Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with 30 TAC 213.

Administrative Review

1. Edwards Aquifer applications must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

   To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: http://www.tceq.texas.gov/field/eapp.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.

3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.

4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

   An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.

6. If the geologic assessment was completed before October 1, 2004 and the site contains "possibly sensitive" features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: UPPER BRUSHY CREEK WS SCS SITE 14 DAM						**2. Regulated Entity No.:** RN101713683			
3. Customer Name: Upper Brushy Creek Water Control and Improvement District						**4. Customer No.:** CN602679904			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension	Exception		
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**		3.1	
9. Application Fee:	$500		**10. Permanent BMP(s):**			none			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			

13. County:	Williamson	**14. Watershed:**	Chandler Branch

Application Distribution

Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which cross into multiple jurisdictions, can require additional copies. Refer to the "Texas Groundwater Conservation Districts within the EAPP Boundaries" map found at:

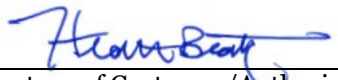
http://www.tceq.texas.gov/assets/public/compliance/field_ops/eapp/EAPP%20GWCD%20map.pdf

For more detailed boundaries, please contact the conservation district directly.

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	✔
Region (1 req.)	___	___	✔
County(ies)	___	___	✔
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ✔Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	___	___	___	___
Region (1 req.)	___	___	___	___	___
County(ies)	___	___	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village	___Bulverde ___Fair Oaks Ranch ___Garden Ridge ___New Braunfels ___Schertz	NA	___San Antonio ETJ (SAWS)	NA

	__Hollywood Park __San Antonio (SAWS) __Shavano Park				

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Heather Beatty
Print Name of Customer/Authorized Agent
 8/9/2025
Signature of Customer/Authorized Agent Date

FOR TCEQ INTERNAL USE ONLY				
Date(s)Reviewed:		Date Administratively Complete:		
Received From:		Correct Number of Copies:		
Received By:		Distribution Date:		
EAPP File Number:		Complex:		
Admin. Review(s) (No.):		No. AR Rounds:		
Delinquent Fees (Y/N):		Review Time Spent:		
Lat./Long. Verified:		SOS Customer Verification:		
Agent Authorization Complete/Notarized (Y/N):		Fee Check:	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):			Signed (Y/N):	
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):	

General Information Form

Texas Commission on Environmental Quality

For Regulated Activities on the Edwards Aquifer Recharge and Transition Zones and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B) Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

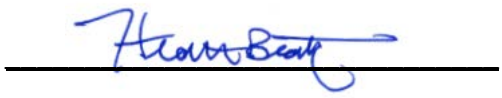
Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **General Information Form** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of Customer/Agent: Heather Beatty, PG

Date: 8/8/2025

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Upper Brushy Creek WS SCS Site 14 Dam
2. County: Williamson
3. Stream Basin: Chandler Branch
4. Groundwater Conservation District (If applicable): N/A
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

   ☐ WPAP
   ☐ SCS
   ☐ Modification
   ☐ AST
   ☐ UST
   ☒ Exception Request

7. Customer (Applicant):

   Contact Person: Alysha Girard, PE, CFM
   Entity: Upper Brushy Creek WCID
   Mailing Address: 460 Texas Ave
   City, State: Round Rock, TX Zip: 78664
   Telephone: 512-284-7685 FAX: N/A
   Email Address: alysha.girard@ubcdams.org

8. Agent/Representative (If any):

   Contact Person: Heather Beatty, PG
   Entity: Cambrian Environmental
   Mailing Address: 4422 Pack Saddle Pass Ste 204
   City, State: Austin, TX Zip: 78745
   Telephone: 512-470-4013 FAX: N/A
   Email Address: hbeatty@cambrianenvironmental.com

9. Project Location:

   ☒ The project site is located inside the city limits of Round Rock.
   ☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
   ☐ The project site is not located within any city's limits or ETJ.

10. ☒ The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

    The site is located between Lakeside Loop and the Hopewell Middle School, within the City of Round Rock, within a conservation easement in Meadow Lake Park.

11. ☒ **Attachment A – Road Map**. A road map showing directions to and the location of the project site is attached. The project location and site boundaries are clearly shown on the map.

12. ☒ **Attachment B - USGS / Edwards Recharge Zone Map**. A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached. The map(s) clearly show:

    ☒ Project site boundaries.
    ☒ USGS Quadrangle Name(s).
    ☒ Boundaries of the Recharge Zone (and Transition Zone, if applicable).
    ☒ Drainage path from the project site to the boundary of the Recharge Zone.

13. ☒ **The TCEQ must be able to inspect the project site or the application will be returned**. Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment.

☒ Survey staking will be completed by this date: site is open to the public

14. ☒ **Attachment C – Project Description**. Attached at the end of this form is a detailed narrative description of the proposed project. The project description is consistent throughout the application and contains, at a minimum, the following details:

    ☒ Area of the site
    ☒ Offsite areas
    ☒ Impervious cover
    ☒ Permanent BMP(s)
    ☒ Proposed site use
    ☒ Site history
    ☒ Previous development
    ☒ Area(s) to be demolished

15. Existing project site conditions are noted below:

    ☐ Existing commercial site
    ☐ Existing industrial site
    ☐ Existing residential site
    ☐ Existing paved and/or unpaved roads
    ☐ Undeveloped (Cleared)
    ☐ Undeveloped (Undisturbed/Uncleared)
    ☒ Other: Undeveloped (previously disturbed)

Prohibited Activities

16. ☒ I am aware that the following activities are prohibited on the Recharge Zone and are not proposed for this project:

    (1) Waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);

    (2) New feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;

    (3) Land disposal of Class I wastes, as defined in 30 TAC §335.1;

    (4) The use of sewage holding tanks as parts of organized collection systems; and

    (5) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

    (6) New municipal and industrial wastewater discharges into or adjacent to water in the state that would create additional pollutant loading.

17. ☒ I am aware that the following activities are prohibited on the Transition Zone and are not proposed for this project:

    (1) Waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);

(2) Land disposal of Class I wastes, as defined in 30 TAC §335.1; and

(3) New municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

Administrative Information

18. The fee for the plan(s) is based on:

- ☐ For a Water Pollution Abatement Plan or Modification, the total acreage of the site where regulated activities will occur.
- ☐ For an Organized Sewage Collection System Plan or Modification, the total linear footage of all collection system lines.
- ☐ For a UST Facility Plan or Modification or an AST Facility Plan or Modification, the total number of tanks or piping systems.
- ☒ A request for an exception to any substantive portion of the regulations related to the protection of water quality.
- ☐ A request for an extension to a previously approved plan.

19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

- ☒ TCEQ cashier
- ☐ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)
- ☐ San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

20. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.

21. ☒ No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the Executive Director.

bing maps

A Texas Commission On Environmental Quality, 12100 Park Thirty Five Cir Ste A, Austin, TX, United States

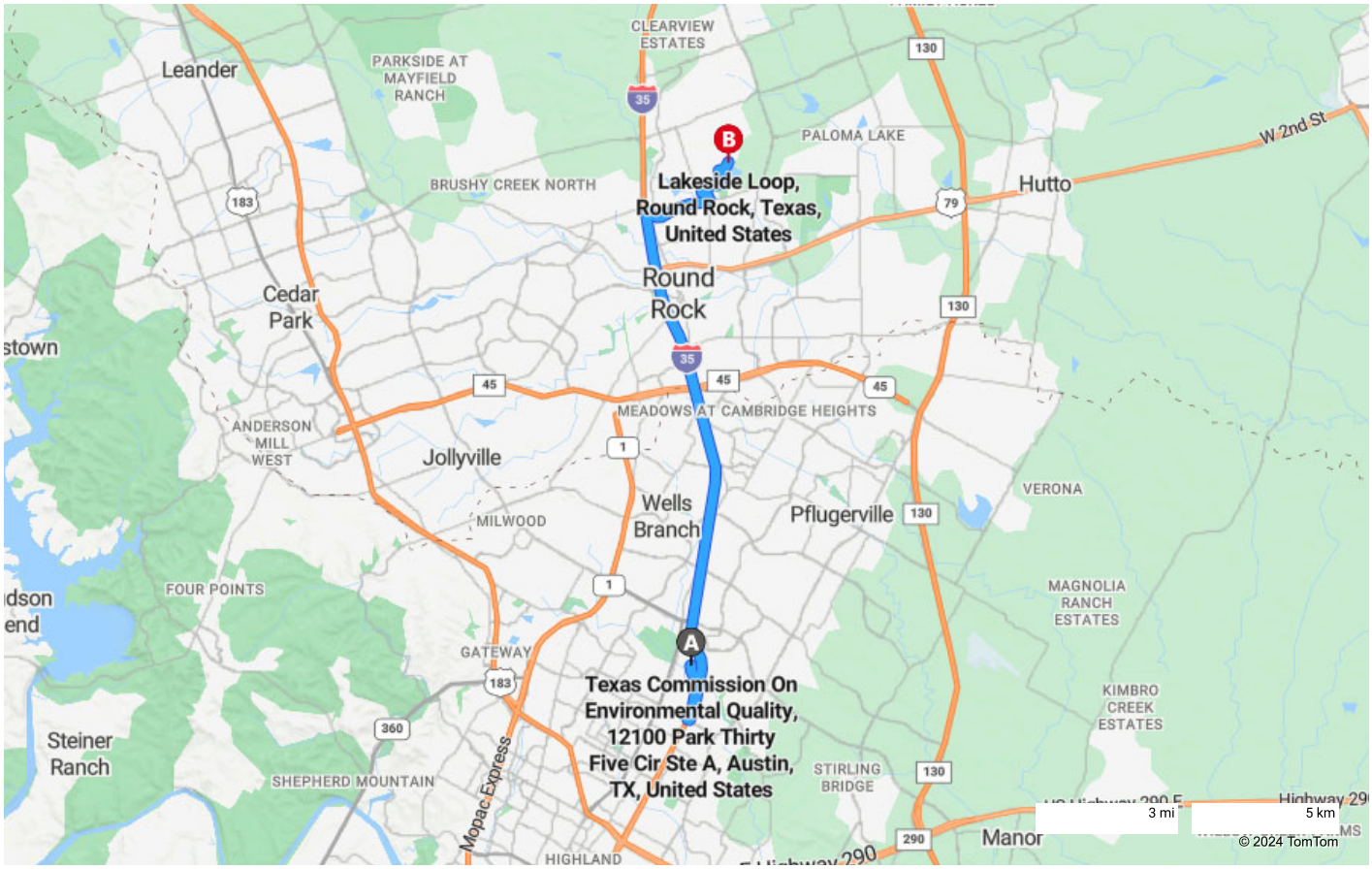
B Lakeside Loop, Round Rock, Texas, United States

23 min , 15.5 miles

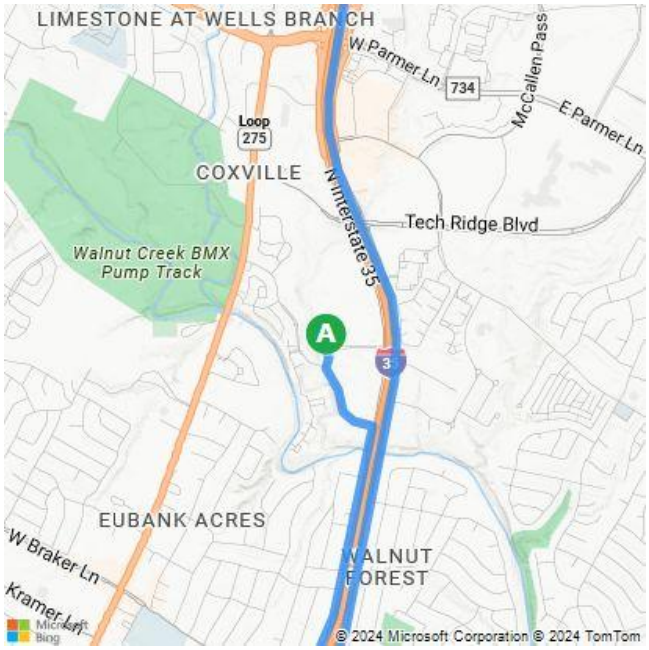
Light traffic (Leave at 11:31 PM)

Via N Interstate 35, I-35 N

ATTACHMENT A - ROAD MAP



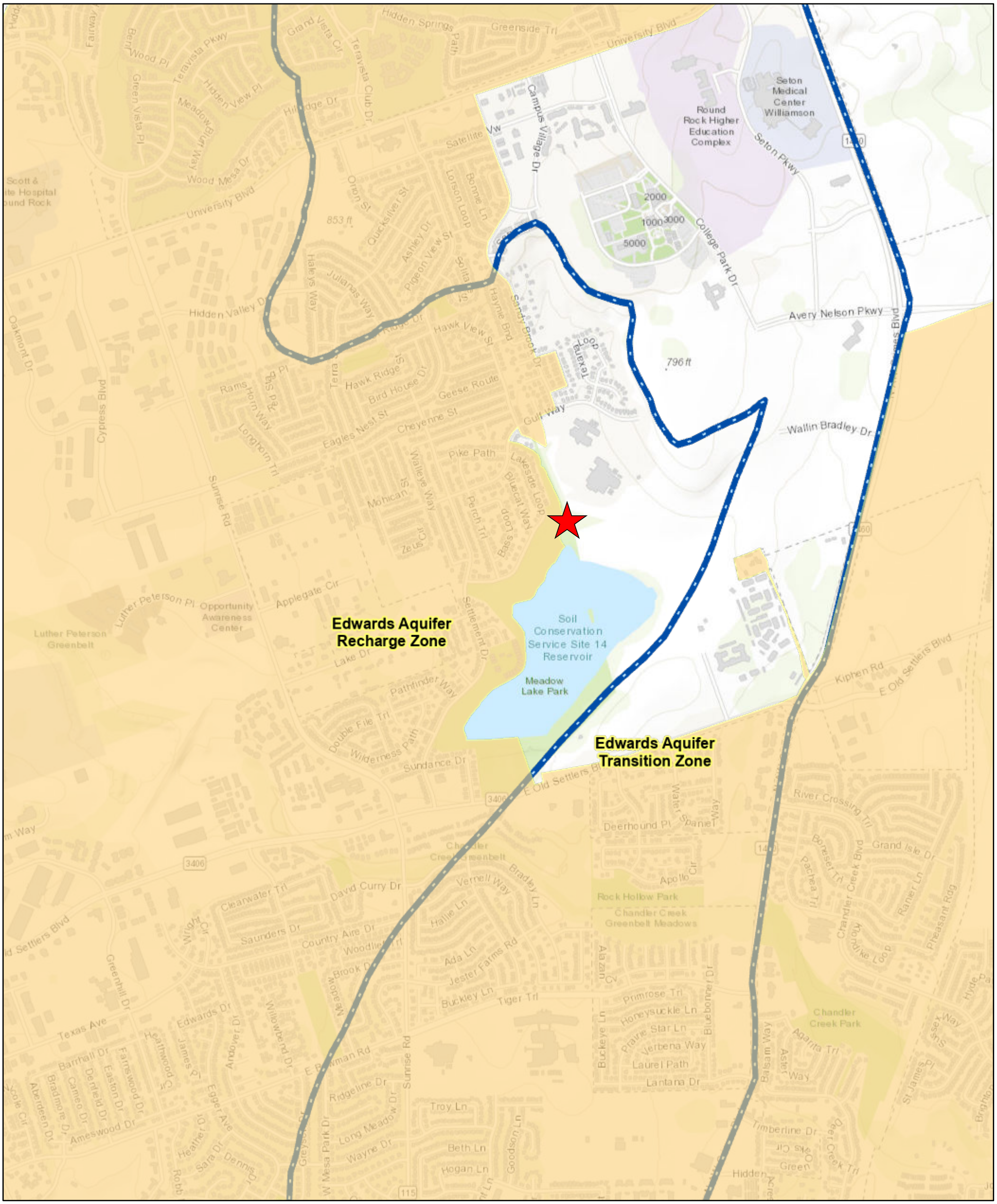
A **Texas Commission On Environmental Qua...**



B **Lakeside Loop, Round Rock, Texas, United...**

These directions are subject to the Microsoft® Service Agreement and are for informational purposes only. No guarantee is made regarding their completeness or accuracy. Construction projects, traffic, or other events may cause actual conditions to differ from these results. Map and traffic data © 2024 TomTom.

Attachment B - Recharge Zone Map



2/26/2024, 9:09:38 PM

- Edwards Aquifer Label
- Edwards Aquifer Boundary
- Edwards Aquifer Boundary central line
- City/Place
- TX Counties
- 7.5 Minute Quad Grid
- TCEQ_EDWARDS_OFFICIAL_MAPS

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

Austin Community College, City of Austin, County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, TCEQ

Web AppBuilder for ArcGIS

Austin Community College, City of Austin, County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA | TCEQ |

UPPER BRUSHY CREEK WS SCS Site 14 Dam
General Information Form

ATTACHMENT C - Project Description

Introduction

Upper Brushy Creek Water Control and Improvement District (WCID or District) is the local sponsor of 23 flood control structures in Williamson County, Texas and is responsible for the operation and maintenance of those dams within the Upper Brushy Creek Watershed in the Brazos River Basin. The proposed project is located within a detention easement for Dam 14 (existing regulated entity UPPER BRUSHY CREEK WS SCS SITE 14 DAM, RN101713683). The nature of the project is stream restoration.

The site of the proposed stream restoration is located between Lakeside Loop and Hopewell Middle School, within Meadow Lake Park, Round Rock, Williamson County, Texas. The project is 540 feet in length and will be constructed within a 3.1-acre limits of disturbance.

AECOM Technical Services, Inc. (AECOM) has developed design plans to implement this mitigation project. The plans are included as an attachment to this application. AECOM also conducted a jurisdictional waters investigation at the site. The goals of this project are to replace the stream functions due to the impacts of the Dam 101 Flood Mitigation Project (EAPP ID No. 11003388) by performing stream restoration on an unnamed intermittent tributary of Chandler Branch. The stream restoration activities will:

- Improve stream and aquatic functions by removing the existing concrete lined stream channel and constructing a stable stream channel in the native soils using natural materials; and

- Improve the riparian buffer though the planting of native trees, shrubs, and herbaceous vegetation.

An exception request is being submitted because the project replaces stream functions, it does not add impervious cover, and it occurs within a floodplain and stream channel that has been previously disturbed. Email coordination with a member of the Edwards Aquifer protection program is attached behind this page. After construction is complete, the site will be maintained by the District.

Existing Conditions and History

The majority of the site consists of maintained and unmaintained parkland surrounded by a residential community and agricultural lands. The site is situated along an unnamed tributary of Chandler Branch that has been modified for urban development above the Dam 14 impoundment (Meadow Lake). The land surrounding the dam is called Meadow Lake Park. The City of Round Rock offers park amenities including a trail surrounding the dam and lake, a playscape, horseshoe pits, a picnic shelter, picnic tables, barbecue grills, and a drinking fountain.

Dam 14 was originally constructed in 1966. The Edwards Aquifer protection program rules regulating construction activities in Williamson County were first in effect in 1985. Program technical requirements for treatment of stormwater runoff over the recharge zone went into effect in the mid-1990's. Guidance to support the treatment requirements was published in 1999. A rehabilitation project for Dam 14 was approved as a WPAP Exception Request in 2004 (see EAPP ID#11-04070801). The project involved

construction of a road at the crest of the dam, and also erosion repairs to the structure. In 2023, an exception request was approved for the rehabilitation of the existing embankment (see EAPP ID #11003346).

Within the park, the concrete trail that is directly adjacent to Settlement Drive was constructed between 1995 and 2002 based on historical imagery from Google Earth. The City of Round Rock received approval of an Exception Request in 2008 (see EAPP ID#11-08091701). The project was called Meadow Lake Park north trail development project.

Additional Details

Site areas –3.1-acre limits of disturbance, 2.8-acre conservation easement
Off-site areas - none
Impervious cover – zero proposed
Permanent Best Management (BMP) practices – an exception is requested
Proposed site use – stream channel within a conservation easement
Areas to be demolished – shown in plans

From: James Slone
To: hbeatty@cambrianenvironmental.com
Subject: RE: Dam 101 Stream Mitigation Project
Date: Thursday, February 22, 2024 2:46:38 PM

Heather,
Your approach in the email below is acceptable. Please retain this email for your records. Please let me know if you nee anything else. (also, note the new desk phone number below)
Bo

James "Bo" Slone, P.G.
Geoscientist
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality
(512) 239-6994

From: hbeatty@cambrianenvironmental.com <hbeatty@cambrianenvironmental.com>
Sent: Thursday, February 22, 2024 9:35 AM
To: James Slone <james.slone@tceq.texas.gov>
Subject: Dam 101 Stream Mitigation Project

Bo,

This is to follow up on our discussion one week ago regarding the type of plan that would be required for the Dam 101 Stream Mitigation project. Note that the project is not at the Dam 101 site but it implements stream mitigation required for the project by US Corps of Engineers Section 404 permitting. The mitigation site is located over 5 miles away along a tributary to the Chandler Branch above Meadow Lake, an impoundment formed by Dam 14 in Round Rock.

I have reviewed the engineer's plans for the mitigation project which would be submitted to your office along with a WPAP Exception Request application. Per our discussion, this would be the appropriate plan type because the project is to improve in stream conditions, it does not add impervious cover and it occurs within a floodplain and stream channel that has been previously disturbed. AECOM personnel conducted a field investigation as part of their coordination with the USCOE. For these reasons, an exception would be requested for permanent best management practices and a geologic assessment. The plans include a sheet for construction sequencing and erosion control.

Please confirm this understanding at your convenience.

Regards,
Heather

Heather Beatty, P.G.

Senior Karst Geologist

Cambrian Environmental
4422 Pack Saddle Pass, Suite 204
Austin, Texas 78745
512-470-4013
cambrianenvironmental.com

Recharge and Transition Zone Exception Request Form

Texas Commission on Environmental Quality
30 TAC §213.9 Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.
Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Recharge and Transition Zone Exception Request Form** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: Heather Beatty, PG
Date: 8/8/2025
Signature of Customer/Agent:

Regulated Entity Name: UPPER BRUSHY CREEK WS SCS SITE 14 DAM

Exception Request

1. ☒ **Attachment A - Nature of Exception**. A narrative description of the nature of each exception requested is attached. All provisions of 30 TAC §213 Subchapter A for which an exception is being requested have been identified in the description.
2. ☒ **Attachment B - Documentation of Equivalent Water Quality Protection**. Documentation demonstrating equivalent water quality protection for the Edwards Aquifer is attached.

Administrative Information

3. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions. The copies must be submitted to the appropriate regional office.
4. ☒ The applicant understands that no exception will be granted for a prohibited activity in Chapter 213.
5. ☒ The applicant understands that prior approval under this section must be obtained from the executive director for the exception to be authorized.

UPPER BRUSHY CREEK WS SCS Site 14 Dam
Recharge and Transition Zone Exception Request Form

ATTACHMENT A – Nature of Exception

An exception request is being submitted because the project is intended to replace the stream functions, it does not add impervious cover and it occurs within a floodplain and stream channel that has been previously disturbed. An exception is requested from the requirements to provide a geologic assessment and a permanent stormwater section that are required for a complete water pollution abatement plan.

UPPER BRUSHY CREEK WS SCS Site 14 Dam
Recharge and Transition Zone Exception Request Form

ATTACHMENT B – Documentation of Equivalent Water Quality Protection

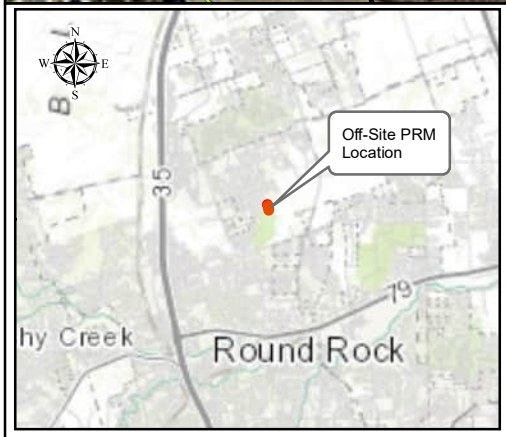
AECOM personnel conducted field investigations of the proposed project in July 2020 and January 2021. Results of the investigation document that the site has been previously disturbed and constructed as a flood control facility. The existing channel consists of a straight concrete lined pilot channel that conveys low flows to the Dam 14 reservoir, also known as Meadow Lake. The geology of the Dam 14 site is described in a geologic assessment for the rehabilitation of the existing embankment (EAPP ID #11003346). No sensitive features were identified in the assessment.

The project is designed improve water quality by restoring an existing stream channel. Permanent stormwater treatment measures are not required for the project because it does not cause an increase in total suspended solids. The project does not add impervious cover. The stream restoration activities will:

- Improve stream and aquatic functions by removing the existing concrete lined stream channel and constructing a stable stream channel in the native soils using natural materials; and

- Improve the riparian buffer though the planting of native trees, shrubs, and herbaceous vegetation.

Please see attached design plans.



Legend

- Off-Site PRM Stream
- Parks

N

0 250 500 Feet

OFF-SITE PRM LOCATION

DAM 101 FLOOD MITIGATION PROJECT

AECOM Technical Services
13640 Briarwick Drive
Suite 200
Austin, TX 78729
www.aecom.com
TBPE Reg. No. F-3580

Date	Project	Figure
12/13/2021	60596433	3

Temporary Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

To ensure that the application is administratively complete, confirm that all fields in the form are complete, verify that all requested information is provided, consistently reference the same site and contact person in all forms in the application, and ensure forms are signed by the appropriate party.

Note: Including all the information requested in the form and attachments contributes to more streamlined technical reviews.

Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Temporary Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Heather Beatty, PG

Date: 8/8/2025

Signature of Customer/Agent:

Regulated Entity Name: Upper Brushy Creek WS SCS Site 14 Dam

Project Information

Potential Sources of Contamination

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

   ☒ The following fuels and/or hazardous substances will be stored on the site: Gasoline and Diesel for use in the equipment and machinery

   These fuels and/or hazardous substances will be stored in:

   ☐ Aboveground storage tanks with a cumulative storage capacity of less than 250 gallons will be stored on the site for less than one (1) year.

☒ Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

☐ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An Aboveground Storage Tank Facility Plan application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

☐ Fuels and hazardous substances will not be stored on the site.

2. ☒ **Attachment A - Spill Response Actions**. A site specific description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances is attached.

3. ☒ Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. ☒ **Attachment B - Potential Sources of Contamination**. A description of any activities or processes which may be a potential source of contamination affecting surface water quality is attached.

Sequence of Construction

5. ☒ **Attachment C - Sequence of Major Activities**. A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is attached.

   ☒ For each activity described, an estimate (in acres) of the total area of the site to be disturbed by each activity is given.

   ☒ For each activity described, include a description of appropriate temporary control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Chandler Branch of Brushy Creek

Temporary Best Management Practices (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. All structural BMPs must be shown on the site plan.

7. ☒ **Attachment D – Temporary Best Management Practices and Measures**. TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information is attached:

☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.

☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. ☒ The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. ☒ **Attachment F - Structural Practices**. A description of the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site is attached. Placement of structural practices in floodplains has been avoided.

10. ☒ **Attachment G - Drainage Area Map**. A drainage area map supporting the following requirements is attached:

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

☒ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. Erosion and sediment controls other than sediment basins or sediment traps within each disturbed drainage area will be used.

11. ☐ **Attachment H - Temporary Sediment Pond(s) Plans and Calculations**. Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are attached.

☒ N/A

12. ☒ **Attachment I - Inspection and Maintenance for BMPs.** A plan for the inspection of each temporary BMP(s) and measure(s) and for their timely maintenance, repairs, and, if necessary, retrofit is attached. A description of the documentation procedures, recordkeeping practices, and inspection frequency are included in the plan and are specific to the site and/or BMP.

13. ☒ All control measures must be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. ☒ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. ☒ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. ☒ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

Soil Stabilization Practices

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. ☒ **Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices**. A schedule of the interim and permanent soil stabilization practices for the site is attached.

18. ☒ Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. ☒ Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

Administrative Information

20. ☒ All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. ☒ If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

22. ☒ Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

UPPER BRUSHY CREEK WS SCS Site 14 Dam
Temporary Stormwater Section

ATTACHMENT A - Spill Response Actions

The measures to be taken to contain spills of hydrocarbons or hazardous substances are as follows:

- If it is safe to do so, identify the source and stop the leak or spill.
- Eliminate ignition sources, including engines.
- Establish containment around the spill or ensure that established containment is secure (i.e., place booms, dirt or sorbent, or any other activity that is safe and will keep the release material from spreading).
- Call for outside help, if necessary.
- If the volume released exceeded the reportable quantity (25 gallons to land or a sheen to water), call the National Response Center (800-424-8802) and the Texas Emergency Oil Spill and Hazardous Substance Reporting (24-Hour) (800-832-8224).
- Supervise containment, repairs and remediation activities.
- Ensure that all wastes are properly collected and disposed.
- Conduct sampling, if necessary, to document the removal of all spilled materials.
- Document the event and remediation in the Storm Water Pollution Prevention Plan (SWPPP).

UPPER BRUSHY CREEK WS SCS Site 14 Dam
Temporary Stormwater Section

ATTACHMENT B - Potential Sources of Contamination

The potential sources of pollution of stormwater from construction operations include: sediment from exposed soils, sediment from stockpile areas, and other disturbed areas such as a temporary access road. Other potential sources of pollution are spills of fuels, lubricants, antifreeze. Activities that have a limited potential to contaminate storm water would include:

- Storage, staging and lay-down of equipment;
- Water flows entering the construction area;
- Areas used to perform maintenance on construction equipment;
- Fuel, lubricant, and antifreeze leaks and spills from construction equipment or dump trucks;
- Oil/condensate leaks to the surrounding environment due to construction accidents; and
- Trash and debris.

In addition, the contractor will be responsible for preparing and implementing the Storm Water Pollution Prevention Plan which describes all measures that will be taken to address environmental requirements, including erosion/sediment controls, equipment maintenance, fueling practices, handling of materials and waste, employee training, etc. Contractor responsibilities will also be clearly specified in the general construction contract.

UPPER BRUSHY CREEK WS SCS Site 14 Dam
Project Name: Dam 101 Stream Mitigation
Temporary Stormwater Section

ATTACHMENT C - Sequence of Major Activities

The sequence of activities is detailed on the Erosion Control sheet. The stream restoration construction will proceed “in the dry” from the upstream end of the project area to the downstream end.

UPPER BRUSHY CREEK WS SCS Site 14 Dam
Temporary Stormwater Section

ATTACHMENT D - Temporary Best Management Practices and Measures

Temporary best management practices (BMPs) will include the use of erosion and sediment controls, bypass operations, revegetation practices, and restrictions on the storage of fuel on the site. All areas within the project area will be subject to temporary control measures in order to prevent and minimize the discharge of pollutants. Temporary BMPs will be used during construction and after construction until permanent vegetation is re-established within the limits of disturbance (LOD). These temporary BMPs are discussed below and in further detail in the construction plans.

There will be a temporary access road leading from Lakeside Loop to the stream restoration site. A stabilized entrance/exit and will be installed and maintained to minimize tracking onto the public road. Erosion controls logs will surround the contractor's staging area.

A temporary fuel storage tank is proposed as a contractor's contingency. A minimum separation distance of 150 feet will be maintained between a fuel tank and the existing stream channel. Any storage of liquid fuels or hazardous materials will be within the limits of disturbance.

The concrete pilot channel will remain in place and maintain stream flows while the new channel is being constructed. Stream flow shall only be diverted to the proposed channel after finished grade has been achieved and the work area has been seeded and mulched. Details of bypass operations are described in the sequence of construction and erosion control plan.

The construction plans serve as the basis for the contractor's Storm Water Pollution Prevention Plan. The plan describes all measures that will be taken to address environmental requirements, including erosion/sediment controls, equipment maintenance, fueling practices, handling of materials, etc. Contractor responsibilities will also be clearly specified in the general construction contract. More details are described in the construction plans.

UPPER BRUSHY CREEK WS SCS Site 14 Dam
Temporary Stormwater Section

ATTACHMENT F - Structural Practices

Based on the nature of the project there is no need for structural practices such as sediment traps or sedimentation ponds. However, pump around diversion procedures will be used to bypass flows away from soils exposed in the new channel. For reference, construction guidelines regarding pumping are found on Sheet 2 of 17 (Notes) and on Sheet 17 of 17 (Erosion Control).

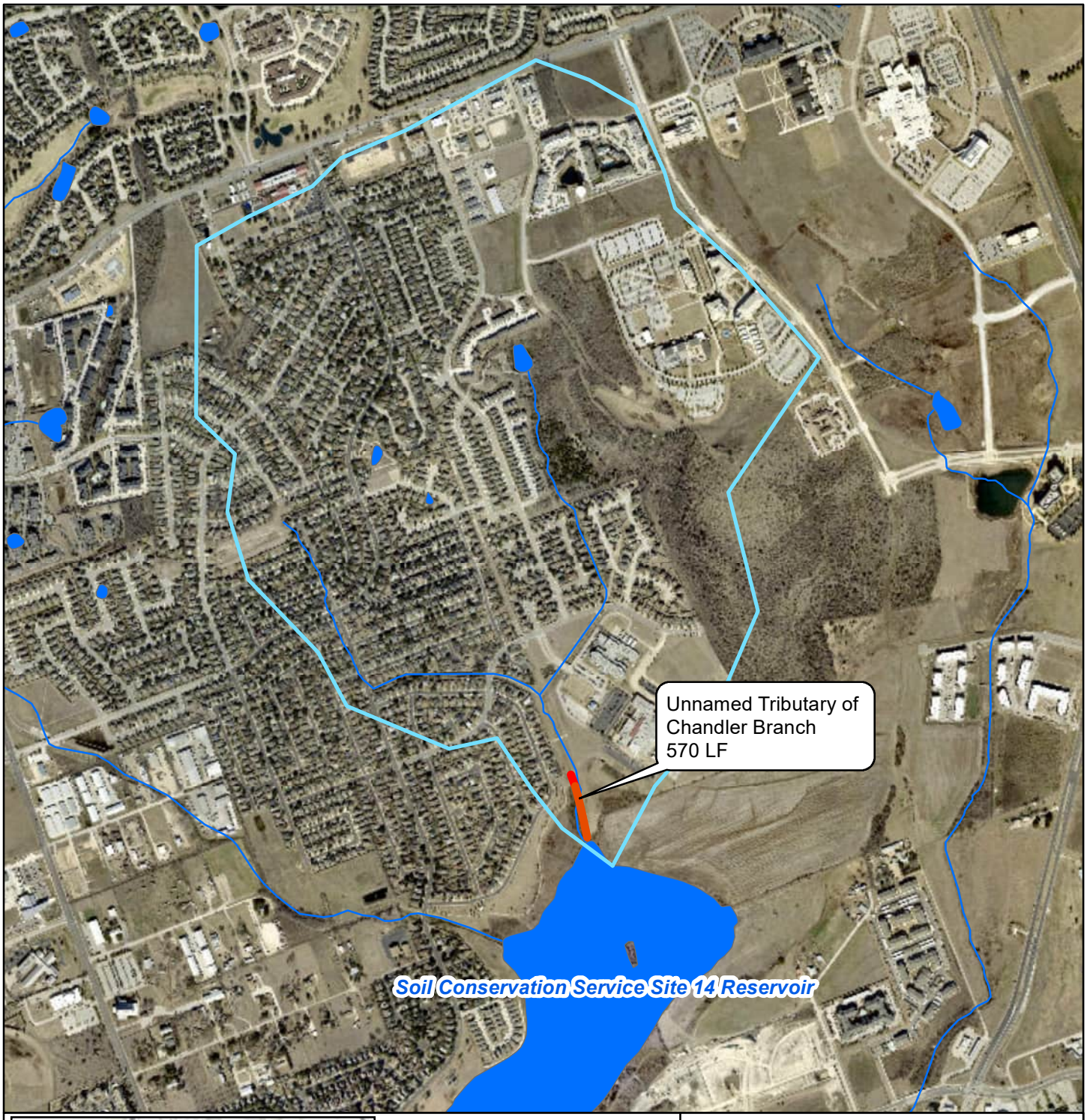
Erosion control logs or sediment bags will be placed to detain runoff while suspended solids settle out. The controls will remain throughout construction until permanent vegetation is established.

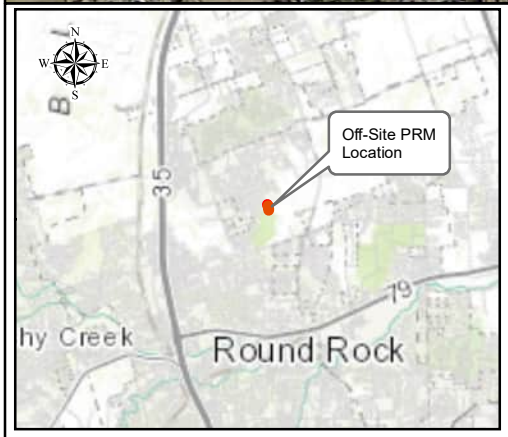
UPPER BRUSHY CREEK WS SCS Site 14 Dam
Temporary Stormwater Section

ATTACHMENT G - Drainage Area Map

A drainage area map is attached. The limits of construction are less than 10 acres. Meadow Lake serves at a sediment basin for this area.

Please see the drainage area map with the watershed to the site shown behind this page. The site is situated at the low point in the watershed just above SCS Site 14.





Legend

- Off-Site PRM Stream
- Waterbodies- USGS NHD
- Tributaries- USGS NHD
- Watershed

N

0 800 1,600 Feet

WATERSHED OF OFF-SITE PRM LOCATION

DAM 101 FLOOD MITIGATION PROJECT

AECOM Technical Services
13640 Briarwick Drive
Suite 200
Austin, TX 78729
www.aecom.com
TBPE Reg. No. F-3580

Date 12/13/2021	Project 60596433	Figure 4

UPPER BRUSHY CREEK WS SCS Site 14 Dam
Temporary Stormwater Section

ATTACHMENT I - Inspection and Maintenance for BMPs

Temporary BMPs will be inspected and maintained throughout construction to provide the highest protection to surface waters. The contractor will be responsible for record-keeping and ensuring that a qualified individual conducts the inspections as required. Inspection documentation will be available upon inspection. If a repair or replacement is necessary, it will be done at the earliest date possible, but no later than 7 calendar days after the surrounding exposed ground has dried sufficiently to prevent further damage from heavy equipment.

Erosion Control Logs

- will be inspected after installation for gaps under the logs and for gaps between the joints of adjacent ends of logs
- will be inspected every 7-days and within 24-hours of a rainfall event of 0.5-inches or greater event and replaced or repaired, if necessary
- sediment retained by the mulch socks shall be removed when it has reached half the height of the log

Stabilized Construction Entrance/Exit

- will be inspected for mud accumulation and tracking onto the public road
- will be inspected every 7-days and within 24-hours of a rainfall event of 0.5-inches or greater event and replaced or repaired, if necessary
- maintenance activities may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of BMPs used to trap sediment.
- All sediment spilled, dropped, washed or tracked onto public rights-of-way will be removed as soon as practical

Temporary Vegetation

- Temporary vegetation should be inspected weekly and after each rain event to locate and repair any erosion.
- Erosion from storms or other damage should be repaired as soon as practical
- If the vegetated cover is less than 80%, the area should be re-seeded.

UPPER BRUSHY CREEK WS SCS Site 14 Dam
Temporary Stormwater Section

ATTACHMENT J - Schedule of Interim and Permanent Soil Stabilization Practices

If disturbed areas are not to be worked for more than 14 days, they will be stabilized by revegetation, mulch or covering. Permanent vegetation will be installed in all areas not covered by concrete within 14 days of final grading. See the vegetation plan and vegetation schedule plan sheets for detailed soil stabilization practices.

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I Alysha Girard,
Print Name

General Manager,
Title - Owner/President/Other

of Upper Brushy Creek Water Control and Improvement District,
Corporation/Partnership/Entity Name

have authorized Heather Beatty
Print Name of Agent/Engineer

of Cambrian Environmental
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Alysha L. Girard
Applicant's Signature

28FEB2024
Date

THE STATE OF Texas §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Alysha L. Girard known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 28th day of February, 2024

Lisa Moravitz
NOTARY PUBLIC

LISA MORAVITZ
Notary Public, State of Texas
Comm. Expires 11-27-2024
Notary ID 12176931

Lisa Moravitz
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 11-27-2024

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Upper Brushy Creek WS SCS Site 14 Dam
Regulated Entity Location: City Limits of Round Rock
Name of Customer: Upper Brushy Creek Water Control and Improvement District
Contact Person: Heather Beatty Phone: 512-470-4013
Customer Reference Number (if issued):CN 602679904
Regulated Entity Reference Number (if issued):RN RN101713683

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

Application fees must be paid by check, certified check, or money order, payable to the **Texas Commission on Environmental Quality**. Your canceled check will serve as your receipt. **This form must be submitted with your fee payment**. This payment is being submitted to:

☒ Austin Regional Office
☐ Mailed to: TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ San Antonio Regional Office
☐ Overnight Delivery to: TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
(512)239-0357

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	$
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	1 Each	$ 500.00
Extension of Time	Each	$

Signature: _____

Date: 8/7/2025

Application Fee Schedule

Texas Commission on Environmental Quality
Edwards Aquifer Protection Program 30 TAC Chapter 213 (effective 05/01/2008)

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

Project	*Project Area in Acres*	*Fee*
One Single Family Residential Dwelling	< 5	$650
Multiple Single Family Residential and Parks	< 5 5 < 10 10 < 40 40 < 100 100 < 500 ≥ 500	$1,500 $3,000 $4,000 $6,500 $8,000 $10,000
Non-residential (Commercial, industrial, institutional, multi-family residential, schools, and other sites where regulated activities will occur)	< 1 1 < 5 5 < 10 10 < 40 40 < 100 ≥ 100	$3,000 $4,000 $5,000 $6,500 $8,000 $10,000

Organized Sewage Collection Systems and Modifications

Project	*Cost per Linear Foot*	*Minimum Fee-Maximum Fee*
Sewage Collection Systems	$0.50	$650 - $6,500

Underground and Aboveground Storage Tank System Facility Plans and Modifications

Project	*Cost per Tank or Piping System*	*Minimum Fee-Maximum Fee*
Underground and Aboveground Storage Tank Facility	$650	$650 - $6,500

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	***Fee***
Extension of Time Request	$150

TCEQ Core Data Form

TCEQ Use Only

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal (*Core Data Form should be submitted with the renewal form*) ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 602679904		RN 101713683

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☐ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name (*If an individual, print last name first: eg: Doe, John*) *If new Customer, enter previous Customer below:*

Upper Brushy Creek Water Control and Improvement District

7. TX SOS/CPA Filing Number	8. TX State Tax ID (11 digits)	9. Federal Tax ID (9 digits)	10. DUNS Number *(if applicable)*

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ State ☒ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☒ Owner ☒ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

460 Texas Avenue

City	Round Rock	State	TX	ZIP	78664	ZIP + 4	

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*
	www.ubcdams.org

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 284-7685		( ) -

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected below this form should be accompanied by a permit application*)

☐ New Regulated Entity ☐ Update to Regulated Entity Name ☐ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name (*Enter name of the site where the regulated action is taking place.*)

Upper Brushy Creek WS SCS Site 14 Dam

23. Street Address of the Regulated Entity: *(No PO Boxes)*	N/A						
	City		**State**		**ZIP**		**ZIP + 4**
24. County							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**
Round Rock			TX		78681
27. Latitude (N) In Decimal:		**28. Longitude (W) In Decimal:**			
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
9511		924110	

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Flood Control

34. Mailing Address:							
	City		**State**		**ZIP**		**ZIP + 4**
35. E-Mail Address:							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
( ) -		( ) -

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Heather Beatty	**41. Title:**	Geologist

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 470-4013		( ) -	hbeatty@cambrianenvironmental.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Cambrian Environmental	**Job Title:**	Geologist
Name *(In Print):*	Heather Beatty	**Phone:**	(512) 470-4013

Signature:	Howard Beatty	Date:	8/9/2025

PROJECT OWNER:

UPPER BRUSHY CREEK WATER
CONTROL AND IMPROVEMENT DISTRICT
460 TEXAS AVENUE
ROUND ROCK, TX 78664
(512) 284-7685

ENGINEER:

AECOM
CONTACT: CLINTON KIMBALL, PE
13640 BRIARWICK DRIVE
SUITE 200 AUSTIN, TX 78729
(512) 454-4797

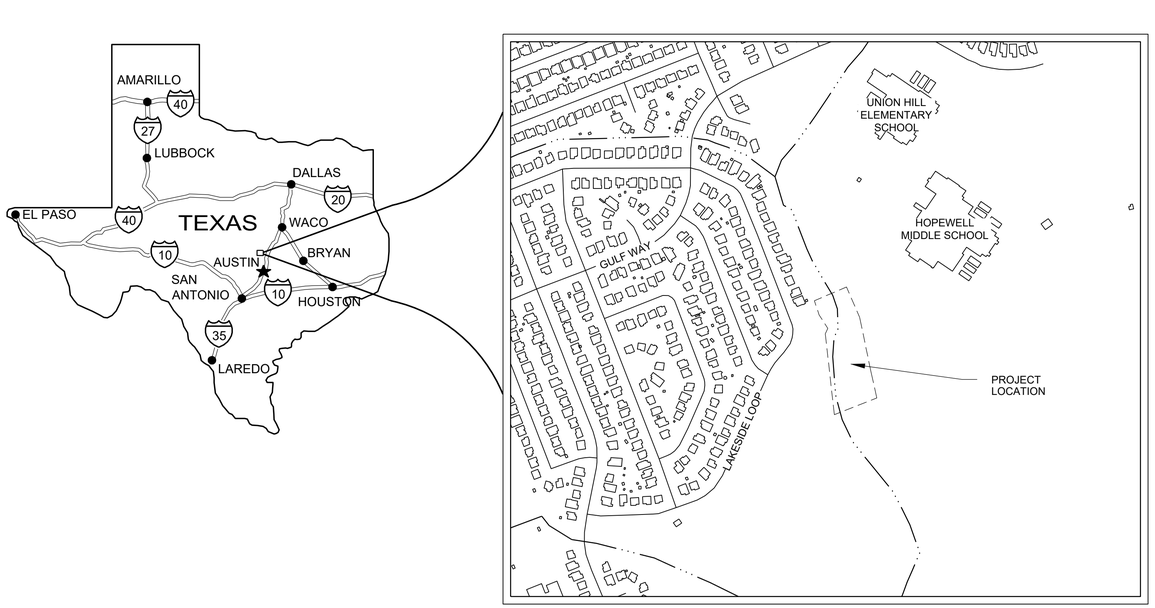
Upper Brushy Creek
Water Control and Improvement District

Upper Brushy Creek WCID
460 Texas Avenue
Round Rock, Texas 78664
(512) 284-7685
www.ubcdams.org

DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

WILLIAMSON COUNTY, TEXAS
FEBRUARY, 2023

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	NOTES
3	ALIGNMENT
4	EXISTING CONDITIONS
5	PROPOSED CONDITIONS
6	PROPOSED CONDITIONS AND CROSS SECTIONS
7	CROSS SECTIONS
8	CROSS SECTIONS
9	GENERAL DETAILS
10	GENERAL DETAILS
11	GENERAL DETAILS
12	GENERAL DETAILS
13	GENERAL DETAILS
14	VEGETATION PLAN
15	VEGETATION SCHEDULE
16	VEGETATION SCHEDULE
17	EROSION CONTROL



VICINITY MAP
1" = 400'
LAT: 30.550134, LONG: -97.660832

100% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION
FOR PERMITTING ONLY

AECOM
9400 Amberglen Blvd.
Austin, Texas 78729
www.aecom.com
TBPE Reg. No. F-3580

SUBMITTED BY:

ENGINEER: CLINTON DAN KIMBALL, PE
TEXAS PE NO. 115807
DATE

AUTHORIZED FOR CONSTRUCTION BY:

PROJECT OWNER: ALYSHA GIRARD, PE
UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT
DATE

GENERAL NOTES:

1. THE PLANS AND SPECIFICATIONS WILL NOT BE SUBSTANTIALLY CHANGED WITHOUT EITHER WRITTEN APPROVAL OF THE EXECUTIVE DIRECTOR OF TCEQ BEFORE THE WORK IS STARTED OR NOTIFICATION OF THE CHANGES, AS DEFINED IN THE 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 299.26, CONSTRUCTION CHANGE ORDERS.

SEQUENCE OF CONSTRUCTION

1. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING ON SITE WITH THE PROJECT ENGINEER, CONSTRUCTION SUPERVISOR, AND APPROPRIATE CITY PERSONNEL TO REVIEW THE EROSION PREVENTION AND SEDIMENT CONTROL REQUIREMENTS. SEQUENCE OF CONSTRUCTION, LIMITS OF DISTURBANCE, CHANNEL LAYOUT, AND TREE IMPACT BEFORE WORK BEGINS. STAKE OUT THE LIMIT OF DISTURBANCE AND CONSTRUCTION BASELINE FOR NEW ALIGNMENT (CHANNEL THALWEG).

2. NOTIFY THE DISTRICT AND PROJECT ENGINEER AT LEAST 7 DAYS PRIOR TO CONSTRUCTION.

3. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND OTHER PERIMETER CONTROL MEASURES AS SHOWN ON THE APPROVED EROSION CONTROL PLAN.

4. ESTABLISH STAGING AND STOCKPILE AREAS AND INSTALL SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF EACH AREA.

5. WHEN EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE ADEQUATELY INSTALLED PER APPROVED EROSION CONTROL PLAN, THE CONTRACTOR MAY BEGIN GRADING OPERATIONS.

6. BEGIN INVASIVE SPECIES REMOVAL OPERATIONS ACCORDING TO THE PROJECT MANUAL AND AS DIRECTED BY THE PROJECT ENGINEER.

7. THE CONCRETE CHANNEL SHALL REMAIN IN PLACE AND MAINTAIN STREAM FLOWS WHILE THE NEW CHANNEL IS BEING CONSTRUCTED.THE ACTIVE WORK AREA SHALL ONLY BE AS LARGE OF AN AREA THAT CAN BE CONSTRUCTED TO FINAL GRADES IN ONE DAY. NO WORK SHALL BE CONDUCTED IN THE PROPOSED CHANNEL DURING RAIN EVENTS.

8. REFER TO TYPICAL CROSS SECTIONS FOR RIFFLES AND POOLS. INSTALL STREAM STABILIZATION PRACTICES AS INDICATED ON THE CONSTRUCTION DRAWINGS.

9. DISTURBED AREAS WILL BE SEEDED OR MULCHED AND TACKED DAILY AS WORK PROGRESSES. EACH DAY'S WORK WILL BE COMPLETED WORK (FINAL GRADES), INCLUDING PROVISIONS FOR GROUND COVER. WHEN FINAL GRADES ARE ESTABLISHED, SEED AND MULCH SHALL BE APPLIED PER THE PLANTING SCHEDULE AND SPECIFICATIONS.

10. STREAM FLOW SHALL ONLY BE DIVERTED TO THE PROPOSED CHANNEL FROM THE CONCRETE CHANNEL AFTER FINISHED GRADE HAS BEEN ACHIEVED AND AREA HAS BEEN SEEDED AND MULCHED. AFTER THE STREAM IS DIVERTED, THE CONCRETE CHANNEL MAY BE REMOVED.

11. ALL EXCESS SOIL SHALL BE PLACED IN THE DESIGNATED FILL AREAS AS SHOWN ON THE CONSTRUCTION DRAWINGS OR DIRECTED BY THE PROJECT ENGINEER. ALL EXCESS SOIL BROUGHT TO THE DESIGNATED FILL AREA SHALL BE GRADED TO BLEND WITH THE SURROUNDING CONTOURS. THE CONTRACTOR SHALL MAINTAIN THE ACCESS WAY TO THE FILL AREAS IN A STABLE MANNER SUCH THAT SEDIMENTS WILL NOT BE WASHED INTO THE STREAM DURING RAIN EVENTS. FILL MATERIAL SHALL BE DISKED INTO EXISTING MATERIAL TO A MINIMUM DEPTH OF 6 INCHES.

12. WHEN CONSTRUCTION IS COMPLETE, STABILIZE ANY REMAINING DISTURBED AREAS. PERMANENT GROUNDCOVER MUST BE INITIATED WITHIN 14 CALENDAR DAYS FOLLOWING THE MOST RECENT DISTURBANCE.

13. PLANT TREES, SHRUBS, AND LIVE STAKES ACCORDING TO THE PLANTING SCHEDULE AT A TIME APPROVED BY THE PROJECT ENGINEER.

14. WITH THE APPROVAL OF THE PROJECT ENGINEER, REMOVE THE SEDIMENT CONTROL MEASURES, STABILIZE ANY AREAS DISTURBED BY EPSC MEASURE REMOVAL.

NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EPSC MEASURES DURING CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH APPROVED SWPPP.

2. EPSC MEASURES SHALL BE INSPECTED TWICE WEEKLY.

3. CONTRACTOR SHALL CONDUCT OWN UNDERGROUND UTILITIES INVESTIGATION BEFORE COMMENCEMENT OF CONSTRUCTION.

GENERAL CONSTRUCTION NOTES

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - THE NAME OF THE APPROVED PROJECT;
   - THE ACTIVITY START DATE; AND
   - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.

3. IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.

4. NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.

5. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

6. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.

7. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.

8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.

9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.

10. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.

11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
   - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
   - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
   - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:

   A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;

   B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;

   C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

STREAM RESTORATION NOTES:

PRE-CONSTRUCTION PREPARATION & NOTIFICATION

A. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, NON-IMPACTED WETLANDS SHALL BE FLAGGED AND NO DISTURBANCE SHALL OCCUR WITHIN THESE AREAS.

B. EXISTING PLANT MATERIALS SUITABLE FOR RELOCATION, TRANSPLANT OR LIVE STAKING SUCH AS WILLOWS, ALDERS, SYCAMORE AND OTHER TREES OR SHRUBS, SHALL BE FLAGGED OR OTHERWISE MARKED PRIOR TO ANY GRADING ACTIVITIES WITHIN THE RESPECTIVE STREAM SEGMENT.

SURVEYING

A. THE CONTRACTOR'S SURVEYOR WILL STAKE OUT THE NEW STREAM ALIGNMENT. CONTROL BENCHMARKS SHALL BE CLEARLY MARKED AT A MINIMUM OF 1,000-FOOT INTERVALS ALONG THE PROPOSED STREAM CHANNEL.

B. IF DURING CONSTRUCTION, THE EXISTING ELEVATIONS (ESPECIALLY STREAM INVERT ELEVATIONS) SHOWN ON THESE CONSTRUCTION DRAWINGS ARE FOUND TO DIFFER MORE THAN 0.2 FEET FROM THE ELEVATIONS IN THE FIELD, OR IF BEDROCK CONDITIONS POSE ISSUES TO THE CONSTRUCTION PLANS, THE CONTRACTOR MUST NOTIFY THE PROJECT ENGINEER IMMEDIATELY FOR AN ADJUSTMENT IN ELEVATIONS. REVIEW TIME FOR ADJUSTMENTS WILL TAKE A MINIMUM OF TWO (2) WEEKS.

MINIMIZING IMPACTS

A. ALL NECESSARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE ATTACHED EROSION AND SEDIMENT CONTROL NOTES PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES. ALTERNATIVE AND/OR ADDITIONAL MEASURES SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO INSTALLATION.

B. DISTURBANCE OF EXISTING MATURE TREES SHALL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE. SHRUBS AND SMALL TREES SUITABLE FOR RELOCATION SHALL BE CLEARLY MARKED BY THE CONTRACTOR PRIOR TO THE PRE-CONSTRUCTION MEETING AND INCORPORATED INTO THE PLANNING FOR EACH SECTION OF PROPOSED STREAM ACTIVITY. TREE PROTECTION MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS TO PRESERVE TREES NOT UTILIZED FOR STRUCTURES OR DISTURBED BY GRADING. CONTRACTOR SHALL ONLY REMOVE VEGETATION NECESSARY TO PERFORM GRADING OPERATIONS DEPICTED ON THE CONSTRUCTION DRAWINGS. TREE AND ROOT DAMAGE SHALL BE AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE WITHIN THE PROJECT BOUNDARY AND TEMPORARY CONSTRUCTION ACCESS AREAS.

C. MATERIALS, SUPPLIES OR EQUIPMENT SHALL BE STOCKPILED AND/OR STORED OUTSIDE OF NON-IMPACT WETLAND LIMITS. CONTRACTOR SHALL NOT TRAVEL ACROSS, STORE SPOILS ON OR OTHERWISE IMPACT THE NON-IMPACT WETLANDS AND FLAGGED BUFFER AREAS. ALL TEMPORARY IMPACTS TO WETLANDS SHALL BE RE-VEGETATED. SWAMP MATS WILL BE USED WHERE TRAVEL IS NECESSARY THROUGH DESIGNATED WETLAND AREAS.

D. MATERIAL STORAGE AND STAGING AREAS SHALL BE LOCATED AND PROTECTED AS SHOWN ON THE ATTACHED EROSION AND SEDIMENT CONTROL PLAN SHEETS. ANY DEVIATION FROM THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE APPROVED BY THE PROJECT ENGINEER AND OWNER PRIOR TO IMPLEMENTATION. ALL EQUIPMENT AND SUPPLIES SHALL BE STORED WITHIN THE CONSTRUCTION STAGING AREA WHILE CONSTRUCTION ACTIVITIES HAVE CEASED FOR THE DAY.

E. THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS AND DISPOSE OF OFFSITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. ANY NECESSARY PERMITS REQUIRED FOR SUCH DISPOSAL SHALL BE OBTAINED BY THE CONTRACTOR AT THEIR EXPENSE.

F. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND DEVICES NECESSARY TO PROTECT THE PROJECT LIMITS, ADJACENT PROPERTY, EMPLOYEES, AND THE GENERAL PUBLIC FOR THE DURATION OF THE PROJECT CONSTRUCTION.

G. EXISTING PLANT MATERIALS SELECTED FOR RELOCATION SHALL BE EXCAVATED DURING GRADING ACTIVITIES IN THE RESPECTIVE STREAM SEGMENT. PLANT EXCAVATION SHALL BE PERFORMED WITH GREAT CARE IN ORDER TO RETAIN THE ROOT STRUCTURE WITHIN THE DRIP-LINE OF THE PLANT, AND ROOTS SHALL NOT BE ALLOWED TO DRY OUT DURING TEMPORARY STORAGE AND RELOCATION.

H. STRIP AND STOCKPILE TOPSOIL IN DESIGNATED MATERIAL STORAGE AREAS.

I. THE CONTRACTOR SHALL REMOVE ALL TREES, STUMPS, SHRUBS, BRUSH, AND OTHER ORGANIC MATERIAL WITHIN THE GRADING LIMITS NECESSARY TO FACILITATE EARTHWORK ACTIVITIES. OTHER DEBRIS SHALL ALSO BE REMOVED (TIRES, CARS, ETC.).

J. ALL NATIVE TREES, STUMPS, SHRUBS, BRUSH AND OTHER ORGANIC MATERIAL REMOVED WITHIN GRADING LIMITS SHOULD BE STORED IN THE PROPER STORAGE AREAS AND USED FOR INSTREAM STRUCTURES (LOG CROSS VANES, LOG VANES AND TOE WOOD), OR TRANSPLANTS/LIVE STAKES. INSTREAM STRUCTURES LOGS SHALL BE RAW WITH BARK AND SHALL NOT BE DEAD, ROTTED OR FROM THE PINE FAMILY.

K. ALL ADDITIONAL MATERIAL MAY BE CHIPPED AND STOCKPILED ON-SITE FOR SUBSEQUENT USE BY THE CONTRACTOR FOR ORGANIC MATTER (OR MULCH) WITHIN THE PROJECT LIMITS.

CONSTRUCTION GUIDELINES

A. ALL REFERENCES TO "LEFT" AND "RIGHT" IN THE CONSTRUCTION DRAWINGS ARE IN REFERENCE TO LOOKING DOWNSTREAM.

B. CONSTRUCTION SHALL PROCEED FROM UPSTREAM TO DOWNSTREAM FOR EVERY STREAM. CONSTRUCTION SHOULD PROGRESS IN A MANNER THAT ALLOWS FOR THE COMPLETION OF STREAM SEGMENTS ON A WEEKLY BASIS UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER OR THE STAKES. UPON COMPLETION OF EACH SEGMENT THE AREA SHOULD BE STABILIZED, SEEDED AND MULCHED. IF NEEDED, PUMP ANY BASE STREAM FLOW FROM UPSTREAM OF THE ACTIVE WORK AREA TO DOWNSTREAM OF THE ACTIVE WORK AREA.

C. THE CONTRACTOR IS RESPONSIBLE FOR DESCRIBING THEIR PROPOSED CONSTRUCTION MEANS AND METHODS IN THEIR WORKFLOW PLAN.

D. CONTRACTOR IS RESPONSIBLE TO MONITOR WEATHER FORECASTS AND PREPARE SITE CONDITIONS, INCLUDING EROSION CONTROL MEASURES, FOR PENDING STORMS. THE CONTRACTOR SHALL INSTALL A RAIN GAUGE ON SITE AND MONITOR IT DAILY. THE RESULTS SHOULD BE INCLUDED IN THE DAILY REPORTS.

E. THE CONTRACTOR SHALL PERFORM ALL ROUGH AND FINE GRADING EARTHWORK OPERATIONS IN ACCORDANCE WITH PROPOSED GRADES AND TECHNICAL SPECIFICATIONS, AS SHOWN HEREIN. CONTRACTOR MUST RECEIVE FINE GRADING APPROVAL FROM ENGINEER PRIOR TO STABILIZING REQUISITE AREAS. ALL AREAS DISTURBED BY CONSTRUCTION AND AS NOTED SHALL BE PERMANENTLY STABILIZED WITH MARYLAND CERTIFIED SOD OR SEED AND STRAW MULCH. SEED MIXTURE TO BE 80% TALL FESCUE AND 20% PERENNIAL RYE GRASS.

F. ON BENCHES AND SLOPES ABOVE BANKFULL ELEVATION, THE CONTRACTOR SHALL STRIP, STOCKPILE, AND REPLACE 6 INCHES OF TOPSOIL PRIOR TO ACHIEVING FINAL DESIGN ELEVATION. EACH SECTION SHALL BE ROUGH GRADED FIRST ALONG THE SPECIFIED SEGMENT, THEN INSTALL STRUCTURES AND BRING PROPOSED STREAM BED AND BANKS TO FINAL GRADE AS WORK PROCEEDS DOWNSTREAM. EXISTING PLANT MATERIALS THAT HAVE BEEN TEMPORARILY STORED FOR RELOCATION SHALL THEN BE BROUGHT BACK TO THESE AREAS AND REPLANTED AT THE FINAL GRADE.

G. INSTREAM STRUCTURES AND GEO-TEXTILE MATERIAL WILL BE INSTALLED IN ACCORDANCE WITH THE TYPICAL STRUCTURE DETAIL SHEET. THE STRUCTURE DETAIL TABLE FOR THE STREAM SEGMENT WILL NOTE PROPOSED INSTREAM STRUCTURE TYPE, LOCATION, AND INVERT ELEVATIONS. THESE SPECIFICATIONS MUST BE MET FOR PROPER STRUCTURE FUNCTION. IF ONSITE BOUNDARY CONDITIONS DO NOT ALLOW FOR PROPER INSTALLATION THE PROJECT ENGINEER OR OWNER MUST BE NOTIFIED SO THAT ADJUSTMENTS MAY OCCUR. IF EXCESS NATIVE ON-SITE MATERIALS ALLOWS FOR THE USE OF AN ALTERNATIVE STRUCTURE MATERIAL SUCH AS A CROSS VANE COMPOSED OF ROCK BOULDERS RATHER THAN LOGS, THE CHANGE MUST BE APPROVED BY THE PROJECT ENGINEER OR OWNER PRIOR TO IMPLEMENTATION.

H. FINAL GRADE OF THE PROPOSED CHANNEL SHALL UTILIZE THE SPECIFIED BED SUBSTRATE MATERIAL AS THE FINAL LAYER IN THE PROPOSED CHANNEL. STONES SHALL BE PLACED TO CREATE A DENSE MASS WITH A MINIMUM OF VOIDS.

I. EACH STREAM SEGMENT SHALL BE BROUGHT TO FINAL GRADE AND STABILIZED WITHIN THREE (3) DAYS OF ACHIEVING FINAL GRADE BEFORE CONTINUING TO THE NEXT SEGMENT, ALLOWING DIVERTED (PUMP MULCH) STREAM FLOW TO BE REDIRECTED BACK INTO THE EXISTING CHANNEL.

J. AS FINAL GRADE AND STABILIZATION PROGRESS, THE BANKS AND OTHER GRADED SURFACES SHALL BE SEEDED AND MULCHED OR MATTED AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ALL DENUDED AND DISTURBED AREAS UNTIL WHICH TIME THEY HAVE BEEN STABILIZED WITH THE SPECIFIED VEGETATIVE COVER. THE NPDES INSPECTOR AND PROJECT ENGINEER SHALL DETERMINE WHEN THE SITE HAS BEEN COMPLETELY STABILIZED.

K. SPECIFIED PLANTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE ATTACHED CONSTRUCTION DRAWINGS FOLLOWING FINAL GRADING. MATTING, AND SEEDING. CONTRACTOR SHALL ONLY USE ATV SCALE VEHICLES AND SMALL EQUIPMENT TO COMPLETE PLANTING WORK TO AVOID TRACK RUTTING AND DISRUPTION OF FINAL GRADE. PENDING SITE CONDITIONS DICTATE THAT USE OF ANY VEHICLES MAY BE PROHIBITED IN CERTAIN AREAS BY THE PROJECT ENGINEER.

L. UPON COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES. APPROVAL WILL BE GRANTED BY THE CITY EROSION CONTROL INSPECTOR AT THE POINT WHEN VEGETATIVE COVER HAS BEEN ESTABLISHED.

M. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF SPECIFIC STRUCTURES WITHIN THE PROJECT AREA (TRASH, CULVERTS, PIPES, ETC) AS SPECIFIED IN THE GRADING PLAN AND PROFILE SHEETS.

N. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ABOVE GROUND AND BELOW GROUND UTILITY LINE OWNERS.

O. UNDER NO CIRCUMSTANCES WILL ANY MATERIAL BE REMOVED FROM THE SITE OR DELIVERED TO THE SITE WITHOUT PRIOR AUTHORIZATION BY THE PROJECT ENGINEER OR THE OWNER.

P. THE CONTRACTOR WILL BE RESPONSIBLE TO COORDINATE WITH ROCK QUARRIES FOR PROPER SIZING OF STREAMBED SUBSTRATE. THE SUBSTRATE MEASUREMENT IN INCHES IS BASED ON THE INTERMEDIATE AXIS OF AN INDIVIDUAL ROCK, SEE SUBSTRATE DETAIL.

Q. ANY DEVIATIONS FROM THE PLANS MUST BE APPROVED BY THE PROJECT ENGINEER OR OWNER PRIOR TO THE IMPLEMENTATION WITH A MINIMUM REVIEW TIME OF TWO (2) WEEKS.

SOIL MATERIAL

A. STREAMBED SUBSTRATE IS DEFINED AS A CONTRACTOR DEVELOPED MATERIAL MIXTURE SPECIFIED BY THE PROJECT ENGINEER FOR CHANNEL LINING IN ACCORDANCE WITH THESE CONSTRUCTION DRAWINGS. THE STREAM BED SUBSTRATE SHALL BE MIXED TO THE APPROPRIATE PERCENTAGES FOR EACH REACH AS SPECIFIED WITHIN THE SUBSTRATE STAKES. THE MEASUREMENT SPECIFIED IN INCHES IS BASED ON THE INTERMEDIATE AXIS OF AN INDIVIDUAL ROCK.

B. THE MIXTURES LISTED IN THE SUBSTRATE DETAIL ARE FOR GLIDE, RIFFLE AND RUN COMBINATION.

C. THE SUBSTRATE HARVESTED ON SITE MAY BE USED IN THE POOL AREAS.

BACKFILLING & FILL PLACEMENT

A. VEGETATIVE DEBRIS AND DELETERIOUS ORGANIC MATTER SHALL BE REMOVED FROM THE CHANNEL (FILL AREA) PRIOR TO THE PLACEMENT OF FILL.

B. MATERIAL USED FOR FILL SHALL BE SUITABLE MATERIAL AS PREVIOUSLY DEFINED, FREE FROM ROCKS LARGER THAN 4 INCHES IN ANY DIMENSION, DEBRIS, ROOT MASS, CLODS OR DELETERIOUS MATTER. FILL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCHES AND EACH LIFT SHALL BE THOROUGHLY COMPACTED WITH HEAVY EQUIPMENT.

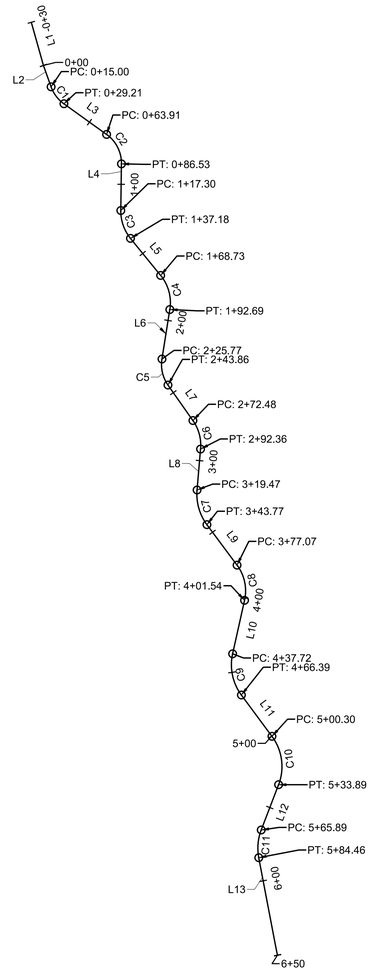
C. STREAMBED SUBSTRATE MIX SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES AND BUCKET COMPACTED WITH HEAVY EQUIPMENT BEFORE PROCEEDING TO ANOTHER LIFT.

DESIGN:
AECOM
AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: SEE DRAWING	NOTES
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14 95% DESIGN**
SHEET: 2 OF 17	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS
PROJECT NO.: 60596433	DATE: DECEMBER, 2021

STRUCTURE CONSTRUCTION DETAILS



Dam101 Structures (Thalweg Station)	N	E	El.	Arm Grade	Description
0+64 Boulder Cross Vane					
1	3137669.11	10174245.88	719.19	5.0%	Arm Tie
2	3137659.51	10174249.48	718.68		Arm Tip
3	3137658.26	10174247.74	718.68		Center
4	3137657.01	10174245.99	718.68		Arm Tip
5	3137657.73	10174239.39	719.01	5.0%	Arm Tie
1+17 Boulder Cross Vane					
6	3137674.55	10174192.78	718.82	5.0%	Arm Tie
7	3137669.77	10174197.54	718.48		Arm Tip
8	3137667.62	10174197.54	718.48		Center
9	3137665.47	10174197.54	718.48		Arm Tip
10	3137662.39	10174187.76	718.99	5.0%	Arm Tie
1+69 Boulder Cross Vane					
11	3137704.05	10174150.32	718.80	5.0%	Arm Tie
12	3137695.56	10174156.06	718.29		Arm Tip
13	3137693.92	10174154.67	718.29		Center
14	3137692.29	10174153.27	718.29		Arm Tip
15	3137691.41	10174146.69	718.62	5.0%	Arm Tie
2+26 Boulder Cross Vane					
16	3137701.09	10174093.92	718.42	5.0%	Arm Tie
17	3137696.92	10174099.37	718.08		Arm Tip
18	3137694.77	10174099.54	718.08		Center
19	3137692.63	10174099.71	718.08		Arm Tip
20	3137688.50	10174090.33	718.59	5.0%	Arm Tie
2+72 Boulder Cross Vane					
21	3137725.01	10174053.81	718.41	5.0%	Arm Tie
22	3137717.10	10174060.08	717.91		Arm Tip
23	3137715.20	10174058.92	717.91		Center
24	3137713.44	10174057.69	717.91		Arm Tip
25	3137712.14	10174051.11	718.25	5.0%	Arm Tie
3+19 Boulder Cross Vane					
26	3137724.44	10174007.76	718.07	5.0%	Arm Tie
27	3137720.09	10174012.91	717.73		Arm Tip
28	3137717.95	10174013.10	717.73		Center
29	3137715.81	10174013.28	717.73		Arm Tip
30	3137711.84	10174003.83	718.24	5.0%	Arm Tie
3+77 Boulder Cross Vane					
31	3137754.28	10173958.68	718.03	5.0%	Arm Tie
32	3137746.05	10173964.80	717.52		Arm Tip
33	3137744.33	10173963.52	717.52		Center
34	3137742.60	10173962.23	717.52		Arm Tip
35	3137741.48	10173955.62	717.86	5.0%	Arm Tie
4+38 Boulder Cross Vane					
36	3137747.15	10173898.85	717.62	5.0%	Arm Tie
37	3137743.60	10173904.43	717.29		Arm Tip
38	3137741.43	10173905.00	717.29		Center
39	3137739.33	10173905.47	717.29		Arm Tip
40	3137734.15	10173896.63	717.80	5.0%	Arm Tie
5+00 Boulder Cross Vane					
41	3137777.43	10173845.85	717.57	5.0%	Arm Tie
42	3137769.10	10173851.82	717.06		Arm Tip
43	3137767.37	10173850.55	717.06		Center
44	3137765.65	10173849.27	717.06		Arm Tip
45	3137764.64	10173842.59	717.40	5.0%	Arm Tie
5+66 Boulder Cross Vane					
46	3137765.05	10173781.83	717.16	5.0%	Arm Tie
47	3137762.29	10173787.99	716.82		Arm Tip
48	3137760.29	10173788.76	716.82		Center
49	3137758.28	10173789.53	716.82		Arm Tip
50	3137751.85	10173781.54	717.33	5.0%	Arm Tie

STRUCTURE LOCATION DATA

STATION	DESCRIPTION	STREAM BED ELEVATION
0+00.00	ROCK STEP POOL - TOP	718.98
0+15.00	ROCK STEP POOL-MIDDLE	718.92
0+29.21	ROCK STEP POOL-BOTTOM	718.86
0+64.00	BOULDER CROSS VANE	718.68
1+17.00	BOULDER CROSS VANE	718.48
1+69.00	BOULDER CROSS VANE	718.29
2+26.00	BOULDER CROSS VANE	718.08
2+72.00	BOULDER CROSS VANE	717.91
3+19.00	BOULDER CROSS VANE	717.73
3+77.00	BOULDER CROSS VANE	717.52
4+38.00	BOULDER CROSS VANE	717.29
5+00.30	BOULDER CROSS VANE	717.06
5+66.00	BOULDER CROSS VANE	716.82
5+90.00	ROCK STEP POOL - TOP	716.29
6+05.28	ROCK STEP POOL - MIDDLE	715.05
6+21.00	ROCK STEP POOL - MIDDLE	713.73
6+44.56	ROCK STEP POOL - BOTTOM	712.24

ALIGNMENT DATA

Station	Description	Northing	Easting	Type	Length	Radius	Direction	Delta angle	Chord length	Chord Direction	External Tangent
0+00.00	Start	10174293.26	3137616.591								
				Line 1	15.00'		S19° 41' 44"E				
0+15.00	PC	10174279.14	3137621.646								
0+22.10	RAD	10174272.24	3137624.116	Curve 1	14.21'	23.50'		34.6390 (d)	13.99'	S37° 00' 54"E	7.33'
0+29.21	PT	10174267.97	3137630.07								
				Line 2	34.70'		S54° 20' 04"E				
0+63.91	PC	10174247.74	3137658.26								
0+75.22	RAD	10174240.58	3137668.231	Curve 2	22.62'	23.50'		55.1517 (d)	21.76'	S26° 45' 31"E	12.27'
0+86.53	PT	10174228.31	3137668.056								
				Line 3	30.77'		S0° 49' 02"W				
1+17.30	PC	10174197.54	3137667.617								
1+27.24	RAD	10174187.18	3137667.469	Curve 3	19.87'	28.50'		39.9558 (d)	19.47'	S19° 09' 39"E	10.36'
1+37.18	PT	10174179.14	3137674.009								
				Line 4	31.55'		S39° 08' 19"E				
1+68.73	PC	10174154.67	3137693.924								
1+80.71	RAD	10174144.79	3137701.965	Curve 4	23.96'	28.50'		48.1690 (d)	23.26'	S15° 03' 15"E	12.74'
1+92.69	PT	10174132.21	3137699.966								
				Line 5	33.08'		S9° 01' 49"W				
2+25.77	PC	10174099.54	3137694.774								
2+34.81	RAD	10174090.14	3137693.28	Curve 5	18.09'	23.50'		44.1048 (d)	17.65'	S13° 01' 19"E	9.52'
2+43.86	PT	10174082.35	3137698.75								
				Line 6	28.62'		S35° 04' 28"E				
2+72.48	PC	10174058.92	3137715.196								
2+82.42	RAD	10174050.44	3137721.154	Curve 6	19.89'	28.50'		39.9812 (d)	19.49'	S15° 05' 02"E	10.37'
2+92.36	PT	10174040.11	3137720.267								
				Line 7	27.11'		S4° 54' 25"W				
3+19.47	PC	10174013.1	3137717.948								
3+31.62	RAD	10174000.43	3137716.861	Curve 7	24.30'	33.50'		41.5575 (d)	23.77'	S15° 52' 19"E	12.71'
3+43.77	PT	10173990.23	3137724.449								
				Line 8	33.30'		S36° 39' 02"E				
3+77.07	PC	10173963.52	3137744.329								
3+89.31	RAD	10173953.05	3137752.116	Curve 8	24.47'	28.50'		49.1886 (d)	23.72'	S12° 03' 23"E	13.04'
4+01.54	PT	10173940.32	3137749.284								
				Line 9	36.18'		S12° 32' 17"W				
4+37.72	PC	10173905	3137741.431								
4+52.05	RAD	10173890.09	3137738.113	Curve 9	28.67'	33.50'		49.0395 (d)	27.81'	S11° 58' 54"E	15.28'
4+66.39	PT	10173877.8	3137747.203								
				Line 10	33.91'		S36° 30' 07"E				
5+00.30	PC	10173850.55	3137767.374								
5+17.10	RAD	10173835.78	3137778.297	Curve 10	33.59'	33.50'		57.4578 (d)	32.20'	S7° 46' 23"E	18.36'
5+33.89	PT	10173818.64	3137771.729								
				Line 11	32.00'		S20° 57' 21"W				
5+65.89	PC	10173788.76	3137760.286								
5+75.18	RAD	10173779.86	3137756.877	Curve 11	18.57'	33.50'		31.7605 (d)	18.33'	S5° 04' 32"W	9.53'
5+84.46	PT	10173770.5	3137758.664								
				Line 12	57.77'		S10° 48' 17"E				
6+42.23	End	10173713.75	3137769.494								

Curve Table: Alignments

Curve #	Radius	Length	Chord Direction	Start Point	End Point
C11	33.50	18.57	S5° 04' 32.08"W	(3137760.29,10173788.76)	(3137758.66,10173770.50)
C10	33.50	33.59	S7° 46' 23.08"E	(3137767.37,10173850.55)	(3137771.73,10173818.64)
C9	33.50	28.67	S11° 58' 54.42"E	(3137741.43,10173905.00)	(3137747.20,10173877.80)
C8	28.50	24.47	S12° 03' 22.87"E	(3137744.33,10173963.52)	(3137749.28,10173940.32)
C7	33.50	24.30	S15° 52' 18.92"E	(3137717.95,10174013.10)	(3137724.45,10173990.23)
C6	28.50	19.89	S15° 05' 01.64"E	(3137715.20,10174058.92)	(3137720.27,10174040.11)
C5	23.50	18.09	S13° 01' 19.20"E	(3137694.77,10174099.54)	(3137698.75,10174082.35)
C4	28.50	23.96	S15° 03' 14.78"E	(3137693.92,10174154.67)	(3137699.97,10174132.21)
C3	28.50	19.87	S19° 09' 38.61"E	(3137667.62,10174197.54)	(3137674.01,10174179.14)
C2	23.50	22.62	S26° 45' 31.21"E	(3137658.26,10174247.74)	(3137668.06,10174228.31)
C1	23.50	14.21	S37° 00' 53.97"E	(3137621.65,10174279.14)	(3137630.07,10174267.97)

Line Table: Alignments

Line #	Length	Direction	Start Point	End Point
L13	57.77	S10° 48' 16.73"E	(3137758.66,10173770.50)	(3137769.49,10173713.75)
L12	32.00	S20° 57' 20.89"W	(3137771.73,10173818.64)	(3137760.29,10173788.76)
L11	33.91	S36° 30' 07.05"E	(3137747.20,10173877.80)	(3137767.37,10173850.55)
L10	36.18	S12° 32' 16.68"W	(3137749.28,10173940.32)	(3137741.43,10173905.00)
L9	33.30	S36° 39' 02.42"E	(3137724.45,10173990.23)	(3137744.33,10173963.52)
L8	27.11	S4° 54' 24.58"W	(3137720.27,10174040.11)	(3137717.95,10174013.10)
L7	28.62	S35° 04' 27.85"E	(3137698.75,10174082.35)	(3137715.20,10174058.92)
L6	33.08	S9° 01' 49.44"W	(3137699.97,10174132.21)	(3137694.77,10174099.54)
L5	31.55	S39° 08' 19.01"E	(3137674.01,10174179.14)	(3137693.92,10174154.67)
L4	30.77	S0° 49' 01.78"W	(3137668.06,10174228.31)	(3137667.62,10174197.54)
L3	34.70	S54° 20' 04.20"E	(3137630.07,10174267.97)	(3137658.26,10174247.74)
L2	15.00	S19° 41' 43.73"E	(3137616.59,10174293.26)	(3137621.65,10174279.14)
L1	29.58	S15° 39' 28.56"E	(3137608.61,10174321.74)	(3137616.59,10174293.26)

DESIGN:

AECOM

AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: SEE DRAWING
DRAWN BY: EEB
DESIGN BY: RGJ
SHEET: 3 OF 17
PROJECT NO.: 60596433

ALIGNMENT

DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14
95% DESIGN
UPPER BRUSHY CREEK WATER CONTROL
AND IMPROVEMENT DISTRICT
ROUND ROCK, TEXAS
DATE: DECEMBER, 2021

LEGEND

- PROPERTY LINES
- EX. 1 FT CONTOUR
- SD — SD — EX. STORMWATER PIPE
- SS — SS — EX. SEWER LINE
- 100YR FP — FEMA 100 YEAR FLOOD ELEVATION
- 500YR — 500YR — FEMA 500 YEAR FLOOD ELEVATION
- LOS — LIMITS OF SURVEY
- BOLLARD
- IRRIGATION CONTROL VALVE
- STORM DRAIN MANHOLE
- WASTE WATER MANHOLE
- SURVEYED TREE
- CHAIN LINK FENCE
- WOOD FENCE
- LOD — LOD — LIMIT OF DISTURBANCE
- PROPOSED CONSERVATION EASEMENT

TREE LIST	
TAG NO.	DESCRIPTION
314	8" CEDAR ELM
315	8" BALD CYPRESS
316	8" BALD CYPRESS
317	8" BALD CYPRESS
318	8" BALD CYPRESS
319	8" BALD CYPRESS
320	8" BALD CYPRESS

MATCHLINE SEE SHEET 5

CONSERVATION EASEMENT: 2.8 ACRES

LOD AREA APPROXIMATELY 3.1 ACRES

TREE TAG NO. 318

TREE TAG NO. 316

TREE TAG NO. 315

TREE TAG NO. 320

TREE TAG NO. 317

TREE TAG NO. 314

0 40 80 Feet

DESIGN:

AECOM

AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: 1"=40'

DRAWN BY: EEB

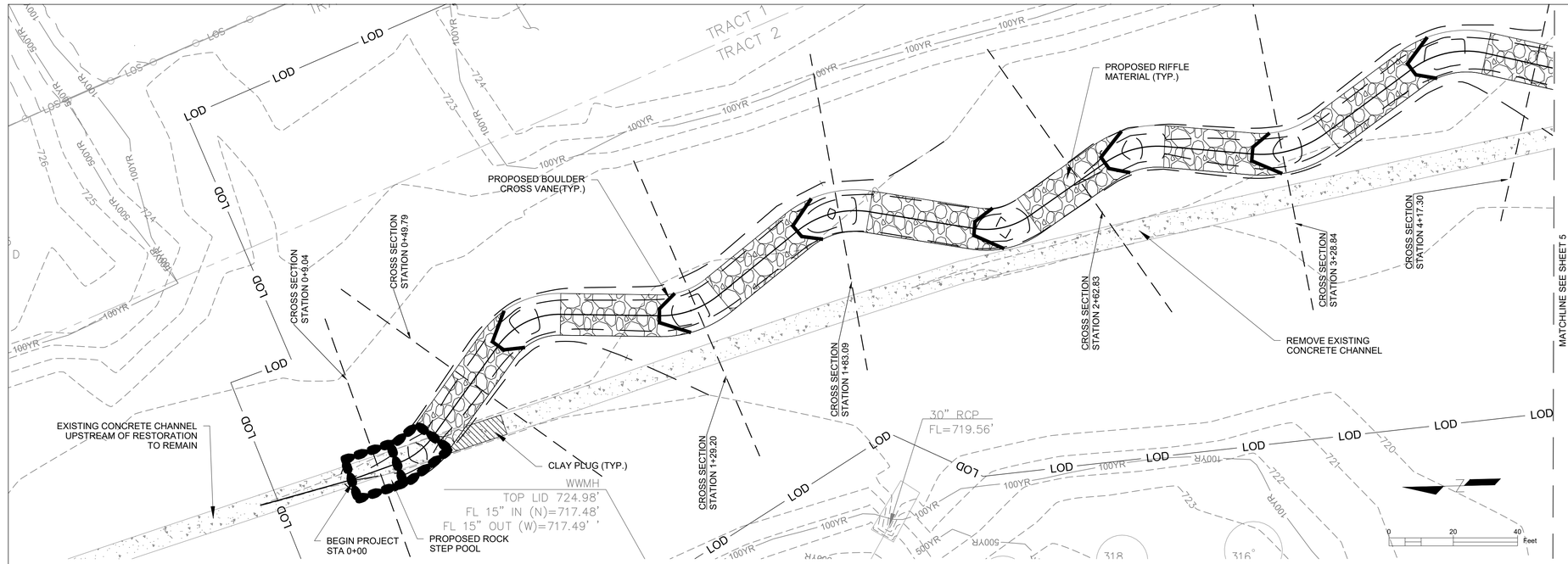
DESIGN BY: RGJ

SHEET: 4 OF 17

PROJECT NO.: 60596433

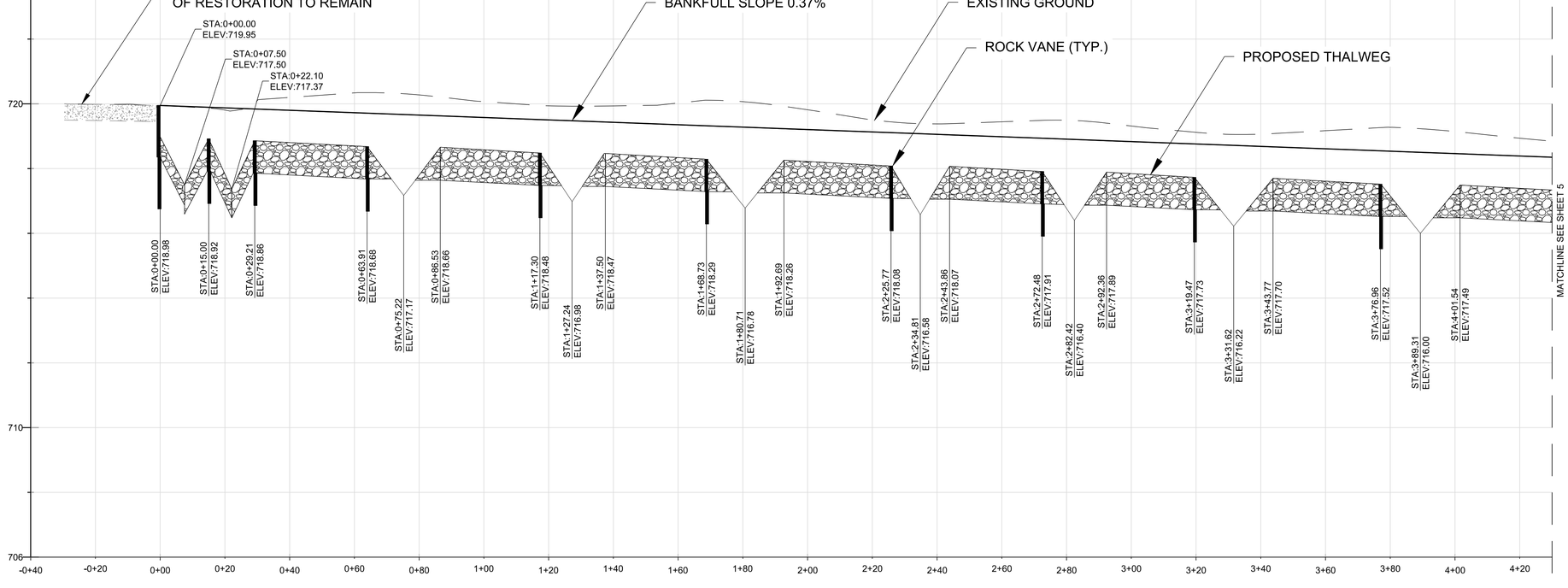
EXISTING CONDITIONS

DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14 95% DESIGN
UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT
ROUND ROCK, TEXAS
DATE: DECEMBER, 2021



LEGEND

- PROPERTY LINES
- EX. 1 FT CONTOUR
- EX. STORMWATER PIPE
- EX. SEWER LINE
- FEMA 100 YEAR FLOOD ELEVATION
- FEMA 500 YEAR FLOOD ELEVATION
- LIMITS OF SURVEY
- BOLLARD
- IRRIGATION CONTROL VALVE
- STORM DRAIN MANHOLE
- WASTE WATER MANHOLE
- SURVEYED TREE
- CHAIN LINK FENCE
- WOOD FENCE
- PROPOSED STREAM ALIGNMENT
- PROPOSED BANKFULL
- LIMIT OF DISTURBANCE
- PROPOSED BOULDER CROSS VANE
- PROPOSED STEP POOL
- PROPOSED 1-FOOT CONTOUR
- CLAY PLUG

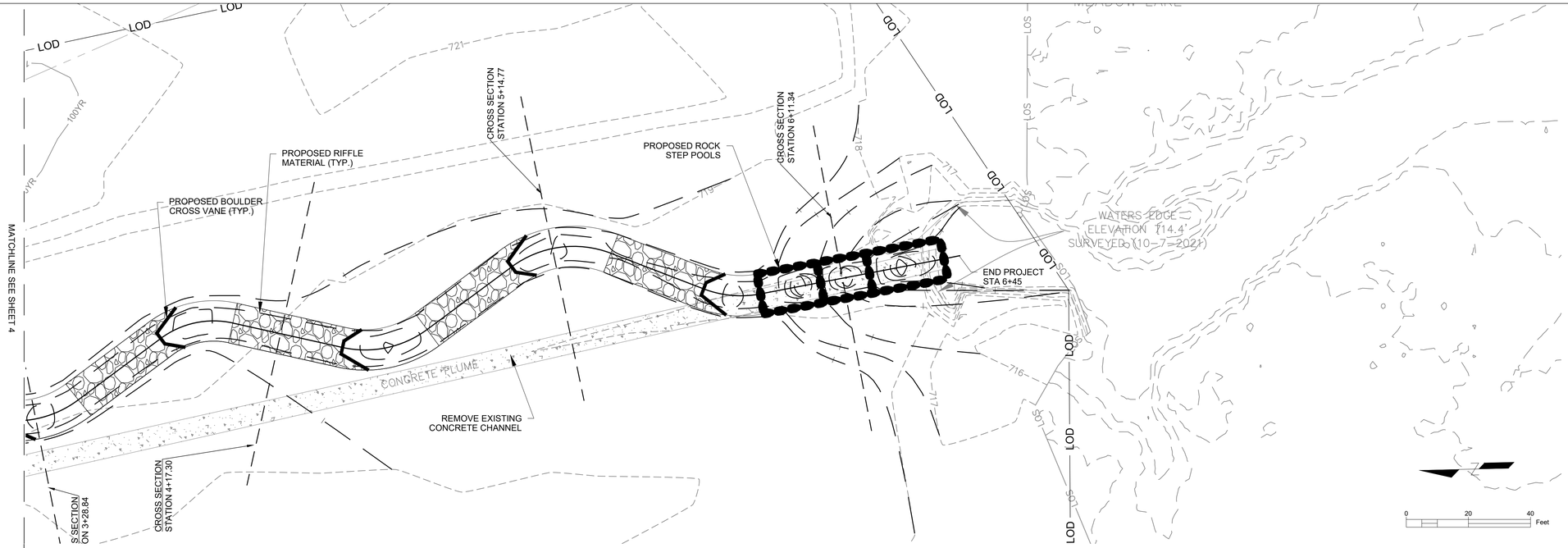


HORIZONTAL SCALE 1"=20'
VERTICAL SCALE 1"=2'

DESIGN:
AECOM
AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

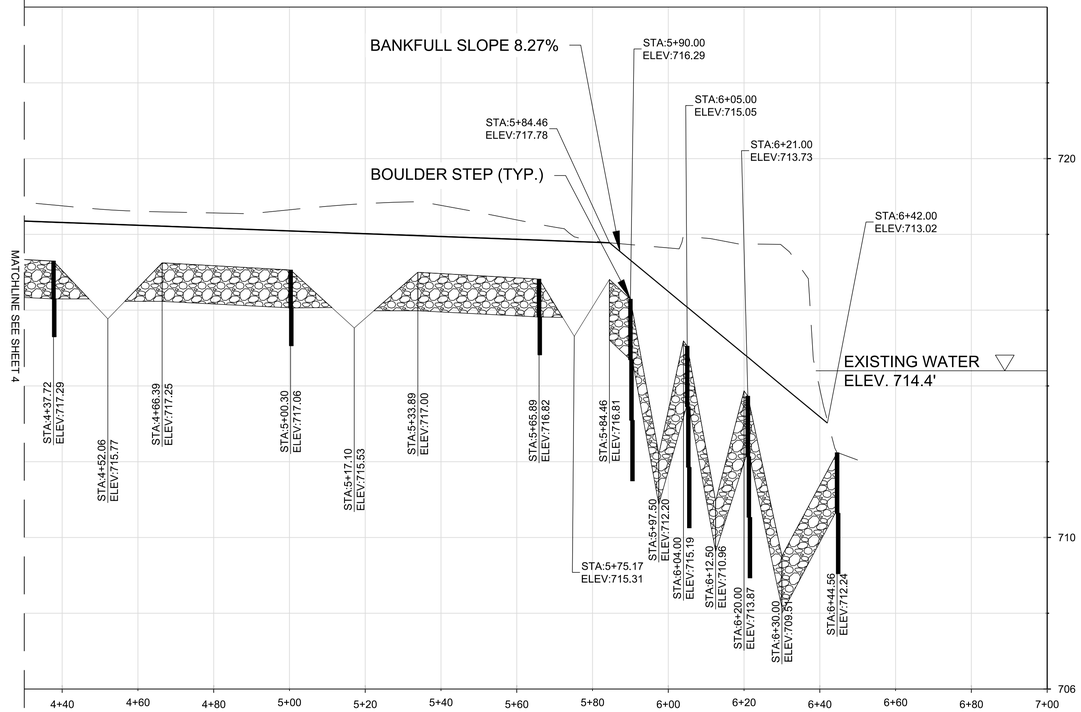
DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: SEE DRAWING	PROPOSED CONDITIONS
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14 95% DESIGN**
SHEET: 5 OF 17	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT
PROJECT NO.: 60596433	ROUND ROCK, TEXAS
	DATE: DECEMBER, 2021

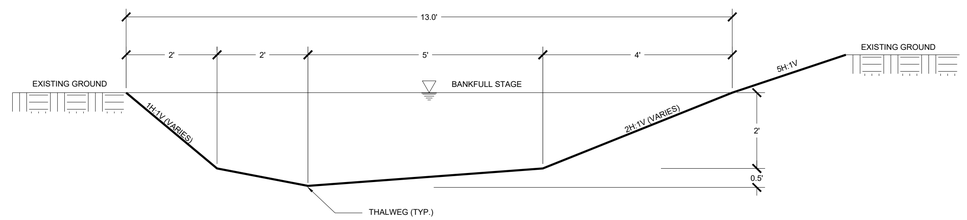


LEGEND

- PROPERTY LINES
- EX. 1 FT CONTOUR
- EX. STORMWATER PIPE
- EX. SEWER LINE
- FEMA 100 YEAR FLOOD ELEVATION
- FEMA 500 YEAR FLOOD ELEVATION
- LIMITS OF SURVEY
- BOLLARD
- IRRIGATION CONTROL VALVE
- STORM DRAIN MANHOLE
- WASTE WATER MANHOLE
- SURVEYED TREE
- CHAIN LINK FENCE
- WOOD FENCE
- PROPOSED STREAM ALIGNMENT
- PROPOSED BANKFULL
- LIMIT OF DISTURBANCE
- PROPOSED BOULDER CROSS VANE
- PROPOSED STEP POOL
- PROPOSED 1-FOOT CONTOUR
- CLAY PLUG



HORIZONTAL SCALE 1"=20'
VERTICAL SCALE 1"=2'

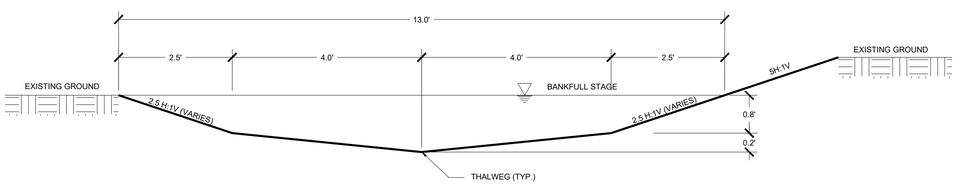


NOTES:

1. SEE ALIGNMENT DATA SHEET FOR LOCATIONS TO APPLY TYPICAL CROSS-SECTIONS.
2. RIFFLE CROSS-SECTION TYPICALLY OCCURS AT MID-RIFFLE AND POOL CROSS-SECTION AT THE MID-POOL.
3. RIGHT POOL CROSS SECTION SHALL BE MIRROR OF LEFT POOL SECTION.

LEFT POOL CROSS-SECTION

SCALE: NTS



RIFFLE CROSS-SECTION

SCALE: NTS

DESIGN:

AECOM

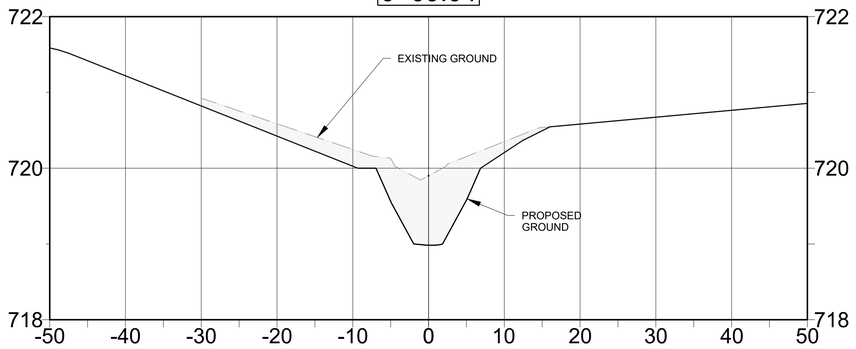
AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

DAM 101 STREAM MITIGATION CHANDLER BRANCH

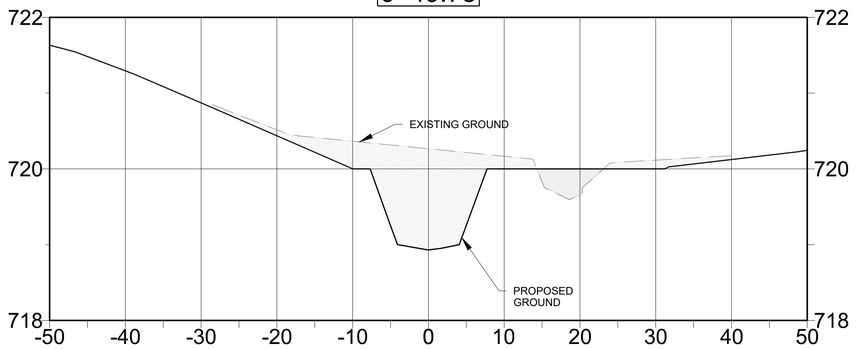
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: SEE DRAWING	PROPOSED CONDITIONS AND CROSS SECTIONS
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14**
SHEET: 6 OF 17	**95% DESIGN**
PROJECT NO.: 60596433	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS DATE: DECEMBER, 2021

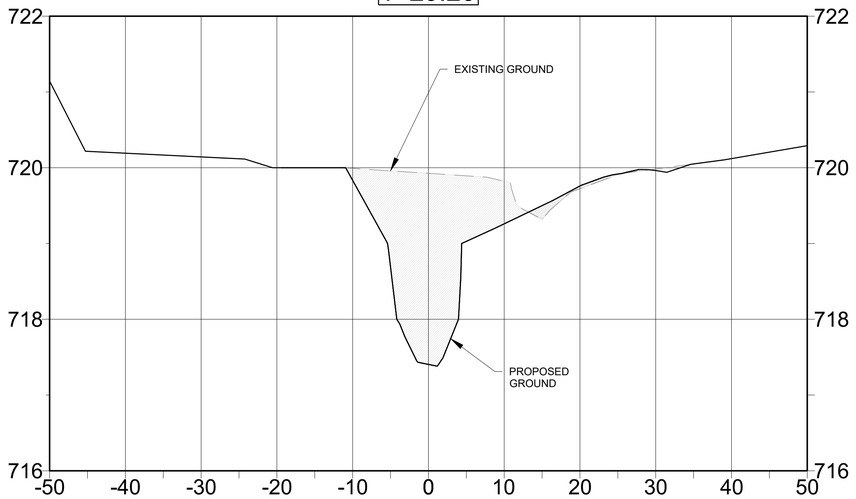
0+09.04



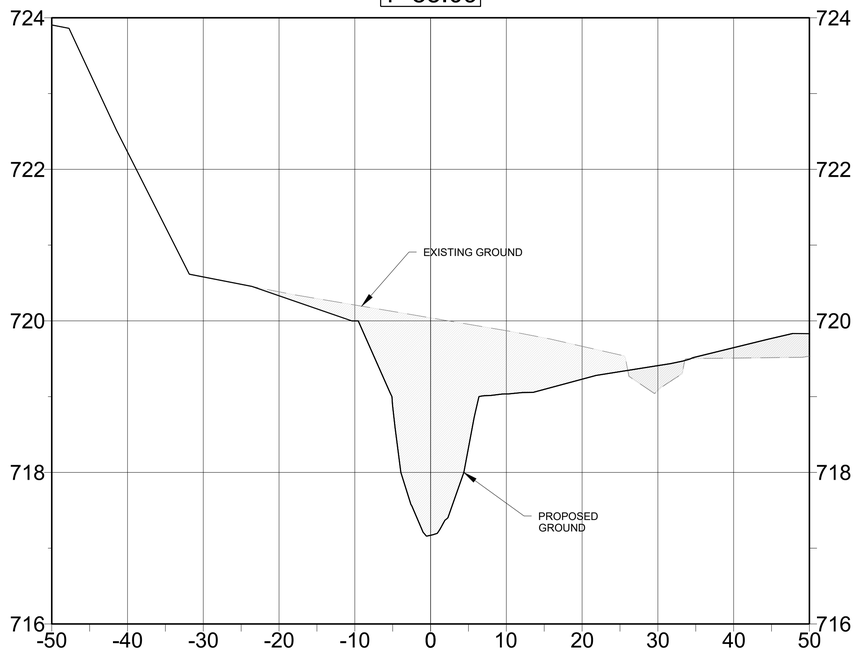
0+49.75



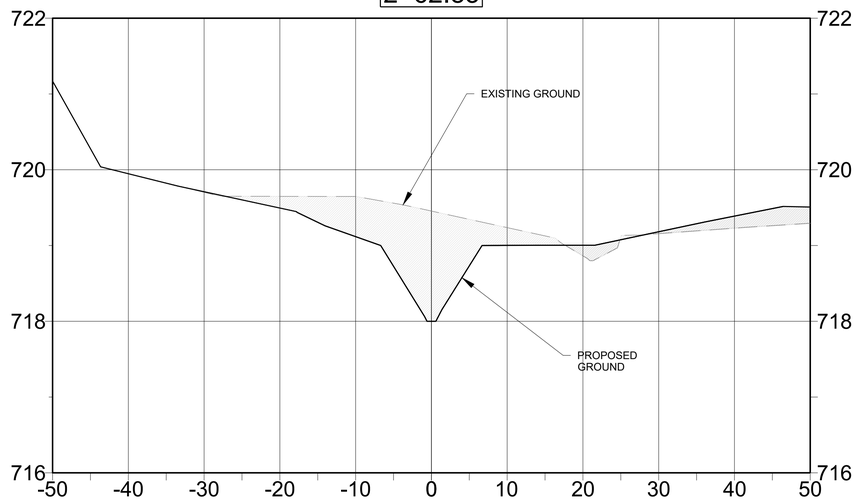
1+29.20



1+83.09



2+62.83



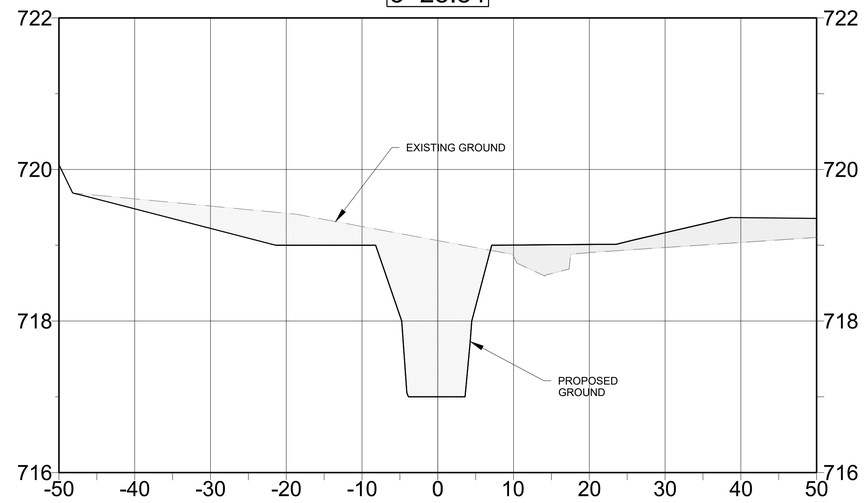
HORIZONTAL SCALE 1"=10'
VERTICAL SCALE 1"=1'

DESIGN:
AECOM
AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

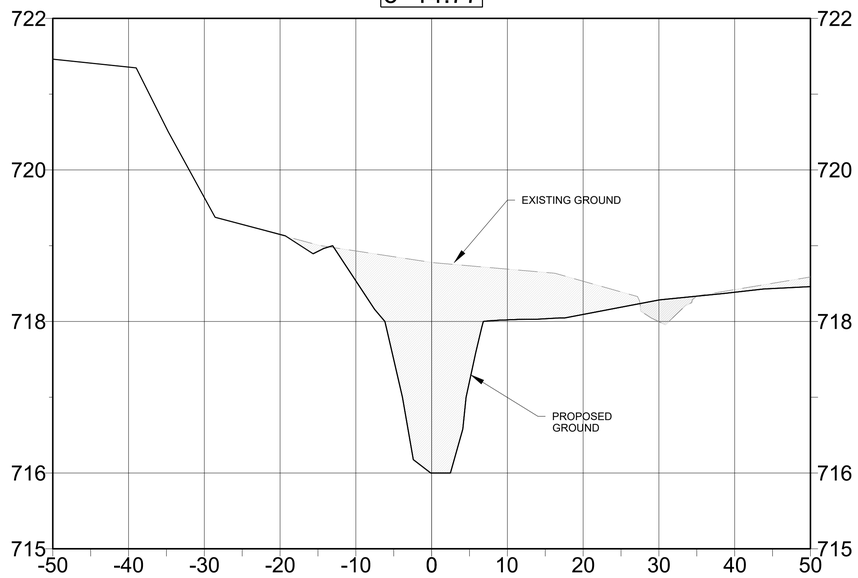
DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: SEE DRAWING	CROSS SECTIONS
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14** **95% DESIGN** UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS DATE: DECEMBER, 2021
SHEET: 7 OF 17	
PROJECT NO.: 60596433	

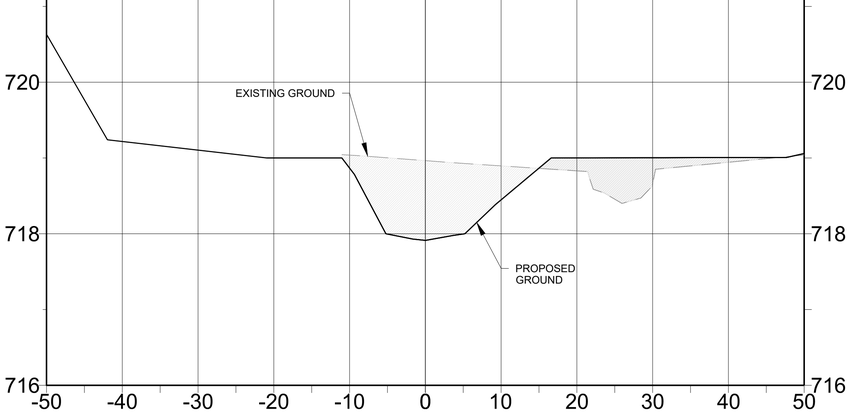
3+28.84



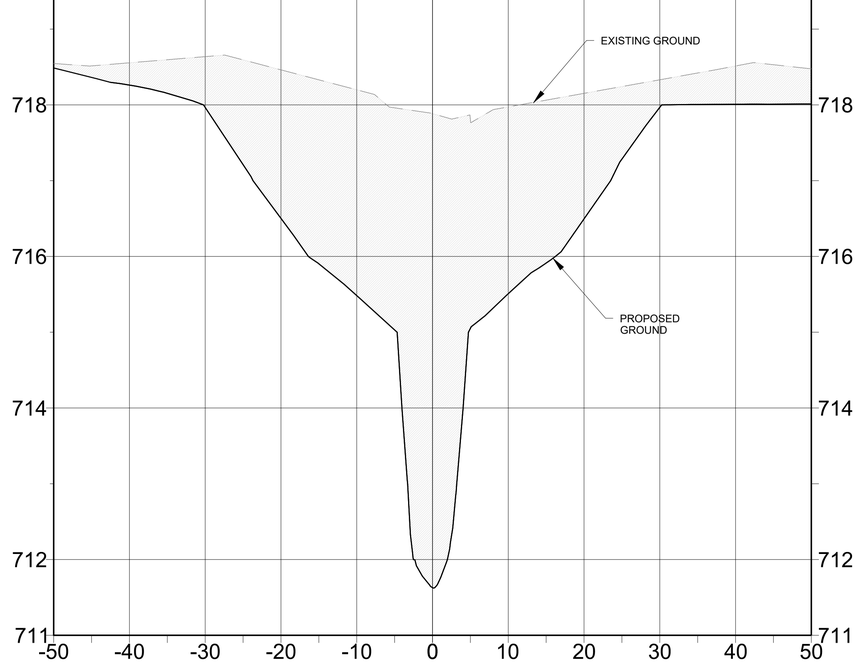
5+14.77



4+17.30



6+11.34



HORIZONTAL SCALE 1"=10'
VERTICAL SCALE 1"=1'

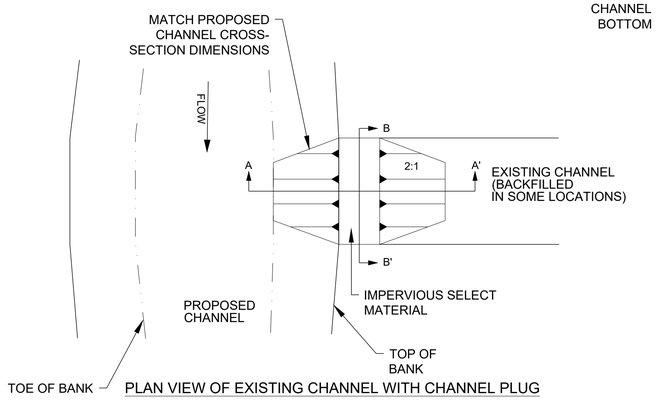
DESIGN:
AECOM
AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

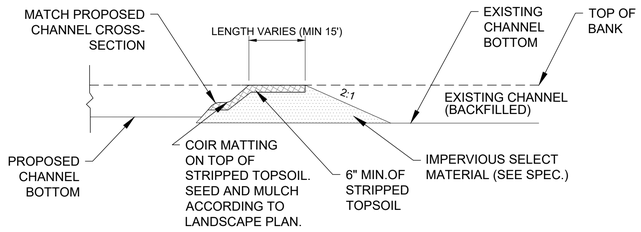
SCALE: SEE DRAWING	CROSS SECTIONS
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14**
SHEET: 8 OF 17	**95% DESIGN**
PROJECT NO.: 60596433	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS
	DATE: DECEMBER, 2021

NOTES:

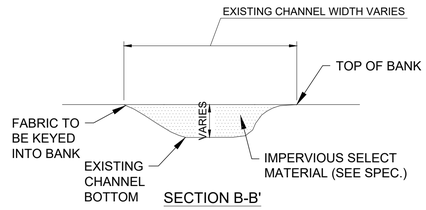
1. 90% COMPACTION RATE IS REQUIRED ON CHANNEL PLUG OR AS APPROVED BY THE ENGINEER.
2. IMPERVIOUS SELECT MATERIAL TO BE ON SITE FILL COMPACTED IN 6" LIFTS
3. SIDE SLOPE THAT IS ADJACENT TO PROPOSED STREAM NEEDS TO MATCH PROPOSED CROSS SECTION IN THAT REGION.
4. CHANNEL PLUG LENGTH IS 15' UNLESS SPECIFIED TO BE LONGER BY DIRECTION OF THE ENGINEER.



PLAN VIEW OF EXISTING CHANNEL WITH CHANNEL PLUG

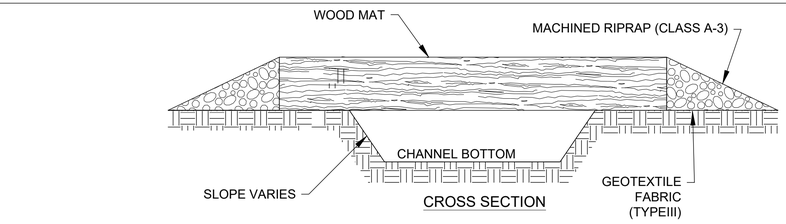


SECTION A-A'

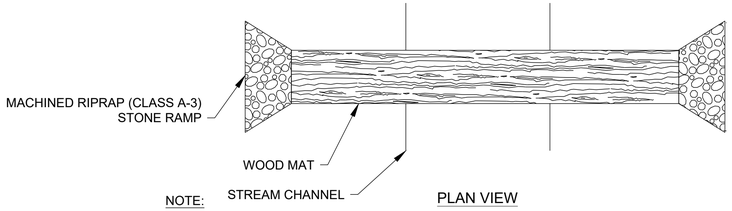


SECTION B-B'

CLAY PLUG
SCALE: NTS



CROSS SECTION

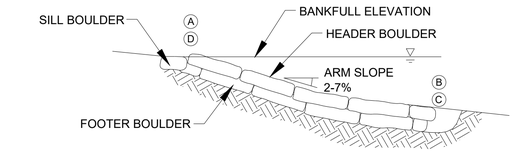


PLAN VIEW

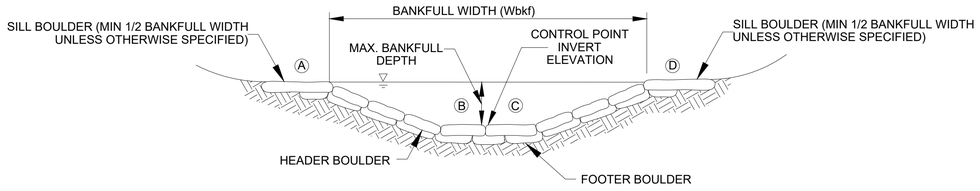
NOTE:

1. CONSTRUCT STREAM CROSSING WHEN FLOW IS LOW.
2. HAVE ALL NECESSARY MATERIALS AND EQUIPMENT ON-SITE BEFORE WORK BEGINS.
3. MINIMIZE CLEARING AND EXCAVATION OF STREAMBANKS. DO NOT EXCAVATE CHANNEL BOTTOM.
4. LINE STREAMBANK AND ACCESS RAMP AREA WITH NON-WOVEN FILTER FABRIC.
5. INSTALL STREAM CROSSING AT RIGHT ANGLE TO THE FLOW.
6. MAINTAIN CROSSING SO THAT RUNOFF IN THE CONSTRUCTION ROAD DOES NOT ENTER EXISTING CHANNEL BY INSTALLING SILT FENCE ON ALL FOUR CORNERS ADJACENT TO THE STREAM. SEE SILT FENCE DETAIL.
7. STABILIZE AN ACCESS RAMP OF MACHINED RIPRAP (CLASS A-3) TO THE EDGE OF THE MUD MAT.
8. THE WOOD MAT SHALL BE OF SUFFICIENT SIZE AND WIDTH TO SUPPORT THE LARGEST VEHICLE CROSSING THE CHANNEL.
9. CONTRACTOR SHALL DETERMINE AN APPROPRIATE RAMP ANGLE ACCORDING TO EQUIPMENT UTILIZED, RECOMMENDED AT A 5:1 SLOPE.

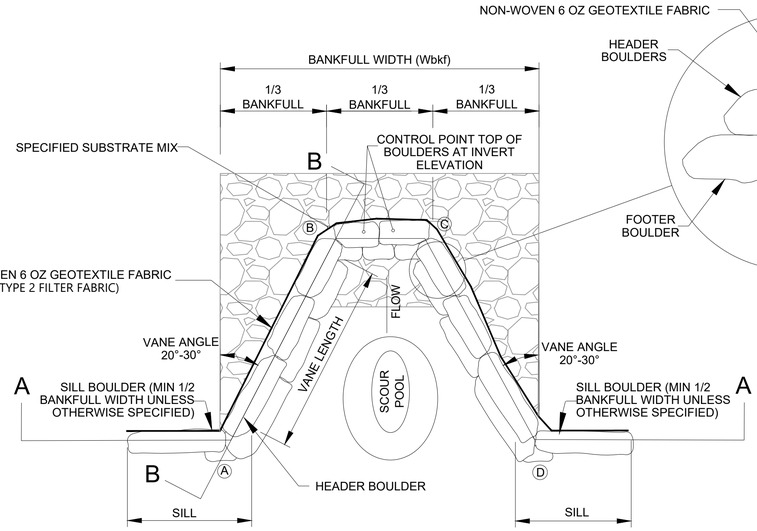
TEMPORARY STREAM CROSSING-WOOD MAT
SCALE: NTS



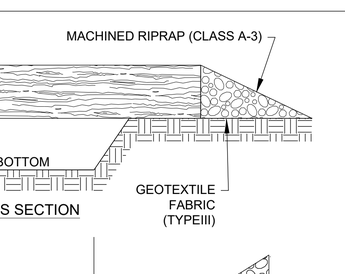
SECTION B-B

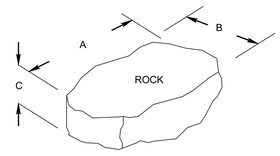


SECTION A-A



PLAN VIEW





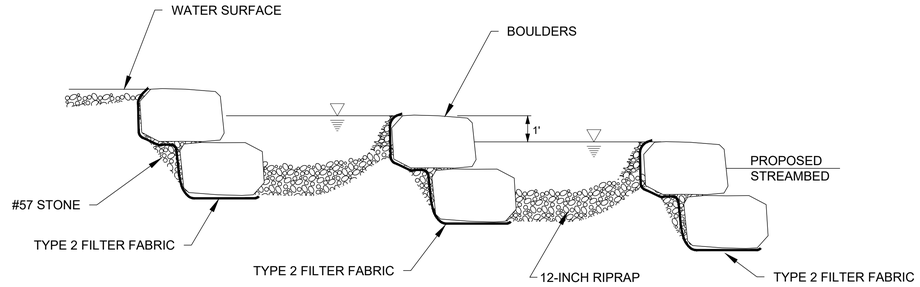
FOOTER AND HEADER BOULDER AXIS A DIMENSIONS		
MINIMUM	MEDIUM	MAXIMUM
24"	30"	36"

BOULDER CROSS VANE
SCALE: NTS

DESIGN:
AECOM
AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

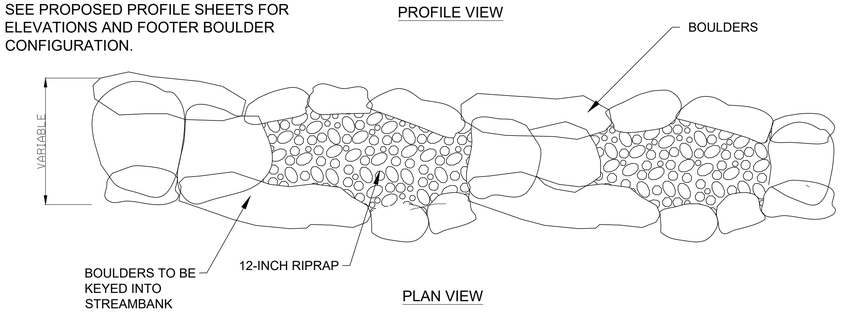
SCALE: NOT TO SCALE	GENERAL DETAILS
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14 95% DESIGN**
SHEET: 9 OF 17	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS
PROJECT NO.: 60596433	DATE: DECEMBER, 2021



NOTES:

1. SEE PROPOSED PROFILE SHEETS FOR ELEVATIONS AND FOOTER BOULDER CONFIGURATION.

PROFILE VIEW

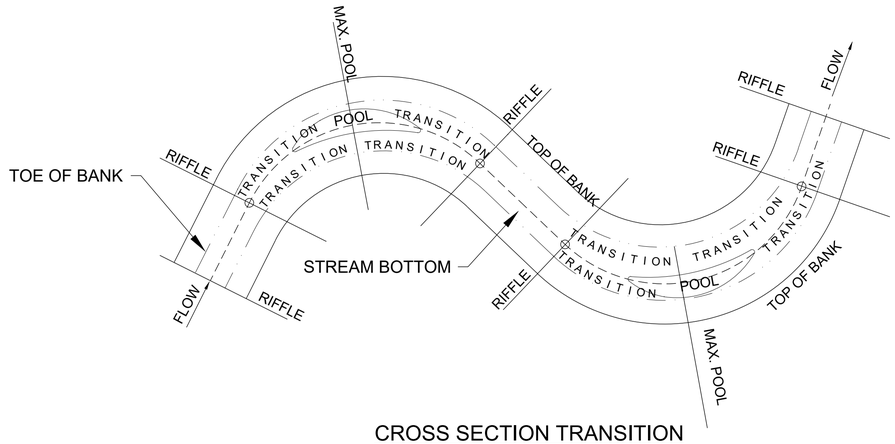


PLAN VIEW

STONE STEP POOL
SCALE: NTS

NOTES:

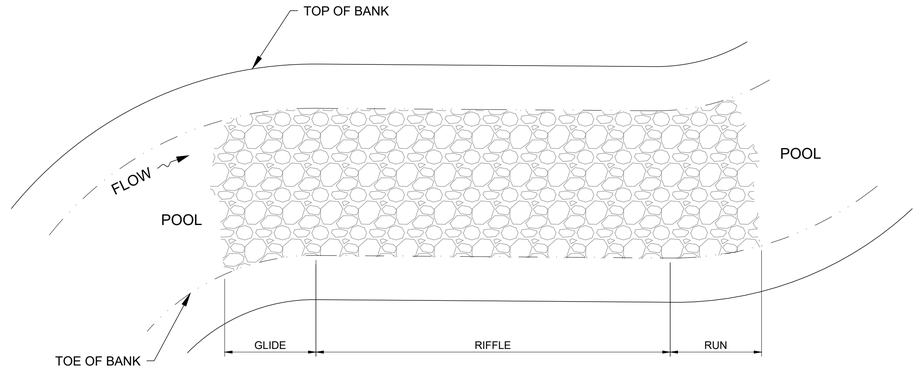
1. AREAS IN BETWEEN LABELED FEATURES ARE TRANSITION AREAS.
2. SEE DETAILED CROSS-SECTIONS



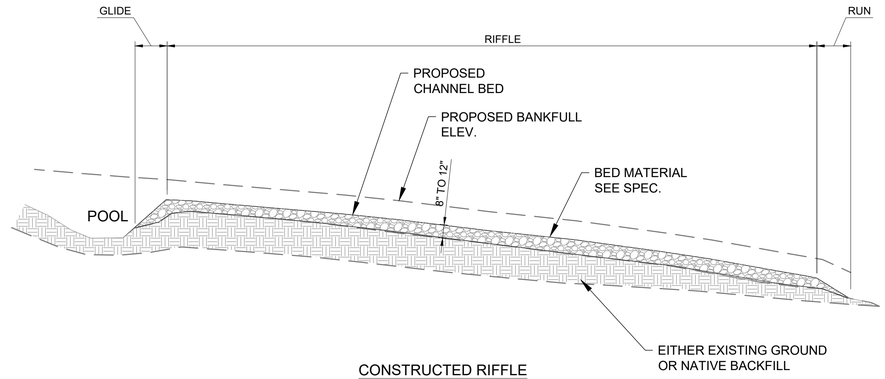
CROSS SECTION TRANSITION LOCATIONS
SCALE: NTS

NOTES:

1. BACKFILL WILL BE INSTALLED IN 6" LIFTS AND EACH LIFT SHALL BE THOROUGHLY COMPACTED WITH HEAVY EQUIPMENT.
2. SEE PROPOSED PROFILE SHEETS AND CROSS SECTION TRANSITION LOCATIONS DETAIL FOR PROFILE FEATURE DIMENSIONS.



CONSTRUCTED RIFFLE
PLAN VIEW



CONSTRUCTED RIFFLE
PROFILE VIEW

CONSTRUCTED RIFFLE
SCALE: NTS

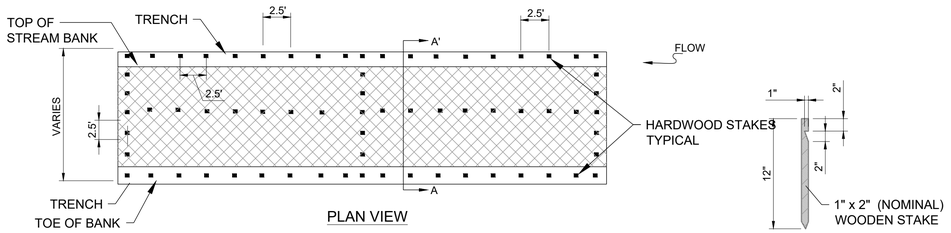
DESIGN:
AECOM
AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: NOT TO SCALE	GENERAL DETAILS
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14 95% DESIGN**
SHEET: 10 OF 17	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS
PROJECT NO.: 60596433	DATE: DECEMBER, 2021

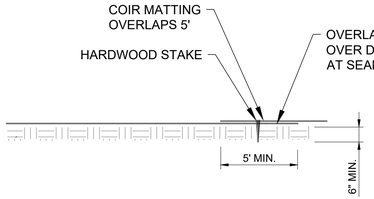
NOTES:

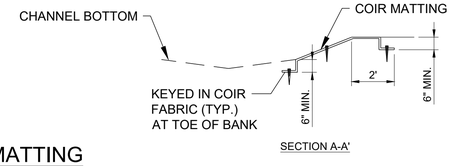
1. MAXIMUM SINGLE LENGTH OF MATTING/MESH IS 100'.
2. TOP AND BOTTOM EDGES OF MATTING/MESH SHALL BE KEYED IN.
3. COIR MATTING DETAIL SHOWN IS FOR PERMANENT INSTALLATION. TEMPORARY INSTALLATION FOR EROSION CONTROL PROTECTION AS STIPULATED SHALL BE TO THE EXTENT THAT THE PROJECT SITE NEEDS TO BE PROTECTED FOR EROSION AND SEDIMENT CONTROL DURING NON-WORKING HOURS.



PLAN VIEW

STAKE DETAIL

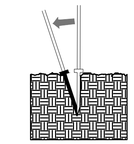




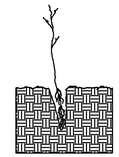
SECTION A-A'

COIR MATTING
SCALE: NTS

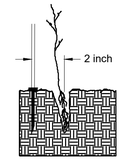
DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



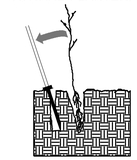
1. INSERT PLANTING BAR AS SHOWN AND PULL HANDLE TOWARD PLANTER.



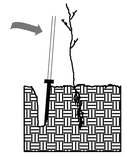
2. REMOVE PLANTING BAR AND PLACE SEEDLING AT CORRECT DEPTH.



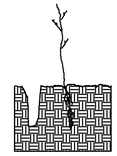
3. INSERT PLANTING BAR 2 INCHES TOWARD PLANTER FROM SEEDLING.



4. PULL HANDLE OF BAR TOWARD PLANTER, FIRMING SOIL AT BOTTOM.



5. PUSH HANDLE FORWARD FIRMING SOIL AT TOP.



6. LEAVE COMPACTION HOLE OPEN. WATER THOROUGHLY.

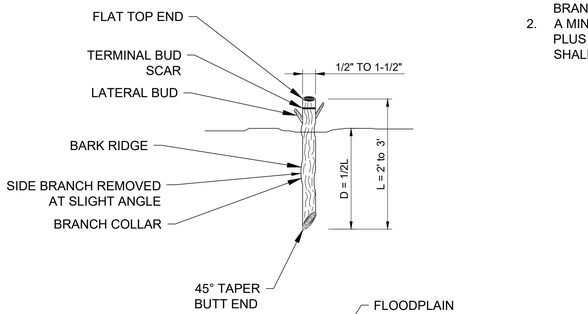
PLANTING NOTES:

PLANTING BAG
DURING PLANTING, SEEDLINGS SHALL BE KEPT IN A MOIST CANVAS BAG OR SIMILAR CONTAINER TO PREVENT THE ROOT SYSTEMS FROM DRYING.

KBC PLANTING BAR
PLANTING BAR SHALL HAVE A BLADE WITH A TRIANGULAR CROSS SECTION, AND SHALL BE 12 INCHES LONG, 6 INCHES WIDE AND 1 INCH THICK AT CENTER.

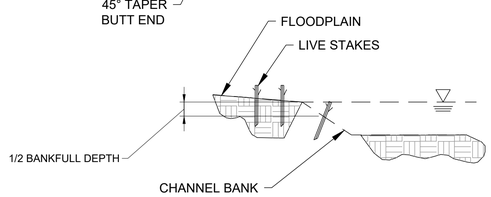
ROOT PRUNING
ALL SEEDLINGS SHALL BE ROOT PRUNED, IF NECESSARY, SO THAT NO ROOTS EXTEND MORE THAN 10 INCHES BELOW THE ROOT COLLAR.

BARE ROOT PLANTING
SCALE: NTS



NOTES:

1. ALL LATERAL BRANCHES SHALL BE TRIMMED TO AVOID DAMAGE TO THE BARK RIDGE AND BRANCH COLLAR.
2. A MINIMUM OF TWO BUDS (ONE LATERAL PLUS ONE TERMINAL OR TWO TERMINAL) SHALL BE ABOVE THE PLANTING DEPTH.



LIVE STAKE
SCALE: NTS

NOTES:

1. INSTALL SIGN AT ALL CORNERS OF THE EASEMENT AND EVERY 200 FT ALONG THE EASEMENT BOUNDARY.

CONSERVATION AREA SIGN
SCALE: NTS

DESIGN:
AECOM
AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

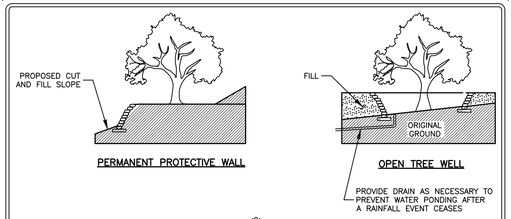
DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: NOT TO SCALE	GENERAL DETAILS
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14 95% DESIGN**
SHEET: 11 OF 17	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS
PROJECT NO.: 60596433	DATE: DECEMBER, 2021

1. ALL TREES NOT LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND OUTSIDE OF DISTURBED AREAS SHALL BE PRESERVED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL TREES TO BE PRESERVED FROM HIS ACTIVITIES.
2. ALL TREES SHOWN TO BE RETAINED WITHIN THE LIMITS OF CONSTRUCTION ON THE PLANS, SHALL BE PROTECTED DURING CONSTRUCTION WITH FENCING. SEE: TREE PROTECTION TREE WELLS (EC-02), TREE PROTECTION TREE LOCATION (EC-03) AND TREE PROTECTION FENCE-CHAIN LINK (EC-04).
3. TREE PROTECTION FENCES SHALL BE ERECTED ACCORDING TO CITY STANDARDS FOR TREE PROTECTION, INCLUDING TYPES OF FENCING AND SIGNAGE.
4. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR GRADING) AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
5. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIPLINES.
6. FENCES SHALL COMPLETELY SURROUND THE TREE OR CLUSTERS OF TREES, LOCATED AT THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIPLINE) OR CRITICAL ROOT ZONE (CRZ), WHICHEVER IS GREATER; AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   - 6A. SOIL COMPACTION IN CRZ AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIAL.
   - 6B. CRZ DISTURBANCES DUE TO GRADE CHANGES OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE FORESTRY MANAGER.
   - 6C. WOUNDS TO EXPOSED ROOTS, TRUNK, OR LIMBS BY MECHANICAL EQUIPMENT
   - 6D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CONCRETE TRUCK CLEANING, AND FIRES.
7. EXCEPTIONS TO INSTALLING TREE FENCES AT THE TREE DRIPLINES OR CRZ, WHICHEVER IS GREATER, MAY BE PERMITTED IN THE FOLLOWING CASES:
   - 7A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, OR TREE WELL;
   - 7B. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   - 7C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING.
   - 7D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE FORESTRY MANAGER TO DISCUSS ALTERNATIVES.
8. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE THAT IS CLOSER THAN 5 FEET TO A TREE TRUNK, THE TRUNK SHALL BE PROTECTED BY STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
9. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES UNDER THE DRIPLINE OR CRZ, WHICHEVER IS GREATER, THOSE AREAS SHOULD BE COVERED WITH 4 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION.
10. ALL GRADING WITHIN CRZ AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCING TO 2 FEET BEHIND THE GRADE CHANGE AREA.
11. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL AND BACKFILLED WITH GOOD QUALITY TOP SOIL WITHIN TWO DAYS. IF EXPOSED ROOT AREAS CANNOT BE BACKFILLED WITHIN 2 DAYS, AN ORGANIC MATERIAL WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION SHALL BE PLACED TO COVER THE ROOTS UNTIL BACKFILL CAN OCCUR.
12. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, A CLEAN CUT SHALL BE MADE WITH A ROCK SAW OR SIMILAR EQUIPMENT, IN A LOCATION AND TO A DEPTH APPROVED BY THE FORESTRY MANAGER, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
13. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES WILL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS ARE TO BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON LEAVES.
14. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, A PLASTIC VAPOR BARRIER SHALL BE PLACED BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE CRZ.
15. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
16. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR (4) INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OR CRZ OF TREES, WHICHEVER IS GREATER. NO TOPSOIL IS PERMITTED ON ROOT FLARES OF ANY TREE.
17. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND CONSTRUCTION EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. ALL PRUNING MUST BE DONE ACCORDING TO CITY STANDARDS AND AS OUTLINED IN LITERATURE PROVIDED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA PRUNING TECHNIQUES).
18. ALL OAK TREE CUTS, INTENTIONAL OR UNINTENTIONAL, SHALL BE SEALED WITH AN APPROVED PRUNING SEALER IMMEDIATELY (WITHIN 10 MINUTES). TREE PAINT MUST BE KEPT ON SITE AT ALL TIMES.
19. THE FORESTRY MANAGER HAS THE AUTHORITY TO REQUIRE ADDITIONAL TREE PROTECTION BEFORE OR DURING CONSTRUCTION.
20. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED. REFER TO THE CITY OF ROUND ROCK TREE TECHNICAL MANUAL FOR APPROPRIATE REMOVAL METHODS.
21. PRIOR TO CONSTRUCTION, ALL LOWER TREE LIMBS OVER ROADWAYS MUST BE PRUNED TO A HEIGHT OF 14 FEET USING THE TECHNIQUES DESCRIBED IN THE CITY OF ROUND ROCK TREE TECHNICAL MANUAL.
22. DEVIATIONS FROM THE ABOVE REQUIREMENTS AND NEGLIGENT DAMAGE TO TREES MAY BE CONSIDERED AS ORDINANCE VIOLATIONS.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-01
APPROVED 03-25-11 DATE	TREE PROTECTION NOTES	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

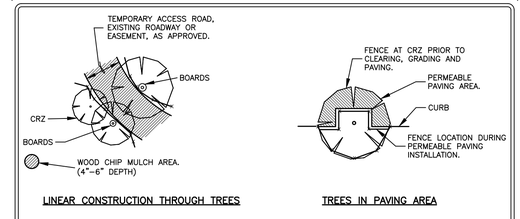


NOTE:

LOCATION, TYPE, DEPTHS AND CONSTRUCTION SPECIFICATIONS OF FILL, DRAINS AND WALLS SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.

FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-02
APPROVED 03-25-11 DATE	TREE PROTECTION TREE WELLS	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

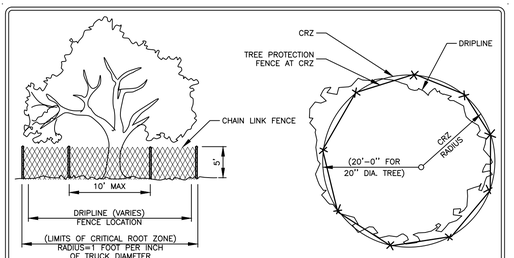


NOTE:

LIMITS OF MULCH AREAS AND DISTANCE FROM TRUNKS TO WORK/ PERMEABLE PAVING AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.

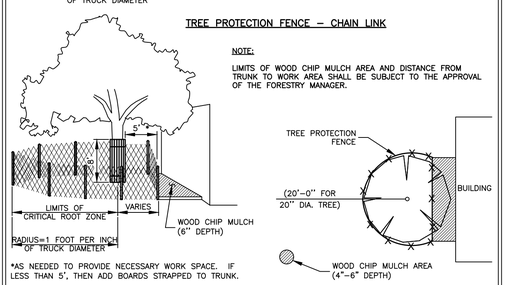
FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-03
APPROVED 03-25-11 DATE	TREE PROTECTION FENCE LOCATIONS	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		



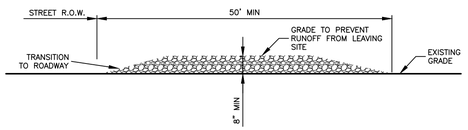
NOTE:

LIMITS OF WOOD CHIP MULCH AREA AND DISTANCE FROM TRUNK TO WORK AREA SHALL BE SUBJECT TO THE APPROVAL OF THE FORESTRY MANAGER.



FOR QUESTIONS CONCERNING THIS DETAIL, PLEASE CONTACT THE FORESTRY MANAGER.

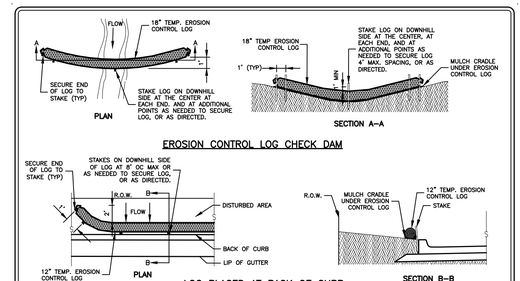
RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-04
APPROVED 03-25-11 DATE	TREE PROTECTION FENCE CHAIN LINK	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		



NOTES:

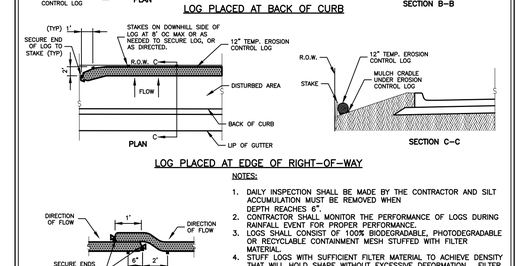
1. STONE SIZE SHALL BE 3" – 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-09
APPROVED 03-25-11 DATE	STABILIZED CONSTRUCTION ENTRANCE DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		



NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 6".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF LOGS DURING RAINFALL EVENT FOR PROPER PERFORMANCE.
3. LOGS SHALL CONSIST OF 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE CONTAINMENT MESH STUFFED WITH FILTER MATERIAL.
4. STUFF LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE DENSITY THAT WILL HOLD SHAPE WITHOUT EXCESSIVE DEFORMATION. FILTER MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR WOOD FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS,100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL, EXCLUDING STRAW AND HAY.
5. STAKES SHALL BE 2" X 2" WOOD, 4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED.



RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-17
APPROVED 03-25-11 DATE	EROSION CONTROL LOG DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

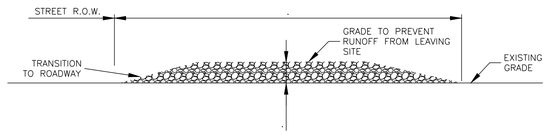
DESIGN:

AECOM

AECOM Technical Services
13640 Briarwick Drive, Suite 200
Austin, TX 78729
515-454-4797

DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: NOT TO SCALE	GENERAL DETAILS
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14**
SHEET: 12 OF 17	**95% DESIGN**
PROJECT NO.: 60596433	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS
	DATE: DECEMBER, 2021



CROSS SECTION

NOTES:

1. STONE SIZE SHALL BE 3" – 8" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

RECORD SIGNED COPY ON FILE AT PUBLIC WORKS	CITY OF ROUND ROCK	DRAWING NO: EC-09
APPROVED 03-25-11 DATE	STABILIZED CONSTRUCTION ENTRANCE DETAIL	ROUND ROCK, TEXAS FUTURE VISION, PRESENT PRIDE
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR THE APPROPRIATE USE OF THIS DETAIL (NOT TO SCALE)		

DESIGN:

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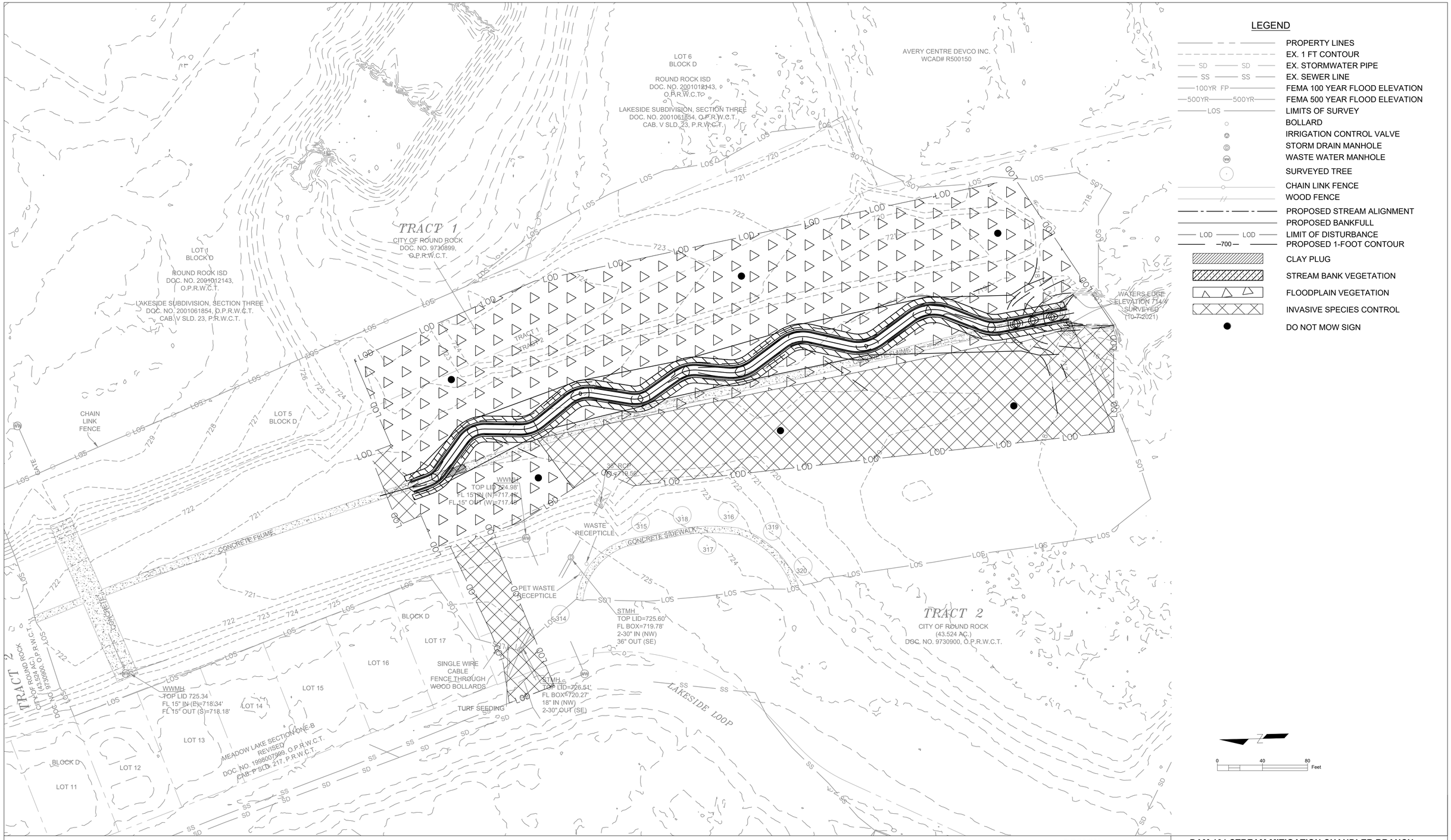
Austin, TX 78729
515-454-4797

DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: SEE DRAWING	GENERAL DETAILS
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14 95% DESIGN**
SHEET: 13 OF 17	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS
PROJECT NO.: 60596433	DATE: DECEMBER, 2021



DESIGN:

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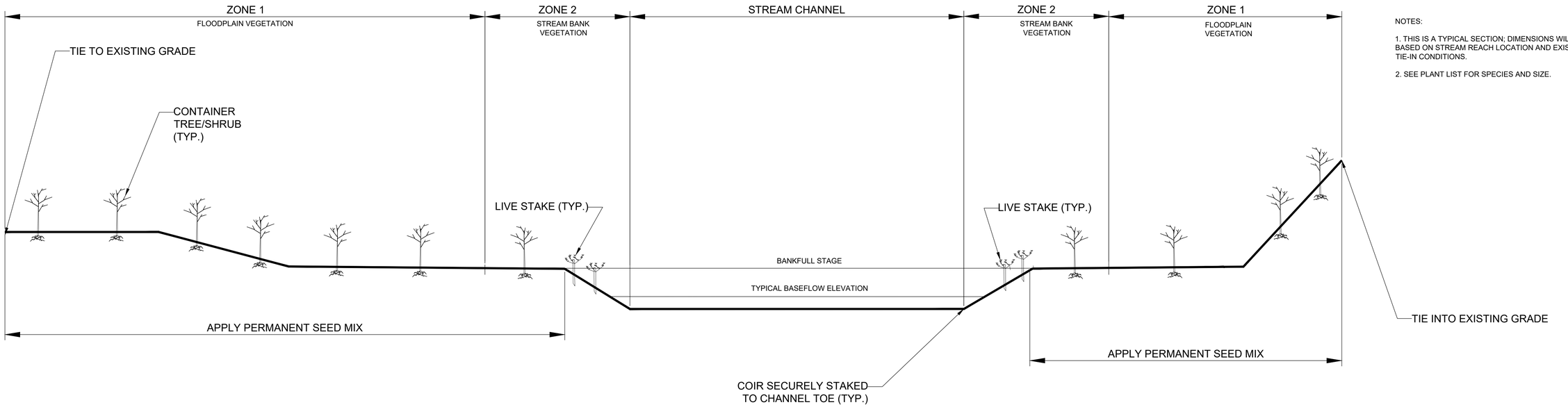
DAM 101 STREAM MITIGATION CHANDLER BRANCH

TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: 1" = 40'	VEGETATION PLAN
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14**
SHEET: 14 OF 17	**95% DESIGN**
PROJECT NO.: 60596433	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS
	DATE: DECEMBER, 2021

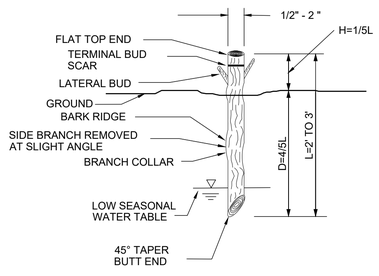


NOTES:

1. THIS IS A TYPICAL SECTION; DIMENSIONS WILL VARY BASED ON STREAM REACH LOCATION AND EXISTING TIE-IN CONDITIONS.

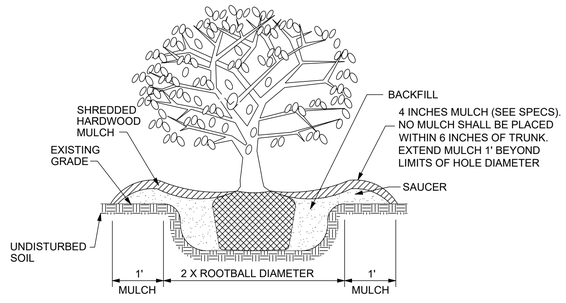
2. SEE PLANT LIST FOR SPECIES AND SIZE.

REVEGETATION SECTION
SCALE: NTS



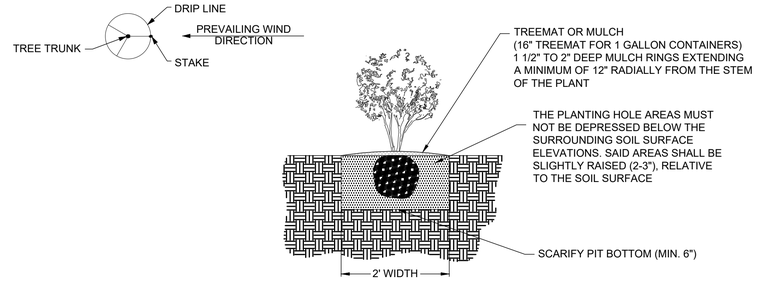
LIVE STAKE

SCALE: NTS



SHRUB PLANTING DETAIL

SCALE: NTS



CONTAINER TREE PLANTING DETAIL

SCALE: NTS

DESIGN:
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DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: NOT TO SCALE	VEGETATION SCHEDULE
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14 95% DESIGN**
SHEET: 15 OF 17	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS DATE: DECEMBER, 2021
PROJECT NO.: 60596433	

ZONE 1: FLOODPLAIN VEGETATION MIX A		
Common Name	Botanical Name	%
Fowl Manna Grass	Glyceria striata	5.3%
Hop Sedge	Carex lupulina	13.7%
Rufous Bulrush	Scirpus pendulus	1.1%
Creeping Spike Rush	Eleocharis palustris	5.3%
Frank's Sedge	Carex frankii	7.6%
Eastern Bur Reed	Sparganium americanum	13.7%
Nodding Sedge	Carex crinita	6.1%
Green Bulrush	Scirpus atrovirens	0.7%
Soft Rush	Juncus effusus	2.3%
Leathery Rush	Juncus coriaceus	0.4%
Rice Cut Grass	Leersia oryzoides	6.1%
Button Bush	Cephalanthus occidentalis	5.7%
Pennsylvania Smartweed	Polygonum pensylvanicum	6.2%
Blue Flag	Iris virginica	5.7%
Rosemallow	Hibiscus moscheutos	3.9%
Seed Box	Ludwigia alternifolia	1.4%
Monkey Flower	Mimulus ringens	1.4%
Arrowhead	Sagittaria latifolia	4.8%
Swamp Milkweed	Asclepias incarnata	8.2%

ZONE 2: STREAMBANK VEGETATION MIX B		
Common Name	Botanical Name	%
Virginia Wild Rye	Elymus virginicus	27.3%
Broomsedge	Andropogon virginicus	3.9%
Fowl Manna Grass	Glyceria striata	2.0%
Rice Cut Grass	Leersia oryzoides	2.0%
Upland Bentgrass	Agrostis perennans	1.6%
Red Top Panicum	Panicum rigidulum	3.9%
Nodding Sedge	Carex crinita	2.3%
Fox Sedge	Carex vulpinoidea	10.9%
Frank's Sedge	Carex frankii	4.7%
Creeping Spike Rush	Eleocharis palustris	1.2%
Soft Rush	Juncus effusus	1.2%
Green Bulrush	Scirpus atrovirens	1.6%
Button Bush	Cephalanthus occidentalis	6.9%
Blue Flag	Iris virginica	3.9%
Ohio Spiderwort	Tradescantia ohiensis	3.5%
Seed Box	Ludwigia alternifolia	1.0%
Boneset	Eupatorium perfoliatum	1.1%
Monkey Flower	Mimulus ringens	1.8%
Rosemallow	Hibiscus moscheutos	2.8%
Swamp Milkweed	Asclepias incarnata	2.4%
Yellow Wingstem	Verbesina alternifolia	7.0%
Joe-Pye Weed	Eupatorium fistulosum	1.1%
Sneezeweed	Helenium autumnale	2.1%
Narrow-Leaved Sunflower	Helianthus angustifolius	4.0%

PLANTING SCHEDULE

			Scientific Name	Common Name	Live Stakes	Container	Remarks
ZONE 1	FLOODPLAIN VEGETATION	TREES	*Carya illinoinensis*	Pecan		50	5 gallon containers or similar ball & burlap random spacing throughout easement
			Celtis occidentalis	Hackberry		50	
			Cercius canadensis var. texensis	Texas Redbud		50	
			Prunus mixicana	Mexican Plum		50	
			Quercus fusiformis	Escarpment Live Oak		50	
			Ulmus crassifolia	Cedar Elm		50	
		SHRUBS	*Asimina triloba*	Pawpaw		50	
			Carpinus caroliniana	American Hornbeam		50	
			Lindera benzoin	Spice Bush		50	
ZONE 2	STREAMBANK VEGETATION	TREES/ SHRUBS	*Cornus drummondii*	Rough Leaved Dogwood	250		One stake per 3 linear feet in rows spaced one foot apart. Randomly distributed.
			Salix nigra	Black Willow	250		
			Sambucus canadensis	Elderberry	250		

NOTES:

1.QUANTITIES ARE BASED ON ESTIMATED 3.1 ACRES OF DISTURBANCE AND BUFFER AREA ALONG THE STREAM CORRIDOR. ANY ADDITIONAL DISTURBANCE WITHIN THE SPECIFIED LOD SHALL BE SEEDED AND PLANTED AT THE RATE SPECIFIED ABOVE.

2. PLANTING QUANTITIES ARE ESTIMATES AND SHALL BE VERIFIED BASED ON THE SPECIFIED DENSITY (PLANTS/ACRES) PRIOR TO BIDDING.

3. SEEDING SHALL OCCUR PRIOR TO INSTALLATION OF EROSION CONTROL COIR MATTING FABRIC AND TREE LIVESTAKE PLANTING.

4. MULCHING SHOULD BE PERFORMED WITHIN 48 HOURS OF SEEDING. GRAIN STRAW MULCH SHOULD BE APPLIED ON SEED AREAS AT A RATE OF 2 TONS PER ACRE AND APPLIED UNIFORMLY.

5. SPECIES LISTED ABOVE SHOULD BE PLANTED, HOWEVER IF UNAVAILABLE, SUBSTITUTIONS OF OTHER IN-STOCK NATIVE MATERIAL WILL BE ALLOWED BASED ON THE SEED AND TREE SUPPLY NURSERY.

6. PROPOSED SEED MIX A SHOULD BE APPLIED AT A SEEDING RATE OF 4-5.8 POUNDS/ACRE.

7. PROPOSED RIPARIAN SEED MIX B SHOULD BE APPLIED AT A SEEDING RATE OF 3.9-5.6 LBS/ACRE.

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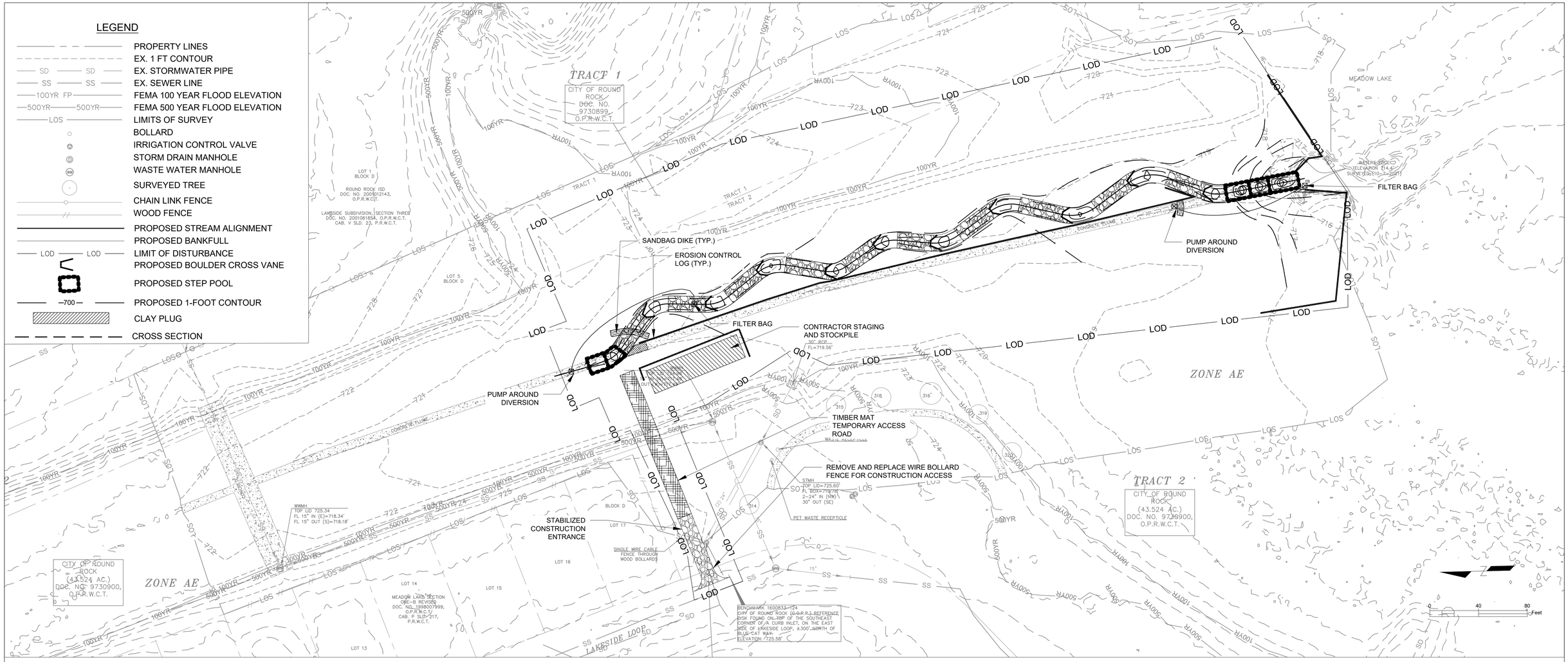
DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: SEE DRAWING
DRAWN BY: EEB
DESIGN BY: RGJ
SHEET: 16 OF 17
PROJECT NO.: 60596433

VEGETATION SCHEDULE

DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14
95% DESIGN
UPPER BRUSHY CREEK WATER CONTROL
AND IMPROVEMENT DISTRICT
ROUND ROCK, TEXAS
DATE: DECEMBER, 2021



GENERAL NOTES

1. THE CONTRACTOR MUST FOLLOW THE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES IN THE CONSTRUCTION DRAWINGS.
2. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING ON SITE WITH THE PROJECT ENGINEER, DISTRICT PROJECT MANAGER, AND APPROPRIATE PERSONNEL TO REVIEW THE EPSC REQUIREMENTS, SEQUENCE OF CONSTRUCTION, LIMITS OF DISTURBANCE, CHANNEL LAYOUT, AND TREE IMPACT BEFORE WORK BEGINS. STAKE OUT THE LIMIT OF DISTURBANCE AND CONSTRUCTION BASELINE FOR NEW ALIGNMENT (CHANNEL THALWEG).
3. WORK SHALL NOT BE CONDUCTED IN THE CHANNEL DURING RAIN EVENTS, WORK MAY PROCEED BASED ON 3 DAY DRY WEATHER FORECAST.
4. TRAVERSING A CHANNEL REACH WITH EQUIPMENT WITHIN THE WORK AREA WHERE NO WORK IS PROPOSED SHOULD BE AVOIDED. IF EQUIPMENT HAS TO TRAVERSE A REACH FOR ACCESS TO ANOTHER AREA, THEN TIMBER MATS OR SIMILAR MEASURES SHOULD BE USED TO MINIMIZE DISTURBANCE TO THE CHANNEL.
5. A PUMP AROUND MUST BE INSTALLED ON ANY TRIBUTARY OR STORM DRAIN OUTFALL WHICH CONTRIBUTES BASEFLOW TO THE WORK AREA. THIS SHOULD BE ACCOMPLISHED BY LOCATING A SANDBAG DIKE AT THE DOWNSTREAM END OF THE TRIBUTARY OR STORM DRAIN OUTFALL AND PUMPING THE STREAM FLOW AROUND THE WORK AREA. THIS WATER SHOULD DISCHARGE ONTO A STABLE VELOCITY DISSIPATOR MADE OF RIPRAP OR SANDBAGS.

SEQUENCE OF CONSTRUCTION EVENTS

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND OTHER PERIMETER CONTROL MEASURES AS SHOWN ON THE ESPC PLAN.
2. ESTABLISH STAGING AND STOCKPILE AREAS AND INSTALL SEDIMENT CONTROL MEASURES AS SHOWN ON THE ESPC PLAN.
3. THE CONTRACTOR SHOULD BEGIN WORK AT STATION 0+50 WITH THE INSTALLATION OF THE SANDBAG DIKE AS INDICATED ON THE PLANS. BEGINNING AT THIS LOCATION, CONSTRUCTION SHALL PROCEED IN THE DRY FROM UPSTREAM TO DOWNSTREAM TO STATION 50+50.
4. WATER FROM THE WORK AREA SHOULD BE PUMPED TO A SEDIMENT FILTERING MEASURE, SUCH AS A DEWATERING BASIN, SEDIMENT BAG, OR OTHER APPROVED SOURCE. THE MEASURE SHOULD BE LOCATED SUCH THAT THE WATER DRAINS INTO THE EXISTING CHANNEL. THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE LOCATION OF DEWATERING PRACTICES AS NEEDED TO ENSURE THE WORK AREA IS MAINTAINED IN DRY CONDITION.
5. ALL STREAM RESTORATION MEASURES SHOULD BE INSTALLED AS INDICATED BY THE PLANS AND ALL BANKS GRADED IN ACCORDANCE WITH THE GRADING PLAN AND TYPICAL CROSS SECTIONS.
6. INSTALL A PUMP AROUND DIVERSION TOWARD THE END OF THE PROJECT AND COMPLETE CONSTRUCTION FROM 50+50 TO THE END OF THE PROJECT.
7. INSTALL A PUMP AROUND DIVERSION AT THE START OF THE PROJECT AND PUMP WATER FROM ABOVE THE WORK AREA INTO THE NEWLY CONSTRUCTED CHANNEL BELOW 10+00.
8. COMPLETE CONSTRUCTION OF CHANNEL FROM START OF PROJECT TO 0+50.
9. ONCE CHANNEL CONSTRUCTION IS COMPLETE REMOVE PUMP AROUND DIVERSION AND ALLOW WATER TO FLOW INTO THE NEWLY CONSTRUCTED CHANNEL.
10. DEMOLISH AND REMOVE ABANDONED CONCRETE LINE CHANNEL AND REGRADE AREA AS INDICATED ON THE PLANS.
11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ACCESS TO AND MAINTAINING ALL EROSION AND SEDIMENT CONTROL DEVICES UNTIL THE ENGINEER APPROVES THEIR REMOVAL.
12. AFTER CONSTRUCTION, ALL DISTURBED AREAS SHALL BE REGRADED AND REVEGETATED AS PER THE PLANTING PLAN.

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DAM 101 STREAM MITIGATION CHANDLER BRANCH
TRIBUTARY 3A TO MEADOW LAKE AT DAM 14

SCALE: 1"=40'	EROSION CONTROL
DRAWN BY: EEB	
DESIGN BY: RGJ	**DAM 101 STREAM MITIGATION CHANDLER BRANCH TRIBUTARY 3A TO MEADOW LAKE AT DAM 14 95% DESIGN**
SHEET: 17 OF 17	UPPER BRUSHY CREEK WATER CONTROL AND IMPROVEMENT DISTRICT ROUND ROCK, TEXAS DATE: DECEMBER, 2021
PROJECT NO.: 60596433	