

Westpointe West Offsite Sewer Extension – Phase I Solicitation Number: CO-00255 Job No.: 18-1658

ADDENDUM 2 January 23, 2019

To Bidder of Record:

This addendum, applicable to work referenced above, is an amendment to the bid proposal, plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the bid proposal.

RESPONSES TO QUESTIONS

- 1. Question: Can we get a Geo-tech Report for this project?

 Response: No geotechnical report is available for this project.
- 2. Question: If geo-tech is not available, what type of soils are found in this area? Response: A soil study was not performed for the project area.
- 3. Question: In regard to the manholes on the above referenced project why are concrete manholes being specified when normally FRP fiberglass manholes (T Base manhole risers or watertight manholes) are more typically specified? Especially on larger diameter sewer pipelines (36" for this project) where fiberglass pipe is specified. Response: The selected manholes specified on the plans adhere to the SAWS Specifications for Water and Sanitary Sewer Construction. For the purposes of bid evaluation, the bid will proceed with the sanitary sewer structures noted on the Specifications; however, SAWS will be open to reevaluating with the awarded contractor the type of manholes that will be installed during Construction. Any SAWS approved changes must be sent through the standard change order process.
- 4. Question: Will SAWS hold an on-site pre-bid meeting to allow prospective bidders access thru the various property owners to determine the amount of ROW clearing, ingress and exit points for material being brought in for construction (gravel, concrete, pipe etc.) and ground conditions?

 Response: A site walk-thru will take place on Monday, January 28th, 2019 at 10:00 am. Please meet at the southern end of the project. If you need directions to the site, please contact Timothy Ybarra (210-233-3062) or Emanuel Rodriguez (210-233-3715).
- 5. Question: Due to the depth of the proposed sewer line and the job location; are the prospective bidders allowed access to dig test holes to determine the amount of rock on the job?

 Response: No test holes will be allowed. However, a site walk-thru will take place on Monday, January 28th, 2019 at 10:00 am. Please meet at the southern end of the project.
- 6. Question: How do we get access to the entire job to do so in order to be able to turn in a balanced and competitive bid?
 Response: A site walk-thru will take place on Monday, January 28th, 2019 at 10:00 am. Please meet at the southern end of the project.
- 7. Question: Can the bores location be staked to determine their location prior to bid? I cannot tell from the plans exactly where on Talley Road they are located at. Trying to determine access for equipment and native soil classification, etc...

Response: A site walk-thru will take place on Monday, January 28th, 2019 at 10:00 am. Please meet at the southern end of the project.

8. Question: Have all easement been acquired?

Response: The developer is working on getting the final easements recorded before the Notice to Proceed and construction begins on this project.

9. Question: Is there a topographic view of the center line that can be furnished? It appears there will be a lot of clearing that needs to be identified prior to bid.

Response: A copy of the preliminary tree preservation plan is included with this addendum for reference.

10. Question: Will SAWS furnish a tree protection plan identifying which trees are designated to be saved and ones can be removed?

Response: A copy of the preliminary tree preservation plan is included with this addendum for reference. The final tree preservation plan approved by the City Arborist will be provided prior to construction.

11. Question: Will SAWS add a bid item for tree fencing protection?

Response: Yes, line item to be added on bid tab for tree fencing and protection. Please reference the revised Bid tabulation table in this Addendum.

12. Question: Will SAWS add a bid item for the temporary fencing for cow protection or give us the stations it will be required at?

Response: Cost for temporary cattle control to be included in the fencing replacement line item.

13. Question: Will SAWS add SWPPP plan with the appropriate bit items for silt fence, rock berms, construction entrances?

Response: A copy of the SWPPP plan is provided with this addendum.

14. Question: Is the funding for this project 100% from SAWS to the Contractor?

Response: This is a tri-lateral project with participation from SAWS and Developer.

- 15. Question: Will SAWs move the bid date to February 1st. (1 week back). The answer to these questions and others will not be posted by SAWS until 4:00pm, January 25th (Friday). Monday is a holiday (MKL Day) which just leaves 3 working days to visit the site and do our due diligence and test holing to formulate the most competitive bid? Response: The bid due date has been postponed to February 6th, 2019 at 1:00 pm as per Addendum #1.
- 16. Question: When is the anticipated Award date?

Response: The project will be proposed for award at the anticipated March 5th board meeting.

17. Question: When is the anticipated Notice to Proceed date?

Response: The NTP will be scheduled by the pre-con meeting following the anticipated March 5th board meeting.

18. Question: Is this a tri-lateral contract or straight SAWS contract?

Response: This is a tri-lateral project.

19. Question: Will SAWS add 50 calendar days to the contractual time line making it a total of 200 days? Due to the depth of the line, probability of rock, bores etc. We feel 150 days is not a realistic time line.

Response: No additional days will be added to contractual time line.

20. Question: Please advise when SAWS will host a site meeting to identify the location of the line to assess the variables that will be encountered accurately.

Response: A site walk-thru will take place on Monday, January 28th, 2019 at 10:00 am. Please meet at the southern end of the project.

21. Question: The Line Item sheet lists 123 If of Jack and Bore 54" Steel Casing. However, after going through the plan document I only find 103 If of jack and bore 54" casing. Is this a typo on the item sheet?

Response: The 123 LF of 54" Jack and Bore/Steel Casing is correct. Please refer to Sheet C3.00 STA 1+27.27 and Sheet C3.02 STA 29+48.00. In addition, 103 LF of 30" Jack and Bore/Steel Casing are called out on Sheet C3.05 STA 16+98.00.

22. Question: Do you also have a SWPPP plan for this project?

Response: A copy of the SWPPP plan is provided with this addendum

23. Question: When will job Start/be awarded?

Response: The project will be awarded and the NTP will be scheduled following the anticipated March 5^{th} board meeting.

24. Question: Is this a Federally Funded Project?

Response: No.

25. Question: Retainage %?

Response: 5%

26. Question: Is certified payroll required? (Yes on TxDOT and COSA)

Response: Yes, certified payroll will be required for this project.

27. Question: Engineers Estimate? Broken out by owner? (CPS, SAWS, COSA, TxDOT)

Response: All improvements depicted on the construction documents are to be owned by SAWS or the private land owners (fencing, etc.). The Engineer's Estimate is not provided as part of the bid request package.

28. Question: Can we get an Excel version of the bid tab?

Response: No, an excel version of the bid tab will not be made available for this project.

29. Question: Any contaminated soil/liquids?

Response: No contaminated soils or liquids were identified during the environmental site investigation.

30. Question: Who is responsible for Material Testing?

Response: Contractor is responsible to engage a geotechnical engineer to perform the required testing.

31. Question: Is project schedule available?

Response: The project has been set to be completed within 150 calendar days.

32. Question: Is a project manual/specifications manual available?

Response: Please refer to Special Conditions section SC-2.0. All work performed in connection with this project shall be in accordance with the current San Antonio Water System Specifications for Water and Sanitary Sewer Construction, the conditions of the contract, the current Texas Department of Transportation Standard Specification for the Construction of Highways, Streets, and Bridges, and any requirements or specifications specified in the plans.

33. Question: in reference to SBEDA, does the specified goal apply only to the base bid? Or does it apply to the base + all the alternates? In other words, do we need to calculate SBEDA percentages to submit on our utilization sheet based on the base only, or base + alt?

Response: Please note that SAWS does not fall under the City of San Antonio's SBEDA Program. The SAWS Small, Minority, Woman, and Veteran-owned Business (SMWVB) Program has an aspirational goal of 20%. No alternate pricing was requested for this bid, therefore any calculations needed would be utilizing the base bid price.

34. Question: Can cross sections be provided?

Response: Please refer to the details provided with the plans. No additional cross-sections to be provided.

35. Question: Can the CAD files be provided?

Response: The CAD files are provided as a separate attachment and will be available for viewing/downloading at the SAWS website for this project and will require a disclosure form be acknowledged with electronic signature.

36. Question: Can a TCP be provided?

Response: No Traffic Control Plan was prepared for this project as the two Talley Road right-of-way crossings will be done by boring the full right-of-way width. Contractor should consider a TCP allowance within line item 18.

- 37. Question: How will SAWS expect the revegetation to occur at this site without a readily available water source?

 Response: The disturbed areas are typically revegetated with a mix of native species seeding that does not require irrigation.
- 38. Question: Between STA: 12 + 12.12 and STA: 16 + 46.00 there is a 15" FRP pipe. Should it be 15" PVC? There isn't a 15" FRP on the bid form

Response: The callout for the pipe between Stations 12+12.12 and 16+32.00 has been revised on Sheet C3.05 to 15" SDR 26 PVC pipe.

39. Question: Regarding the Westpointe West Offsite Sewer Extension, will a Geotechnical report or bore logs be provided for use of pricing?

Response: No geotechnical report is available for this project.

- 40. Question: Approximately at Station 12+00 there seems to be an existing structure. Do we need to remove/replace? Where does this get paid for? Do you have any information on this structure?

 Response: According to the surveyor, the structure seen on the Google Earth aerial image is a horse trailer that can be moved by the owner.
- 41. Question: Need clarification on sheet C3.05 STA 12+00 on the 15" Sewer Line. The profile is showing 15" FRP SN72, is this supposed to be 15" SDR 26 Heavy Sewer Pipe or FRP SN72

 Response: The callout for the pipe between Stations 12+12.12 and 16+32.00 has been revised on Sheet C3.05 to 15" SDR 26 PVC pipe.

CLARIFICATIONS

 ENGINEER'S PROJECT COST ESTIMATE: The previous project cost estimate is hereby modified from \$2,512,349.95 to \$2,558,412.45

CHANGES TO THE SPECIFICATIONS

- 1. BID TAB. Delete previous Bid tab in its entirety and replace with the revised Bid tab attached to this Addendum. Modifications to bid tab as follows:
 - added line items for "Tree Fencing and Protection" and "Revegetation"
 - moved mobilization and preparation of right-of-way to the end
 - added Subtotal line item
 - revised mobilization and preparation of right-of-way note regarding line items (1-22)

CHANGES TO THE PLANS

- 1. Sheet C3.05 Revise callout.
- 2. Added C5.00, C5.01, C5.02, C5.03

END OF ADDENDUM

This Addendum, including these <u>4</u> pages, is ten (10) pages with attachments in its entirety.

Attachments:

Bid Tab

Sheet C3.05

Sheet C5.00

Sheet C5.01

Sheet C5.02

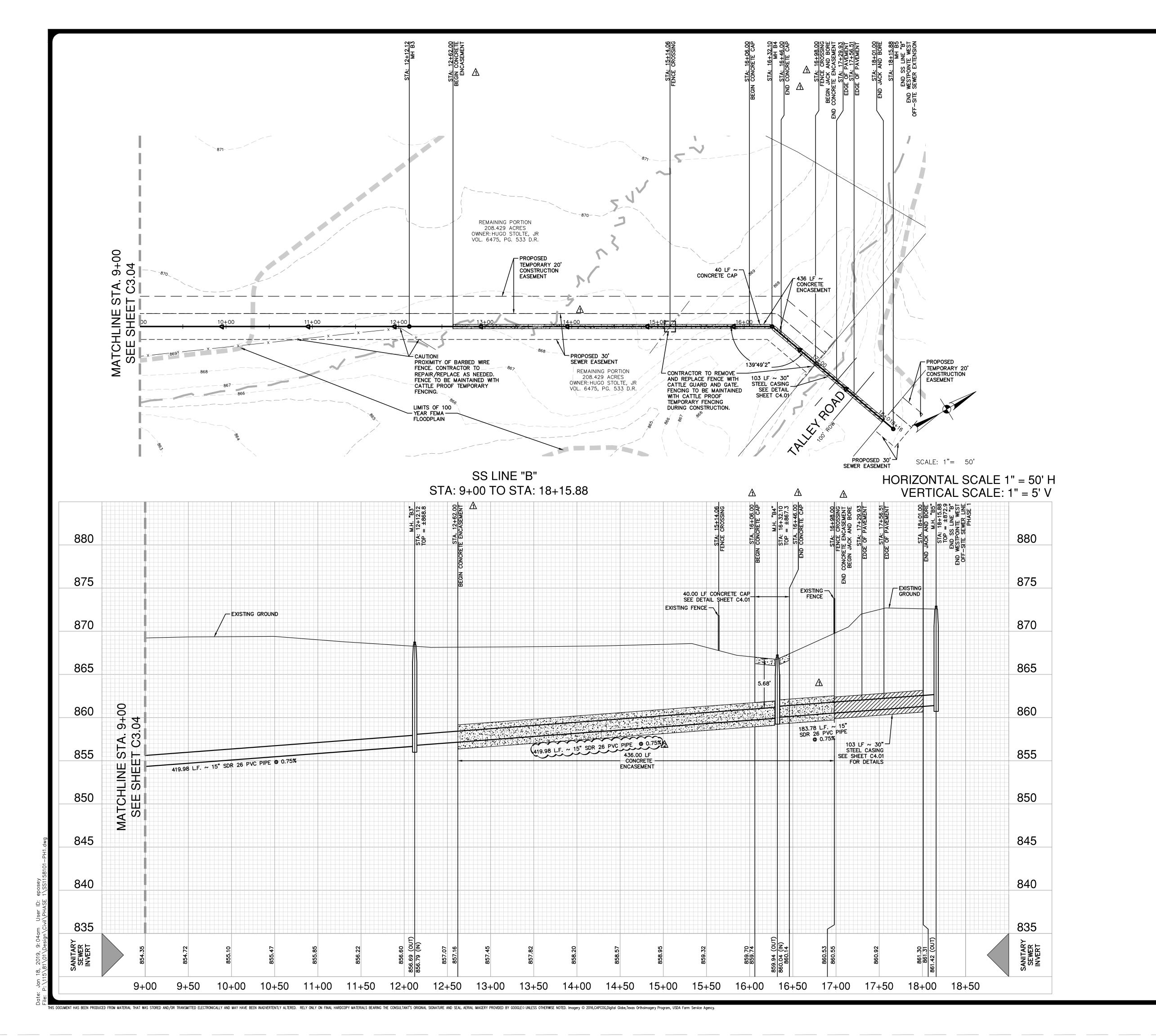
Sheet C5.03

Jason Diamond, P.E.
Pape-Dawson Engineers, Inc.



Quotes								
ine No.	Item No.	Item Description	Unit	Quantity	Unit Price	Total		
1	1	36" FRP Gravity Sewer 6' - 10'	LF	312				
2	2	36" FRP Gravity Sewer 10' - 14'	LF	1335	45	1 2		
3	3	36" FRP Gravity Sewer >14'	LF	2614	<u> </u>	2		
4	4	15" PVC Gravity Sewer (SDR 26) 6' - 10'	LF	583	1			
5	5	15" PVC Gravity Sewer (SDR 26) 10' - 14'	LF	574				
6	6	15" PVC Gravity Sewer (SDR 26) >14'	LF	559				
7	7	Jack and Bore 30" Steel Casing	LF	103				
8	8	Jack and Bore 54" Steel Casing	LF	123		<u>.</u>		
9	9	Sanitary Sewer Manholes (4' Diameter)	EA	5	7	· · · · · · · · · · · · · · · · · · ·		
10	10	6' Sanitary Sewer Structure	EA	11	1	J.		
11	11	Manholes - Extra Depth(>6')	VF	136				
12	12	Fence Gate 16' Type 1	EA	8				
13	13	Remove & Replace Fencing	LF	521	-	,		
14	14	Concrete Cap	LF '	494				
15	15	Concrete Encasement	LF -	2294		,		
16	16	Flowable Fill	CY	12				
17	17	Trench Excavation Safety Protection	LF	5977	A S	, * , *		
18	18	Signs & TrafficHandling	LS	1				
19	19	Sewer Main TVInspection	LF	5977		·		
20	20	Tree Fencing and Protection	LS	1	1 :			
21.	21	Revegetation	SY	21,250	-	* *		
22	22	TPDES Storm Water Pollution Prevention Plan	LS	1		3-7		
UBTOTA	L				1	\$		
23	23	*Mobilization	LS	1		, , , , , , , , , , , , , , , , , , ,		
24	24	*Prepare Right-of-Way	LS	1				
	14							
OTAL E	BID AMOU	NT			\$	\$		

*Combined costs of Mobilization and Preparation of Right-of-Way may not exceed 10% of subtotal project price (items 1-22)



LEGEND

PROPOSED SEWER LINE

EXISTING SEWER LINE

PARCEL BOUNDARY LINE

LIMITS OF 100 YEAR FEMA FLOODPLAIN

LIMITS OF 5 YEAR FEMA FLOODPLAIN

EXISTING CONTOUR

EXISTING BARBED WIRE FENCE

EXISTING HOG WIRE FENCE

EXISTING HERITAGE TREE TO REMAIN

FENCE LINE CROSSING SEE SHEET C1.00 FOR NOTES

NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT A LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12—INCH LOOSE LIFT PER 400 FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THE REQUIREMENT BEING MET AND VERIFIED BY PROVING ALL NECESSARY DOCUMENTED TEST RESULTS.

CAUTION OVERHEAD UTILITIES

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 THE LOCAL UTILITY PROVIDER.

TRENCH EXCAVATION SAFETY PROTECTION

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

CAUTION UNDERGROUND UTILITIES

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.

	QUANTITY TABLE		
NO	ITEM		QUANTITY
848	15" (SDR 26) PVC PIPE		915.88
852	MANHOLE	EA	3
818	JACK AND BORE, 30" STEEL CASING	LF	103.00
550	TRENCH EXCAVATION SAFTEY PROTECTION	LF	915.88
866	SEWER MAIN TV INSPECTION	LF	915.88
852.3	MANHOLES — EXTRA DEPTH	VF	13
	REMOVE AND REPLACE EXISTING FENCING	LF	250
	⚠ CONCRETE ENCASEMENT	LF	436.00
	CONCRETE CAP	LF	40.00
	FENCE GATE 16' TYPE 1	EA	2

SEWER

Developer's Name: MERITAG	SITE SEWER EXTENSION I				
	ess: 3010 N LOOP 1604 W , STE. 214				
City: San Antonio	State: Texas	ZIP <u>: 78248</u>			
Phone#	FAX <u>#_</u>				
076588, 0 SAWS Block Map <u>#078586. 0</u>	76590 1 <u>76586</u> Total EDU's <u>N/A</u>	Total Acreage 4.13 Ac			
Total Linear Footage of Pip	pe: 4261.1 ~ 36"	Plat No. <u>N/A</u>			

O. REVISION
DATE

O. EXTENDED CONCRETE
10/20/
ENCASEMENT TO LIMITS OF 5 YR
FLOODPLAIN
CORRECTED PIPE MATERIAL
01/18/



JRSORT WORTH I DALLAS
78213 I 210.375.9000

ONIO I AUSTIN I HOUSTON I FORT WORT
LOOP 410 I SAN ANTONIO, TX 78213 I 3
AREGISTRATION #470 I TBPLS FIRM REGISTRAT

NTE WEST OFF-SITE SEWER EXTENSION PHAS BEXAR COUNTY, TEXAS ANITARY SEWER LINE "B" PLAN AND PROFILE STA: 9+00 TO STA: 18+15.88

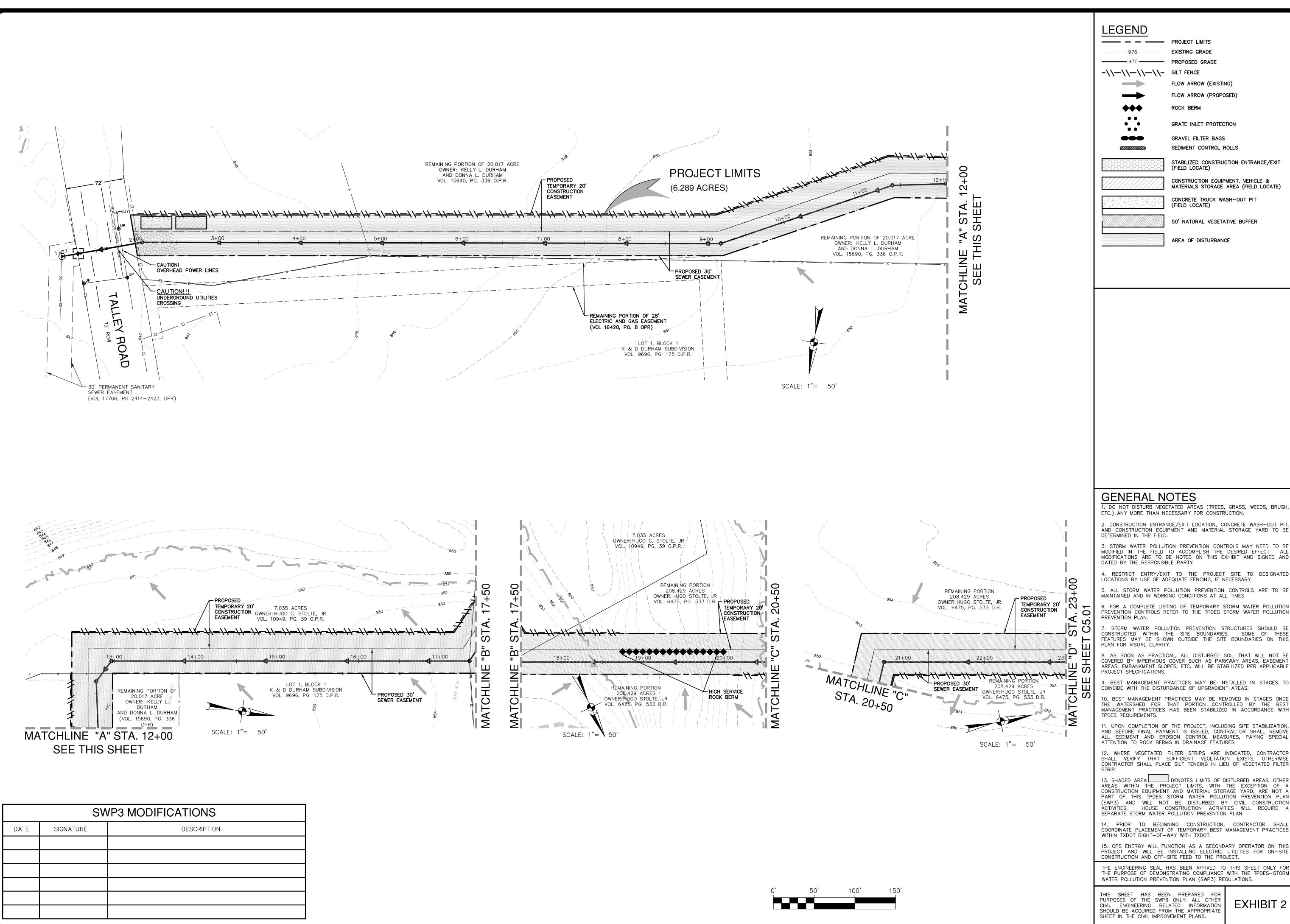
PLAT NO. N/A

JOB NO. 11581-02

DATE JAN 2019

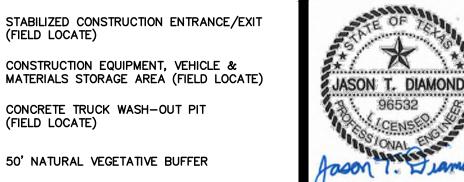
DESIGNER RG

CHECKED RG DRAWN EP



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——— — PROJECT LIMITS EXISTING GRADE 970 — PROPOSED GRADE -\\-\\-\\-\\- SILT FENCE FLOW ARROW (EXISTING) FLOW ARROW (PROPOSED) ROCK BERM GRATE INLET PROTECTION GRAVEL FILTER BAGS SEDIMENT CONTROL ROLLS STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)



0

GENERAL NOTES

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

(FIELD LOCATE)

AREA OF DISTURBANCE

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 BY USE OF ADEQUATE FENCING, IF NECESSARY.

5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO 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

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

9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS. D. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH

11. UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.

12. WHERE VEGETATED FILTER STRIPS ARE INDICATED, CONTRACTOR SHALL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE

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 A PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES. HOUSE CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN.

14. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TXDOT RIGHT-OF-WAY WITH TXDOT.

15. CPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.

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.

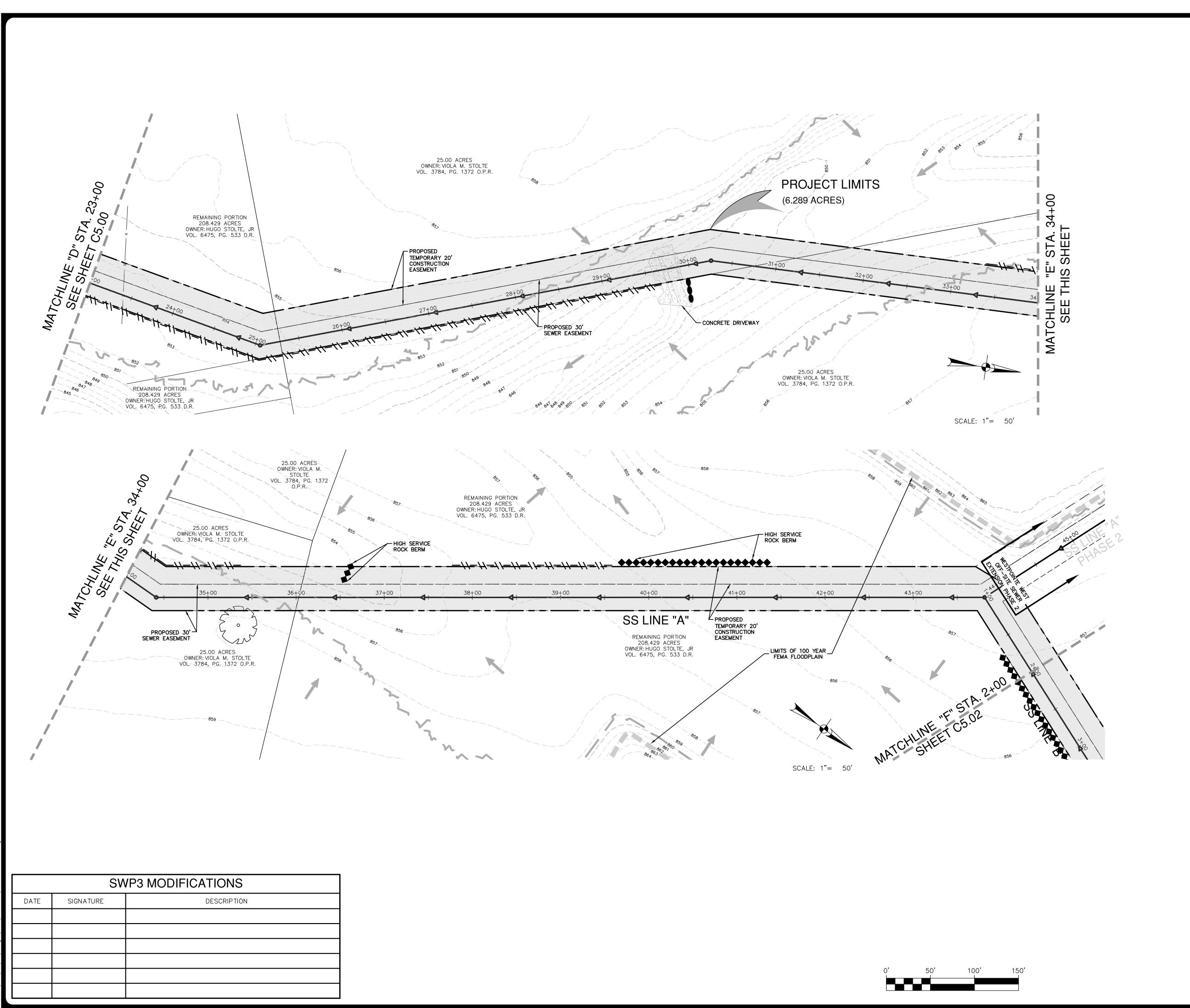
THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT 2

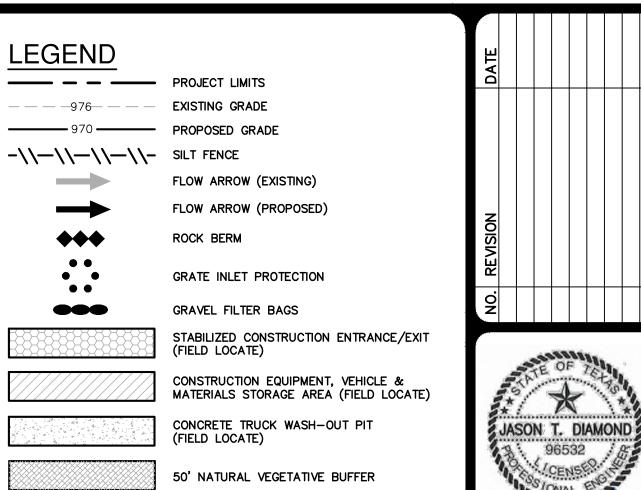
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C5.00



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JASON T. DIAMOND
96532
CENSSONAL
JAMON
1/18/19

FAPE-DAWSO

ENGINEERS

TONIO I AUSTIN I HOUSTON I FORT WORTH I DAW

WE LOOP 410 I SAN ANTONIO, TX 78213 I 210.375

PROFII

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LINI +00

GENERAL NOTES

PLAN FOR VISUAL CLARITY.

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

AREA OF DISTURBANCE

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 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 BY USE OF ADEQUATE FENCING, IF NECESSARY.

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

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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

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 A PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES. HOUSE CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN.

14. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TXDOT RIGHT-OF-WAY WITH TXDOT.

15. CPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.

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.

EXHIBIT 2

PLAT NO. N/A

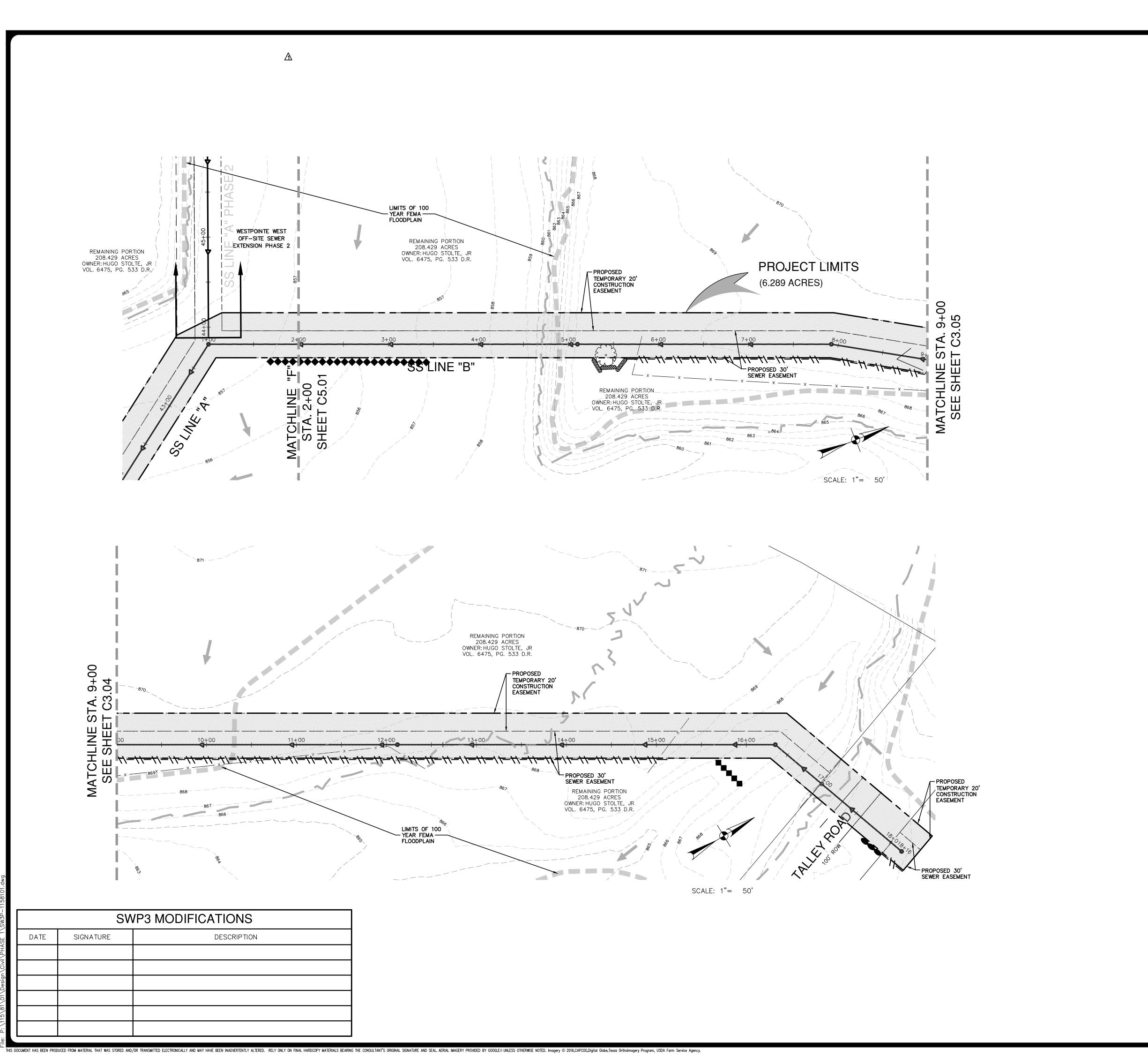
JOB NO. 11581-02

DATE JAN 2019

DESIGNER RG

CHECKED RG DRAWN EP

C5.01



LEGEND ——— — PROJECT LIMITS ---976--- Existing grade 970 — PROPOSED GRADE -\\-\\-\\- SILT FENCE FLOW ARROW (EXISTING) FLOW ARROW (PROPOSED) ******* ROCK BERM • • GRATE INLET PROTECTION • • GRAVEL FILTER BAGS STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE) CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE) CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE) 50' NATURAL VEGETATIVE BUFFER AREA OF DISTURBANCE SO

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 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 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 PREVENTION PLAN.

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

PLAN FOR VISUAL CLARITY.

8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT

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

9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS.

10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.

11. UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.

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

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

14. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TXDOT RIGHT-OF-WAY WITH TXDOT.

15. CPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR ON—SITE CONSTRUCTION AND OFF—SITE FEED TO THE PROJECT.

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EXHIBIT 2

PLAT NO. N/A

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DESIGNER RG

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SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT

. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN. 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

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. 4. IF 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

SECTION "A-A" OF A CONSTRUCTION ENTRANCE/EXIT

COMMON TROUBLE POINTS 1. INADEQUATE RUNOFF CONTROL-SEDIMENT WASHES ONTO PUBLIC ROAD.

STABILIZE FOUNDATION

2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.

PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC-EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY. 4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING

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

TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.

PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

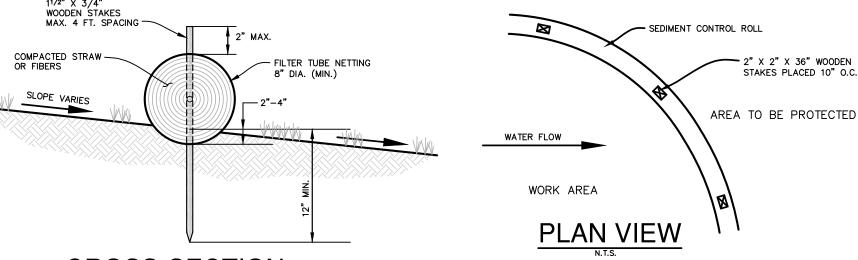
STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

INSPECTION AND MAINTENANCE GUIDELINES 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

USED TO TRAP SEDIMENT. 2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR. 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 SEDIMENT BASIN.

5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.



CROSS-SECTION

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.

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 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

<u>SEDIMENT CONTROL ROLLS IN A TEMPORARY EROSION</u> CONTROL APPLICATION

ultra-violet inhibitors. Wattle ends shall be tied closed.

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.

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

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

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

1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR

POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36

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

2. 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

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

FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING

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

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

USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A

INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

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

INSTALLATION 1. Remove all rocks, clods, vegetation or other obstructions so that the installed rolls will have direct contact with the soil.

between the soil and the bottom of the roll. Roll should be

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 3. Install the rolls in the trench, insuring that no gaps exist

lapped 6" minimum to prevent sediment passing through the 4. 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. 5. 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. 6. Terminal ends of rolls may be "dog legged" up slope to ensure containment and prevent channeling of sediment. 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

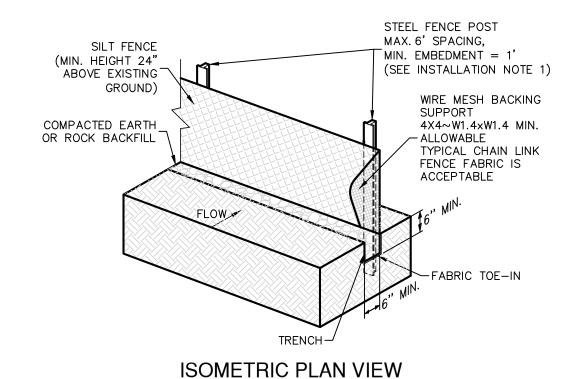
damage occurring to the roll as a result of the installation process. Should the roll be damaged during installation, a wooden stake shall be placed either side of the damaged area terminating the log segment.

NSPECTION 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 2. Rolls shall be inspected after significant rainfall events. Rills

or gullies upslope of the roll and any undercutting is to be

SEDIMENT CONTROL ROLLS



 A high service rock berm should be designated in areas of important environmental significance such as in steep canyons or above permanent springs, pools, recharge features, or other environmentally sensitive areas that may require a higher level of protection. The drainage area to this device should not exceed 5 acres and the slope should be less than 30%.

24" MINIMUM

MATERIALS:

Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width 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%, and minimum apparent opening size of U.S.

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 nominal weight 1.25 lb/ft², and Brindell hardness exceeding 140. Rebar (either #5 or #6) may also be used to anchor the berm.

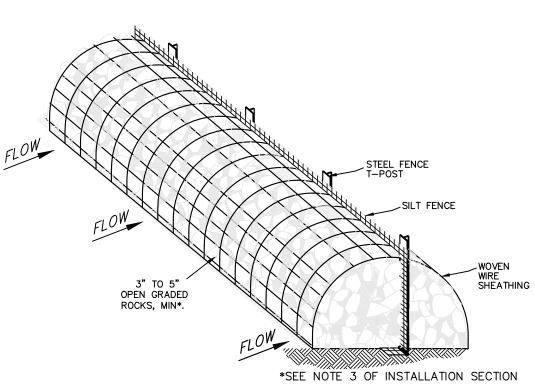
galvanized 2" x 4" welded wire, 12 gauge minimum. The berm structure should be secured with a woven wire sheathing having maximum opening of 1 inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoat rings.

Woven wire backing to support the fabric should be

Clean, open graded 3— to 5— inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5— to 8— inch diameter rocks maybe used.

Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1—inch

- Install the silt fence along the center of the proposed berm placement, as with a normal silt fence described in Section
- Place the rock along the sheathing on both sides of the silt fence as shown in the diagram (Figure 1-29), to a height not less than 24 inches. Clean, open graded 3" to 5" diameter rock should be used, except in areas where high velocities or large volumes of flow are expected,
- where 5" to 8" diameter rock may be used. 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
- The high service rock berm should be removed when the site is revegetated or otherwise stabilized or it may remain in place as a permanent BMP if drainage is adequate.



SCHEMATIC DIAGRAM OF HIGH SERVICE ROCK BERM (LCRA, 1998)

HIGH SERVICE ROCK BERM

- 2. Berm not installed perpendicular to flow line (runoff escaping
- around one side).
- flows displacing berm).

INSPECTION AND MAINTENANCE GUIDELINES:

- 1. Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional
- 2. Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved
- 3. Repair any loose wire sheathing.

HIS 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 Orthorimagery Program, USDA Farm Service Agency

- The berm should be reshaped as needed during inspections. 5. The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the
- rocks, washout, construction traffic damage, etc. 6. The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

1. Insufficient berm height or length (runoff quickly escapes over top or around sides of berm).

- 3. Internal silt fence not anchored securely to ground (high
- 4. When installed in streambeds, they often result in diversion scour, so their use in this setting is not recommended.

INSTALLATION . STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST daily inspections should be made on rock berm. BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8

SILT FENCE

AREAS OF CONCENTRATED FLOW.

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

AT ANY TIME.

EXCEEDING 140.

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

TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL. . SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE. WHICH IS IN TURN ATTACHED TO THE STEEL FENCE

4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE

POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE

. 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 SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY

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

. 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

2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.

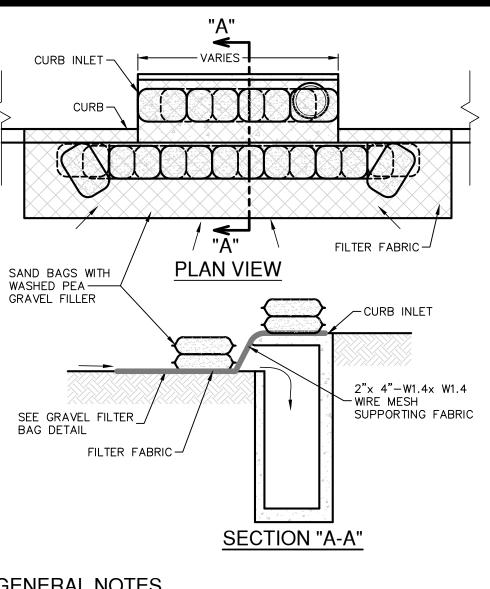
1. INSPECT ALL FENCING WEEKLY, AND AFTER RAINFALL.

. 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

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



GENERAL NOTES

CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE GUTTER AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.

2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES 1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE

2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.

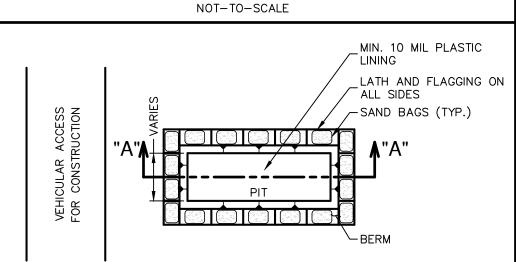
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER

3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND

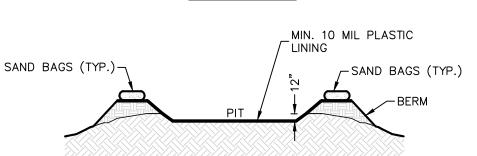
BAGGED GRAVEL CURB INLET

PROTECTION DETAIL

THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



PLAN VIEW



SECTION "A-A"

GENERAL NOTES . DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN

SIZE DEPENDING ON EXPECTED FREQUENCY OF USE. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.

3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.

5. 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

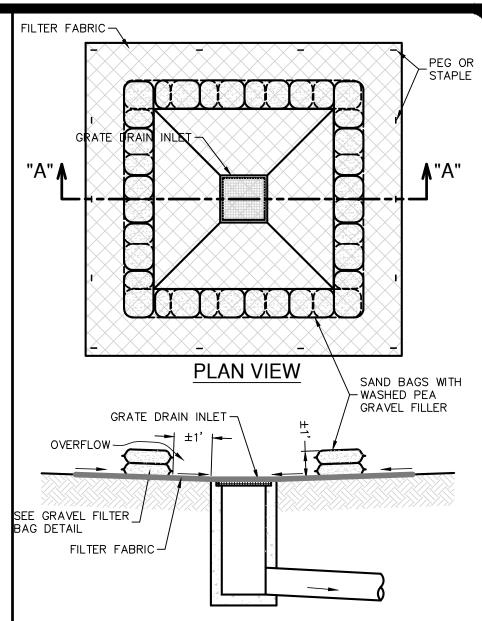
WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.

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 BACKFILLED AND REPAIRED.

CONCRETE TRUCK WASHOUT PIT DETAIL

NOT-TO-SCALE



SECTION "A-A"

GENERAL NOTES THE SANDBAGS SHOULD BE FILLED WITH WASHED PEA GRAVEL AND STACKED TO FORM A CONTINUOUS BARRIER ABOUT 1 FOOT HIGH AROUND

2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES . INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.

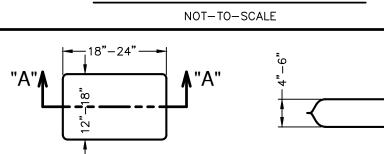
. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MATTER THAT IT WILL NOT ERODE.

3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE 4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR

. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED

BAGGED GRAVEL GRATE INLET

PROTECTION DETAIL



PLAN VIEW SECTION "A-A'

. 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 EQUIPMENT & STORAGE AND MAINTENANC AREA

ENTRANCE CONSTRUCTION AND WASTE LEGEND MATERIAL -\\-\\-\\ SILT FENCE STORAGE AREA → FLOW ARROWS

CONSTRUCTION STAGING AREA

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.

NOT-TO-SCALE

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.

EXHIBIT 3

ESIGNER

WEI

HECKED RG DRAWN EP C5.03

N/A

11581-02

JAN 2019

JASON T. DIAMOND

NOT-TO-SCALE