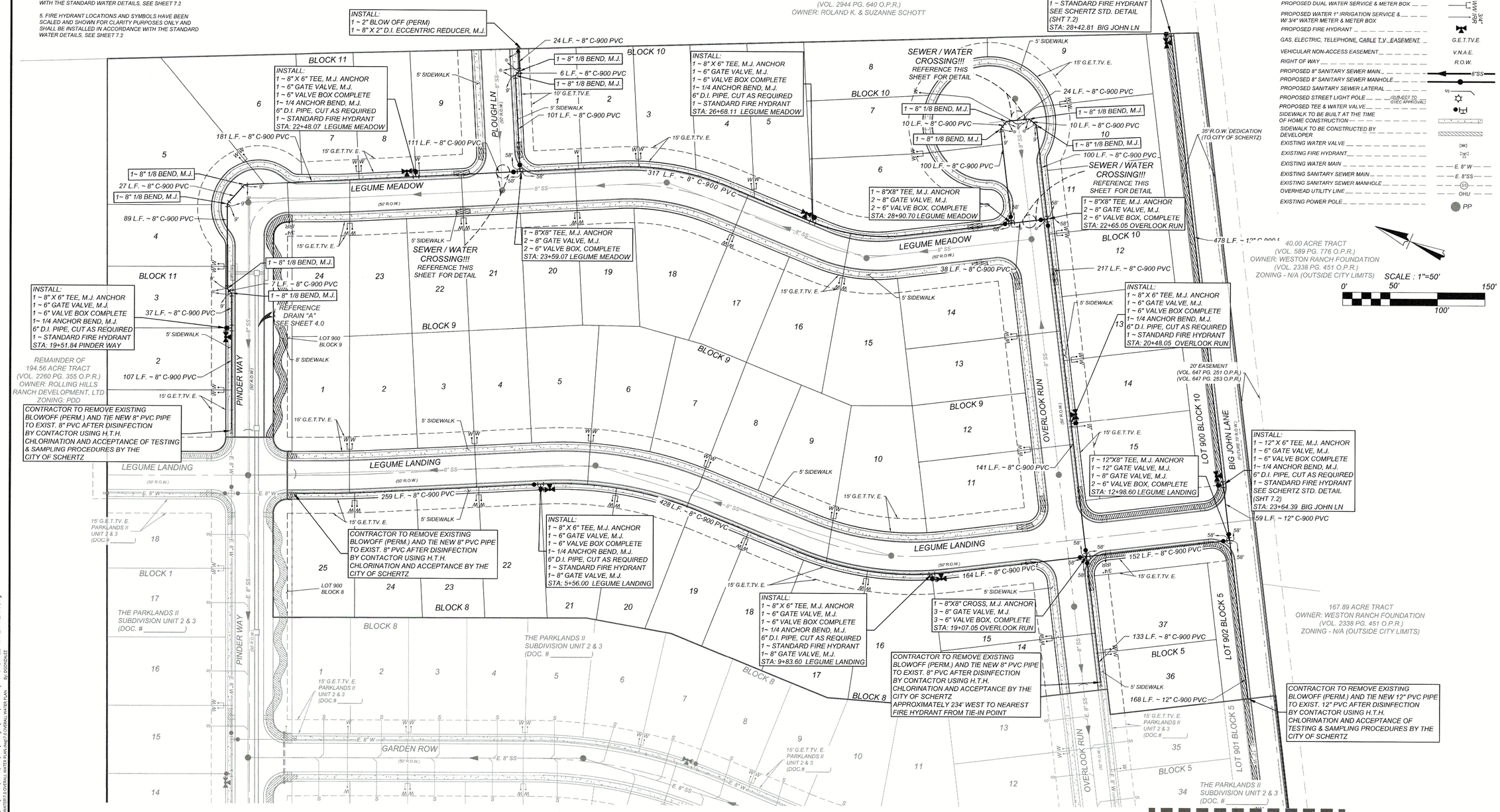
TYPICAL 50' ROW STREET CROSS SECTION - LOCAL ST.
N.T.S.



LOCATION MAP
N.T.S.

LEGEND

- PROPOSED WATER MAIN — 8"W
- PROPOSED WATER SERVICE & METER BOX — W WW IRR 3/4"
- PROPOSED DUAL WATER SERVICE & METER BOX
- PROPOSED WATER 1" IRRIGATION SERVICE & W/ 3/4" WATER METER & METER BOX
- PROPOSED FIRE HYDRANT
- GAS, ELECTRIC, TELEPHONE, CABLE T.V., EASEMENT — G.E.T.TV.E.
- VEHICULAR NON-ACCESS EASEMENT — V.N.A.E.
- RIGHT OF WAY — R.O.W.
- PROPOSED 8" SANITARY SEWER MAIN — 8"SS
- PROPOSED 8" SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER LATERAL
- PROPOSED STREET LIGHT POLE (SUBJECT TO GVEC APPROVAL)
- PROPOSED TEE & WATER VALVE
- SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
- SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING WATER MAIN — E. 8" W
- EXISTING SANITARY SEWER MAIN — E. 8"SS
- EXISTING SANITARY SEWER MANHOLE — OHU
- OVERHEAD UTILITY LINE
- EXISTING POWER POLE — PP



MATCHLINE 'A' SEE SHEET 7.1

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

REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14969
TBPLS Firm#: 10014250

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 7.0 OVERALL WATER PLAN

SHEET TITLE: OVERALL WATER PLAN

SHEET NUMBER: 7.0

Date: May 07, 2024, 11:23am User ID: dgonzalez
File: U:\Projects\205\29\05\Design\Civil\WATER\7.0 OVERALL WATER PLAN.dwg
Design/Drawn/Check/7.0 OVERALL WATER PLAN.dwg By: DGONZALEZ

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

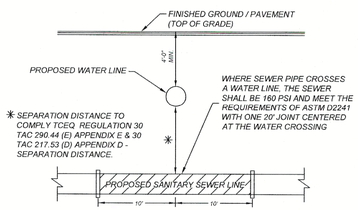
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGNIGEOTECHNICALSAFETYEQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH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

CAUTION!!:

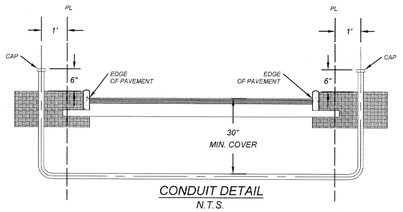
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

*** WATER METER NOTE:**

ALL ELECTRIC IMPROVEMENTS INCLUDING STREET LIGHTS MUST BE PLACED A MINIMUM OF 4 FEET FROM THE METER BOX.



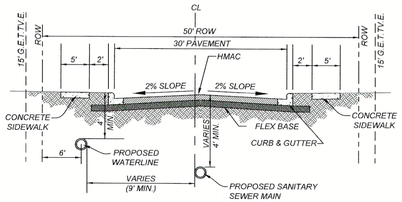
TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.



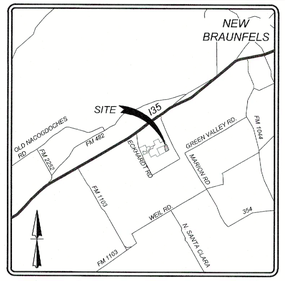
CONDUIT DETAIL
N.T.S.
*PVC SCHED. 40 OR 80 CONDUIT
SEE PLAN SHEETS FOR SIZE LOCATION AND NUMBER OF CONDUITS

NOTE:

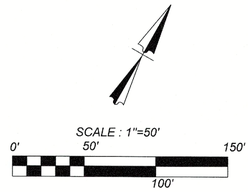
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TYPICAL 50' ROW STREET CROSS SECTION - LOCAL ST.
N.T.S.

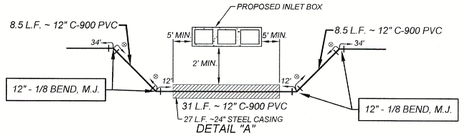


LOCATION MAP
N.T.S.

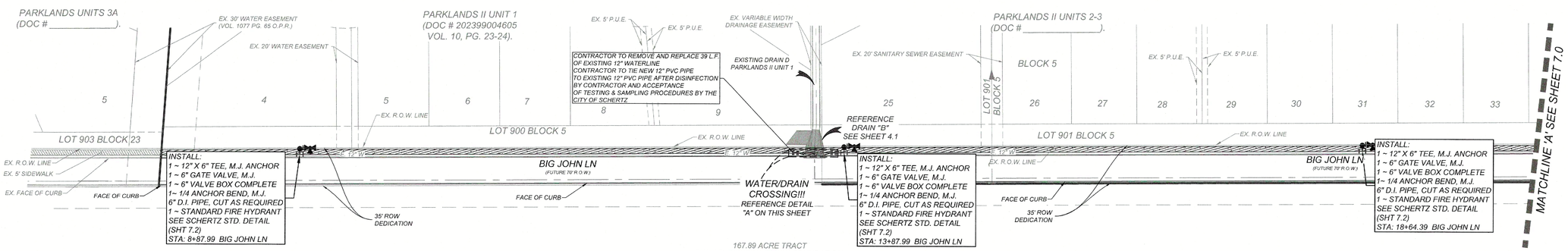


LEGEND

PROPOSED WATER MAIN	8"W
PROPOSED WATER SERVICE & METER BOX	W
PROPOSED DUAL WATER SERVICE & METER BOX	W W
PROPOSED WATER 1" IRRIGATION SERVICE & W/ 3/4" WATER METER & METER BOX	3/4"
PROPOSED FIRE HYDRANT	
GAS, ELECTRIC, TELEPHONE, CABLE T.V. EASEMENT	G.E.T.T.V.E.
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SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION	
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EXISTING WATER VALVE	
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EXISTING SANITARY SEWER MAIN	E. 8"SS
EXISTING SANITARY SEWER MANHOLE	
OVERHEAD UTILITY LINE	OHU
EXISTING POWER POLE	PP



DETAIL "A"
VERTICAL OFFSET



OSHA TRENCH SAFETY

1. TRENCH EXCAVATION SHALL COMPLY WITH MINIMUM STANDARDS AS SET FORTH BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, REGULATIONS STANDARDS - 29 CFR - "EXCAVATION" - 1926 SUBPART P.

2. TRENCH SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SHOP DRAWINGS FOR DETAIL PLANS AND SPECIFICATIONS TO PROVIDE ADEQUATE SHORING AND SHEETING STANDARDS THAT MEET THE OSHA STANDARDS AS SET OUT BY STANDARDS - 29 CFR - EXCAVATION" - 1926 SUBPART P. FOR TRENCH SAFETY. COST OF TRENCH SAFETY SHALL BE INCLUDED IN THE UNIT PRICE COST PER LINEAR FOOT OF PIPE AS BID.

3. CONTINUOUS INSPECTION OF ALL TRENCH EXCAVATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR JOB SUPERINTENDENT. THE CONTRACTOR CONTROLS THE SIZE, WEIGHT, AND SPEED OF OPERATION OF EQUIPMENT AND PIPE INSTALLATION, WHICH DIRECTLY AFFECTS ALL SAFETY MEASURES IN A TRENCH. IF PROBABLE CAUSE OF UNSAFE TRENCH CONDITIONS EXIST, ALL WORK SHALL CEASE IMMEDIATELY UNTIL NECESSARY PRECAUTIONS TO SAFEGUARD EMPLOYEES ARE TAKEN.

WATER PLAN NOTES:

1. ALL PVC PIPE 4", 8" AND 12" TO BE C-900 DR 14 CLASS 305.
2. FOR TYPICAL STREET SECTIONS SEE DETAIL THIS SHEET.
3. FOR ADDITIONAL WATER NOTES AND DETAILS SEE SHEET 7.2
4. WATER METER LOCATIONS ARE SHOWN SYMBOLICALLY TO SERVICE THE LOTS BUT SHALL BE LOCATED IN ACCORDANCE WITH THE STANDARD WATER DETAILS, SEE SHEET 7.2
5. FIRE HYDRANT LOCATIONS AND SYMBOLS HAVE BEEN SCALED AND SHOWN FOR CLARITY PURPOSES ONLY AND SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD WATER DETAILS, SEE SHEET 7.2

⊗ ENTIRE LENGTH OF PIPE TO BE RESTRAINT

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESS OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND OTHER JOINT RESTRAINING HARNESS AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN
FOR
PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 7.0 OVERALL WATER PLAN

SHEET TITLE: OVERALL WATER PLAN

SHEET NUMBER: 7.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: May 07, 2024, 11:24am User ID: dgonzalez
File: U:\Projects\205\29\03\Design\Civil\WATER\7.0 OVERALL WATER PLAN.dwg

GENERAL WATER NOTES

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL BE APPROVED BY THE CITY OF SCHERTZ AND COMPLY WITH THE FOLLOWING AS APPLICABLE:
   a. CURRENT CITY OF SCHERTZ "UNIFIED DEVELOPMENT CODE"
   b. CURRENT CITY OF SCHERTZ "PUBLIC WORKS SPECIFICATION MANUAL"
   c. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND DRAINAGE."
2. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY HAVE NOTIFIED CITY OF SCHERTZ PUBLIC WORKS WITH AT LEAST **3 WORKING DAYS (72 HOURS) NOTICE**. ANY TIE-IN SHALL BE COORDINATED BY THE CONTRACTOR WITH PUBLIC WORKS.
3. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
   a. CITY OF SCHERTZ PUBLIC WORKS (210) 619-1800
   b. TEXAS STATE WIDE ONE CALL 1-800-245-4545
   c. CITY PUBLIC SERVICE 210-353-5952
   d. SPECTRUM. 866-874-2389
   e. GUADALUPE VALLEY ELECTRIC CO. 210-658-7033
   f. GREEN VALLEY WATER SUPPLY CORP. (830-914-2330)
   g. SSLGC 830-401-2409
   h. NEW BRAUNFELS UTILITY 830-606-2074
   i. CANYON LAKE REGIONAL WATER AUTHORITY 830-609-0543
   j. CENTER POINT 888-876-5786
   k. SAN ANTONIO RIVER AUTHORITY (866-345-7272)
   l. CCMA 210-658-6241
4. **NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT THE CONTRACTOR'S AND / OR DEVELOPER'S EXPENSE.**
5. 2", SCHEDULE 40, PVC CASING TO BE USED FOR ALL WATER SERVICE LINES BENEATH ROADWAYS.
6. CONTRACTORS SHOULD USE HTH GRANULAR FOR DISINFECTION OF WATER LINES (NOT CHLORINE INJECTION).

CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

CONSTRUCTION PLAN NOTES

PW TECH. SPEC. SECTION 02501

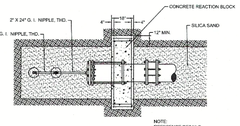
GENERAL WATER NOTES CONT:

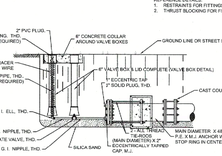
7. NEW WATERLINES SHALL BE TIED INTO EXISTING WATER SYSTEM UNDER THE SUPERVISION OF CITY PERSONNEL NO LATER THAN 14 DAYS AFTER PASSING BACTERIOLOGICAL TESTS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES PER SPECIFICATION 01740.
9. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY ARBORIST AND THE CITY OF SCHERTZ CONSTRUCTION INSPECTOR FOR GUIDANCE.
10. 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.
11. THE DEVELOPER DEDICATES THE WATER MAINS UPON COMPLETION BY THE DEVELOPER AND ACCEPTANCE BY THE CITY OF SCHERTZ. THE CITY OF SCHERTZ WILL OWN AND MAINTAIN SAID WATER MAINS WHICH ARE LOCATED WITHIN THIS PARTICULAR SUBDIVISION (AS APPLICABLE).
12. THE CONTRACTOR AND/OR THE 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. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.
13. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE NOTICE TO PROCEED WITH THE CITY OF SCHERTZ CONSTRUCTION INSPECTOR WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
14. THE CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE METER BOX FREE OF ALL OBJECTS AND DEBRIS

CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

CONSTRUCTION PLAN NOTES

PW TECH. SPEC. SECTION 02501





NOTE:
1. MIMIMUM ALL EXTERIOR METAL SURFACES IN SILICA SAND
2. REINFORCE BARS IN THE CONCRETE REACTION BLOCK SHALL BE #4.
3. ALL FERROUS METAL SURFACES TO BE IN ACCORDANCE WITH CITY OF SCHERTZ SPECIFICATIONS.
4. ALL BURIED METAL SURFACES, INCLUDING GALVANIZED PIPE AND STEEL RODS, ARE TO BE PROTECTED FROM SOIL EXPOSURE BY POLYBAGGING AND POLYTAPING (SPEC. 02526).

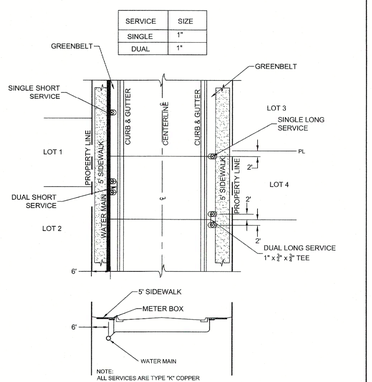
PERMANENT 2" BLOW-OFF ASSEMBLY

CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

BLOW-OFF ASSEMBLY

PW TECH. SPEC. SECTION 02501

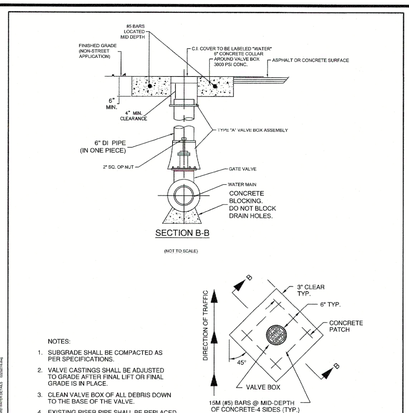
SERVICE	SIZE
SINGLE	1"
DUAL	1"



CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

METER BOX LOCATION

PW TECH. SPEC. SECTION 02501



SECTION B-B
(NOT TO SCALE)

PLAN VIEW

NOTES:
1. SUBGRADE SHALL BE COMPACTED AS PER SPECIFICATIONS.
2. VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OR FINAL GRADE IS IN PLACE.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE BASE OF THE VALVE.
4. EXISTING RISER PIPE SHALL BE REPLACED WITH DUCTILE IRON ELEVATION USING NEW PIPE AND A COLLAR CASTING.
5. REINFORCING STEEL SHALL MEET SPECIFICATIONS.
6. VALVES WILL BE ACCOMPANIED BY A "V" ETCHED INTO CURB FACE PAINTED BLUE

CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

VALVE BOX

PW TECH. SPEC. SECTION 02501

OSHA TRENCH SAFETY

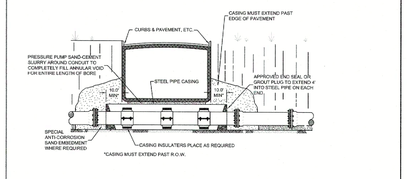
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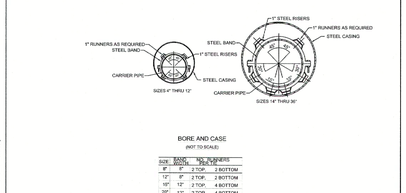
TRENCH SAFETY SYSTEM

CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

OSHA TRENCH SAFETY NOTES

PW TECH. SPEC. SECTION 02501





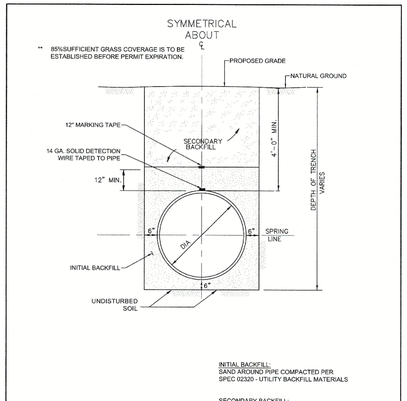
BORE AND CASE
(NOT TO SCALE)

SIZE	BORE	No. RUNNERS
4"	8"	2 TOP, 2 BOTTOM
12"	8"	2 TOP, 2 BOTTOM
16"	12"	2 TOP, 4 BOTTOM
20"	12"	2 TOP, 4 BOTTOM
24"	12"	2 TOP, 4 BOTTOM
30"	12"	2 TOP, 4 BOTTOM
36"	12"	2 TOP, 4 BOTTOM

CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

BORE AND CASE

PW TECH. SPEC. SECTION 02447



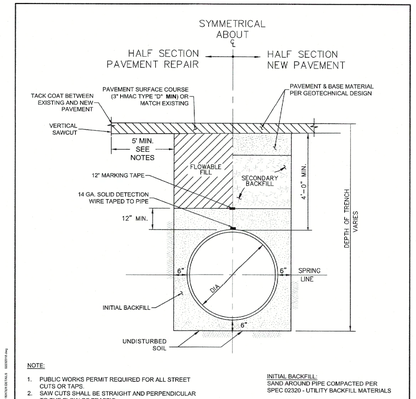
INITIAL BACKFILL:
SAND AROUND PIPE COMPACTED PER SPEC 02320 - UTILITY BACKFILL MATERIALS

SECONDARY BACKFILL:
NATIVE MATERIAL FROM TRENCH PLACED IN MAXIMUM 8" LOOSE LIFTS, FREE OF DEBRIS AND STONES LARGER THAN 4". COMPACTION TO 95% STD PROCTOR DENSITY (ASTM D 698). PER SPEC 02317

CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

WATER MAIN TRENCH IN UNPAVED AREA

PW TECH. SPEC. SECTION 02501



NOTE:
1. PUBLIC WORKS PERMIT REQUIRED FOR ALL STREET CUTS OR TAPS.
2. SAW CUTS SHALL BE STRAIGHT AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
3. TACK ALL VERTICAL SURFACES.

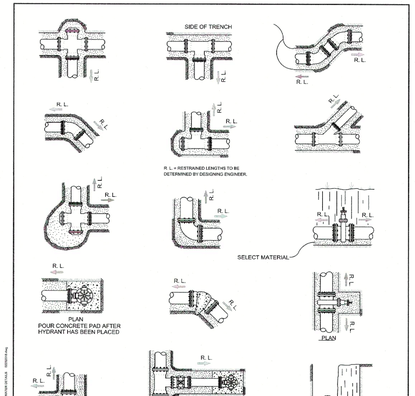
INITIAL BACKFILL:
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CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

WATER MAIN TRENCH IN STREET

PW TECH. SPEC. SECTION 02501

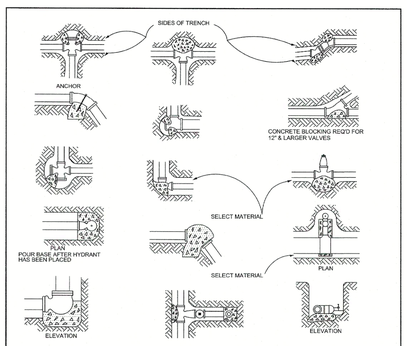


RESTRAINTS FOR FITTING
(NOT TO SCALE)

CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

RESTRAINTS FOR FITTINGS

PW TECH. SPEC. SECTION 02501



SQUARE FEET OF BLOCKING REQUIRED FOR ROCK EXCAVATION (3000 psi concrete)

SIZE PIPE	TEES & DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS
6"	2	2	1	1
8"	3	4	2	1
12"	6	9	5	2
16"	11	15	8	4
18"	14	20	10	5

SQUARE FEET OF BLOCKING REQUIRED FOR OTHER THAN ROCK EXCAVATION (3000 psi concrete)

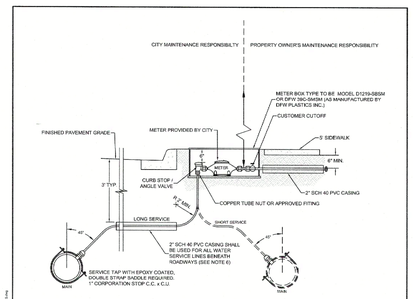
SIZE PIPE	TEES & DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS
6"	3	4	2	1
8"	4	6	4	2
12"	10	14	8	4
16"	18	25	14	7
18"	21	31	17	10

THRUST BLOCKING FOR FITTINGS
(NOT TO SCALE)

CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

THRUST BLOCKING FOR FITTINGS

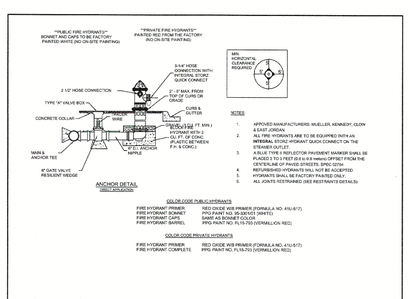
PW TECH. SPEC. SECTION 02501



NOTES:
1. CONTRACTORS SHOULD USE HTH FOR DISINFECTION OF WATER LINES (NOT CHLORINE INJECTION) UNLESS APPROVED OTHERWISE PRIOR TO ISSUANCE OF PERMIT.
2. NEW WATERLINES SHALL BE TIED INTO EXISTING WATER SYSTEM UNDER THE SUPERVISION OF CITY PERSONNEL NO LATER THAN 14 DAYS AFTER PASSING BACTERIOLOGICAL TESTS.
3. ALL SERVICES ARE TYPE "K" COPPER OR BLUE HDPE.
4. METER BOXES WILL BE ACCOMPANIED BY AN "X" ETCHED INTO CURB FACE PAINTED BLUE.
5. NO METER BOXES TO BE SET IN DRIVEWAYS. METER BOXES SET IN DRIVEWAYS SHALL BE RELOCATED AT THE CONTRACTORS AND/OR DEVELOPER'S EXPENSE
6. PVC CASING IS NOT REQUIRED FOR HDPE WATER SERVICE PIPE.

SCHERTZ — COMMUNITY - SERVICE - OPPORTUNITY

STANDARD DETAIL 2512
WATER TAP & SERVICE
TECHNICAL SPECIFICATION SECTIONS 02512
ENGINEERING AND PUBLIC WORKS



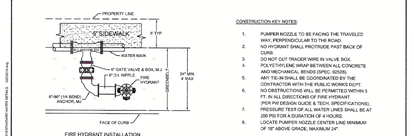
NOTES
1. APPROVED MANUFACTURERS: MUELLER, KENNEDY, CLOW & EAST JORDAN.
2. ALL FIRE HYDRANTS ARE TO BE EQUIPPED WITH AN INTERNAL STORZ HYDRANT QUICK CONNECT ON THE 5-1/4" STEAMER.
3. A BLUE TYPE 3 REFLECTOR PAVEMENT MARKER SHALL BE PLACED 2 TO 3 FEET (0.6 to 0.9 meters) OFFSET FROM THE CENTERLINE OF PAVED STREETS. SPEC 02704
4. REFURBISHED HYDRANTS SHALL NOT BE ACCEPTED
5. HYDRANTS SHALL BE FACTORY PAINTED ONLY.
6. ALL JOINTS RESTRAINED (SEE RESTRAINTS DETAILS)

COLOR CODE PUBLIC HYDRANTS

FIRE HYDRANT PRIMER	RED OXIDE W/B PRIMER (FORMULA NO. 47U-5/17)
FIRE HYDRANT BONNET	PPG PAINT NO. 95-330 NYLOMAX 3944TD
FIRE HYDRANT TOP	PPG PAINT NO. 9-1 GLOSS WHITE
FIRE HYDRANT BARREL	PPG PAINT NO. FL15-702 (VERMILLION RED)

COLOR CODE PRIVATE HYDRANTS

FIRE HYDRANT PRIMER	RED OXIDE W/B PRIMER (FORMULA NO. 47U-5/17)
FIRE HYDRANT COMPLETE	PPG PAINT NO. FL15-702 (VERMILLION RED)



FIRE HYDRANT INSTALLATION ANGLED APPLICATION
(NOT TO SCALE)

CONSTRUCTION KEY NOTES:
1. PUMPER NOZZLE TO BE FACING THE TRAVELED WAY, PERPENDICULAR TO THE ROAD.
2. NO HYDRANT SHALL PROTRUDE PAST BACK OF CURB.
3. DO NOT CUT TRACER WIRE IN VALVE BOX.
4. ALL FITTINGS TO BE RESTRAINED WITH CONCRETE AND MECHANICAL BENDS (SPEC. 02532)
5. ANY TIE-IN SHALL BE COORDINATED BY THE CONTRACTOR WITH THE PUBLIC WORKS DEPT.
6. NO OBSTRUCTIONS WILL BE PERMITTED WITHIN 5 FT. IN ALL DIRECTIONS OF FIRE HYDRANT. (PER PW DESIGN GUIDE & TECH. SPECIFICATIONS).
7. PRESSURE TEST OF ALL WATER LINES SHALL BE AT 200 PSI FOR A DURATION OF 4 HOURS.
8. LOCATE PUMPER NOZZLE CENTER LINE MINIMUM OF 18" ABOVE GRADE, MAXIMUM 24".

CITY OF SCHERTZ TEXAS — ENGINEERING AND PUBLIC WORKS — STANDARD DETAIL

FIRE HYDRANT

PW TECH. SPEC. SECTION 02501

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811 TEXAS — Know what's below. Call before you dig. — PROTECT YOURSELF — ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE — FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS — WAYNE FLORES — 90130 — LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14309
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A

DRAWING NAME: 7.2 WATER NOTES AND DETAILS SHEET

SHEET TITLE: *WATER NOTES AND DETAILS SHEET*

SHEET NUMBER: 7.2

Date: Jan 24, 2024, 3:46pm User ID: ASerna
File: U:\Projects\205\29\00\Design\Civil\WATER\7.2 WATER NOTES AND DETAILS SHEET.dwg
Drawings\WATER\7.2 WATER NOTES AND DETAILS SHEET.dwg By: ASERNA

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

CAUTION!!!
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

PROJECT COMPLETION:

1. ALL DISTURBED AREAS ARES NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADIENT AREAS HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

SW3P MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION

SEQUENCE OF CONSTRUCTION:

CONSTRUCTION ACTIVITY WILL INCLUDE:

1. INSTALLATION OF TEMPORARY BMP's
2. SITE CLEARING AND GRUBBING ACTIVITIES FOR STREETS.
3. ROUGH SUBGRADE PREPARATION: EARTHWORK, GRADING, STREETS, EXCAVATION AND EMBANKMENT.
4. UTILITY TRENCHING AND INSTALLATION.
5. FINAL STREET PREPARATION, CURBING, AND PAVING ACTIVITIES.
6. HOME CONSTRUCTION.
7. SITE CLEAN UP AND REMOVAL OF TEMPORARY BMP's.

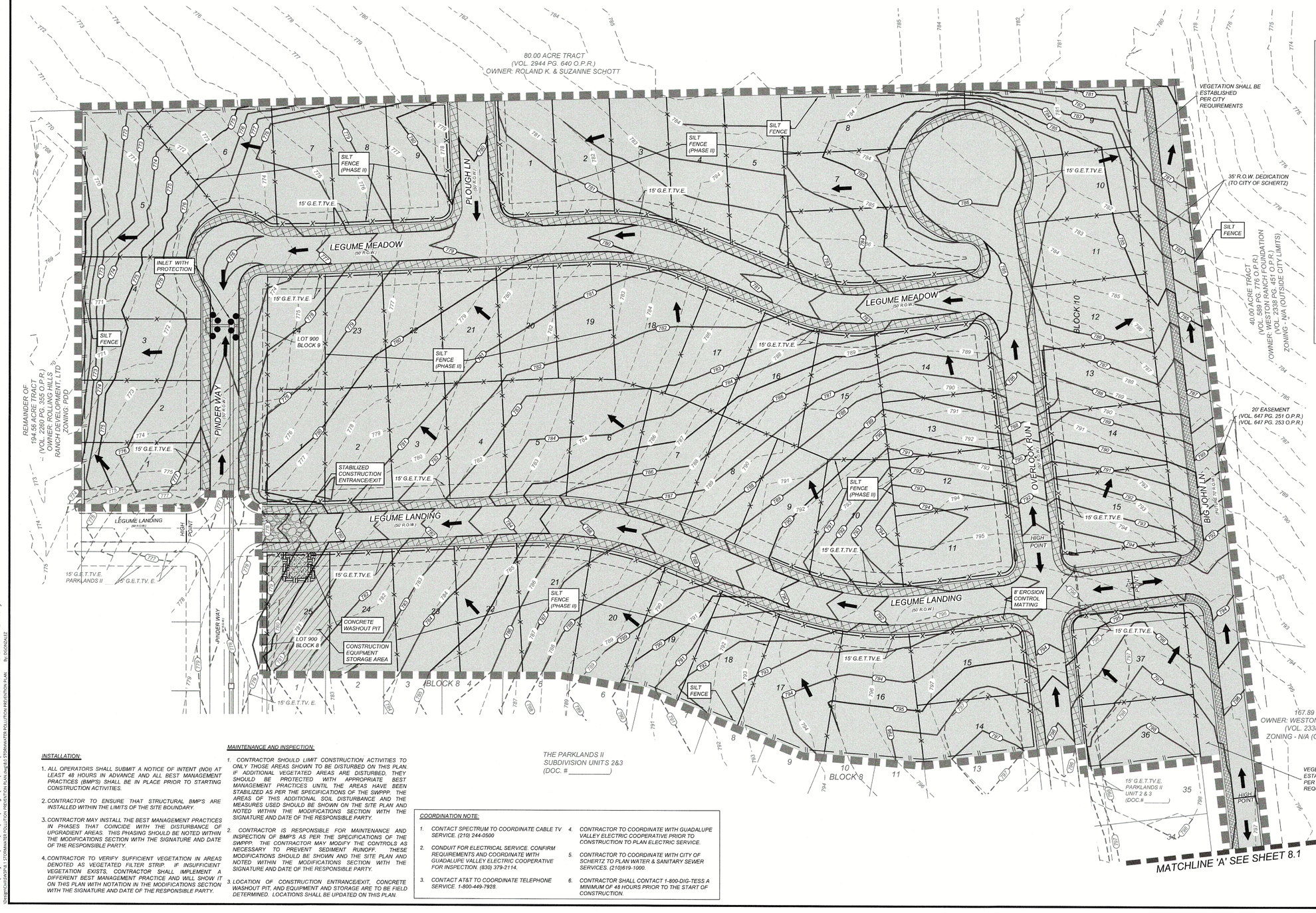
NOTE: SEE SHEET 8.2 FOR BENCHMARK INFORMATION

GENERAL

1. THIS EXHIBIT IS TO BE USED FOR THE PURPOSES OF STORMWATER POLLUTION PREVENTION ONLY. ALL OTHER CIVIL ENGINEERING INFORMATION SHOULD BE OBTAINED FROM THE APPROPRIATE CONSTRUCTION DOCUMENTS.
2. THE PURPOSE OF THE SIGNATURE AND SEAL OF THE ENGINEER ON THIS DOCUMENT IS TO DEMONSTRATE COMPLIANCE WITH THE TPDES STORMWATER POLLUTION PREVENTION PLAN REGULATIONS ONLY.
3. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT
4. CITY INSPECTOR MAY REQUIRE ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AS APPROPRIATE.
5. ALL DISTURBED AREAS SHALL BE REVEGETATED TO A MINIMUM OF 85% WITH THE EXCEPTION OF BUILDABLE RESIDENTIAL LOTS. EROSION AND SEDIMENTATION FROM BUILDABLE LOTS SHOULD BE PREVENTED THROUGH THE USE OF SILT FENCE, CONTROL MATTING, OR OTHER BMP AS APPROPRIATE.



LOCATION MAP
N.T.S.



LEGEND

- LIMITS OF CONSTRUCTION
- 780 EXISTING CONTOURS
- 780 PROPOSED GRADE
- 780 PARKLAND II UNITS 2-3 CONTOURS
- FLOW ARROW
- STABILIZED CONSTRUCTION ENTRANCE/EXIT
- CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA
- CONCRETE TRUCK WASHOUT PIT
- INLET WITH PROTECTION (GRAVEL FILTER BAGS)
- DISTURBED AREA
- ROCK BERM
- SILT FENCE
- SILT FENCE PHASE II
- NATURAL VEGETATIVE BUFFER
- EROSION CONTROL MATTING ORIGINAL CURLEX ECB OR EQUAL

SCALE : 1"=50'
0' 50' 150'
100'

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 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 THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

INSTALLATION:

1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

MAINTENANCE AND INSPECTION:

1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED, THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210) 244-0500
2. CONDUIT FOR ELECTRICAL SERVICE. CONFIRM REQUIREMENTS AND COORDINATE WITH GUADALUPE VALLEY ELECTRIC COOPERATIVE FOR INSPECTION. (830) 379-2114.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH GUADALUPE VALLEY ELECTRIC COOPERATIVE PRIOR TO CONSTRUCTION TO PLAN ELECTRIC SERVICE.
5. CONTRACTOR TO COORDINATE WITH CITY OF SCHERTZ TO PLAN WATER & SANITARY SEWER SERVICES. (210)619-1000.
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN
FOR
PARKLANDS II UNIT 4
CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194650

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF
PROJECT NUMBER: 23008197A	DRAWING NAME: 8.1 STORMWATER POLLUTION PREVENTION PLAN		

SHEET TITLE:
STORMWATER POLLUTION PREVENTION PLAN

SHEET NUMBER:
8.0

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Apr 12, 2024, 10:18am User ID: dgonzalez
File: U:\Projects\1200\1289\05\Design\CAD\SW3P\8.1 STORMWATER POLLUTION PREVENTION PLAN.dwg
Xrefs: C:\ACAD\SW3P\8.1 STORMWATER POLLUTION PREVENTION PLAN.dwg By: DGONZALEZ

CAUTION!!
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PROJECT COMPLETION:

1. ALL DISTURBED AREAS ARES NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
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3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

SW3P MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION

SEQUENCE OF CONSTRUCTION:

CONSTRUCTION ACTIVITY WILL INCLUDE:

1. INSTALLATION OF TEMPORARY BMP's
2. SITE CLEARING AND GRUBBING ACTIVITIES FOR STREETS.
3. ROUGH SUBGRADE PREPARATION: EARTHWORK, GRADING, STREETS, EXCAVATION AND EMBANKMENT.
4. UTILITY TRENCHING AND INSTALLATION.
5. FINAL STREET PREPARATION, CURBING, AND PAVING ACTIVITIES.
6. HOME CONSTRUCTION.
7. SITE CLEAN UP AND REMOVAL OF TEMPORARY BMP's.

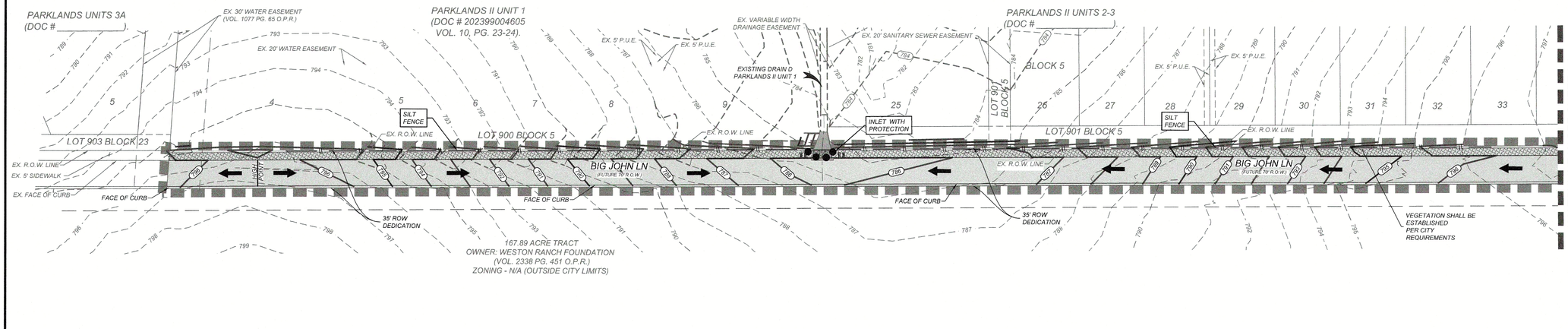
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4. CITY INSPECTOR MAY REQUIRE ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AS APPROPRIATE.
5. ALL DISTURBED AREAS SHALL BE REVEGETATED TO A MINIMUM OF 85% WITH THE EXCEPTION OF BUILDABLE RESIDENTIAL LOTS. EROSION AND SEDIMENTATION FROM BUILDABLE LOTS SHOULD BE PREVENTED THROUGH THE USE OF SILT FENCE, CONTROL MATTING, OR OTHER BMP AS APPROPRIATE.



LOCATION MAP
N.T.S.



SCALE : 1"=50'

0' 50' 150'

100'

LEGEND

- LIMITS OF CONSTRUCTION
- 780 EXISTING CONTOURS
- 780 PROPOSED GRADE
- 780 PARKLAND II UNITS 2-3 CONTOURS
- FLOW ARROW
- STABILIZED CONSTRUCTION ENTRANCE/EXIT
- CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA.
- CONCRETE TRUCK WASHOUT PIT
- INLET WITH PROTECTION (GRAVEL FILTER BAGS)
- DISTURBED AREA
- ROCK BERM
- SILT FENCE
- SILT FENCE PHASE II
- NATURAL VEGETATIVE BUFFER
- EROSION CONTROL MATTING ORIGINAL CURLEX ECB OR EQUAL

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 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 THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

INSTALLATION:

1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

MAINTENANCE AND INSPECTION:

1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED, THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

COORDINATION NOTE:

1. CONTACT SPECTRUM TO COORDINATE CABLE TV SERVICE. (210) 244-0500
2. CONDUIT FOR ELECTRICAL SERVICE. CONFIRM REQUIREMENTS AND COORDINATE WITH GUADALUPE VALLEY ELECTRIC COOPERATIVE FOR INSPECTION. (830) 379-2114.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH GUADALUPE VALLEY ELECTRIC COOPERATIVE PRIOR TO CONSTRUCTION TO PLAN ELECTRIC SERVICE.
5. CONTRACTOR TO COORDINATE WITH CITY OF SCHERTZ TO PLAN WATER & SANITARY SEWER SERVICES. (210)619-1000.
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

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Formerly Known as KFW

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

REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
640 N. Walnut Ave.
Suite 1101
New Braunfels, TX 78130
Phone: 830.220.6042
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 8.1 STORMWATER POLLUTION PREVENTION PLAN

SHEET TITLE:
STORMWATER POLLUTION PREVENTION PLAN

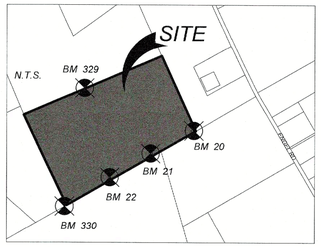
SHEET NUMBER:
8.1

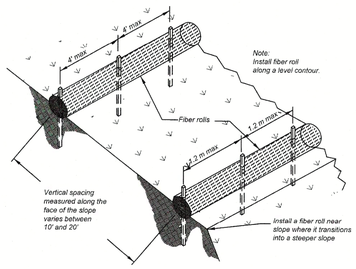
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Jan 24, 2024, 3:32pm User ID: ASerna
File: U:\Projects\205\29\05\Design\Civil\SW3P\8.1 STORMWATER POLLUTION PREVENTION PLAN.dwg
Plotted On XREFs & STORMWATER POLLUTION PREVENTION PLAN changed & STORMWATER POLLUTION PREVENTION PLAN By ASERNA

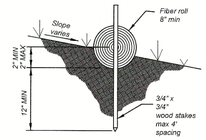
SITE BENCHMARKS (SURFACE)

BM #	ELEV.	DESCRIPTION
BM 20	780.29	SET ½" IRON ROD WITH "KFW" CAP N: 13781553.04, E: 2228215.38 (SURFACE)
BM 21	797.88	SET ½" IRON ROD WITH "KFW" CAP N: 13781235.65, E: 2227613.02 (SURFACE)
BM 22	784.17	SET ½" IRON ROD WITH "KFW" CAP N: 13780902.86, E: 2227039.13 (SURFACE)
BM 329	763.37	SET ½" IRON ROD WITH "KFW" CAP N: 13782144.45, E: 2226687.56
BM 330	796.04	SET ½" IRON ROD WITH "KFW" CAP N: 13780498.43, E: 2226408.86





TYPICAL FIBER ROLL INSTALLATION
N.T.S.



ENTRENCHMENT DETAIL
N.T.S.

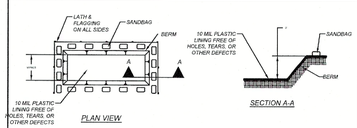
THE MATERIAL, INSTALLATION, INSPECTION, AND MAINTENANCE OF FIBER ROLLS WILL BE PER THE MANUFACTURE'S SPECIFICATIONS AND SHALL ALSO COMPLY WITH THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY CURRENT "TECHNICAL GUIDANCE ON BEST MANAGEMENT PRACTICES" AS NOTED BELOW.

Material:
(1) Core material: Core material should be biodegradable or recyclable. Material may be compost, mulch, aspen wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or similar materials.
(2) Containment Mesh: Containment mesh should be 100% biodegradable, photodegradable or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or similar material. When the fiber role will remain in place as part of a vegetative system use biodegradable or photodegradable mesh. For temporary installation recyclable mesh is recommended.

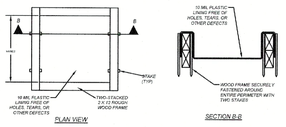
Implementation:
(1) Locate fiber rolls on level contours spaced as follows:
Slope inclination of 4:1 (H:V) or flatter: Fiber rolls should be placed at a maximum interval of 20 ft.
Slope inclination between 4:1 and 2:1 (H:V): Fiber Rolls should be placed at a maximum interval of 15 ft. (a closer spacing is more effective).
Slope inclination 2:1 (H:V) or greater: Fiber Rolls should be placed at a maximum interval of 10 ft. (a closer spacing is more effective).
(2) Turn the ends of the fiber roll up slope to prevent runoff from going around the roll.
(3) Stake fiber rolls into a 2 to 4 in. deep trench with a width equal to the diameter of the fiber roll.
(4) Drive stakes at the end of each fiber roll and spaced 4 ft maximum on center.
(5) Use wood stakes with a nominal classification of 0.75 by 0.75 in. and minimum length of 24 in.
(6) If more than one fiber roll is placed in a row, the rolls should be overlapped, not abutted.

Inspection and Maintenance Guidelines:
(1) Inspect prior to forecast rain, daily during extended rain events, after rain events, and weekly.
(2) Repair or replace split, torn, unraveling, or slumping fiber rolls.
(3) If the fiber roll is used as a sediment capture device, or as an erosion control device to maintain sheet flows, sediment that accumulates behind the role must be periodically removed in order to maintain its effectiveness. Sediment should be removed when the accumulation reaches one-half the designated sediment storage depth, usually one-half the distance between the top of the fiber roll and the adjacent ground surface. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed of at an appropriate location.

FIBER ROLL



TYPE 'BELOW GRADE'

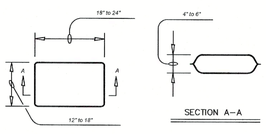


TYPE 'ABOVE GRADE'

GENERAL NOTES:

- *DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.*
- *WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.*
- *WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF AND AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.*

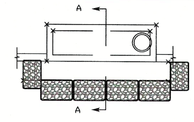
CONCRETE TRUCK WASHOUT PIT



GENERAL NOTES:

- *THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC. MIN UNIT WEIGHT OF 4 OUNCES/SY, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.*
- *THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).*

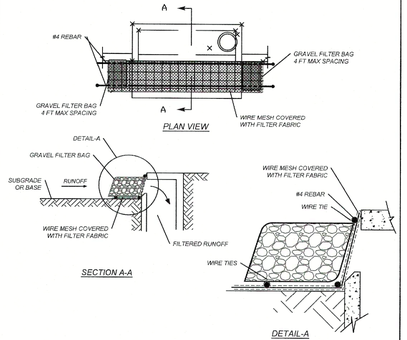
GRAVEL FILTER BAG DETAIL



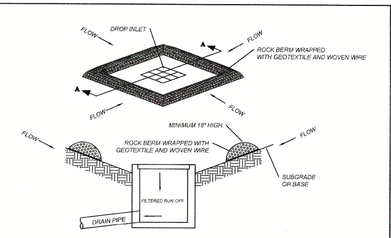
GENERAL NOTES:

- *ALL STORM DRAINAGE SYSTEMS INLETS SHOULD FILTER RUNOFF BEFORE THE WATER IS DISCHARGED INTO STREAMS OR ONTO ADJACENT PROPERTIES, UNLESS TREATMENT IS PROVIDED ELSEWHERE.*
- *IF NO ADDITIONAL DOWNSTREAM TREATMENT EXISTS, THE MAXIMUM DRAINAGE AREA TRIBUTARY TO AN AREA DRAIN INSTALLED WITH A GRAVEL FILTER SHOULD BE ONE ACRE.*
- *ALL CURB INLET GRAVEL FILTERS SHOULD BE INSPECTED AND REPAIRED AFTER EACH RUNOFF EVENT. SEDIMENT SHOULD BE REMOVED WHEN MATERIAL IS WITHIN THREE INCHES OF THE TOP OF THE CONCRETE BLOCKS. PERIODICALLY, THE GRAVEL SHOULD BE RAKED TO INCREASE INFILTRATION AND FILTERING OF RUNOFF WATERS.*

CURB INLET PROTECTION GRAVEL FILTER BAGS



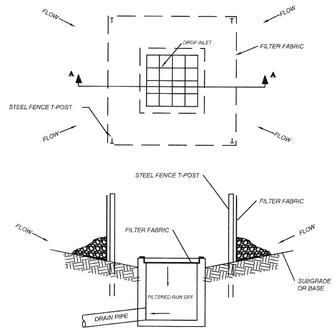
CURB INLET PROTECTION (ALRTERNATE)



GENERAL NOTES:

- *USE OPEN GRADED CLEAN STONE.*
- *THE ROCK SHOULD BE ENCLOSED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE AND WRAPPED IN GEOTEXTILE WITH 300 PSI BURST STRENGTH FILTER FABRIC.*
- *INSPECTION SHOULD BE MADE FREQUENTLY ON SEVERE SERVICE ROCK BERMS. SILT SHOULD BE REMOVED WHEN ACCUMULATION REACHES 4 INCHES OR MORE.*
- *WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHOULD BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.*

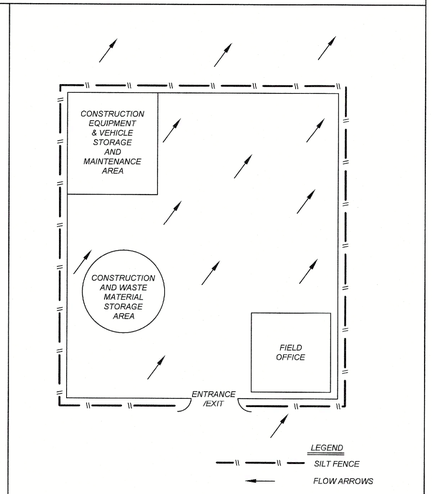
GRATE INLET PROTECTION



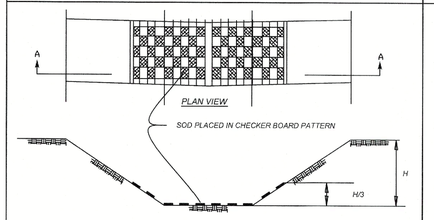
GENERAL NOTES:

- *ALL MATERIALS AND ERECTION PROCEDURES WILL BE THE SAME AS DESCRIBED IN THE STANDARD SILT FENCE REQUIREMENTS.*

GRATE INLET PROTECTION (ALRTERNATE)

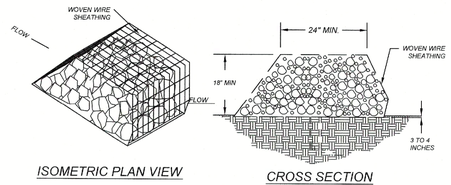


TYPICAL CONSTRUCTION STAGING AREA



- *CHANNEL TO BE STABILIZED WITH SOD PLACED IN A CHECKER BOARD PATTERN TON THE CHANNEL BOTTOM AND ON THE SIDES UP TO 1/3 THE DEPTH OF CHANNEL.*

CHANNEL LINING



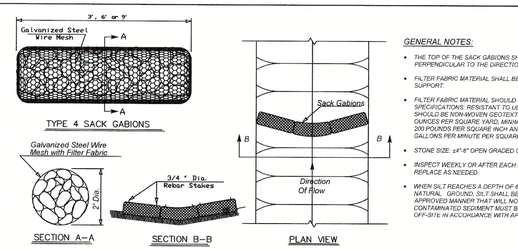
ISOMETRIC PLAN VIEW — CROSS SECTION

Materials:
(1) The berm structure should be, secured with a woven wire sheathing having maximum opening of 1 inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoat rings.
(2) Clean, open graded 3- to 5-inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5- to 8-inch diameter rocks may be used.

Installation:
(1) Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1 inch openings.
(2) Berm should have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter.
(3) Place the rock along the sheathing as shown in the diagram Figure 1-28), to a height not less than 18".
(4) Wrap the wire sheathing around the rock and secure with tie wire so that the ends of the sheathing overlap at least 2 inches, ain the berm retains its shape when walked upon.
(5) Berm should be built along the contour at zero percent grade or as near as possible.
(6) The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approximately 3 to 4 inches deep to prevent failure of the control.

Inspection and Maintenance Guidelines:
(1) Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.
(2) Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause any additional siltation.
(3) Repair any loose wire sheathing.
(4) The berm should be reshaped as needed during inspection.
(5) The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
(6) The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

ROCK BERM



GENERAL NOTES:

- *THE TOP OF THE SACK GABIONS SHOULD BE LEVEL AND ORIENTED PERPENDICULAR TO THE DIRECTION OF FLOW.*
- *FILTER FABRIC MATERIAL SHALL BE FASTENED TO WOVEN WIRE SUPPORT.*
- *FILTER FABRIC MATERIAL SHOULD MEET THE FOLLOWING SPECIFICATIONS: RESISTANT TO ULTRAVIOLET LIGHT, FABRIC SHOULD BE NON-WOVEN GEOTEXTILE WITH MINIMUM WEIGHT OF 3.5 OUNCES PER SQUARE YARD, MINIMUM MULLEN BURST STRENGTH OF 200 POUNDS PER SQUARE INCH AND A FLOW THRU RATE OF 100 GALLONS PER MINUTE PER SQUARE FOOT OF FRONTAL AREA.*
- *STONE SIZE: ±4"-8" OPEN GRADED CRUSHED LIMESTONE.*
- *INSPECT WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACE AS NEEDED.*
- *WHEN SILT REACHES A DEPTH OF 6 INCHES OR MORE ABOVE NATURAL GROUND, SILT SHALL BE REMOVED AND DISPOSED IN AN APPROVED MANNER THAT WILL NOT CONTRIBUTE TO RESILTATION. CONTAMINATED SEGMENT MUST BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.*

TYPE 4 SACK GABIONS

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REV	DATE	DRAWN BY	DESCRIPTION

STATE OF TEXAS
WAYNE FLORES
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LICENSED
PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN
FOR
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GUADALUPE COUNTY
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

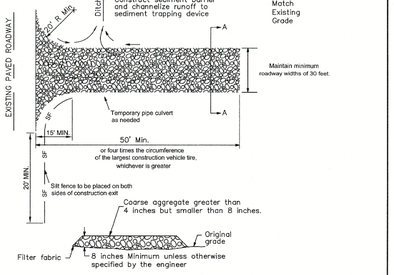
PROJECT NUMBER: 23008197A
DRAWING NAME: 8.2 STORMWATER POLLUTION PREVENTION PLAN TYPICAL DETAILS

SHEET TITLE: *STORMWATER POLLUTION PREVENTION PLAN TYPICAL DETAILS*

SHEET NUMBER: 8.2

Date: Jan 24, 2024, 3:40pm User ID: ASerna
File: U:\Projects\205\29\05\Design\Civil\SWPP\8.2 STORMWATER POLLUTION PREVENTION PLAN TYPICAL DETAILS.dwg
By: ASERNA

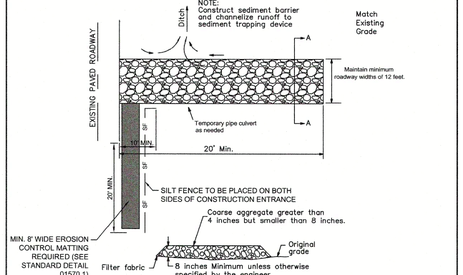
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



SECTION A–A

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
3. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT–OF–WAY.
4. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN A STABILIZED AREA THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
5. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.
6. PLACE GEOTEXTILE FABRIC AS A PERMEABLE SEPERATOR TO PREVENT MIXING OF COARSE AGGREGATE AND UNDERLYING SOIL.
7. REUSABLE TRACKOUT CONTROL SYSTEMS ARE ENCOURAGED. INCLUDE TRACKOUT CONTROL SYSTEMS WITH CLEARING AND GRADING PERMIT SUBMITTAL.

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY	STANDARD DETAIL 01575.1 STABILIZED CONSTRUCTION EXIT TECHNICAL SPECIFICATION SECTION 01575
ENGINEERING AND PUBLIC WORKS	SCALE: NTS; DATE: 7/15/19; DRAWN BY: ENG; CHECKED BY: SCH; SHEET NO.: 1 of 1



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6. PLACE GEOTEXTILE FABRIC AS A PERMEABLE SEPERATOR TO PREVENT MIXING OF COARSE AGGREGATE AND UNDERLYING SOIL.
7. REUSABLE TRACKOUT CONTROL SYSTEMS ARE ENCOURAGED. INCLUDE TRACKOUT CONTROL SYSTEMS WITH CLEARING AND GRADING PERMIT SUBMITTAL.
8. THE CONTRACTOR SHALL MAINTAIN SILT FENCE AND MATTING PER RESIDENTIAL LOT GRADING PLAN.
9. THE CONTRACTOR SHALL PREVENT WATER PONDING BEHIND EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION AND AFTER REMOVAL.

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY	STANDARD DETAIL 01575.2 STABILIZED CONSTRUCTION EXIT ALTERNATIVE FOR 1/2 ACRE OR SMALLER RESIDENTIAL LOTS TECHNICAL SPECIFICATION SECTION 01575
ENGINEERING AND PUBLIC WORKS	SCALE: NTS; DATE: 7/15/19; DRAWN BY: ENG; CHECKED BY: SCH; SHEET NO.: 1 of 1

CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES:

THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY EXTREME CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY THE APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER".

59. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERMITTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THEM TO AVOID ANY UNAUTHORIZED CLEARING. BARRICADES AND OTHER PROTECTIVE FENCING ARE TO BE LOCATED AT THE DRIP LINE OF EXISTING NATIVE TREES OR A MINIMUM OF 10 FEET FROM TREE CANOPY OR THE DRIP LINE, WHICHEVER IS GREATER.
60. SPECIMEN AND HISTORIC TREES, CONSERVATION EASEMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING. BARRICADES ARE TO BE SET AT THE DRIP LINE OF THE TREES AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. BARBED WIRE IS NOT PERMITTED AS A PROTECTIVE BARRIER.
61. WHERE A CHANGE OF GRADE OCCURS AT THE DRIP LINE OF A SPECIMEN TREE, SILT FENCES WILL BE REQUIRED DURING CONSTRUCTION AND RETAINING WALLS MUST BE INSTALLED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
62. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL PROTECTIVE VEGETATION BARRICADES AND EROSION CONTROL STRUCTURES AND MEASURES IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK, INCLUDING PRELIMINARY GRUBBING. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY CONSTRUCTION FENCES, SYNTHETIC JUTE BALES, WATTLES, &/OR HAVE BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED, SILT FENCES, AND FLOATING TURBIDITY BARRIERS. FURTHER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES THROUGHOUT THE DURATION OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PERIODIC INSPECTION AND REMOVAL OF DEBRIS ABUTTING EROSION CONTROL DEVICES.
63. PRIOR TO THE INSTALLATION OF ANY FILL MATERIALS ON SUBJECT SITE, SILT FENCES SHALL BE INSTALLED (1) ALONG SUBJECT SITE BOUNDARY AND PROPERTY LINES, (2) AT THE EDGE OF CONSERVATION EASEMENTS AND WETLANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS, (4) AROUND THE PERIMETER OF EXISTING STORM WATER TREATMENT FACILITIES, AND (5) AT ANY ADDITIONAL AREAS THAT THE CITY DEEMS NECESSARY TO BE PROTECTED FROM POTENTIAL EROSION IMPACTS DURING CONSTRUCTION. THESE CONDITIONS SHALL APPLY IN ALL INSTANCES WHERE FILL MATERIAL IS BEING INSTALLED WITHIN 25 FEET OF ANY OF THE AFOREMENTIONED LOCATIONS, WHILE THESE ITEMS REPRESENT THE MINIMUM REQUIREMENTS, THE CITY RESERVES THE RIGHT TO IMPOSE ADDITIONAL PROTECTIVE MEASURES, AS DETERMINED DURING ACTUAL SITE VISITS CONDUCTED AS PART OF THE STANDARD REVIEW OF THE SITE THROUGHOUT PROJECT CONSTRUCTION.
64. AT A MINIMUM, THE CONTRACTOR SHALL SEED AND/OR MULCH ALL DISTURBED AREAS. **85% SUFFICIENT GRASS** COVERAGE IS TO BE ESTABLISHED BEFORE PERMIT EXPIRATION.
65. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEEN BROUGHT TO THIER PROPOSED FINAL GRADE, WITHIN SEVEN (7) DAYS OF BRINGING A SUBJECT AREA TO ITS FINAL GRADE OR INACTIVITY IN CONSTRUCTION. THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOD, AS REQUIRED. ANY PROJECT THAT IS INACTIVE FOR A PERIOD OF 30 DAYS OR MORE SHALL BE STABILIZED TO THE SATISFACTION OF THE CITY OF SCHERTZ.
66. ONCE AN AREA IS SEEDED OR SODDED, IT MUST BE MAINTAINED BY THE CONTRACTOR TO ALLOW THE GRASS TO BECOME ESTABLISHED. IF THE GRASS IS NOT ESTABLISHED WITHIN **TWO WEEKS** THE CITY MAY REQUIRE THE CONTRACTOR TO RE-SEED OR A NON-VEGETATIVE OPTION MAY BE EMPLOYED.
67. ABSOLUTELY NO BURYING OF CLEARED MATERIALS IS PERMITTED.
68. THE REMOVAL OF ALL VEGETATION AND TOPSOIL ON THE FUTURE ROADWAY, PARKING AND BUILDING LOT AREAS IS REQUIRED TO BE COMPLETED PRIOR TO THE PLACEMENT OF FILL ON THOSE AREAS. THE TOPSOIL MAY BE TEMPORARILY STOCKPILED AND USED AS TOPSOIL OVER OVER PROPOSED GREEN AREAS SUCH AS PLANT BEDS, SODDED AREAS, AND WHERE TREES ARE TO BE INSTALLED OR RELOCATED.
69. FILL MATERIAL IS TO BE PLACED IN ONE FOOT LIFTS AND COMPACTED TO THE APPROPRIATE DENSITY (95% FOR PAVED AREAS AND 95% FOR BUILDING PADS AND ALL OTHER AREAS AS PER ASTM D-698).
70. DURING SUBDIVISION DEVELOPMENT WHEN FUTURE BUILDING LOTS ARE FILLED AS PART OF THE OVERALL SUBDIVISION IMPROVEMENTS, COMPACTION TEST REPORTS MUST BE PERFORMED ON THE BUILDING LOTS AT 300 FOOT INTERVALS. THESE TESTS ARE TO BE PERFORMED IN ONE-FOOT VERTICAL INCREMENTS. THE RESULTS OF THESE TESTS ARE TO BE SUBMITTED TO THE CITY UPON COMPLETION OF THE TESTS.
71. IF ANY MUCK MATERIAL IS DISCOVERED, IT SHALL BE REQUIRED TO BE REMOVED AND REPLACED WITH A SUITABLE MATERIAL THAT IS PROPERLY BACKFILLED, COMPACTED AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
72. STOCKPILING IS NOT GENERALLY PERMITTED BY THE CITY. WHEN ALLOWED, **STOCKPILES SHALL NOT EXCEED SIX FEET IN HEIGHT** MEASURED FROM THE ORIGINAL GRADE, AT A MINIMUM, STOCK PILES THAT WILL REMAIN IN PLACE IN EXCESS OF TWENTY DAYS SHOULD BE SEEDED AND MULCHED IMMEDIATELY UPON PLACEMENT OF THE FINAL LIFT.
73. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES. ADEQUATE WATERING METHODS SHOULD BE EMPLOYED TO ALLOW DAILY COVERAGE OF THE ENTIRE LIMITS OF ALL AREAS THAT DO NOT HAVE AN ESTABLISHED VEGETATIVE COVER. METHODS TO BE EMPLOYED INCLUDE, BUT ARE NOT LIMITED TO, WATER TRUCKS, PERMANENT IRRIGATION SYSTEMS. TEMPORARY SPRINKLER SYSTEMS OPERATED BY PUMPING UNITS CONNECTED TO WET RETENTION PONDS, WATER CANNONS, TEMPORARY IRRIGATION SYSTEMS MOUNTED ATOP STOCKPILE AREAS, AND OTHER METHODS AS DEEMED NECESSARY BY THE CITY.

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY	CLEARING & GRADING TECHNICAL SPECIFICATION SECTION 01562 & 01570
ENGINEERING AND PUBLIC WORKS	SCALE: NTS; DATE: 7/1/19; DRAWN BY: SCT; SHEET NO.: 1 of 1

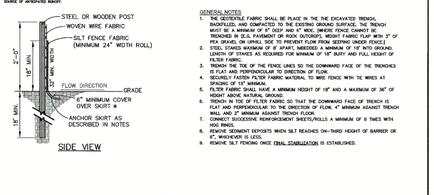
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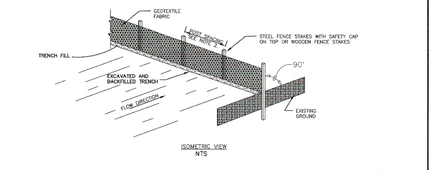
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74. ALL FILL MATERIALS LOCATED BENEATH STRUCTURES AND PAVEMENT SHALL CONSIST OF CLEAN GRANULAR SAND FREE FROM ORGANICS AND SIMILAR MATERIAL THAT COULD DECOMPOSE.
75. ALL FILL TO BE PLACED IN LANDSCAPED AREAS SHALL HAVE A Ph RANGE BETWEEN 5.5 AND 8.5, BE ORGANIC IN NATURE, FREE OF ROCKS AND DEBRIS, OR MATCH NATIVE EXISTING SOILS.
76. OWNER/CONTRACTOR SHALL FILE A **"NOTICE OF INTENT"** TO USE GENERAL PERMIT FOR STORM WATER DISCHARGE FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES" WITH THE TEXAS POLLUTION DISCHARGE ELIMINATION SYSTEM" IN COORDINATION WITH THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY. CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH ALL PROVISIONS OF THE GENERIC PERMIT INCLUDING BUT NOT LIMITED TO:

A. PROVIDE SUCH EROSION AND SEDIMENT CONTROL MEASURES AS MAY BE NECESSARY TO PREVENT DISCHARGE OF POLLUTANTS FROM THE SITE FROM THE START OF CONSTRUCTION UNTIL THE FINAL GROUND COVER HAS BEEN ESTABLISHED.
B. WORK WITH CITY INSPECTORS TO MAKE WEEKLY INSPECTIONS/REPORTS OF THE CONDITION OF EROSION AND SEDIMENT CONTROL MEASURES.
C. WORK WITH CITY INSPECTORS TO MAKE INSPECTIONS/REPORTS OF THE CONDITION OF EROSION AND SEDIMENT CONTROL MEASURES WITHIN 24 HOURS OF EVERY RAINFALL EVENT EXCEEDING ONE-HALF INCH.
D. MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION.
E. ADD EROSION AND SEDIMENT CONTROL MEASURES AS SITE CONDITIONS CHANGE.
F. REMOVE TEMPORARY EROSION/SEDIMENT CONTROL MEASURES AFTER SUBSTANTIAL RE-VEGETATION AND/OR PRIOR TO THE END OF THE PERMIT EXPIRATION.

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY	CLEARING & GRADING TECHNICAL SPECIFICATION SECTION 01562 & 01570
ENGINEERING AND PUBLIC WORKS	SCALE: NTS; DATE: 7/1/19; DRAWN BY: SCT; SHEET NO.: 1 of 1



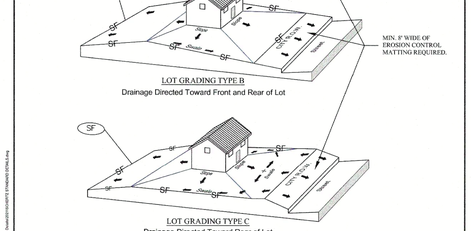


GENERAL NOTES

1. THE GEOTEXTILE FABRIC SHALL BE PLACE IN THE THE EXCAVATED TRENCH, BACKFILLED, AND COMPACTED TO THE EXISTING GROUND SURFACE. THE TRENCH MUST BE A MINIMUM OF 6" DEEP AND 4" WIDE. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3" OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.)
2. STEEL STAKES MAXIMUM OF 8' APART, IMBEDDED A MINIMUM OF 18" INTO GROUND. WOOD STAKES AS REQUIRED FOR MINIMUM OF 18" BURY AND FULL HEIGHT OF FILTER FABRIC.
3. TRENCH THE TOE OF THE FENCE LINES SO THE DOWNWARD FACE OF THE TRENCHES IS FLAT AND PERPENDICULAR TO DIRECTION OF FLOW.
4. SECURELY FASTEN FILTER FABRIC MATERIAL TO WIRE FENCE WITH TIE WIRES AT SPACING OF 1'0" MINIMUM.
5. FILTER FABRIC SHALL HAVE A MINIMUM HEIGHT OF 18" AND A MAXIMUM OF 36" OF THE ABOVE GROUND FENCE HEIGHT.
6. TRENCH IN TOE OF FILTER FABRIC SO THAT THE DOWNWARD FACE OF TRENCH IS FLAT AND PERPENDICULAR TO THE DIRECTION OF FLOW, 4" MINIMUM AGAINST TRENCH WALL AND 2" MINIMUM AGAINST TRENCH FLOOR.
7. CONNECT SUCCESSIVE REINFORCEMENT SHEETS/ROLLS A MINIMUM OF 6 TIMES WITH HOOP SKIRT.
8. REMOVE SEDIMENT DEPOSITS WHEN SILT REACHES ON–THIRD HEIGHT OF BARRIER OR 6", WHICHEVER IS LESS.
9. REMOVE SILT FENCING ONCE FINAL STABILIZATION IS ESTABLISHED.

ISOMETRIC VIEW
NTS

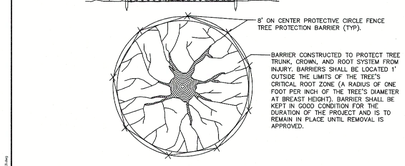
SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY	STANDARD DETAIL 01570.2 SILT FENCE TECHNICAL SPECIFICATION SECTION 01570
ENGINEERING AND PUBLIC WORKS	SCALE: NTS; DATE: 7/15/19; DRAWN BY: SCH; CHECKED BY: SCH; SHEET NO.: 1 of 1



GENERAL NOTES

1. ENGINEER SHALL IDENTIFY SUBDIVISION LOT NUMBERS ASSOCIATED WITH EACH LOT GRADING TYPE.
2. ALL GRADED LOT SURFACES AND SWALES SHALL HAVE MINIMUM 0.5% SLOPE.
3. ROUGH GRADING OF LOTS SHALL MATCH ULTIMATE LOT GRADING TYPE: A,B, OR C, AT THE TIME OF PUBLIC INFRASTRUCTURE ACCEPTANCE.
4. SWPPP REQUIRED ON ALL LOTS. (EROSION CONTROL, WATTLES, ETC. AS APPROPRIATE).
5. CONSTRUCTION ENTRANCE REQUIRED ON ALL RESIDENTIAL LOTS TO PREVENT SEDIMENT FROM BEING DEPOSITED AFTER EQUIPMENT LEAVES THE SITE. THE CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE LOCATION OF THE PROPOSED PERMANENT DRIVEWAY.

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY	STANDARD DETAIL 01570.1 RESIDENTIAL LOT GRADING TECHNICAL SPECIFICATION SECTION 01570
ENGINEERING AND PUBLIC WORKS	SCALE: NTS; DATE: 7/15/19; DRAWN BY: SCH; CHECKED BY: SCH; SHEET NO.: 1 of 1



ADDITIONAL REQUIREMENTS FOR WORK WITHIN THE CRITICAL ROOT ZONE

- ESTABLISH FENCE PROTECTION A MINIMUM OF 5' FROM TRUNK
- PROVIDE 4" DEEP WOOD CHIP MULCH OVER CRITICAL ROOT ZONE INSIDE FENCE PROTECTION
- PROVIDE 8" DEEP WOOD CHIP MULCH OVER DRIP LINE OUTSIDE OF FENCE PROTECTION.
- MAKE CLEAN CUTS ON ROOTS EXPOSED BY GRADING AND BACKFILL IMMEDIATELY.
- PROVIDE TEMPORARY IRRIGATION WHERE REQUIRED BY THE CITY

GENERAL NOTES

1. A TREE PRESERVATION/REMOVAL PERMIT APPLICATION MUST BE SUBMITTED AND APPROVED.
2. A LANDSCAPING PLAN SHALL BE SUBMITTED TO THE CITY FOR APPROVAL.
3. PROVIDE TIMBER WRAP PROTECTION FOR TREES WHEN WORK IS REQUIRED WITHIN CONSTRUCTION FENCING. INSTALL VERTICAL 5 TO 6 FOOT LONG 2 BY 4's OR 2 BY 5's, SPACED 3 TO 5 INCHES APART, AROUND CIRCUMFERENCE OF TREE TRUNK.
4. FOR TREES OR SHRUBS IN PAVED AREAS, USE MOVABLE POSTS CONSISTING OF 2-2" MINIMUM DIAMETER CONCRETE FILLED STEEL PIPE MOUNTED IN RUBBER AUTOMOBILE TIRES WITH CONCRETE.

SCHERTZ COMMUNITY • SERVICE • OPPORTUNITY	STANDARD DETAIL 01562 TREE AND PLANT PROTECTION TECHNICAL SPECIFICATION SECTION 01562
ENGINEERING AND PUBLIC WORKS	SCALE: NTS; DATE: 7/15/19; DRAWN BY: SCH; CHECKED BY: SCH; SHEET NO.: 1 of 1

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WAYNE FLORES
90130
LICENSED PROFESSIONAL ENGINEER
5-8-24

FINAL SUBDIVISION PLAN

FOR

PARKLANDS II UNIT 4

CITY OF SCHERTZ
GUADALUPE COUNTY
TEXAS

Colliers Engineering & Design
NEW BRAUNFELS (KFW)
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COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	1/3/2024	TDM	WF

PROJECT NUMBER: 23008197A
DRAWING NAME: 8.2 STORMWATER POLLUTION PREVENTION PLAN TYPICAL DETAILS

SHEET TITLE: *STORMWATER POLLUTION PREVENTION PLAN TYPICAL DETAILS*

SHEET NUMBER: *8.3*

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Date: Jan 24, 2024, 3:41pm User ID: ASerna
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