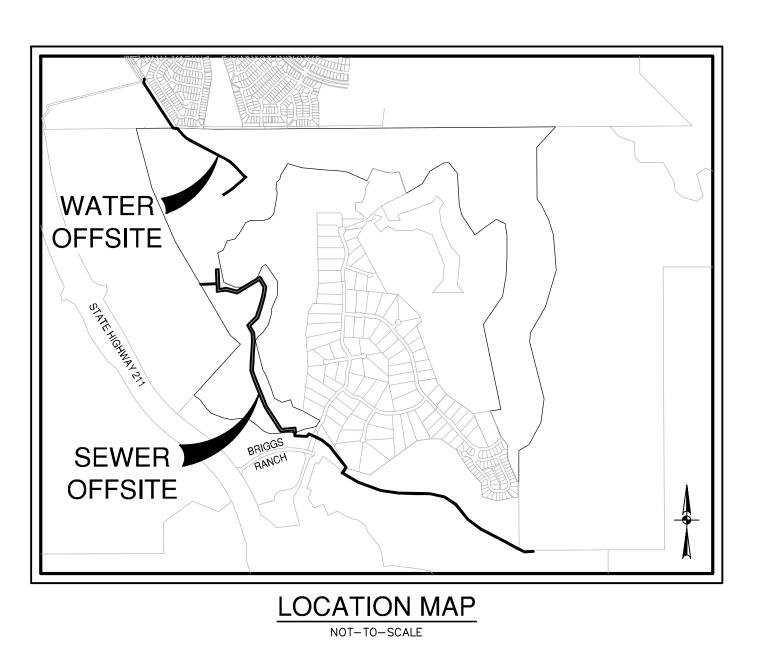
BRIGGS RANCH NORTH OFFSITE UTILITIES

SAN ANTONIO, TEXAS

CIVIL CONSTRUCTION PLANS



PREPARED FOR:

CHESMAR HOMES, LLC 211 NORTH LOOP 1604, SUITE 175 SAN ANTONIO, TEXAS 78232

FEBRUARY 2024





WATER: (PRESSURE ZONE 1080)

Developer's Name: <u>CHESMAR</u>		
Address: 211 NORTH LOOP	1604, SUITE 175	
City: SAN ANTONIO	State; TEXAS	ZIP:_ 78232
Phone# <u>(210)</u> 957-3395	FAX <u>#_N</u> ,	/A
SAWS Block Map# 080560, 0	80562	Total Acreage <u>1.18</u>
Total Linear Footage of Pipe	509.41 LF ~ 8" PVC 496.94 LF ~ 12" PVC	Plat No. <u>N/</u>

Sheet Number Sheet Title

C1.00

C2.00

C2.02

C2.03

C2.04

C2.05

C2.06

C2.11

C2.12

C3.00

C3.01

C3.02

C3.03

C3.04

C4.00

C4.01

C4.02

C4.03

C4.04

C4.05

C4.06

C4.07

C4.08

C4.09

C4.10

C4.11

C4.12

COVER SHEET

OFWER LIBRER MEDINA COLITIL BOOKERO W.D.O.

Sheet List Table

SANITARY SEWER LINE A & LINE AO PLAN & PROFILE

STORM WATER POLLUTION PREVENTION PLAN (1 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (2 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (3 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (4 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (5 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (6 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (7 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (8 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (9 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (10 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (11 OF 12)

STORM WATER POLLUTION PREVENTION PLAN (12 OF 12)

STORM WATER POLLUTION PREVENTION DETAILS

SANITARY SEWER LINE A PLAN & PROFILE (STA. 1+00.00 TO 12+00.00)

SANITARY SEWER LINE A PLAN & PROFILE (STA. 12+00.00 TO 23+00.00)

SANITARY SEWER LINE A PLAN & PROFILE (STA. 23+00.00 TO 34+00.00)

SANITARY SEWER LINE A PLAN & PROFILE (STA. 34+00.00 TO 45+00.00)

SANITARY SEWER LINE A PLAN & PROFILE (STA. 45+00.00 TO 56+00.00)

SANITARY SEWER LINE A PLAN & PROFILE (STA. 56+00.00 TO 67+00.00)

SANITARY SEWER LINE A PLAN & PROFILE (STA. 67+00.00 TO 77+50.00)

SANITARY SEWER LINE A PLAN & PROFILE (STA. 77+50.00 TO 87+00.00)

SANITARY SEWER LINE A PLAN & PROFILE (STA. 87+00.00 TO 97+00.00)

SHEET INDEX & OVERALL UITLITY PLAN

OVERALL SANITARY SEWER PLAN

LINE A STA. 97+00.00 TO END

LINE AO 1+00.00 TO END

SANITARY SEWER NOTES

SANITARY SEWER DETAILS

OVERALL WATER DISTRIBUTION PLAN

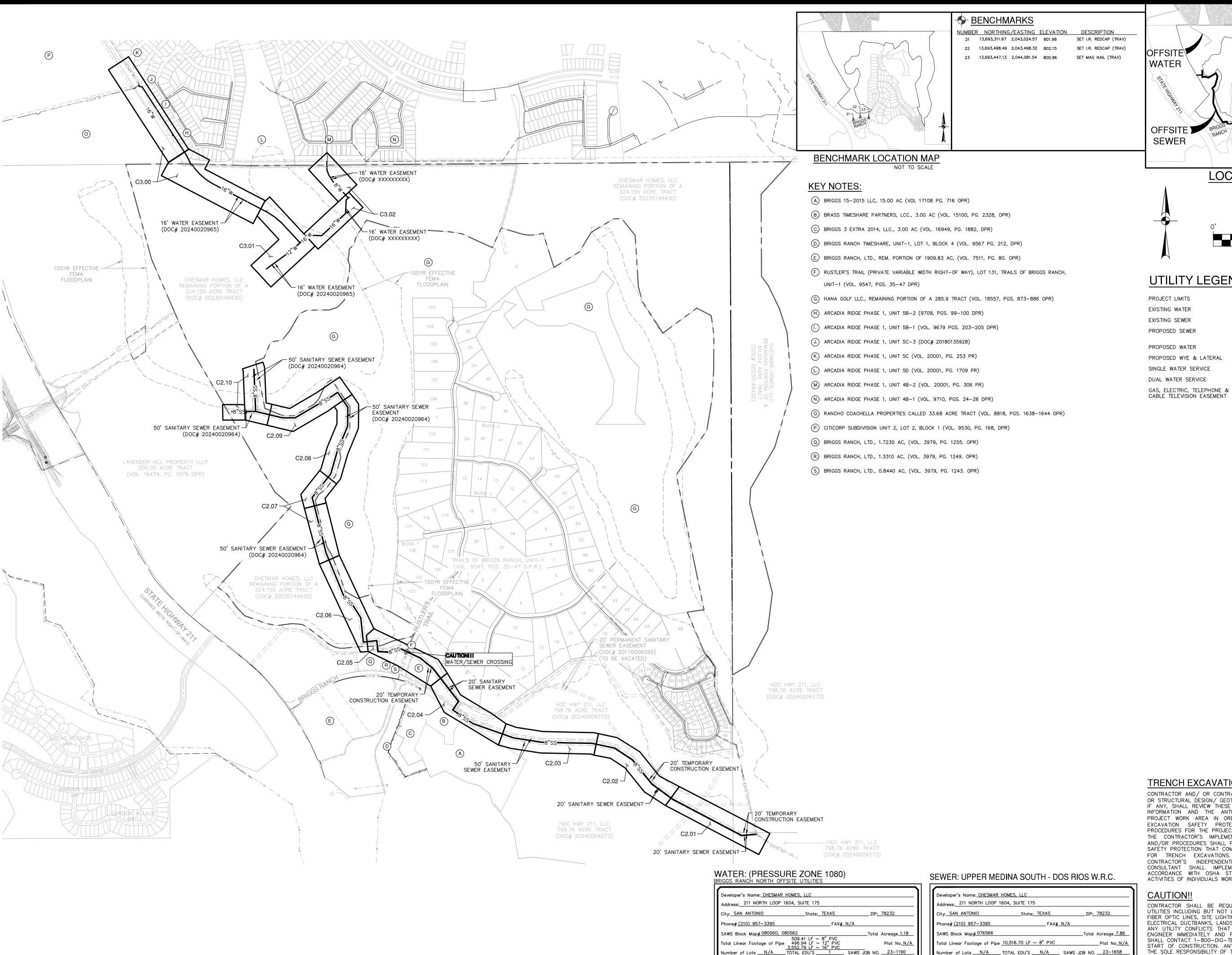
OVERALL WATER DISTRIBUTION PLAN

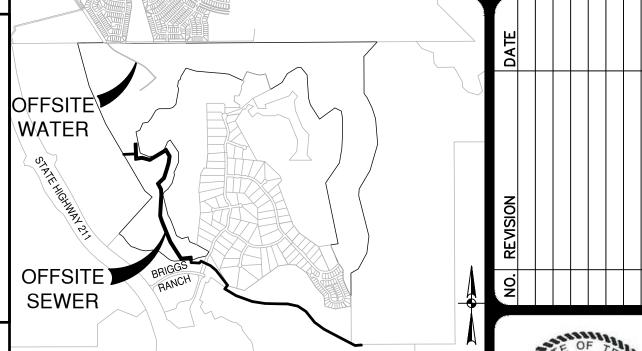
OVERALL WATER DISTRIBUTION PLAN

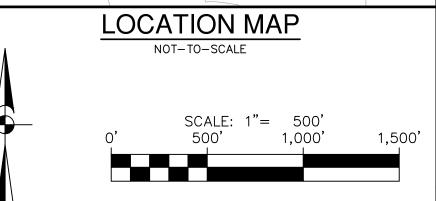
OVERALL WATER DISTRIBUTION NOTES

OVERALL WATER DISTRIBUTION DETAILS

	SEWER: UPPER MEDINA SOUTH - DOS RIOS W.R.C.
-	Developer's Name: CHESMAR HOMES, LLC Address: 211 NORTH LOOP 1604, SUITE 175
- []	City: SAN ANTONIO State: TEXAS ZIP: 78232
	Phone# <u>(210) 957–3395</u> FAX <u># N/A</u>
- - <u>4</u>	SAWS Block Map# 076566Total Acreage 7.86
<u> </u>	Total Linear Footage of Pipe 10,516.70 LF ~ 8" PVC Plat No. N/A
ل-	Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 23-1658







UTILITY LEGEND

PROPOSED SEWER PROPOSED WYE & LATERAL SINGLE WATER SERVICE

-----[≰

BRUNA F. SPENGLER

TRENCH EXCAVATION SAFETY PROTECTION:

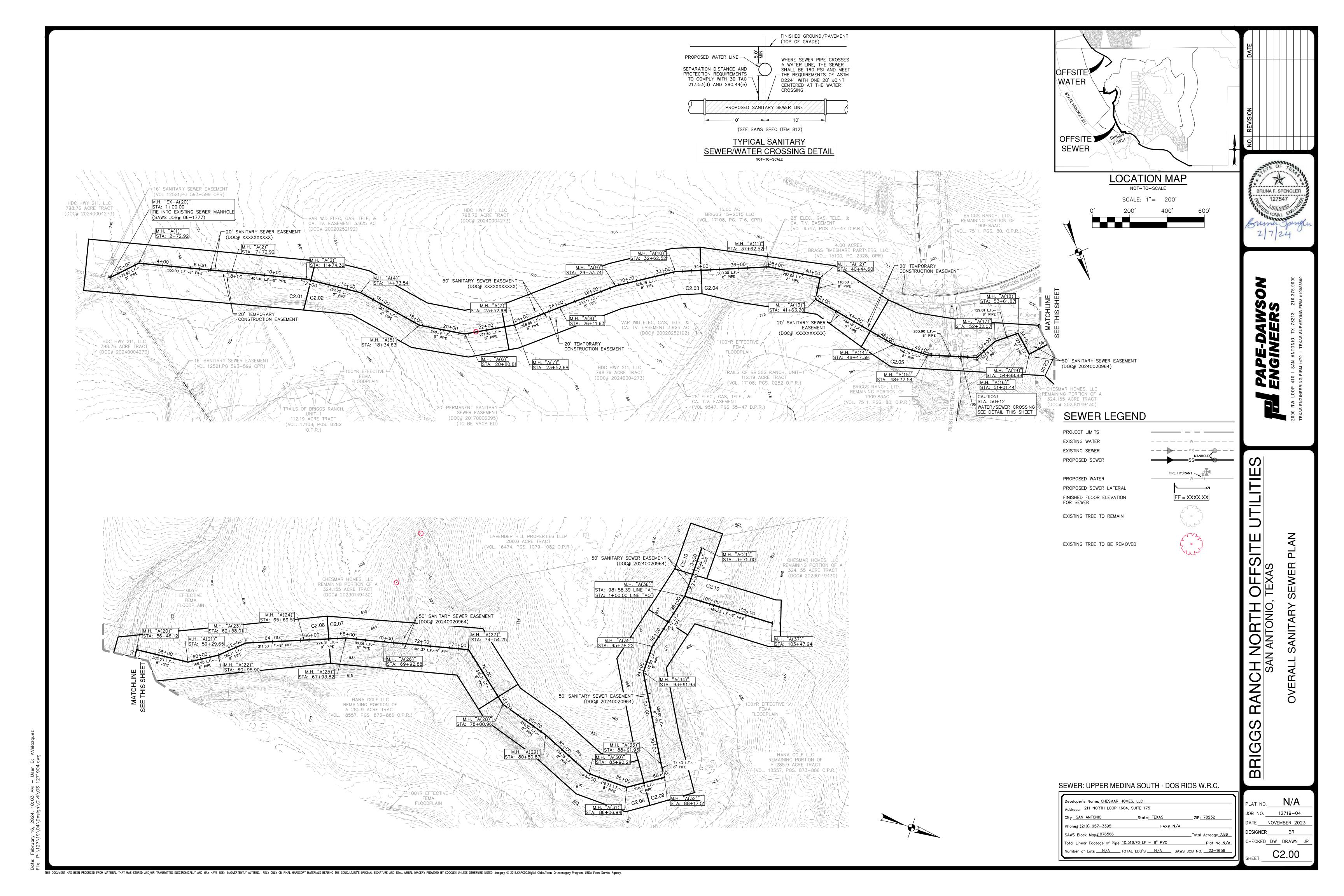
CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

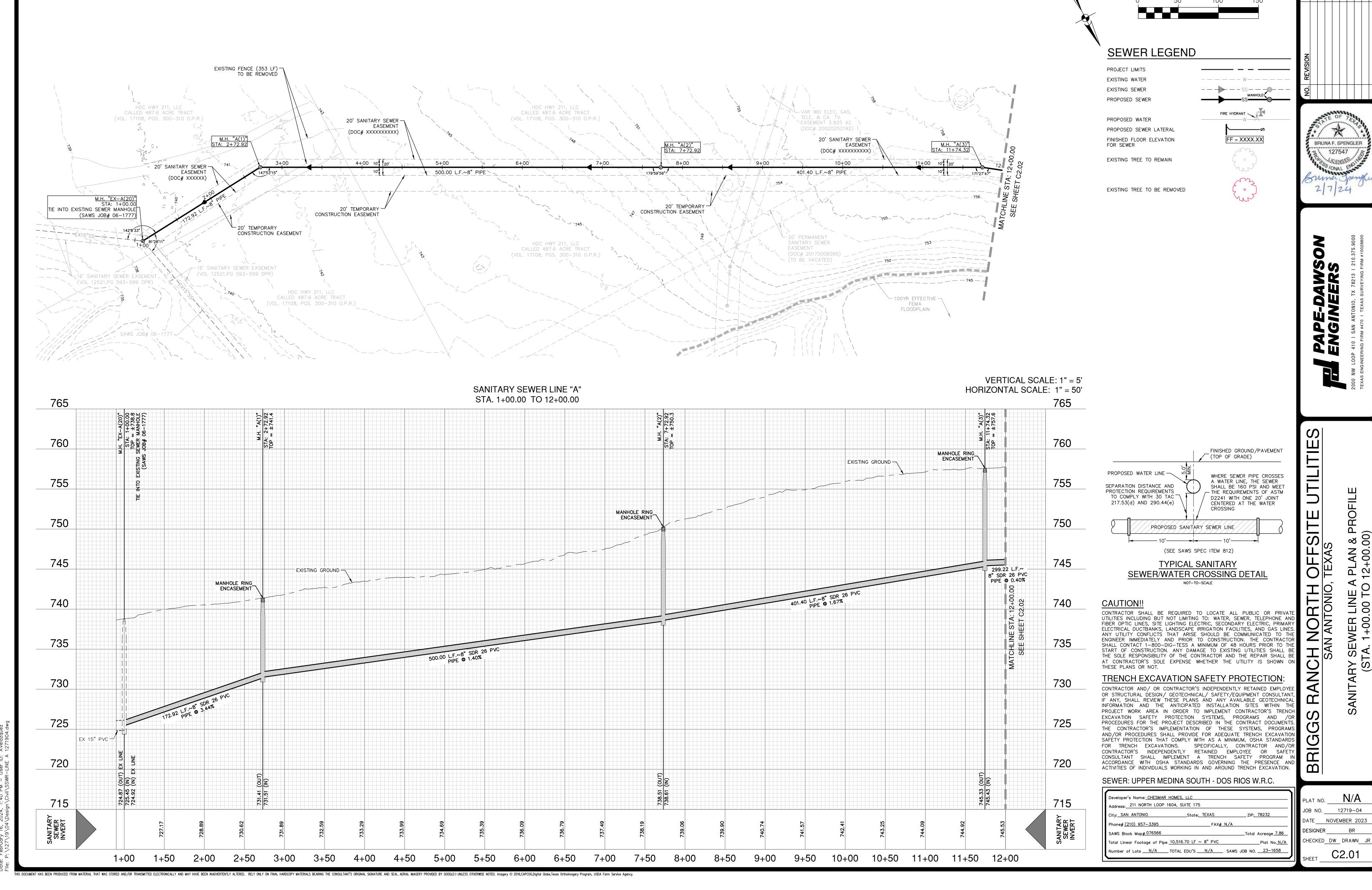
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12719-04 ATE NOVEMBER 2023

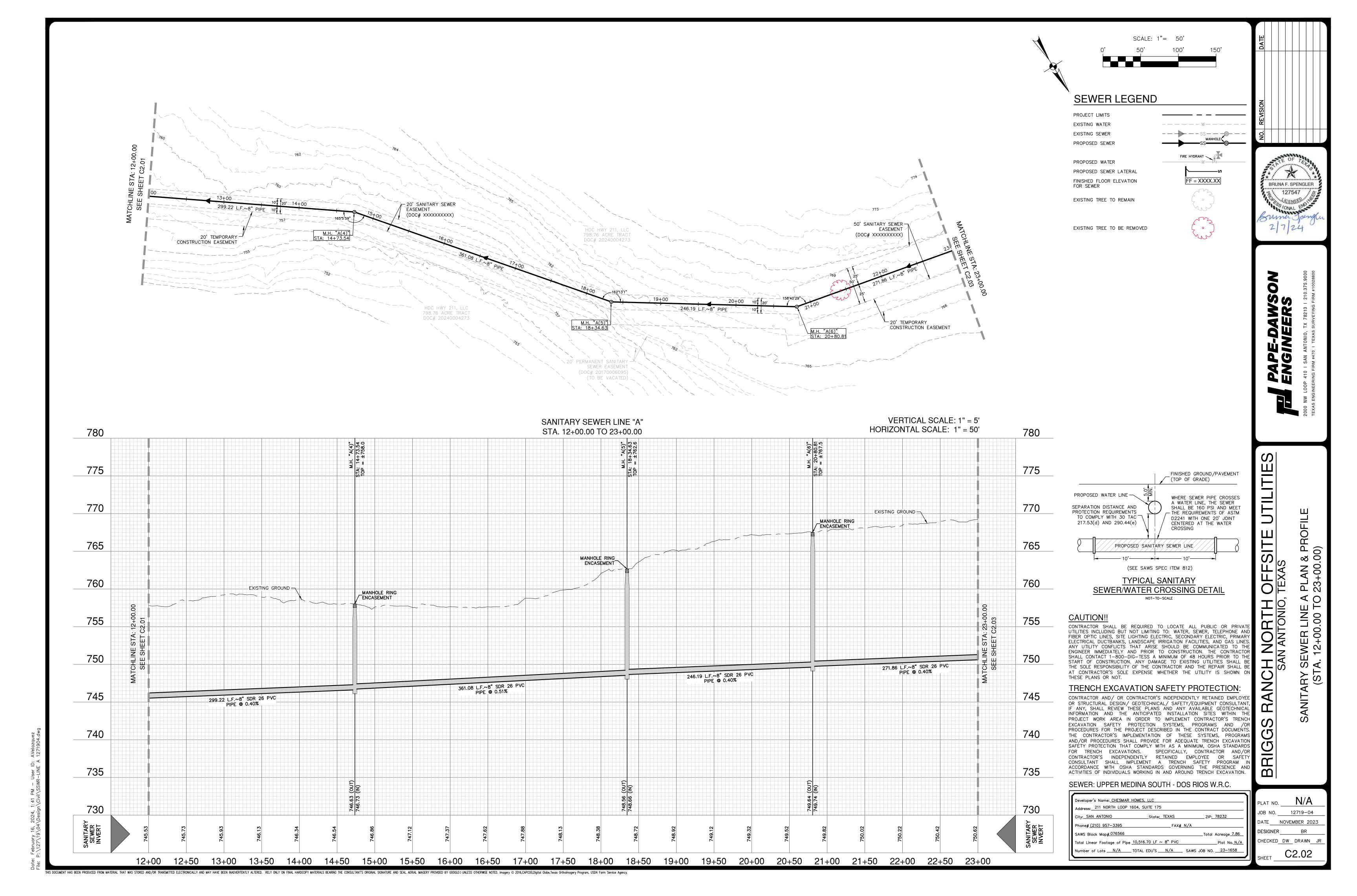
DESIGNER

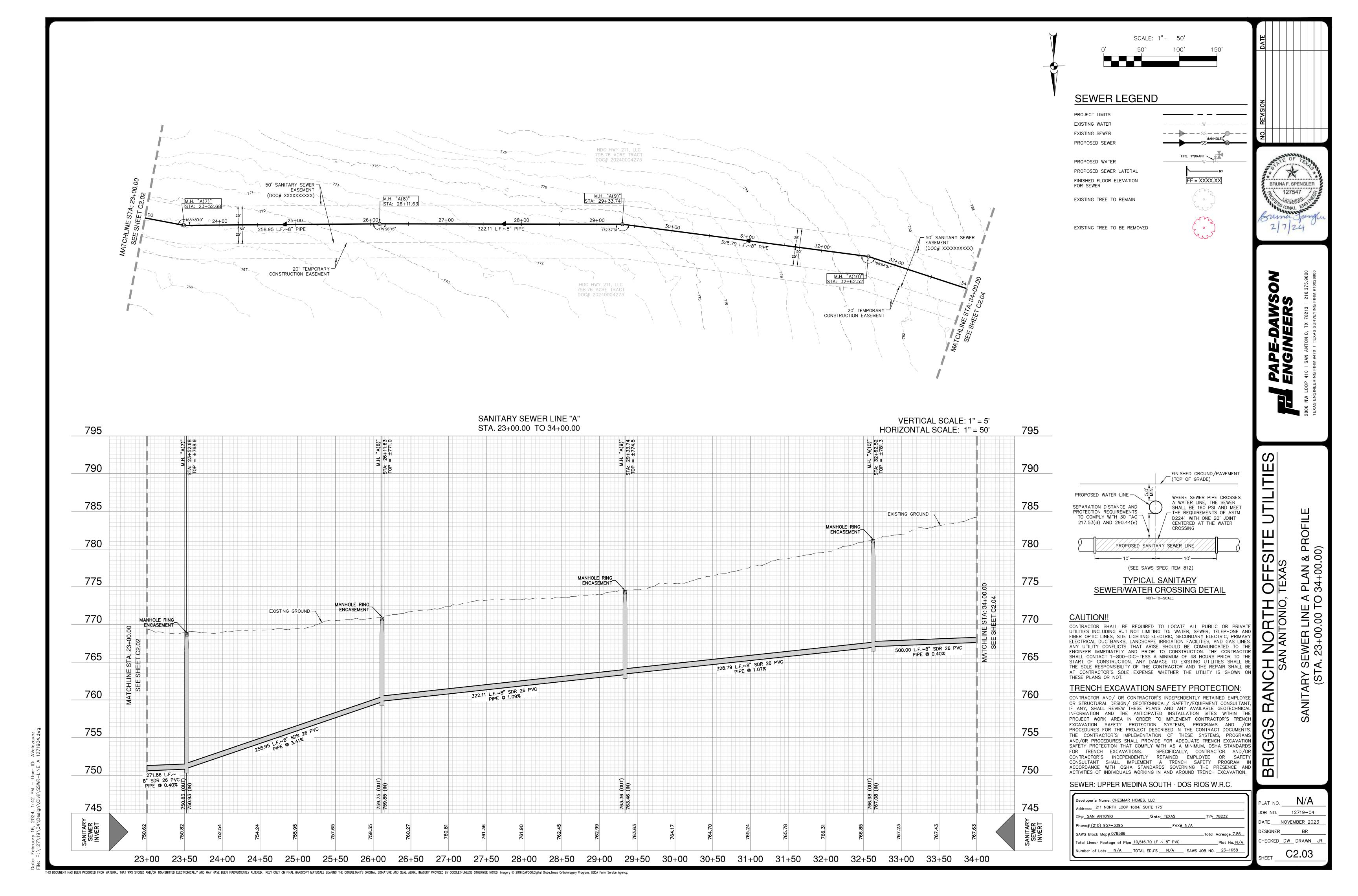
CHECKED DW DRAWN JR

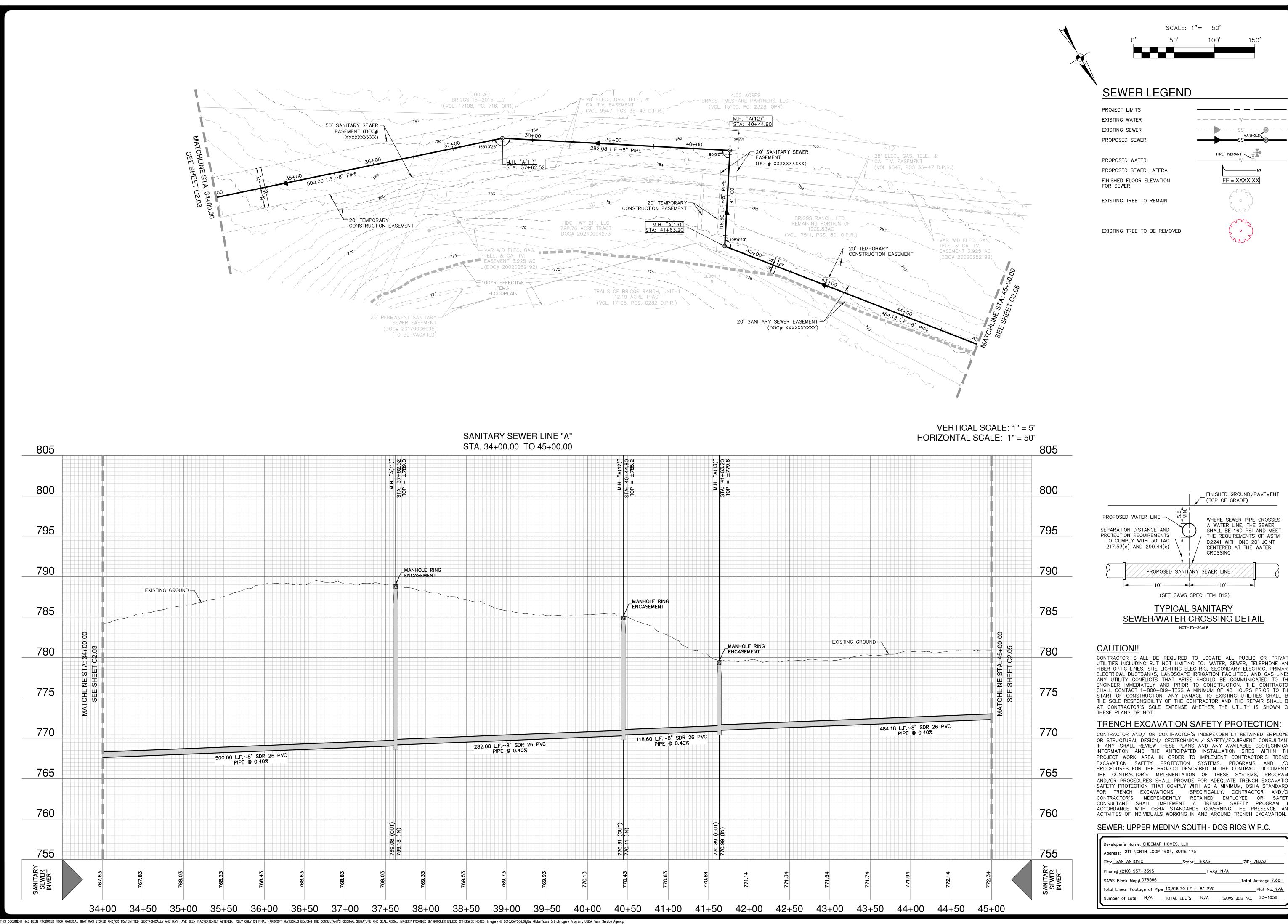


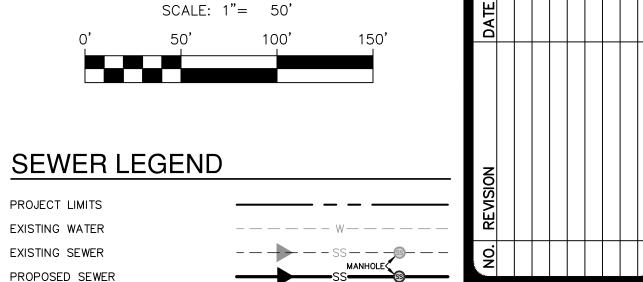


SCALE: 1"= 50'

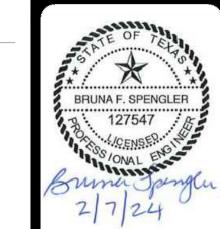








FF = XXXX.XX



S

FINISHED GROUND/PAVEMENT WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING 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 T 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 B AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN O

PROPOSED SANITARY SEWER LINE

(SEE SAWS SPEC ITEM 812)

TYPICAL SANITARY

NOT-TO-SCALE

 $^-$ (TOP OF GRADE) $^{'}$

CROSSING

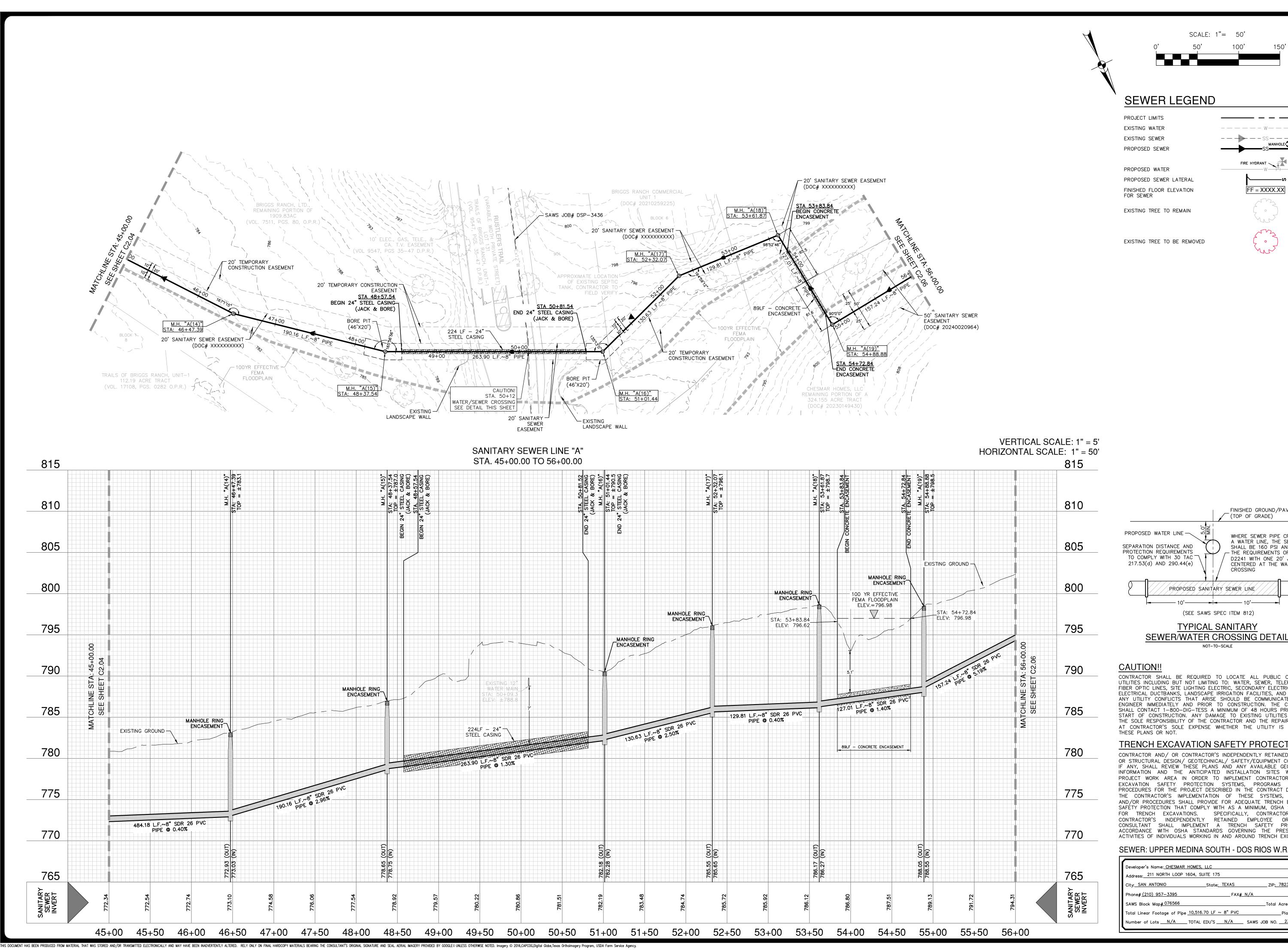
TRENCH EXCAVATION SAFETY PROTECTION:

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SEWER: UPPER MEDINA SOUTH - DOS RIOS W.R.C.

Address: 211 NORTH LOOP	1604, SUITE 175	
City: SAN ANTONIO	State;TEXAS	ZIP <u>; 78232</u>
Phone# <u>(210) 957-3395</u>	FAX <u>#_N/A</u>	
SAWS Block Map# 076566		_Total Acreage <u>7.8</u>
Total Linear Footage of Pipe	10,516.70 LF ~ 8" PVC	Plat No. <u>N</u>

PLAT NO. N/A JOB NO. 12719-04 DATE NOVEMBER 2023 DESIGNER CHECKED DW DRAWN JR



SCALE: 1"= 50' SEWER LEGEND

FF = XXXX.XX



& PROFIL (.00)

4 0

S FINISHED GROUND/PAVEMENT WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING 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 ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL B THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL E AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN O

(SEE SAWS SPEC ITEM 812)

TYPICAL SANITARY

NOT-TO-SCALE

TOP OF GRADE

CROSSING

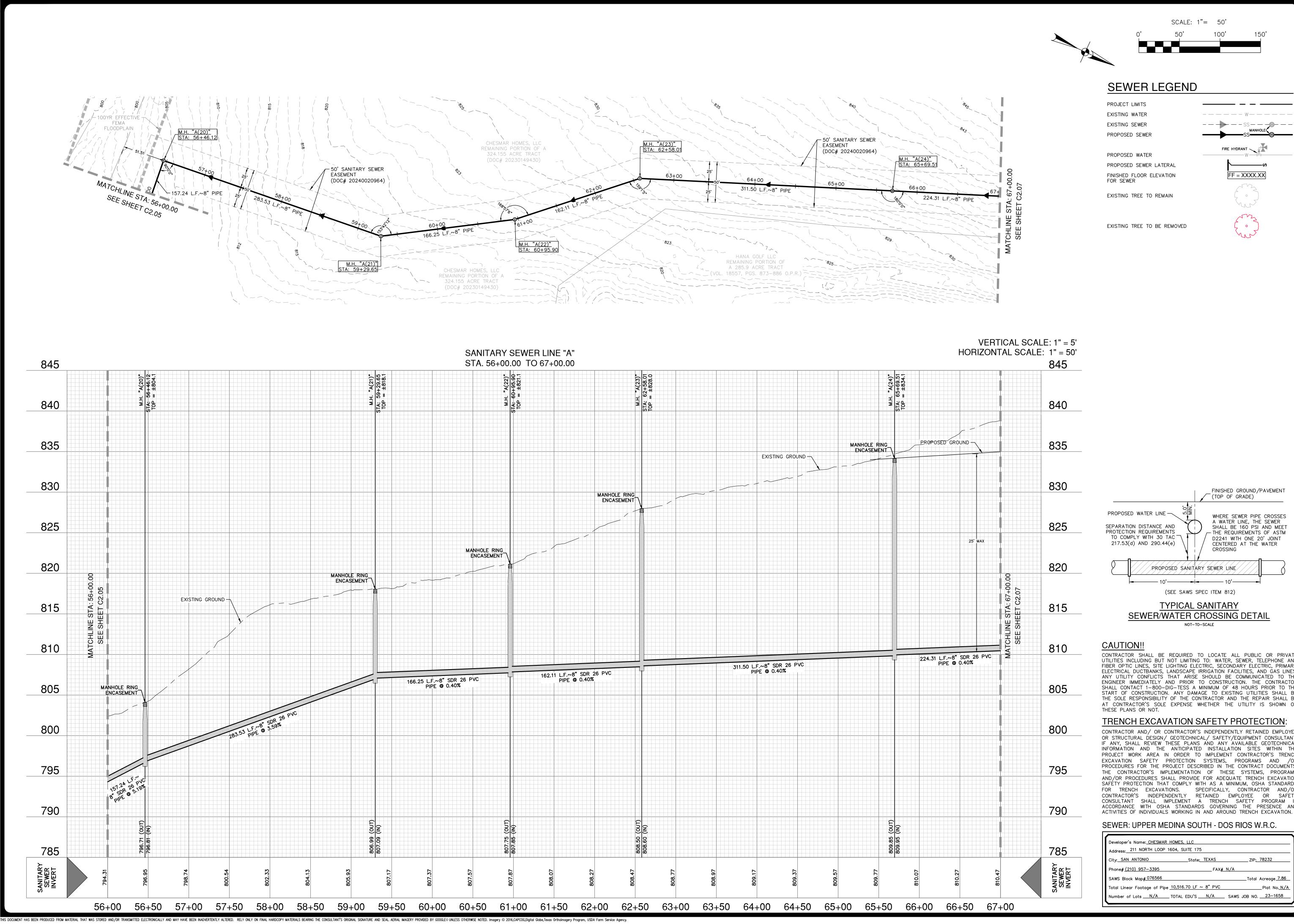
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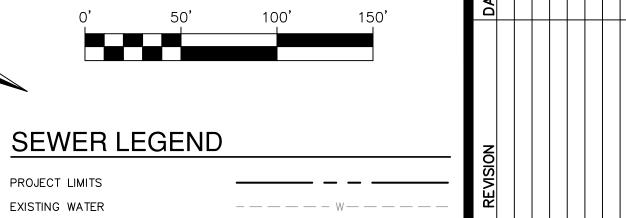
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SEWER: UPPER MEDINA SOUTH - DOS RIOS W.R.C.

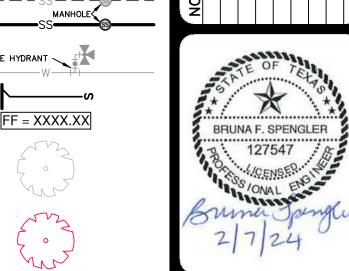
Address: 211 NORTH LOOP	1604, SUITE 175		
City: SAN ANTONIO	State:TEXAS	ZIP <u>:</u>	78232
Phone# <u>(210) 957-3395</u>	FAX <u>#_N/A</u>		
SAWS Block Map# 076566		Total	Acreage 7.86
Total Linear Footage of Pipe	e 10,516.70 LF ~ 8" PVC		Plat_No. <u>_N</u> /

PLAT NO. JOB NO. 12719-04 DATE NOVEMBER 2023 DESIGNER CHECKED DW DRAWN JR C2.05





SCALE: 1"= 50'



S

FINISHED GROUND/PAVEMENT $^-$ (TOP OF GRADE) $^{'}$ WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING PROPOSED SANITARY SEWER LINE

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

(SEE SAWS SPEC ITEM 812)

NOT-TO-SCALE

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING 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 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 B THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL E AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN O

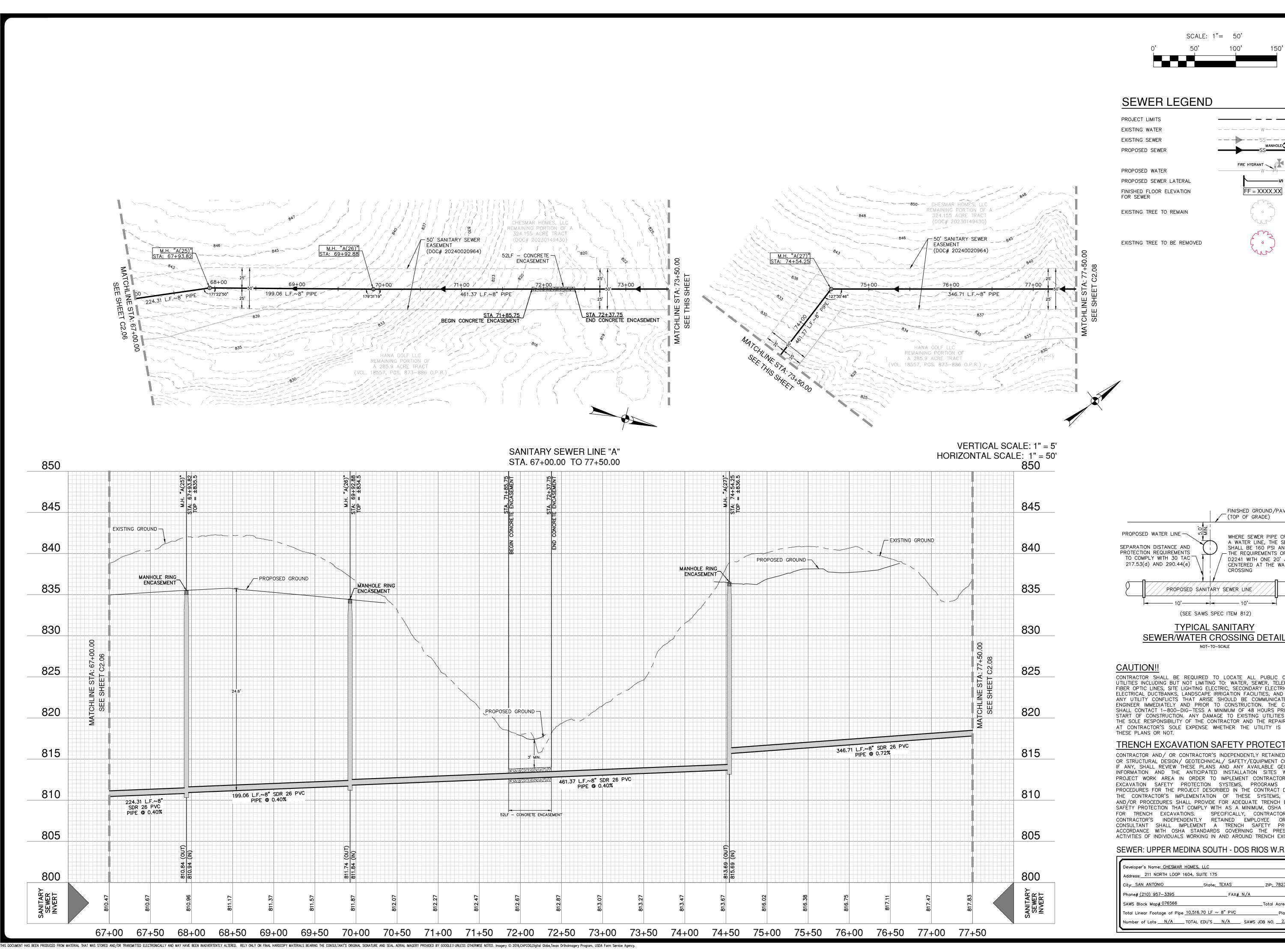
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SEWER: UPPER MEDINA SOUTH - DOS RIOS W.R.C.

Address: 211 NORTH LOOP 1	1604, SUITE 175	
City: SAN ANTONIO	State: TEXAS	ZIP <u>: 78232</u>
Phone# <u>(210) 957-3395</u>	FAX# <u>N/</u>	
SAWS Block Map# 076566		Total Acreage <u>7.8</u>
Total Linear Footage of Pipe	10,516.70 LF ~ 8" PVC	Plat No. <u>N</u> ,

PLAT NO. N/A JOB NO. 12719-04 DATE NOVEMBER 2023 DESIGNER CHECKED DW DRAWN JR



FF = XXXX.XX

 $^-$ (TOP OF GRADE) $^{^{\prime}}$

CROSSING

SCALE: 1"= 50'



S FINISHED GROUND/PAVEMENT WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING 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 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 B THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL E AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN OF THESE PLANS OR NOT.

PROPOSED SANITARY SEWER LINE

(SEE SAWS SPEC ITEM 812)

TYPICAL SANITARY

NOT-TO-SCALE

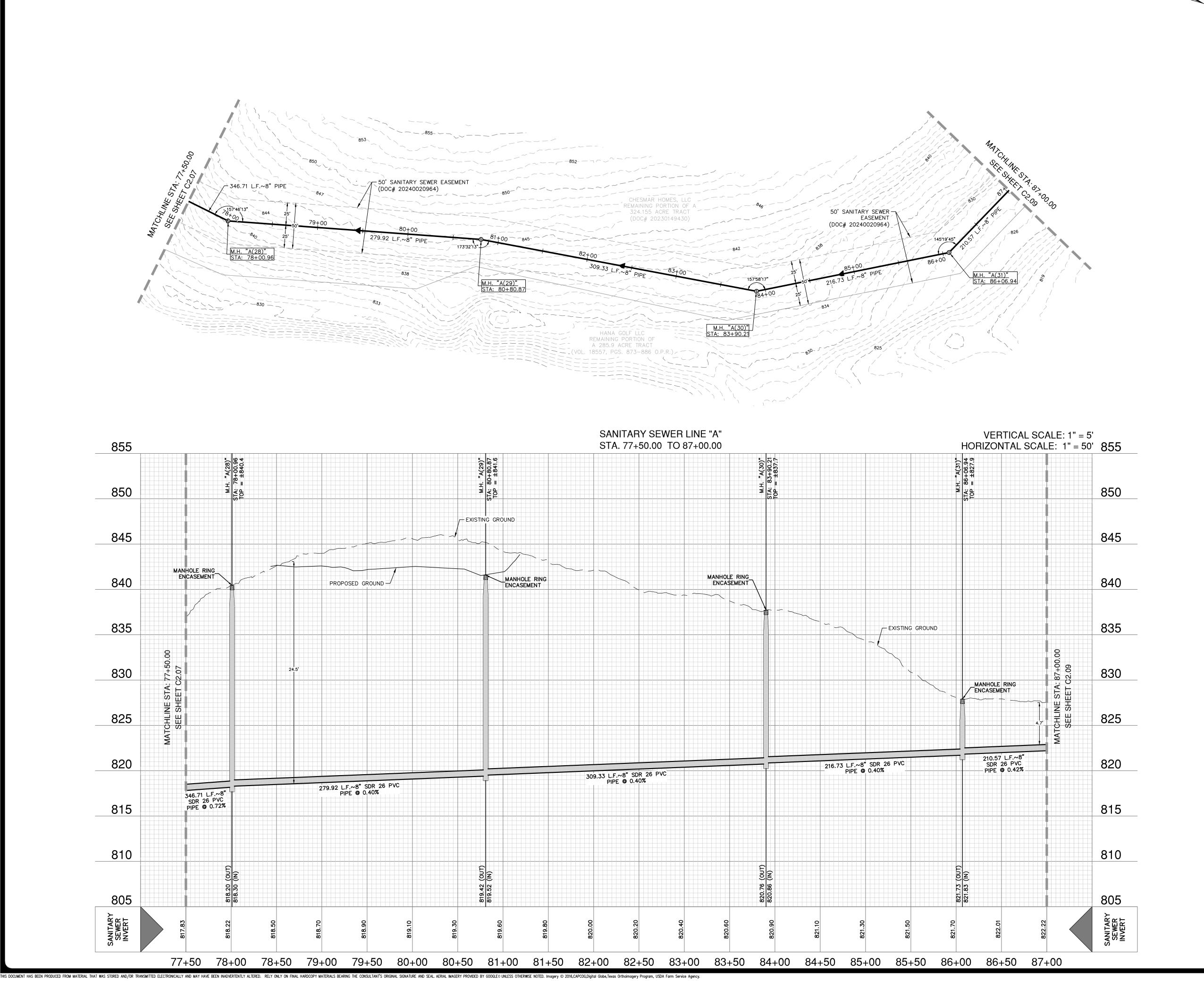
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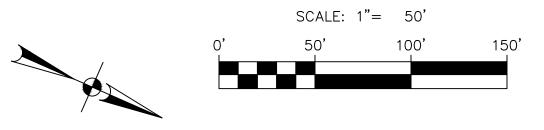
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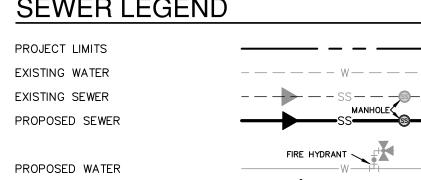
SEWER: UPPER MEDINA SOUTH - DOS RIOS W.R.C.

Address: 211 NORTH LOOP 16	304, SUITE 175	
City: SAN ANTONIO	State <u>; TEXAS</u>	ZIP <u>; 78232</u>
Phone# <u>(210) 957-3395</u>	FAX <u>#_</u> !	N/A
SAWS Block Map# 076566		Total Acreage_7.86
Total Linear Footage of Pipe _	10,516.70 LF ~ 8" PVC	Plat No. <u>N/A</u>

PLAT NO. JOB NO. 12719-04 DATE___NOVEMBER 2023 DESIGNER CHECKED DW DRAWN JR







FF = XXXX.XX

PROPOSED SEWER LATERAL FINISHED FLOOR ELEVATION FOR SEWER

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED



S FINISHED GROUND/PAVEMENT WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER

(SEE SAWS SPEC ITEM 812) TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

PROPOSED SANITARY SEWER LINE

(TOP OF GRADE)

CROSSING

CAUTION!

PROPOSED WATER LINE —

SEPARATION DISTANCE AND PROTECTION REQUIREMENTS TO COMPLY WITH 30 TAC

217.53(d) AND 290.44(e)

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING 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 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 B THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL E AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN OF THESE PLANS OR NOT.

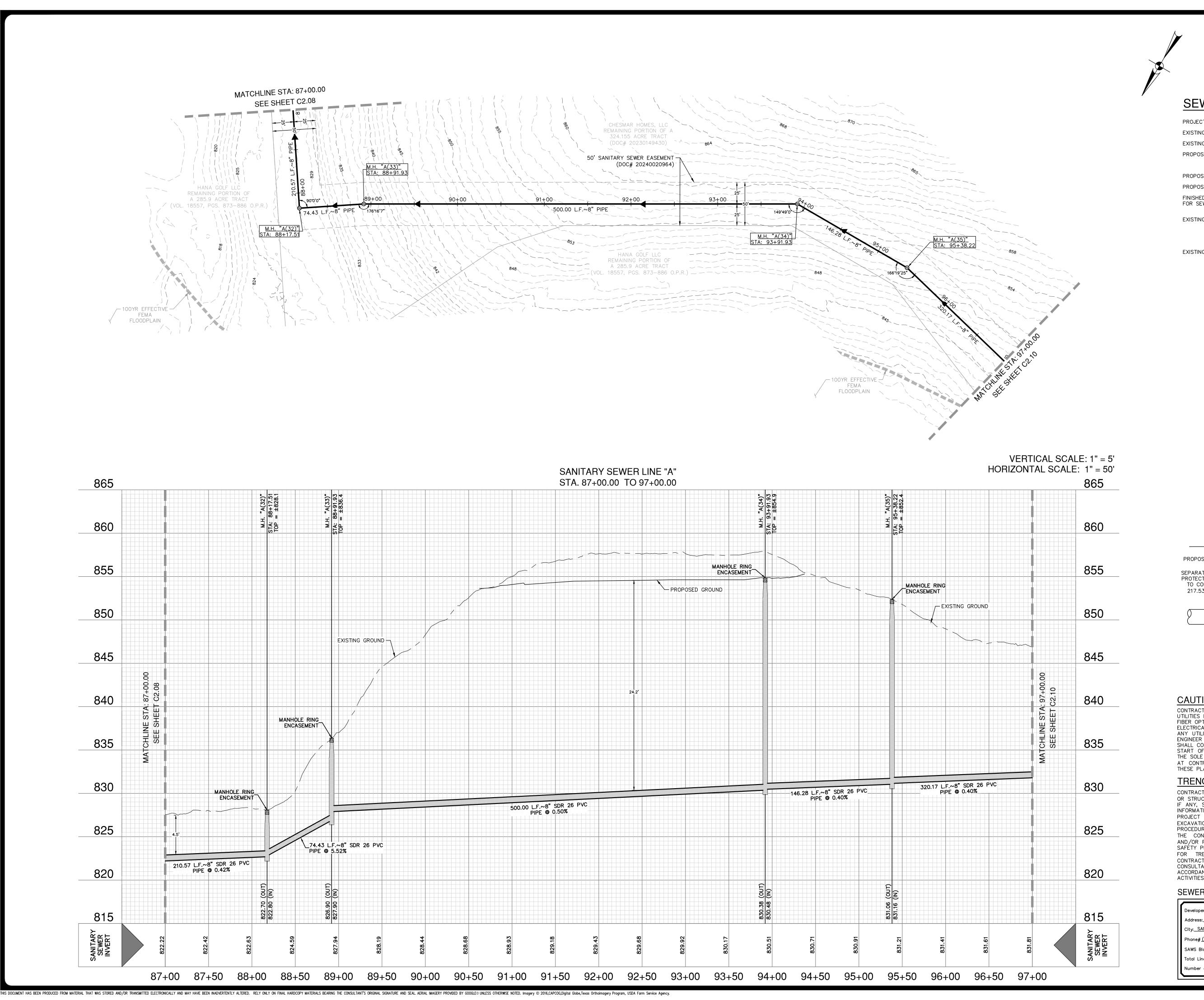
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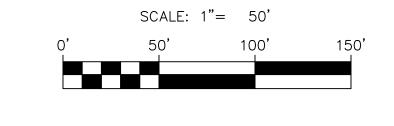
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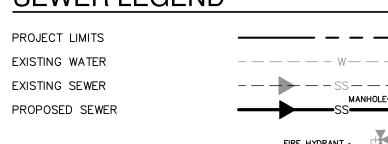
SEWER: UPPER MEDINA SOUTH - DOS RIOS W.R.C.

Address: 211 NORTH LOOP 160	04, SUITE 175	
City: SAN ANTONIO	State;TEXAS	ZIP: 78232
Phone# <u>(210) 957-3395</u>	FAX <u>#_N/A</u>	
SAWS Block Map# 076566		Total Acreage <u>7.8</u>
Total Linear Footage of Pipe <u>1</u>	0,516.70 LF ~ 8" PVC	Plat No. <u>N</u>
Number of Lots N/A T	OTAL EDU'S <u>N/A</u> SAV	VS JOB NO. 23-1658

PLAT NO. ___ N/A JOB NO. 12719-04 DATE NOVEMBER 2023 DESIGNER CHECKED DW DRAWN JR







FF = XXXX.XX

PROPOSED WATER PROPOSED SEWER LATERAL FINISHED FLOOR ELEVATION FOR SEWER

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED



S

FINISHED GROUND/PAVEMENT TOP OF GRADE PROPOSED WATER LINE -WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SEPARATION DISTANCE AND PROTECTION REQUIREMENTS SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER TO COMPLY WITH 30 TAC 217.53(d) AND 290.44(e) CROSSING PROPOSED SANITARY SEWER LINE

> TYPICAL SANITARY SEWER/WATER CROSSING DETAIL NOT-TO-SCALE

(SEE SAWS SPEC ITEM 812)

CAUTION!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING 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 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 B THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL E AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN O THESE PLANS OR NOT.

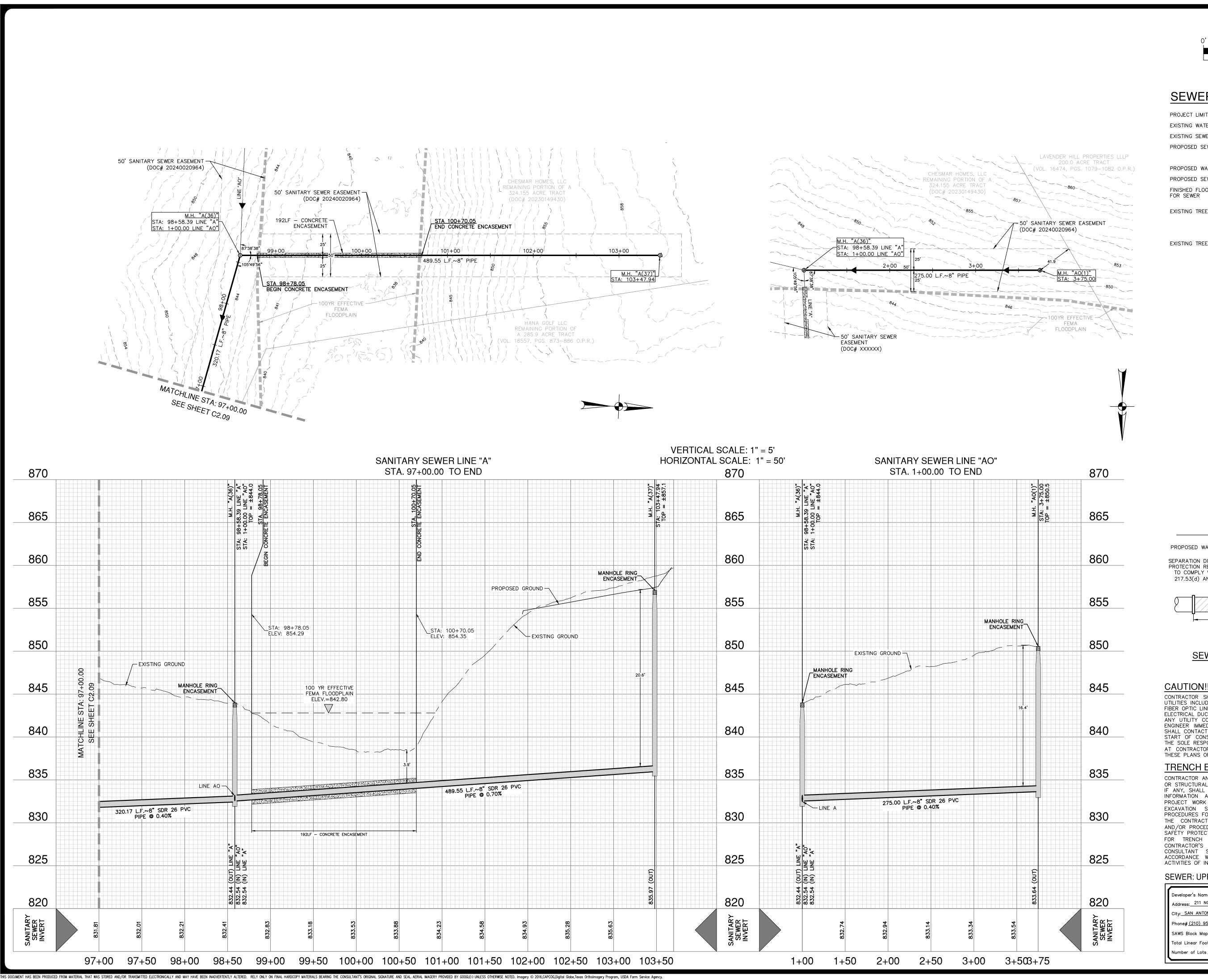
TRENCH EXCAVATION SAFETY PROTECTION:

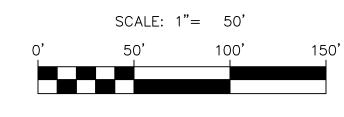
CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN TH PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

SEWER: UPPER MEDINA SOUTH - DOS RIOS W.R.C.

Developer's Name: CHESMAR I	HOMES, LLC	
Address: 211 NORTH LOOP 16	604, SUITE 175	
City: SAN ANTONIO	State: TEXAS	ZIP <u>: 78232</u>
Phone# <u>(210) 957-3395</u>	FAX#	N/A
SAWS Block Map# 076566		Total Acreage <u>7.86</u>
Total Linear Footage of Pipe	10,516.70 LF ~ 8" PVC	Plat No. N/
Number of Lots <u>N/A</u>	TOTAL EDU'S N/A	SAWS JOB NO. 23-1658

PLAT NO. JOB NO. 12719-04 DATE NOVEMBER 2023 DESIGNER CHECKED DW DRAWN JR







FF = XXXX.XX

PROPOSED SEWER LATERAL FINISHED FLOOR ELEVATION

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED



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FINISHED GROUND/PAVEMENT $\overline{}$ (TOP OF GRADE) $^{'}$ PROPOSED WATER LINE -WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SEPARATION DISTANCE AND PROTECTION REQUIREMENTS SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER TO COMPLY WITH 30 TAC 217.53(d) AND 290.44(e) CROSSING PROPOSED SANITARY SEWER LINE (SEE SAWS SPEC ITEM 812)

> TYPICAL SANITARY SEWER/WATER CROSSING DETAIL NOT-TO-SCALE

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING 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 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 E THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL E AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN C THESE PLANS OR NOT.

TRENCH EXCAVATION SAFETY PROTECTION:

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

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Phone# <u>(210)</u> 957-3395	FAX# <u>N/A</u>	\
SAWS Block Map# 076566		Total Acreage <u>7.86</u>
Total Linear Footage of Pipe_	10,516.70 LF ~ 8" PVC	Plat No. <u>N</u> /
Number of Lots N/A	TOTAL EDU'S <u>N/A</u> SA	WS JOB NO. <u>23-1658</u>

PLAT NO. JOB NO. 12719-04 DATE NOVEMBER 2023 DESIGNER CHECKED DW DRAWN JR C2.10

SAWS STANDARD GENERAL CONSTRUCTION NOTES ASSOCIATED WITH 2021 SAWS STANDARD SPECS

(UPDATED JANUARY 2022)

GENERAL CONSTRUCTION

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:
- A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290
- CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE." CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER
- CONSTRUCTION."
- CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- . CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
- THE CONTRACTOR SHALL OBTAIN SAWS STANDARD DETAILS FROM SAWS WEBSITE,
- HTTPS: //APPS.SAWS.ORG/BUSINESS_CENTER/SPECS/CONSTSPECS/ UNLESS OTHERWISE NOTED WITHIN DESIGN PLANS.
- THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 (DURING REGULAR SAWS WORKING HOURS) AND PROVIDE NOTIFICATION PROCEDURES THE CONTRACTOR WILL USE TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS TWO (2) WEEKS PRIOR TO EXCAVATION. OUTSIDE OF REGULAR SAWS WORKING HOURS THE SAWS EOC SHOULD BE CONTACTED AT 210-704-7297.
- . IF NECESSARY, CONTRACTOR WILL COORDINATE USE OF SAWS PREMISES AT NO ADDITIONAL COST TO SAWS. SUCH EFFORTS INCLUDE, BUT ARE NOT LIMITED TO, OBTAINING SECURITY IDENTIFICATION BADGES REQUIRED FOR ACCESS TO
- LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. AS-BUILTS FOR SAWS INFRASTRUCTURE CAN BE OBTAINED AT WEBSITE BELOW. CONTRACTOR SHALL COORDINATE PHYSICAL LOCATES FOR SAWS INFRASTRUCTURE THROUGH THE SAWS INSPECTOR. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS INFRASTRUCTURE. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:

SAN ANTONIO WATER SYSTEM:

REQUEST AS-BUILTS: HTTPS://WWW.SAWS.ORG/SERVICE/LOCATES-SERVICE/

COSA DRAINAGE 210-206-8433

- COSA TRAFFIC SIGNAL OPERATIONS 210-207-7720 TEXAS STATEWIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING, AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGES DONE BY THE PROJECTS CONSTRUCTION.
- CONTRACTOR SHALL NOT MAKE USE OF DUMPSTERS OR WASTE BINS THAT ARE INTENDED TO SERVE RESIDENTS AND/OR BUSINESSES.
- ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION AND BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT.
- O. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- 11. ALL WORK WITHIN THE 100-YEAR FLOODPLAIN SHALL BE DONE IN ACCORDANCE WITH FLOODPLAIN DEVELOPMENT
- 12. ANY WORK COMPLETED WITHOUT PRIOR WRITTEN AUTHORIZATION WHICH IS NOT INCLUDED IN THESE PLANS AND SPECIFICATIONS WILL NOT BE COMPENSATED BY THE SAN ANTONIO WATER SYSTEM.
- 13. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS.
- WEEKEND WORK: CONTRACTORS ARE REQUIRED TO SUBMIT REQUEST TO THE SAWS INSPECTION CONSTRUCTION DEPARTMENT BY 12:00PM ON THE WEDNESDAY PRIOR TO THE WEEKEND BEING REQUESTED. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.
- ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION AT NO COST TO SAWS.
- 14. PRE-CON SITE VIDEO: BEFORE THE START OF ANY CONSTRUCTION. THE SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO SAWS INSPECTIONS. A PRE-SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF THE EXISTING CONDITIONS(NSPI).
- 15. POWER POLE BRACING: CONTRACTORS SHOULD BE ADVISED THAT THERE ARE EXISTING OVERHEAD UTILITY POLES ALONG THE PROJECT CORRIDOR. CONTRACTORS SHOULD FURTHER BE ADVISED THAT IF THE DISTANCE FROM THE OUTSIDE FACE OF A UTILITY TRENCH TO THE FACE OF A UTILITY POLE IS LESS THAN 5 FEET, SAID UTILITY POLE IS SUBJECT TO BRACING, BASED ON A DETERMINATION MADE BY UTILITY POLE OWNER. COSTS INCURRED BY CONTRACTOR FOR BRACING OF THESE UTILITY POLES IS SUBSIDIARY TO THAT RESPECTIVE UTILITY COMPANY'S WORK. IT IS ADVISABLE FOR THE CONTRACTOR TO REVIEW THE CONSTRUCTION DOCUMENTS AND VISIT THE CONSTRUCTION SITE TO DETERMINE POTENTIAL IMPACTS.
- 16. CONSTRUCTION SEQUENCING: IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SCHEDULE SEQUENCING FOR REMOVAL AND INSTALLATION OF EXISTING AND PROPOSED SAWS UTILITIES IN CONJUNCTION WITH GENERAL PROJECT CONSTRUCTION. SEQUENCE OF CONSTRUCTION ACTIVITIES SHALL BE CONSIDERED IN ORDER TO MINIMIZE THE EXTENT AND DURATION OF DISTURBANCES.
- 17. CONTRACTOR SHALL COMPLY WITH APPLICABLE REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE OVERSEEN BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). OSHA INFORMATION AND RELATED MATERIALS MAY BE OBTAINED AT HTTPS: //WWW.OSHA.GOV/ OR AT THE OSHA SAN ANTONIO OFFICE LOCATED AT FOUNTAINHEAD TOWER, SUITE 605 8200 W. INTERSTATE 10 SAN ANTONIO, TX 78230 WHICH IS ALSO REACHABLE BY PHONE AT (210)
- 18. TRENCH EXCAVATION SAFETY PROTECTION: CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREAS IN ORDER TO IMPLEMENT CONTRACTOR S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTORIS 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 CONTRACTORIS 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

- 19. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:
- A. IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER IMMEDIATELY AT 210-704-SAWS (210-704-7297). PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.
- ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO. . CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.
- CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
- CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.
- MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS.
- SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, INCLUDING ANY FINES FROM EPA.
- NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND SAWS.
- 24. THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE AROUND EACH SEGMENT OF PIPE TO BE REPLACED,

- IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION ITEM NO. 865, "BYPASS PUMPING SMALL DIAMETER SANITARY SEWER MAINS" AND STANDARD SPECIFICATION ITEM NO. 864, "BYPASS PUMPING LARGE DIAMETER SANITARY SEWER MAINS" AS APPLICABLE. PAYMENT FOR SUCH WORK WILL BE MADE UNDER THE APPROPRIATE BID ITEM ASSOCIATED WITH SANITARY SEWER BYPASS PUMPING IN ACCORDANCE WITH SAWS STANDARD SPECIFICATIONS 865 AND 864.
- 25. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT 210-233-3500 AND/OR SAWS PRODUCTION GROUPS AT LEAST TWO WEEKS OR MORE IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
- 26. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECTS IMPROVEMENTS (NSPI).
- 27. MANHOLE REMOVAL: WHERE EXISTING MANHOLES ARE TO BE REPLACED BY THE CONTRACTOR, THE EXISTING MANHOLES SHALL BE REMOVED. (NSPI)
- 28. SMART MANHOLE COVERS: THE CONTRACTOR SHALL NOTIFY SAWS EOC AT 210-704-SAWS (210-233-7297) AND EITHER AMERICA ESPINOZA AT 210-233-2934 OR JOSE A. MARTINEZ AT 210-233-3071 A MINIMUM OF 72 HOURS. NOT COUNTING WEEKENDS OR SAWS HOLIDAYS, BEFORE WORKING ON THE PIPE OR MANHOLE, IN ORDER TO HAVE SAWS REMOVE THE SMART COVER. ANY DAMAGE DONE TO THE SMART COVER WILL BE CHARGED TO THE CONTRACTOR THROUGH A CHANGE ORDER.
- 29. FLOW METERS IN MANHOLES: THE CONTRACTOR SHALL NOTIFY BOBBY JOHNSON AT 210-233-3493 OR ABEL BORUNDA AT 210-233-3704 A MINIMUM OF 72 HOURS, NOT COUNTING WEEKENDS OR SAWS HOLIDAYS, BEFORE WORKING ON THE PIPE OR MANHOLE, IN ORDER TO HAVE SAWS REMOVE THE FLOW METER IN THE MANHOLE. ANY DAMAGE DONE TO THE FLOW METER WILL BE CHARGED TO THE CONTRACTOR THROUGH A CHANGE ORDER.

ADDITIONAL MISCELLANEOUS SAWS NOTES

- 1. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A NOTICE TO PROCEED FROM SAWS
- 2. THE CONTRACTOR SHALL MAINTAIN SERVICE TO ALL EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION.
- 3. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CITY PUBLIC SERVICE MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND GAS VALVES THAT ARE IN THE
- 4. SEWER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS AS APPROVED BY SAWS, MECHANICAL JOINT "BOOT TYPE" CONNECTIONS ALONE WILL NOT BE ALLOWED. "BOOT TYPE JOINTS MAY BE USED IN CONJUNCTION WITH COMPRESSION JOINTS AS APPROVED BY SAWS. ANY CHANGES FROM THESE METHODS MUST BE APPROVED BY SAWS.
- 5. WHERE REQUIRED, CONCRETE ENCASEMENT SHALL BE PLACED FOR FULL WIDTH OF THE TRENCH TO A PLANE 6" ABOVE THE TOP OF THE PIPE, WITH PAY LIMITS AS SHOWN ON THE ITEM NO. DD-858-01.
- 6. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOODPLAIN WITHOUT FIRST OBTAINING AN APPROVAL FLOODPLAIN DEVELOPMENT PERMIT.

7. STORM WATER PROTECTION:

- A. THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF SEWER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTED ON THE PROJECT'S PLAN AND PROFILE SHEETS.
- B. AT A MINIMUM THESE CONTROLS SHALL CONSIST OF ROCK BERMS AND/OR SILT FENCES CONSTRUCTED PARALLEL TO AND DOWN GRADIENT FROM THE TRENCHES. THE ROCK BERM OR SILT FENCES SHALL BE INSTALLED IN A MANNER SUCH THAT ANY RAINFALL RUNOFF SHALL BE FILTERED. HAY BALES SHALL NOT BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
- C. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION, SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL BE REMOVED WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED. ADDITIONAL PROTECTION MAY BE NECESSARY IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.
- 15. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE SAN ANTONIO WATER SYSTEM.
- 16. PLACEMENT OF SUCH CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS, BUT WILL BE VERIFIED BY THE ENGINEER/INSPECTOR IN THE FIELD PRIOR TO SEWER LINE CONSTRUCTION. THE CONTRACTOR AND CITY INSPECTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE SIGNIFICANT DISTURBANCE TO THE STRUCTURES HAS NO OCCURRED. SEDIMENT DEPOSITED AFTER A SIGNIFICANT RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN APPROVED DESIGNATED SOIL DISPOSAL AREA.
- 17. A DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER INITIAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. ITEM NO. 849
- 18. ALL MAINS MUST PASS AIR TESTING PER ITEM NO. 849 IN THE STANDARD SPECIFICATIONS PRIOR TO ACCEPTANCE BY THE SAN ANTONIO WATER SYSTEM.
- 19. ALL MAINS MUST COMPLY WITH ITEM NO. 868 OF SEWER MAIN CLEANING.
- 20. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. SANITARY SEWER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR PUBLIC WORKS
- 21. SANITARY SEWER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF THE MANHOLES IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS ITEM 849.
- 22. AFTER CONSTRUCTION, TESTING WILL BE DONE BY T.V. CAMERA BY THE CONTRACTOR AND OBSERVED BY INSPECTOR, AND WASTEWATER ENGINEERING PERSONNEL AS THE CAMERA IS RUN THROUGH THE LINES. ANY ABNORMALITIES, SUCH AS BROKEN PIPE OR MISALIGNED JOINTS, MUST BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- 23. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO THE SAN ANTONIO WATER SYSTEM CONSTRUCTION INSPECTION DIVISION.
- 24. 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
- 25. THE DEVELOPER DEDICATES THE SANITARY SEWER MAINS UPON COMPLETION BY THE DEVELOPER AND ACCEPTANCE BY THE SAN ANTONIO WATER SYSTEM. THE SAN ANTONIO WATER SYSTEM WILL OWN AND MAINTAIN SAID SANITARY SEWER MAINS WHICH ARE LOCATED WITHIN THIS PARTICULAR SUBDIVISION. (AS APPLICABLE)
- 26. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED CONSENT OF THE SAN ANTONIO WATER SYSTEM CONSTRUCTION INSPECTION DIVISION WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
- 27. CONTRACTOR SHALL ABIDE BY ALL APPLICABLE GOVERNMENTAL AND REGULATORY STANDARDS AND REQUIREMENTS AND OBTAIN ALL NECESSARY PERMITS AND APPROVALS FOR CONSTRUCTION OF THE PIPELINE FACILITIES SHOWN IN
- 28. THE CONTRACTOR SHALL EXCAVATE THE TOP 12 INCHES OF TOPSOIL AND STOCKPILE IT SEPARATELY FROM THE GENERAL EXCAVATION. A SUITABLE VOLUME OF TOPSOIL SHALL BE EXCAVATED TO PLACE A MINIMUM OF 12 INCHES OF TOPSOIL OVER ALL EXCAVATED OR BACKFILLED AREAS. TOPSOILING IS NOT REQUIRED WHERE PAVEMENT, CONCRETE CAP, RIP-RAP OR OTHER FACILITIES ARE REQUIRED AT THE SURFACE. CONTRACTOR MAY MOUND EXCESS TRENCH EXCAVATED MATERIAL OVER PIPE UP TO 1 FOOT IN HEIGHT ABOVE NATURAL GRADE. MOUND SHALL BE COMPLETELY COVERED WITH 12 INCHES OF TOPSOIL. MOUND SHALL BE FREE OF BRUSH AND ROCK. MOUNDING IS NOT PERMITTED IN DEVELOPED PROPERTIES, ROADS, CREEKS, FLOODPLAINS, PAVED AREAS, CULTIVATED FIELDS OR OTHER AREAS DIRECTED BY SAWS'S REPRESENTATIVE. RESTORE GROUND TO ORIGINAL GRADE AND PONDING OF STORM WATER RUNOFF ON ALL GROUND DISTURBED BY CONSTRUCTION ACTIVITIES.
- 29. CONSTRUCTION SURVEYING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR INCLUDING BUT NOT LIMITED TO LIMITS OF PERMANENT EASEMENT AND TEMPORARY EASEMENTS, PIPE ALIGNMENT, APPURTENANCE LOCATION AND ROAD CROSSINGS. THE CONTRACTOR SHALL VERIFY ALL CONTROL MONUMENTATION PRIOR TO BEGINNING CONSTRUCTION.
- 30. ALL PIPELINES 24" AND LARGER SHALL HAVE A MINIMUM COVER OF 48". PIPE SMALLER THAN 24" SHALL HAVE A MINIMUM COVER OF 36" (UNLESS NOTED OTHERWISE). PIPES SHALL BE ROUTED AS SHOWN UNLESS MINOR REVISIONS ARE NECESSARY TO MISS EXISTING PIPES, STRUCTURES, ETC. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL FITTINGS AND ADAPTORS REQUIRED TO MAKE THE ROUTING CHANGES. CONTRACTOR SHALL INCLUDE COST FOR THIS IN THE BID.
- 31. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING PIPE, STRUCTURES, EQUIPMENT, ETC. AS REQUIRED AND SHALL PROVIDE ALL FITTINGS. ADAPTORS AND APPURTENANCES REQUIRED TO MAKE THE CONNECTIONS, PROVIDE ALL SUPPORTS REQUIRED FOR A RIGID INSTALLATION AND TO HAVE A COMPLETE AND WORKING SYSTEM.
- 32. VARIOUS LOCATIONS OF THE WORK ARE SUBJECT TO FLOODING AND STANDING WATER DURING WET WEATHER PERIODS. CONTRACTOR SHALL PLAN THIS WORK FOR DRY WEATHER PERIODS AND PROVIDE DEWATERING AND OTHER WET WEATHER PROVISIONS AS INCIDENTAL WORK.

- 33. CONTRACTOR SHALL COORDINATE HIS/HER PROPOSED CONSTRUCTION WITH OTHER CONTRACTORS IN THE EVENT OF THE OTHER CONTRACTORS DOING WORK IN THE SAME AREA SIMULTANEOUSLY WITH HIS/HER PROJECT. THIS INCLUDES, BUT NOT LIMITED TO, ALL CONNECTION POINTS OR OTHER SPECIAL ITEMS AS REQUIRED FOR TESTING.
- 34. CONTRACTOR SHALL DISPOSE OF ALL EXCESS MATERIAL, CONSTRUCTION, RUBBLE AND TRASH. ALL TRASH SHALL BE PICKED-UP AND REMOVED AT THE END OF EACH DAY.

35. NO BURNING OR BLASTING IS ALLOWED.

36. THE PERMANENT AND TEMPORARY EASEMENTS ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR MAY ACQUIRE ADDITIONAL TEMPORARY CONSTRUCTION EASEMENTS AT HIS/HER OWN COST, IF HE/SHE SO CHOOSES. IF THE CONTRACTOR ACQUIRES ADDITIONAL TEMPORARY EASEMENTS, HE/SHE SHALL PROVIDE COPIES OF THE WRITTEN AGREEMENT TO SAWS. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR ANY DAMAGE AS A RESULT OF USE OF EASEMENTS.

SUPPLEMENTARY NOTES

- 1. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ALL PERMITS.
- 2. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER IN ADVANCE OF ANY WORK IN THE OWNERS' PROPERTY. WITHIN THE:
 - 1) BRIGGS RANCH LTD. CARTER SPEER (210-862-8700)
- 2) BRIGGS RANCH HOA (RUSTLERS TRAIL) (210-862-8700) 3) CONVERGENCE INVESTMENTS, MARIAH UNDERHILL (203-520-4203)
- WHEN WORKING IN AN AREA WITH LIVESTOCK, THE CONTRACTOR SHALL INSTALL AND MAINTAIN (AT CONTRACTOR'S EXPENSE) THE NECESSARY TEMPORARY FENCING TO KEEP THE LIVESTOCK FROM EXITING THE AREA. ANY ESCAPED LIVESTOCK WILL BE CAPTURED AND RETURNED TO THE AREA AT THE CONTRACTOR'S EXPENSE. CONTRACTOR IS RESPONSIBLE FOR ANY INJURY, DEATH OR DAMAGES RESULTING FROM ESCAPED LIVESTOCK. SEE SPECIAL CONDITION
- 4. CONTRACTOR TO COORDINATE CONSTRUCTION PHASING WITH PROPERTY OWNER TO FACILITATE CATTLE MANAGEMENT
- SMOKING IN THE PROJECT AREA IS PROHIBITED DUE TO TALL GRASS BEING A FIRE HAZARD.

UNDERGROUND TELEPHONE/COMMUNICATION LINES NOTE

- THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE AS SHOWN ON THESE PLANS HAS BEEN TAKEN FROM THE BEST INFORMATION AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR SHALL CONTACT THE TELEPHONE/COMMUNICATION COMPANY CABLE LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR SHALL PROTECT AND (AS NECESSARY) INSTALL SHORING FOR TELEPHONE COMPANY FACILITIES DURING CONSTRUCTION.
- CONTRACTOR TO LOCATE AND MAINTAIN IN SERVICE EXISTING ELECTRIC SERVICE TO WELL AND WATER LINES EXTENDING FROM THE WELL. IF THE EXISTING WELL ELECTRIC SERVICE IS FOUND TO BE WITHIN THE PERMANENT SEWER EASEMENT, CONTRACTOR TO RELOCATE THE ELECTRIC SERVICE OUTSIDE THE PERMANENT SEWER EASEMENT, CONTRACTOR TO RELOCATE THE ELECTRIC SERVICE OUTSIDE THE PERMANENT EASEMENT TO A LOCATION COORDINATED WITH THE PROPERTY OWNER.

TREE PROTECTION NOTES

- CONTRACTOR TO PROTECT ALL TREES WHEREVER POSSIBLE. DAMAGE TO TREES IDENTIFIED TO BE PROTECTED WILL BE MITIGATED AT THE CONTRACTOR'S SOLE EXPENSE. ALSO, ALL WORK IN PUBLIC RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE CONTROLLING ENTITIES STANDARDS, SPECIFICATIONS AND PERMIT REQUIREMENTS.
- PROTECT EXISTING TREES SIX INCH (6") DIAMETER AND LARGER. ALL TREES TO BE PRESERVED AS PART OF THE PROJECT SHALL BE PROTECTED AGAINST INJURY OR DAMAGE, INCLUDING CUTTING, SOIL COMPACTION, BREAKING OR SKINNING OF ROOTS, TRUNKS, OR BRANCHES DURING CONSTRUCTION OPERATIONS BY FENCING AS DESCRIBED BELOW. THE TREE PROTECTION SHALL BE PLACED BEFORE ANY EXCAVATION OR GRADING IS BEGUN AND MAINTAINED FOR THE DURATION OF THE CONSTRUCTION WORK. PROTECTION WILL ENCOMPASS THE ROOT PROTECTION ZONE WHICH WILL BE AT MINIMUM ONE FOOT (1.0') RADIUS PER INCH DIAMETER OF THE TREE TRUNK AT 4.5' ABOVE GROUND. NO MATERIAL SHALL BE STORED OR CONSTRUCTION OPERATION SHALL BE CARRIED ON WITHIN THE TREE PROTECTION FENCING, UNLESS AUTHORIZED BY THE OWNER. THE PROTECTION SHALL REMAIN UNTIL ALL WORK IS COMPLETED.
- NO CONSTRUCTION ACTIVITIES SHALL BE PERFORMED WITHIN 5' FROM THE TRUNK OF A TREE THAT IS PROTECTED. TRENCH SHORING WILL BE REQUIRED INSIDE OF A ROOT PROTECTION ZONE. THE ROOT PROTECTION ZONE IS CALCULATED AS A RADIUS FROM THE TREE TRUNK EQUAL TO ONE FOOT PER DIAMETER INCH OF THE TREE.
- 4. THIS PROJECT IS SUBJECT TO REGULATIONS ESTABLISHED BY THE CITY OF SAN ANTONIO TREE ORDINANCE.

HAULING AND STORAGE

 HAULING AND/OR TEMPORARY STORAGE OF EQUIPMENT AND MATERIALS MAY BE NECESSARY, INCLUDING EXCAVATED MATERIAL AND SPOILS. CONTRACTOR SHALL INCLUDE IN HIS BID PRICE ALL COSTS ASSOCIATED WITH HAULING ANI OFF-SITE STORAGE OF ALL MATERIALS AND/OR EQUIPMENT. ALSO REFER TO THE PROJECT SPECIFICATIONS.

EXISTING IMPROVEMENTS

ALL EXISTING IMPROVEMENTS WITHIN THE PROJECT AREA, WHICH ARE NOT COVERED UNDER THE UNIT PRICE BID PROPOSAL, SHALL BE PROTECTED OR REMOVED AND REPLACED TO EXISTING CONDITION OR BETTER AT NO ADDITIONAL

MISCELLANEOUS NOTES

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL, MONITOR AND MAINTAIN THE STORMWATER POLLUTION PREVENTION PLAN FOR THIS PROJECT.
- 2. ALL FENCING, GATES, OIL FIELD FACILITIES, SIGNS AND ANY OTHER EXISTING IMPROVEMENTS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED TO ITS ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER.
- 3. THE CONTRACTOR, BY PERSONAL EXAMINATION OF THE SITE, SHALL SATISFY HIMSELF/HERSELF WITH THE LOCAL CONDITIONS AND MAKE HIS/HER ESTIMATE OF THE DIFFICULTIES AND UNCERTAINTIES THAT WILL ATTEND THE EXECUTION OF THE PROPOSED WORK. DERIVING INFORMATION FROM PLANS AND SPECIFICATIONS ONLY, WHILE FAILING TO EXAMINE THE SITE, SHALL IN NO WAY RELIEVE THE CONTRACTOR FROM HIS/HER RESPONSIBILITIES OR AFFECT THE RISK OR OBLIGATION ASSUMED BY THE CONTRACTOR FROM FULFILLING ANY CONDITION OF THE CONTRACT.
- 4. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO AVOID DAMAGING EXISTING FACILITIES INCLUDING BUT NOT LIMITED TO WELLS, WATER LINES, PIPING, TANKS, HOSES AND ELECTRICAL.

TRAFFIC CONTROL NOTE

CONTROL TRAFFIC AT ALL TIMES THROUGHOUT CONSTRUCTION.

 CONTRACTOR SHALL PREPARE AND SUBMIT A TRAFFIC CONTROL PLAN TO BEXAR COUNTY FOR REVIEW AND APPROVAL. NECESSARY TRAFFIC CONTROL, DETOUR ROUTING AROUND WORK ACTIVITIES, MAINTENANCE OF DETOUR SIGNS AND FLAGMEN ARE THE CONTRACTOR'S RESPONSIBILITY. UNLESS DIRECTED OTHERWISE, THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE OPEN TRAFFIC LANE (MINIMUM 12 FEET WIDE), CONTROLLED WITH FLAGMEN, DURING WORKING HOURS. DURING ALL NON-WORKING HOURS A MINIMUM OF TWO TRAFFIC LANES (EACH A MINIMUM 12 FEET WIDE) SHALL BE OPEN TO TRAFFIC. CONTRACTOR WILL FURNISH AND MAINTAIN ALL REQUIRED TRAFFIC CONTROL DEVICES PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), TO PROPERLY WARN, GUIDE AND

CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS

- WHERE A SEWER MAIN CROSSES OVER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE (9) FEET, ALL PORTIONS OF THE SEWER MAIN WITHIN NINE (9) FEET OF THE WATER LINE SHALL BE CONSTRUCTED USING 160 PSI PRESSURE RATED HDPE.
- WHERE A SEMI-RIGID OR RIGID SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET BUT GREATER THAN TWO FEET, THE INITIAL BACKFILL SHALL BE CEMENT STABILIZED SAND (TWO OR MORE BAGS OF CEMENT PER CUBIC YARD OF SAND) FOR ALL SECTIONS OF THE SEWER WITHIN NINE FEET
- III. WHERE A SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN TWO FEET, THE SEWER MAIN SHALL BE CONSTRUCTED OF HDPE WITH A MINIMUM PRESSURE RATING OF 160 PSI WITHIN NINE FEET OF THE WATER MAIN, SHALL BE PLACED NO CLOSER THAN SIX (6") INCHES BETWEEN OUTER DIAMETERS.
- WHERE A SEWER MAIN PARALLELS A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE FEET, THE SEWER MAIN SHALL BE BELOW THE WATER MAIN, SHALL BE CONSTRUCTED OF HDPE WITH A MINIMUM PRESSURE RATING OF 160 PSI FOR BOTH PIPE AND JOINTS FOR A DISTANCE OF NINE FEET BEYOND THE POINT OF CONFLICT SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE BETWEEN OUTER DIAMETERS OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY.
- V. SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED ANY CLOSER THAN NINE FEET TO WATER MAINS.

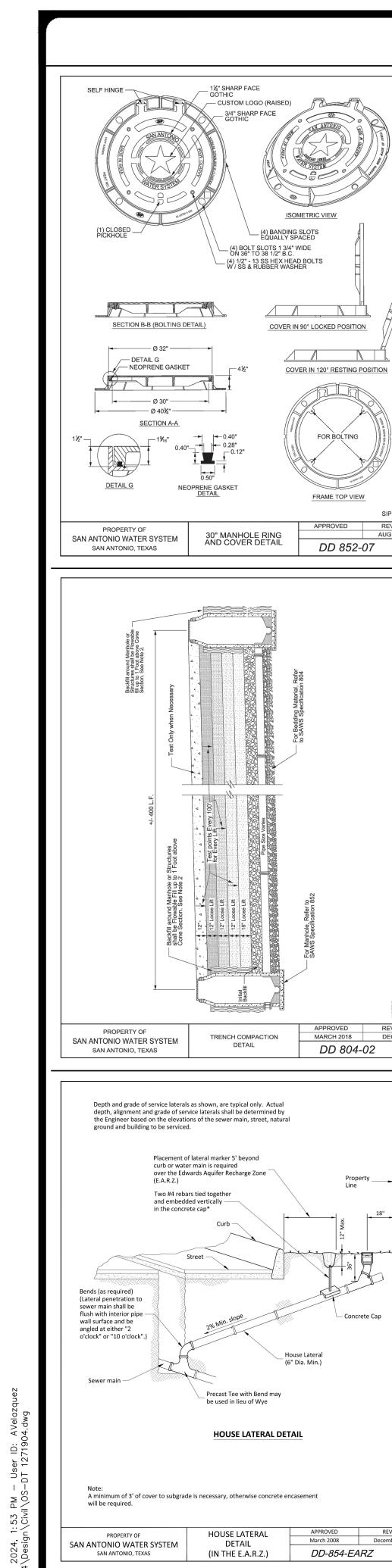
BEXAR COUNTY FLOOD PLAIN GENERAL CONSTRUCTION NOTES:

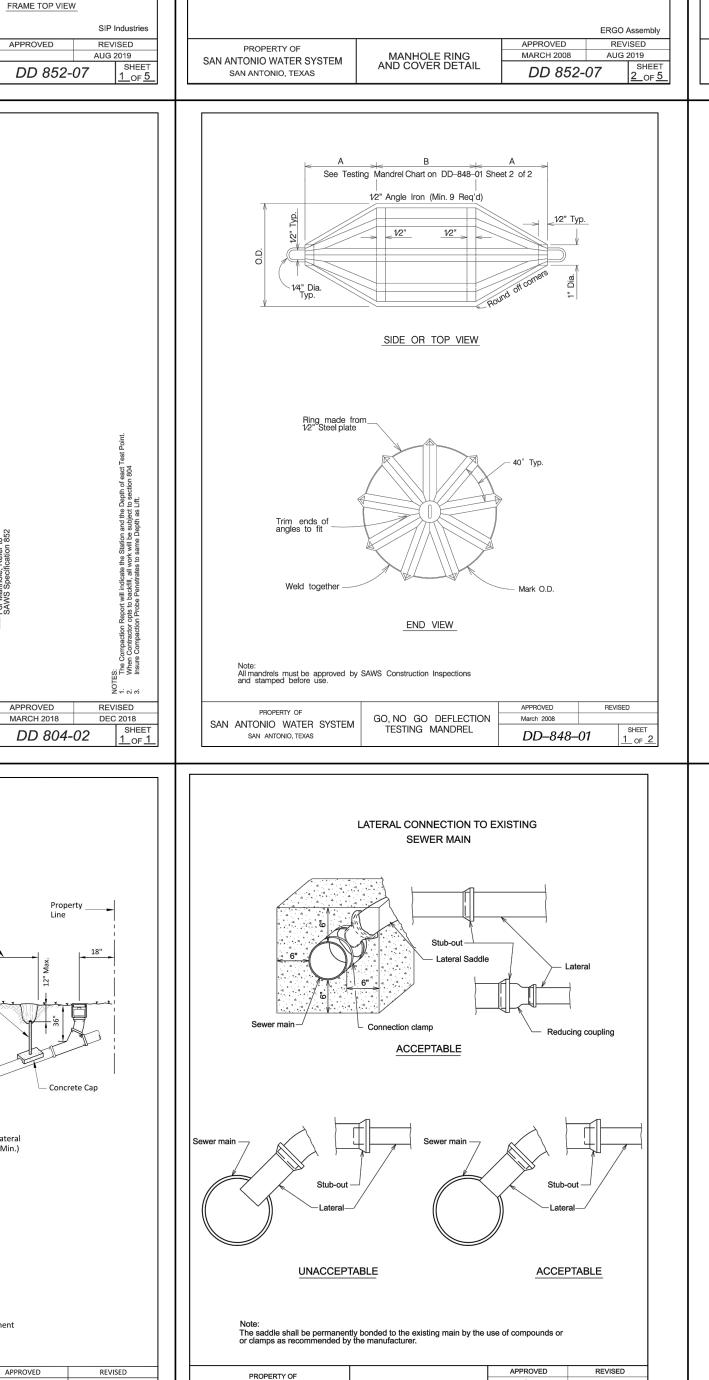
- 1. CONTRACTOR IS TO MAINTAIN UNRESTRICTED DRAINAGE OF THE PROJECT SITE AND ADJACENT AREAS DURING
- 2. NO CONSTRUCTION MATERIAL AND/OR WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF THE EXISTING NATURAL DRAINAGE OR PLACED WITHIN THE LIMITS OF THE EXISTING FLOOD



LAT NO. 12719-04 ATE NOVEMBER 2023 DESIGNER CHECKED DW DRAWN .

DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE® UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.





- 1¼" Sharp Face Gothic

─_ 1¼" Sharp Face Gothic

LHD0102238 Flat Gasket w.out Sut ——

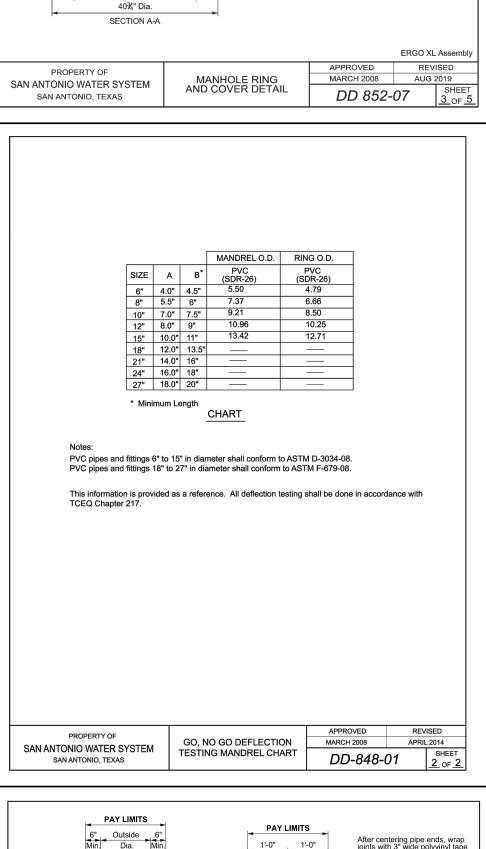
FRAME SECTION A-A

COVER SECTION B-B

HINGE & GASKET VIEW

HINGE POSITIONS

FRAME SECTION B-B



COVER IN 90° LOCKED POSITION

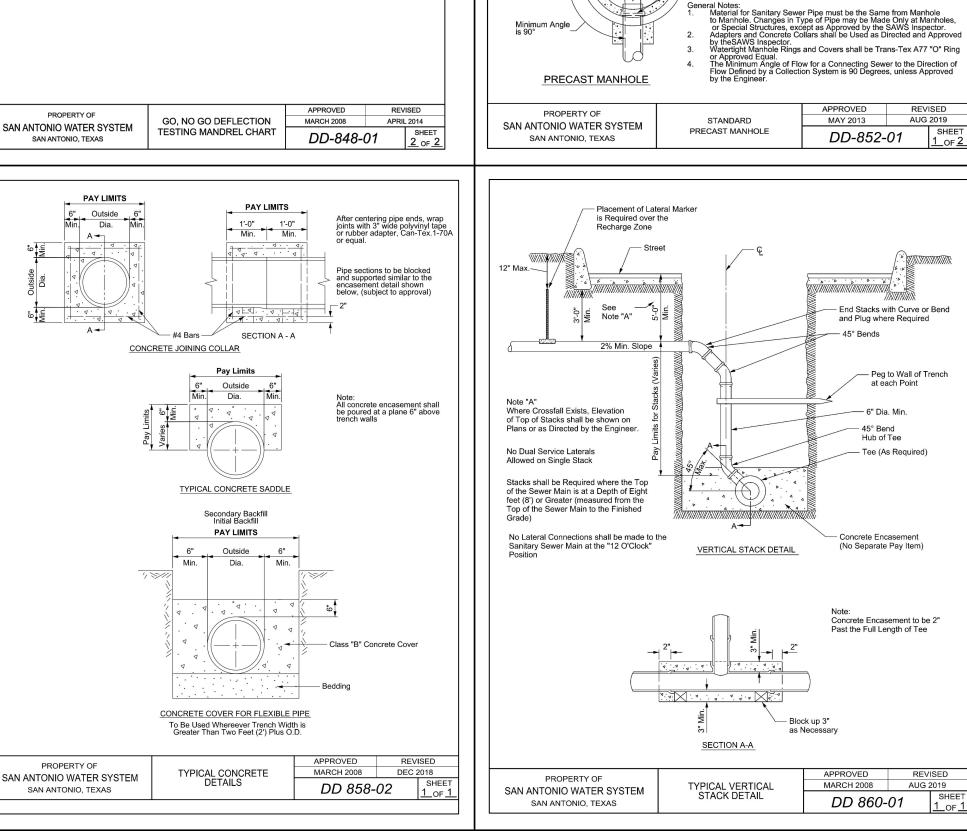
COVER IN 120° RESTING POSITION

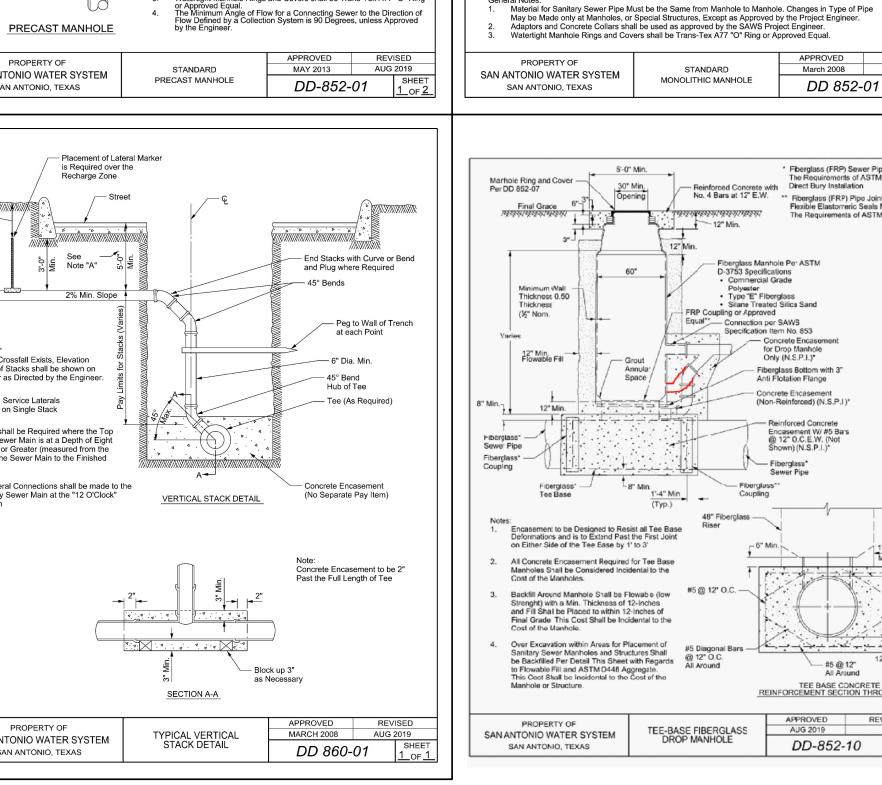
REMOVE LIFT ASSIST BOLT & REMOVE COVER @ 90°

— (4) Bolts Slots 1" Wide on 36" to ³⁸½" B.C. (4) ½" - 13 SS Hex Head Bolts — w/SS and Rubber Washers

SECTION B-B

30" Dia.





4X Drill Tap & CBore for ½ - 13 X 2½" Long SS Hex Bolt & _ Narrow Washer Kit #91562 Optional Penta HD Bolt

Flush w/Top Surface

"T-SEAL" GASKET DETAIL

— Hold Open Device

PROPERTY OF

SAN ANTONIO WATER SYSTEM

SAN ANTONIO, TEXAS

All New Manhole Installations Shall have a Minimum of (2) and Not Exceed (4) Throat Rings.

Minimum Angle ______ is 90°

Neoprene Plug (For Self-Sealing

NEENAH FOUNDR'

MARCH 2008 AUG 2019

SHEET

— Bench 1/2-Inch per Foot

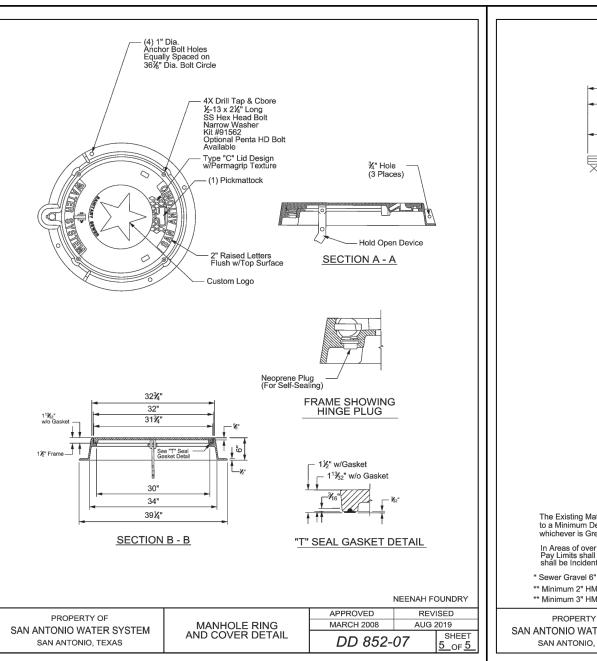
PRECAST MANHOLE

Concrete Cradle to Nearest Point of all Lines Leaving or Entering Manholes

All Pipe is Used, Provide
Rubber Gasket One Size Smaller
than Pipe at Each Wall Crossing
of Manhole, If HDPE Pipe is Used
a Non-Shrink Grout to be Applied
within the Wall Sections, Gasket
is also, Required.

DD 852-07

FRAME SHOWING HINGE PLUG



— I & I Barrier Required as Per Specification

Press Seal Gasket

March 2008

DD 852-01

Fiberglass (FRP) Sewer Pipe Meeting The Requirements of ASTM D3743 for Direct Bury Installation

** Fiberglass (FRP) Pipe Joints Using Flexible Elastomeric Seals Meeting The Requirements of ASTM D4151

#5 @ 12" All Around

TEE BASE CONCRETE
REINFORCEMENT SECTION THROUGH PIPE

DD-852-10

APPROVED REVISED
AUG 2019

City: SAN ANTONIO

Phone#<u>(210) 957-3395</u>

SAWS Block Map# 076566

for Drop Manhole Only (N.S.P.I.)*

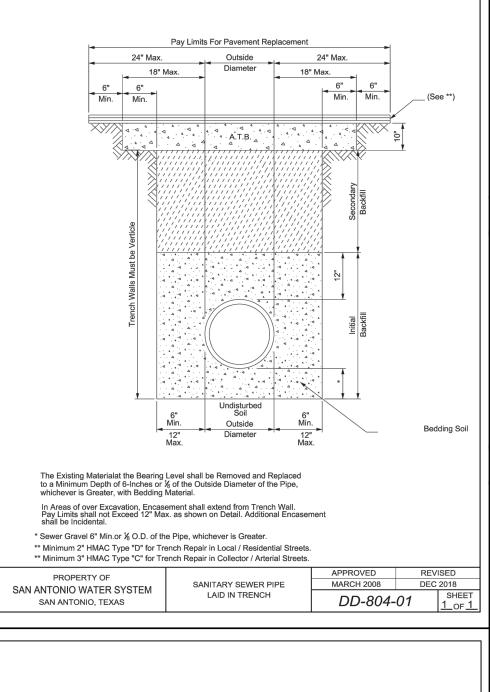
Fiberglass Bottom with 3"
 Anti Flotation Flange

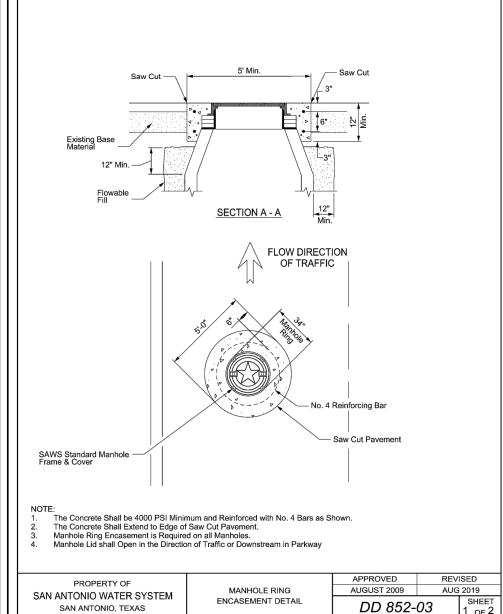
Expansion ASTM C-923 at Base Section (PreCast)

AUG 2019

Manhole Ring and Cover (See DD 852-02)

MONOLITHIC MANHOLE







BRUNA F. SPENGLER

127547

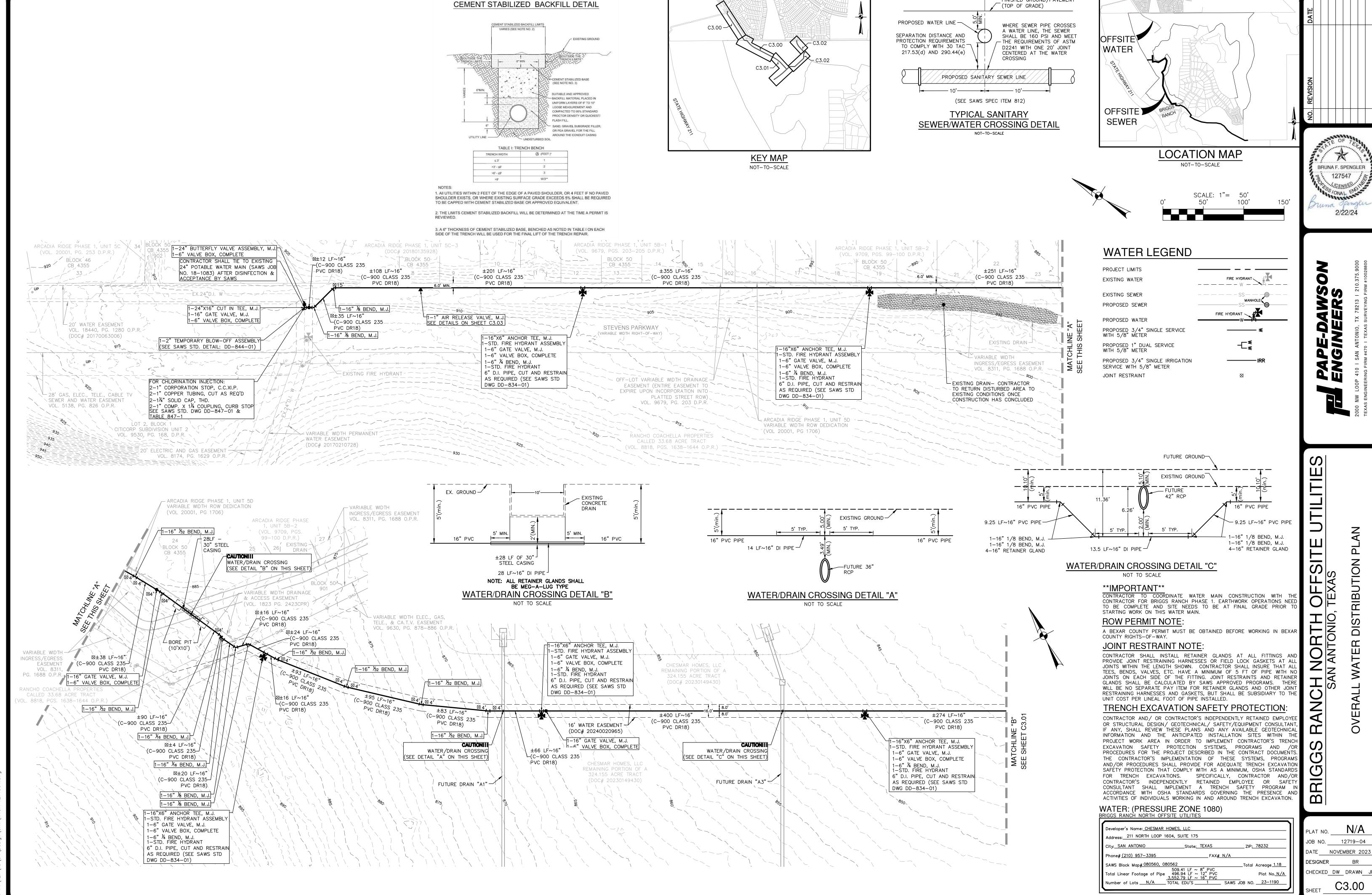
SEWER: UPPER MEDINA SOUTH - DOS RIOS W.R.C. Developer's Name: CHESMAR HOMES, LLC Address: 211 NORTH LOOP 1604, SUITE 175 12719-04 ____ ZIP: 78232 _State: TEXAS ATE NOVEMBER 2023 FAX# N/A ESIGNER _Total Acreage<u>7.86</u> Total Linear Footage of Pipe 10,516.70 LF ~ 8" PVC HECKED DW DRAWN Number of Lots <u>N/A</u> TOTAL EDU'S <u>N/A</u> SAWS JOB NO. <u>23-1658</u> C2.12

BRIG

MARCH 2008 APRIL 2014

SHEE SAN ANTONIO WATER SYSTEM LATERAL CONNECTION DD-854-03 DD-854-EARZ SAN ANTONIO, TEXAS

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE® UNILESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.



FINISHED GROUND/PAVEMENT

MATCHLINE "C" SEE SHEET C3.02

1-16"X16" ANCHOR TEE, M.J. 8> 1-16" GATE VALVE, M.J.

1-12" GATE VALVE, M.J.

1-16"X12" REDUCER M.J.

1-12" $\frac{1}{32}$ BEND, M.J.

1−12" ⅓₂ BEND, M.J.

(C-900 PVC DR18)

1-12"X6" ANCHOR TEE, M.J. I-STD. FIRE HYDRANT ASSEMBLY

6" D.I. PIPE, CUT AND RESTRAIN

AS REQUIRED (SEE SAWS STD

CHESMAR HOMES, LLC REMAINING PORTION OF A 324.155 ACRE TRACT (DOC# 20230149430)

1-6" GATE VALVE, M.J. 1-6" VALVE BOX, COMPLETE

1-6" $\frac{1}{4}$ BEND, M.J. 1-STD. FIRE HYDRANT

DWG DD-834-01)

" AIR RELEASE VALVE, M.J.

SEE DETAILS ON SHEET C4.03

1-12"X2" ECCENTRICALLY TAPPED CAP, M.J.

1-2" PERMANENT BLOW-OFF ASSEMBLY

±9 LF~12"

2-6" VALVE BOX, COMPLETE

REMAINING PORTION OF 324.155 ACRE TRACT

(DOC# 20230149430)

⊗±77 LF~12"

±53 LF~12" /(C-900 PVC DR18)

16' WATER EASEMENT

/ (DOC# 20240020965)

/(C-900 PVC DR18)

-16' WATER EASEMENT

(DOC# 20240020965)

±314 LF~16"

/(C-900 CLASS 235/

PVC DR18)

324.155 ACRE TRACT

(DOC# 20230149430)

±34 LF~16"

PVC DR18)

┌(C-900 CLASS 235

(C-900 CLASS 235

PVC DR18) ⊗4'.

 $\frac{1-16" \frac{1}{32} \text{ BEND, M.J}}{1-16"}$

1-16"X6" ANCHOR TEE, M.J.

1-6" VALVE BOX, COMPLETE

1-6" ¼ BEND, M.J. 1-STD. FIRE HYDRANT

DWG DD-834-01)

1-STD. FIRE HYDRANT ASSEMBLY 1-6" GATE VALVE, M.J.

6" D.I. PIPE, CUT AND RESTRAIN AS REQUIRED (SEE SAWS STD

1-16" ⅓2 BEND, M.J.

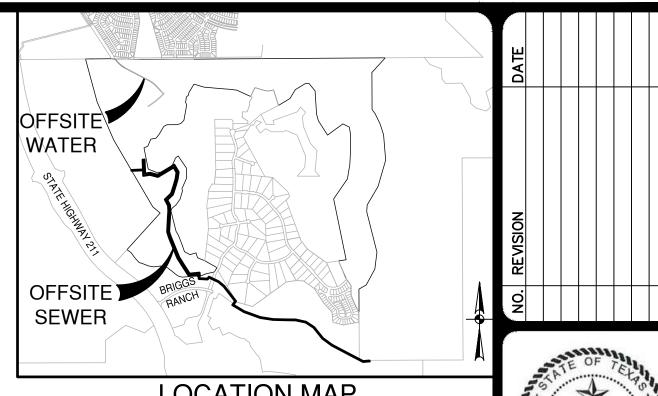
1−16" ⅓₂ BEND, M.J.

±93 LF~16"

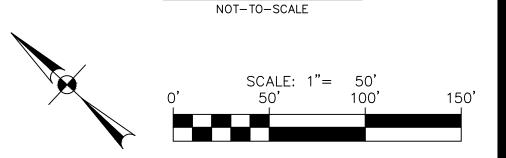
(C-900 CLASS 235√

±274 LF~16"

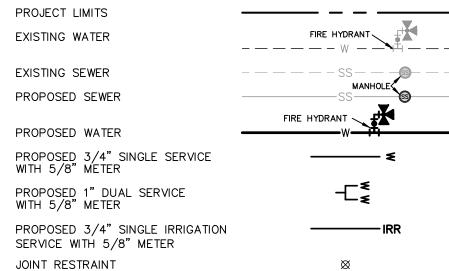
_(C-900 CLASS 235



LOCATION MAP



WATER LEGEND



S

BRUNA F. SPENGLER

2/22/24

IMPORTANT CONTRACTOR TO COORDINATE WATER MAIN CONSTRUCTION WITH TH CONTRACTOR FOR BRIGGS RANCH PHASE 1. EARTHWORK OPERATIONS NEED TO BE COMPLETE AND SITE NEEDS TO BE AT FINAL GRADE PRIOR T STARTING WORK ON THIS WATER MAIN. **ROW PERMIT NOTE:**

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES 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 HARNESSES AND GASKETS, BUT SHALL BE SUBSIDIARY TO TH UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

TRENCH EXCAVATION SAFETY PROTECTION:

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

WATER: (PRESSURE ZONE 1080) BRIGGS RANCH NORTH OFFSITE UTILITIES

State: TEXAS		
3(d)(e,12,7,18	ZIP <u>:</u>	78232
FA>	(<u>#_N/</u> A	
44 LE 6" DVO	Total	Acreage 1.18
.94 LF ~ 12" PV(2	Plat No. <u>N/A</u>
	.41 LF ~ 8" PVC .94 LF ~ 12" PVC .79 LF ~ 16" PVC	FAX# N/A

CEMENT STABILIZED BACKFILL DETAIL SUITABLE AND APPROVED BACKFILL MATERIAL PLACED IN UNIFORM LAYERS OF 6" TO 10" LOOSE MEASUREMENT AND COMPACTED TO 95% STANDARD PROCTOR DENSITY OR QUICKEST/ FLASH FILL. - SAND, GRAVEL SUBGRADE FILLER OR PEA GRAVEL FOR THE FILL AROUND THE CONDUIT CASING UNDISTURBED SOIL TABLE I: TRENCH BENCH TRENCH WIDTH

>6' - ≤9'

TO BE CAPPED WITH CEMENT STABILIZED BASE OR APPROVED EQUIVALENT

1. All UTILITIES WITHIN 2 FEET OF THE EDGE OF A PAVED SHOULDER, OR 4 FEET IF NO PAVED SHOULDER EXISTS, OR WHERE EXISTING SURFACE GRADE EXCEEDS 5% SHALL BE REQUIRED 2. THE LIMITS CEMENT STABILIZED BACKFILL WILL BE DETERMINED AT THE TIME A PERMIT IS

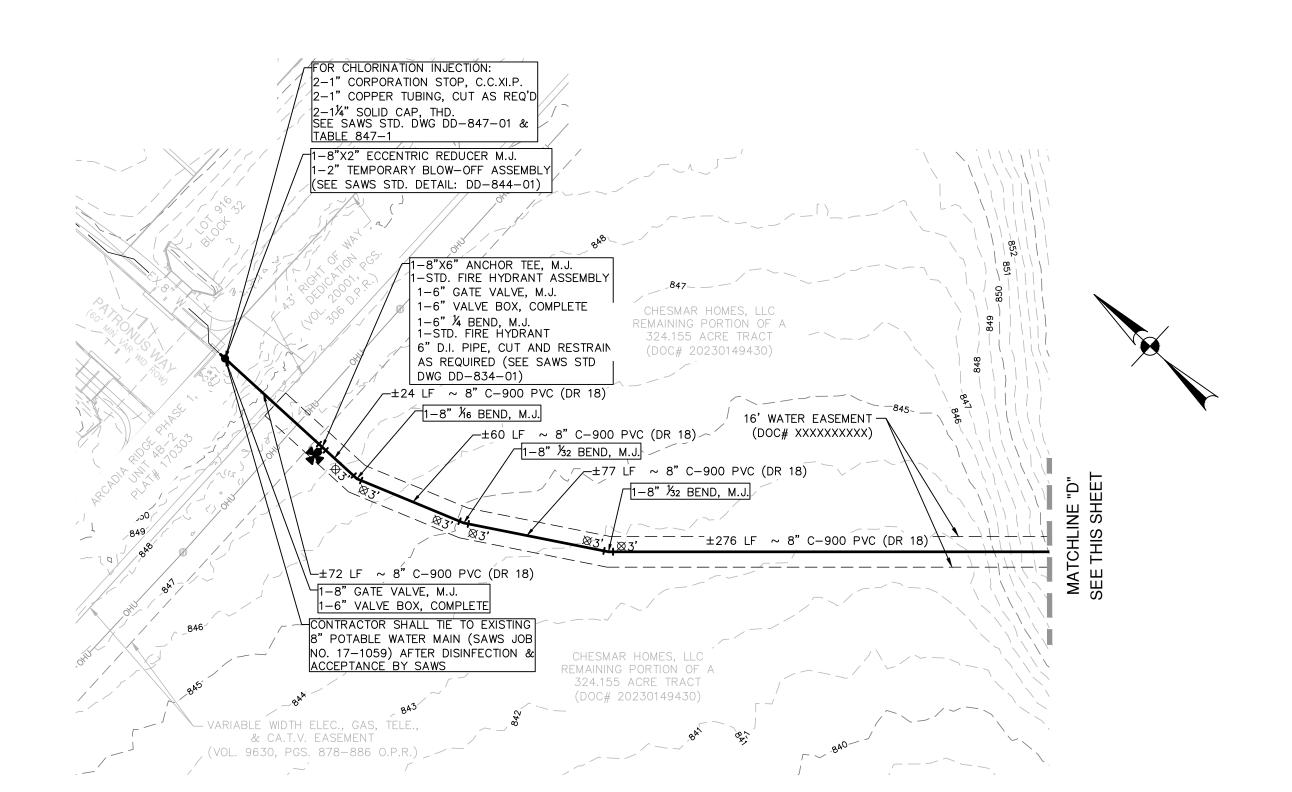
3. A 6" THICKNESS OF CEMENT STABILIZED BASE, BENCHED AS NOTED IN TABLE I ON EACH SIDE OF THE TRENCH WILL BE USED FOR THE FINAL LIFT OF THE TRENCH REPAIR.

DESIGNER CHECKED<u>DW</u> DRAWN<u>JR</u>

LAT NO.

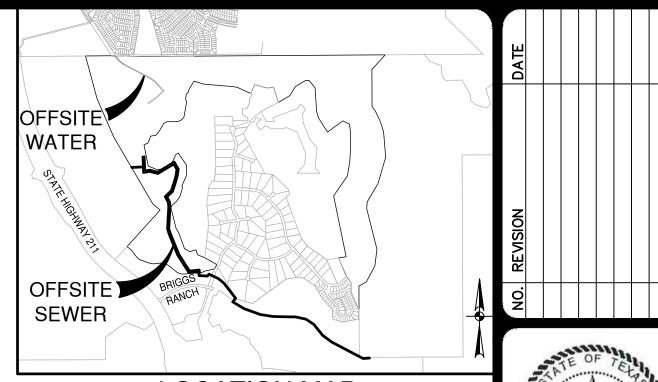
JOB NO. 12719-04

ATE NOVEMBER 2023

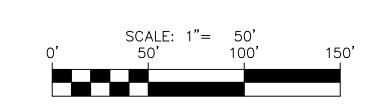


FINISHED GROUND/PAVEMENT (TOP OF GRADE) PROPOSED WATER LINE -WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET SEPARATION DISTANCE AND PROTECTION REQUIREMENTS THE REQUIREMENTS OF ASTM TO COMPLY WITH 30 TAC D2241 WITH ONE 20' JOINT 217.53(d) AND 290.44(e) CENTERED AT THE WATER CROSSING PRÓPOSED SANITARY SEWER LINE (SEE SAWS SPEC ITEM 812)

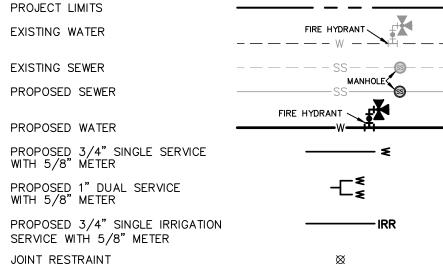
TYPICAL SANITARY SEWER/WATER CROSSING DETAIL NOT-TO-SCALE



LOCATION MAP NOT-TO-SCALE



WATER LEGEND



S

BRUNA F. SPENGLER

IMPORTANT CONTRACTOR TO COORDINATE WATER MAIN CONSTRUCTION WITH TH CONTRACTOR FOR BRIGGS RANCH PHASE 1. EARTHWORK OPERATIONS NEED TO BE COMPLETE AND SITE NEEDS TO BE AT FINAL GRADE PRIOR

ROW PERMIT NOTE: A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR

COUNTY RIGHTS-OF-WAY. JOINT RESTRAINT NOTE

STARTING WORK ON THIS WATER MAIN.

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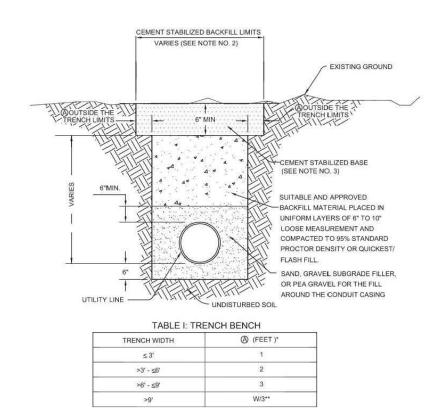
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WATER: (PRESSURE ZONE 1080) BRIGGS RANCH NORTH OFFSITE UTILITIES

Address: 211 NORTH LOOP 1	604, SUITE 175	
City: SAN ANTONIO	State:TEXAS	ZIP: 78232
Phone# <u>(210) 957-3395</u>	FAX <u>#_N/</u>	Ά
SAWS Block Map# <u>080560, 08</u>	30562 509.41 LF ~ 8" PVC	Total Acreage_ <u>1.18</u>
Total Linear Footage of Pipe		Plat No. <u>N/A</u>

CEMENT STABILIZED BACKFILL DETAIL



1. All UTILITIES WITHIN 2 FEET OF THE EDGE OF A PAVED SHOULDER, OR 4 FEET IF NO PAVED SHOULDER EXISTS, OR WHERE EXISTING SURFACE GRADE EXCEEDS 5% SHALL BE REQUIRED TO BE CAPPED WITH CEMENT STABILIZED BASE OR APPROVED EQUIVALENT

3. A 6" THICKNESS OF CEMENT STABILIZED BASE, BENCHED AS NOTED IN TABLE I ON EACH SIDE OF THE TRENCH WILL BE USED FOR THE FINAL LIFT OF THE TRENCH REPAIR.

2. THE LIMITS CEMENT STABILIZED BACKFILL WILL BE DETERMINED AT THE TIME A PERMIT IS

SEE THIS SHEET

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL AERIAL IMAGERY PROVIDED BY GOOGL® UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.

LAT NO. JOB NO. 12719-04 ATE NOVEMBER 2023 DESIGNER CHECKED DW DRAWN JR

GENERAL SECTION

- 1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:
- A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.
- B. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
- C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION" D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
- E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
- THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
- THE CONTRACTOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS WEBSITE, http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
- 4. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY
- 5. LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:
 - SAWS UTILITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES COSA DRAINAGE (210) 207-0724 OR (210) 207-6026 COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8480
 - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
 - TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE PROJECT'S CONSTRUCTION.
- 8. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- 9. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING
- 10. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD
- 11. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO constworkreq@saws.org. WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO constworkreg@saws.org. ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
- 12. COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
- 13. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.

WATER SECTION

- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE—INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
 - FOR WATER MAINS 12"OR HIGHER: SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014
- ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS' WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".
- VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)
- 4. SUITABLE ANCHORAGE/THRUST BLOCKING OR JOINT RESTRAINT SHALL BE PROVIDED AT ALL OF THE FOLLOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, CAPS, TEES, CROSSES, VALVES, AND BENDS, IN ACCORDANCE WITH THE STANDARD DRAWINGS DD-839 SERIES AND ITEM NO. 839, IN THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- 5. ALL VALVES SHALL READ "OPEN RIGHT".
- 6. PRVs REQUIRED: CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 895 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 895 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF *PRV IS/ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. *Note: A pressure regulator is also known as a pressure reducing valve (PRV).
- 7. PIPE DISINFECTION WITH DRY HTH FOR PROJECTS LESS THAN 800 LINEAR FEET. (ITEM NO. 847.3): MAINS SHALL BE DISINFECTED WITH DRY HTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR. AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED FOR MAIN REPAIRS. THE CONTRACTOR SHALL UTILIZE ALL APPROPRIATE SAFETY MEASURE TO PROTECT HIS PERSONNEL DURING DISINFECTION OPERATIONS.
- - ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS ARE REQUIRED TO HAVE BACKFLOW PREVENTION DEVICES. ALL COMMERCIAL BACKFLOW PREVENTION DEVICES MUST BE APPROVED BY SAWS PRIOR TO INSTALLATION.
- 9. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND SAWS HAS RELEASED THE MAIN FOR TIE-IN AND USE.
- 10. DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

ADDITIONAL WATER NOTES

- LEAD FREE FIRE HYDRANTS:
- "SAWS REQUIRES GCPS AND COUNTER PERMITS TO USE LEAD FREE (< 0.25% LEAD) FIRE HYDRANTS."
- 2. SAWS SHALL MACHINE CHLORINATE NEW WATER MAINS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE SITE AND VERIFY THAT ALL STAKES REQUIRED FOR HIS WORK ARE IN PLACE AT THE TIME THE CONSTRUCTION BEGINS. IF ANY STAKES ARE MISSING, THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY. AFTER CONSTRUCTION BEGINS, ALL CONSTRUCTION STAKES, MARKS, ETC., SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR, AND IN CASE OF DESTRUCTION OR REMOVAL BY THE CONTRACTOR, HIS EMPLOYEE OR ANY OTHER MEANS, SUCH STAKES, MARKS, ETC., SHALL BE REPLACED AT
- 4. THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS, TAPS AND LENGTH OF SERVICE CONNECTIONS.
- FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND THE S.A.W.S. RELEASES THE MAIN FOR TIE-IN AND USE.
- 6. UNIT PRICE BID FOR "STANDARD FIRE HYDRANT ASSEMBLY" SHALL INCLUDE FIRE HYDRANT, 6-INCH GATE VALVE AND 6-INCH VALVE BOX COMPLETE, ANCHOR BEND, AND ALL 6-INCH DI PIPE REQUIRED (DI PIPE REQUIRED SHALL INCLUDE ALL PIPE FROM THE TEE ON THE MAIN LINE TO THE FIRE HYDRANT).
- FIRE HYDRANTS SHALL BE PLACED NO FURTHER THAN 7' AND NO CLOSER THAN 1' FROM FACE OF CURB.

MISCELLANEOUS NOTES

- 1. ALL FENCING, SIGNS AND ANY OTHER IMPROVEMENTS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED TO ITS ORIGINAL CONDITION OR 1. ALL SHOP DRAWINGS AND SUBMITTALS REQUIRED FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. BETTER AT NO ADDITIONAL COST TO THE OWNER.
- 2. ALL PIPE FITTINGS AND PIPE RESTRAINTS SHALL BE CONSIDERED SUBSIDIARY TO THE WATER MAIN PIPE UNIT PRICE.
- 3. CONTRACTOR SHALL REPAIR OR REPLACE ANY ADJACENT CURB, PAVEMENT, PAVEMENT MARKINGS, FENCES, ETC. DAMAGED BY CONSTRUCTION TO THE PRE-EXISTING CONDITIONS, AT CONTRACTOR'S EXPENSE.
- 5. FIRE HYDRANTS SHALL BE PAINTED WITH APPROPRIATE SAWS COLORS.
- 6. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND THE S.A.W.S. RELEASES THE MAIN FOR TIE-IN AND USE.

CPS ENERGY GAS VALVES AND OVERHEAD POWER

LINE NOTES

- 1. CALL CPS LOCATOR AT 978-3500 72 HOURS BEFORE BEGINNING ANY EXCAVATION.
- 2. DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, CPS ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE 8. CONTRACTOR SHALL REFER TO THE CONTRACT DOCUMENTS SPECIAL CONSTRUCTION CONDITIONS FOR ADDITIONAL INFORMATION REGARDING WORK CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- 3. CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN WORKING UNDER "HIGH VOLTAGE TRANSMISSION LINES". A WORKING HEIGHT OF 30' FROM GROUND ELEVATION WILL BE OBSERVED WHEN WORKING UNDER THE HIGH VOLTAGE LINE. COORDINATE ALL WORK WITH CPS ENERGY.

HAULING AND STORAGE

. HAULING AND/OR TEMPORARY STORAGE OF EQUIPMENT AND MATERIALS MAY BE NECESSARY, INCLUDING EXCAVATED MATERIAL AND SPOILS. CONTRACTOR SHALL INCLUDE IN HIS BID PRICE ALL COSTS ASSOCIATED WITH HAULING AND OFF-SITE STORAGE OF ALL MATERIALS AND/OR EQUIPMENT.

UNDERGROUND UTILITIES NOTE

. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. 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 DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTORS SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

CONTRACTOR NOTES

- 2. ALL AREAS WITHIN THE RIGHT-OF-WAY AND THE WATER LINE EASEMENT THAT ARE NECESSARY FOR INSTALLATION OF THE PROPOSED WATER LINE ARE TO BE CLEARED EXCEPT AS OTHERWISE NOTED ON THE PLANS AND/OR AS DIRECTED IN THE CONTRACT DOCUMENTS SPECIAL CONSTRUCTION CONDITIONS. CONTRACTOR SHALL REMOVE TREES WITHIN THE RIGHT-OF-WAY AND WATER LINE EASEMENT ONLY AS NECESSARY FOR INSTALLATION OF THE PROPOSED WATER LINE. NO HERITAGE TREES SHALL BE REMOVED. OTHERWISE ALL TREES WITHIN 15-FEET OF THE WORK SHALL BE PROTECTED, SEE TREE PROTECTION NOTES AND DETAILS.
- 3. PI'S AND PVI'S MAY BE SHOWN FOR PIPE JOINT DEFLECTION. JOINT DEFLECTION SHALL BE AS PER THE PIPE MANUFACTURER'S RECOMMENDATIONS, AND LIMITED TO SAWS MAXIMUM ALLOWABLE DEFLECTION ANGLES.
- 4. CONTRACTOR SHALL NOTIFY AND COORDINATE WITH LANDOWNER(S) PRIOR TO ENTERING ANY PROPERTY OUTSIDE THE COUNTY RIGHT-OF-WAY 14 DAYS IN ADVANCE AND AGAIN 72 HOURS PRIOR TO CONSTRUCTION ON PRIVATE PROPERTY.
- 5. CONTRACTOR SHALL REMOVE AND REPLACE, TO AS GOOD OR BETTER CONDITION THAN EXISTING, ANY CROSS FENCING LOCATED WITHIN THE WATER LINE EASEMENT AS NECESSARY FOR INSTALLATION OF THE PROPOSED WATER MAIN. N.S.P.I.
- 6. VALVE BOXES SHALL BE INSTALLED SO THAT THE VALVE OPERATING NUT IS CENTERED IN THE BOX. VALVES INSTALLED ON SLOPING TERRAIN SHALL HAVE THE VALVE BOX INSTALLED PERPENDICULAR TO THE VALVE WITH THE OPERATING NUT CENTERED IN THE BOX IN ORDER TO ALLOW THE VALVE WRENCH EASY ACCESS TO THE VALVE OPERATING NUT.
- 7. CONTRACTOR SHALL NOT OPERATE ANY EXISTING WATER VALVES WITHIN THE SAWS SYSTEM. NOTIFYING & OBTAINING ASSISTANCE FROM THE SAWS STAFF IS REQUIRED.
- ASSOCIATED WITH THIS PROJECT.
- 9. 24" C900 PVC PIPE SHALL BE CLASS 235 (DR 18). ALL PIPE, FITTINGS AND VALVES SHALL MEET SAWS STANDARDS.
- 10. HAUL OFF OF EXCAVATED MATERIAL SHALL BE INCLUDED AS PART OF THE PIPE INSTALLATION LINE ITEM BID PRICE.

STORM WATER PROTECTION AND EROSION CONTROL

NOTES

- 1. CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND SUBMIT IT TO THE ENGINEER AND SAWS FOR REVIEW AND APPROVAL. THE CONTRACTOR IS RESPONSIBLE FOR THE SUBMITTAL OF THE SWPPP PLAN TO BEXAR COUNTY AS PART OF THEIR ROW PERMIT SUBMITTAL REQUIREMENT.
- 2. CONTRACTOR SHALL INSTALL STORM WATER POLLUTION PREVENTION STRUCTURES INCLUDING BUT NOT LIMITED TO, SILT FENCING AND/OR ROCK BERMS IN ALL AREAS TO BE IMPACTED BY CURRENT AND ONGOING CONSTRUCTION AND MAINTAIN SUCH STRUCTURES UNTIL SUITABLE GROUNDCOVER/REVEGETATION IS ACCEPTED. ALL STORM WATER POLLUTION PREVENTION STRUCTURES SHALL BE CONSTRUCTED WITHIN THE COUNTY RIGHT-OF-WAY AND WATER LINE EASEMENTS. ANY FEATURES ON THE PLANS SHOWN OUTSIDE THESE AREAS ARE SHOWN FOR VISUAL CLARITY ONLY.
- 3. THE LOCATION OF ANY BEST MANAGEMENT PRACTICES (B.M.P.'S) SUCH AS SILT FENCING, ROCK BERMS, STABILIZED CONSTRUCTION ENTRANCE/EXIT, ETC. THAT MAY BE SHOWN ON THESE PLANS ARE SUBJECT TO FIELD VERIFICATION. CONTRACTOR SHALL ADJUST THE LOCATIONS OF B.M.P.'S TO BEST ACCOMMODATE THE CONDITIONS AND TOPOGRAPHY ENCOUNTERED DURING CONSTRUCTION. QUESTIONS REGARDING THE PLACEMENT AND/OR CHANGES CONCERNING B.M.P.'S SHALL BE REFERRED TO THE OWNER AND THE COUNTY. THE CONTRACTOR IS TO ENSURE THAT SEDIMENTATION AND EROSION WILL BE CONTAINED WITHIN THE PROJECT WORK AREAS AND KEPT OFF ROADWAYS AND ADJACENT PROPERTIES AND OUT OF DRAINAGE CHANNELS AND WATER COURSES.

TREE PROTECTION NOTES

- 1. CONTRACTOR TO PROTECT ALL TREES WHEREVER POSSIBLE. DAMAGE TO TREES IDENTIFIED TO BE PROTECTED WILL BE MITIGATED AT THE CONTRACTOR'S SOLE EXPENSE. ALSO, ALL WORK IN PUBLIC RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE CONTROLLING ENTITIES STANDARDS, SPECIFICATIONS AND PERMIT REQUIREMENTS.
- 2. PROTECT EXISTING TREES SIX INCH (6") DIAMETER AND LARGER. ALL TREES TO BE PRESERVED AS PART OF THE PROJECT SHALL BE PROTECTED AGAINST INJURY OR DAMAGE, INCLUDING CUTTING, SOIL COMPACTION, BREAKING OR SKINNING OF ROOTS, TRUNKS, OR BRANCHES DURING CONSTRUCTION OPERATIONS BY FENCING AS DESCRIBED BELOW. THE TREE PROTECTION SHALL BE PLACED BEFORE ANY EXCAVATION OR GRADING IS BEGUN AND MAINTAINED FOR THE DURATION OF THE CONSTRUCTION WORK. PROTECTION WILL ENCOMPASS THE ROOT PROTECTION ZONE WHICH WILL BE AT MINIMUM ONE FOOT (1.0') RADIUS PER INCH DIAMETER OF THE TREE TRUNK AT 4.5' ABOVE GROUND. NO MATERIAL SHALL BE STORED OR CONSTRUCTION OPERATION SHALL BE CARRIED ON WITHIN THE TREE PROTECTION FENCING, UNLESS AUTHORIZED BY THE OWNER. THE PROTECTION SHALL REMAIN UNTIL ALL WORK IS COMPLETED. TREE PROTECTION SHALL BE INCLUDED IN BASE BID.

TRAFFIC CONTROL NOTE

• CONTRACTOR SHALL PREPARE AND SUBMIT A TRAFFIC CONTROL PLAN TO BEXAR COUNTY FOR REVIEW AND APPROVAL. NECESSARY TRAFFIC CONTROL. DETOUR ROUTING AROUND WORK ACTIVITIES. MAINTENANCE OF DETOUR SIGNS AND FLAGMEN ARE THE CONTRACTOR'S RESPONSIBILITY. UNLESS DIRECTED OTHERWISE, THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE OPEN TRAFFIC LANE (MINIMUM 12 FEET WIDE), CONTROLLED WITH FLAGMEN, DURING WORKING HOURS. DURING ALL NON-WORKING HOURS A MINIMUM OF TWO TRAFFIC LANES (EACH A MINIMUM 12 FEET WIDE) SHALL BE OPEN TO TRAFFIC. CONTRACTOR WILL FURNISH AND MAINTAIN ALL REQUIRED TRAFFIC CONTROL DEVICES PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), TO PROPERLY WARN, GUIDE AND CONTROL TRAFFIC AT ALL TIMES THROUGHOUT CONSTRUCTION.

UNDERGROUND TELEPHONE/COMMUNICATION LINES NOTE

• THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE AS SHOWN ON THESE PLANS HAS BEEN TAKEN FROM THE BEST INFORMATION AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR SHALL CONTACT THE TELEPHONE/COMMUNICATION COMPANY CABLE LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR SHALL PROTECT AND (AS NECESSARY) INSTALL SHORING FOR TELEPHONE COMPANY FACILITIES DURING CONSTRUCTION.

EXISTING IMPROVEMENTS

 ALL EXISTING IMPROVEMENTS WITHIN THE PROJECT AREA, WHICH ARE NOT COVERED UNDER THE UNIT PRICE BID PROPOSAL, SHALL BE PROTECTED. OR REMOVED AND REPLACED TO EXISTING CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER.

BEXAR COUNTY FLOODPLAIN GENERAL CONSTRUCTION

. NO CONSTRUCTION AND/OR WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING NATURAL DRAINAGE OR PLACED WITHIN THE LIMITS OF EXISTING FLOODPLAIN.

BRUNA F. SPENGLEF



LAT NO.

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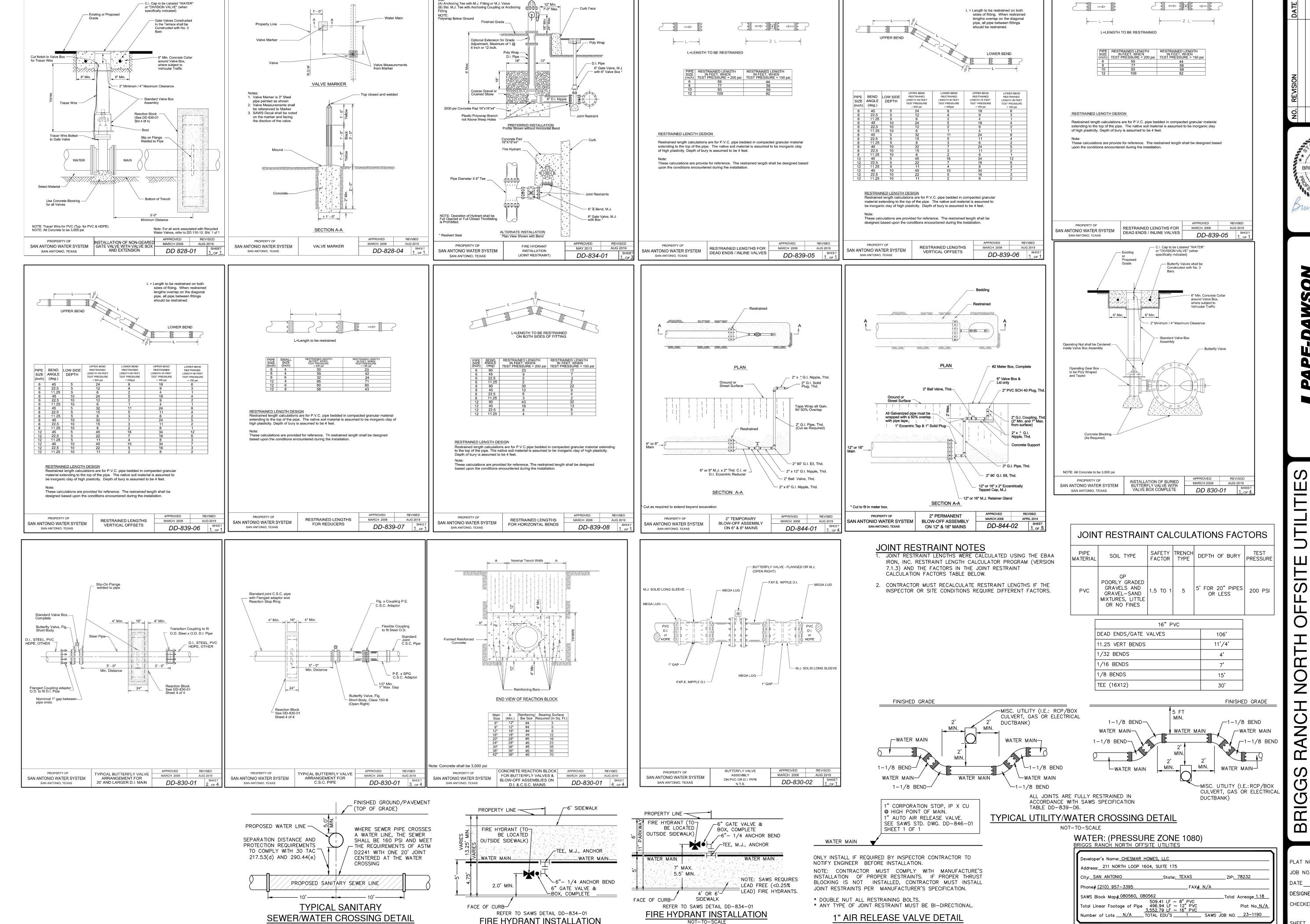
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WATER: (PRESSURE ZONE 1080)

BRIGGS RANCH NORTH OFFSITE UTILITIES Developer's Name: CHESMAR HOMES, LLC Address: 211 NORTH LOOP 1604, SUITE 175 ___State: TEXAS __ ZIP: 78232 City: SAN ANTONIO Phone#<u>(210) 957-3395</u> _FAX<u>#_N/A</u>_ SAWS Block Map#<u>080560, 080562</u> _Total Acreage<u>1.18</u> otal Linear Footage of Pipe TOTAL EDU'S _____1 ___ SAWS JOB NO. __23-1190 umber of Lots N/A

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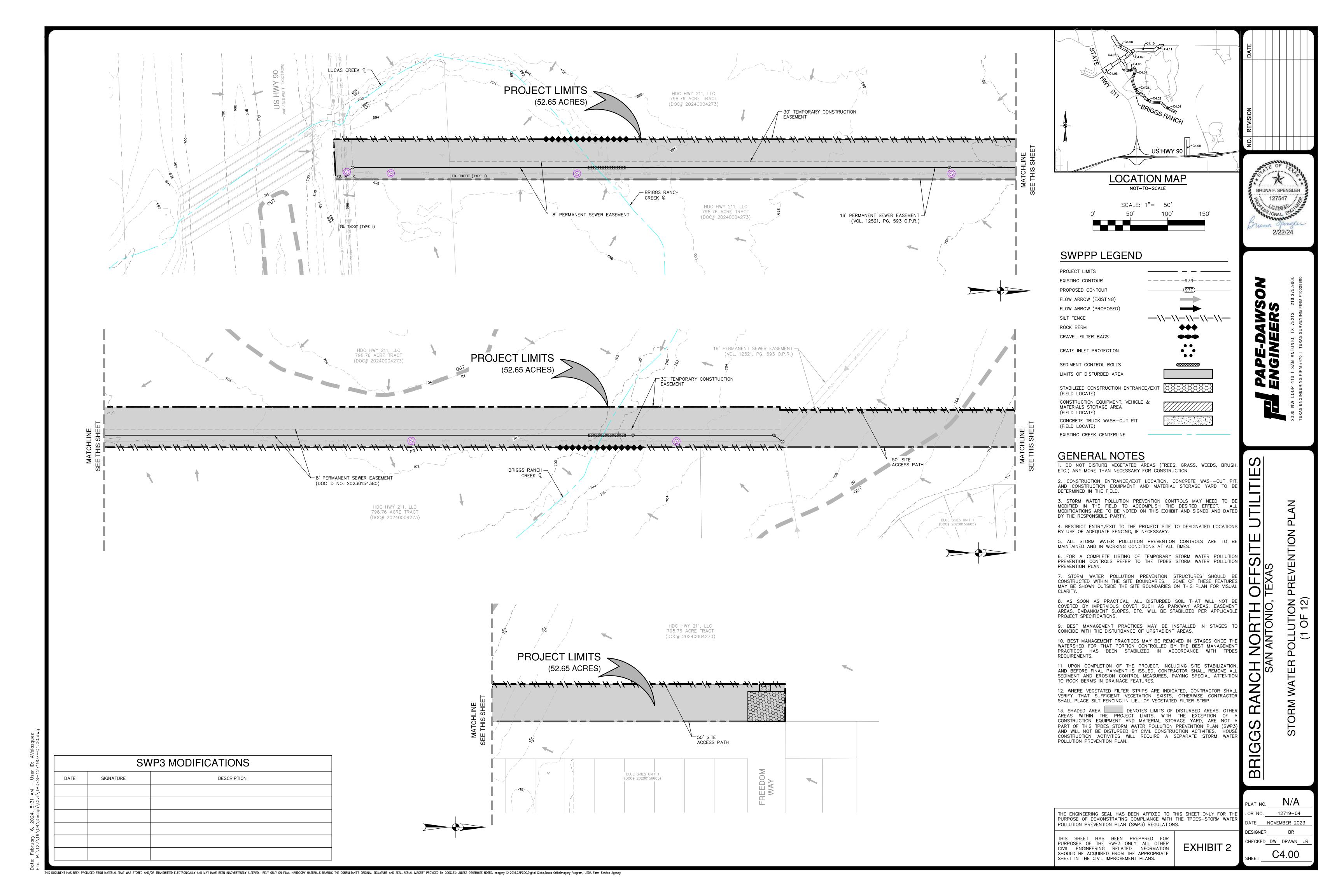
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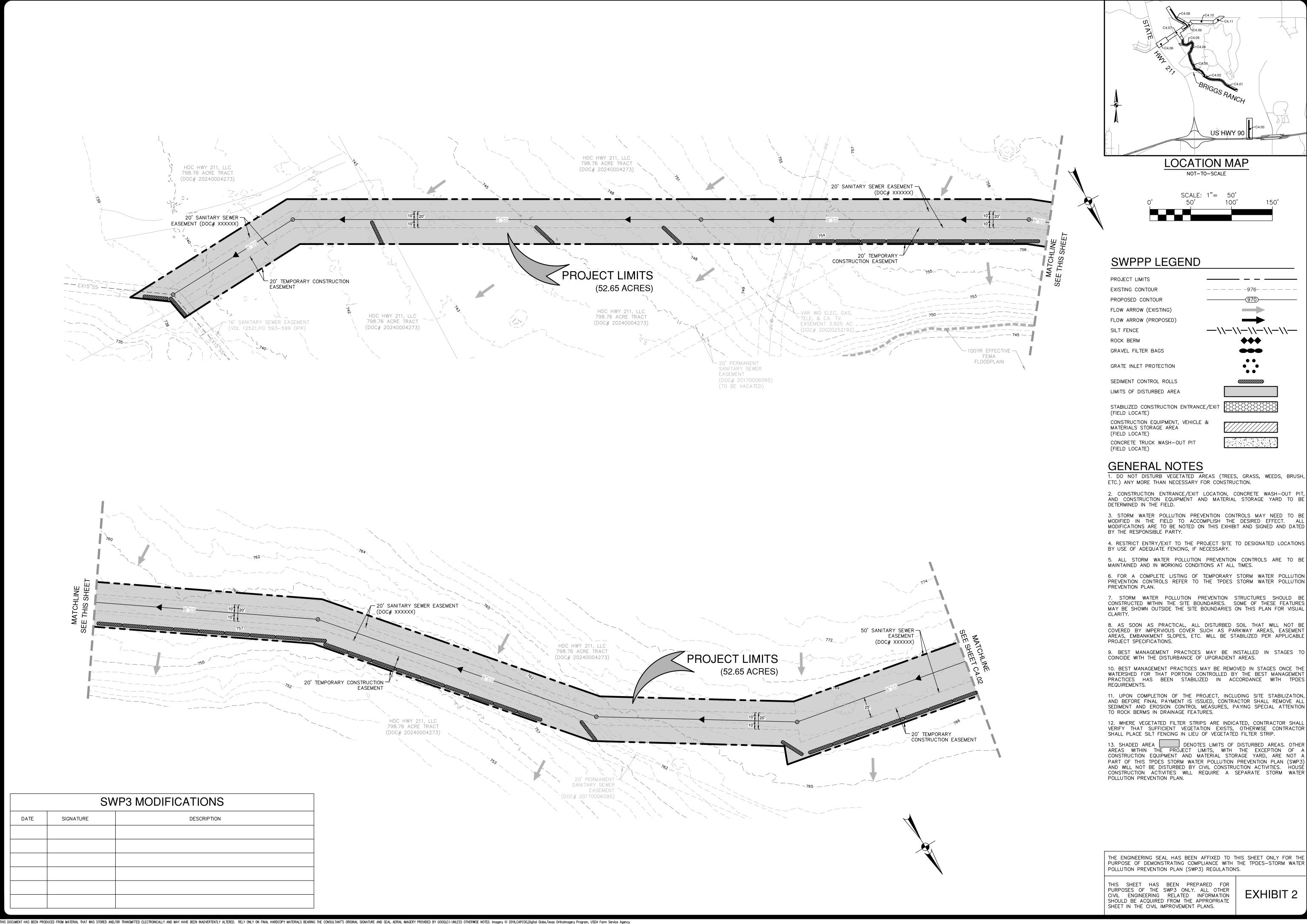
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BRUNA F. SPENGLER

12719-04 NOVEMBER 2023 ESIGNER

HECKED DW DRAWN .





BRUNA F. SPENGLER 2/22/24

ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE

3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED

4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS

5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO E

6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION

7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES

MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL

AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE

COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS.

AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION

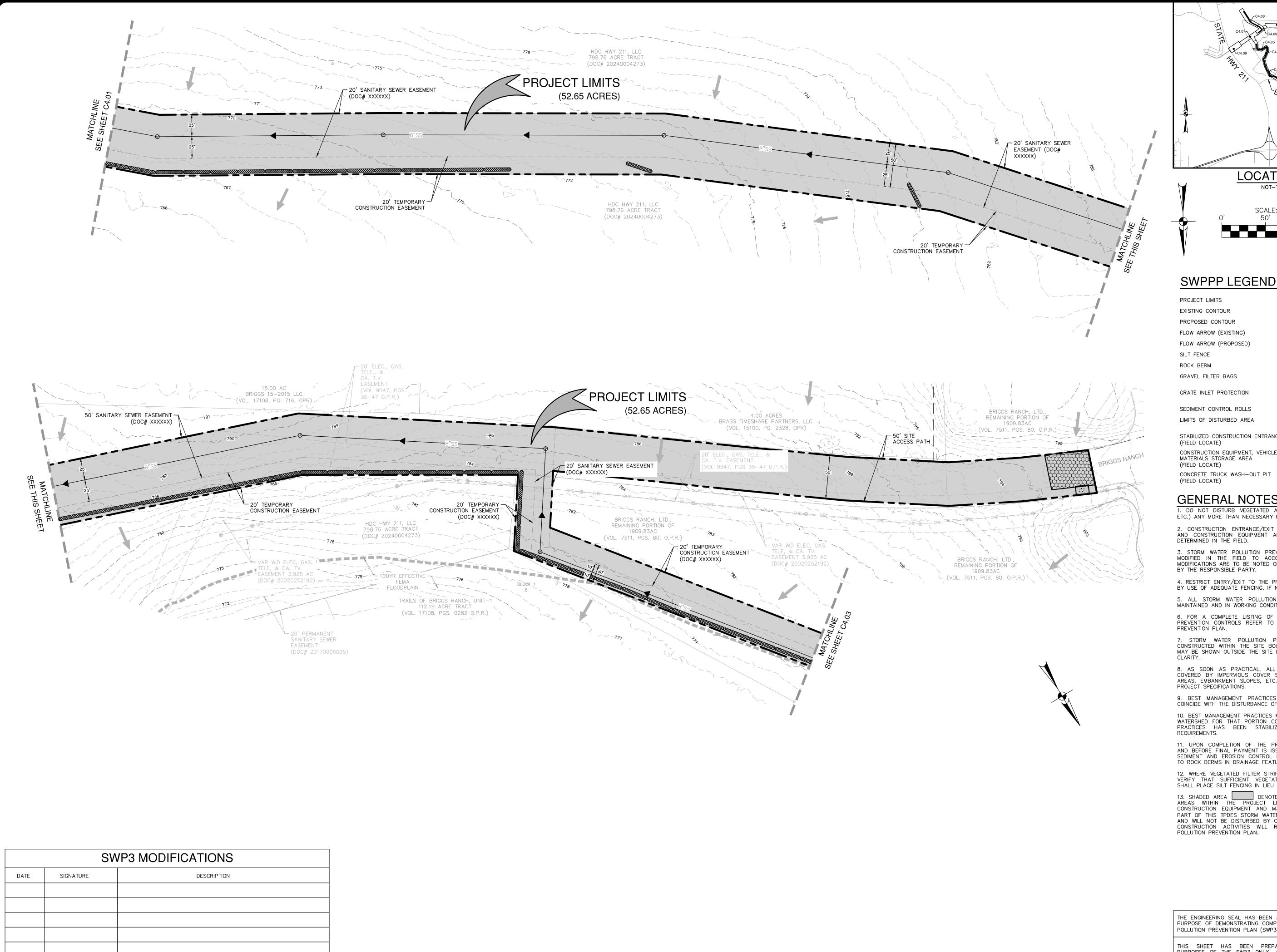
12. WHERE VEGETATED FILTER STRIPS ARE INDICATED, CONTRACTOR SHALL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE CONTRACTOR SHALL PLACE SILT FENCING IN LIEU OF VEGETATED FILTER STRIP.

13. SHADED AREA DENOTES LIMITS OF DISTURBED AREAS. OTHER AREAS WITHIN THE PROJECT LIMITS, WITH THE EXCEPTION OF A CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD, ARE NOT PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES. HOUSÉ CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES-STORM WATER

JOB NO. 12719-04 ATE NOVEMBER 2023 ESIGNER

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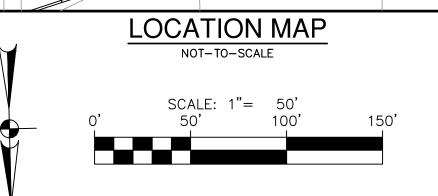
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BRUNA F. SPENGLER

2/22/24

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(3 OF 12)



PROPOSED CONTOUR FLOW ARROW (EXISTING) FLOW ARROW (PROPOSED) -//-//-//-//-******* GRAVEL FILTER BAGS

GRATE INLET PROTECTION

SEDIMENT CONTROL ROLLS LIMITS OF DISTURBED AREA

STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE) CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)

CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE)

GENERAL NOTES

ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PI AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.

3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO E MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. AL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.

4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.

5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.

6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION

7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL

8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT E COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.

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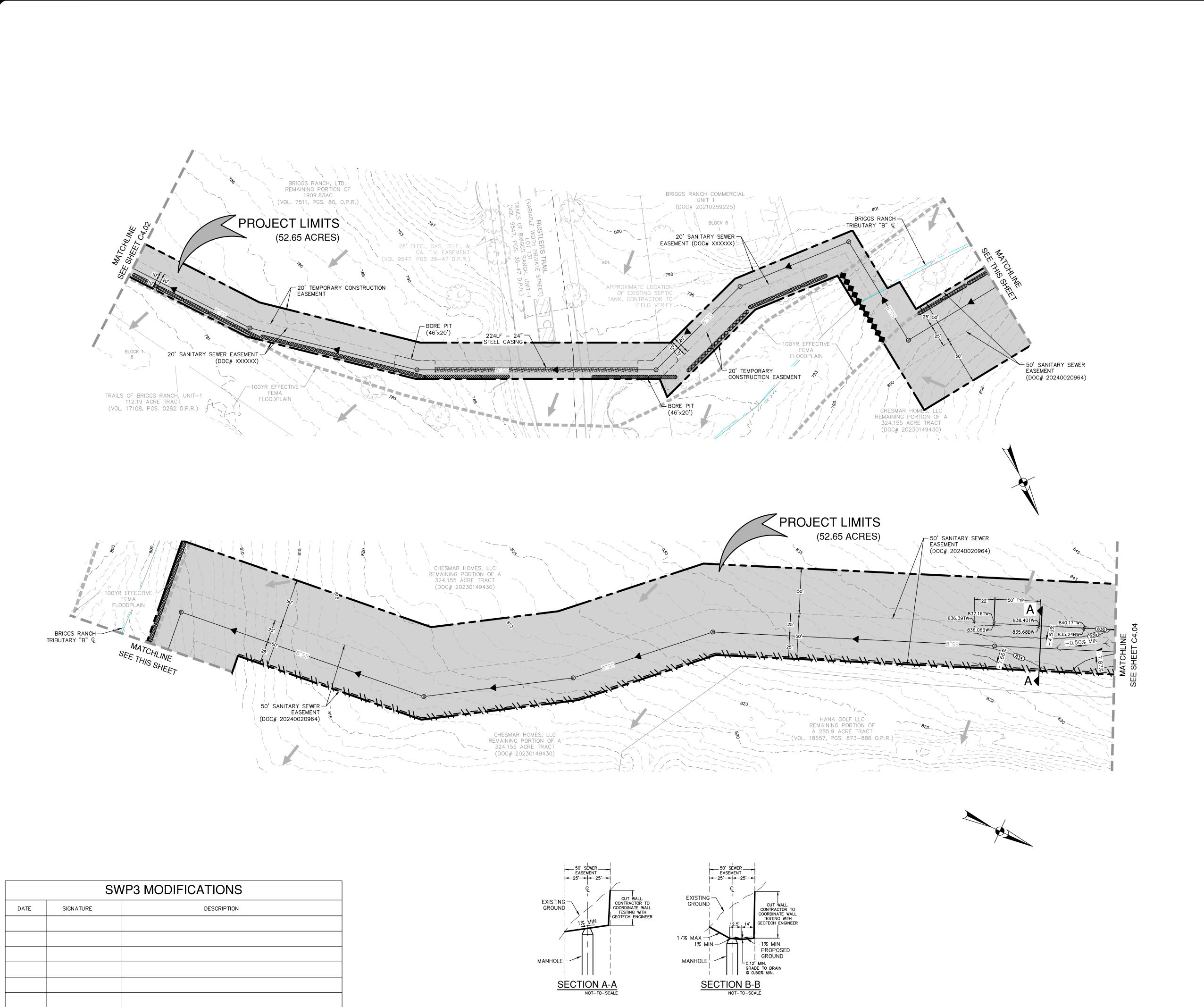
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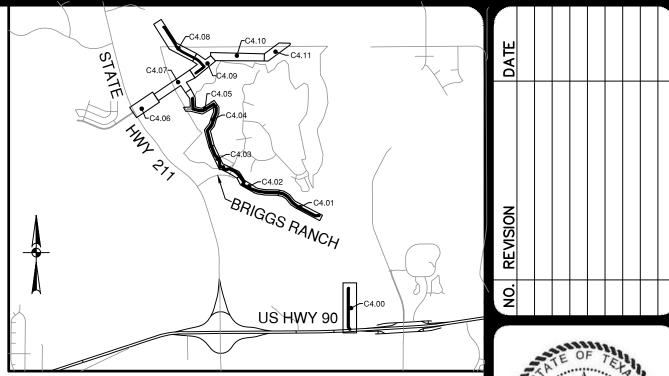
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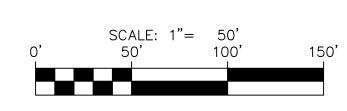
JOB NO. 12719-04 DATE NOVEMBER 2023 DESIGNER HECKED DW DRAWN JR

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LOCATION MAP



SWPPP LEGEND

PROJECT LIMITS

EXISTING CONTOUR

PROPOSED CONTOUR

FLOW ARROW (EXISTING)

FLOW ARROW (PROPOSED)

SILT FENCE

ROCK BERM

GRAVEL FILTER BAGS

GRATE INLET PROTECTION

SEDIMENT CONTROL ROLLS

LIMITS OF DISTURBED AREA

STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)

CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)

CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE)

EXISTING CREEK CENTERLINE

EXIT SEE SEE SEE

GENERAL NOTES

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EXHIBIT 2

SAN ANTON

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BRUNA F. SPENGLER

2/22/24

PLAT NO. N/A

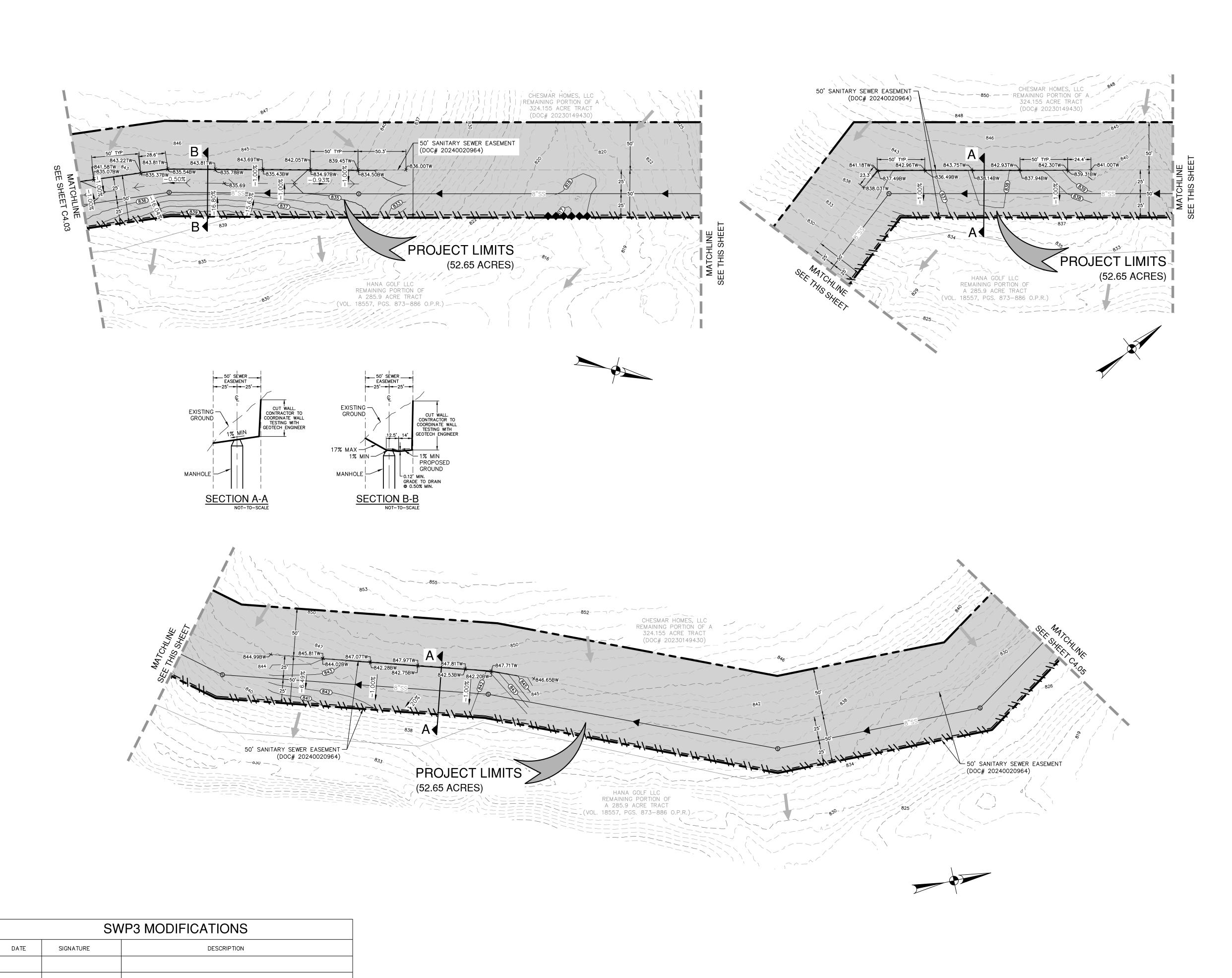
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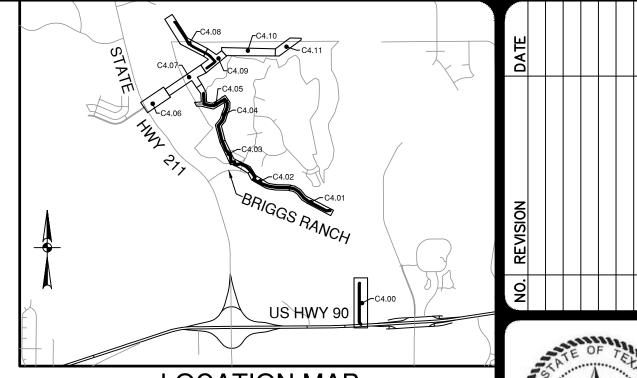
DATE NOVEMBER 2023

DESIGNER BR

CHECKED DW DRAWN JR

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BRUNA F. SPENGLEF

2/22/24





SWPPP LEGEND

PROJECT LIMITS

EXISTING CONTOUR

PROPOSED CONTOUR

FLOW ARROW (EXISTING)

FLOW ARROW (PROPOSED)

SILT FENCE

ROCK BERM

GRAVEL FILTER BAGS

GRATE INLET PROTECTION

SEDIMENT CONTROL ROLLS
LIMITS OF DISTURBED AREA

STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)

CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)

CONCRETE TRUCK WASH-OUT PIT

GENERAL NOTES

(FIELD LOCATE)

1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

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EXHIBIT 2

PLAT NO. N/A

JOB NO. 12719-04

DATE NOVEMBER 2023

DESIGNER BR

<u>N</u>

LLUTION (5 OF 12)

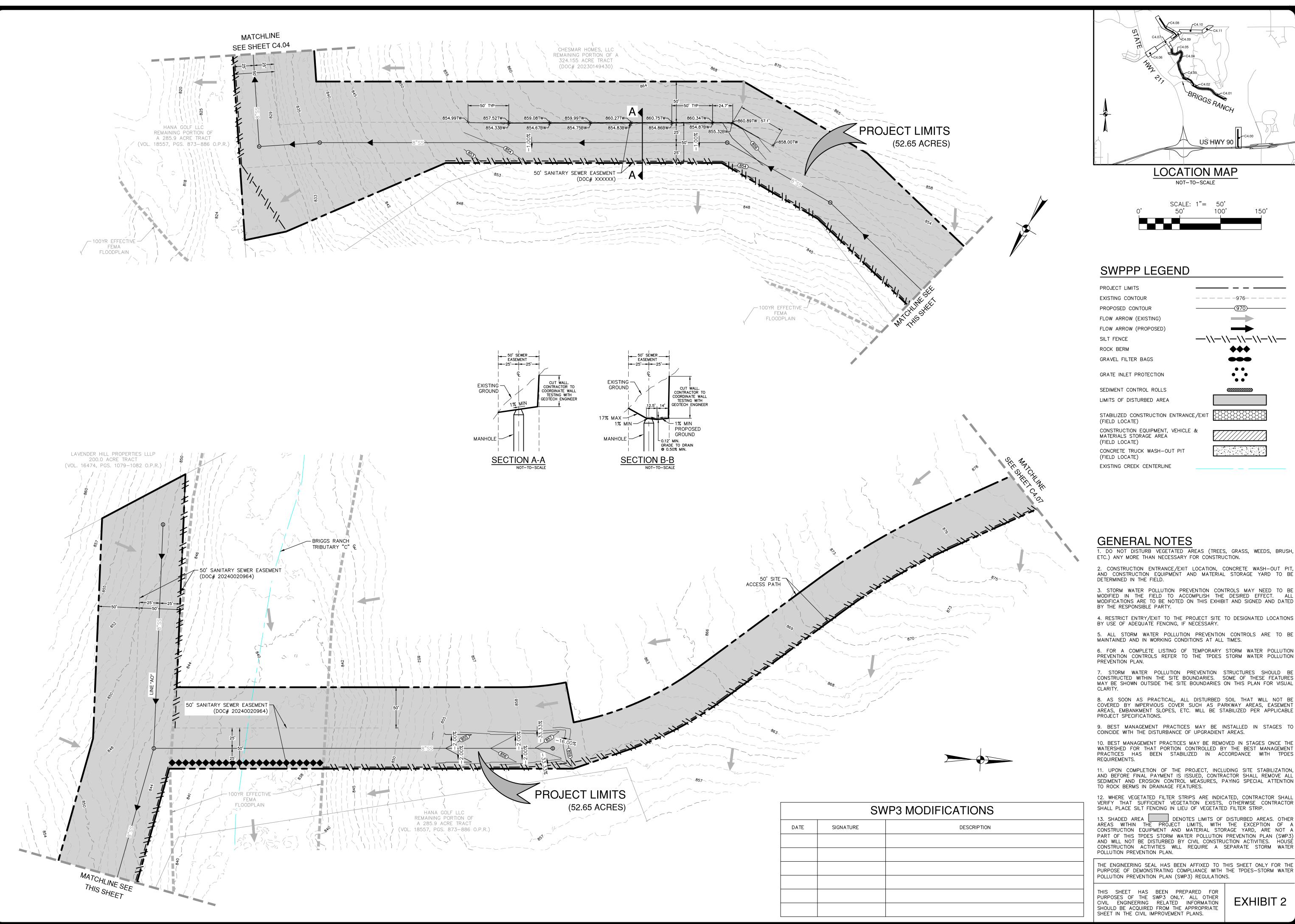
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HECKED DW DRAWN JR

DATE SIGNATURE DESCRIPTION

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BRUNA F. SPENGLER

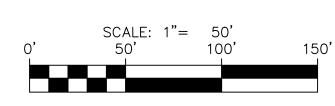
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(6 OF 12)

LOCATION MAP NOT-TO-SCALE



SWPPP LEGEND

-//-//-//-//-*******

STABILIZED CONSTRUCTION ENTRANCE/EXIT

CONSTRUCTION EQUIPMENT, VEHICLE & CONCRETE TRUCK WASH-OUT PIT

1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PI AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE

3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.

4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS

5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO B MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.

7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES

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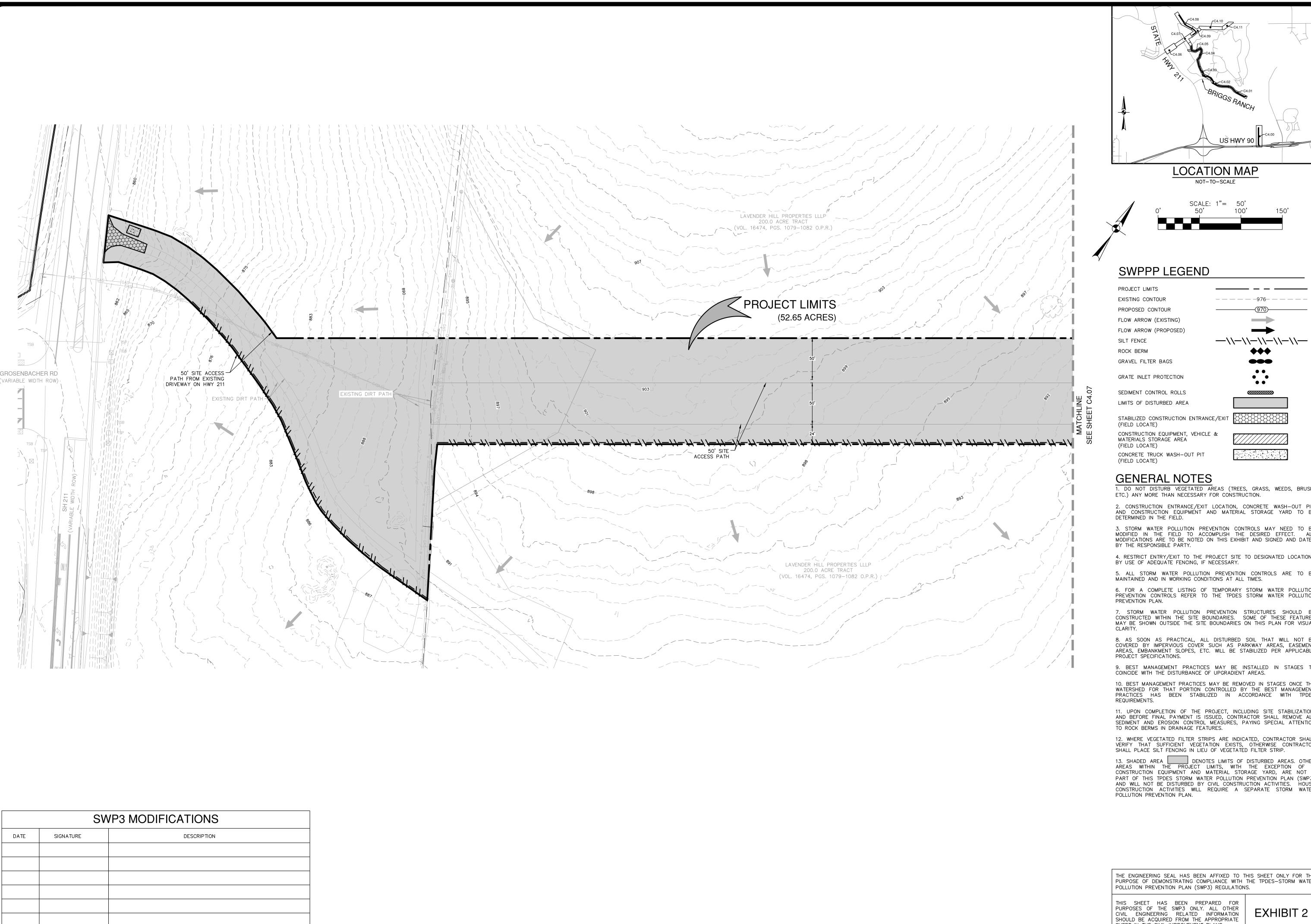
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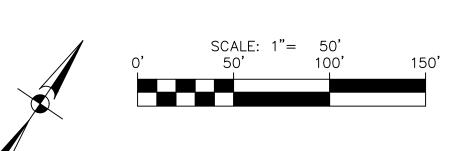
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JOB NO. 12719-04 ATE NOVEMBER 2023 ESIGNER HECKED DW DRAWN JR



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LOCATION MAP



SWPPP LEGEND

STABILIZED CONSTRUCTION ENTRANCE/EXIT CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA

CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE)

ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

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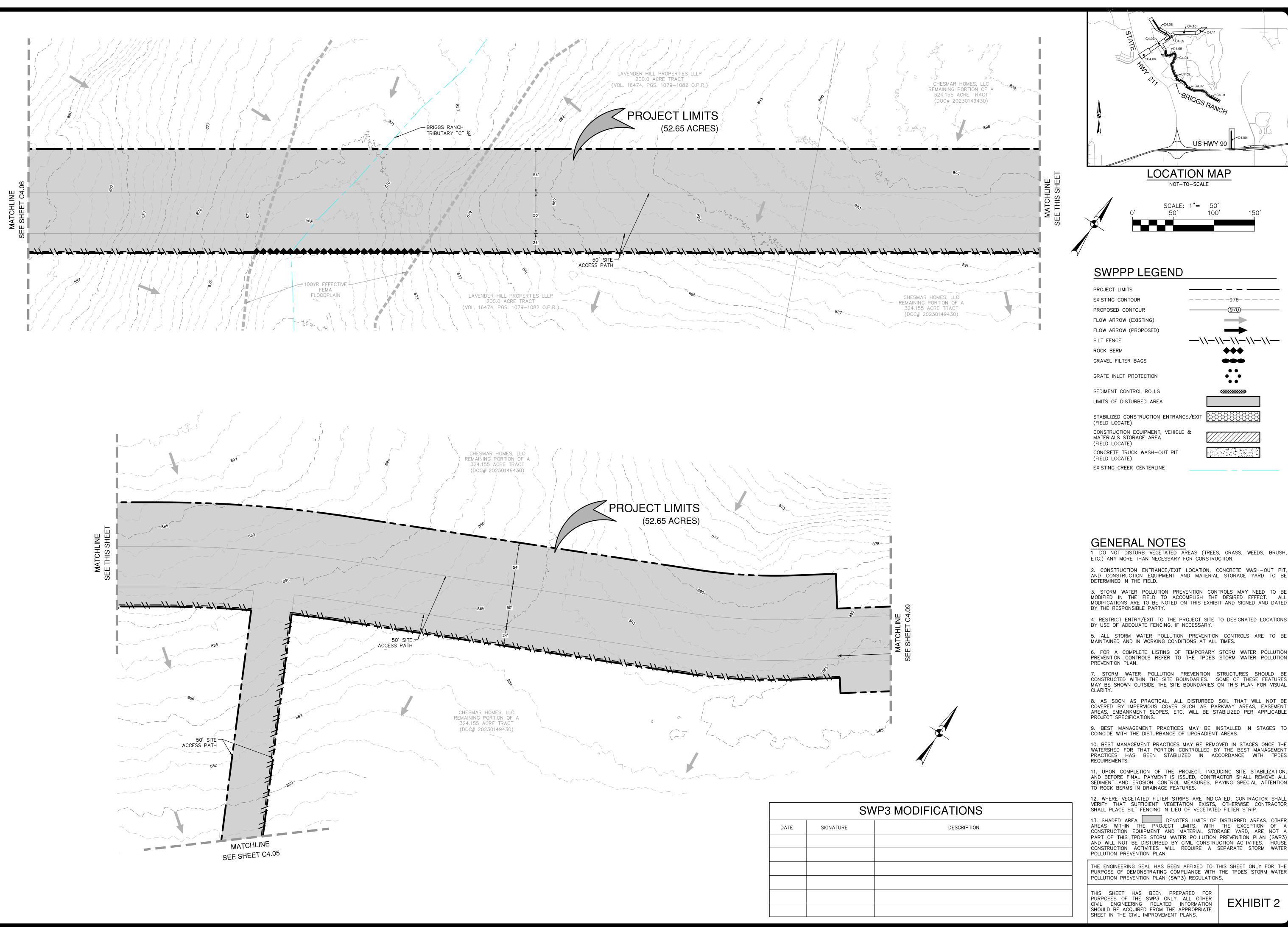
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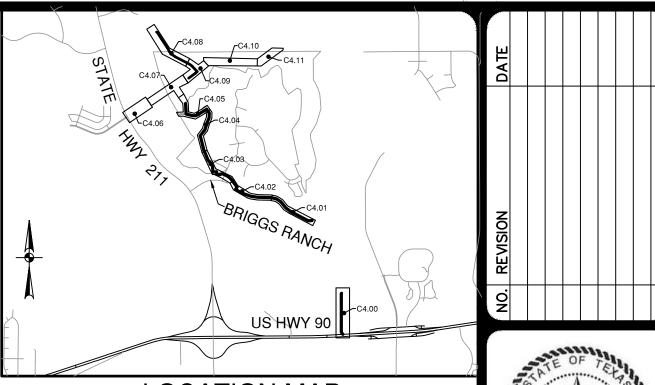
JOB NO. 12719-04 ATE NOVEMBER 2023 DESIGNER

<u>NO</u>

HECKED DW DRAWN JR



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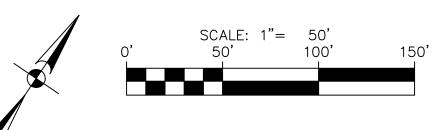


BRUNA F. SPENGLEF

2/22/24

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LOCATION MAP NOT-TO-SCALE



SWPPP LEGEND

STABILIZED CONSTRUCTION ENTRANCE/EXI CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA

CONCRETE TRUCK WASH-OUT PIT EXISTING CREEK CENTERLINE

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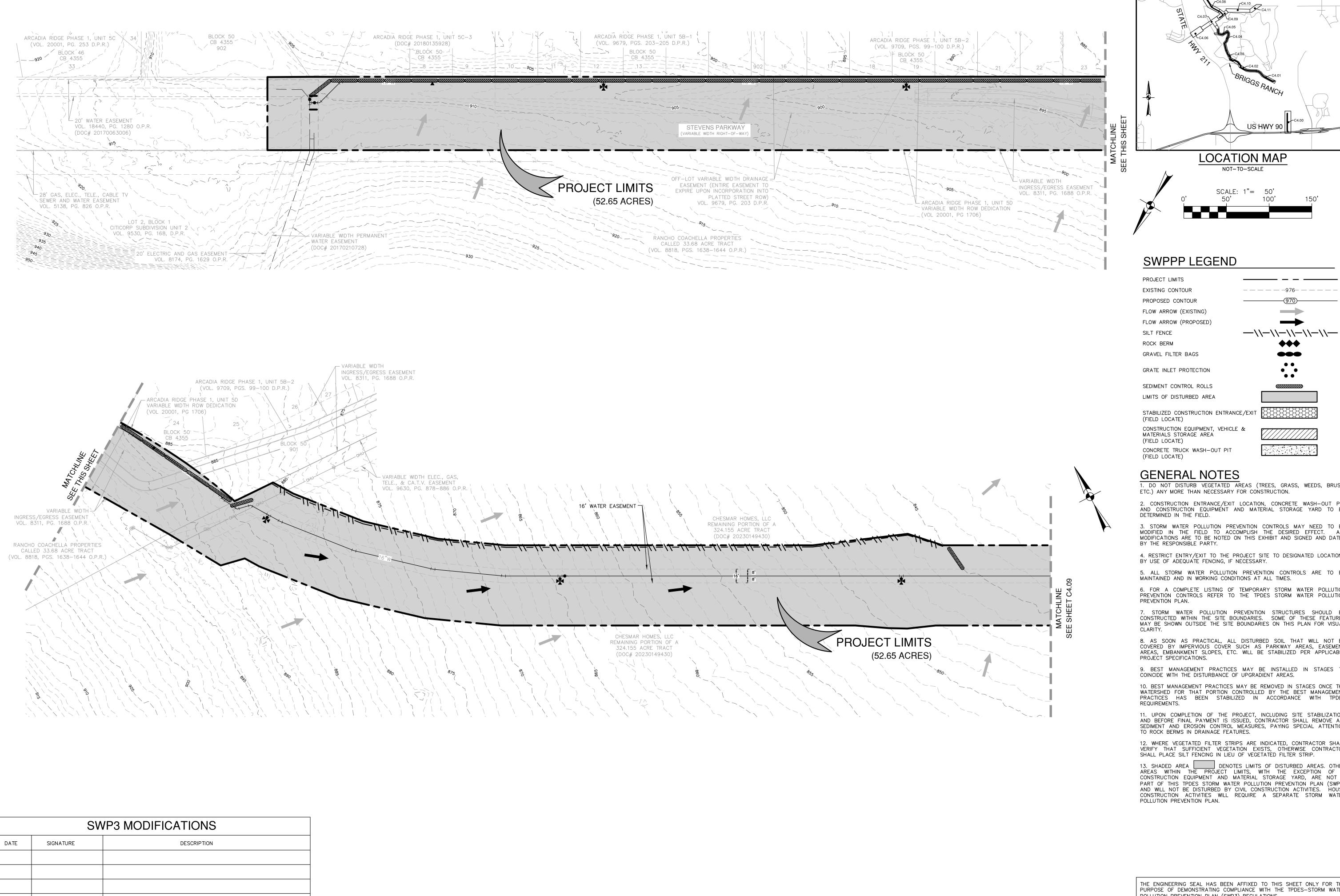
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BRUNA F. SPENGLER

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ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PI AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE

3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO E MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. AL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED

4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS

5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.

6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION

7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL

8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT E COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE

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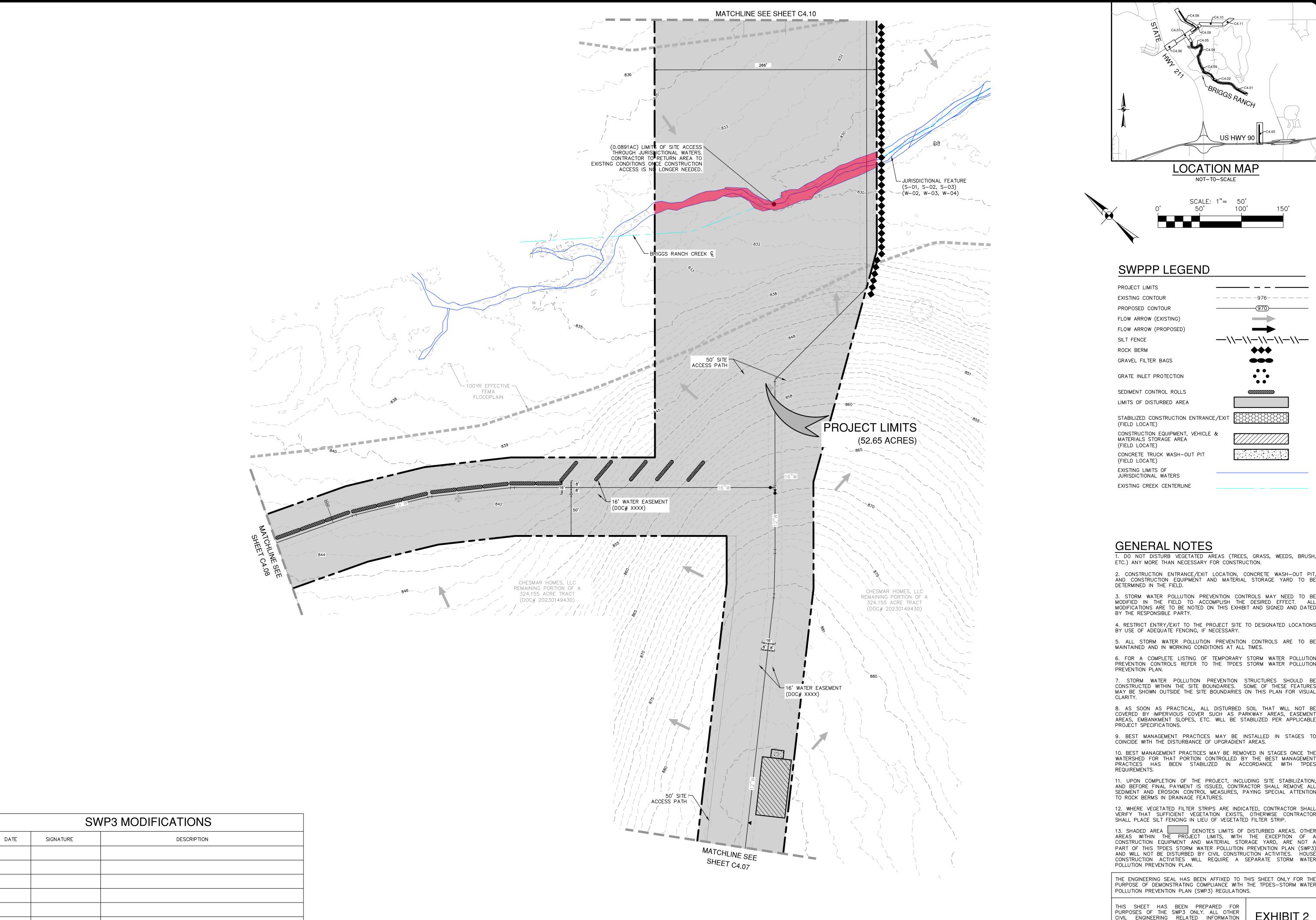
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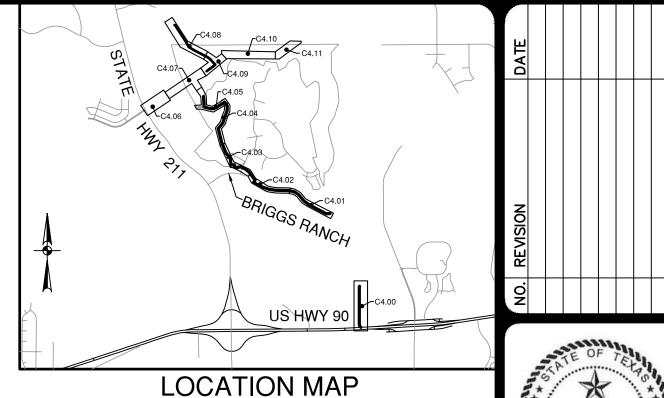
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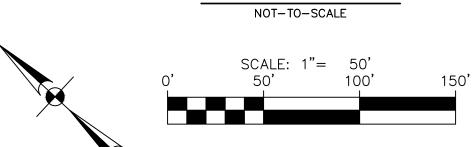
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SWPPP LEGEND

PROJECT LIMITS EXISTING CONTOUR PROPOSED CONTOUR FLOW ARROW (EXISTING) FLOW ARROW (PROPOSED) -//-//-//-//-******* GRAVEL FILTER BAGS GRATE INLET PROTECTION SEDIMENT CONTROL ROLLS LIMITS OF DISTURBED AREA STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE) CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)

GENERAL NOTES

1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.

3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.

4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.

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8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE

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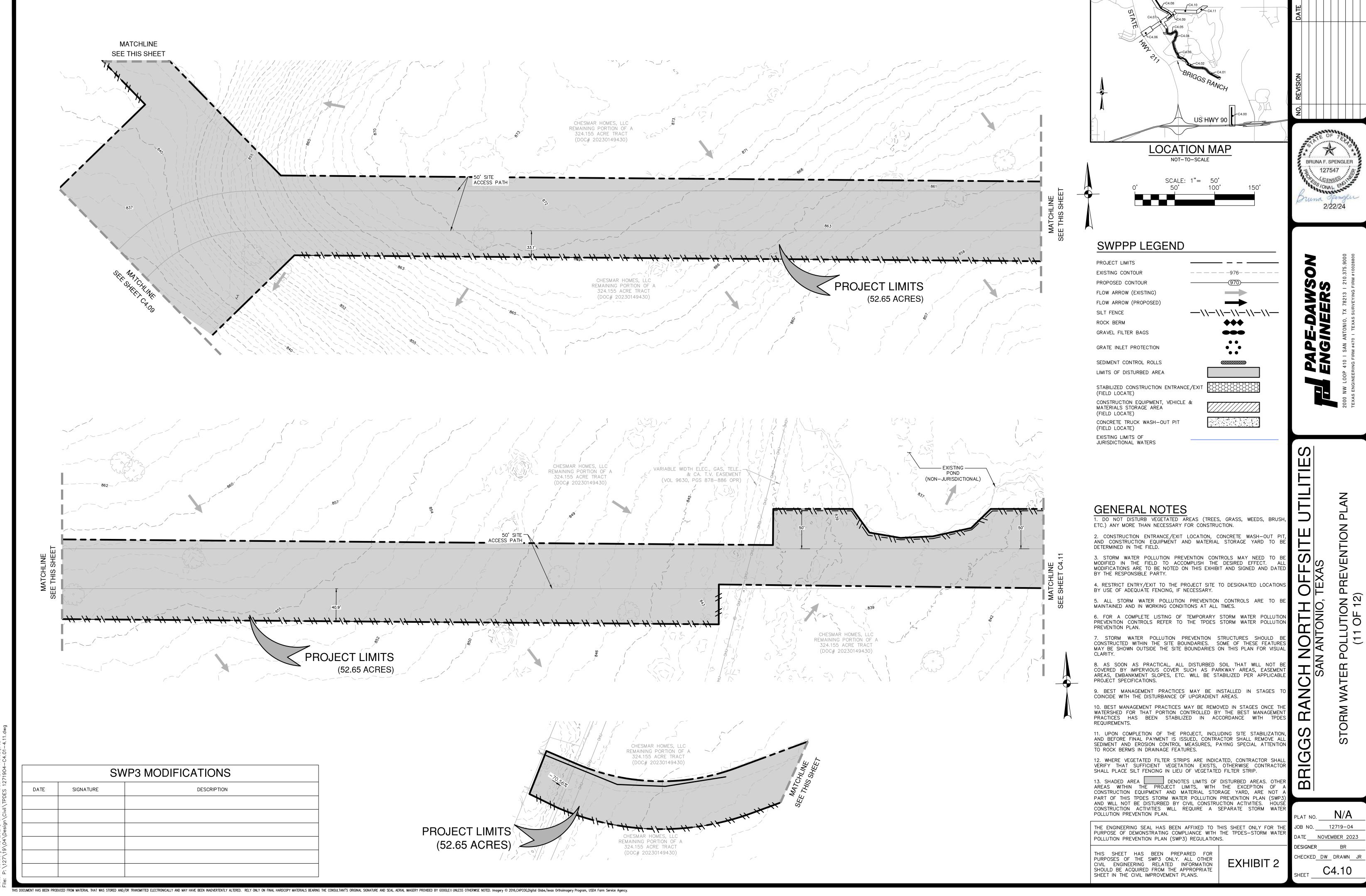
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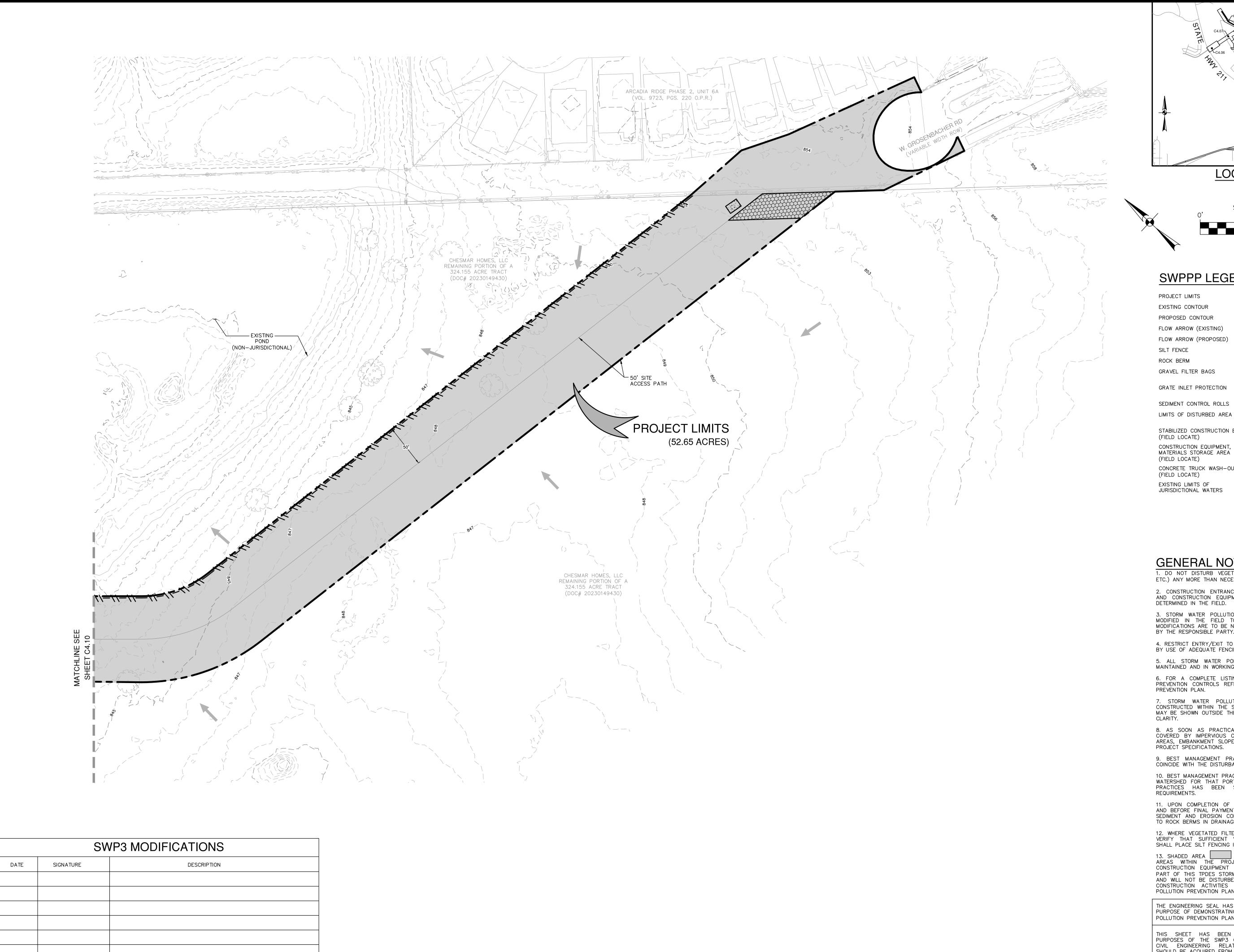
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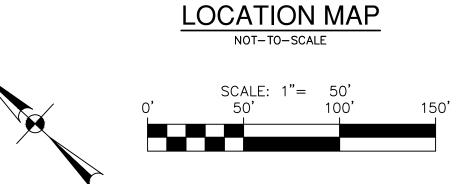
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SWPPP LEGEND

FLOW ARROW (EXISTING) FLOW ARROW (PROPOSED) ******* GRAVEL FILTER BAGS

SEDIMENT CONTROL ROLLS

STABILIZED CONSTRUCTION ENTRANCE/EXIT CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA

CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE) EXISTING LIMITS OF

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SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT

MATERIALS

8-INCHES.

DRAINAGE

MATERIALS

OF 36 HOURS.

SHOOT GROWTH AND THATCH.

SITE PREPARATION

TIGHTLY (SEE FIGURE ABOVE).

THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN. 2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF

3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD2, A MULLEN BURST RATING OF 140 LB/IN2, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.

4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4-INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR

INSTALLATION

RUNOFF AWAY FROM THE PUBLIC ROAD.

I. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.

2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.

3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG. THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE 6-INCHES TO 8-INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT

5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.

6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.

7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.

8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD

WOVEN WIRE SHEATHING

ISOMETRIC PLAN VIEW

WOVEN WIRE SHEATHING

SECTION "A-A"

ROCK BERMS

>2% GRADE

SECTION "A-A" OF A

CONSTRUCTION ENTRANCE/EXIT

. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY

. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC-EXTEND PAD BEYOND

4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING

5. UNSTABLE FOUNDATION - USE GEOTEXTILE FABRIC UNDER PAD AND/OR

THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL

PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY.

THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS

CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES

2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC

3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT

4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED

WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR

5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN,

CORRECT

INCORREC^{*}

SOD INSTALLATION

USE PEGS OR STAPLES TO FASTEN SOD

FIRMLY - AT THE ENDS OF STRIPS AND

IN THE CENTER, OR EVERY 3-4 FEET IF

THE STRIPS ARE LONG. WHEN READY TO

MOW, DRIVE PEGS OR STAPLES FLUSH

STAPLE

RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.

INSPECTION AND MAINTENANCE GUIDELINES

1. INADEQUATE RUNOFF CONTROL-SEDIMENT WASHES ONTO PUBLIC ROAD.

COMMON TROUBLE POINTS

CONDITION AS STONE IS PRESSED INTO SOIL.

IMPROVE FOUNDATION DRAINAGE.

USED TO TRAP SEDIMENT.

SHOOTS OR GRASS BLADES.

GRASS SHOULD BE GREEN AND

- THATCH- GRASS CLIPPINGS AND

-ROOT ZONE - SOIL AND ROOTS.

DEAD LEAVES, UP TO 1/2" THICK.

HEALTHY: MOWED AT A 2"-3"

CUTTING HEIGHT

SEDIMENT BASIN

THE MINIMUM 50-FOOT LENGTH AS NECESSARY.

TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.

PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

DITCH OR WATER COURSE BY USING APPROVED METHODS.

GEOTEXTILE FABRIC TO

STABILIZE FOUNDATION

THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE. AS SUCH. ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS (DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING BED LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

INSPECTION AND MAINTENANCE GUIDELINES . 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.

WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

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,

6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

MATERIALS

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

2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE

INSTALLATION

. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH

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 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, AND 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.

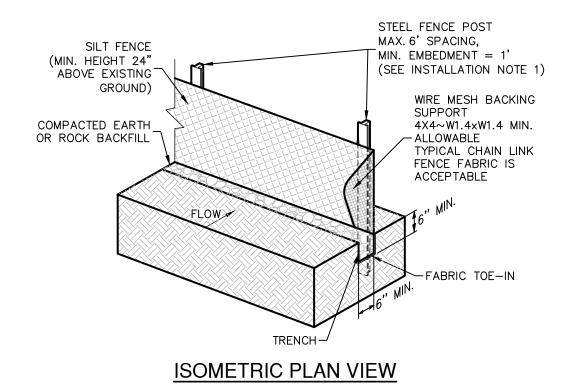
COMMON TROUBLE POINTS

. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).

2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).

ROCK BERM DETAIL

NOT-TO-SCALE



STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL NOT-TO-SCALE

LAY SOD IN A STAGGERED PATTERN. BUTT

ENDS AND TRIMMING PIECES. ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED

THE STRIPS TIGHTLY AGAINST EACH OTHER.

DO NOT LEAVE SPACES AND DO NOT

OVERLAP. A SHARPENED MASON'S TROWEL

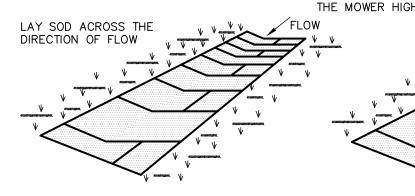
IS A HANDY TOOL FOR TUCKING DOWN THE

SHOULD BE 1/2"-3/4" THICK, WITH DENSE ROOT MAT FOR STRENGTH. APPEARANCE OF GOOD SOD

1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.

3. MOW WHEN THE SOD IS ESTABLISHED - IN 2-3 WEEKS. SET THE MOWER HIGH (2"-3").



1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH

(± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE

2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND

STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO

SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN

4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD

PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT

THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL

FERTILIZE ACCORDING TO SOIL TESTS. FERTILIZER NEEDS CAN BE

DETERMINED BY A SOIL TESTING LABORATORY OR REGIONAL RECOMMENDATIONS CAN BE MADE BY COUNTY AGRICULTURAL EXTENSION AGENTS. FERTILIZEI

SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 3 INCHES WITH A DISC,

FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE

SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE

2. AFTER ROLLING OR TAMPING, SOD SHOULD BE PEGGED OR STAPLED TO

RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER

NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL

DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS

TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE.

SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION.

TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.

INSTALLATION IN CHANNELS

INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.

IN CRITICAL AREAS, SECURE SOD WITH NETTING. USE STAPLES.

GENERAL INSTALLATION (VA. DEPT. OF CONSERVATION, 1992

SOD SHOULD NOT BE CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER. SOD ALSO SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN. 2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHOULD BE LIGHTLY LENGTH. WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%. IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND REDUCE ROOT BURNING AND DIEBACK.

WITH THE GROUND.

FIRST ROW OF SOD SHOULD BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH OTHER. LATERAL JOINTS SHOULD BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHOULD BE EXERCISED TO ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS (SEE FIGURE ABOVE).

4. ON SLOPES 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM, SOD SHOULD BE LAID WITH STAGGERED JOINTS AND SECURED BY STAPLING OF OTHER APPROVED METHODS. SOD SHOULD BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON CONTOUR).

5. AS SODDING OF CLEARLY DEFINED AREAS IS COMPLETED, SOD SHOULD BE ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD ROLLED OR TAMPED TO PROVIDE FIRM CONTACT BETWEEN ROOTS AND SOIL. 6. AFTER ROLLING, SOD SHOULD BE IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE SOD PAD AND THE SOIL 4 INCHES BELOW THE SOD IS

> UNTIL SUCH TIME A GOOD ROOT SYSTEM BECOMES DEVELOPED, IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHOULD BE PERFORMED AS OFTEN AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF AT LEAST 4

> 8. THE FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FIRMLY ROOTED, USUALLY 2-3 WEEKS. NOT MORE THAN ONE THIRD OF THE GRASS LEAF SHOULD BE REMOVED AT ANY ONE CUTTING.

INSPECTION AND MAINTENANCE GUIDELINES SOD SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.

IS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE® UNLESS OTHERWISE NOTED. Imagery © 2016,CAPCOG,Digital Globe,Texas Orthoimagery Program, USDA Farm Service Agency.

. DAMAGE FROM STORMS OR NORMAL CONSTRUCTION ACTIVITIES SUCH AS TIRE RUTS OR DISTURBANCE OF SWALE STABILIZATION SHOULD BE REPAIRED AS SOON AS PRACTICAL.

SOD INSTALLATION DETAIL

2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

SILT FENCE

AREAS OF CONCENTRATED FLOW.

AT ANY TIME.

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.

A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED

BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE.

WHEN PROPERLY USED, SILT FENCES CAN BE HIGHLY EFFECTIVE AT

CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO

POND, ALLOWING HEAVIER SOLIDS TO SETTLE OUT. IF NOT PROPERLY

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER-BORN

SEDIMENT FROM UNPROTECTED AREAS OF A LIMITED EXTENT. SILT FENCE IS

USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A

DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO

PERCOLATE THROUGH. THIS FENCE SHOULD REMAIN IN PLACE UNTIL THE

DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE

USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR

DRAINAGE WAY. IF CONCENTRATED FLOW OCCURS AFTER INSTALLATION.

CORRECTIVE ACTION MUST BE TAKEN SUCH AS PLACING A ROCK BERM IN THE

SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY

TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY

ANCHORED TO THE GROUND AT THE END OF THE DAY. SILT FENCES ON THE

PERIMETER OF THE SITE OR AROUND DRAINAGE WAYS SHOULD NOT BE MOVED

. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR

POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36

INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST

STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%,

. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET

LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR

GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS

3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED

AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.

INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

2. LAY OUT FENCING DOWN—SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.

3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT

POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET 6. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

COMMON TROUBLE POINTS FENCE NOT INSTALLED ALONG THE CONTOUR CAUSING WATER TO CONCENTRATE AND FLOW OVER THE FENCE.

2. FABRIC NOT SEATED SECURELY TO GROUND (RUNOFF PASSING UNDER FENCE).

3. FENCE NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING

4. FENCE TREATING TOO LARGE AN AREA, OR EXCESSIVE CHANNEL FLOW (RUNOFF OVERTOPS OR COLLAPSES FENCE).

INSPECTION AND MAINTENANCE GUIDELINES 1. INSPECT ALL FENCING WEEKLY, AND AFTER RAINFALL.

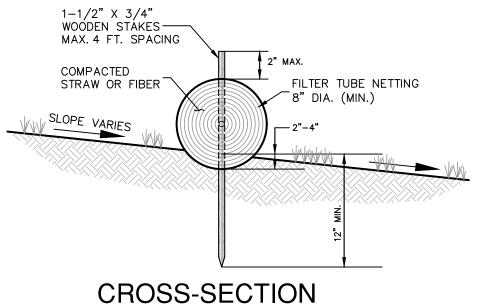
2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.

3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

4. REPLACE OR REPAIR SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.

WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL

SILT FENCE DETAIL



SEDIMENT CONTROL ROLLS

SEDIMENT CONTROL ROLLS ARE ELONGATED TUBES OF COMPACTED STRAW AND/OR OTHER FIBERS THAT ARE INSTALLED ALONG CONTOURS OR AT THE BASE OF SLOPES TO HELP REDUCE SOIL EROSION AND RETAIN SEDIMENT. THEY FUNCTION BY SHORTENING SLOPE LENGTH, REDUCING RUNOFF WATER VELOCITY, TRAPPING DISLODGED SOIL PARTICLES AND REDUCING THE EFFECTS OF SLOPE STEEPNESS.

MATERIALS

CORE MATERIAL: CORE MATERIALS SHALL BE BIODEGRADABLE NAD NOXIOUS WEED FREE. MATERIAL MAY BE COMPOST, MULCH, ASPEN EXCELSIOR WOOD FIBERS, CHIPPED SITE VEGETATION, AGRICULTURAL RICE OR WHEAT STRAW, COCONUT FIBER, OR OTHER 100% BIODEGRADABLE FIBERS. CONTAINMENT MESH: CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE SUCH AS BURLAP TWINE, UV PHOTODEGRADABLE PLASTIC OR POLYESTER. USE BIODEGRADABLE OR PHOTODEGRADABLE MESH WHEN WATTLE WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. USE RECYCLABLE MESH FOR TEMPORARY INSTALLATIONS. WATTLES SHALL HAVE A MINIMUM DIAMETER OF 8 INCHES AND A MAXIMUM DIAMETER OF 20 INCHES NO MORE THAN 5% OF THE FILL MATERIAL SHALL BE PERMITTED TO ESCAPE FROM THE CONTAINING MESH. MESH SHALL BE 0.5" X 0.5" HIGH DENSITY POLYETHYLENE AND ETHYLY VINYL ACETATE AND CONTAIN ULTRA-VIOLET INHIBITORS. WATTLE ENDS SHALL BE TIED CLOSED.

SEDIMENT CONTROL ROLLS IN A TEMPORARY **EROSION CONTROL APPLICATION**

WHEN NO LONGER REQUIRED FOR THE INTENDED PURPOSE, TEMPORARY ROLLS SHALL BE REMOVED FROM THE SITE. AS AN OPTION, THE STRAW ROLLS MAY BE SLIT DOWN THE LENGTH OF THE NETTING AND THE STRAW MAY BE USED ON SLOPES OR OTHER AREAS.

TRENCHES, DEPRESSIONS OR ANY OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY STRAW ROLLS SHALL BE BACKFILLED AND REPAIRED WITH THE EXCESS SEDIMENT CAPTURED BY THE ROLLS, PRIOR TO SPREADING THE STRAW OR OTHER FINAL EROSION CONTROL PROTECTION.

SEDIMENT CONTROL ROLLS IN A PERMANENT EROSION CONTROL APPLICATION LEAVE ROLLS AS INSTALLED TO PHOTODEGRADE OR BIODEGRADE OVER TIME AS NATIVE AND APPLIED VEGETATION ULTIMATELY STABILIZE THE REPAIRED

SEDIMENT CONTROL - WOODEN STAKES PLACED 10" O.C. AREA TO BE PROTECTED WATER FLOW WORK ARFA **PLAN VIEW** NOT-TO-SCALE

REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED ROLLS WILL HAVE DIRECT CONTACT WITH THE SOIL.

BRUNA F. SPENGLEF

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2. A SMALL TRENCH, 2-4 INCHES IN DEPTH SHOULD BE EXCAVATED ON THE SLOPE CONTOUR AND PERPENDICULAR TO WATER FLOW. SOIL FROM THE EXCAVATION SHOULD BE PLACED UPSLOPE NEXT TO THE TRENCH.

INSTALL THE ROLLS IN THE TRENCH, INSURING THAT NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE ROLL. ROLL SHOULD BE LAPPED 6" MINIMUM TO PREVENT SEDIMENT PASSING THROUGH THE FIELD JOINT.

WOODEN STAKES SHOULD BE USED TO FASTEN THE ROLLS TO THE SOIL. WHEN CONDITIONS WARRANT, A STRAIGHT METAL BAR CAN BE USED TO DRIVE A "PILOT HOLE" THROUGH THE ROLL AND INTO THE SOIL.

WOODEN STAKES SHOULD BE PLACED 6" FROM THE ROLL END ANGLED TOWARDS THE ADJACENT ROLL AND SPACED AT 4 FEET CENTERS LEAVING LESS THAN 1-2 INCHES OF STAKE EXPOSED ABOVE THE ROLL. ALTERNATELY. STAKES MAY BE PLACED ON EACH SIDE OF THE ROLL TYING ACROSS WITH WITH A NATURAL FIBER TWINE OR STAKING IN A CROSSING MANNER ENSURING DIRECT SOIL CONTACT AT ALL TIMES.

TERMINAL ENDS OF ROLLS MAY BE "DOG LEGGED" UP SLOPE TO ENSURE CONTAINMENT AND PREVENT CHANNELING

7. BACKFILL THE UPSLOPE LENGTH OF THE ROLL WITH THE EXCAVATED SOIL AND COMPACT.

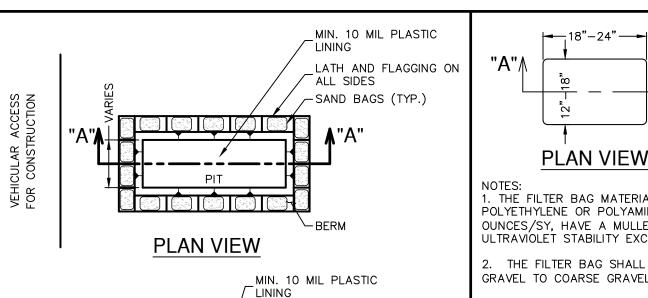
8. CARE SHALL BE TAKEN DURING INSTALLATION SO AS TO AVOID DAMAGE OCCURRING TO THE ROLL AS A RESULT OF THE INSTALLATION PROCESS. SHOULD THE ROLL BE DAMAGED DURING INSTALLATION, A WOODEN STAKE SHALL BE PLACED EITHER SIDE OF THE DAMAGED AREA TERMINATING THE LOG

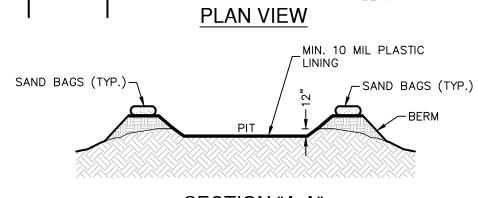
INSPECTION AND MAINTENANCE

THE SEDIMENT CONTROL ROLLS SHALL BE INSPECTED AFTER INSTALLATION TO INSURE THAT THEY ARE TRENCHED-IN AND THAT NO GAPS EXIST UNDER THE ROLLS OR BETWEEN ADJACENT ENDS OF THE ROLLS.

2. ROLLS SHALL BE INSPECTED AFTER SIGNIFICANT RAINFALL EVENTS. RILLS OR GULLIES UPSLOPE OF THE ROLL AND ANY UNDERCUTTING IS TO BE REPAIRED.

SEDIMENT CONTROL ROLLS





SECTION "A-A'

GENERAL NOTES

DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE. 2. 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.

4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.

TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

MATERIALS

PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL

MAINTENANCE

BACKFILLED AND REPAIRED.

WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT

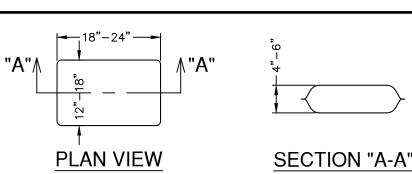
FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE

REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE

CONCRETE TRUCK WASHOUT

NOT-TO-SCALE

PIT DETAIL



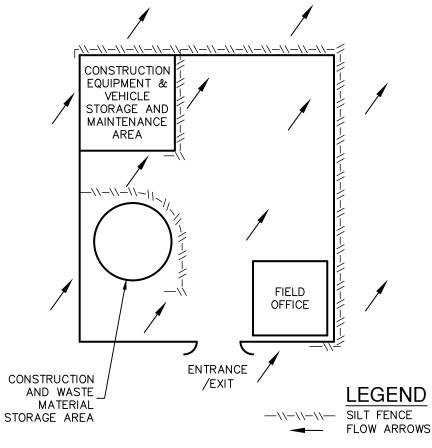
THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN. UNIT WEIGHT OF 4 OUNCES/SY, HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.

THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).

3. SAND SHALL <u>NOT</u> BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



CONSTRUCTION STAGING AREA

NOT-TO-SCALE

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES-STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

ECKED DW DRAWN

SIGNER

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NOVEMBER 2023

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