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Cottonwood Channel Pond

EA ID 11-06090101

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City of Cedar Park, Texas

Williamson County, Texas

# MODIFICATION OF A PREVIOUSLY APPROVED TCEQ EDWARDS AQUIFER CONTRIBUTING ZONE PLAN

Prepared for:

City of Cedar Park

Prepared by:

 **LJA Engineering, Inc.**

LJA Engineering, Inc.

2700 La Frontera, Suite 200

Round Rock, Texas 78681



# Modification of a Previously Approved Contributing Zone Plan Checklist

- ✓ **Edwards Aquifer Application Cover Page (TCEQ-20705)**
- ✓ **Modification of a Previously Approved Contributing Zone Plan Form (TCEQ-10259)**
  - Attachment A - Original Approval Letter and Approved Modification Letters
  - Attachment B - Narrative of Proposed Modification
  - Attachment C - Current site plan of the approved project
- ✓ **Contributing Zone Plan Application (TCEQ-10257)**
- ✓ **Storm Water Pollution Prevention Plan (SWPPP)**
- OR-
- ✗ **Temporary Stormwater Section (TCEQ-0602)**
- ✓ **Copy of Notice of Intent (NOI)**
- ✓ **Agent Authorization Form (TCEQ-0599) (City of Cedar Park), if application submitted by agent**
- ✓ **Agent Authorization Form (TCEQ-0599) (Cedar Park Regional Health Center), if application submitted by agent**
- ✓ **Application Fee Form (TCEQ-0574)**
- ✓ **Check Payable to the “Texas Commission on Environmental Quality”**
- ✓ **Core Data Form (TCEQ-10400)**

# Texas Commission on Environmental Quality

## Edwards Aquifer Application Cover Page

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### 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.

<b>1. Regulated Entity Name:</b> Cottonwood channel Pond and Wastewater Improvements					<b>2. Regulated Entity No.:</b> 105031397				
<b>3. Customer Name:</b> City of Cedar Park					<b>4. Customer No.:</b> 600407951				
<b>5. Project Type:</b> (Please circle/check one)	New	Modification			Extension	Exception			
<b>6. Plan Type:</b> (Please circle/check one)	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
<b>7. Land Use:</b> (Please circle/check one)	Residential	Non-residential				<b>8. Site (acres):</b>		63.57	
<b>9. Application Fee:</b>	\$8,000		<b>10. Permanent BMP(s):</b>			Wet Basin			
<b>11. SCS (Linear Ft.):</b>	1892		<b>12. AST/UST (No. Tanks):</b>			N/A			
<b>13. County:</b>	Williamson		<b>14. Watershed:</b>			Cottonwood Creek			



# 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](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.)	—	—	x
Region (1 req.)	—	—	x
County(ies)	—	—	x
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Barton Springs/ Edwards Aquifer <input type="checkbox"/> Hays Trinity <input type="checkbox"/> Plum Creek	<input type="checkbox"/> Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	<input type="checkbox"/> Austin <input type="checkbox"/> Buda <input type="checkbox"/> Dripping Springs <input type="checkbox"/> Kyle <input type="checkbox"/> Mountain City <input type="checkbox"/> San Marcos <input type="checkbox"/> Wimberley <input type="checkbox"/> Woodcreek	<input type="checkbox"/> Austin <input type="checkbox"/> Bee Cave <input type="checkbox"/> Pflugerville <input type="checkbox"/> Rollingwood <input type="checkbox"/> Round Rock <input type="checkbox"/> Sunset Valley <input type="checkbox"/> West Lake Hills	<input type="checkbox"/> Austin <input checked="" type="checkbox"/> Cedar Park <input type="checkbox"/> Florence <input type="checkbox"/> Georgetown <input type="checkbox"/> Jerrell <input type="checkbox"/> Leander <input type="checkbox"/> Liberty Hill <input type="checkbox"/> Pflugerville <input type="checkbox"/> Round Rock

San Antonio Region					
County:	Bexar	Comal	Kinney	Medina	Uvalde
Original (1 req.)	—	—	—	—	—
Region (1 req.)	—	—	—	—	—
County(ies)	—	—	—	—	—
Groundwater Conservation District(s)	<input type="checkbox"/> Edwards Aquifer Authority <input type="checkbox"/> Trinity-Glen Rose	<input type="checkbox"/> Edwards Aquifer Authority	<input type="checkbox"/> Kinney	<input type="checkbox"/> EAA <input type="checkbox"/> Medina	<input type="checkbox"/> EAA <input type="checkbox"/> Uvalde
City(ies) Jurisdiction	<input type="checkbox"/> Castle Hills <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Helotes <input type="checkbox"/> Hill Country Village <input type="checkbox"/> Hollywood Park <input type="checkbox"/> San Antonio (SAWS) <input type="checkbox"/> Shavano Park	<input type="checkbox"/> Bulverde <input type="checkbox"/> Fair Oaks Ranch <input type="checkbox"/> Garden Ridge <input type="checkbox"/> New Braunfels <input type="checkbox"/> Schertz	NA	<input type="checkbox"/> San Antonio ETJ (SAWS)	NA

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.

John Tietz

Print Name of Customer/Authorized Agent

*Jack Tietz*

06/04/2025

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):

# Modification of a Previously Approved Contributing Zone Plan

## Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Transition Zone and Relating to 30 TAC 213.4(j), 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.*

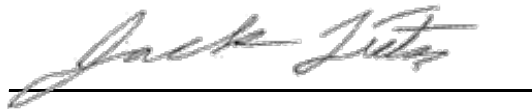
## Signature

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 **Modification of a Previously Approved Contributing Zone Plan** is hereby submitted for TCEQ review and executive director approval. The request was prepared by:

Print Name of Customer/Agent: John Tietz

Date: 06/04/2025

Signature of Customer/Agent:



## Project Information

- Current Regulated Entity Name: Cottonwood Channel Pond and Wastewater Improvements  
Original Regulated Entity Name: Cottonwood Channel Pond and Wastewater Improvements  
Assigned Regulated Entity Number(s) (RN): 105031397  
Edwards Aquifer Protection Program ID Number(s): 06090101  
☐ The applicant has not changed and the Customer Number (CN) is: \_\_\_\_\_  
☒ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.
- ☒ **Attachment A: Original Approval Letter and Approved Modification Letters.** A copy of the original approval letter and copies of any modification approval letters are attached.
- A modification of a previously approved plan is requested for (check all that apply):

- ☒ Any physical or operational modification of any best management practices or structure(s), including but not limited to temporary or permanent ponds, dams, berms, silt fences, and diversionary structures;
- ☐ Any change in the nature or character of the regulated activity from that which was originally approved;
- ☐ A change that would significantly impact the ability to prevent pollution of the Edwards Aquifer and hydrologically connected surface water; or
- ☒ Any development of land previously identified in a contributing zone plan as undeveloped.

4. ☒ Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

<b><i>CZP Modification</i></b>	<b><i>Approved Project</i></b>	<b><i>Proposed Modification</i></b>
<b><i>Summary</i></b>		
Acres	<u>511.23</u>	<u>470.83</u>
Type of Development	<u>Mixed</u>	<u>Mixed</u>
Number of Residential Lots	<u>N/A</u>	<u>N/A</u>
Impervious Cover (acres)	<u>188.42</u>	<u>305.48</u>
Impervious Cover (%)	<u>36.8</u>	<u>64.9</u>
Permanent BMPs	<u>Wet Basin</u>	<u>Wet Basin</u>
Other	<u>N/A</u>	<u>N/A</u>
<b><i>AST Modification</i></b>		
<b><i>Summary</i></b>		
Number of ASTs	<u>0</u>	<u>0</u>
Other	<u>N/A</u>	<u>N/A</u>
<b><i>UST Modification</i></b>		
<b><i>Summary</i></b>		
Number of USTs	<u>0</u>	<u>0</u>
Other	<u>N/A</u>	<u>N/A</u>

5. ☒ **Attachment B: Narrative of Proposed Modification.** A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved,

including previous modifications, and how this proposed modification will change the approved plan.

6. ☒ **Attachment C: Current Site Plan of the Approved Project.** A current site plan showing the existing site development (i.e., current site layout) at the time this application for modification is attached. A site plan detailing the changes proposed in the submitted modification is required elsewhere.
- ☐ The approved construction has not commenced. The original approval letter and any subsequent modification approval letters are included as Attachment A to document that the approval has not expired.
- ☒ The approved construction has commenced and has been completed. Attachment C illustrates that the site was constructed as approved.
- ☐ The approved construction has commenced and has been completed. Attachment C illustrates that the site was **not** constructed as approved.
- ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was constructed as approved.
- ☐ The approved construction has commenced and has **not** been completed. Attachment C illustrates that, thus far, the site was **not** constructed as approved.
7. ☐ Acreage has not been added to or removed from the approved plan.
- ☒ Acreage has been added to or removed from the approved plan and is discussed in *Attachment B: Narrative of Proposed Modification*.
8. ☒ 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.

**MODIFICATION OF A PREVIOUSLY APPROVED CONTRIBUTING ZONE**  
**PLAN (TCEQ-10259)**  
**ATTACHMENT A -APPROVAL LETTERS**

Kathleen Hartnett White, *Chairman*  
Larry R. Soward, *Commissioner*  
Martin A. Hubert, *Commissioner*  
Glenn Shankle, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

October 18, 2006

Dr. David Klein  
Cedar Park Health System, LP  
5800 Tennyson Parkway  
Plano, Texas 75024

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Cottonwood Channel Pond and Wastewater Improvements; North on  
CR 185 From Intersection With FM 1431; Cedar Park, Texas

TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas  
Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer  
Edwards Aquifer Protection Program File No. 06090101

Dear Dr. Klein:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP application for the referenced project submitted to the Austin Regional Office by Gray-Jansing & Associates, Inc. on behalf of Cedar Park Health System, LP on September 1, 2006. Final review of the CZP submittal was completed after additional material was received on October 10, 2006. As presented to the TCEQ, the Temporary Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Contributing Zone Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10% of the construction has commenced on the project or an extension of time has been requested.*

### PROJECT DESCRIPTION

The proposed project is to construct a regional wet basin that will receive stormwater runoff from a total of 511.23 acres. Channel improvements along approximately 1,800 feet of Cottonwood Creek are also proposed. The channel improvements are to help convey and contain the flow from the 100-year storm event. Also, an existing wastewater interceptor will be rerouted to avoid the channel and pond improvements.

REPLY TO: REGION 11 • 1921 CEDAR BEND DR., STE. 150A • AUSTIN, TEXAS 78758-5327 • 512/339-2929 • FAX 512/339-3795

P.O. Box 13087 • Austin, Texas 78711-3087 • 512/239-1000 • Internet address: [www.tceq.state.tx.us](http://www.tceq.state.tx.us)

printed on recycled paper using soy-based ink



Several property owners and the City of Cedar Park are proposing the regional pond and channel improvements. Runoff generated from their property will either flow to Cottonwood Creek and into the regional pond or flow directly into the regional pond. The proposed wet basin has been sized to reduce the pollutant load and the peak runoff generated by the participating property owners (approximately 261 acres). An additional 250.59 acres of property that will drain to the pond is not included in the sizing of the pond for pollutant removal or peak runoff reduction, and those properties will need to provide their own onsite detention and water quality facilities. The proposed impervious cover (IC) for the development is approximately 188.42 acres (36.9 % of the total area draining to pond). Project wastewater will be disposed of by conveyance to the existing City of Cedar Park Water Reclamation Facility.

#### PERMANENT POLLUTION ABATEMENT MEASURES

A wet basin will be constructed to treat stormwater runoff. The wet basin will provide a capacity of approximately 30.95 acre-feet with a permanent pool volume of 16.49 acre-feet and a water quality volume of 14.56 acre-feet. The approved measures meet the required 80 percent removal of the increased load in total suspended solids caused by the project.

#### SPECIAL CONDITION

Intentional discharges of sediment laden stormwater during construction are not allowed. If dewatering excavated areas and/or areas of accumulated stormwater becomes necessary, the discharge shall be filtered through appropriately selected temporary best management practices. These may include vegetative filter strips, sediment traps, rock berms, silt fence rings, etc.

#### STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

#### Prior to Commencement of Construction:

2. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project until all regulated activities are completed.
3. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

4. The applicant must provide written notification of intent to commence construction of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
5. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. The water quality pond shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

6. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
7. If sediment escapes the construction site, the 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). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. 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).
8. The following records shall be maintained and made available to the executive director 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.
9. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

Dr. David Klein  
Page 4  
October 18, 2006

After Completion of Construction:

10. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.
11. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50% of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
12. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact Mr. Terry Webb of the Edwards Aquifer Protection Program of the Austin Regional Office at (512)339-2929.

Sincerely,



Glenn Shankle  
Executive Director  
Texas Commission on Environmental Quality

GS/tmw

cc: Mr. Stephen K. Collins, P.E., Gray-Jansing & Associates, Inc.  
The Honorable John C. Doerfler, County Judge, Williamson County  
Mr. Paulo C. Pinto, B.S., R.S., Director of Environmental Services, Williamson County  
& Cities Health District  
Mr. Sam Roberts, P.E., Director of Public Works, City of Cedar Park  
TCEQ Central Records

**MODIFICATION OF A PREVIOUSLY APPROVED CONTRIBUTING ZONE**  
**PLAN (TCEQ-10259)**  
**ATTACHMENT B – NARRATIVE OF PROPOSED MODIFICATION**

## **Narrative of Proposed Modification**

This proposed modification updates the previously approved Cottonwood Channel, Pond & Wastewater Improvements Contributing Zone Plan (CZP), originally permitted under EAPP ID 11-06090101 and submitted by Cedar Park Regional Health Center. At the time of original approval, few participating tracts were developed, and broad assumptions were made regarding contributing drainage areas and impervious cover. These assumptions were based on conceptual layouts and anticipated future developments rather than actual site plans and field conditions.

## **Modifications to the approved plan**

This modification updates the owner/applicant to the city of Cedar Park, and adds additional tracts North of New Hope Drive that were previously non-participants. The modification also updates the contributing area assumptions with current, field-verified conditions, reflecting several key changes:

1. **CTRMA ROW:**  
The previous plan broadly estimated runoff contributions from the CTRMA ROW. Updated grading contours and as-built construction plans now show a reduced non-participating area within this ROW. This results in a more accurate and lower estimate of untreated area draining outside the Cottonwood Pond system.
2. **Town Center Development Area:**  
Initial estimates assumed to have a greater development area. However, based on site-specific infrastructure and current development plans, this development area is smaller than initial estimates, thereby reducing its contribution to the pond's required water quality volume (WQV).
3. **Nebraska Furniture Mart (NFM) Site:**  
A new development is underway at the NFM site, permitted under current EAPP ID 11004011. This project is within the pond's drainage area and a portion of the tract is being included as a participating tract in this modification.
4. **New Hope Drive Expansion:**  
The City of Cedar Park's New Hope Drive project, currently under construction under EAPP ID 11-11004061, includes roadway widening, intersection improvements, storm sewer, curb and gutter, and lighting infrastructure. This project adds new impervious cover, which contributes runoff to Cottonwood Channel Pond.

## **Site Plan and Infrastructure Updates**

The proposed modification references Attachment – Site Plan, which maps contributing areas, including:

- Participating tracts (existing and under construction),

- Updated drainage patterns based on new grading,
- Non-participating areas with refined boundary conditions.

### Pond Modifications

To accommodate the increased runoff and meet TCEQ's 80% TSS removal requirement, the following physical enhancements to Cottonwood Pond are included:

- Expansion of pond footprint and grading modifications, increasing overall capacity.
- Addition of riprap at the upstream entrance to manage inflow energy.
- Installation of one aerator fountains to improve water quality and prevent stagnation.
- Construction of a gabion wall to contain sediment in the sedimentation basin.
- New maintenance driveway to facilitate long-term upkeep.

Table 1: Basin 3 Summary of Changes

COTTONWOOD POND SUMMARY OF CHANGES			
	UNITS	EXISTING	PROPOSED
DRAINAGE AREA	ACRES	511.23	470.83
PERCENTAGE OF IMPERVIOUS COVER	%	36.8%	64.9%
TOTAL IMPERVIOUS COVER	ACRES	188.27	305.48
REQUIRED WATER QUALITY VOLUME (WQV)	FT^3	1,286,817.5	2,172,297.8
REQUIRED PERMANENT POOL VOLUME (PPV)	FT^3	701,900.4	1,184,889.7
PROVIDED WATER QUALITY VOLUME (WQV)	FT^3	1,348,323.0	2,487,913.0
PROVIDED PERMANENT POOL VOLUME (PPV)	FT^3	718,186.0	1,257,987.0

Table 2: Impervious Cover Allocation

From approved CZP						Proposed							
Area ID	Property Owner	Area (ac)	% Imp	Imp Area (ac)	% Allocation	Area ID	WCAD Parcel ID	Owner Name	Area (ac)	% Imp	Imp Area (ac)	% Allocation	
1	DR Horton	64.00	48.8%	31.23	16.7%	1	Various	Town Center Subdvsn	51.51	48.8%	25.14	8.2%	
2	City of Cedar Park	10.39	71.7%	7.45	4.0%	2	NA	City of Cedar Park/NHD	19.92	80.4%	16.02	5.2%	
3	V-S Cedar Park	5.48	80.0%	4.38	2.3%	3A	R542595	HUT HOMES IV LLC (NH Animal Hospital)	1.73	88.4%	1.53	0.5%	
						3B	R548647	7-ELEVEN INC	1.33	87.2%	1.16	0.4%	
						3C	R548648	SLK DUTCH BROTHERS LLC	0.83	88.0%	0.73	0.2%	
						3D	R542597	Velocity Credit Union	1.14	85.1%	0.97	0.3%	
4	V-S Cedar Park	2.24	80.0%	1.79	1.0%	4	R513564	BIG DIAMOND INC (Circle K)	2.42	93.4%	2.26	0.7%	
5	DR Horton	33.02	80.0%	26.42	14.1%	5	R543269	IVT PARKE CEDAR PARK LLC (The Parke)	34.07	80.0%	27.26	8.9%	
6	V-S Cedar Park	8.98	80.0%	7.18	3.8%	6A	R557813	RS CEDAR PARK LLC & REP WARNER CP LLC & CEDAR PARK WSS LLC (Woodspring Suites)	2.80	80.0%	2.24	0.7%	
						6B	R631706	JRB CEDAR PARK LP (Ethan Allen )	1.38	80.0%	1.10	0.4%	
						6C	R631707	CEDAR PARK TOWN CENTER LP (UFCU)	0.92	92.4%	0.85	0.3%	
						6D	R557814	SRH HOSPITALITY CEDAR PARK REALTY LLC (Hyatt Place)	2.58	80.0%	2.06	0.7%	
						6E	R557815	DEVAGIRI INVESTORS LLC & BIG CREEK LOTS LLC & JAYYES GROUP LLC	1.01	80.0%	0.81	0.3%	
7	City of Cedar Park	2.15	71.7%	1.54	0.8%	7	NA	City of Cedar Park (NHD)	1.73	93.0%	1.61	0.5%	
8	V-S Cedar Park	32.95	80.0%	26.36	14.1%	8A	R586832	CPTC SEC NHD LLC (54th Street)	4.19	80.0%	3.35	1.1%	
						8B	R532778	TRIAD HOSPITALS INC	15.71	80.0%	12.57	4.1%	
						8C	R545029	PSCN CEDAR PARK CONDO	8.99	80.0%	7.19	2.4%	
						8D	R586833	CPTC 24HF LLC	4.07	58.7%	2.39	0.8%	
9	Triad	68.80	80.0%	55.04	29.4%	9A	R565440	CEDAR PARK HEALTH SYSTEM LP	33.52	80.0%	26.82	8.8%	
						9D	R031433	CEDAR PARK HEALTH SYSTEM LP	12.39	80.0%	9.91	3.2%	
						9B	R565441	R&J MEDICAL PROPERTIES LLC	2.69	80.0%	2.15	0.7%	
						9C	R559281	City of Cedar Park (Fire Station)	2.44	80.0%	1.95	0.6%	
10	Endeavor	3.43	71.7%	2.46	1.3%	10	NA	City of Cedar Park	3.31	71.7%	2.37	0.8%	
11	Triad	7.29	71.7%	5.23	2.8%	11	NA	City of Cedar Park	4.78	71.7%	3.43	1.1%	
12	Endeavor	21.90	81.9%	17.94	9.6%	12A	R499696	1431 SC LTD	5.02	81.9%	4.11	1.3%	
						12B	R510849	1431 SC LTD	6.28	81.9%	5.14	1.7%	
						12C	R661194	CP1890 PROPERTIES LLC	1.33	81.9%	1.09	0.4%	
						12D	R499694	MENGAN REALTY LLC SERIES A	3.55	81.9%	2.91	1.0%	
						12E	R499690	STORE MASTER FUNDING XI LLC	1.01	81.9%	0.83	0.3%	
						12F	R491993	WK DE CEDAR PARK LLC	1.18	81.9%	0.97	0.3%	
						12G	R499691	SPOONIAN, LLC	0.59	81.9%	0.48	0.2%	
						12H	R481885	TARGET CORPORATION	2.97	81.9%	2.43	0.8%	
Non-Part	Non Participants	250.59	0.5%	1.25		13	R658955	121 ACQUISITION COMPANY LLC (NFM)	77.35	80.0%	61.88	20.3%	
						14A	R031861	NORTHLAND DEVELOPMENTS CEDAR PARK INC	16.59	80.0%	13.27	4.3%	
						14B	R031859	NORTHLAND DEVELOPMENTS CEDAR PARK INC	5.00	80.0%	4.00	1.3%	
						14C	R543331	NORTHLAND DEVELOPMENTS CEDAR PARK INC	7.59	80.0%	6.07	2.0%	
						14D	R431906	NORTHLAND DEVELOPMENTS CEDAR PARK INC	8.89	80.0%	7.11	2.3%	
						15	R031776	RH BLOCK HOUSE RD LLC (Reger)	13.99	80.0%	11.19	3.7%	
						16A	R349071	City of Cedar Park (HEB Center)	32.39	80.0%	25.91	8.5%	
						16B	R524950	City of Cedar Park (Pond)	1.83	80.0%	1.46	0.5%	
						16C	R509161	City of Cedar Park (Remainder)	0.77	80.0%	0.62	0.2%	
						16D	R543330	City of Cedar Park (Sign)	0.16	80.0%	0.13	0.0%	
						Non-Part		Multiple	54.61	0.0%	0.00	0.0%	
						17		City of Cedar Park (Pond)	14.27	0.0%	0.00	0.0%	
Total		511.23		188.42	100.0%	Total			470.83		305.48	100.0%	



## **Conclusion**

This modification represents a comprehensive update based on actual development patterns, refined drainage delineations, and current construction activities. The net effect is an increase in contributing impervious cover, necessitating greater treatment volumes and supporting the expansion of Cottonwood Channel Pond to maintain regulatory compliance and water quality performance. This modification also updates the applicant and owner from the Cedar Park Regional Health Center, to the City of Cedar Park to operate and maintain.

**MODIFICATION OF A PREVIOUSLY APPROVED CONTRIBUTING ZONE**  
**PLAN (TCEQ-10259)**  
**ATTACHMENT C – SITE PLAN OF THE PREVIOUSLY APPROVED PROJECT**











Office Flowline: 896 2.25, 100-year weir elev = 899.1 Emergency weir elevation: 900.4									
	Elevation (ft)	Area (sq ft)	Area (AC)	Inlet Volume (cfs)	Accum. Volume (cfs)	Detention Volume (ac-ft)	Office Flow (cfs)	Office Flow (cfs)	Trapezoidal Weir Flow (cfs)
	890	83,574	1.919	0	0	0.00			
	891	87,441	2.007	85,508	1.96				
	892	91,371	2.098	89,406	174,914	4.02			
	893	128,972	2.981	110,172	285,085	6.54			
	894	153,888	3.073	131,419	416,504	8.95			
	895	150,616	3.458	142,241	558,745	12.83			
	896	168,260	3.863	159,441	718,188	16.49			
	897	173,652	3.987	170,959	888,144	20.41	3.92	18.0	0.00
	898	215,572	4.949	184,612	1,083,758	24.88	8.39	18.0	9.51
	899	261,231	5.997	236,402	1,322,158	30.35	13.87	18.0	12.76
	899.1	263,074	6.016	263,165	1,348,323	30.95	14.47	18.0	13.04
	900	269,681	6.191	239,281	1,587,604	36.45	19.96	18.0	15.34
	901	278,203	6.387	273,632	1,891,536	42.73	26.25	18.0	17.54
	902	286,842	6.585	282,523	2,144,059	49.22	32.73	18.0	19.50
	903	296,576	6.785	291,209	2,438,267	55.91	39.42	18.0	21.27
	904	313,778	7.203	304,678	2,739,943	62.90	46.41	18.0	22.91
	905	332,646	7.636	323,211	3,063,154	70.32	53.83	18.0	24.44
	905.4	340,582	7.819	334,847	3,197,801	73.41	56.92	18.0	25.03
	906	352,513	8.003	340,732	3,408,733	78.19	61.70	18.0	25.88
	907	372,041	8.541	362,277	3,768,010	86.50	70.01	18.0	27.24
	907.4	379,512	8.712	379,512	3,818,320	88.95	73.46	18.0	27.77

COTTONWOOD CREEK TIME OF CONCENTRATION CALCULATIONS DEVELOPED CONDITION													
Drainage Area	Manning's n	Sheet Flow		Shallow Concentrated Flow				Open Channel Flow				Total	
		Flow Length (ft)	2-yr. 24-hr. Rainfall (in)	Slope (ft/ft)	Travel Time (hrs)	Flow Length (ft)	Slope (ft/ft)	Average Velocity (fps)	Travel Time (hrs)	Flow Length (ft)	Average Velocity (fps)	Travel Time (hrs)	Lag Time (hrs)
1	0.02	50	4.1	0.010	0.022	300	0.010	2.02	0.041	3,838	6.00	0.18	0.24
2	0.02	50	4.1	0.010	0.022	100	0.010	2.02	0.014	1,805	6.00	0.08	0.12
3*	0.24	188	4.1	0.011	0.442	2,055	0.016	2.10	0.272	68	0.67	0.03	0.74
4	0.24	300	4.1	0.010	0.668	337	0.021	2.60	0.036	4,337	6.00	0.20	0.90
5*	0.24	201	4.1	0.016	0.400	2,207	0.018	2.19	0.280	710	2.67	0.07	0.75
6-A*	0.24	131	4.1	0.010	0.344	2,352	0.014	1.90	0.344	0	6.00	0.00	0.68
6-B*	0.24	136.5	4.1	0.010	0.358	1,316	0.014	1.90	0.192	0	6.00	0.00	0.55
7*	0.24	118	4.1	0.017	0.256	871	0.021	2.30	0.105	0	6.00	0.00	0.36

COTTONWOOD CREEK TIME OF CONCENTRATION CALCULATIONS EXISTING CONDITION																		
Drainage Area	Manning's n	Sheet Flow		Shallow Concentrated Flow				Open Channel Flow				Cross- sectional Area (sq ft)	Wetted Perimeter (ft)	Hydraulic Radius (ft)	Average Velocity (fps)	Travel Time (hrs)	Total Travel Time (hrs)	Lag Time (min)
		Flow Length (ft)	2-yr. 24-hr. Rainfall (in)	Slope (ft/ft)	Travel Time (hrs)	Flow Length (ft)	Slope (ft/ft)	Average Velocity (fps)	Travel Time (hrs)	Manning's n	Flow Length (ft)	Slope (ft/ft)	Channel Bottom Width (ft)	Channel Side Slope	Channel Depth (ft)			
1	0.24	201	4.1	0.009	0.512	3,155	0.012	5.83	0.158							0.00	0.87	0.40
2	0.24	172	4.1	0.012	0.402	1,413	0.010	1.80	0.245	0.05	553	0.007	0	25	0.85	18.28	42.83	0.43
3	0.24	188	4.1	0.011	0.442	2,055	0.016	2.10	0.272	0.05	68	0.006	0	29	0.31	2.74	17.71	0.15
4	0.24	290	4.1	0.015	0.502	4,298	0.014	1.90	0.628							0.00	1.13	0.88
5	0.24	201	4.1	0.016	0.400	2,207	0.018	2.19	0.280	0.04	710	0.009	0	5	1.36	9.49	14.24	0.67
6-A	0.24	131	4.1	0.010	0.344	2,352	0.014	1.90	0.344							0.00	0.75	0.45
6-B	0.24	136.5	4.1	0.010	0.358	1,316	0.014	1.90	0.192							0.00	0.69	0.41
7	0.24	118	4.1	0.017	0.256	871	0.021	2.30	0.105							0.00	0.55	0.33

COTTONWOOD CREEK CURVE NUMBER CALCULATIONS EXISTING CONDITION													
Drainage Area No.	Total Area (SF)	Total Area (AC)	Pasture, Grassland or Range (Group C)	Pasture, Grassland or Range Group C CN	Pasture, Grassland or Range (Group D)	Pasture, Grassland or Range Group D CN	Woods- Grass Combo (Group C)	Woods- Grass Combo Group C CN	Woods- Grass Combo (Group D)	Woods- Grass Combo Group D CN	Residential (Group C)	Residential CN	Residential (Group D)
1	5,996,566	137.7	3.0	79	29.9	84	0.0	72	103.5	79	0	86.5	0
2	1,274,788	29.3	0	79	0	84	19.8	72	6.8	79	0	86.5	0
3	2,171,305	49.8	0	79	0	84	18.8	72	30.8	79	0	86.5	0
4	4,825,005	110.8	0	79	0	84	51.4	72	58.0	79	0	86.5	0
5	4,831,050	110.9	10.7	79	27.0	84	13.0	72	57.8	79	0.0	86.5	1.1
6-A	1,077,998	24.7	12.8	79	9.9	84	0.0	72	0.0	79	1.8	86.5	0.0
6-B	914,801	21.0	8.9	79	12.0	84	0.0	72	0.0	79	0.1	86.5	0.0
7	1,178,998	27.1	0.3	79	2.6	84	12.6	72	11.0	79	0.0	86.5	0.0

COTTONWOOD CREEK DRAINAGE AREA COVER DESCRIPTIONS DEVELOPED CONDITION POND DESIGN																			
Drainage Area No.	Total Area (SF)	Total Area (AC)	Pasture, Grassland or Range (Group C)	Pasture, Grassland or Range Group C CN	Pasture, Grassland or Range (Group D)	Pasture, Grassland or Range Group D CN	Woods- Grass Combo (Group C)	Woods- Grass Combo Group C CN	Woods- Grass Combo (Group D)	Woods- Grass Combo Group D CN	Residential (Group C)	Residential CN	Residential (Group D)	Residential CN	High Density Residential (Group C)	High Density Residential Group C CN	High Density Residential (Group D)	High Density Residential Group D CN	Commercial (Group C)
1	5,996,566	137.7	0.0	79	0.0	84	0.0	72	20.2	79	0	86.5	0.0	89.5	0.0	90	0.0	92	0.0
2	1,274,788	29.3	0.0	79	0.0	84	6.9	72	0.1	79	0	86.5	0	89.5	0.0	90	0.0	92	0.0
3	2,171,305	49.8	0.0	79	0.0	84	18.8	72	30.8	79	0	86.5	0	89.5	0.0	90	0.0	92	0.0
4	4,825,005	110.8	0.0	79	0.0	84	51.4	72	58.0	79	0	86.5	18.7	89.5	16.8	90	8.1	92	0.0
5	4,831,050	110.9	10.7	79	27.0	84	13.0	72	57.8	79	0	86.5	1.1	89.5	0.0	90	0.0	92	0.0
6-A	1,077,998	24.7	12.8	79	9.9	84	0.0	72	0.0	79	1.8	86.5	0.0	89.5	0.0	90	0.0	92	0.0
6-B	914,801	21.0	8.9	79	12.0	84	0.0	72	0.0	79	0.1	86.5	0	89.5	0.0	90	0.0	92	0.0
7	1,178,998	27.1	0.3	79	2.6	84	12.6	72	10.7	79	0	86.5	0	89.5	0.0	90	0.0	92	0.0

Project: CC Pond Final Design Simulation Run: 2-year				
Start of Run:	16May2005, 12:00	Basin Model:	Ex & Dev wEndeavor	
End of Run:	19May2005, 12:01	Meteorologic Model:	2yr 24 Hour Storm	
Compute Time:	19Jul2006, 13:37:29	Control Specifications:	Control 1	
Volume Units: IN				
Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
1	0.2150	185.10	17May2005, 00:28	2.23
183 A	0.4600	304.74	17May2005, 00:31	2.08
183 A D	0.4600	410.84	17May2005, 00:31	2.64
1D	0.2150	404.18	17May2005, 00:10	3.40
2	0.0460	29.55	17May2005, 00:33	1.80
2D	0.0460	90.98	17May2005, 00:06	3.03
3	0.0780	54.60	17May2005, 00:32	1.93
3D	0.0780	54.60	17May2005, 00:32	1.93
4	0.1730	94.02	17May2005, 00:47	1.89
4D	0.1730	166.32	17May2005, 00:35	3.37
5	0.1730	137.04	17May2005, 00:32	2.18
5D	0.1730	137.04	17May2005, 00:32	2.18
6-A	0.0390	34.83	17May2005, 00:29	2.35
6-A D	0.0390	34.83	17May2005, 00:29	2.35
6-B	0.0330	33.06	17May2005, 00:23	2.37
6-B D	0.0330	33.06	17May2005, 00:23	2.37
7	0.0420	40.65	17May2005, 00:15	1.94
7D	0.0420	41.17	17May2005, 00:15	1.96
CC Pond	0.7990	569.30	17May2005, 00:37	2.79
CR 185	0.7990	572.02	17May2005, 00:30	2.09
CR 185 D	0.7990	752.08	17May2005, 00:12	2.80
CW1	0.5380	359.34	17May2005, 00:32	2.06
CW1 D	0.5380	465.43	17May2005, 00:31	2.53
CW2	0.5840	388.89	17May2005, 00:32	2.04
CW2 D	0.5840	488.25	17May2005, 00:29	2.57

Project: CC Pond Final DesignSimulation Run : 2-year Reservoir: CC Pond				
Start of Run:	16May2005, 12:00	Basin Model:	Ex & Dev wEndeavor	
End of Run:	19May2005, 12:01	Meteorologic Model:	2yr 24 Hour Storm	
Compute Time:	19Jul2006, 13:37:29	Control Specifications:	Control 1	

Volume Units: IN				
Computed Results				
Peak Inflow:	752.08 (CFS)	Date/Time of Peak Inflow:	17May2005, 00:12	
Peak Outflow:	569.30 (CFS)	Date/Time of Peak Outflow:	17May2005, 00:37	
Total Inflow:	2.80 (IN)	Peak Storage:	34.53 (AC-FT)	
Total Outflow:	2.79 (IN)	Peak Elevation:	902.27 (FT)	

Project: CC Pond Final Design Simulation Run: 25-year				
Start of Run:	16May2005, 12:00	Basin Model:	Ex & Dev wEndeavor	
End of Run:	19May2005, 12:01	Meteorologic Model:	25yr 24 Hour Storm	
Compute Time:	19Jul2006, 13:39:28	Control Specifications:	Control 1	
Volume Units: IN				
Hydrologic Element	Drainage Area (MI2)	Peak Discharge (CFS)	Time of Peak	Volume (IN)
1	0.2150	456.59	17May2005, 00:27	5.57
183 A	0.4600	779.36	17May2005, 00:30	5.34
183 A D	0.4600	930.50	17May2005, 00:29	6.08
1D	0.2150	804.91	17May2005, 00:10	7.04
2	0.0460	82.08	17May2005, 00:31	4.92
2D	0.0460	190.24	17May2005, 00:06	6.61
3	0.0780	145.98	17May2005, 00:30	5.12
3D	0.0780	145.98	17May2005, 00:30	5.12
4	0.1730	254.69	17May2005, 00:45	5.07
4D	0.1730	373.71	17May2005, 00:35	7.02
5	0.1730	342.44	17May2005, 00:30	5.80
5D	0.1730	342.44	17May2005, 00:30	5.50
6-A	0.0390	83.68	17May2005, 00:27	5.73
6-A D	0.0390	83.68	17May2005, 00:27	5.73
6-B	0.0330	79.03	17May2005, 00:22	5.76
6-B D	0.0330	79.03	17May2005, 00:22	5.76
7	0.0420	108.22	17May2005, 00:15	5.14
7D	0.0420	108.89	17May2005, 00:15	5.17
CC Pond	0.7990	1450.68	17May2005, 00:29	6.28
CR 185	0.7990	1459.57	17May2005, 00:29	5.36
CR 185 D	0.7990	1645.66	17May2005, 00:12	6.27
CW1	0.5380	925.34	17May2005, 00:30	5.31
CW1 D	0.5380	1076.29	17May2005, 00:29	5.94
CW2	0.5840	1007.37	17May2005, 00:30	5.28
CW2 D	0.5840	1128.86	17May2005, 00:28	5.99



# Contributing Zone Plan Application

## Texas Commission on Environmental Quality

for Regulated Activities on the Contributing Zone to the Edwards Aquifer and Relating to 30 TAC §213.24(1), 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 **Contributing Zone Plan Application** is hereby submitted for TCEQ review and Executive Director approval. The application was prepared by:

Print Name of Customer/Agent: John Tietz

Date: 06/04/2025

Signature of Customer/Agent:



Regulated Entity Name: Cottonwood Channel Pond and Wastewater Improvements

## Project Information

1. County: Williamson
2. Stream Basin: Cottonwood Creek
3. Groundwater Conservation District (if applicable): None
4. Customer (Applicant):

Contact Person: Randall Lueders

Entity: City of Cedar Park

Mailing Address: 405 Cypress Creek Rd., Bldg1

City, State: Cedar Park, TX

Zip: 78613

Telephone: 512-401-5354

Fax: \_\_\_\_\_

Email Address: randall.lueders@cedarparktexas.gov

5. Agent/Representative (If any):

Contact Person: John Tietz

Entity: LJA Engineering

Mailing Address: 2700 La Frontera, Suite 200

City, State: Round Rock, TX

Zip: 78681

Telephone: 512-439-4744

Fax: \_\_\_\_\_

Email Address: jtietz@lja.com

6. Project Location:

- ☒ The project site is located inside the city limits of City of Cedar Park.  
☐ 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.

7. ☒ The location of the project site is described below. Sufficient detail and clarity has been provided so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.

West of Cottonwood Creek Trail approximately 75', South of New Hope Drive 650',  
North of RM 1431 1750'

8. ☒ **Attachment A - Road Map.** A road map showing directions to and the location of the project site is attached. The map clearly shows the boundary of the project site.

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

- ☒ Project site boundaries.  
☒ USGS Quadrangle Name(s).

10. ☒ **Attachment C - Project Narrative.** A detailed narrative description of the proposed project is attached. 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

11. 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/Not cleared)
- ☐ Other: \_\_\_\_\_

12. The type of project is:

- ☐ Residential: # of Lots: \_\_\_\_\_
- ☐ Residential: # of Living Unit Equivalents: \_\_\_\_\_
- ☒ Commercial
- ☐ Industrial
- ☒ Other: Roadway

13. Total project area (size of site): 470.83 Acres

Total disturbed area: \_\_\_\_\_ Acres

14. Estimated projected population: \_\_\_\_\_

15. The amount and type of impervious cover expected after construction is complete is shown below:

**Table 1 - Impervious Cover**

<i><b>Impervious Cover of Proposed Project</b></i>	<i><b>Sq. Ft.</b></i>	<i><b>Sq. Ft./Acre</b></i>	<i><b>Acres</b></i>
Structures/Rooftops	0	÷ 43,560 =	0
Parking	0	÷ 43,560 =	0
Other paved surfaces	13,306,709	÷ 43,560 =	305.48
Total Impervious Cover	13,306,709	÷ 43,560 =	305.48

**Total Impervious Cover  $\frac{305.48}{470.83} \times 100 = 64.9\%$  Impervious Cover**

16. ☒ **Attachment D - Factors Affecting Surface Water Quality.** A detailed description of all factors that could affect surface water quality is attached. If applicable, this includes the location and description of any discharge associated with industrial activity other than construction.

17. ☒ Only inert materials as defined by 30 TAC 330.2 will be used as fill material.

### ***For Road Projects Only***

***Complete questions 18 - 23 if this application is exclusively for a road project.***

☒ N/A

18. Type of project:

- ☐ TXDOT road project.
- ☐ County road or roads built to county specifications.
- ☐ City thoroughfare or roads to be dedicated to a municipality.
- ☐ Street or road providing access to private driveways.

19. Type of pavement or road surface to be used:

- ☐ Concrete
- ☐ Asphaltic concrete pavement
- ☐ Other: \_\_\_\_\_

20. Right of Way (R.O.W.):

Length of R.O.W.: \_\_\_\_\_ feet.

Width of R.O.W.: \_\_\_\_\_ feet.

$L \times W = \text{_____ Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} = \text{_____ acres.}$

21. Pavement Area:

Length of pavement area: \_\_\_\_\_ feet.

Width of pavement area: \_\_\_\_\_ feet.

$L \times W = \text{_____ Ft}^2 \div 43,560 \text{ Ft}^2/\text{Acre} = \text{_____ acres.}$

Pavement area \_\_\_\_\_ acres  $\div$  R.O.W. area \_\_\_\_\_ acres  $\times 100 = \text{_____ \%}$  impervious cover.

22. ☐ A rest stop will be included in this project.

☐ A rest stop will not be included in this project.

23. ☐ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

***Stormwater to be generated by the Proposed Project***

24. ☒ **Attachment E - Volume and Character of Stormwater.** A detailed description of the volume (quantity) and character (quality) of the stormwater runoff which is expected to occur from the proposed project is attached. The estimates of stormwater runoff quality and quantity are based on area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

***Wastewater to be generated by the Proposed Project***

25. ☒ Wastewater is to be discharged in the contributing zone. Requirements under 30 TAC §213.6(c) relating to Wastewater Treatment and Disposal Systems have been satisfied.

☐ N/A

26. Wastewater will be disposed of by:

☐ On-Site Sewage Facility (OSSF/Septic Tank):

☐ **Attachment F - Suitability Letter from Authorized Agent.** An on-site sewage facility will be used to treat and dispose of the wastewater from this site. The appropriate licensing authority's (authorized agent) written approval is attached. It states that the land is suitable for the use of private sewage facilities and will meet or exceed the requirements for on-site sewage facilities as specified under 30 TAC Chapter 285 relating to On-site Sewage Facilities.

☐ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

☒ Sewage Collection System (Sewer Lines):

The sewage collection system will convey the wastewater to the Brushy Creek Regional Waste Water System (BCRWWS) (name) Treatment Plant. The treatment facility is:

☒ Existing.

☒ Proposed.

☐ N/A

### ***Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons***

***Complete questions 27 - 33 if this project includes the installation of AST(s) with volume(s) greater than or equal to 500 gallons.***

☒ N/A

27. Tanks and substance stored:

**Table 2 - Tanks and Substance Storage**

<i>AST Number</i>	<i>Size (Gallons)</i>	<i>Substance to be Stored</i>	<i>Tank Material</i>
1			
2			
3			
4			
5			

**Total x 1.5 = \_\_\_\_\_ Gallons**

28. ☐ The AST will be placed within a containment structure that is sized to capture one and one-half (1 1/2) times the storage capacity of the system. For facilities with more than

5 of 11

one tank system, the containment structure is sized to capture one and one-half (1 1/2) times the cumulative storage capacity of all systems.

- ☐ **Attachment G - Alternative Secondary Containment Methods.** Alternative methods for providing secondary containment are proposed. Specifications showing equivalent protection for the Edwards Aquifer are attached.

29. Inside dimensions and capacity of containment structure(s):

**Table 3 - Secondary Containment**

<i>Length (L)(Ft.)</i>	<i>Width(W)(Ft.)</i>	<i>Height (H)(Ft.)</i>	<i>L x W x H = (Ft3)</i>	<i>Gallons</i>

**Total: \_\_\_\_\_ Gallons**

30. Piping:

- ☐ All piping, hoses, and dispensers will be located inside the containment structure.
- ☐ Some of the piping to dispensers or equipment will extend outside the containment structure.
- ☐ The piping will be aboveground
- ☐ The piping will be underground

31. ☐ The containment area must be constructed of and in a material impervious to the substance(s) being stored. The proposed containment structure will be constructed of: \_\_\_\_\_.

32. ☐ **Attachment H - AST Containment Structure Drawings.** A scaled drawing of the containment structure is attached that shows the following:

- ☐ Interior dimensions (length, width, depth and wall and floor thickness).
- ☐ Internal drainage to a point convenient for the collection of any spillage.
- ☐ Tanks clearly labeled
- ☐ Piping clearly labeled
- ☐ Dispenser clearly labeled

33. ☐ Any spills must be directed to a point convenient for collection and recovery. Spills from storage tank facilities must be removed from the controlled drainage area for disposal within 24 hours of the spill.

- ☐ In the event of a spill, any spillage will be removed from the containment structure within 24 hours of the spill and disposed of properly.

- ☐ In the event of a spill, any spillage will be drained from the containment structure through a drain and valve within 24 hours of the spill and disposed of properly. The drain and valve system are shown in detail on the scaled drawing.

## **Site Plan Requirements**

**Items 34 - 46 must be included on the Site Plan.**

34. ☒ The Site Plan must have a minimum scale of 1" = 400'.  
Site Plan Scale: 1" = 100'.
35. 100-year floodplain boundaries:
- ☒ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.
- ☐ No part of the project site is located within the 100-year floodplain.  
The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): \_\_\_\_\_.
36. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.
- ☐ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot contour intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.
37. ☒ A drainage plan showing all paths of drainage from the site to surface streams.
38. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.
39. ☒ Areas of soil disturbance and areas which will not be disturbed.
40. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.
41. ☒ Locations where soil stabilization practices are expected to occur.
42. ☒ Surface waters (including wetlands).  
☐ N/A
43. ☒ Locations where stormwater discharges to surface water.  
☐ There will be no discharges to surface water.
44. ☐ Temporary aboveground storage tank facilities.  
☒ Temporary aboveground storage tank facilities will not be located on this site.

45. ☐ Permanent aboveground storage tank facilities.  
☒ Permanent aboveground storage tank facilities will not be located on this site.
46. ☒ Legal boundaries of the site are shown.

### ***Permanent Best Management Practices (BMPs)***

***Practices and measures that will be used during and after construction is completed.***

47. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.  
☐ N/A
48. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.  
☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.  
☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: \_\_\_\_\_.  
☐ N/A
49. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.  
☐ N/A
50. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.  
☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.  
☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.  
☒ The site will not be used for low density single-family residential development.

51. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

- ☐ **Attachment I - 20% or Less Impervious Cover Waiver.** The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
- ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
- ☒ The site will not be used for multi-family residential developments, schools, or small business sites.

52. ☒ **Attachment J - BMPs for Upgradient Stormwater.**

- ☐ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
- ☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
- ☒ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

53. ☒ **Attachment K - BMPs for On-site Stormwater.**

- ☒ A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is attached.
- ☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

54. ☐ **Attachment L - BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams is attached.

☒ N/A

55. ☒ **Attachment M - Construction Plans.** Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. Construction plans for the proposed permanent BMPs and measures are

attached and include: Design calculations, TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

☐ N/A

56. ☒ **Attachment N - Inspection, Maintenance, Repair and Retrofit Plan.** A site and BMP specific plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan fulfills all of the following:

- ☒ Prepared and certified by the engineer designing the permanent BMPs and measures
- ☒ Signed by the owner or responsible party
- ☒ Outlines specific procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofit.
- ☒ Contains a discussion of record keeping procedures

☐ N/A

57. ☐ **Attachment O - Pilot-Scale Field Testing Plan.** Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

☒ N/A

58. ☒ **Attachment P - Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that result in water quality degradation.

☐ N/A

***Responsibility for Maintenance of Permanent BMPs and Measures after Construction is Complete.***

59. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.
60. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development,



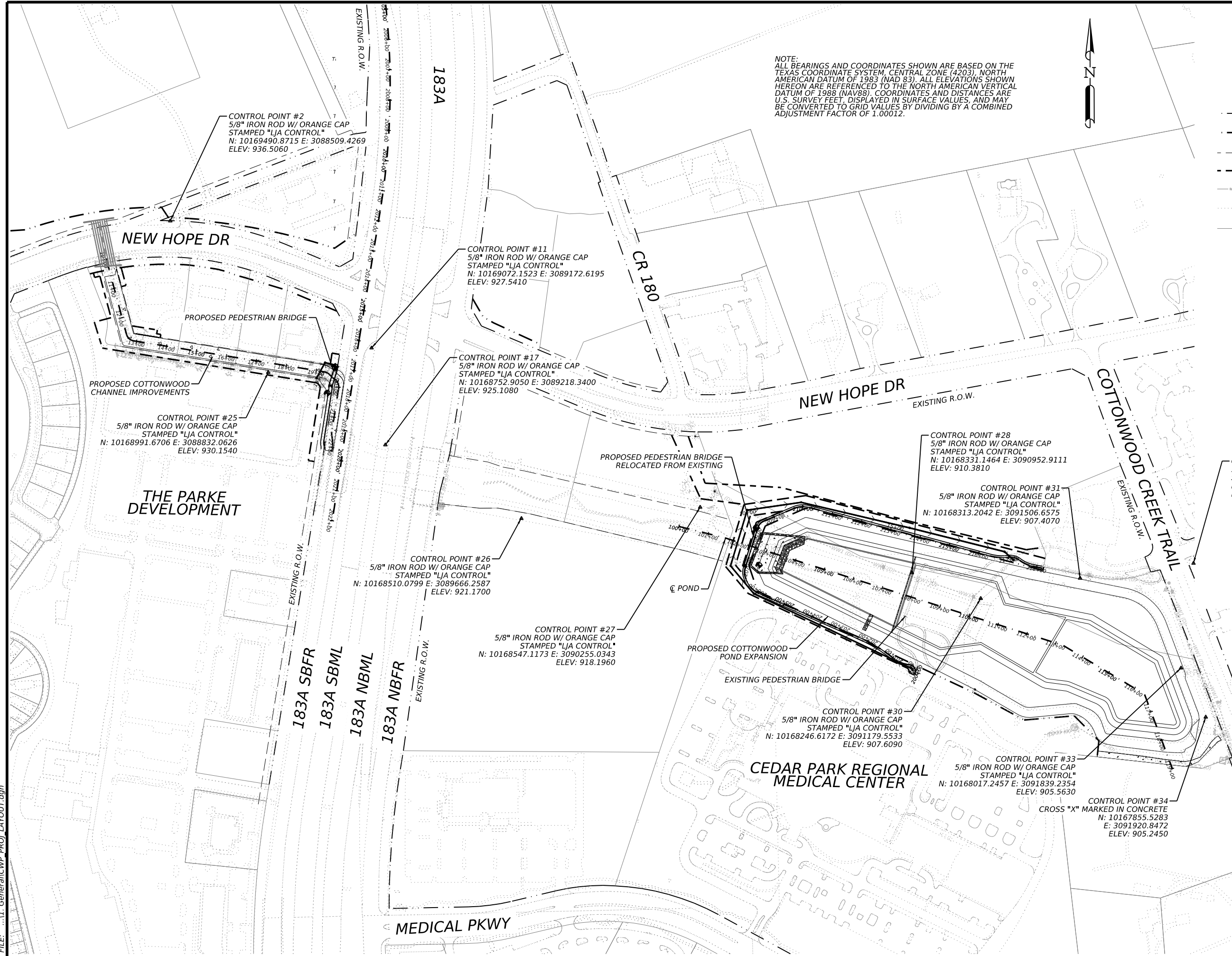
or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

### ***Administrative Information***

- 61. ☒ 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.
- 62. ☒ Any modification of this Contributing Zone Plan may require TCEQ review and Executive Director approval prior to construction, and may require submission of a revised application, with appropriate fees.
- 63. ☒ The site description, controls, maintenance, and inspection requirements for the storm water pollution prevention plan (SWPPP) developed under the EPA NPDES general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) of the technical report. All requirements of 30 TAC §213.24(1-5) have been met by the SWPPP document.
- ☐ The Temporary Stormwater Section (TCEQ-0602) is included with the application.

**ATTACHMENT A – ROAD MAP**

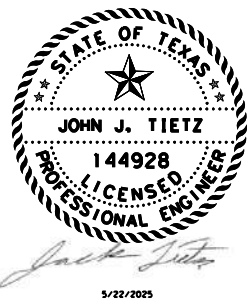
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LEGEND:

- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY
- SURVEY CONTROL POINT

0' 75' 150' 300'  
SCALE: 1"=300'



**LJA ENGINEERING, INC**  
FRN - F-1386

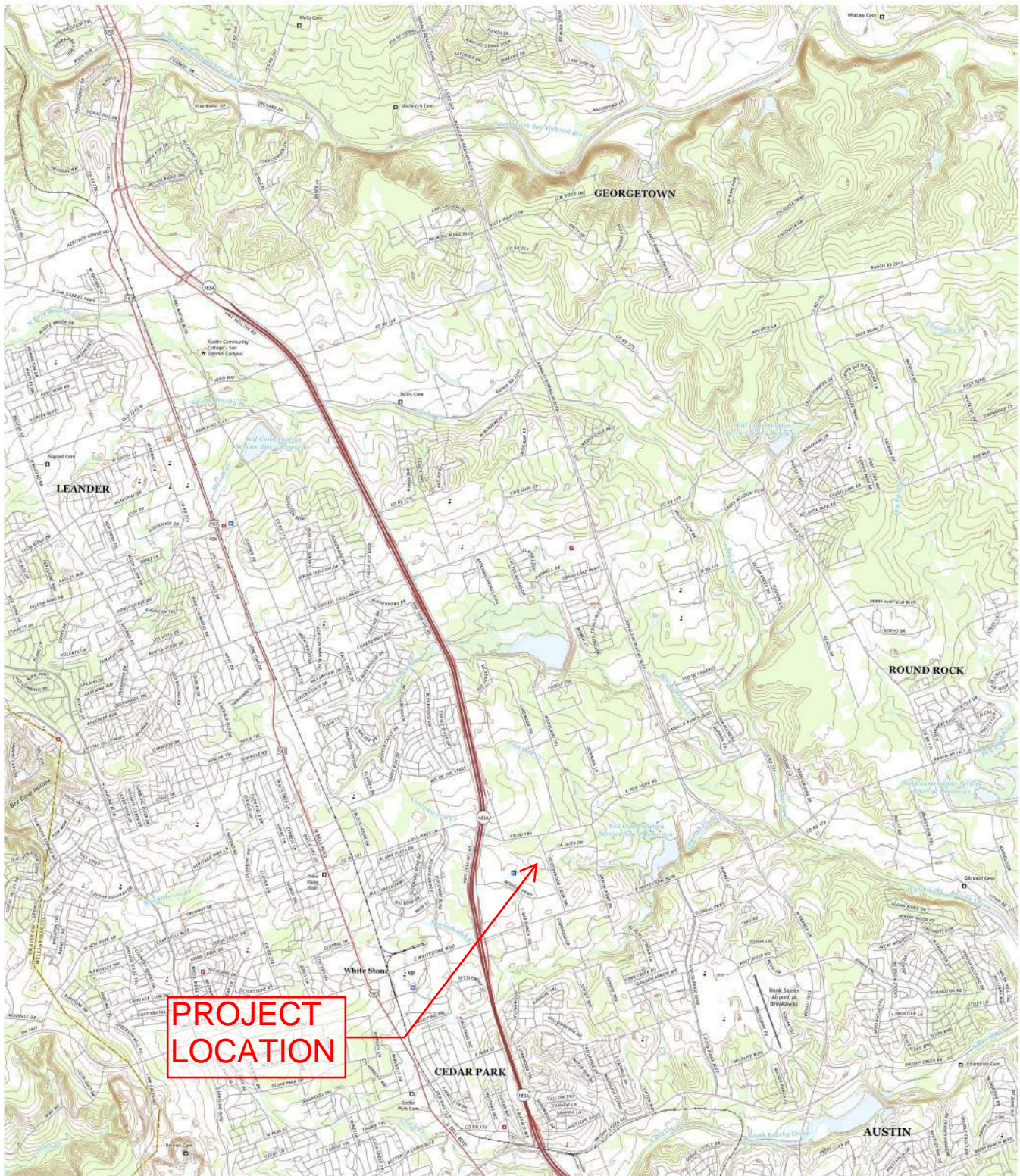
COTTONWOOD POND  
PROJECT LAYOUT

SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		11

**ATTACHMENT B – USGS MAP**

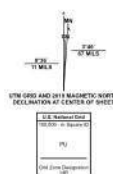


## ATTACHMENT B - USGS MAP



Produced by the United States Geological Survey  
North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84) Projection and  
1000-meter grid (Universal Transverse Mercator, Zone 14S)  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands with government  
reservations may not be shown. Obtain permission before  
entering private lands.

Imagery: NAD83 September 2016 - November 2016  
Roads: U.S. Census Bureau 2015 2019  
Hydrography: National Hydrography Dataset, 2002 2020  
Contours: National Elevation Dataset, 2010  
Boundaries: Multiple sources; see metadata file 2019 - 2021  
Wetlands: FWS National Wetlands Inventory Not Available



SCALE 1:24 000  
1000 500 0 500 1000  
1000 500 0 500 1000  
FEET METERS  
CONTOUR INTERVAL 10 FEET  
NORTH AMERICAN VERTICAL DATUM OF 1989  
This map was produced to conform with the  
National Geospatial Program US Topo Product Standard.



QUADRANGLE LOCATION  
1 Liberty Hill  
2 Leander NE  
3 Georgetown  
4 Round Rock  
5 Bluebird Bend  
6 Bluebird Bend  
7 Leander  
8 Pflugerville West

ROAD CLASSIFICATION  
Expressway  
Secondary Hwy  
Artery  
Interstate Route  
Local Connector  
Local Road  
400  
US Route  
State Route

LEANDER, TX  
2022





## **ATTACHMENT C - PROJECT DESCRIPTION**

The approved Cottonwood Pond Contributing Zone Plan (CZP) provided water quality best management practices (BMP's) for a regional area servicing multiple parcels/landowners. The participant tracts contributing to the plan include the Cedar Park Regional Health Center (current owner of pond and plan), City of Cedar Park (New Hope Drive), and local developers with mix uses of commercial and residential developments along with the roadway and hospital. All of these developments treat TSS removal with a single regional Wet Pond located on the Regional Health Center property.

This Contributing Zone Modification will serve to transfer ownership responsibilities to the City of Cedar Park, add in new participating tracts within the contributing area draining to the pond, and update size and impervious cover allocations of existing developments that contribute to the pond. Due to increasing the participating tracts contributing to the pond, water quality calculations were updated to size the proposed wet basin. Construction plans detail the expansion of the existing Cottonwood Pond to meet water quality and permanent pool volume requirements.

Two projects within the contributing drainage area of the pond include the City of Cedar Park's New Hope Drive (existing participant) and the Nebraska Furniture Mart Development (proposed participant). These two projects currently have approved Contributing Zone Plan applications (EAPP 11-11004061 and 1100400 respectively). These plans will be modified upon the approval of this modification to reflect inclusion into this pond and remove proposed BMP's previously approved in those plans.

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## **ATTACHMENT D – FACTORS AFFECTING SURFACE WATER QUALITY**

The following factors may affect surface water quality:

1. Runoff and erosion of sediment and pollutants from exposed soil due to clearing and grubbing, grading, landscaping, and other earthwork activities.
2. Runoff from the construction equipment storage and maintenance. This may include typical automotive fluids, lubricants, and fuels.
3. Runoff from construction product staging, storage, and waste. This may include toxic and nontoxic materials that can degrade the quality of receiving waters and make them unsafe for consumption and aquatic life.

## **ATTACHMENT E – VOLUME AND CHARACTER OF STORMWATER**

The post construction peak project runoff for the project will be increased, when compared to the pre-construction peak runoff. The post-construction adjusted curve number (CN) factor will remain the same at 74 due to the soil type remaining uniform within all tracts. The impervious cover area will increase due to the development of land within the total area delineated in the previously approved Cottonwood Channel Pond CZP.

*Table 1: Impervious Cover Comparison*

PARTICIPANT TRACTS	Total Area Draining to WQ Pond (ac)		Impervious Cover Area (ac)	
	EX	PROP	EX	PROP
1	64.00	51.51	31.23	25.14
2	10.39	19.92	7.45	16.02
3	5.48	5.03	4.38	4.39
4	2.24	2.42	1.79	2.26
5	33.02	34.07	26.42	27.26
6	8.98	8.69	7.18	7.07
7	2.15	1.73	1.54	1.61
8	32.95	32.96	26.36	25.50
9	68.80	51.04	55.04	40.83
10	3.43	3.31	2.46	2.37
11	7.29	4.78	5.23	3.43
12	21.90	21.93	17.94	17.96
13	N/A	77.35	1.25	61.88
14	N/A	38.07	N/A	30.46
15	N/A	13.99	N/A	11.19
16	N/A	35.15	N/A	28.12
17	N/A	14.27	N/A	0.00
Non-Part	250.59	54.61	1.25	0.00
<b>Total</b>	<b>511.23</b>	<b>470.83</b>	<b>188.42</b>	<b>305.48</b>

The character of stormwater is expected to change from pre- to post-construction, as the area surrounding and including the project is still developing. Potential sources of contamination will be from sediment, debris, and chemicals generated on site by activities related to grading, paving, storm sewer and culvert construction and utility relocations.

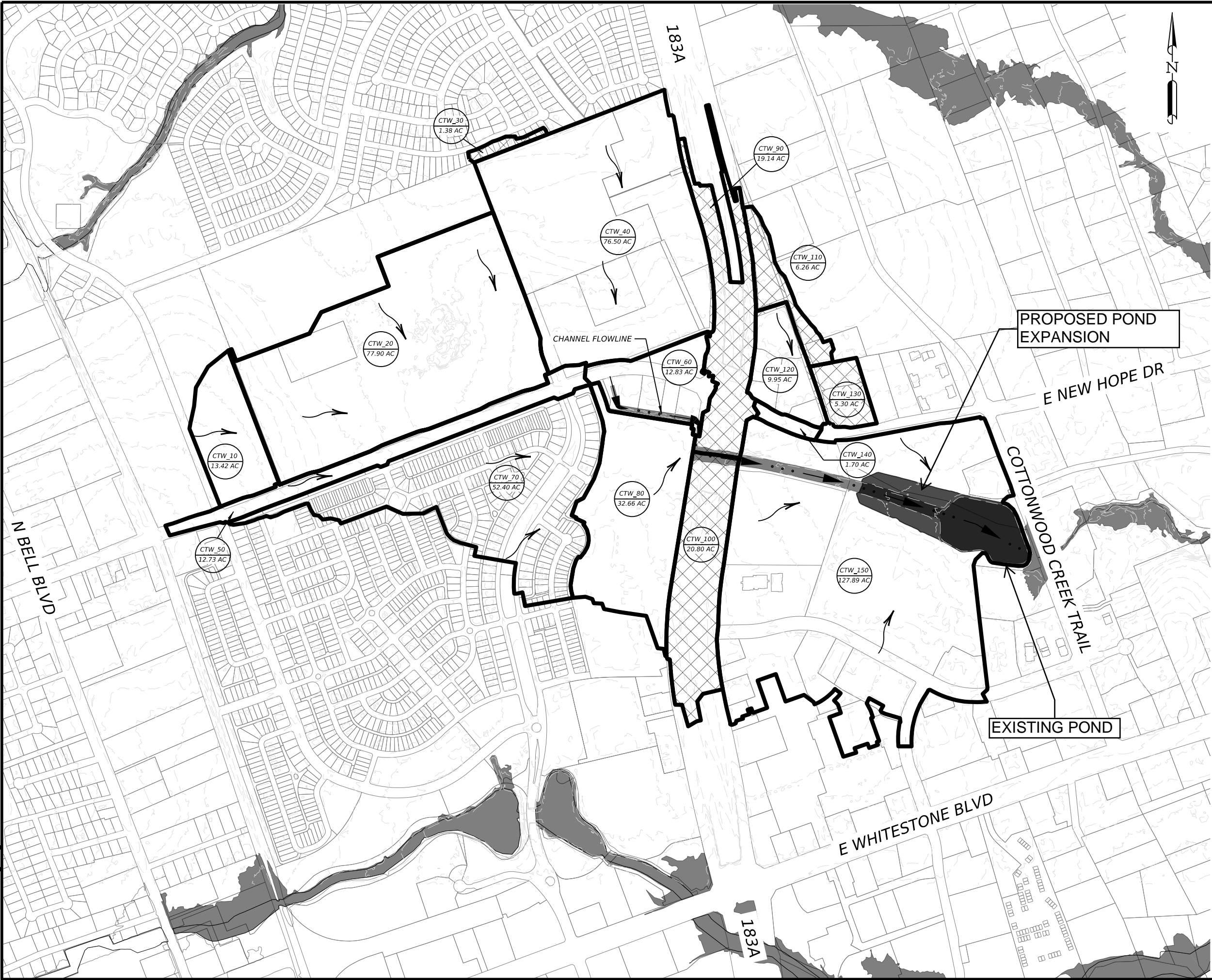


These potential contaminants are explained in more detail in Attachment D above. Runoff from the proposed project will be conveyed through the regional pond. Existing wet ponds will continue to ensure the required TSS load removal. All disturbed areas will be re-vegetated or stabilized at the completion of the project; therefore, no significant degradation of stormwater quality is anticipated because of the project.

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**ATTACHMENT – SITE PLAN**

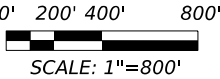
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LEGEND

- PARCEL BOUNDARY
- CONTOUR LINE
- SUBBASIN BOUNDARY
- FLOWLINE
- NON-PARTICIPANT AREA
- 100-YR FEMA FLOODPLAIN
- AREA ID
- FLOW DIRECTION ARROW

- NOTES:
1. HYDROLOGY WAS PERFORMED IN HEC-HMS VERSION 4.5, BASED ON NRCS METHODOLOGY DESCRIBED IN WILLIAMSON COUNTY'S ATLAS 14 FLOODPLAIN MAPPING STUDY DATED APRIL 16, 2024.
  2. LOSS METHOD: SCS CURVE NUMBER, TRANSFORM: SCS UNIT HYDROGRAPH
  3. ATLAS-14 DEPTH-DURATION-FREQUENCY VALUES FOR BRUSHY CREEK WAS OBTAINED FROM THE PREVIOUSLY MENTIONED FLOODPLAIN MAPPING STUDY. THIS DATA WAS ADOPTED AS OF DECEMBER 7, 2021.
  4. IMPERVIOUS COVER CALCULATIONS BASED ON A FULLY DEVELOPED WATERSHED BASED ON ZONING MAPS FROM THE CITY OF CEDAR PARK WHEN AVAILABLE.
  5. 5FT CONTOURS SHOWN. CONTOUR DATA BASED ON 2021 CENTRAL TEXAS LIDAR AND 2024 PROJECT SURVEY.
  6. PROJECT DATA IMPACTING FEMA ZONE AE. SEE H&H REPORT FOR MORE INFORMATION.



COTTONWOOD POND  
DRAINAGE AREA  
MAP  
(HYDROLOGY)

SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		40

DATE: 5/22/2025 10:26:01 AM  
FILE: ...15\_Drainage\CWP LandUse\_01.dgn

Proposed						
Area ID	WCAD Parcel ID	Owner Name	Area (ac)	% Imp	Imp Area (ac)	% Allocation
1	Various	Town Center Subdvsn	51.51	48.8%	25.14	8.3%
2	NA	City of Cedar Park/NHD	19.92	80.4%	16.02	5.3%
3A	R542595	HUT HOMES IV LLC (NH Animal Hospital)	1.73	80.0%	1.38	0.5%
3B	R548647	7-ELEVEN INC	1.33	80.0%	1.06	0.3%
3C	R548648	SLK DUTCH BROTHERS LLC	0.83	80.0%	0.66	0.2%
3D	R542597	Velocity Credit Union	1.14	80.0%	0.91	0.3%
4	R513564	BIG DIAMOND INC (Circle K)	2.42	80.0%	1.94	0.6%
5	R543269	IVT PARKE CEDAR PARK LLC (The Parke)	34.07	80.0%	27.26	9.0%
6A	R557813	RS CEDAR PARK LLC & REP WARNER CP LLC & CEDAR PARK WSS LLC (Woodspring Suites)	2.80	80.0%	2.24	0.7%
6B	R631706	JRB CEDAR PARK LP (Ethan Allen)	1.38	80.0%	1.10	0.4%
6C	R631707	CEDAR PARK TOWN CENTER LP (UFCU)	0.92	80.0%	0.74	0.2%
6D	R557814	SRW HOSPITALITY CEDAR PARK REALTY LLC (Hyatt Place)	2.58	80.0%	2.06	0.7%
6E	R557815	DEVAGIRI INVESTORS LLC & BIG CREEK LOTS LLC & JAYYES GROUP LLC	1.01	80.0%	0.81	0.3%
7	NA	City of Cedar Park (NHD)	1.73	93.0%	1.61	0.5%
8A	R586832	CPTC SEC NHD LLC (54th)	4.19	80.0%	3.35	1.1%
8B	R532778	TRIAD HOSPITALS INC	15.71	80.0%	12.57	4.1%
8C	R545029	PSLCN CEDAR PARK CONDO	8.99	80.0%	7.19	2.4%
8D	R586833	CPTC 24HF LLC	4.07	46.9%	1.91	0.6%

Proposed						
Area ID	WCAD Parcel ID	Owner Name	Area (ac)	% Imp	Imp Area (ac)	% Allocation
9A	R565440	CEDAR PARK HEALTH SYSTEM LP	33.52	80.0%	26.82	8.8%
9D	R031433	CEDAR PARK HEALTH SYSTEM LP	12.39	80.0%	9.91	3.3%
9B	R565441	R&J MEDICAL PROPERTIES LLC	2.69	80.0%	2.15	0.7%
9C	R559281	City of Cedar Park (Fire)	2.44	80.0%	1.95	0.6%
10	NA	City of Cedar Park	3.31	71.7%	2.37	0.8%
11	NA	City of Cedar Park	4.78	71.7%	3.43	1.1%
12A	R499696	1431 SC LTD	5.02	81.9%	4.11	1.4%
12B	R510849	1431 SC LTD	6.28	81.9%	5.14	1.7%
12C	R661194	CP1890 PROPERTIES LLC	1.33	81.9%	1.09	0.4%
12D	R499694	MENGAN REALTY LLC SERIES A	3.55	81.9%	2.91	1.0%
12E	R499690	STORE MASTER FUNDING XI LLC	1.01	81.9%	0.83	0.3%
12F	R491993	WK DE CEDAR PARK LLC	1.18	81.9%	0.97	0.3%
12G	R499691	SPOONIAN, LLC	0.59	81.9%	0.48	0.2%
12H	R481885	TARGET CORPORATION	2.97	81.9%	2.43	0.8%
13	R658955	121 ACQUISITION COMPANY LLC (NFM)	77.35	80.0%	61.88	20.3%
14A	R031861	NORTHLAND DEVELOPMENTS CEDAR PARK INC	16.59	80.0%	13.27	4.4%
14B	R031859	NORTHLAND DEVELOPMENTS CEDAR PARK INC	5.00	80.0%	4.00	1.3%
14C	R543331	NORTHLAND DEVELOPMENTS CEDAR PARK INC	7.59	80.0%	6.07	2.0%
14D	R431906	NORTHLAND DEVELOPMENTS CEDAR PARK INC	8.89	80.0%	7.11	2.3%
15	R031776	RH BLOCK HOUSE RD LLC	13.99	80.0%	11.19	3.7%
16A	R349071	City of Cedar Park (HEB)	32.39	80.0%	25.91	8.5%
16B	R524950	City of Cedar Park (Pond)	1.83	80.0%	1.46	0.5%
16C	R509161	City of Cedar Park	0.77	80.0%	0.62	0.2%
16D	R543330	City of Cedar Park (Sign)	0.16	80.0%	0.13	0.0%
Non-Part	Multiple		54.61	0.0%	0.00	0.0%
17		Cottonwood Regional Pond	14.27	0.0%	0.00	0.0%
Total			470.83		304.19	100.0%

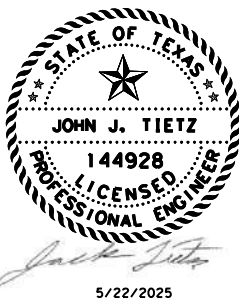
LEGEND

- PARCEL BOUNDARY  
CONTRIBUTING PARCEL BOUNDARY  
PROPOSED PARTICIPANT AREA  
NON-PARTICIPANT AREA  
AREA ID

NOTES:

1. ACREAGE SHOWN IS BASED ON WILLIAMSON COUNTY APPRAISAL DISTRICT AND GIS DATA.

0' 200' 400' 800'  
SCALE: 1"=800'



COTTONWOOD POND  
DRAINAGE AREA  
MAP  
(WATER QUALITY)

SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		41

## **ATTACHMENT J – BMPs FOR UPGRADIENT STORMWATER**

Permanent BMPs or other measures are not required for stormwater originating from upgradient areas that flow across the site because this runoff is ultimately captured and treated by the regional Cottonwood Channel Pond, located downstream of the contributing area. The pond is designed and permitted as a regional detention and water quality facility, which accommodates both on-site and upgradient stormwater flows. As such, no additional treatment measures are necessary for upgradient runoff within the project limits.

## **ATTACHMENT K – BMPs FOR ON-SITE STORMWATER**

The original Cottonwood Regional Pond CZP was approved in 2006 before any of the participating and non-participating tracts were developed. Due to this, the approved plan had to make assumptions based on existing flow patterns and future development impervious cover. Since plan approval, many participating tracts have been developed and subdivided. The calculations in this section will document three conditions.

1. Approved Permit Condition - Conditions that represent the assumptions in the approved CZP that are being modified on file.
2. Actual Existing Condition - This condition documents what exists today with regards to tract subdivision and ownership, parcel size, drainage area contributing boundaries, and actual impervious cover. This condition is based on site plans, current appraisal district information, and as-built plans and data online.
3. Proposed Condition - This condition outlines impervious cover allocations for each tract including both existing and proposed participating tracts. This is the condition the proposed pond expansion calculations will be based on.

Providing these three conditions will provide TCEQ a ledger and document what each tract was originally allotted, where they are in the present, and what the proposed allotment is for comparison. This information is summarized in the tables below and is represented on the proposed Site Plan in a previous section.

*Table 1: Existing and Proposed Water Quality*

	<b>Existing</b>	<b>Proposed</b>
<b>Total Area (AC)</b>	511.23	470.83
<b>Imp. Area (AC)</b>	188.42	304.19
<b>Required Load Removal LM (lbs)</b>	158,943.7	259,712.3
<b>Load Removed LR (lbs)</b>	160,000.0	265,000.0
<b>Required WQV (cf)</b>	1,286,817.5	2,161,418.4
<b>Required PPV (cf)</b>	701,900.4	1,178,955.5
<b>Provided WQV (cf)</b>	1,348,323.0	2,487,913.0
<b>Provided PPV (cf)</b>	718,186.0	1,257,987.0

Table 2: Impervious Cover

From approved CZP					Existing Conditions							Proposed			
Area ID	Property Owner	Area (ac)	% Imp	Imp Area (ac)	Area ID	WCAD Parcel ID	Owner Name	Area (ac)	% Imp	Imp Area (ac)	Area (ac)	% Imp	Imp Area (ac)	% Allocation	
1	DR Horton	64.00	48.8%	31.23	1	Various	Town Center Subdvsn	51.51	44.1%	22.74	51.51	48.8%	25.14	8.2%	
2	City of Cedar Park	10.39	71.7%	7.45	2	NA	City of Cedar Park/NHD	14.08	55.6%	7.83	19.92	80.4%	16.02	5.2%	
3	V-S Cedar Park	5.48	80.0%	4.38	3A	R542595	HUT HOMES IV LLC (NH Animal Hospital)	1.73	44.5%	0.77	1.73	88.4%	1.53	0.5%	
					3B	R548647	7-ELEVEN INC	1.33	36.1%	0.48	1.33	87.2%	1.16	0.4%	
					3C	R548648	SLK DUTCH BROTHERS LLC	0.83	47.0%	0.39	0.83	88.0%	0.73	0.2%	
					3D	R542597	Velocity Credit Union	1.14	74.6%	0.85	1.14	85.1%	0.97	0.3%	
4	V-S Cedar Park	2.24	80.0%	1.79	4	R513564	BIG DIAMOND INC (Circle K)	2.42	79.8%	1.93	2.42	93.4%	2.26	0.7%	
5	DR Horton	33.02	80.0%	26.42	5	R543269	IVT PARKE CEDAR PARK LLC (The Parke)	34.07	80.0%	27.26	34.07	80.0%	27.26	8.9%	
6	V-S Cedar Park	8.98	80.0%	7.18	6A	R557813	RS CEDAR PARK LLC & REP WARNER CP LLC & CEDAR PARK WSS LLC (Woodspring Suites)	2.80	62.1%	1.74	2.80	80.0%	2.24	0.7%	
					6B	R631706	JRB CEDAR PARK LP (Ethan Allen )	1.38	68.1%	0.94	1.38	80.0%	1.10	0.4%	
					6C	R631707	CEDAR PARK TOWN CENTER LP (UFCU)	0.92	92.4%	0.85	0.92	92.4%	0.85	0.3%	
					6D	R557814	SRH HOSPITALITY CEDAR PARK REALTY LLC (Hyatt Place)	2.58	80.0%	2.06	2.58	80.0%	2.06	0.7%	
					6E	R557815	DEVAGIRI INVESTORS LLC & BIG CREEK LOTS LLC & JAYYES GROUP LLC	1.01	10.9%	0.11	1.01	80.0%	0.81	0.3%	
7	City of Cedar Park	2.15	71.7%	1.54	7	NA	City of Cedar Park (NHD)	1.70	68.2%	1.16	1.73	93.0%	1.61	0.5%	
8	V-S Cedar Park	32.95	80.0%	26.36	8A	R586832	CPTC SEC NHD LLC (54th Street)	4.19	65.2%	2.73	4.19	80.0%	3.35	1.1%	
					8B	R532778	TRIAD HOSPITALS INC	15.71	0.0%	0.00	15.71	80.0%	12.57	4.1%	
					8C	R545029	PSLCN CEDAR PARK CONDO	8.99	69.3%	6.23	8.99	80.0%	7.19	2.4%	
					8D	R586833	CPTC 24HF LLC	4.07	11.3%	0.46	4.07	58.7%	2.39	0.8%	
9	Triad	68.80	80.0%	55.04	9A	R565440	CEDAR PARK HEALTH SYSTEM LP	33.52	48.7%	16.33	33.52	80.0%	26.82	8.8%	
					9D	R031433	CEDAR PARK HEALTH SYSTEM LP	12.39	0.0%	0.00	12.39	80.0%	9.91	3.2%	
					9B	R565441	R&J MEDICAL PROPERTIES LLC	2.69	75.5%	2.03	2.69	80.0%	2.15	0.7%	
					9C	R559281	City of Cedar Park (Fire Station)	2.44	74.6%	1.82	2.44	80.0%	1.95	0.6%	
10	Endeavor	3.43	71.7%	2.46	10	NA	City of Cedar Park	3.31	71.7%	2.37	3.31	71.7%	2.37	0.8%	
11	Triad	7.29	71.7%	5.23	11	NA	City of Cedar Park	4.78	71.7%	3.43	4.78	71.7%	3.43	1.1%	
12	Endeavor	21.90	81.9%	17.94	12A	R499696	1431 SC LTD	5.02	81.9%	4.11	5.02	81.9%	4.11	1.3%	
					12B	R510849	1431 SC LTD	6.28	81.9%	5.14	6.28	81.9%	5.14	1.7%	
					12C	R661194	CP1890 PROPERTIES LLC	1.33	81.9%	1.09	1.33	81.9%	1.09	0.4%	
					12D	R499694	MENGAN REALTY LLC SERIES A	3.55	81.9%	2.91	3.55	81.9%	2.91	1.0%	
					12E	R499690	STORE MASTER FUNDING XI LLC	1.01	81.9%	0.83	1.01	81.9%	0.83	0.3%	
					12F	R491993	WK DE CEDAR PARK LLC	1.18	81.9%	0.97	1.18	81.9%	0.97	0.3%	
					12G	R499691	SPOONIAN, LLC	0.59	81.9%	0.48	0.59	81.9%	0.48	0.2%	
					12H	R481885	TARGET CORPORATION	2.97	81.9%	2.43	2.97	81.9%	2.43	0.8%	
Non-Part	Non Participants	250.59	0.5%	1.25	13	R658955	121 ACQUISITION COMPANY LLC (NFM)	77.35	0.0%	0.00	77.35	80.0%	61.88	20.3%	
					14A	R031861	NORTHLAND DEVELOPMENTS CEDAR PARK INC	16.59	0.0%	0.00	16.59	80.0%	13.27	4.3%	
					14B	R031859	NORTHLAND DEVELOPMENTS CEDAR PARK INC	5.00	0.0%	0.00	5.00	80.0%	4.00	1.3%	
					14C	R543331	NORTHLAND DEVELOPMENTS CEDAR PARK INC	7.59	0.0%	0.00	7.59	80.0%	6.07	2.0%	
					14D	R431906	NORTHLAND DEVELOPMENTS CEDAR PARK INC	8.89	0.0%	0.00	8.89	80.0%	7.11	2.3%	
					15	R031776	RH BLOCK HOUSE RD LLC (Reger)	13.99	0.0%	0.00	13.99	80.0%	11.19	3.7%	
					16A	R349071	City of Cedar Park (HEB Center)	32.39	65.5%	21.22	32.39	80.0%	25.91	8.5%	
					16B	R524950	City of Cedar Park (Pond)	1.83	0.0%	0.00	1.83	80.0%	1.46	0.5%	
					16C	R509161	City of Cedar Park (Remainder)	0.77	0.0%	0.00	0.77	80.0%	0.62	0.2%	
					16D	R543330	City of Cedar Park (Sign)	0.16	80.0%	0.13	0.16	80.0%	0.13	0.0%	
					Non-Part		Multiple	54.61	0.0%	0.00	54.61	0.0%	0.00	0.0%	
					17		City of Cedar Park (Pond)	14.27	0.0%	0.00	14.27	0.0%	0.00	0.0%	
Total		511.23		188.42	Total			464.96		143.82	470.83		305.48	100.0%	

**EXISTING TCEQ CALCS**

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Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.  
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.  
Characters shown in red are data entry fields.  
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3:  $L_M = 27.2(A_N \times P)$

where:  $L_{M \text{ TOTAL PROJECT}}$  = Required TSS removal resulting from the proposed development = 80% of increased load  
 $A_N$  = Net increase in impervious area for the project  
 $P$  = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan *	511.23	acres
Predevelopment impervious area within the limits of the plan *	5.81	acres
Total post-development impervious area within the limits of the plan*	188.42	acres
Total post-development impervious cover fraction *	0.37	
P =	32	inches

$L_{M \text{ TOTAL PROJECT}}$  = 158944 lbs.

\* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 1

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	1	
Total drainage basin/outfall area =	511.23	acres
Predevelopment impervious area within drainage basin/outfall area =	5.81	acres
Post-development impervious area within drainage basin/outfall area =	188.42	acres
Post-development impervious fraction within drainage basin/outfall area =	0.37	
$L_{M \text{ THIS BASIN}}$ =	158944	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Wet Basin**  
Removal efficiency = 93 percent

- Aqualogic Cartridge Filter
- Bioretention
- Contech StormFilter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

4. Calculate Maximum TSS Load Removed ( $L_R$ ) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:  $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:  $A_C$  = Total On-Site drainage area in the BMP catchment area  
 $A_I$  = Impervious area proposed in the BMP catchment area  
 $A_P$  = Pervious area remaining in the BMP catchment area  
 $L_R$  = TSS Load removed from this catchment area by the proposed BMP

$A_C$ =	511.23	acres
$A_I$ =	188.42	acres
$A_P$ =	322.81	acres
$L_R$ =	199203	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired  $L_{M \text{ THIS BASIN}}$  = 160000 lbs.  
 $F$  = 0.80

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = 1.08 inches  
Post Development Runoff Coefficient = 0.29

On-site Water Quality Volume = 584917 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 0.00 acres  
Off-site Impervious cover draining to BMP = 0.00 acres  
Impervious fraction of off-site area = 0  
Off-site Runoff Coefficient = 0.00  
Off-site Water Quality Volume = 0 cubic feet

Storage for Sediment = 116983

Total Capture Volume (required water quality volume(s) x 1.20) = 701900 cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.  
The values for BMP Types not selected in cell C45 will show NA.



11. Wet Basins

Designed as Required in RG-348

Pages 3-66 to 3-71

Required capacity of Permanent Pool = 701900 cubic feet  
Required capacity at WQV Elevation = 1286817 cubic feet

Permanent Pool Capacity is 1.20 times the WQV  
Total Capacity should be the Permanent Pool Capacity plus a second WQV.

**PROPOSED TCEQ CALCS**

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Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.  
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.  
Characters shown in red are data entry fields.  
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3:  $L_M = 27.2(A_N \times P)$

where:  $L_{M \text{ TOTAL PROJECT}}$  = Required TSS removal resulting from the proposed development = 80% of increased load  
 $A_N$  = Net increase in impervious area for the project  
 $P$  = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Williamson	
Total project area included in plan *	470.83	acres
Predevelopment impervious area within the limits of the plan *	5.81	acres
Total post-development impervious area within the limits of the plan *	305.48	acres
Total post-development impervious cover fraction *	0.65	
P =	32	inches

$L_{M \text{ TOTAL PROJECT}}$  = 260830 lbs.

\* The values entered in these fields should be for the total project area.

Number of drainage basins / outfalls areas leaving the plan area = 1

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	1	
Total drainage basin/outfall area =	470.83	acres
Predevelopment impervious area within drainage basin/outfall area =	5.81	acres
Post-development impervious area within drainage basin/outfall area =	305.48	acres
Post-development impervious fraction within drainage basin/outfall area =	0.65	
$L_{M \text{ THIS BASIN}}$ =	260830	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Wet Basin  
Removal efficiency = 93 percent



- Aqualogic Cartridge Filter
- Bioretention
- Contech StormFilter
- Constructed Wetland
- Extended Detention
- Grassy Swale
- Retention / Irrigation
- Sand Filter
- Stormceptor
- Vegetated Filter Strips
- Vortechs
- Wet Basin
- Wet Vault

4. Calculate Maximum TSS Load Removed ( $L_R$ ) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:  $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

where:  $A_C$  = Total On-Site drainage area in the BMP catchment area  
 $A_I$  = Impervious area proposed in the BMP catchment area  
 $A_P$  = Pervious area remaining in the BMP catchment area  
 $L_R$  = TSS Load removed from this catchment area by the proposed BMP

$A_C$ =	470.83	acres
$A_I$ =	305.48	acres
$A_P$ =	165.35	acres
$L_R$ =	317205	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired  $L_{M \text{ THIS BASIN}}$  = 266261 lbs.  
 $F$  = 0.84

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area. Calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = 1.26 inches  
Post Development Runoff Coefficient = 0.46

On-site Water Quality Volume = 987408 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 0.00 acres  
Off-site Impervious cover draining to BMP = 0.00 acres  
Impervious fraction of off-site area = 0  
Off-site Runoff Coefficient = 0.00  
Off-site Water Quality Volume = 0 cubic feet

Storage for Sediment = 197482

Total Capture Volume (required water quality volume(s) x 1.20) = 1184890 cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.  
The values for BMP Types not selected in cell C45 will show NA.



11. Wet Basins

Designed as Required in RG-348

Pages 3-66 to 3-71

Required capacity of Permanent Pool = 1184890 cubic feet  
Required capacity at WQV Elevation = 2172298 cubic feet

Permanent Pool Capacity is 1.20 times the WQV  
Total Capacity should be the Permanent Pool Capacity plus a second WQV.

## **ATTACHMENT M – CONSTRUCTION PLANS**

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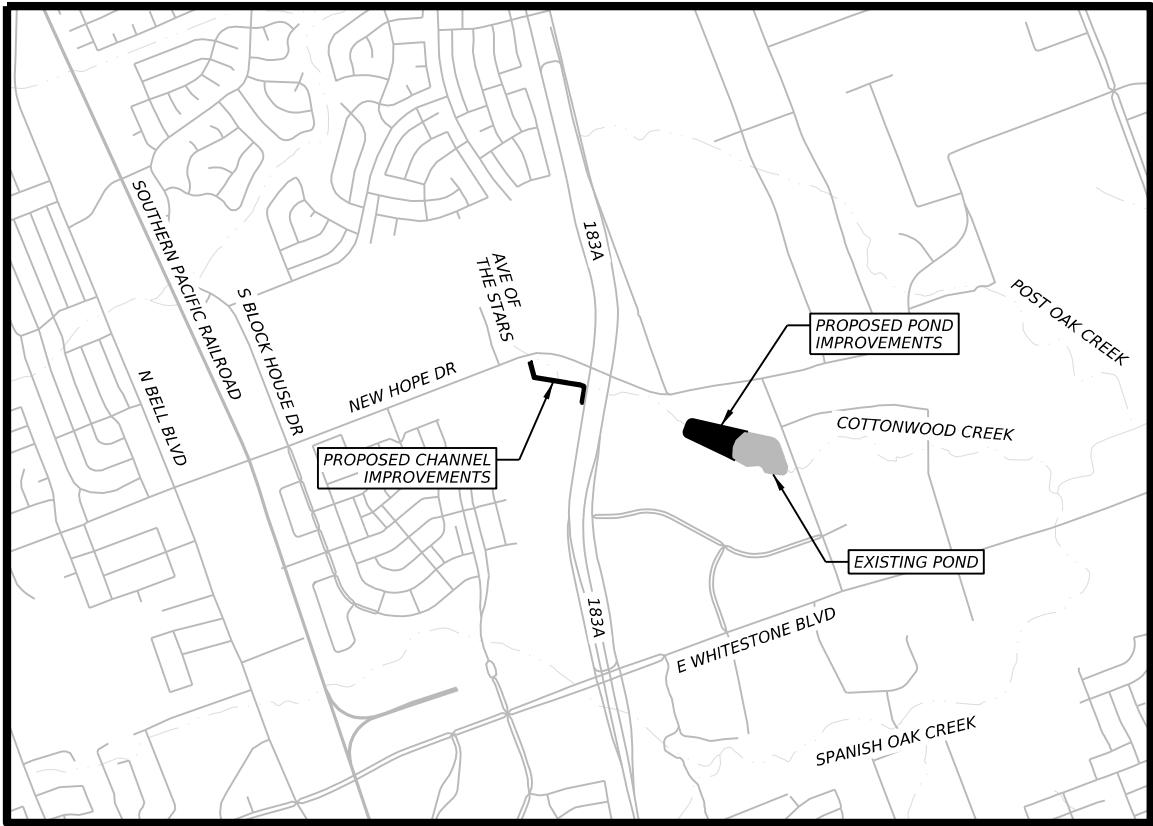
# PLANS OF COTTONWOOD POND WATER QUALITY PROJECTS

REGIONAL POND EXPANSION, SIDEWALK, AND UTILITY IMPROVEMENTS  
OF COTTONWOOD POND FROM 1050' EAST OF 183A NORTHBOUND  
FRONTAGE ROAD TO COTTONWOOD CREEK TRAIL.  
CHANNEL, SIDEWALK, AND BARRIER IMPROVEMENTS OF EXISTING CHANNEL  
FROM E NEW HOPE DR TO 183A SOUTHBOUND FRONTAGE ROAD.  
CHANNEL LENGTH = 1162.9 FT, 0.220 MILES  
POND LENGTH = 1596.9 FT, 0.302 MILES

CONSISTS OF GRADING, DRAINAGE, CONCRETE TRAFFIC RAIL, PEDESTRIAN BRIDGE CROSSING,  
ADA SIDEWALKS, AND WASTEWATER IMPROVEMENTS.

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	SUPPLEMENTAL INDEX OF SHEETS

LOCATION MAP



NOTE:  
TDLR INSPECTION REQUIRED

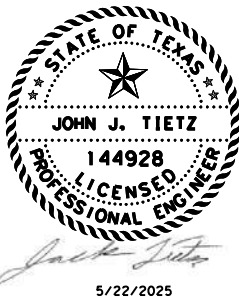
NOTE:  
ALL BEARINGS AND COORDINATES SHOWN ARE BASED ON THE TEXAS COORDINATE SYSTEM, CENTRAL ZONE (4203), NORTH AMERICAN DATUM OF 1983 (NAD 83). ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88). COORDINATES AND DISTANCES ARE U.S. SURVEY FEET, DISPLAYED IN SURFACE VALUES, AND MAY BE CONVERTED TO GRID VALUES BY DIVIDING BY A COMBINED ADJUSTMENT FACTOR OF 1.00012.

SUBMITTED FOR LETTING:

APPROVED FOR CONSTRUCTION:

SCALE: NTS  
NO EQUATIONS  
NO EXCEPTIONS

CITY COUNCIL	
JIM PENNIMAN-MORIN	MAYOR
BOBBI HUTCHINSON	COUNCIL MEMBER PLACE 1
MEL KIRKLAND	COUNCIL MEMBER PLACE 2
ANNE DUFFY	COUNCIL MEMBER PLACE 3
ERIC BOYCE (MAYOR PRO TEM)	COUNCIL MEMBER PLACE 4
KEVIN HARRIS	COUNCIL MEMBER PLACE 5
HEATHER JEFTS	COUNCIL MEMBER PLACE 6



COTTONWOOD POND  
TITLE SHEET

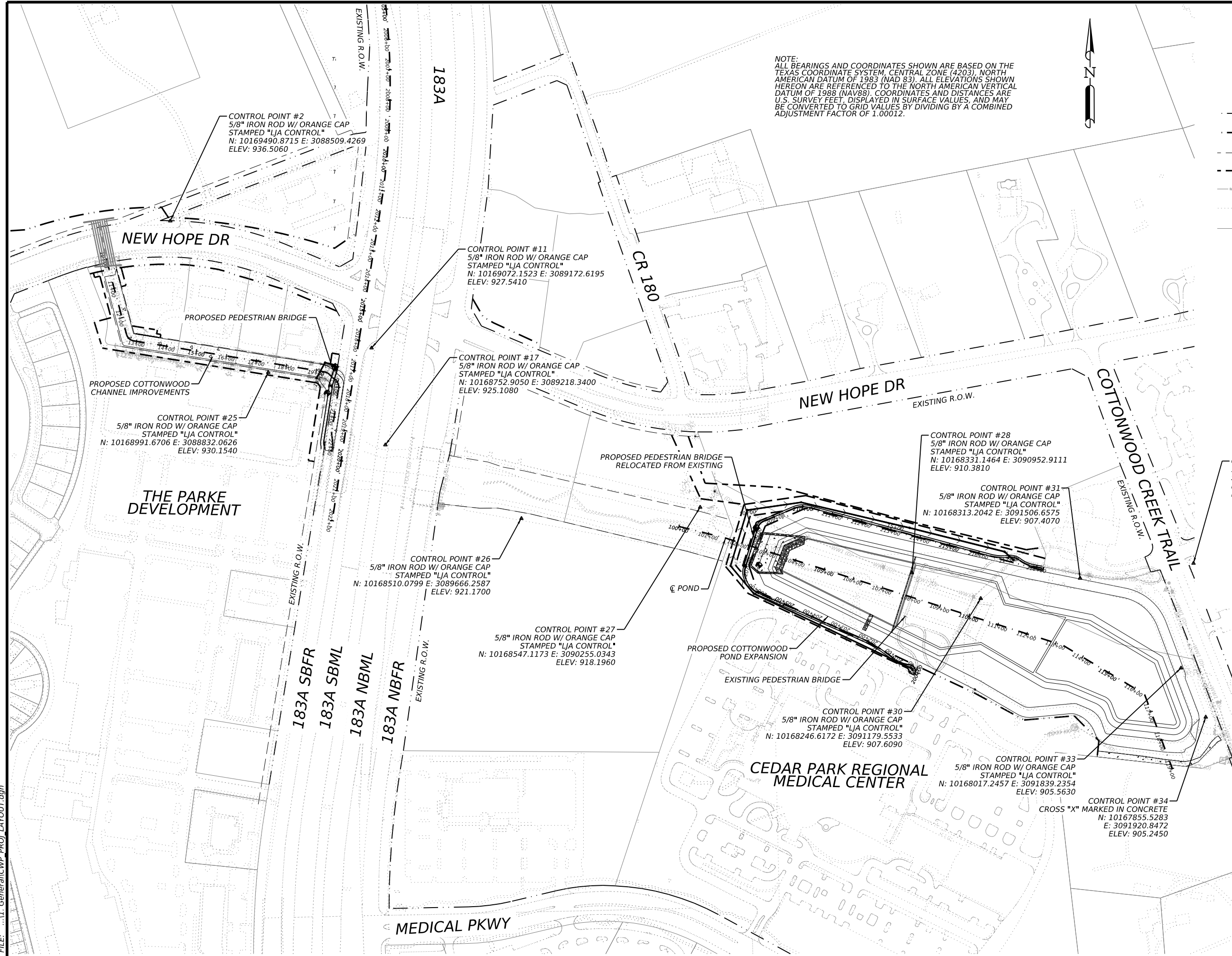
SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		1

PROJECT MANAGER  
JOHN J. TIETZ, P.E.  
LJA ENGINEERING, INC.

DATE

CITY OF CEDAR PARK  
CITY'S PROJECT MANAGER

DATE



LEGEND:

- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY
- SURVEY CONTROL POINT

0' 75' 150' 300'  
SCALE: 1"=300'



**LJA ENGINEERING, INC**  
FRN - F-1386

COTTONWOOD POND  
PROJECT LAYOUT

SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		11

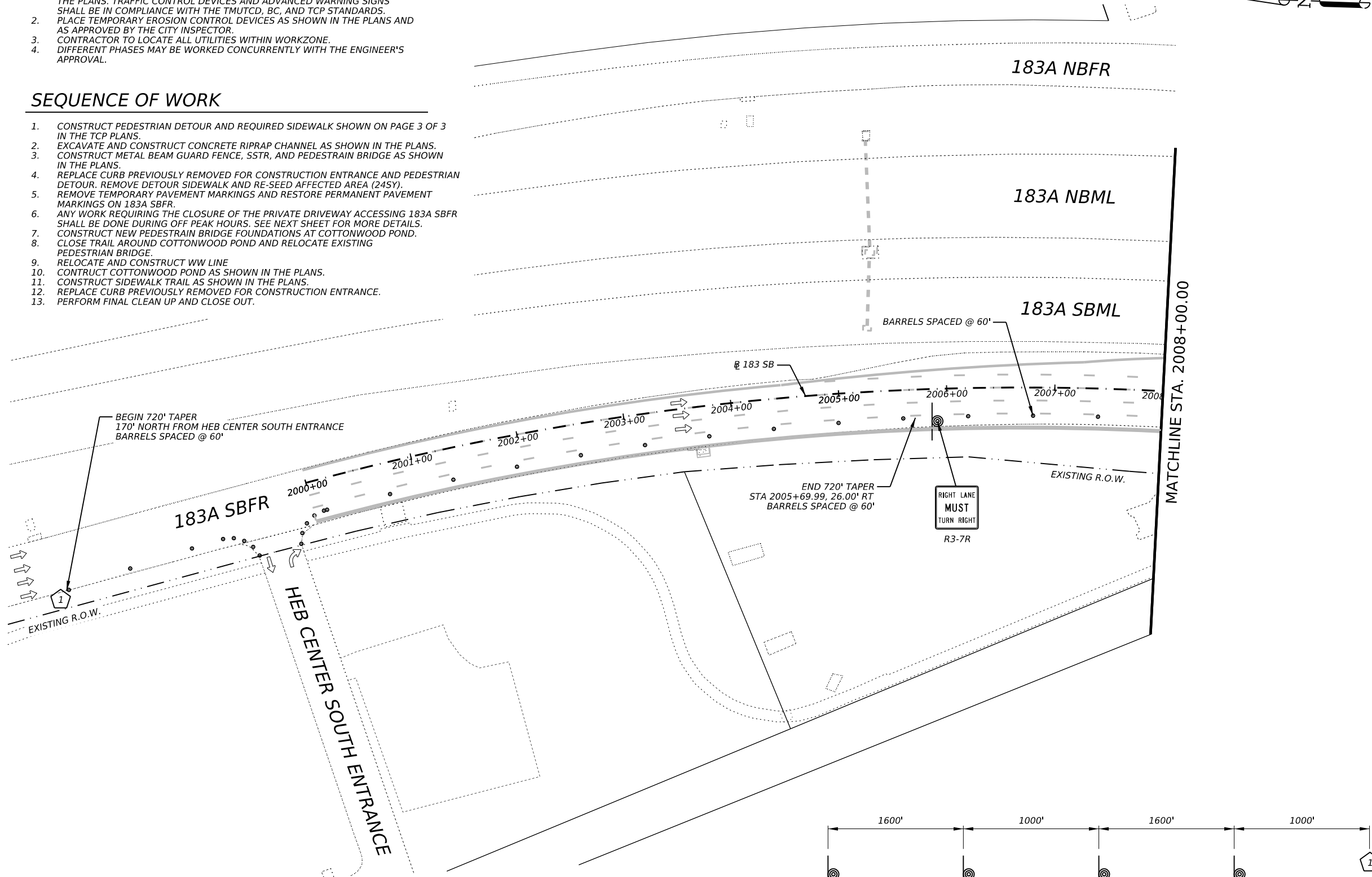


PRIOR TO BEGINNING ANY CONSTRUCTION

1. PLACE TRAFFIC CONTROL DEVICES AND ADVANCED WARNING SIGNS AS SHOWN IN THE PLANS. TRAFFIC CONTROL DEVICES AND ADVANCED WARNING SIGNS SHALL BE IN COMPLIANCE WITH THE TMUTCD, BC, AND TCP STANDARDS.
2. PLACE TEMPORARY EROSION CONTROL DEVICES AS SHOWN IN THE PLANS AND AS APPROVED BY THE CITY INSPECTOR.
3. CONTRACTOR TO LOCATE ALL UTILITIES WITHIN WORKZONE.
4. DIFFERENT PHASES MAY BE WORKED CONCURRENTLY WITH THE ENGINEER'S APPROVAL.

SEQUENCE OF WORK

1. CONSTRUCT PEDESTRIAN DETOUR AND REQUIRED SIDEWALK SHOWN ON PAGE 3 OF 3 IN THE TCP PLANS.
2. EXCAVATE AND CONSTRUCT CONCRETE RIPRAP CHANNEL AS SHOWN IN THE PLANS.
3. CONSTRUCT METAL BEAM GUARD FENCE, SSTR, AND PEDESTRAIN BRIDGE AS SHOWN IN THE PLANS.
4. REPLACE CURB PREVIOUSLY REMOVED FOR CONSTRUCTION ENTRANCE AND PEDESTRIAN DETOUR. REMOVE DETOUR SIDEWALK AND RE-SEED AFFECTED AREA (24SY).
5. REMOVE TEMPORARY PAVEMENT MARKINGS AND RESTORE PERMANENT PAVEMENT MARKINGS ON 183A SBFR.
6. ANY WORK REQUIRING THE CLOSURE OF THE PRIVATE DRIVEWAY ACCESSING 183A SBFR SHALL BE DONE DURING OFF PEAK HOURS. SEE NEXT SHEET FOR MORE DETAILS.
7. CONSTRUCT NEW PEDESTRAIN BRIDGE FOUNDATIONS AT COTTONWOOD POND.
8. CLOSE TRAIL AROUND COTTONWOOD POND AND RELOCATE EXISTING PEDESTRIAN BRIDGE.
9. RELOCATE AND CONSTRUCT WW LINE
10. CONSTRUCT COTTONWOOD POND AS SHOWN IN THE PLANS.
11. CONSTRUCT SIDEWALK TRAIL AS SHOWN IN THE PLANS.
12. REPLACE CURB PREVIOUSLY REMOVED FOR CONSTRUCTION ENTRANCE.
13. PERFORM FINAL CLEAN UP AND CLOSE OUT.

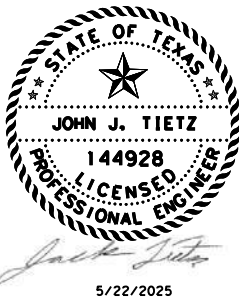
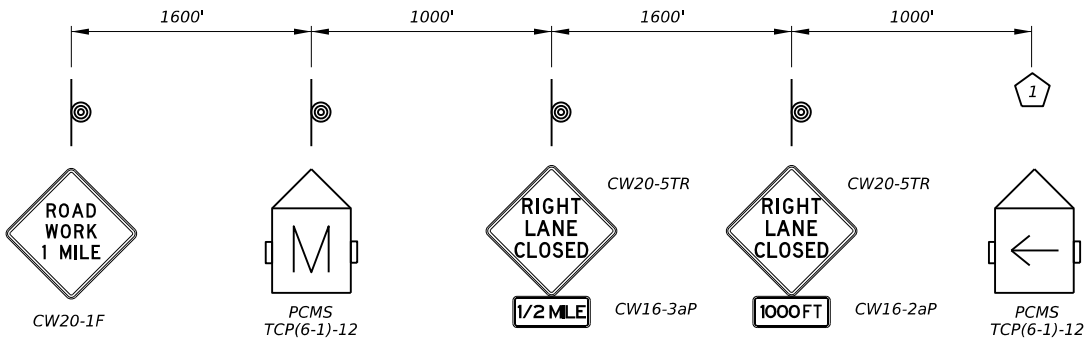
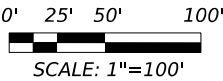


LEGEND:

- EXISTING PLANIMETRICS
- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING EASEMENT
- PROPOSED TEMP EASEMENT
- CHANNELIZING DEVICE
- TY III BARRICADE
- EXISTING TRAFFIC DIRECTIONAL ARROW
- PROPOSED TRAFFIC DIRECTIONAL ARROW
- LOW PROFILE CONCRETE BARRIER (LPCB)
- PROPOSED LANE LINE (THIS PHASE)
- PROPOSED CONSTRUCTION (THIS PHASE)
- PROPOSED CONSTRUCTION (PREV. PHASE)
- PROPERTY LINE

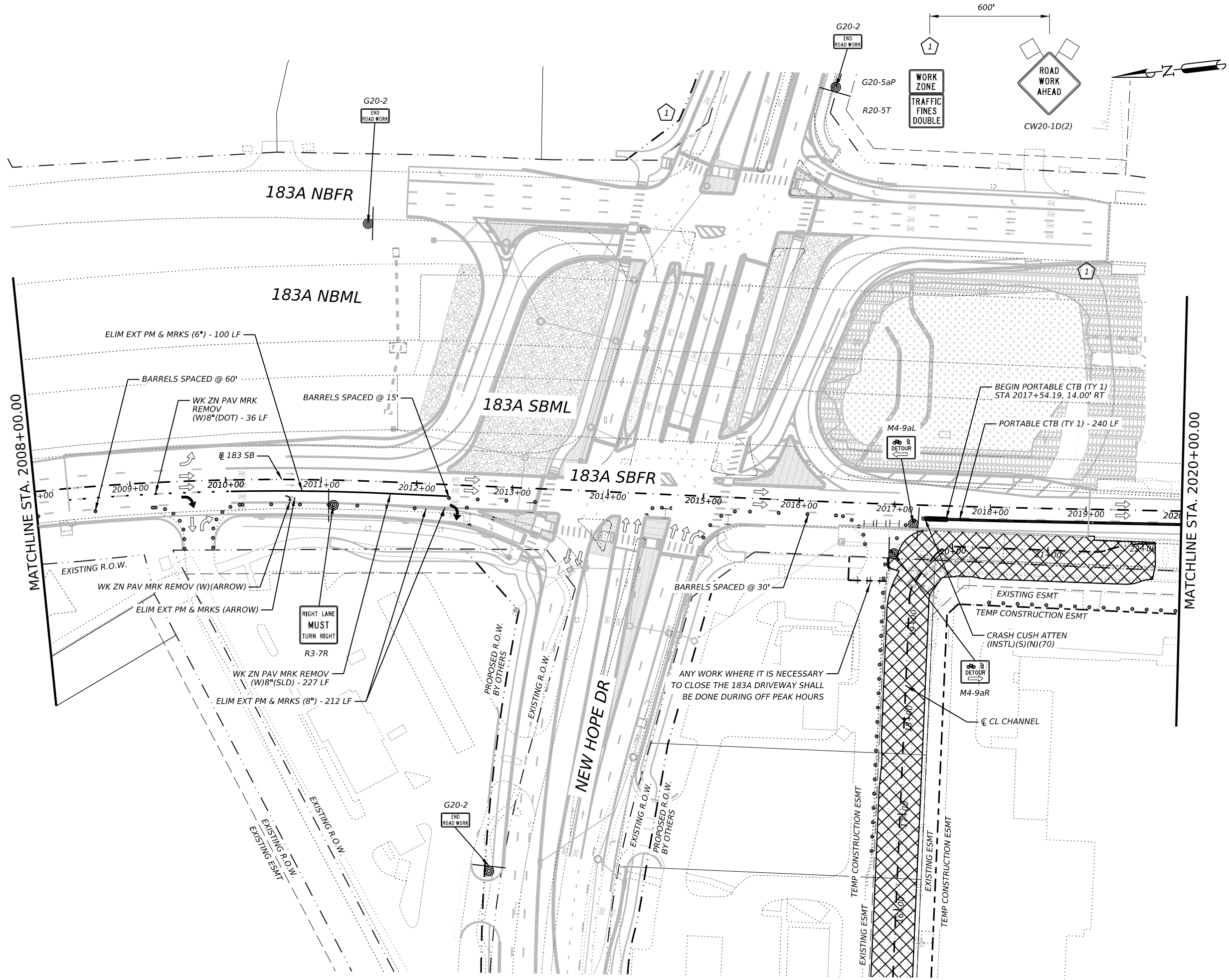
NOTES:

1. ALL EXISTING UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR DETERMINING UTILITY LOCATIONS AND AVOIDING ANY DAMAGES TO UTILITIES DURING CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO ALL DRIVEWAYS.
3. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE.
4. BARRELS ON RADII SHALL BE SPACED AT 10' UNLESS OTHERWISE NOTED.



COTTONWOOD POND  
TRAFFIC CONTROL PLAN  
PHASE 1  
183A SB

SHEET 1 OF 3			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		20

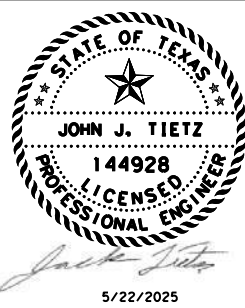
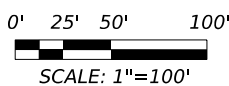


LEGEND:

- EXISTING PLANIMETRICS
- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING EASEMENT
- PROPOSED TEMP EASEMENT
- CHANNELIZING DEVICE
- TY III BARRICADE
- EXISTING TRAFFIC DIRECTIONAL ARROW
- PROPOSED TRAFFIC DIRECTIONAL ARROW
- LOW PROFILE CONCRETE BARRIER (LPCB)
- PROPOSED LANE LINE (THIS PHASE)
- PROPOSED CONSTRUCTION (THIS PHASE)
- PROPOSED CONSTRUCTION (PREV. PHASE)
- PROPERTY LINE

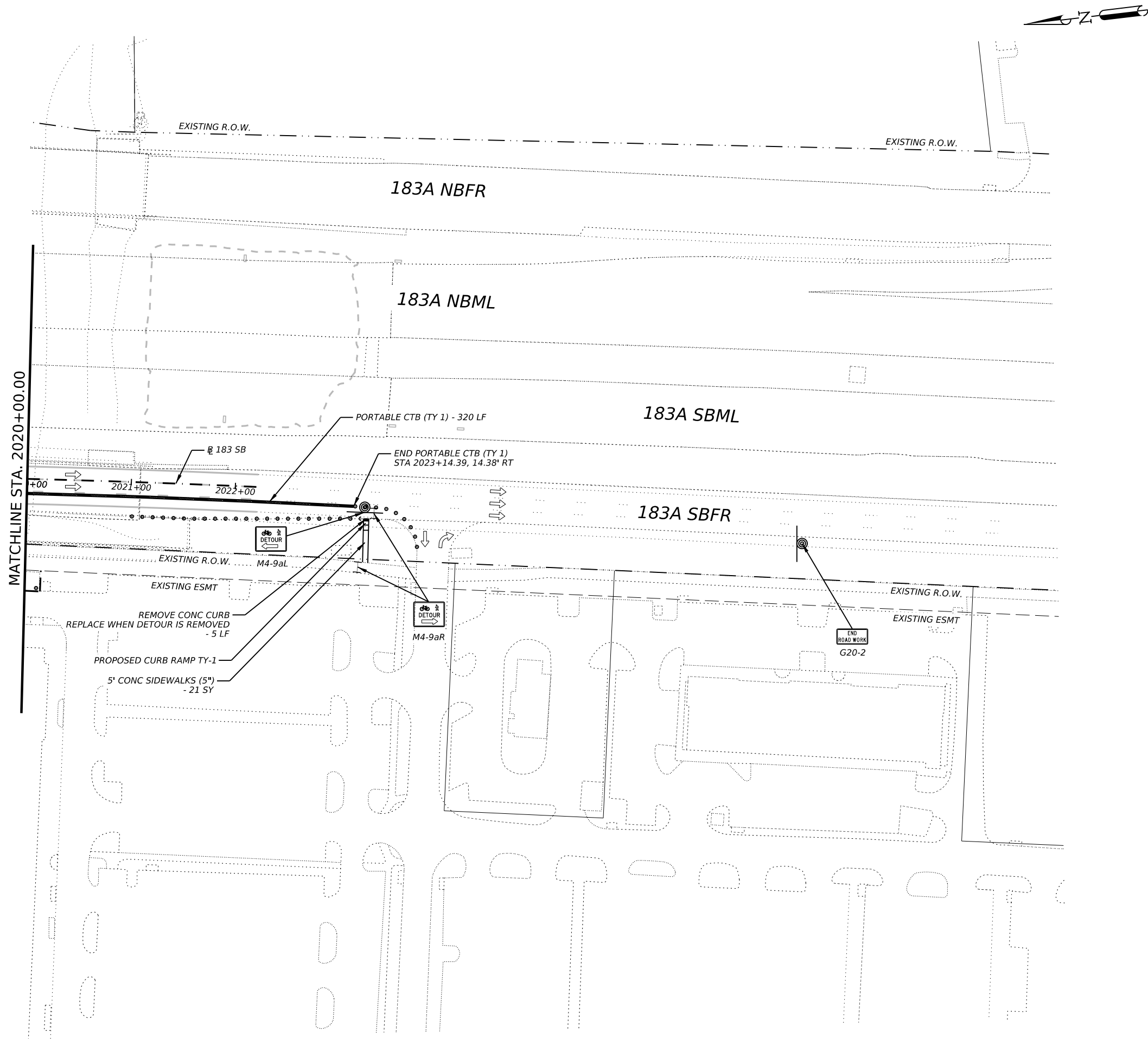
NOTES:

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2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO ALL DRIVEWAYS.
3. CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE.
4. BARRELS ON RADII SHALL BE SPACED AT 10' UNLESS OTHERWISE NOTED.



COTTONWOOD POND  
TRAFFIC CONTROL PLAN  
PHASE 1  
183A SB

SHEET 2 OF 3			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		21

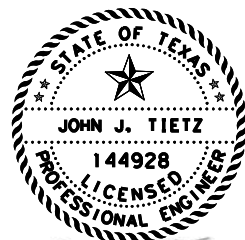
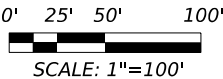


LEGEND:

- EXISTING PLANIMETRICS
- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING EASEMENT
- PROPOSED TEMP EASEMENT
- CHANNELIZING DEVICE
- TY III BARRICADE
- EXISTING TRAFFIC DIRECTIONAL ARROW
- PROPOSED TRAFFIC DIRECTIONAL ARROW
- LOW PROFILE CONCRETE BARRIER (LPCB)
- PROPOSED LANE LINE (THIS PHASE)
- PROPOSED CONSTRUCTION (THIS PHASE)
- PROPOSED CONSTRUCTION (PREV. PHASE)
- PROPERTY LINE

NOTES:

- ALL EXISTING UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR DETERMINING UTILITY LOCATIONS AND AVOIDING ANY DAMAGES TO UTILITIES DURING CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO ALL DRIVEWAYS.
- CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE.
- BARRELS ON RADII SHALL BE SPACED AT 10' UNLESS OTHERWISE NOTED.



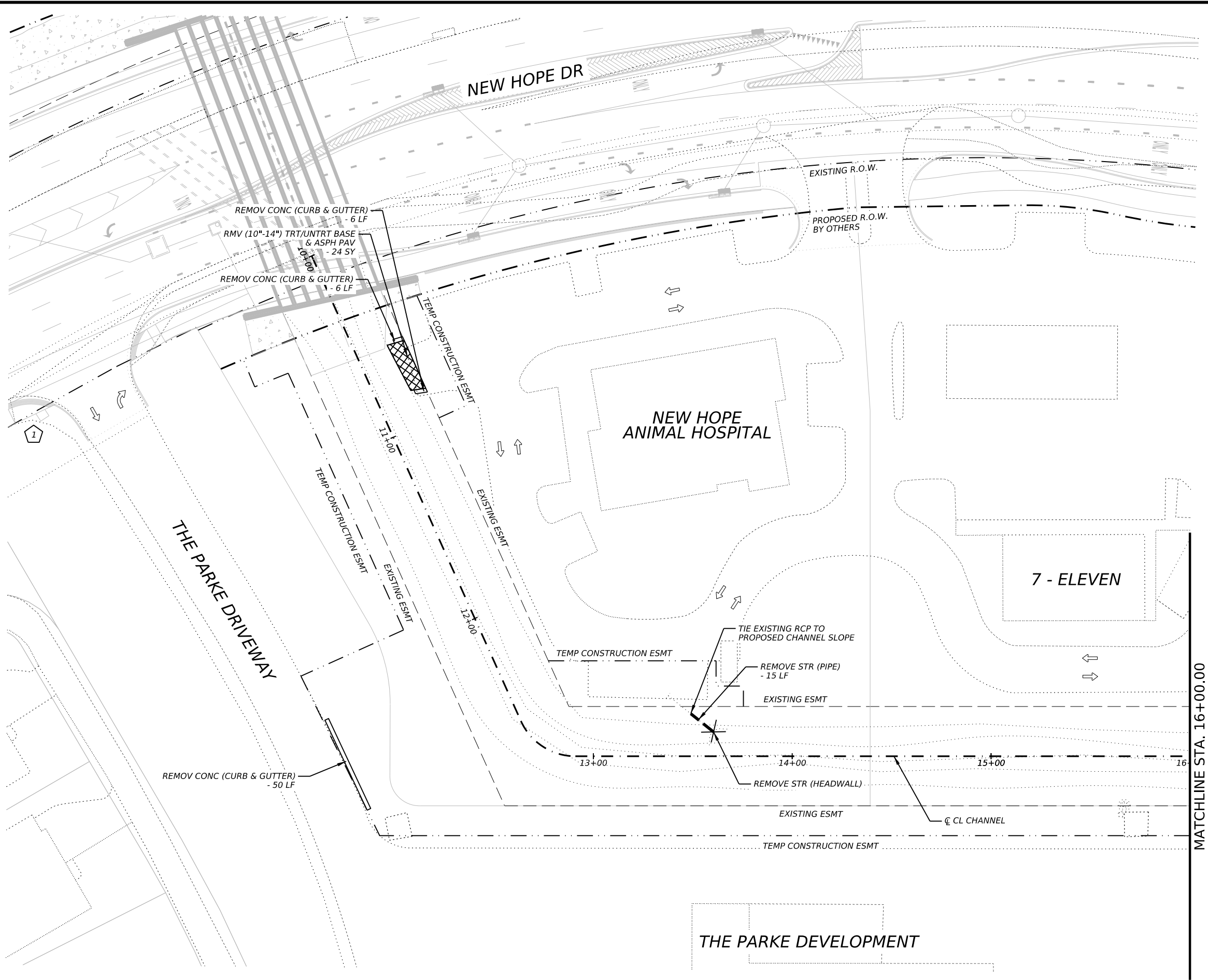
5/22/2025



COTTONWOOD POND  
TRAFFIC CONTROL PLAN  
PHASE 1  
183A SB

SHEET 3 OF 3

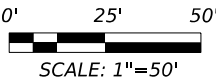
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY	SHEET NO.	
AUS	WILLIAMSON	22	



**LEGEND:**

- EXISTING PLANIMETRICS
- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING EASEMENT
- PROPOSED EASEMENT
- PROPOSED TEMP EASEMENT
- REMOVING STAB BASE & ASPH PAV
- REMOVING CONC (GENERAL)
- REMOVE ROCK RIPRAP
- EXISTING TRAFFIC DIRECTIONAL ARROW

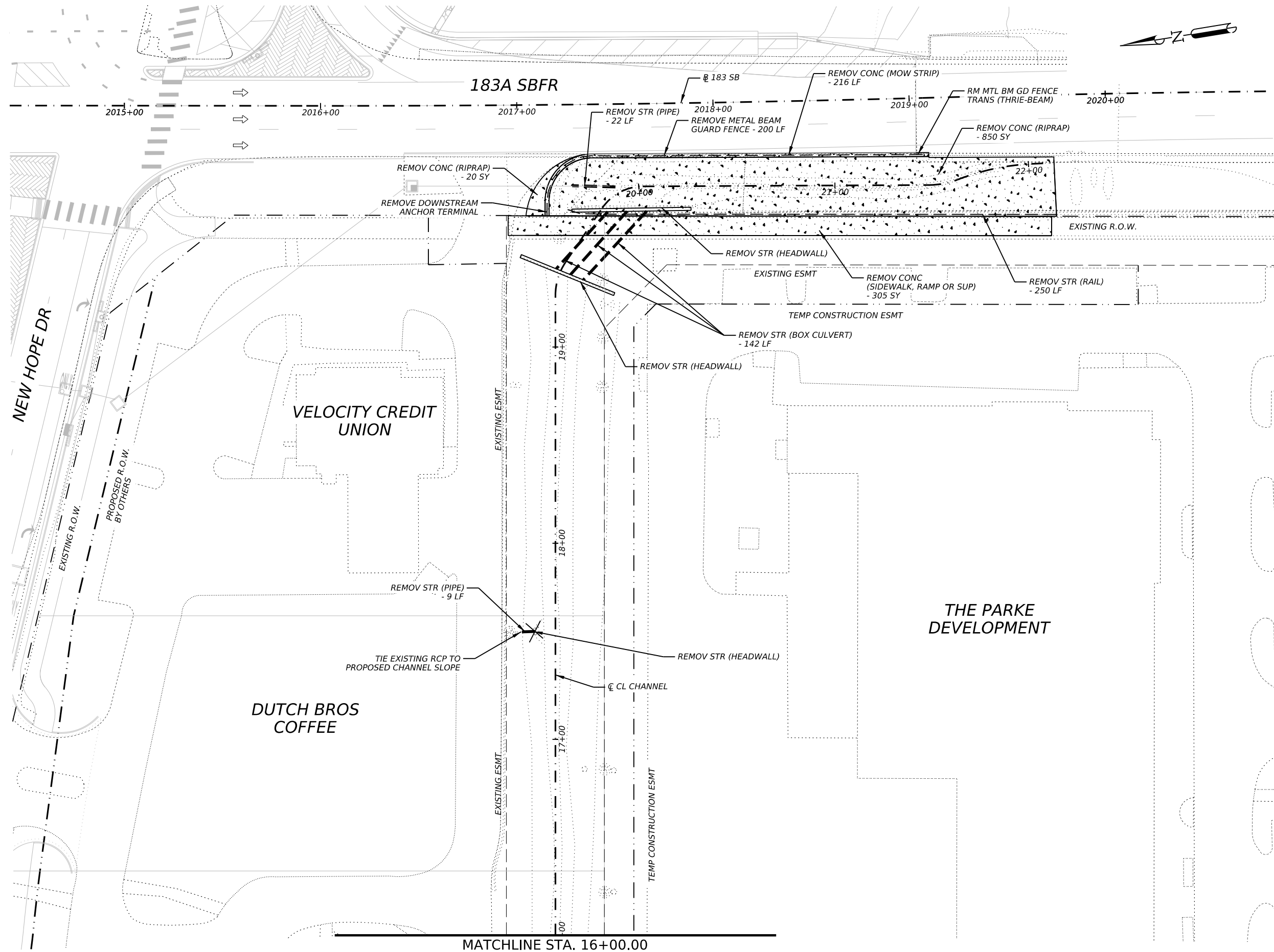
- NOTES:**
- ALL TREE AND BRUSH REMOVAL SHALL BE SUBSIDIARY TO ITEM 100-7002 "PREPARING RIGHT OF WAY".



COTTONWOOD POND  
REMOVAL PLAN  
CHANNEL

SHEET 1 OF 2

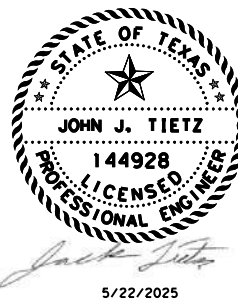
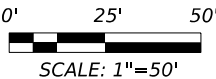
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY	SHEET NO.	
AUS	WILLIAMSON	37	



**LEGEND:**

- EXISTING PLANIMETRICS
- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING EASEMENT
- PROPOSED EASEMENT
- PROPOSED TEMP EASEMENT
- REMOVING STAB BASE & ASPH PAV
- REMOVING CONC (GENERAL)
- REMOVE ROCK RIPRAP
- EXISTING TRAFFIC DIRECTIONAL ARROW

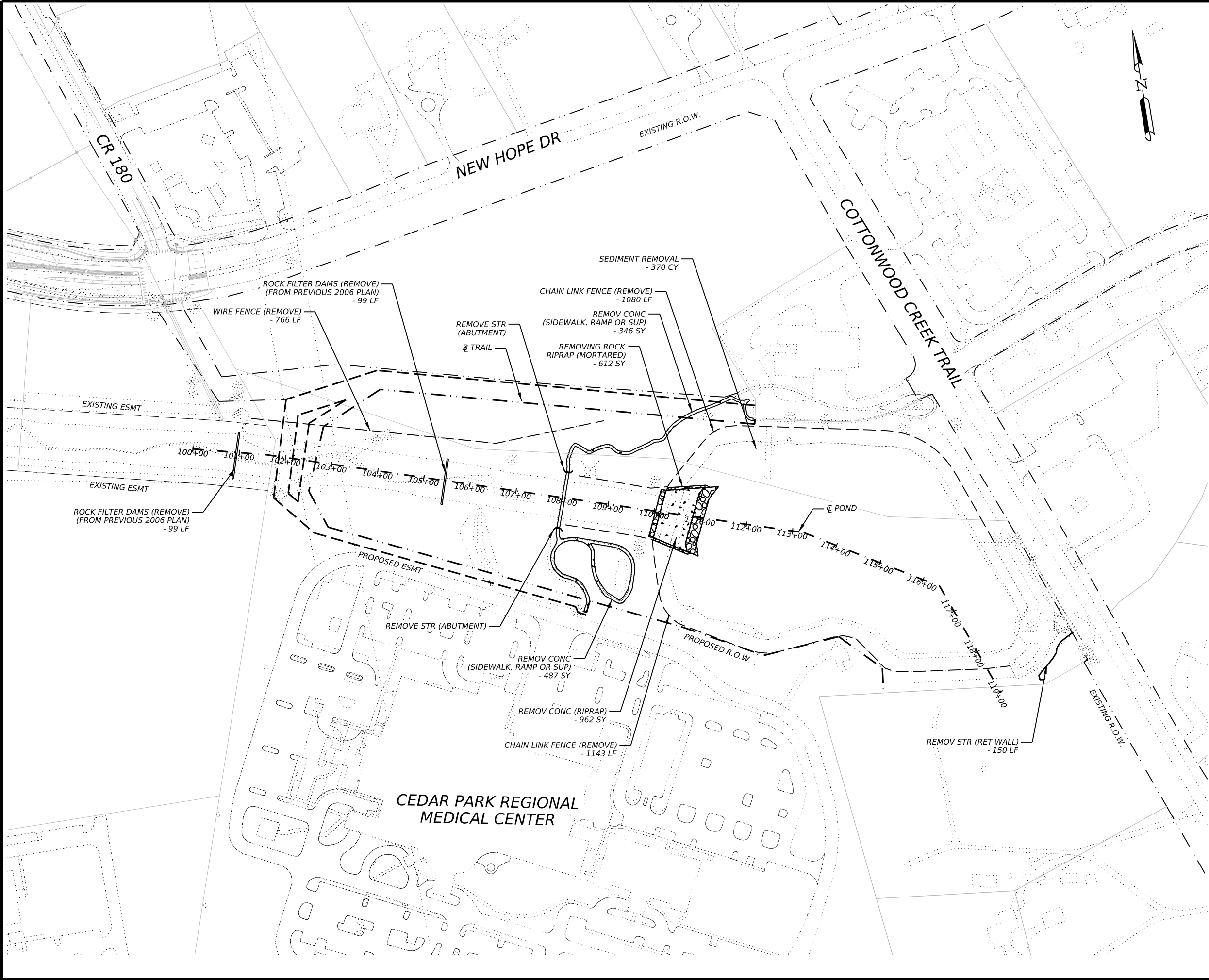
- NOTES:**
- ALL TREE AND BRUSH REMOVAL SHALL BE SUBSIDIARY TO ITEM 100-7002 "PREPARING RIGHT OF WAY".



**COTTONWOOD POND  
REMOVAL PLAN  
CHANNEL**

SHEET 2 OF 2

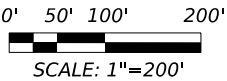
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY	SHEET NO.	
AUS	WILLIAMSON	38	



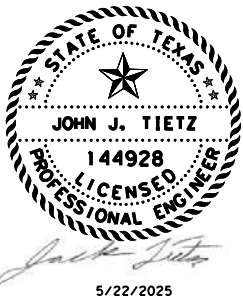
LEGEND:

- EXISTING PLANIMETRICS
- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING EASEMENT
- PROPOSED EASEMENT
- PROPOSED TEMP EASEMENT
- REMOVING STAB BASE & ASPH PAV
- REMOVING CONC (GENERAL)
- REMOVE ROCK RIPRAP
- EXISTING TRAFFIC DIRECTIONAL ARROW

- NOTES:
1. ALL TREE AND BRUSH REMOVAL SHALL BE SUBSIDIARY TO ITEM 100-7002 "PREPARING RIGHT OF WAY".



SCALE: 1"=200'

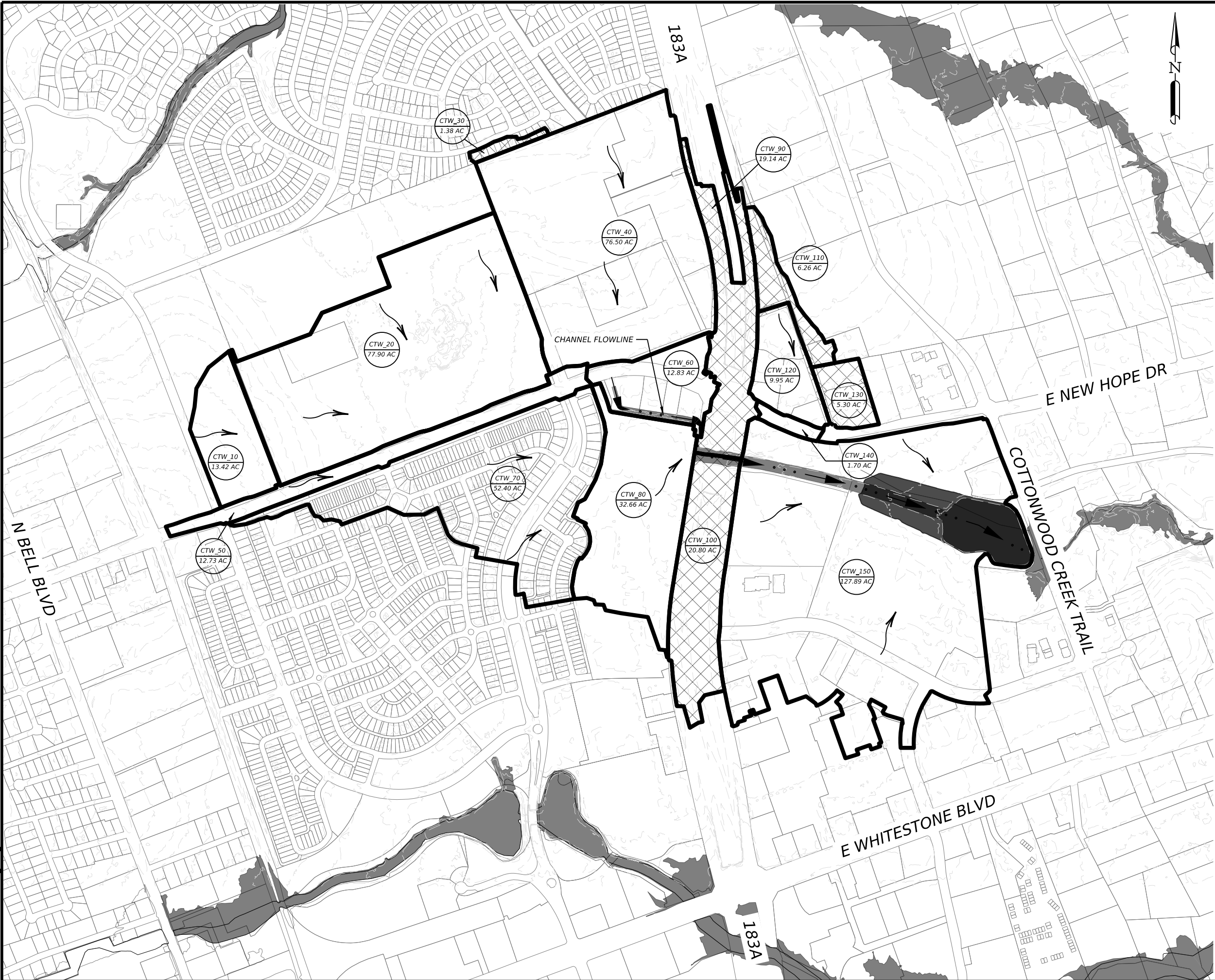


COTTONWOOD POND  
REMOVAL PLAN  
POND

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY	SHEET NO.	
AUS	WILLIAMSON	39	





LEGEND

- PARCEL BOUNDARY
- CONTOUR LINE
- SUBBASIN BOUNDARY
- FLOWLINE
- NON-PARTICIPANT AREA
- 100-YR FEMA FLOODPLAIN
- AREA ID
- FLOW DIRECTION ARROW

- NOTES:
1. HYDROLOGY WAS PERFORMED IN HEC-HMS VERSION 4.5, BASED ON NRCS METHODOLOGY DESCRIBED IN WILLIAMSON COUNTY'S ATLAS 14 FLOODPLAIN MAPPING STUDY DATED APRIL 16, 2024.
  2. LOSS METHOD: SCS CURVE NUMBER, TRANSFORM: SCS UNIT HYDROGRAPH
  3. ATLAS-14 DEPTH-DURATION-FREQUENCY VALUES FOR BRUSHY CREEK WAS OBTAINED FROM THE PREVIOUSLY MENTIONED FLOODPLAIN MAPPING STUDY. THIS DATA WAS ADOPTED AS OF DECEMBER 7, 2021.
  4. IMPERVIOUS COVER CALCULATIONS BASED ON A FULLY DEVELOPED WATERSHED BASED ON ZONING MAPS FROM THE CITY OF CEDAR PARK WHEN AVAILABLE.
  5. 5FT CONTOURS SHOWN. CONTOUR DATA BASED ON 2021 CENTRAL TEXAS LIDAR AND 2024 PROJECT SURVEY.
  6. PROJECT DATA IMPACTING FEMA ZONE AE. SEE H&H REPORT FOR MORE INFORMATION.

0' 200' 400' 800'  
SCALE: 1"=800'



COTTONWOOD POND  
DRAINAGE AREA  
MAP  
(HYDROLOGY)

SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		40

DATE: 6/4/2025 2:08:36 PM  
FILE: ...15\_Drainage\CWP LandUse 01.dgn

Proposed						
Area ID	WCAD Parcel ID	Owner Name	Area (ac)	% Imp	Imp Area (ac)	% Allocation
1	Various	Town Center Subdvsn	51.51	48.8%	25.14	8.2%
2	NA	City of Cedar Park/NHD	19.92	80.4%	16.02	5.2%
3A	R542595	HUT HOMES IV LLC (NH Animal Hospital)	1.73	88.4%	1.53	0.5%
3B	R548647	7-ELEVEN INC	1.33	87.2%	1.16	0.4%
3C	R548648	SLK DUTCH BROTHERS LLC	0.83	88.0%	0.73	0.2%
3D	R542597	Velocity Credit Union	1.14	85.1%	0.97	0.3%
4	R513564	BIG DIAMOND INC (Circle K)	2.42	93.4%	2.26	0.7%
5	R543269	IVT PARKE CEDAR PARK LLC (The Parke)	34.07	80.0%	27.26	8.9%
6A	R557813	RS CEDAR PARK LLC & REP WARNER CP LLC & CEDAR PARK WSS LLC (Woodspring Suites)	2.80	80.0%	2.24	0.7%
6B	R631706	JRB CEDAR PARK LP (Ethan Allen)	1.38	80.0%	1.10	0.4%
6C	R631707	CEDAR PARK TOWN CENTER LP (UFCU)	0.92	92.4%	0.85	0.3%
6D	R557814	SRW HOSPITALITY CEDAR PARK REALTY LLC (Hyatt Place)	2.58	80.0%	2.06	0.7%
6E	R557815	DEVAGIRI INVESTORS LLC & BIG CREEK LOTS LLC & JAYYES GROUP LLC	1.01	80.0%	0.81	0.3%
7	NA	City of Cedar Park (NHD)	1.73	93.0%	1.61	0.5%
8A	R586832	CPTC SEC NHD LLC (54th)	4.19	80.0%	3.35	1.1%
8B	R532778	TRIAD HOSPITALS INC	15.71	80.0%	12.57	4.1%
8C	R545029	PSLCN CEDAR PARK CONDO	8.99	80.0%	7.19	2.4%
8D	R586833	CPTC 24HF LLC	4.07	58.7%	2.39	0.8%

Proposed						
Area ID	WCAD Parcel ID	Owner Name	Area (ac)	% Imp	Imp Area (ac)	% Allocation
9A	R565440	CEDAR PARK HEALTH SYSTEM LP	33.52	80.0%	26.82	8.8%
9D	R031433	CEDAR PARK HEALTH SYSTEM LP	12.39	80.0%	9.91	3.2%
9B	R565441	R&J MEDICAL PROPERTIES LLC	2.69	80.0%	2.15	0.7%
9C	R559281	City of Cedar Park (Fire)	2.44	80.0%	1.95	0.6%
10	NA	City of Cedar Park	3.31	71.7%	2.37	0.8%
11	NA	City of Cedar Park	4.78	71.7%	3.43	1.1%
12A	R499696	1431 SC LTD	5.02	81.9%	4.11	1.3%
12B	R510849	1431 SC LTD	6.28	81.9%	5.14	1.7%
12C	R661194	CP1890 PROPERTIES LLC	1.33	81.9%	1.09	0.4%
12D	R499694	MENGAN REALTY LLC SERIES A	3.55	81.9%	2.91	1.0%
12E	R499690	STORE MASTER FUNDING XI LLC	1.01	81.9%	0.83	0.3%
12F	R491993	WK DE CEDAR PARK LLC	1.18	81.9%	0.97	0.3%
12G	R499691	SPOONIAN, LLC	0.59	81.9%	0.48	0.2%
12H	R481885	TARGET CORPORATION	2.97	81.9%	2.43	0.8%
13	R658955	121 ACQUISITION COMPANY LLC (NFM)	77.35	80.0%	61.88	20.3%
14A	R031861	NORTHLAND DEVELOPMENTS CEDAR PARK INC	16.59	80.0%	13.27	4.3%
14B	R031859	NORTHLAND DEVELOPMENTS CEDAR PARK INC	5.00	80.0%	4.00	1.3%
14C	R543331	NORTHLAND DEVELOPMENTS CEDAR PARK INC	7.59	80.0%	6.07	2.0%
14D	R431906	NORTHLAND DEVELOPMENTS CEDAR PARK INC	8.89	80.0%	7.11	2.3%
15	R031776	RH BLOCK HOUSE RD LLC (Reger)	13.99	80.0%	11.19	3.7%
16A	R349071	City of Cedar Park (HEB)	32.39	80.0%	25.91	8.5%
16B	R524950	City of Cedar Park (Pond)	1.83	80.0%	1.46	0.5%
16C	R509161	City of Cedar Park	0.77	80.0%	0.62	0.2%
16D	R543330	City of Cedar Park (Sign)	0.16	80.0%	0.13	0.0%
Non-Part		Multiple	54.61	0.0%	0.00	0.0%
17		City of Cedar Park (Pond)	14.27	0.0%	0.00	0.0%
Total			470.83		305.48	100.0%

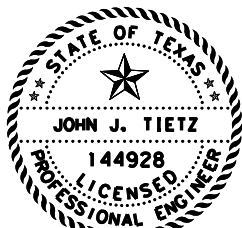
LEGEND

- PARCEL BOUNDARY  
CONTRIBUTING PARCEL BOUNDARY  
PROPOSED PARTICIPANT AREA  
NON-PARTICIPANT AREA  
AREA ID

NOTES:

1. ACREAGE SHOWN IS BASED ON WILLIAMSON COUNTY APPRAISAL DISTRICT AND GIS DATA.

0' 200' 400' 800'  
SCALE: 1"=800'



6/4/2025



COTTONWOOD POND  
DRAINAGE AREA  
MAP  
(WATER QUALITY)

SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		41



Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Cottonwood Pond  
Date Prepared: 5/14/2025

1. The Required Load Reduction for the total project:

Calculations from RG-348 Pages 3-27 to 3-30

Page 3-29 Equation 3.3:  $L_{TSS,Red} = 27.2(A_i \times P)$

where:

$L_{TSS,Red}$  = Required TSS removal resulting from the proposed development = 80% of increased load  
 $A_i$  = Net increase in impervious area for the project  
 $P$  = Average annual precipitation, inches

Site Data: Determine Required Load Removal Based on the Entire Project

County = Williamson  
Total project area included in plan = 470.83 acres  
Predevelopment impervious area within the limits of the plan = 5.81 acres  
Total post-development impervious area within the limits of the plan = 305.48 acres  
Total post-development impervious cover fraction = 0.65  
 $P$  = 32 inches  
Number of drainage basins / outfalls areas leaving the plan area = 1  
 $L_{TSS,Red}$  = 260830 lbs.

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = 1  
Total drainage basin/outfall area = 470.83 acres  
Predevelopment impervious area within drainage basin/outfall area = 5.81 acres  
Post-development impervious area within drainage basin/outfall area = 305.48 acres  
Post-development impervious fraction within drainag = 0.65  
 $L_{TSS,Red}$  = 260830 lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Wet Basin  
Removal efficiency = 93 percent

Aqualogic Cartridge Filter  
Bioretention  
Contech StormFilter  
Constructed Wetland  
Extended Detention  
Grassy Swale  
Retention / Irrigation  
Sand Filter  
Stormceptor  
Vegetated Filter Strips  
Vortechs  
Wet Basin  
Wet Vault

4. Calculate Maximum TSS Load Removed (L<sub>TSS,Red</sub>) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7:  $L_{TSS,Red} = (BMP \text{ efficiency}) \times P \times (A_i \times 34.6 + A_p \times 0.54)$

where:

$A_i$  = Total On-Site drainage area in the BMP catchment area  
 $A_p$  = Impervious area proposed in the BMP catchment area  
 $A_p$  = Pervious area remaining in the BMP catchment area  
 $L_{TSS,Red}$  = TSS Load removed from this catchment area by the proposed BMP

$A_i$  = 470.83 acres  
 $A_p$  = 305.48 acres  
 $A_p$  = 165.35 acres  
 $L_{TSS,Red}$  = 317205 lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired  $L_{TSS,Red}$  = 266261 lbs.

$F$  = 0.84

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area

calculations from RG-348 Pages 3-34 to 3-36

Rainfall Depth = 1.26 inches  
Post Development Runoff Coefficient = 0.46  
On-site Water Quality Volume = 987408 cubic feet

Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 0.00 acres  
Off-site Impervious cover draining to BMP = 0.00 acres  
Impervious fraction of off-site area = 0  
Off-site Runoff Coefficient = 0.00  
Off-site Water Quality Volume = 0 cubic feet

Storage for Sediment = 197482  
Total Capture Volume (required water quality volume(s) x 1.20) = 1184890 cubic feet

11. Wet Basins

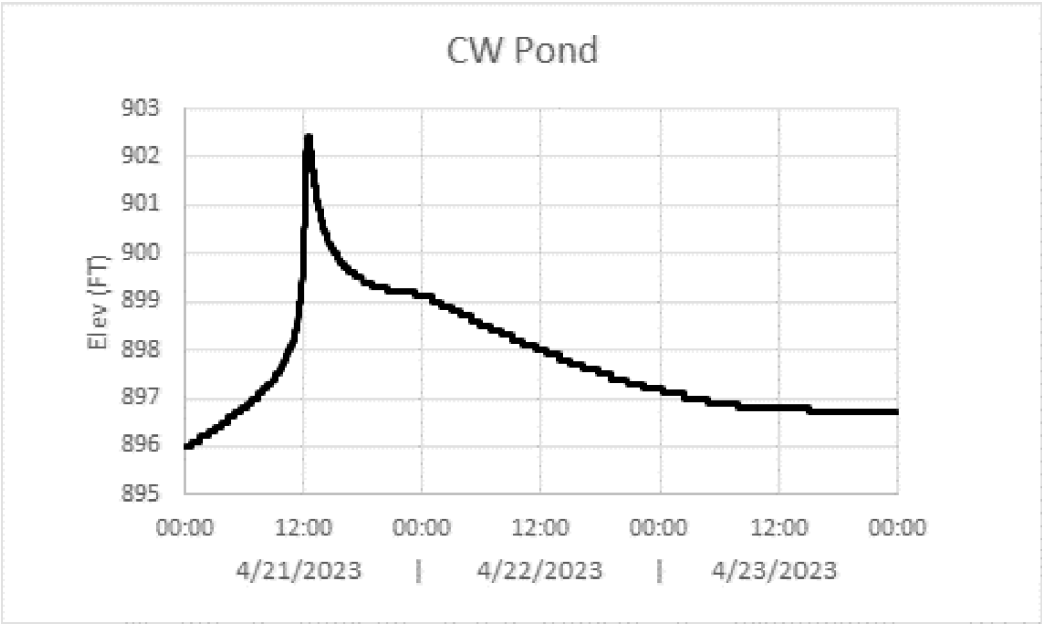
Designed as Required in RG-348 Pages 3-66 to 3-71

Required capacity of Permanent Pool = 1184890 cubic feet Permanent Pool Capacity is 1.20 times the WQV  
Required capacity at WQV Elevation = 2172298 cubic feet Total Capacity should be the Permanent Pool Capacity plus a second WQV.

Existing Impervious Cover			
Area ID	Area (ac)	Impervious %	Impervious Area
1	64.00	48.8%	31.23
2	10.39	71.7%	7.45
3	5.48	80.0%	4.38
4	2.24	80.0%	1.79
5	33.02	80.0%	26.42
6	8.98	80.0%	7.18
7	2.15	71.7%	1.54
8	32.95	80.0%	26.36
9	68.80	80.0%	55.04
10	3.43	71.7%	2.46
11	7.29	71.7%	5.23
12	21.90	81.9%	17.94
Non-Part	250.59	0.5%	1.25
Total	511.22		188.27

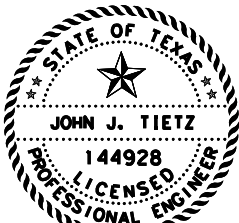
Proposed Impervious Cover			
Area ID	Area (ac)	Impervious %	Impervious Area
1	51.51	48.80%	25.14
2	19.92	80.40%	16.02
3	5.03	87.28%	4.39
4	2.42	93.39%	2.26
5	34.07	80.00%	27.26
6	8.69	81.31%	7.07
7	1.73	93.00%	1.61
8	32.96	77.37%	25.50
9	51.04	80.00%	40.83
10	3.31	71.70%	2.37
11	4.78	71.70%	3.43
12	21.93	81.90%	17.96
13	77.35	80.00%	61.88
14	38.07	80.00%	30.46
15	13.99	80.00%	11.19
16	35.15	80.00%	28.12
17	14.27	0.00%	0.00
Non-Part	54.61	0.00%	0.00
Total	470.83		305.48

Scenario	Units	Existing	Proposed
Drainage Area	(acres)	511.22	470.83
Percentage of Impervious Cover	%	36.83%	64.88%
Total Impervious Cover	(acres)	188.27	305.48
Required Water Quality Volume (WQV)	(cu ft)	1,286,817.5	2,173,176.0
Required Permanent Pool Volume (PPV)	(cu ft)	701,900.4	1,185,369



NOTES:

1. ALL EXISTING IMPERVIOUS COVER VERIFIED PER PARCEL THAT IT IS NOT EXCEEDING EXISTING ALLOTMENTS BASED ON APPROVED SITE PLANS AND NATIONAL IMPERVIOUS COVER DATABASE.
2. EXISTING TOTAL SUSPENDED SOLIDS REMOVAL CALCULATIONS FROM THE 2006 COTTONWOOD CHANNEL, POND WASTEWATER IMPROVEMENTS JOB NO. 1507-9584-32 PLANS AND APPROVED CZP EA ID #11-06090101.
3. PROPOSED IMPERVIOUS COVER FOR EACH PARCEL FROM PERCENT ALLOCATION BASED ON AS-BUILT PLANS. ASSUMED 80% IMPERVIOUS FOR NEW PARTICIPATING PARCELS.
4. EXISTING VALUES SHOWN REPRESENT THE DEVELOPED CONDITION OF WHICH THE 2006 POND WAS DESIGNED. PROPOSED VALUES INCORPORATE PREVIOUS NON-PARTICIPANTS. SEE DRAINAGE AREA MAP (WATER QUALITY) FOR PROPOSED PARTICIPANTS AND NON-PARTICIPANTS.
5. FOR PARCEL ID LOCATION SEE DRAINAGE AREA MAP (WATER QUALITY)



Jack Tietz  
6/4/2025



**LJA** ENGINEERING, INC  
FRN - F-1386

COTTONWOOD POND  
HYDRAULIC CALCULATIONS  
TSS REMOVAL

SHEET 1 OF 7

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		42

COTTONWOOD CREEK TIME OF CONCENTRATION CALCULATIONS EXISTING CONDITION

Drainage Ared ID	Overland Sheet Flow							Shallow Concentrated Flow								Channel Flow												TC-TOTAL	LAG (0.6*TC)
	Length	n-Value	E-START	E-END	Slope	SEGMENT TC-SHEET	SUMMATION OF TC-SHEET	Length	Paved (P)/ Unpaved (U)	E-START	E-END	Slope	Velocity	SEGMENT TC-SHALLOW	SUMMATION OF TC-SHALLOW	Length	E-START	E-END	Slope	n-Value	BW	TW	D	Velocity	SEGMENT TC-CHANNEL	SUMMATION OF TC-CHANNEL			
CTW*10	100	0.55	988.54	986.7	1.84%	25.75	25.75	368.5	U	986.7	981.34	1.45%	1.95	3.15	3.15											0.00	28.90	17.34	
CTW*20	100	0.20	959.51	958.7	0.81%	15.92	15.92	790.37	U	958.7	947.87	1.37%	1.89	6.97	6.97	1126.84	947.87	940.03	0.70%	0.035	6	16	1.8	3.99	4.71	4.71	27.60	16.56	
CTW*30	94	0.40	969.54	968.57	1.03%	23.94	23.94	30	U	968.57	968.5	0.50%	1.14	0.44	0.44											0.00	24.38	14.63	
CTW*40	100	0.30	962.98	962.18	0.80%	22.12	22.12	1160.4	U	962.18	936.93	2.18%	2.38	8.13	8.13	221.18	936.93	930.63	2.85%	0.040	15	38	1.4	6.17	0.60	0.60	30.85	18.51	
CTW*50	100	0.02	997.15	995.18	1.97%	5.00	5.00	1	P	995.18	995.18	0.50%	1.44	0.01	0.01	3615.81	995.18	932.59	1.73%	0.020	4	18	2.6	12.9	4.67	4.67	9.68	5.81	
CTW*60	100	0.01	942.09	933.43	8.66%	5.00	5.00	1	P	933.43	931.6	183.00%	27.50	0.00	0.00	400	931.6	922.52	2.27%	0.013	9.4	24	4	32.35	0.21	0.21	5.21	3.13	
CTW*70	100	0.30	980.75	978.9	1.85%	15.82	15.82	340	P	978.9	968.64	3.02%	3.53	1.61	1.61	3353.94	968.64	934.26	1.03%	0.016	15	39	1	7.37	7.58	7.58	25.01	15.01	
CTW*80	100	0.01	936.37	934.47	1.90%	5.00	5.00	1	P	934.47	934.47	0.50%	1.44	0.01	0.01	1100	934.47	928.7	0.52%	0.013	1	2	1	4.97	3.69	3.69	8.70	5.22	
CTW*90	100	0.24	958.4	958	0.50%	22.33	22.33	50	U	958	956.8	2.40%	2.50	0.33	0.33	2360	956.8	923	1.43%	0.045	1	6	1.65	3.49	11.27	11.27	33.93	20.36	
CTW*100	100	0.24	940.18	937.91	2.27%	12.19	12.19	50	U	937.91	937.83	0.50%	1.14	0.73	0.73	2210	937.83	923	0.67%	0.045	1	6	1	2	18.42	18.42	31.34	18.80	
CTW*110	80	0.20	956.49	950.5	7.49%	5.47	5.47	1	U	950.5	950.5	0.50%	1.14	0.01	0.01	546.4	950.5	945.3	0.95%	0.030	1	4	1	3.22	2.83	2.83	8.31	4.99	
CTW*120	100	0.01	944.03	937.88	6.15%	5.00	5.00	55	P	937.88	937.3	1.05%	2.09	0.44	0.44	1352.1	937.3	922.28	1.11%	0.015	1	3	1	6.79	3.32	3.32	8.76	5.26	
CTW*130	100	0.01	931.07	929.58	1.49%	5.00	5.00	218	P	929.58	926.7	1.32%	2.34	1.55	1.55	609.5	926.7	922.76	0.65%	0.015	1	3	1	5.18	1.96	1.96	8.51	5.11	
CTW*140	30	0.01	932.12	931.8	1.07%	5.00	5.00	1	P	931.8	931.79	1.00%	2.03	0.01	0.01	590	931.79	922.95	1.50%	0.012	1	3	1	9.86	1.00	1.00	6.01	3.61	
CTW*150	100	0.02	939.04	932.93	6.11%	5.00	5.00	300	P	932.93	931.23	0.57%	1.53	3.27	3.27	3085.4	931.23	903.23	0.91%	0.020	1	3	1	4.6	11.18	11.18	19.45	11.67	

COTTONWOOD CREEK TIME OF CONCENTRATION CALCULATIONS FULLY DEVELOPED CONDITION

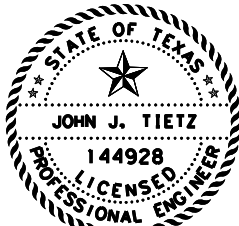
NOTES:

Drainage Area ID	Overland Sheet Flow							Shallow Concentrated Flow								Channel Flow												TC-TOTAL	LAG (0.6*TC)
	Length	n-Value	E-START	E-END	Slope	SEGMENT TC-SHEET	SUMMATION OF TC-SHEET	Length	Paved (P) / Unpaved (U)	E-START	E-END	Slope	Velocity	SEGMENT TC-SHALLOW	SUMMATION OF TC-SHALLOW	Length	E-START	E-END	Slope	n-Value	BW	TW	D	Velocity	SEGMENT TC-CHANNEL	SUMMATION OF TC-CHANNEL			
CTW*10	100	0.34	988.54	986.7	1.84%	17.52	17.52	368.5	P	986.7	981.34	1.45%	2.45	2.51	2.51											0.00	20.03	12.02	
CTW*20	100	0.13	959.51	958.7	0.81%	11.28	11.28	790.37	P	958.7	947.87	1.37%	2.38	5.53	5.53	1126.84	947.87	940.03	0.70%	0.015	6	16	1.8	9.31	2.02	2.02	18.83	11.30	
CTW*30	94	0.40	969.54	968.57	1.03%	23.94	23.94	30	U	968.57	968.5	0.50%	1.14	0.44	0.44											0.00	24.38	14.63	
CTW*40	100	0.12	962.98	962.18	0.80%	10.63	10.63	280	P	962.18	954.5	2.74%	3.37	1.38	1.38	1101.6	954.5	930.63	2.17%	0.040	15	38	1.4	5.38	3.41	3.41	15.42	9.25	
CTW*50	100	0.02	997.15	995.18	1.97%	5.00	5.00	1	P	995.18	995.18	0.50%	1.44	0.01	0.01	3615.81	995.18	932.59	1.73%	0.020	4	18	2.6	12.9	4.67	4.67	9.68	5.81	
CTW*60	100	0.01	942.09	933.43	8.66%	5.00	5.00	1	P	933.43	931.6	183.00%	27.50	0.00	0.00	400	931.6	922.52	2.27%	0.013	9.4	24	4	32.35	0.21	0.21	5.21	3.13	
CTW*70	100	0.30	980.75	978.9	1.85%	15.82	15.82	340	P	978.9	968.64	3.02%	3.53	1.61	1.61	3353.94	968.64	934.26	1.03%	0.016	15	39	1	7.37	7.58	7.58	25.01	15.01	
CTW*80	100	0.01	936.37	934.47	1.90%	5.00	5.00	1	P	934.47	934.47	0.50%	1.44	0.01	0.01	1100	934.47	928.7	0.52%	0.013	1	2	1	4.97	3.69	3.69	8.70	5.22	
CTW*90	100	0.24	958.4	958	0.50%	22.33	22.33	50	U	958	956.8	2.40%	2.50	0.33	0.33	2360	956.8	923	1.43%	0.045	1	6	1.65	3.49	11.27	11.27	33.93	20.36	
CTW*100	100	0.24	940.18	937.91	2.27%	12.19	12.19	50	U	937.91	937.83	0.50%	1.14	0.73	0.73	2210	937.83	923	0.67%	0.045	1	6	1	2	18.42	18.42	31.34	18.80	
CTW*110	80	0.20	956.49	950.5	7.49%	5.47	5.47	1	U	950.5	950.5	0.50%	1.14	0.01	0.01	546.4	950.5	945.3	0.95%	0.030	1	4	1	3.22	2.83	2.83	8.31	4.99	
CTW*120	100	0.01	944.03	937.88	6.15%	5.00	5.00	55	P	937.88	937.3	1.05%	2.09	0.44	0.44	1352.1	937.3	922.28	1.11%	0.015	1	3	1	6.79	3.32	3.32	8.76	5.26	
CTW*130	100	0.01	931.07	929.58	1.49%	5.00	5.00	218	P	929.58	926.7	1.32%	2.34	1.55	1.55	609.5	926.7	922.76	0.65%	0.015	1	3	1	5.18	1.96	1.96	8.51	5.11	
CTW*140	30	0.01	932.12	931.8	1.07%	5.00	5.00	1	P	931.8	931.79	1.00%	2.03	0.01	0.01	590	931.79	922.95	1.50%	0.012	1	3	1	9.86	1.00	1.00	6.01	3.61	
CTW*150	100	0.02	939.04	932.93	6.11%	5.00	5.00	300	P	932.93	931.23	0.57%	1.53	3.27	3.27	3085.4	931.23	903.23	0.91%	0.020	1	3	1	4.6	11.18	11.18	19.45	11.67	

1. TIME OF CONCENTRATION AND CURVE NUMBER VALUES CALCULATED USING METHODOLOGY OUTLINED IN THE WILLIAMSON COUNTY ATLAS 14 FLOOD PLAIN MAPPING STUDY DATED APRIL 16, 2024.
2. EXISTING VALUES SHOWN REPRESENT THE DEVELOPED CONDITION OF WHICH THE 2006 POND WAS DESIGNED. PROPOSED VALUES INCORPORATE PREVIOUS NON-PARTICIPANTS. SEE DRAINAGE AREA MAP (WATER QUALITY) FOR PROPOSED PARTICIPANTS AND NON-PARTICIPANTS.

NRCS METHOD HYDROLOGIC PARAMETER

Subbasin ID	Area		Lag Time		Curve Number		Impervious %	
	Exist	Prop	Exist	Prop	Exist	Prop	Exist	Prop
	(acres)	(acres)	(min)	(min)				
CTW*10	13.42	13.42	17.3	12.0	74	74	8	80
CTW*20	88.45	77.88	16.6	11.3	74	74	2	80
CTW*30	2.20	1.38	14.6	14.6	74	74	42	42
CTW*40	76.50	76.50	18.5	9.3	74	74	43	80
CTW*50	12.73	12.73	5.8	5.8	74	74	72	87
CTW*60	12.83	12.83	3.1	3.1	74	74	80	93
CTW*70	52.40	52.40	15.0	15.0	74	74	64	64
CTW*80	32.66	32.66	5.2	5.2	74	74	80	80
CTW*90	19.14	19.14	20.4	20.4	74	74	74	74
CTW*100	20.80	20.80	18.8	18.8	74	74	72	72
CTW*110	6.26	6.26	5.0	5.0	74	74	24	24
CTW*120	9.95	9.95	5.3	5.3	74	74	80	80
CTW*130	5.30	5.30	5.1	5.1	74	74	36	36
CTW*140	1.70	1.70	3.6	3.6	74	74	72	92
CTW*150	127.89	127.89	11.7	11.7	74	74	80	80



5/22/2025



COTTONWOOD POND  
HYDRAULIC CALCULATIONS  
NRCS CALCULATIONS

SHEET 2 OF 7

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST		COUNTY	SHEET NO.
AUS		WILLIAMSON	43

COTTONWOOD CREEK DETENTION POND CALCULATIONS EXISTING CONDITIONS

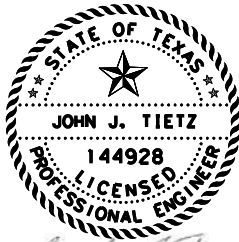
	Elevation (ft)	Area (sf)	Area (AC)	Incre. Volume (cf)	Accum. Volume (cf)	Accum. Volume (ac-ft)	Detention Volume (ac-ft)	Orifice Dia. (in)	Orifice Flow (cfs)	Trapezoidal Weir Flow (cfs)	Trapezoidal Weir Side Slope (run/rise)	Emergency Weir Length (ft)	Emergency Weir Flow (cfs)	Total Discharge (cfs)
	890	83574	1.919	0	0	0								
	891	87441	2.007	85508	85508	1.96								
	892	91371	2.098	89406	174914	4.02								
	893	128972	2.961	110172	285085	6.54								
	894	133866	3.073	131419	416504	9.56								
	895	150616	3.458	142241	558745	12.83								
PERMANENT POOL ELEV.	896	168265	3.863	159441	718186	16.49		18.0	0.00					0.00
	897	173652	3.987	170959	889144	20.41	8.24	18.0	4.25					4.25
	898	215572	4.949	194612	1083756	24.88	17.30	18.0	9.51					9.51
	899	261231	5.997	238402	1322158	30.35	27.20	18.0	12.76					12.76
WATER QUALITY ELEV.	899.1	262074	6.016	26165	1348323	30.95	28.24	18.0	13.04	0.00	4.00	200.00	0.00	13.04
	900	269661	6.191	239281	1587604	36.45	37.74	18.0	15.33	67.99	4.00	200.00	0.00	83.32
	901	278203	6.387	273932	1861536	42.73	48.62	18.0	17.53	236.76	4.00	200.00	0.00	254.29
	902	286842	6.585	282523	2144058	49.22	59.83	18.0	19.49	499.66	4.00	200.00	0.00	519.14
	903	295576	6.785	291209	2435267	55.91	71.36	18.0	21.26	862.23	4.00	200.00	0.00	883.49
	904	313776	7.203	304676	2739943	62.90	83.24	18.0	22.90	1331.15	4.00	200.00	0.00	1354.04
	905	332645	7.636	323211	3063154	70.32	95.44	18.0	24.43	1913.18	4.00	200.00	0.00	1937.61
EMERGENCY WEIR ELEV.	905.4	340592	7.819	134647	3197801	73.41	98.54	18.0	24.79	2077.14	4.00	200.00	0.00	2101.94
	906	352513	8.093	207932	3405733	78.18	107.97	18.0	25.87	2077.14	4.00	200.00	542.90	2645.91
	907	372041	8.541	362277	3768010	86.50	120.78	18.0	27.23	2077.14	4.00	200.00	1941.26	4045.63
TOP OF POND BERM	907.4	379512	8.712	150311	3918320	89.95	125.97	18.0	27.75	2077.14	4.00	200.00	2646.93	4751.82

NOTES:

1. EXISTING VALUES SHOWN REPRESENT THE DEVELOPED CONDITION OF WHICH THE 2006 POND WAS DESIGNED. PROPOSED VALUES INCORPORATE PREVIOUS NON-PARTICIPANTS. SEE DRAINAGE AREA MAP (WATER QUALITY) FOR PROPOSED PARTICIPANTS AND NON-PARTICIPANTS.

COTTONWOOD CREEK DETENTION POND CALCULATIONS PROPOSED CONDITIONS

	Elevation (ft)	Area (sf)	Area (AC)	Incre. Volume (cf)	Accum. Volume (cf)	Accum. Volume (ac-ft)	Detention Volume (ac-ft)	Orifice Dia. (in)	Orifice Flow (cfs)	Trapezoidal Weir Flow (cfs)	Trapezoidal Weir Side Slope (run/rise)	Emergency Weir Length (ft)	Emergency Weir Flow (cfs)	Total Discharge (cfs)
	890	81983	1.882	0	0	0								
	891	85808	1.970	83890	83890	1.93								
	892	192126	4.411	87747	171637	3.94								
	893	268108	6.155	195675	367312	8.43								
	894	277427	6.369	272764	640076	14.69								
	895	308856	7.090	293099	933175	21.42								
PERMANENT POOL ELEV.	896	340856	7.825	324812	1257987	28.88		18.0	0.00					0.00
	897	376750	8.649	358915	1616902	37.12	8.24	18.0	4.25					4.25
	898	412846	9.478	394755	2011657	46.18	17.30	18.0	9.51					9.51
	899	449457	10.318	431111	2442768	56.08	27.20	18.0	12.76					12.76
WATER QUALITY ELEV.	899.1	451175	10.358	45145	2487913	57.11	28.24	18.0	13.04	0.00	4.00	200.00	0.00	13.04
	900	466643	10.713	414089	2902002	66.62	37.74	18.0	15.33	67.99	4.00	200.00	0.00	83.32
	901	481079	11.044	473782	3375784	77.50	48.62	18.0	17.53	236.76	4.00	200.00	0.00	254.29
	902	495558	11.376	488184	3863968	88.70	59.83	18.0	19.49	499.66	4.00	200.00	0.00	519.14
	903	510084	11.710	502631	4366599	100.24	71.36	18.0	21.26	862.23	4.00	200.00	0.00	883.49
	904	524657	12.044	517127	4883726	112.11	83.24	18.0	22.90	1331.15	4.00	200.00	0.00	1354.04
	905	539274	12.380	531665	5415391	124.32	95.44	18.0	24.43	1913.18	4.00	200.00	0.00	1937.61
EMERGENCY WEIR ELEV.	905.25	541962	12.442	135191	5550582	127.42	98.54	18.0	24.79	2077.14	4.00	200.00	0.00	2101.94
	906	550026	12.627	410513	5961095	136.85	107.97	18.0	25.87	2077.14	4.00	200.00	542.90	2645.91
	907	567935	13.038	557852	6518947	149.65	120.78	18.0	27.23	2077.14	4.00	200.00	1941.26	4045.63
TOP OF POND BERM	907.4	575099	13.202	226169	6745116	154.85	125.97	18.0	27.75	2077.14	4.00	200.00	2646.93	4751.82



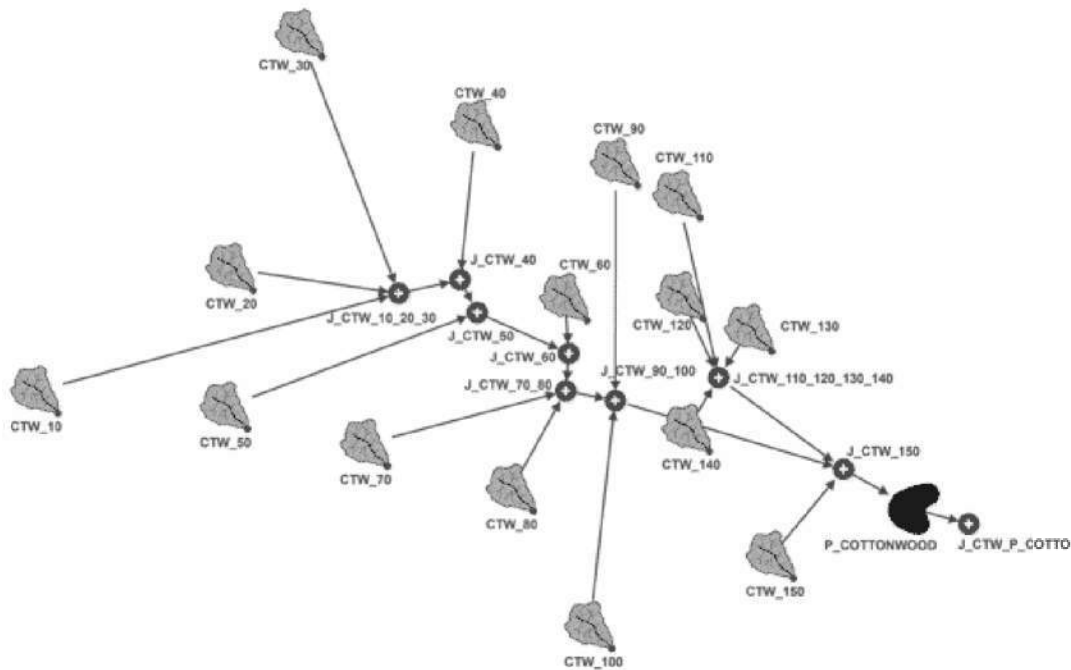
*John J. Tietz*  
5/22/2025



COTTONWOOD POND  
HYDRAULIC CALCULATIONS  
NRCS CALCULATIONS

SHEET 3 OF 7

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		44



JUNCTION SUMMARY

Junction ID	Contributing Subbasin	Location Description
J*CTW*10*20*30	CTW*10, 20, and 30	Upstream of existing culvert @ Ave of the Stars
J*CTW*40	CTW*10, 20, 30, and 40	Upstream of Culv B @ NHD ROW
J*CTW*50	CTW*10, 20, 30, 40, and 50	Downstream of Culv B @ NHD ROW, POA
J*CTW*60	CTW*10, 20, 30, 40, 50, and 60	Downstream of Pedestrian Culvert
J*CTW*70*80	CTW*10, 20, 30, 40, 50, 60, 70, and 80	Upstream US183A ROW
J*CTW*90*100	CTW*10, 20, 30, 40, 50, 60, 70, 80, 90, and 100	Downstream US183A ROW
J*CTW*110*120*130*140	CTW*110, 120, 130, and 140	Downstream of developments on East NHD
J*CTW*150	CTW*10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, and 150	Upstream of Regional Pond J*CTW*P*COTTONWOOD
J*CTW*P*COTTONWOOD	Downstream of Regional Pond	Downstream of Regional Pnd J*CTW*P*COTTONWOOD

NOTES:

1. EXISTING VALUES SHOWN REPRESENT THE DEVELOPED CONDITION OF WHICH THE 2006 POND WAS DESIGNED. PROPOSED VALUES INCORPORATE PREVIOUS NON-PARTICIPANTS. SEE DRAINAGE AREA MAP (WATER QUALITY) FOR PROPOSED PARTICIPANTS AND NON-PARTICIPANTS.

Project: CW Pond Final Design Simulation Run: 2-year				
Hydrologic Element	Drainage Area (MI <sup>2</sup> )	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CTW*10	0.020975	43.8	21Apr2023, 12:13	3.47
CTW*20	0.121693	260.9	21Apr2023, 12:12	3.47
CTW*30	0.00215	3.1	21Apr2023, 12:17	2.57
CTW*40	0.119529	278.7	21Apr2023, 12:10	3.48
CTW*50	0.019893	57.7	21Apr2023, 12:07	3.65
CTW*60	0.020042	70.4	21Apr2023, 12:04	3.79
CTW*70	0.081871	138.5	21Apr2023, 12:17	3.09
CTW*80	0.051037	146.8	21Apr2023, 12:06	3.48
CTW*90	0.029904	46.2	21Apr2023, 12:22	3.33
CTW*100	0.032494	51.6	21Apr2023, 12:20	3.27
CTW*110	0.009785	18.7	21Apr2023, 12:06	2.13
CTW*120	0.015546	44.4	21Apr2023, 12:06	3.48
CTW*130	0.00828	17.5	21Apr2023, 12:06	2.43
CTW*140	0.002651	9	21Apr2023, 12:05	3.77
CTW*150	0.199826	422.4	21Apr2023, 12:13	3.47
J*CTW*10*20*30	0.142668	304.7	21Apr2023, 12:13	3.47
J*CTW*40	0.262197	578.3	21Apr2023, 12:11	3.48
J*CTW*50	0.28209	624.1	21Apr2023, 12:11	3.49
J*CTW*60	0.302132	657.8	21Apr2023, 12:10	3.51
J*CTW*70*80	0.43504	878.1	21Apr2023, 12:10	3.43
J*CTW*90*100	0.497438	945.6	21Apr2023, 12:11	3.41
J*CTW*110*120*130*140	0.036262	89.1	21Apr2023, 12:06	2.89
J*CTW*150	0.733526	1423.2	21Apr2023, 12:11	3.4
J*CTW*P*COTTONWOOD	0.733526	663.4	21Apr2023, 12:30	2.67
P*COTTONWOOD	0.733526	663.4	21Apr2023, 12:30	2.67
R*CTW*70	0.081871	138.5	21Apr2023, 12:18	3.09

Project: CW Pond Final Design Simulation Run: 25-year				
Hydrologic Element	Drainage Area (MI <sup>2</sup> )	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CTW*10	0.020975	82.3	21Apr2023, 12:13	7.53
CTW*20	0.121693	489.9	21Apr2023, 12:12	7.53
CTW*30	0.00215	6.9	21Apr2023, 12:16	6.35
CTW*40	0.119529	523	21Apr2023, 12:10	7.53
CTW*50	0.019893	105.7	21Apr2023, 12:07	7.75
CTW*60	0.020042	127	21Apr2023, 12:04	7.94
CTW*70	0.081871	276	21Apr2023, 12:16	7.03
CTW*80	0.051037	275.4	21Apr2023, 12:06	7.54
CTW*90	0.029904	89	21Apr2023, 12:22	7.33
CTW*100	0.032494	100.2	21Apr2023, 12:20	7.26
CTW*110	0.009785	45.1	21Apr2023, 12:06	5.79
CTW*120	0.015546	83.3	21Apr2023, 12:06	7.54
CTW*130	0.00828	39.4	21Apr2023, 12:06	6.18
CTW*140	0.002651	16.2	21Apr2023, 12:05	7.91
CTW*150	0.199826	792.7	21Apr2023, 12:13	7.53
J*CTW*10*20*30	0.142668	571.6	21Apr2023, 12:13	7.53
J*CTW*40	0.262197	1085.6	21Apr2023, 12:11	7.53
J*CTW*50	0.28209	1169.3	21Apr2023, 12:11	7.54
J*CTW*60	0.302132	1230.3	21Apr2023, 12:10	7.57
J*CTW*70*80	0.43504	1661.1	21Apr2023, 12:10	7.46
J*CTW*90*100	0.497438	1793.9	21Apr2023, 12:11	7.44
J*CTW*110*120*130*140	0.036262	183.3	21Apr2023, 12:06	6.78
J*CTW*150	0.733526	2701.2	21Apr2023, 12:11	7.43
J*CTW*P*COTTONWOOD	0.733526	1794.7	21Apr2023, 12:23	6.64
P*COTTONWOOD	0.733526	1794.7	21Apr2023, 12:23	6.64
R*CTW*70	0.081871	275.8	21Apr2023, 12:18	7.02

Project: CW Pond Final Design Simulation Run: 100-year				
Hydrologic Element	Drainage Area (MI <sup>2</sup> )	Peak Discharge (CFS)	Time of Peak	Volume (IN)
CTW*10	0.020975	107.8	21Apr2023, 12:13	10.81
CTW*20	0.121693	641.7	21Apr2023, 12:12	10.81
CTW*30	0.00215	9.4	21Apr2023, 12:16	9.53
CTW*40	0.119529	684.8	21Apr2023, 12:10	10.81
CTW*50	0.019893	137.4	21Apr2023, 12:07	11.05
CTW*60	0.020042	164	21Apr2023, 12:04	11.26
CTW*70	0.081871	368.1	21Apr2023, 12:16	10.26
CTW*80	0.051037	360.5	21Apr2023, 12:06	10.82
CTW*90	0.029904	117.5	21Apr2023, 12:22	10.59
CTW*100	0.032494	132.6	21Apr2023, 12:20	10.51
CTW*110	0.009785	63	21Apr2023, 12:06	8.92
CTW*120	0.015546	109.1	21Apr2023, 12:06	10.82
CTW*130	0.00828	54.2	21Apr2023, 12:06	9.34
CTW*140	0.002651	21	21Apr2023, 12:05	11.22
CTW*150	0.199826	1038.2	21Apr2023, 12:13	10.81
J*CTW*10*20*30	0.142668	748.7	21Apr2023, 12:12	10.81
J*CTW*40	0.262197	1421.9	21Apr2023, 12:11	10.81
J*CTW*50	0.28209	1530.6	21Apr2023, 12:11	10.83
J*CTW*60	0.302132	1609.9	21Apr2023, 12:10	10.86
J*CTW*70*80	0.43504	2182	21Apr2023, 12:10	10.74
J*CTW*90*100	0.497438	2358.7	21Apr2023, 12:11	10.72
J*CTW*110*120*130*140	0.036262	246.2	21Apr2023, 12:06	10
J*CTW*150	0.733526	3551.4	21Apr2023, 12:11	10.7
J*CTW*P*COTTONWOOD	0.733526	2544.3	21Apr2023, 12:21	9.86
P*COTTONWOOD	0.733526	2544.3	21Apr2023, 12:21	9.86
R*CTW*70	0.081871	367.7	21Apr2023, 12:17	10.26

COTTONWOOD DETENTION POND SUMMARY

Design	2yr		10yr		25yr		100yr	
	Exist	Prop	Exist	Prop	Exist	Prop	Exist	Prop
Max Inflow (cfs)	1085.7	1423.2	1784.4	2191.3	2258.4	2701.2	3050.4	3551.4
Max Outflow (cfs)	774.0	663.4	1458.1	1340.7	1906.8	1794.7	2679.8	2544.3
Max Storage (ac-ft)	53.8	93.3	64.2	111.8	69.9	121.3	78.3	135.1
Max Pool Elev (ft)	902.7	902.4	904.2	904.0	904.9	904.8	906.0	905.9

NOTES:

1. HEC-RAS 6.3.1 WAS USED FOR THE HYDRAULIC ANALYSIS OF THE PEDESTRIAN BRIDGE.
2. DRAINAGE AREA DELINATIONS BASED ON 2021 CENTRAL TEXAS LIDAR.
3. DISCHARGES DETERMINED USING NRCS UNIT HYDROGRAPH METHOD, AND ATLAS 14 RAINFALL DATA.
4. THIS PEDESTRIAN BRIDGE IS LOCATED IN A FEMA ZONE AE. IT IS SHOWN ON FEMA FIRM MAP NUMBER 48491C0462F AND 48491C0470F, EFFECTIVE 12/20/2019.
5. THE DESIGN STORM EVENT IS THE 25 YEAR. THE 100 YEAR IS THE CHECK STORM.

STATE OF TEXAS

JOHN J. TIETZ

144928

PROFESSIONAL ENGINEER

Jackie Tietz

5/22/2025

CEDAR PARK

LJA

ENGINEERING, INC

FRN - F-1386

COTTONWOOD POND

HYDRAULIC CALCULATIONS

SHEET 4 OF 7

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		45

8718

8937

8517

8316

8195

7943

8086

8136

7942

7921

183A

7837

7742

7630

7624

7533

7318

183A

183B

183C

183D

183E

183F

183G

183H

183I

183J

183K

183L

183M

183N

183O

183P

183Q

183R

183S

183T

183U

183V

183W

183X

183Y

183Z

183AA

183AB

183AC

183AD

183AE

183AF

183AG

183AH

183AI

183AJ

183AK

183AL

183AM

183AN

183AO

183AP

183AQ

183AR

183AS

183AT

183AU

183AV

183AW

183AX

183AY

183AZ

183BA

183BB

183BC

183BD

183BE

183BF

183BG

183BH

183BI

183BJ

183BK

183BL

183BM

183BN

183BO

183BP

183BQ

183BR

183BS

183BT

183BU

183BV

183BW

183BX

183BY

183BZ

183CA

183CB

183CC

183CD

183CE

183CF

183CG

183CH

183CI

183CJ

183CK

183CL

183CM

183CN

183CO

183CP

183CQ

183CR

183CS

183CT

183CU

183CV

183CW

183CX

183CY

183CZ

183DA

183DB

183DC

183DD

183DE

183DF

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183DS

183DT

183DU

183DV

183DW

183DX

183DY

183DZ

183EA

183EB

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183EG

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183EJ

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183GY

183GZ

183HA

183HB

183HC

183HD

183HE

183HF

183HG

183HH

183HI

183HJ

183HK

183HL

183HM

183HN

183HO

183HP

183HQ

183HR

183HS

183HT

183HU

183HV

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183KS

183KT

183KU

183KV

183KW

183KX

183KY

183KZ

183LA

183LB

183LC

183LD

183LE

183LF

183LG

183LH

183LI

183LJ

183LK

183LL

183LM

183LN

183LO

183LP

183LQ

183LR

183LS

183LT

183LU

183LV

183LW

183LX

183LY

183LZ

183MA

183MB

183MC

183MD

183ME

183MF

183MG

183MH

183MI

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183NA

183NB

183NC

183ND

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183NI

183NJ

183NK

183NL

183NM

183NN

183NO

183NP

183NQ

183NR

183NS

183NT

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 CEDAR PARK

**LJA** ENGINEERING, INC  
FRN - F-1386

# COTTONWOOD POND HYDRAULIC CALCULATIONS HEC-RAS ANALYSIS

SHEET 5 OF 7

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		46

Plan: LJA*PROP Cottonwood Creek Reach1 RS: 8136		Profile: 25yr*Prop		
E.G. US. (ft)	929.41	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	925.13	E.G. Elev (ft)	929.23	929.17
Q Total (cfs)	1169.3	W.S. Elev (ft)	925.19	924.92
Q Bridge (cfs)	1169.3	Crit W.S. (ft)	926.44	926.18
Q Weir (cfs)		Max Chl Dpth (ft)	2.1	2.11
Weir Sta Lft (ft)		Vel Total (ft/s)	16.13	16.54
Weir Sta Rgt (ft)		Flow Area (sq ft)	72.48	70.7
Weir Submerg		Froude # Chl	2.07	2.09
Weir Max Depth (ft)		Specif Force (cu ft)	658.63	672.8
Min El Weir Flow (ft)	928	Hydr Depth (ft)	1.89	1.95
Min El Prs (ft)	927.9	W.P. Total (ft)	39.61	37.93
Delta EG (ft)	0.33	Conv. Total (cfs)	16109.8	15910.8
Delta WS (ft)	0.19	Top Width (ft)	38.29	36.29
BR Open Area (sq ft)	191.06	Frctn Loss (ft)	0.04	0.06
BR Open Vel (ft/s)	16.54	C & E Loss (ft)	0.02	0.04
BR Sluice Coef		Shear Total (lb/sq ft)	0.6	0.63
BR Sel Method	Energy only	Power Total (lb/ft s)	9.71	10.39

Plan: LJA*PROP Cottonwood Creek Reach1 RS: 8136		Profile: 100yr*Prop		
E.G. US. (ft)	930.53	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	925.51	E.G. Elev (ft)	930.36	930.3
Q Total (cfs)	1530.6	W.S. Elev (ft)	925.56	925.32
Q Bridge (cfs)	1530.6	Crit W.S. (ft)	927.06	926.81
Q Weir (cfs)		Max Chl Dpth (ft)	2.47	2.51
Weir Sta Lft (ft)		Vel Total (ft/s)	17.57	17.9
Weir Sta Rgt (ft)		Flow Area (sq ft)	87.11	85.5
Weir Submerg		Froude # Chl	2.08	2.08
Weir Max Depth (ft)		Specif Force (cu ft)	938.23	954.8
Min El Weir Flow (ft)	928	Hydr Depth (ft)	2.21	2.3
Min El Prs (ft)	927.9	W.P. Total (ft)	40.95	39.11
Delta EG (ft)	0.32	Conv. Total (cfs)	21409.5	21401.4
Delta WS (ft)	0.17	Top Width (ft)	39.37	37.15
BR Open Area (sq ft)	191.06	Frctn Loss (ft)	0.04	0.05
BR Open Vel (ft/s)	17.9	C & E Loss (ft)	0.02	0.03
BR Sluice Coef		Shear Total (lb/sq ft)	0.68	0.7
BR Sel Method	Energy only	Power Total (lb/ft s)	11.93	12.5

- NOTES:
- HEC-RAS 6.3.1 WAS USED FOR THE HYDRAULIC ANALYSIS OF THE PEDESTRIAN BRIDGE.
  - DRAINAGE AREA DELINATIONS BASED ON 2021 CENTRAL TEXAS LIDAR.
  - DISCHARGES DETERMINED USING NRCS UNIT HYDROGRAPH METHOD, AND ATLAS 14 RAINFALL DATA.
  - THIS PEDESTRIAN BRIDGE IS LOCATED IN A FEMA ZONE AE. IT IS SHOWN ON FEMA FIRM MAP NUMBER 48491C0462F AND 48491C0470F, EFFECTIVE 12/20/2019.
  - THE DESIGN STORM EVENT IS THE 25 YEAR. THE 100 YEAR IS THE CHECK STORM.



5/22/2025



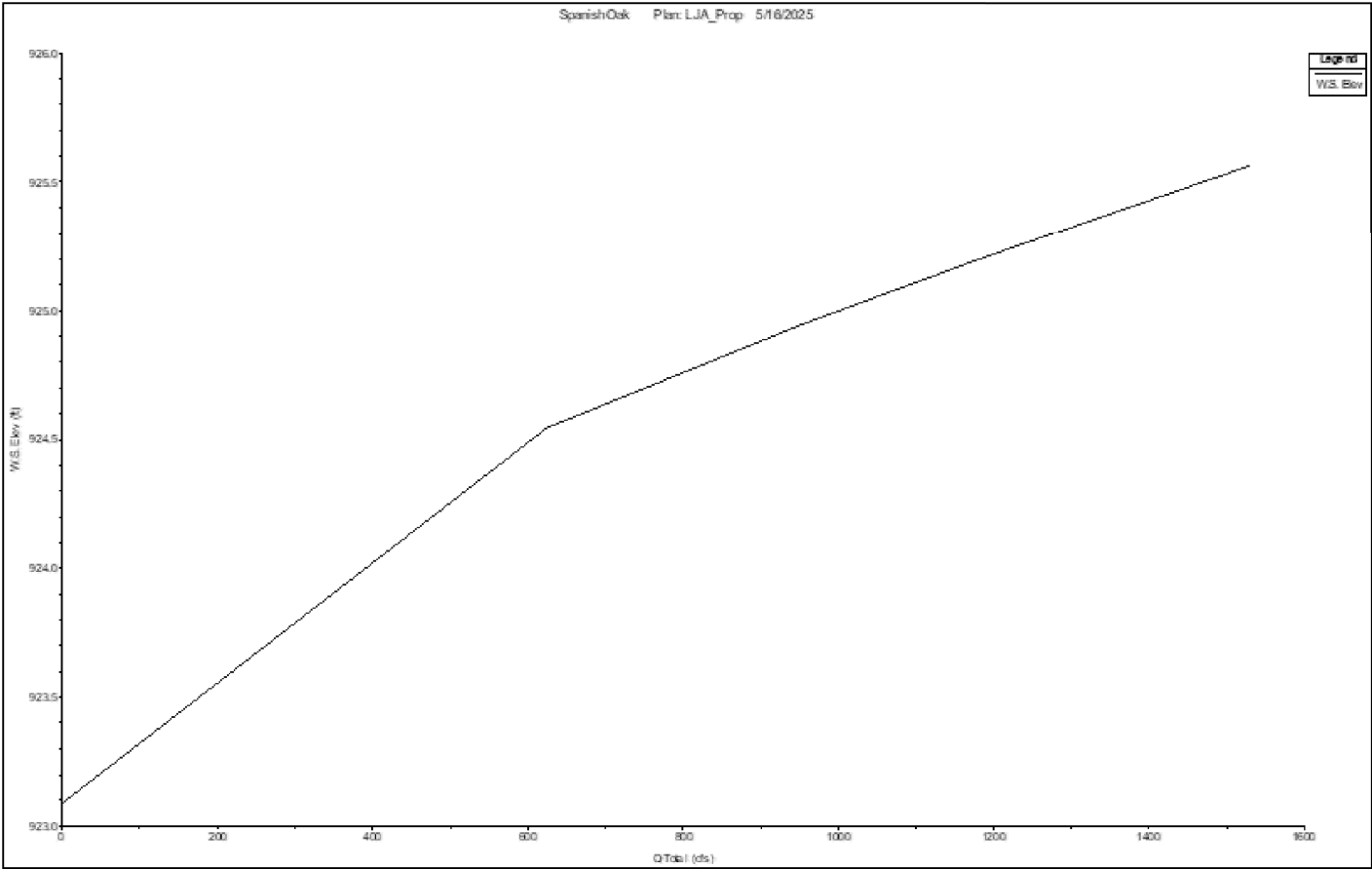
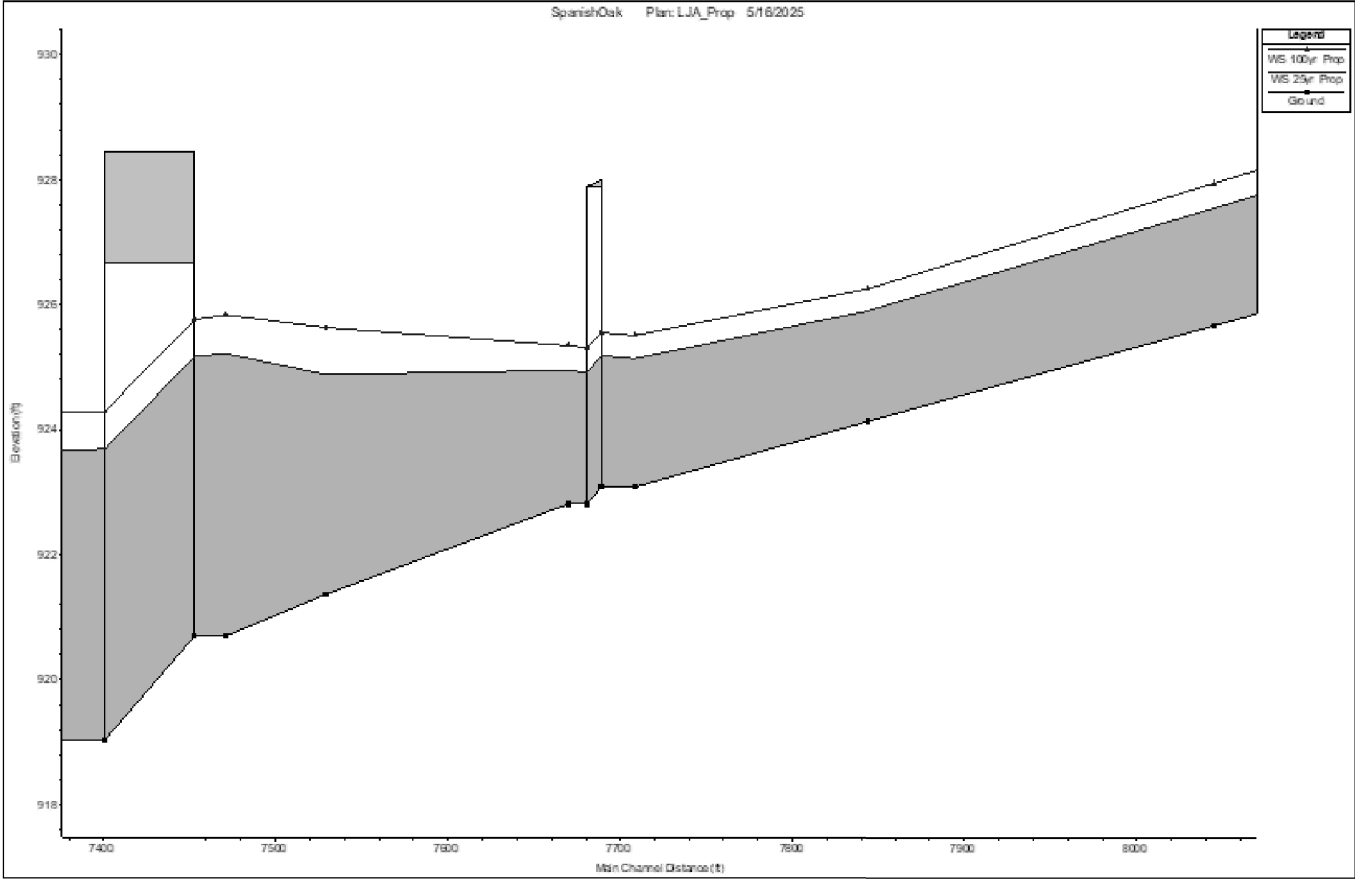
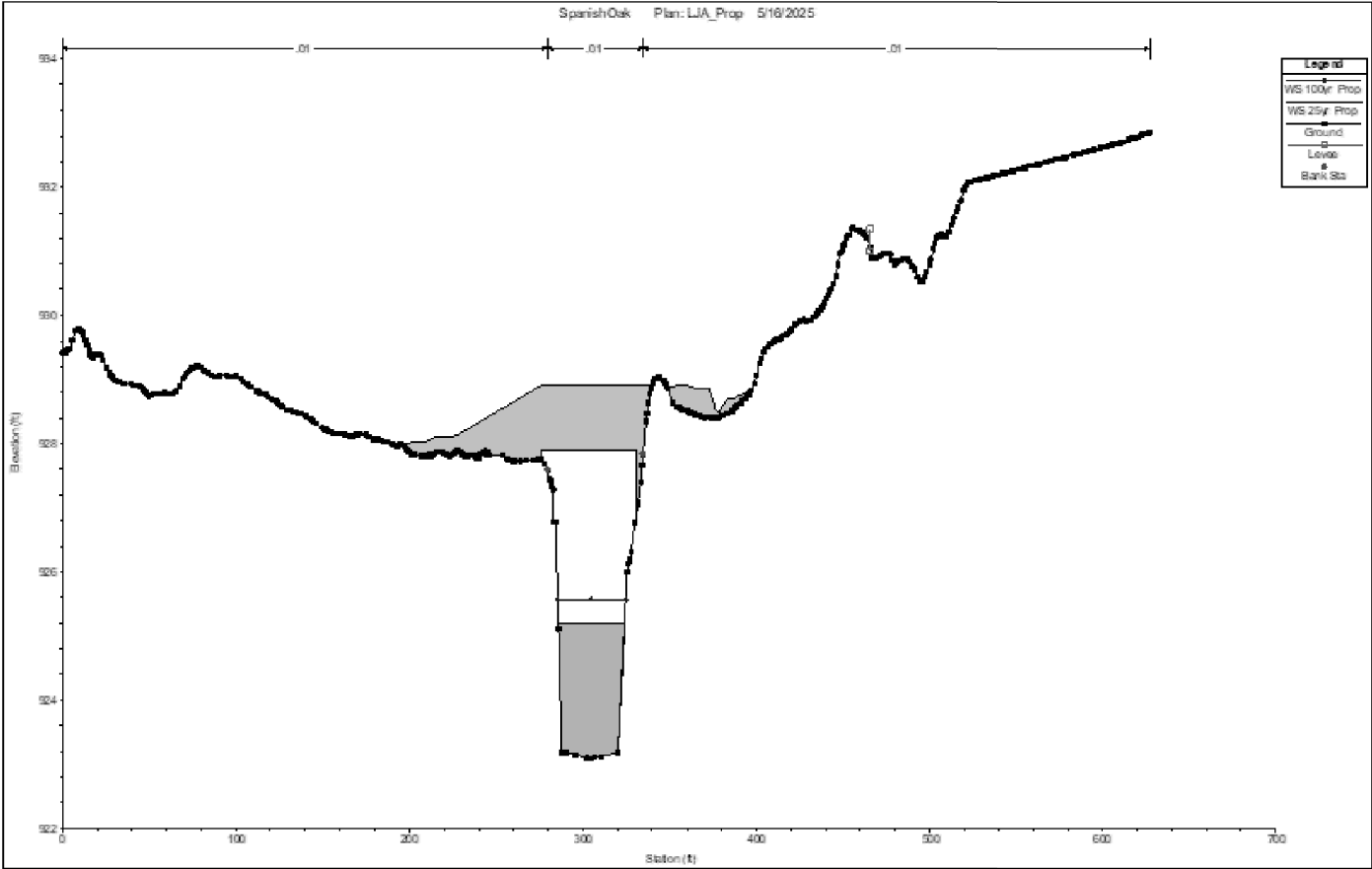


FRN - F-1386

COTTONWOOD POND  
HYDRAULIC CALCULATIONS

SHEET 6 OF 7

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		47



- NOTES:
1. HEC-RAS 6.3.1 WAS USED FOR THE HYDRAULIC ANALYSIS OF THE PEDESTRIAN BRIDGE.
  2. DRAINAGE AREA DELINATIONS BASED ON 2021 CENTRAL TEXAS LIDAR.
  3. DISCHARGES DETERMINED USING NRCS UNIT HYDROGRAPH METHOD, AND ATLAS 14 RAINFALL DATA.
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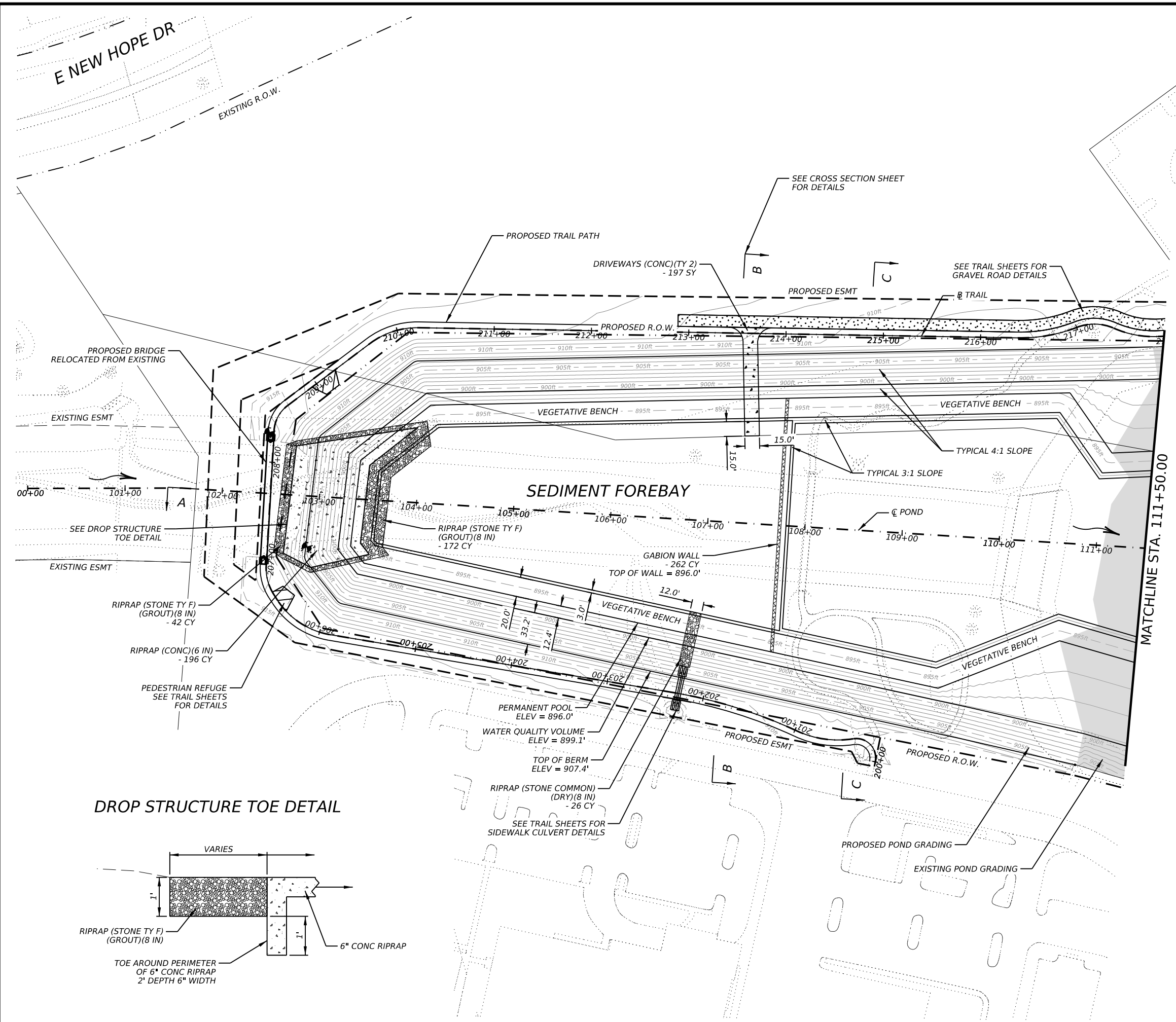
5/22/2025

COTTONWOOD POND  
HYDRAULIC CALCULATIONS

SHEET 7 OF 7

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY	SHEET NO.	
AUS	WILLIAMSON	48	





E NEW HOPE DR  
EXISTING R.O.W.

PROPOSED TRAIL PATH

DRIVEWAYS (CONC)(TY 2)  
- 197 SY

SEE CROSS SECTION SHEET  
FOR DETAILS

SEE TRAIL SHEETS FOR  
GRAVEL ROAD DETAILS

PROPOSED BRIDGE  
RELOCATED FROM EXISTING

EXISTING ESMT

SEE DROP STRUCTURE  
TOE DETAIL

EXISTING ESMT

RIPRAP (STONE TY F)  
(GROUT)(8 IN)  
- 42 CY

RIPRAP (CONC)(6 IN)  
- 196 CY

PEDESTRIAN REFUGE  
SEE TRAIL SHEETS  
FOR DETAILS

SEDIMENT FOREBAY

RIPRAP (STONE TY F)  
(GROUT)(8 IN)  
- 172 CY

GABION WALL  
- 262 CY  
TOP OF WALL = 896.0'

VEGETATIVE BENCH

PERMANENT POOL  
ELEV = 896.0'

WATER QUALITY VOLUME  
ELEV = 899.1'

TOP OF BERM  
ELEV = 907.4'

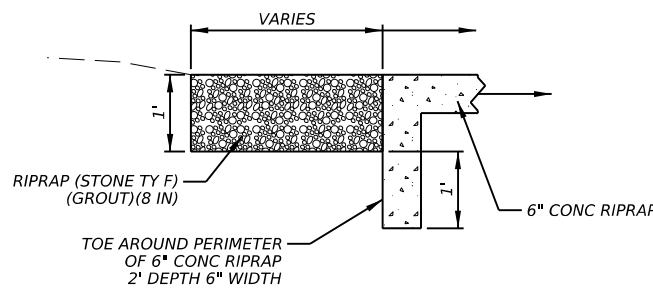
RIPRAP (STONE COMMON)  
(DRY)(8 IN)  
- 26 CY

SEE TRAIL SHEETS FOR  
SIDEWALK CULVERT DETAILS

PROPOSED POND GRADING

EXISTING POND GRADING

DROP STRUCTURE TOE DETAIL

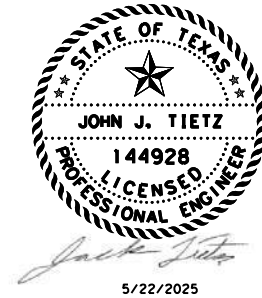
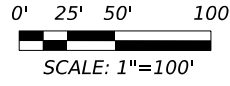


LEGEND:

- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY
- PROPOSED CONC (RIPRAP & DRIVEWAYS)
- PROPOSED STONE RIPRAP (MORTARED)
- EXISTING POND GRADING
- DRAINAGE FLOW LINE

NOTES:

- PROPOSED COCP EASEMENT INCLUDES TRAIL, MAINTENANCE, ACCESS, AND UTILITY EASEMENT.

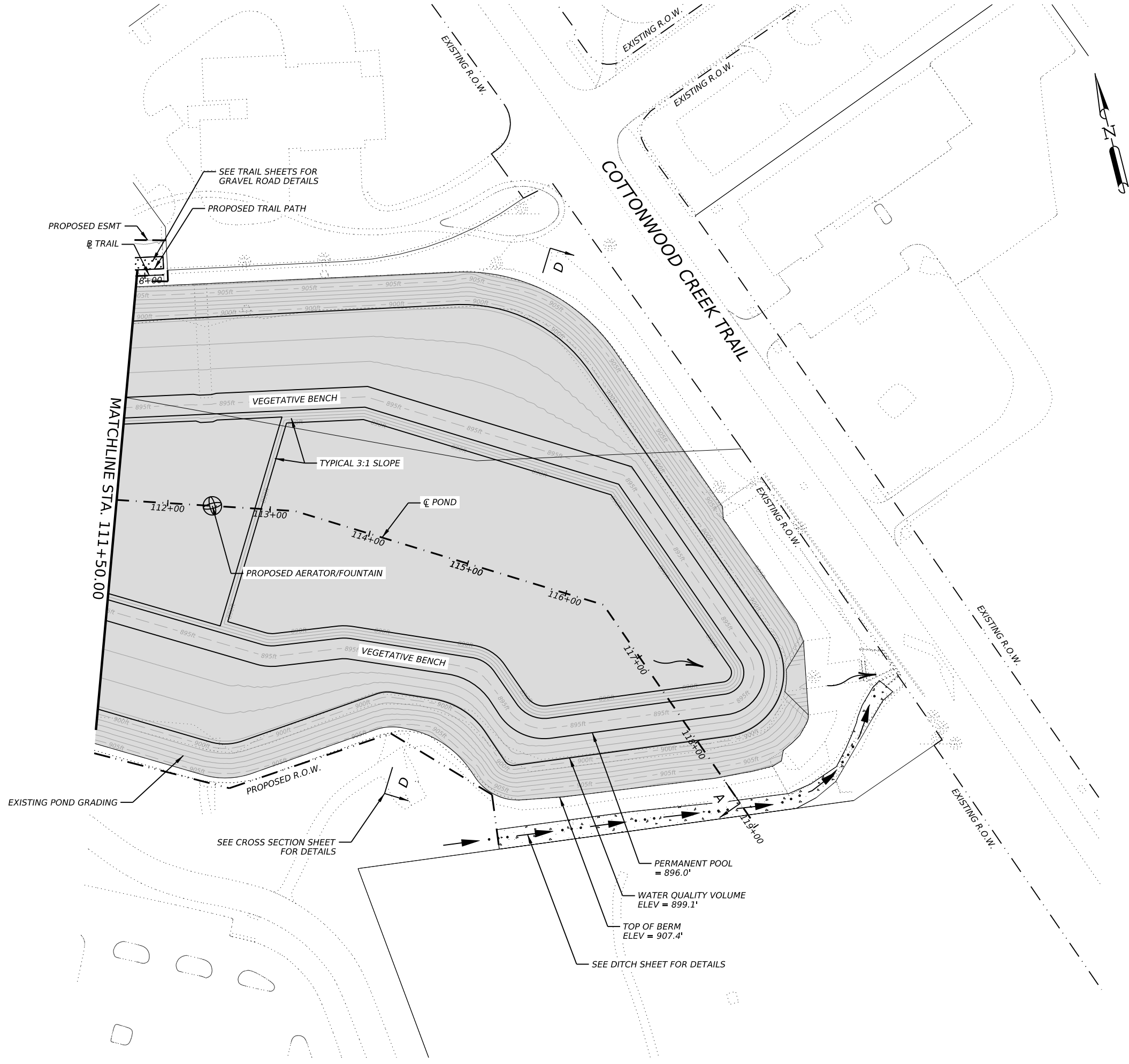


COTTONWOOD POND  
PLAN SHEET

BEGIN TO STA 111+50

SHEET 1 OF 2			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		49



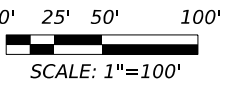


**LEGEND:**

- EXISTING R.O.W.
- - - PROPOSED R.O.W.
- - - EXISTING DRAINAGE EASEMENT
- - - PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY
- [Pattern] PROPOSED CONC (RIPRAP & DRIVEWAYS)
- [Pattern] PROPOSED STONE RIPRAP (MORTARED)
- [Shaded] EXISTING POND GRADING
- > DRAINAGE FLOW LINE

**NOTES:**

1. PROPOSED COCP EASEMENT INCLUDES TRAIL, MAINTENANCE, ACCESS, AND UTILITY EASEMENT.



STATE OF TEXAS  
JOHN J. TIETZ  
144928  
LICENSED PROFESSIONAL ENGINEER  
5/22/2025

CEDAR PARK

**LJA** ENGINEERING, INC  
FRN - F-1386

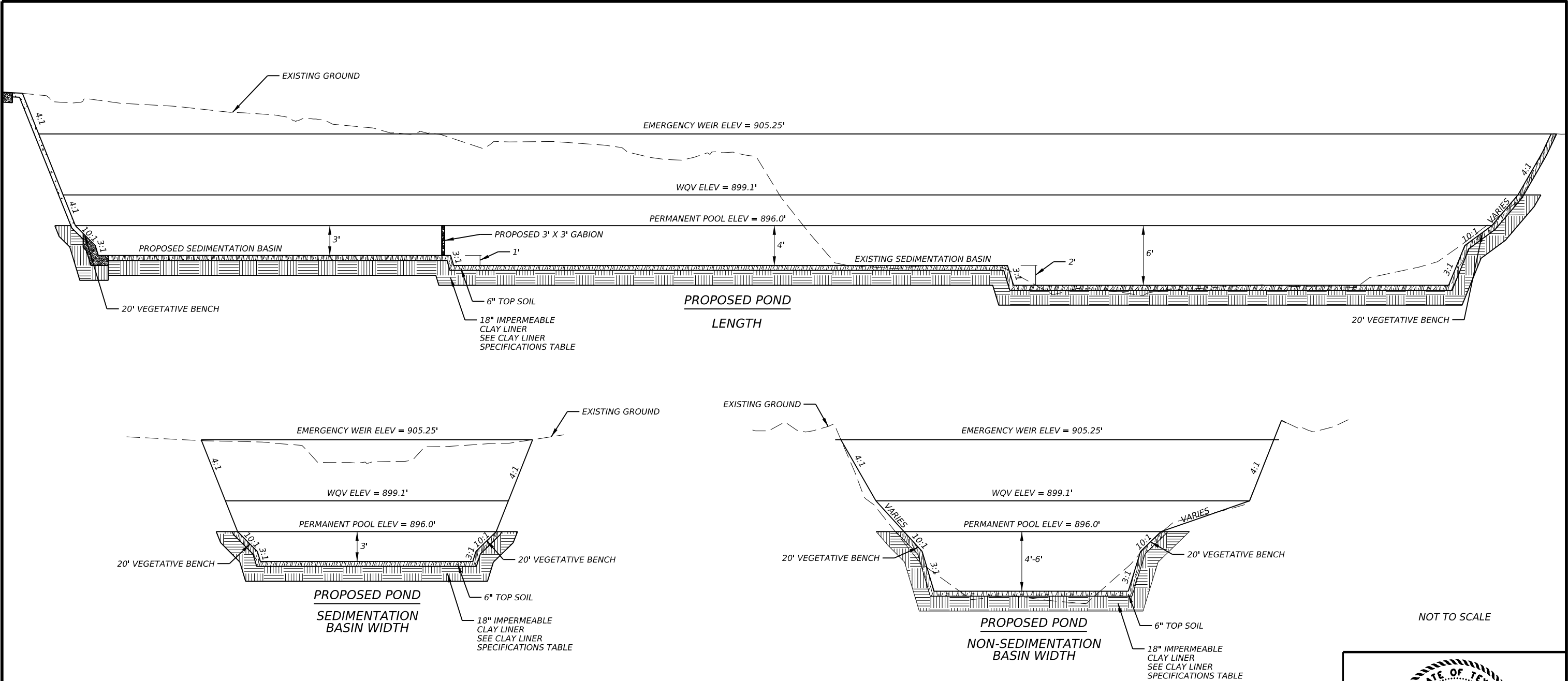
**COTTONWOOD POND  
PLAN SHEET**

STA 111+50 TO END

SHEET 2 OF 2			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		50

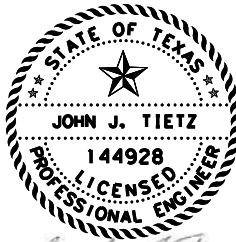
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NOT TO SCALE

Clay Liner Specifications			
Property	Test Method	Unit	Specification
Permeability	ASTM D-2434	cm/sec	1 x 10 <sup>-6</sup>
Plasticity Index of Clay	ASTM D-423 & D-424	%	Not less than 15
Liquid Limit of Clay	ASTM D-2216	%	Not less than 30
Clay Particles Passing	ASTM D-422	%	Not less than 30
Clay Compaction	ASTM D-2216	%	95% of Standard Proctor Density



*John J. Tietz*  
5/22/2025

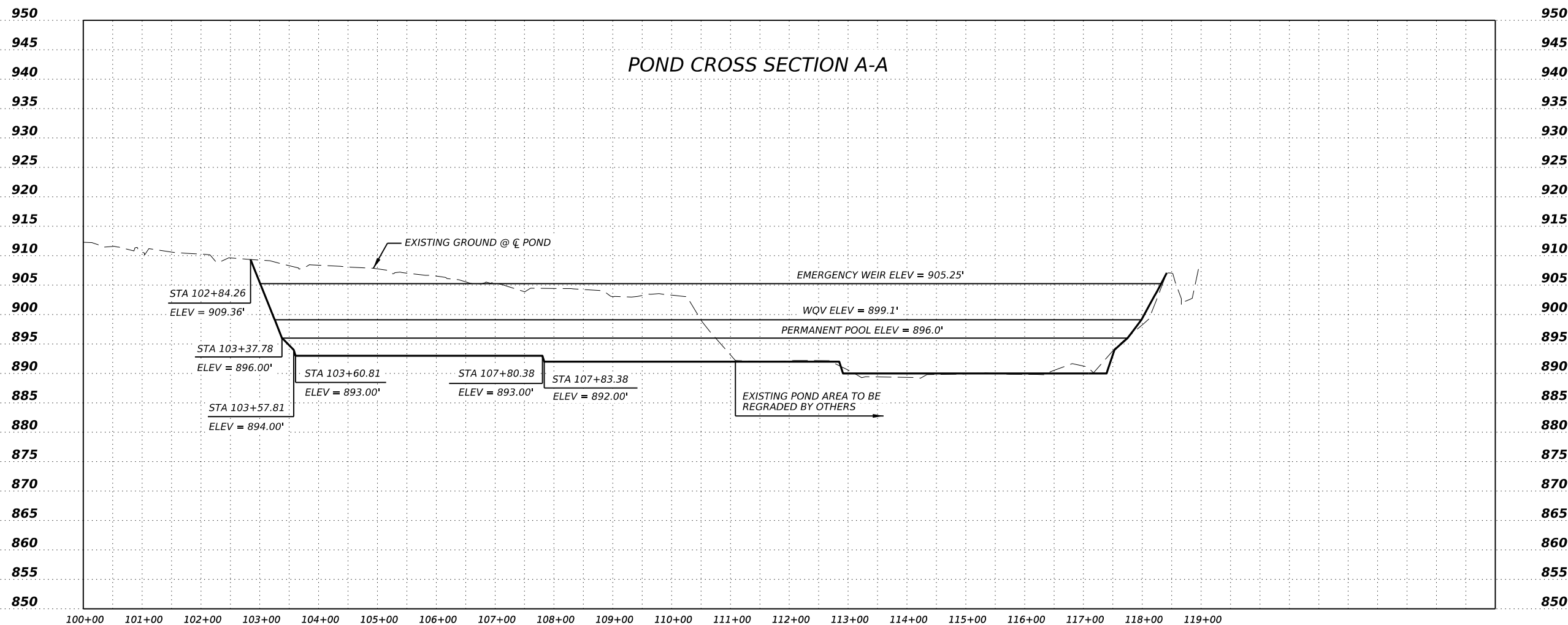
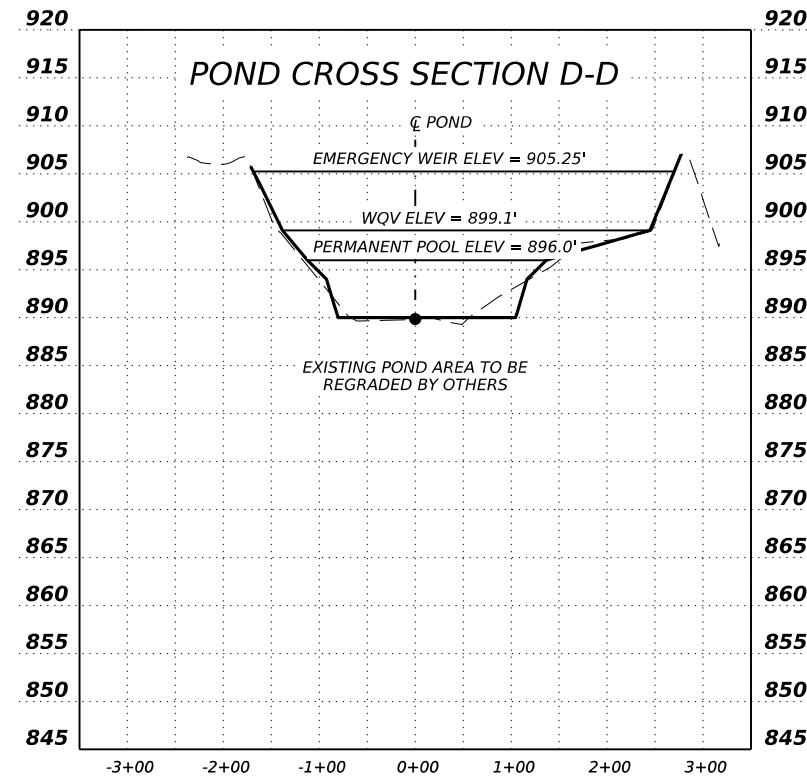
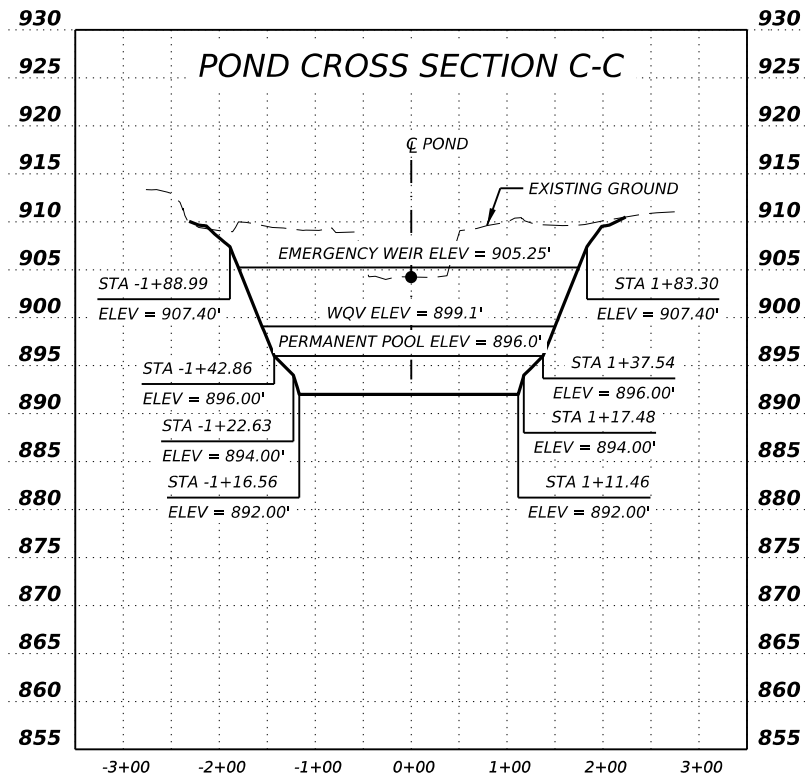
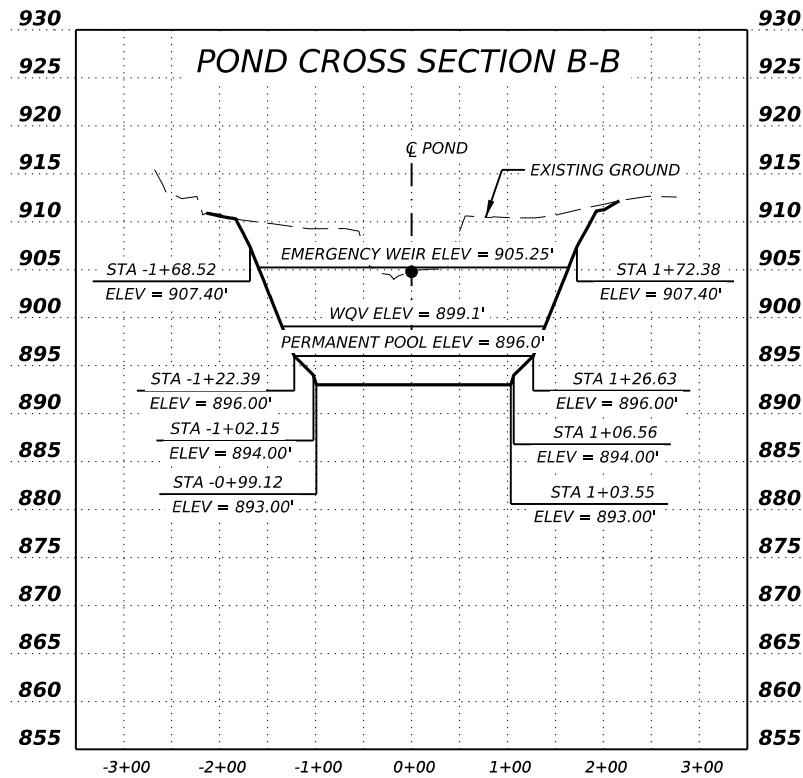


COTTONWOOD POND  
POND TYPICALS

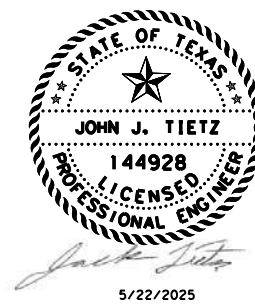
SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		51

100% SUBMITTAL

DATE: 5/22/2025 10:27:09 AM  
FILE: ...15\_Drainage\CWP Pond\_XSEC.dgn



0' 50' 100' 200'  
SCALE: 1"=200'- HORZ  
1"=20'- VERT



**LJA ENGINEERING, INC**  
FRN - F-1386

**COTTONWOOD POND  
POND CROSS SECTIONS**

SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		52

3.5.11 Wet Basins

A clear requirement for wet basins is that a firm commitment be made to carry out both routine and non-routine maintenance tasks. The nature of the maintenance requirements are outlined below, along with design tips that can help to reduce the maintenance burden (modified from Young et al., 1996).

Routine Maintenance.

- *Mowing.* The side-slopes, embankment, and emergency spillway of the basin should be mowed at least twice a year to prevent woody growth and control weeds.
- *Inspections.* Wet basins should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the basin is functioning properly. There are many functions and characteristics of these BMPs that should be inspected. The embankment should be checked for subsidence, erosion, leakage, cracking, and tree growth. The condition of the emergency spillway should be checked. The inlet, barrel, and outlet should be inspected for clogging. The adequacy of upstream and downstream channel erosion protection measures should be checked. Stability of the side slopes should be checked. Modifications to the basin structure and contributing watershed should be evaluated. During semi-annual inspections, replace any dead or displaced vegetation. Replanting of various species of wetland vegetation may be required at first, until a viable mix of species is established. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage. The inspections should be carried out with as-built pond plans in hand.
- *Debris and Litter Removal.* As part of periodic mowing operations and inspections, debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the riser, and the outlet should be checked for possible clogging.
- *Erosion Control.* The basin side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion. Corrective measures such as regrading and revegetation may be necessary. Similarly, the riprap protecting the channel near the outlet may need to be repaired or replaced.

- *Nuisance Control.* Most public agencies surveyed indicate that control of insects, weeds, odors, and algae may be needed in some ponds. Nuisance control is probably the most frequent maintenance item demanded by local residents. If the ponds are properly sized and vegetated, these problems should be rare in wet ponds except under extremely dry weather conditions. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.). Biological control of algae and mosquitoes using fish such as fathead minnows is preferable to chemical applications.

Non-routine maintenance.

- *Structural Repairs and Replacement.* Eventually, the various inlet/outlet and riser works in the wet basin will deteriorate and must be replaced. Some public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yr, while concrete barrels and risers may last from 50 to 75 yr. The actual life depends on the type of soil, pH of runoff, and other factors. Polyvinyl chloride (PVC) pipe is a corrosion resistant alternative to metal and concrete pipes. Local experience typically determines which materials are best suited to the site conditions. Leakage or seepage of water through the embankment can be avoided if the embankment has been constructed of impermeable material, has been compacted, and if anti-seep collars are used around the barrel. Correction of any of these design flaws is difficult.
- *Sediment Removal.* Wet ponds will eventually accumulate enough sediment to significantly reduce storage capacity of the permanent pool. As might be expected, the accumulated sediment can reduce both the appearance and pollutant removal performance of the pond. Sediment accumulated in the sediment forebay area should be removed from the facility every two years to prevent accumulation in the permanent pool. Dredging of the permanent pool should occur at least every 20 years, or when accumulation of sediment impairs functioning of the outlet structure.
- *Harvesting.* If vegetation is present on the fringes or in the pond, it can be periodically harvested and the clippings removed to provide export of nutrients and to prevent the basin from filling with decaying organic matter.



5/22/2025



CEDAR PARK



**LJA ENGINEERING, INC**  
FRN - F-1386

COTTONWOOD POND  
POND NOTES

SHEET 1 OF 2

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY	SHEET NO.	
AUS	WILLIAMSON	53	

Wetland Plant List

Install Bulrush in clumps, with individual plants spaced approximately three to four feet on center. At least two of the following species should be used:

BULRUSH	WATER DEPTH	NOTES
Scirpus validus, Bulrush	1’ — 3’	8’ tall evergreen, resists cattail encroachment
Scirpus californicus, Bulrush	1’ — 3’	8’ tall evergreen, resists cattail encroachment
Scirpus americanus, Three-square bulrush	2” — 6”	2’ to 4’ tall, w/ 3 distinct edges

At least two species of the following marsh plants should be used (additional species are encouraged). Install in clumps in shallow water, with individual plants spaced at approximately three feet on center:

MARSH DIVERSITY	WATER DEPTH	NOTES
1. Cyperus ochraeus, Flatsedge	2”—6”	1’ to 2’ tall, clump-forming, common to central Texas
2. Dichromena colorata, White-topped Sedge	2” —6”	1’ to 2’ tall, white bracts during warm season
3. Echinodorus rostratus, Burhead	3’ - 1’	1’ to 2’ tall, annual, heart-shaped leaves, flower similar to arrowhead
4. Eleocharis quadrangulata, Four-square Spikerush	6” — 1’	1’ to 2’ tall, colonizes, inhabits deeper water than other Spikerushes
5. Iris Pseudacorus, Yellow Flag Iris	1’ — 2’	3’ to 4’ tall. can be invasive, dense growth, yellow flowers
6. Juncus effusus, Soft Rush	6” — 1’	3’ to 4’ tall, forms a tight clump, evergreen, very attractive
7. Justicia americana, Water willow	2” — 6”	2’ to 3’ tall, common, white flowers, herbaceous, colonizes
8. Marsilea macropoda, Water Clover	2” — 6”	Looks like floating four-leaf clover, endemic to Texas
9. Najas guadalupensis, Water-Naiad	1’ —4’	Submergent, valuable to fish and wildlife
10. Pontederia cordata, Pickerelweed	2” — 1’	3’ tall, colonizes, cosmopolitan, purple flowers
11. Rhynchospora corniculata, Horned-rush	2” — 6”	2’ to 3’ tall, brass-colored flowers in May

Install spikerush at or near the water’s edge, with individual plants spaced approximately three to six feet on center. At least two of the following species should be used:

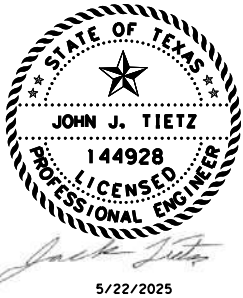
SPIKERUSH	WATER DEPTH	NOTES
Eleocharis montevidensis, Spikerush	0” — 6”	1’ tall, rhizomatous, reduces erosion at the pond edge
Eleocharis macrostachys, Spikerush	0” — 6”	1’ tall, rhizomatous, reduces erosion at the pond edge
Eleocharis quadrangulata, Spikerush	3” — 1’	2’ to 2.5’ tall, rhizomatous, can accommodate deeper water, 4-angled

Install Arrowhead in clumps in shallow water, with individual plants spaced approximately three feet on center.

ARROWHEAD	WATER DEPTH	NOTES
Sagittaria latifolia, Arrowhead	2” — 1’	2’ height, wildlife value, white flowers, proven water quality performer

Floating-leafed aquatic plants are rooted in the sediment of the pond, and have leaves that float on the surface of the water. These leaves shade the water, which limits potential algae growth. At least two of the following species should be used and should be placed at random locations throughout the pond:

AQUATICS	WATER DEPTH	NOTES
1. Cabomba caroliniana, Fanwort	1’ — 4’	Approximately 6’ length underwater, submergent
2. Ceratophyllum spp., Coon-tail	1’ —4’	Maximum 8’ length, tolerant of turbidity and water fluctuation, wildlife food
3. Nymphaea odorata, Fanwort	6” —2’	A native, reliably hardy, floating- leaved aquatic, with white flowers
4. Potomageton pectinatus, Sago Pondweed	8” — 3’	Colonizes quickly, valuable to fish and wildlife; floating-leaved aquatic



COTTONWOOD POND  
POND NOTES

SHEET 2 OF 2			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		54

CEDAR PARK  
FIRE STATION #5

EXISTING ELECTRICAL  
SERVICE ENCLOSURE  
TAG: 449088

PROPOSED XFMR

PROPOSED PEC METER  
FOUNDATION

PROPOSED GROUND BOX TY D

PROPOSED POND FOUNTAIN

☉ POND

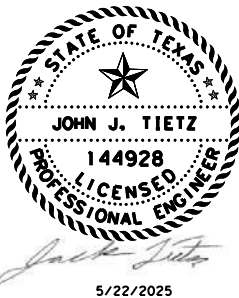
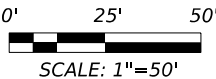
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		TRENCH 2"
1	10	10
2	10	10
3	366	366
4	223	223
TOTAL		609

LEGEND:

- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY
- CONDUIT (TRENCH)
- GROUND BOX, TY D
- CONDUIT RUN NO.

NOTES:

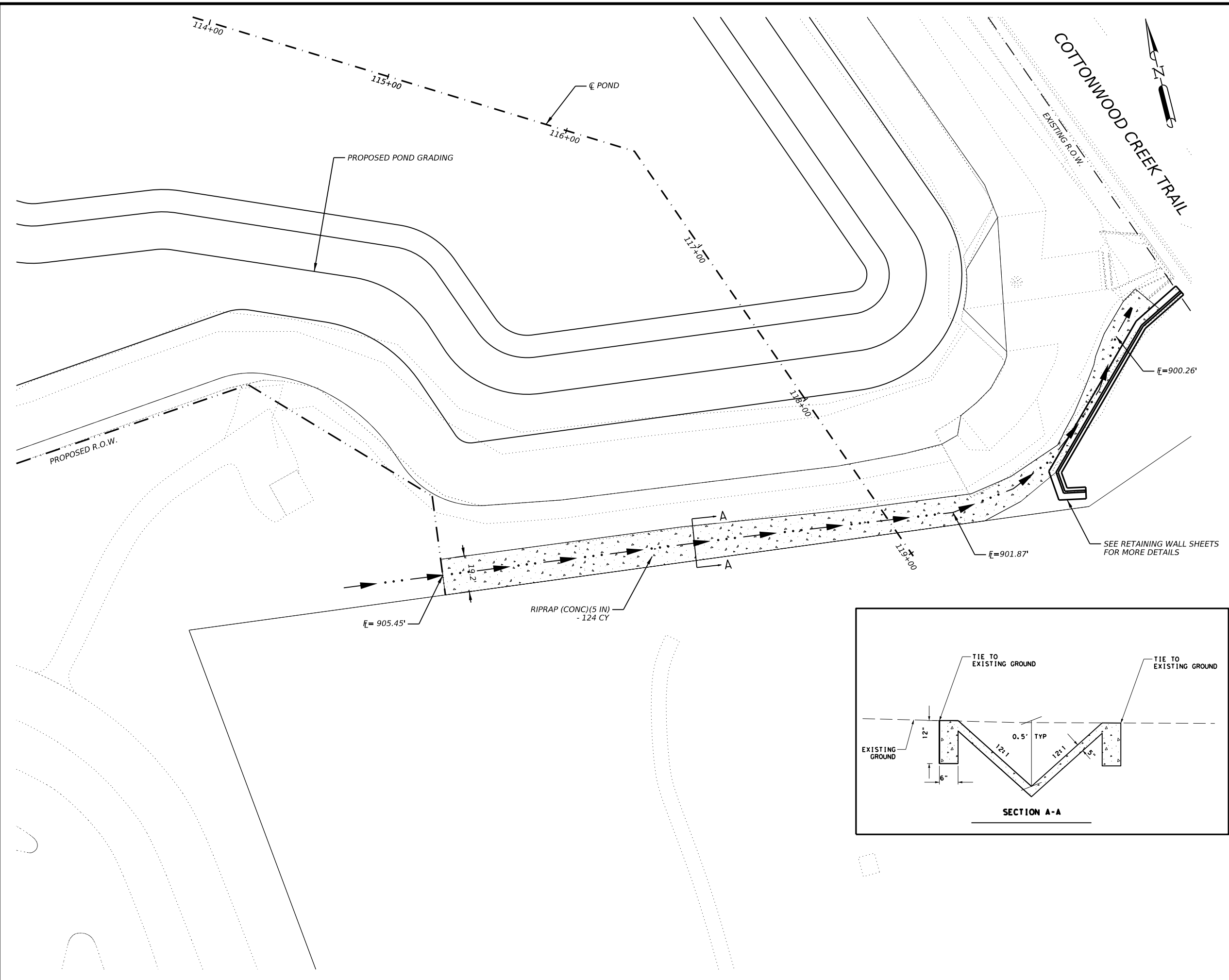
1. UTILITIES SHOWN IN PLANS ARE IN APPROXIMATE LOCATIONS. CONTRACTOR TO VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.



COTTONWOOD POND  
ELECTRIC SERVICE  
PLAN

SHEET 1 OF 1

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		55

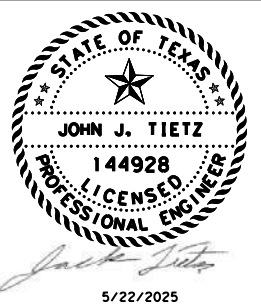
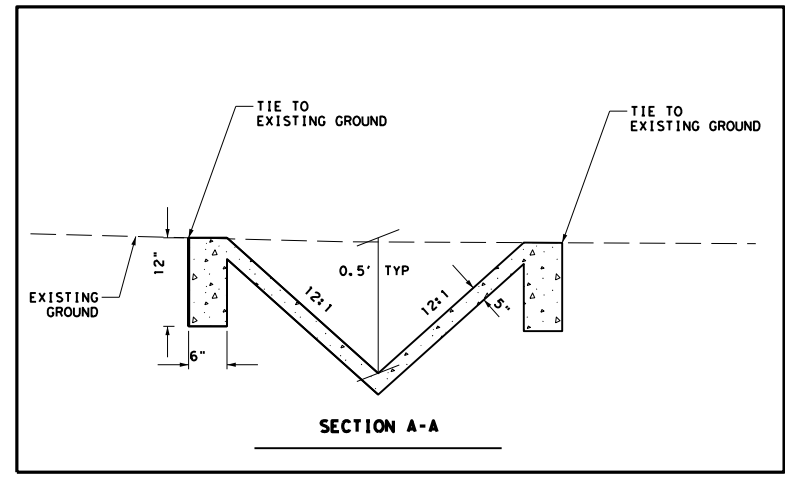
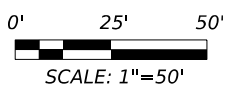


LEGEND:

- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY
- PROPOSED CONC (RIPRAP & DRIVEWAYS)
- PROPOSED STONE RIPRAP (MORTARED)
- EXISTING POND GRADING
- DRAINAGE FLOW LINE

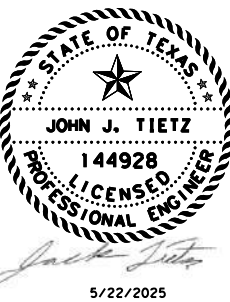
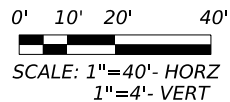
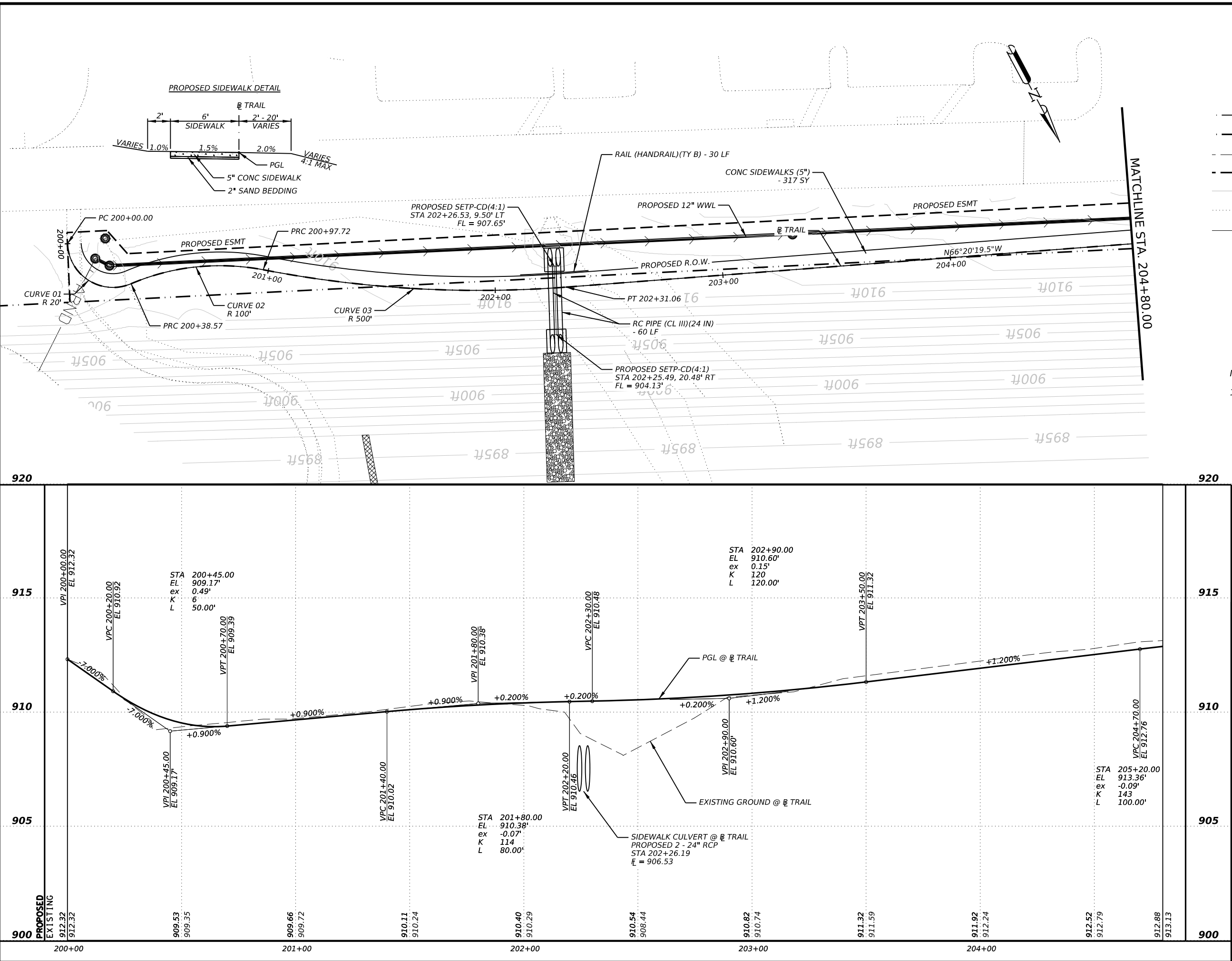
NOTES:

1. THE LOCATIONS AND ELEVATIONS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED.
2. DRAINAGE FOR THIS DEVELOPMENT TO MATCH EXISTING FLOWLINES AND SIDE SLOPES.



COTTONWOOD POND  
DITCH DETAILS

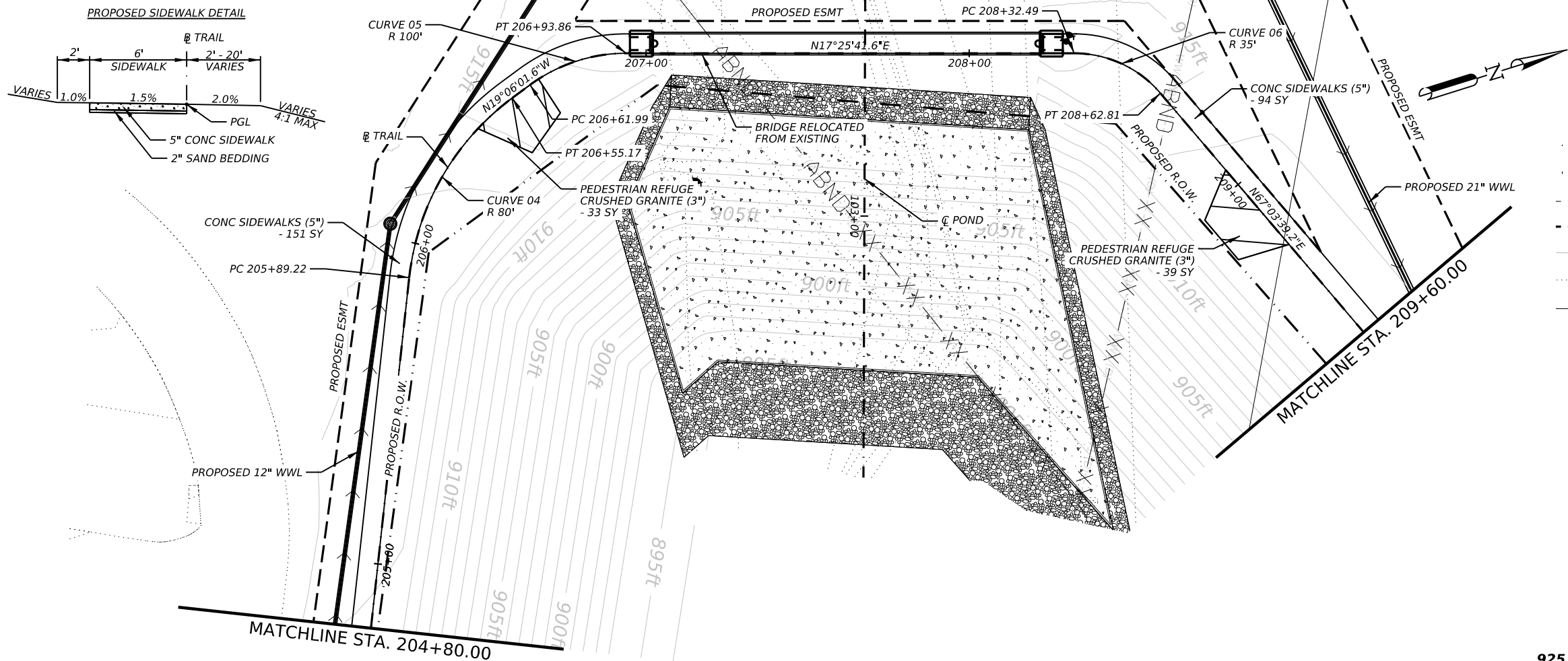
SHEET 1 OF 1			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		56



COTTONWOOD POND  
TRAIL PLAN & PROFILE  
SHEETS  
BEGIN TO STA 204+80

SHEET 1 OF 4			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		57

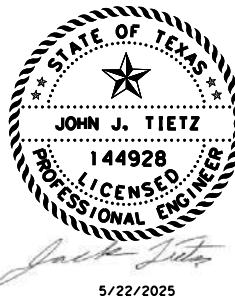
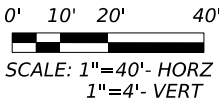




LEGEND:

- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY

- NOTES:
- SAND BEDDING SHALL BE SUBSIDIARY TO ITEM 531-7002 "CONC SIDEWALKS".



COTTONWOOD POND  
TRAIL PLAN & PROFILE  
SHEETS

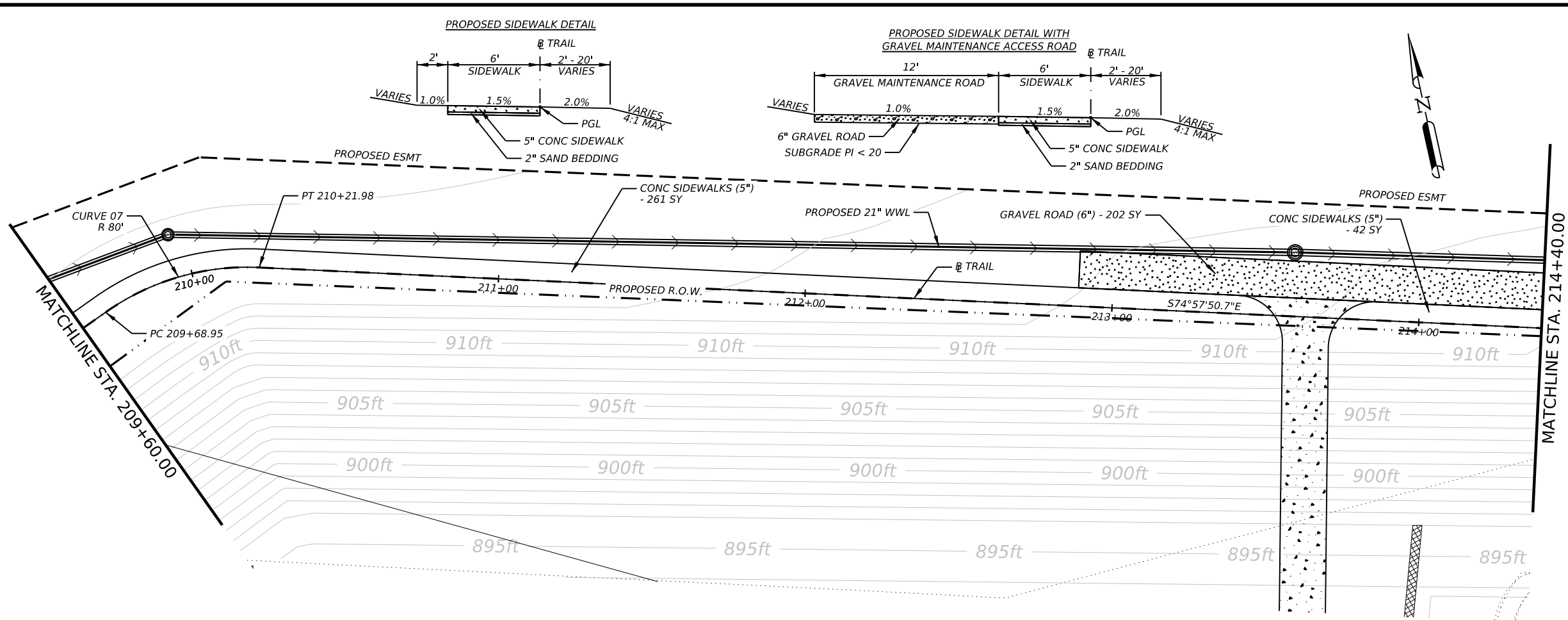
STA 204+80 TO STA 209+60

SHEET 2 OF 4

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY	SHEET NO.	
AUS	WILLIAMSON	58	

100% SUBMITTAL

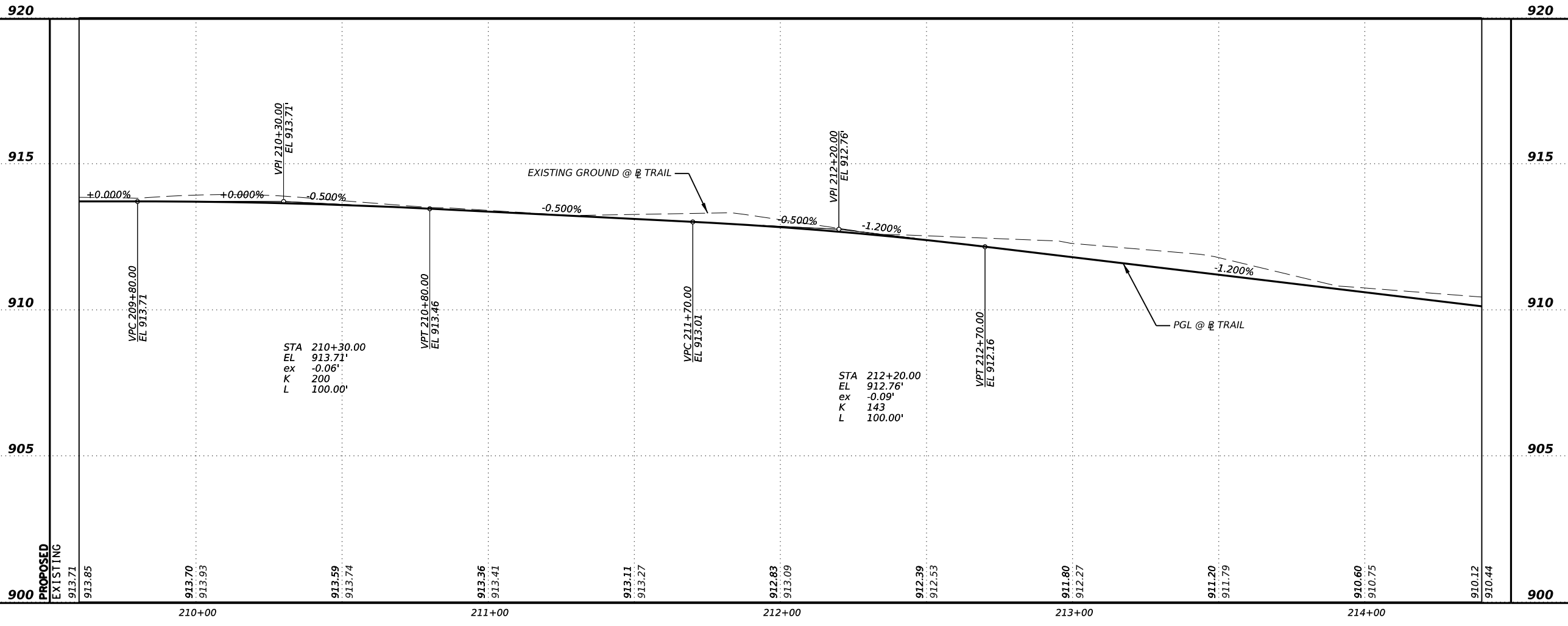
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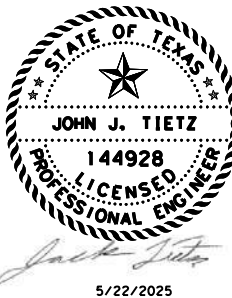
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- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY

- NOTES:
- SAND BEDDING SHALL BE SUBSIDIARY TO ITEM 531-7002 "CONC SIDEWALKS".



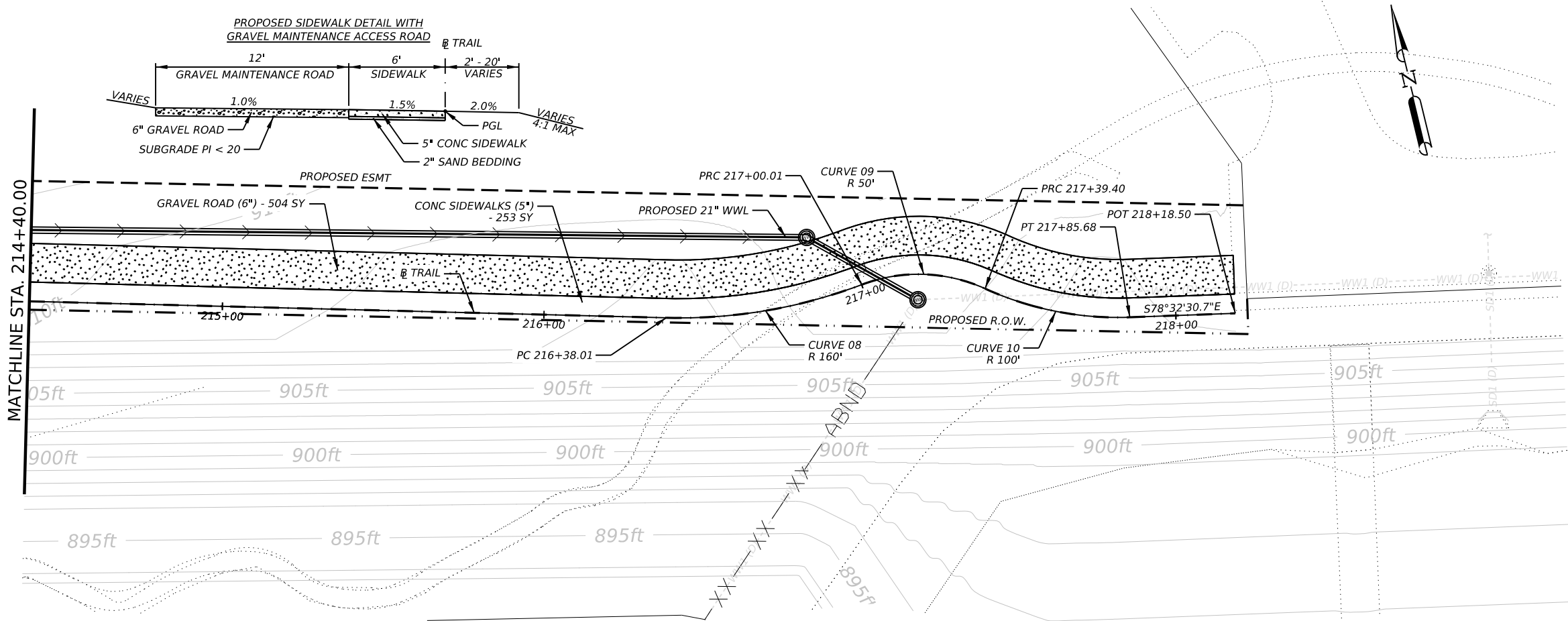
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1"=4'- VERT



COTTONWOOD POND  
TRAIL PLAN & PROFILE  
SHEETS

STA 209+60 TO STA 214+40

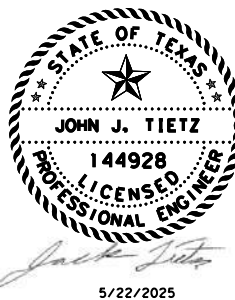
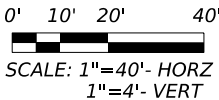
SHEET 3 OF 4			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		59



LEGEND:

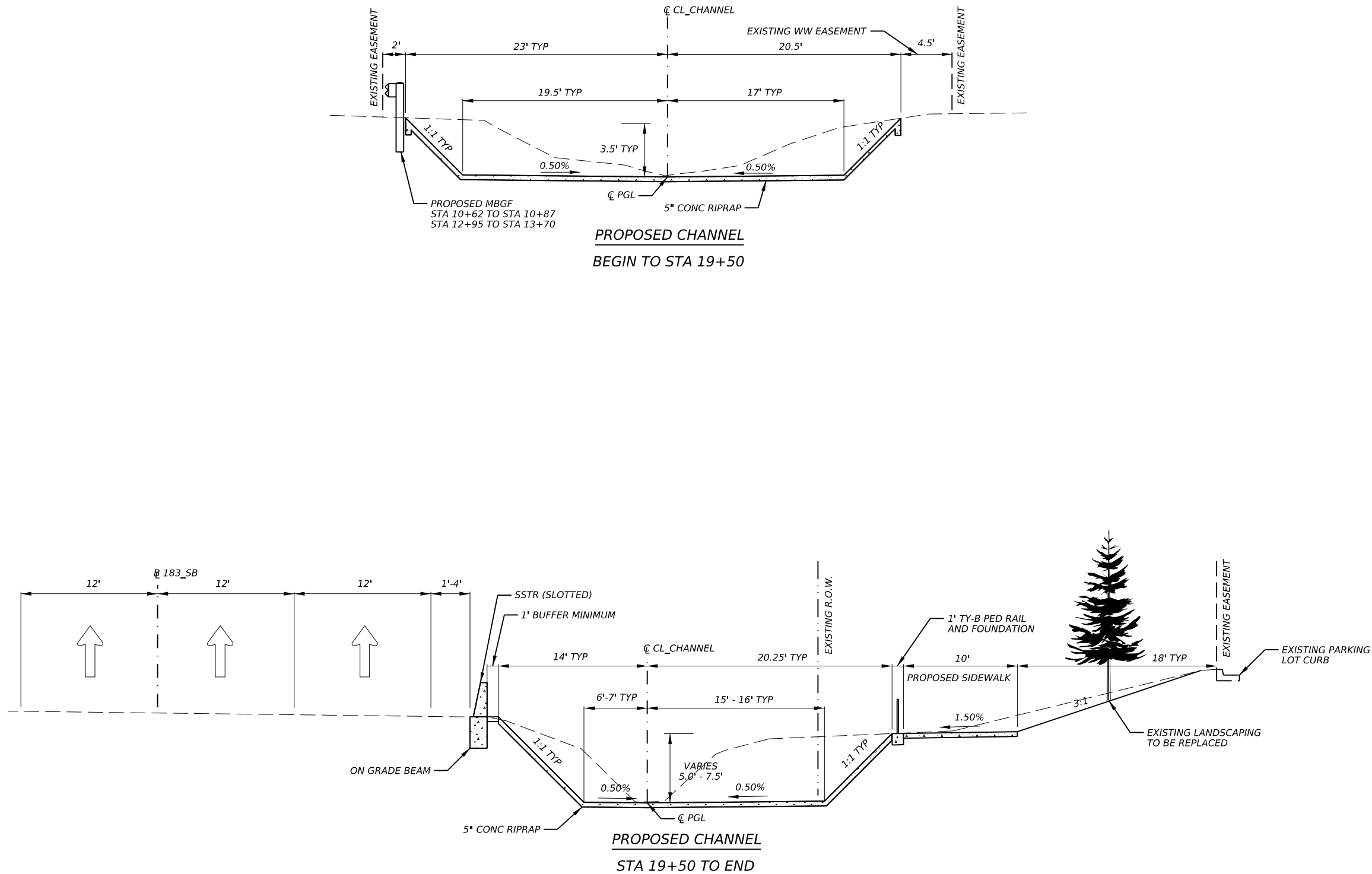
- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY

- NOTES:
- SAND BEDDING SHALL BE SUBSIDIARY TO ITEM 531-7002 "CONC SIDEWALKS".

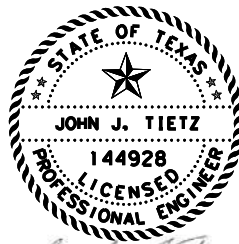


COTTONWOOD POND  
TRAIL PLAN & PROFILE  
SHEETS  
STA 214+40 TO END

SHEET 4 OF 4			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		60



NOT TO SCALE



5/22/2025

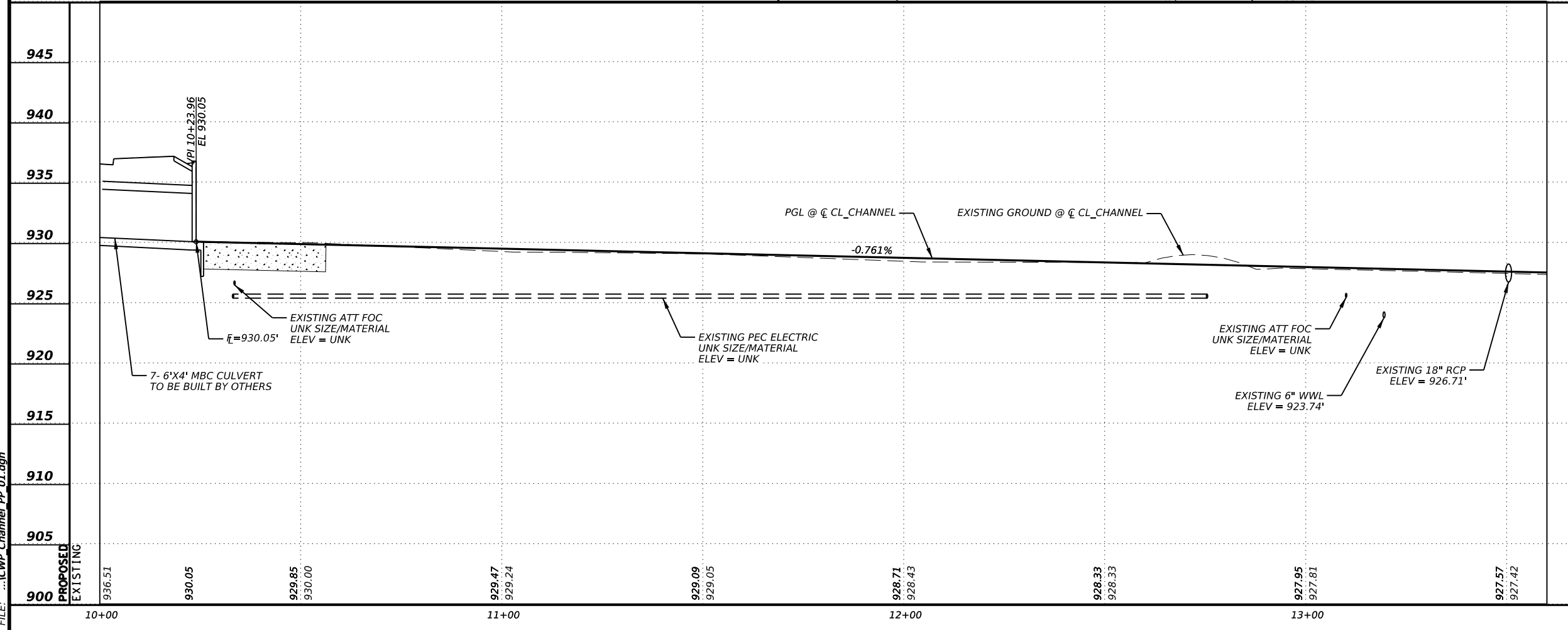



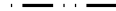







COTTONWOOD POND  
CHANNEL TYPICALS

SHEET 1 OF 1

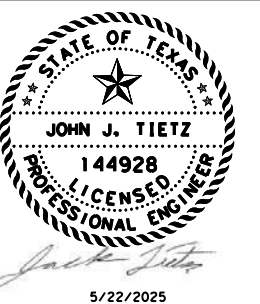
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY	SHEET NO.	
AUS	WILLIAMSON	61	

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	EXISTING R.O.W.
	PROPOSED R.O.W.
	EXISTING DRAINAGE EASEMENT
	TEMP CONSTRUCTION ESMT
	EXISTING UTILITY
	EXISTING PLANIMETRICS
	EXISTING PARCEL BOUNDARY
	EXISTING TRAVEL DIRECTION
	PROPOSED RIPRAP (CONC)

1. THE LOCATIONS AND ELEVATIONS OF ALL UTILITIES ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED.
2. W-BEAM END SECTIONS SHALL BE SUBSIDIARY TO MBGF PAYMENT.



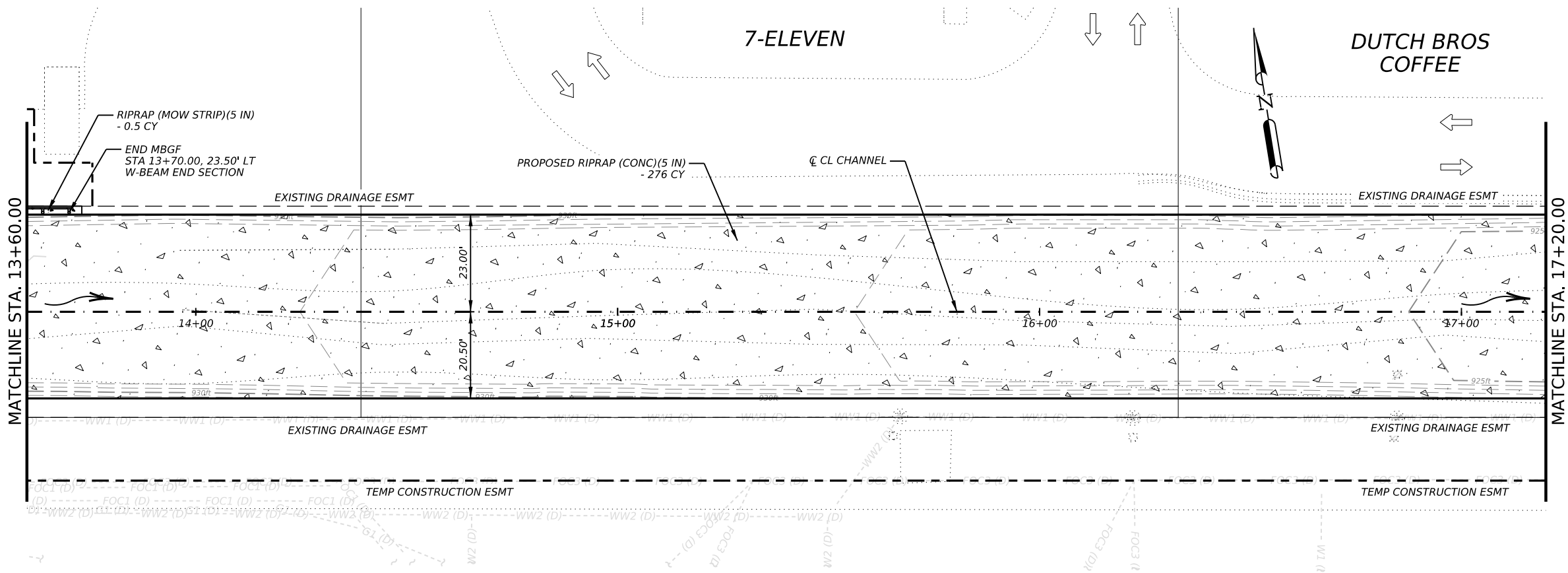
BEGIN TO STA 13+60

SHEET 1 OF 4			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		62



100% SUBMITTAL

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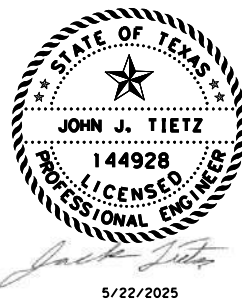
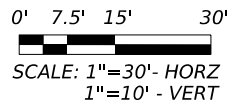


LEGEND:

- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- TEMP CONSTRUCTION ESMT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY
- EXISTING TRAVEL DIRECTION
- PROPOSED RIPRAP (CONC)

NOTES:

- THE LOCATIONS AND ELEVATIONS OF ALL UTILITIES ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED.
- W-BEAM END SECTIONS SHALL BE SUBSIDIARY TO MBGF PAYMENT.



COTTONWOOD POND  
CHANNEL PLAN & PROFILE  
SHEETS

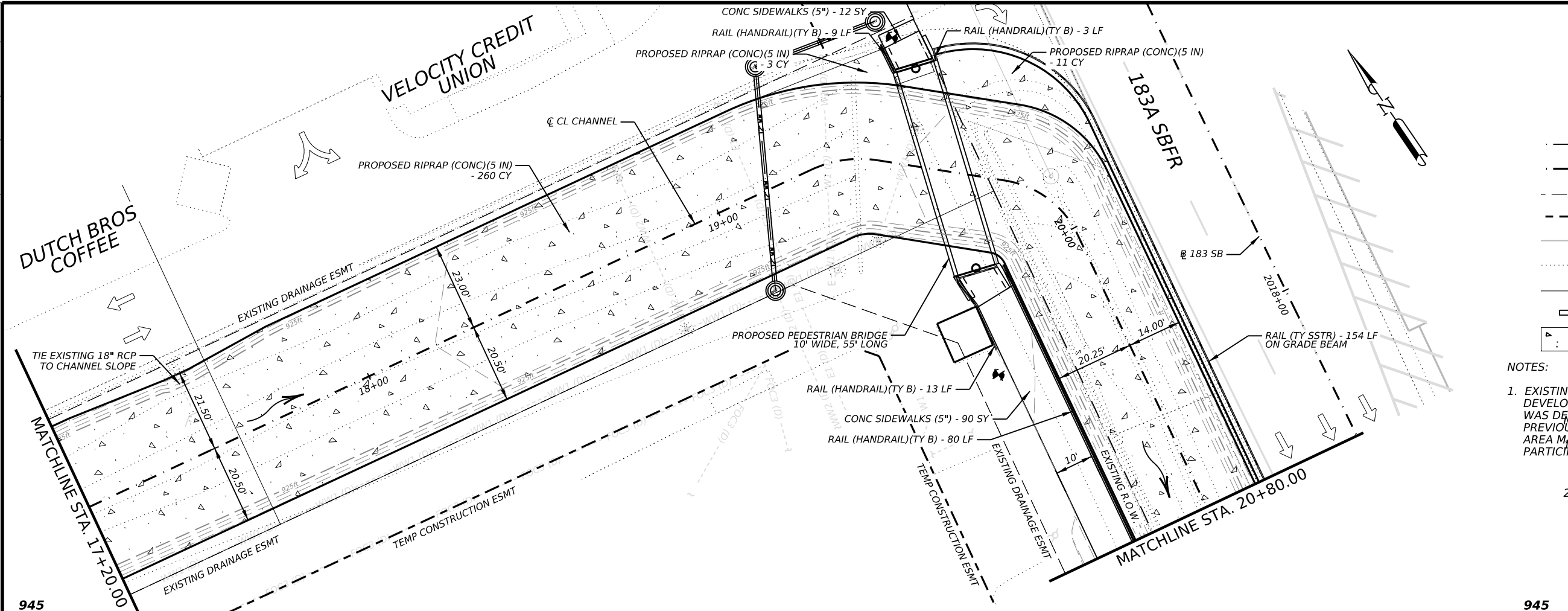
STA 13+60 TO STA 17+20

SHEET 2 OF 4

CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY	SHEET NO.	
AUS	WILLIAMSON	63	

CK  
DW  
CK  
DW

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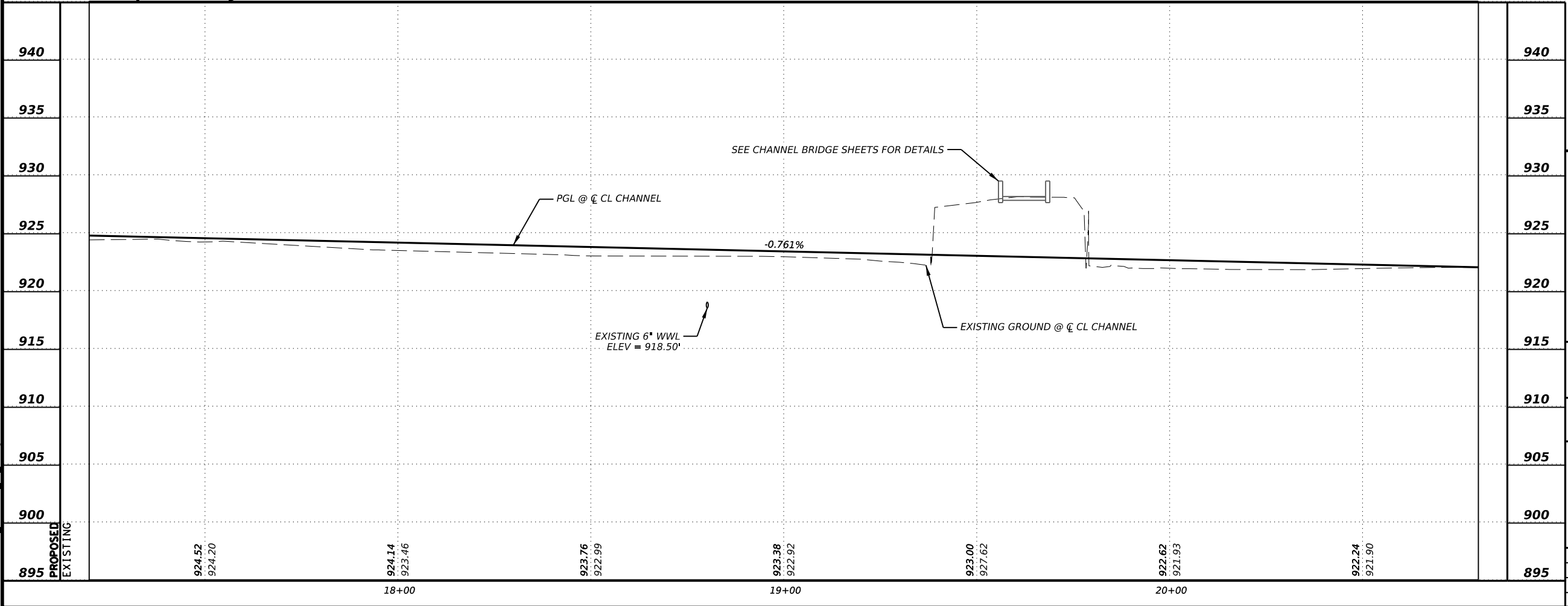


### LEGEND:

- EXISTING R.O.W.
- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- TEMP CONSTRUCTION ESMT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY
- EXISTING TRAVEL DIRECTION
- PROPOSED RIPRAP (CONC)

### NOTES:

- EXISTING VALUES SHOWN REPRESENT THE DEVELOPED CONDITION OF WHICH THE 2006 POND WAS DESIGNED. PROPOSED VALUES INCORPORATE PREVIOUS NON-PARTICIPANTS. SEE DRAINAGE AREA MAP (WATER QUALITY) FOR PROPOSED PARTICIPANTS. UTILITIES ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED.
- W-BEAM END SECTIONS SHALL BE SUBSIDIARY TO MBGF PAYMENT.



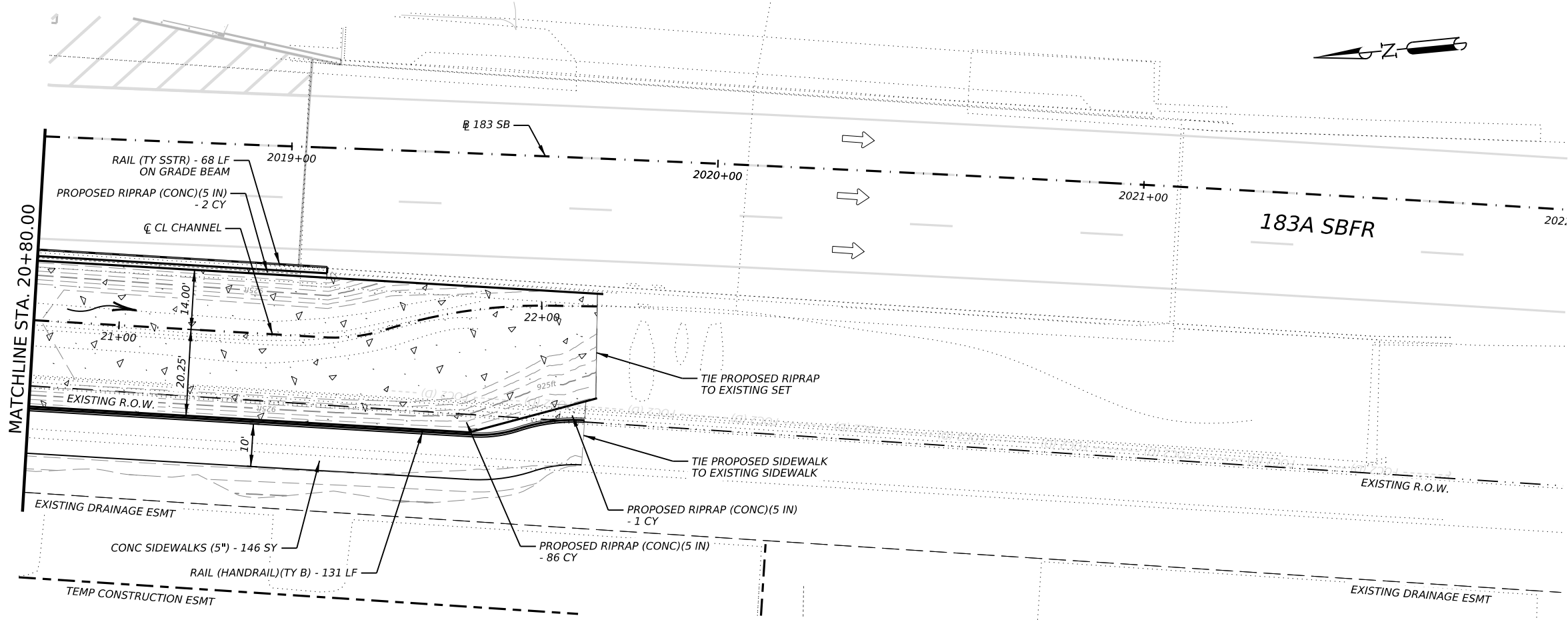
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SCALE: 1"=30'- HORZ  
1"=10' - VERT



## COTTONWOOD POND CHANNEL PLAN & PROFILE SHEETS

STA 17+20 TO STA 20+80

SHEET 3 OF 4			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		64

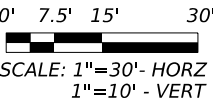


LEGEND:

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- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- TEMP CONSTRUCTION ESMT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- EXISTING PARCEL BOUNDARY
- EXISTING TRAVEL DIRECTION
- PROPOSED RIPRAP (CONC)

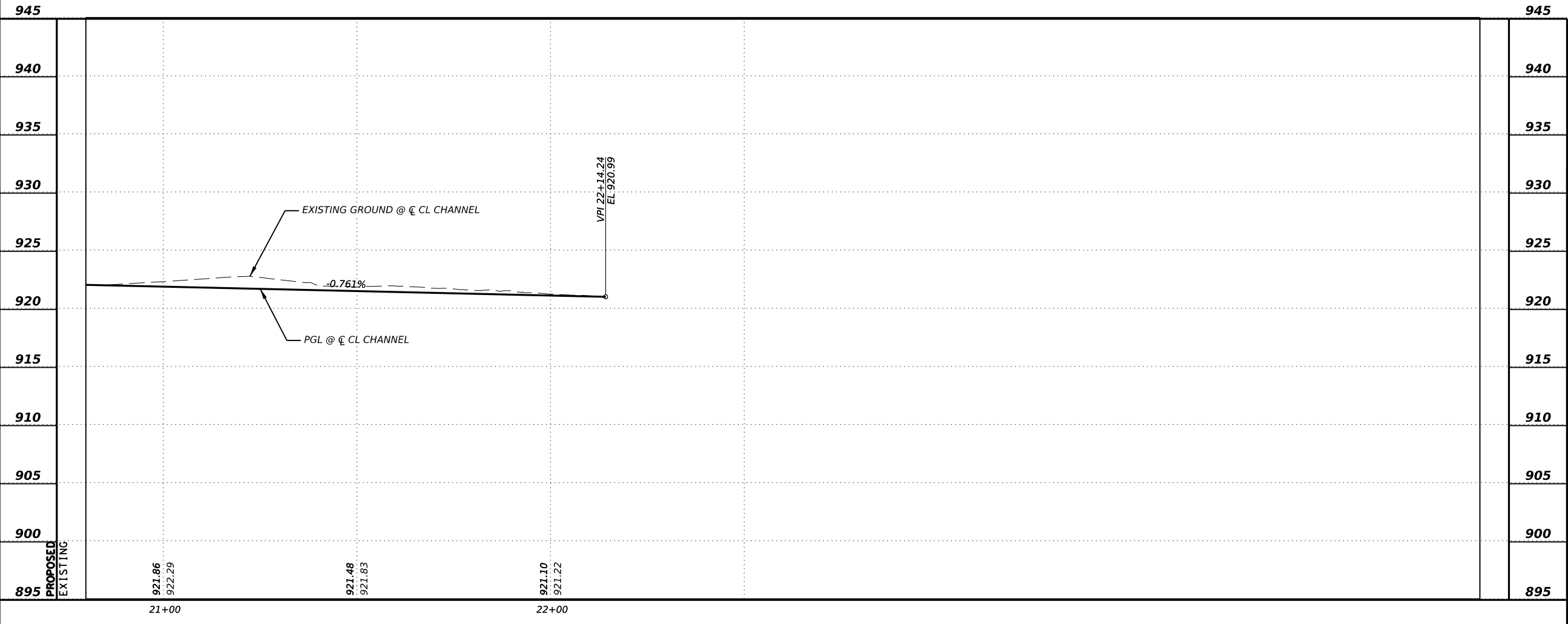
NOTES:

- THE LOCATIONS AND ELEVATIONS OF ALL UTILITIES ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED.
- W-BEAM END SECTIONS SHALL BE SUBSIDIARY TO MBBF PAYMENT.



COTTONWOOD POND  
CHANNEL PLAN & PROFILE  
SHEETS  
STA 20+80 TO END

SHEET 4 OF 4			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY	SHEET NO.	
AUS	WILLIAMSON	65	



**ATTACHMENT N – INSPECTION, MAINTENANCE,  
REPAIR, AND RETROFIT PLAN**

---

### 3.5.11 Wet Basins

A clear requirement for wet basins is that a firm commitment be made to carry out both routine and non-routine maintenance tasks. The nature of the maintenance requirements are outlined below, along with design tips that can help to reduce the maintenance burden (modified from Young et al., 1996).

#### Routine Maintenance.

- *Mowing.* The side-slopes, embankment, and emergency spillway of the basin should be mowed at least twice a year to prevent woody growth and control weeds.
- *Inspections.* Wet basins should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. When possible, inspections should be conducted during wet weather to determine if the basin is functioning properly. There are many functions and characteristics of these BMPs that should be inspected. The embankment should be checked for subsidence, erosion, leakage, cracking, and tree growth. The condition of the emergency spillway should be checked. The inlet, barrel, and outlet should be inspected for clogging. The adequacy of upstream and downstream channel erosion protection measures should be checked. Stability of the side slopes should be checked. Modifications to the basin structure and contributing watershed should be evaluated. During semi-annual inspections, replace any dead or displaced vegetation. Replanting of various species of wetland vegetation may be required at first, until a viable mix of species is established. Cracks, voids and undermining should be patched/filled to prevent additional structural damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage. The inspections should be carried out with as-built pond plans in hand.
- *Debris and Litter Removal.* As part of periodic mowing operations and inspections, debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the riser, and the outlet should be checked for possible clogging.
- *Erosion Control.* The basin side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion. Corrective measures such as regrading and revegetation may be necessary. Similarly, the riprap protecting the channel near the outlet may need to be repaired or replaced.



- *Nuisance Control.* Most public agencies surveyed indicate that control of insects, weeds, odors, and algae may be needed in some ponds. Nuisance control is probably the most frequent maintenance item demanded by local residents. If the ponds are properly sized and vegetated, these problems should be rare in wet ponds except under extremely dry weather conditions. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.). Biological control of algae and mosquitoes using fish such as fathead minnows is preferable to chemical applications.

#### Non-routine maintenance.

- *Structural Repairs and Replacement.* Eventually, the various inlet/outlet and riser works in the wet basin will deteriorate and must be replaced. Some public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yr, while concrete barrels and risers may last from 50 to 75 yr. The actual life depends on the type of soil, pH of runoff, and other factors. Polyvinyl chloride (PVC) pipe is a corrosion resistant alternative to metal and concrete pipes. Local experience typically determines which materials are best suited to the site conditions. Leakage or seepage of water through the embankment can be avoided if the embankment has been constructed of impermeable material, has been compacted, and if anti-seep collars are used around the barrel. Correction of any of these design flaws is difficult.
  - *Sediment Removal.* Wet ponds will eventually accumulate enough sediment to significantly reduce storage capacity of the permanent pool. As might be expected, the accumulated sediment can reduce both the appearance and pollutant removal performance of the pond. Sediment accumulated in the sediment forebay area should be removed from the facility every two years to prevent accumulation in the permanent pool. Dredging of the permanent pool should occur at least every 20 years, or when accumulation of sediment impairs functioning of the outlet structure.
  - *Harvesting.* If vegetation is present on the fringes or in the pond, it can be periodically harvested and the clippings removed to provide export of nutrients and to prevent the basin from filling with decaying organic matter.
-

## **ATTACHMENT P – MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION**

To avoid or minimize surface stream contamination and hydrological changes resulting from construction and development, a suite of erosion and sediment control measures will be implemented. These measures specifically target increased stream flashing, elevated flow velocities, and other in-stream effects that can lead to channel erosion and water quality degradation. Sediment control fences will be installed to intercept and slow stormwater runoff, trapping sediment on-site before it can reach surface waters. Rock filter dams will further filter runoff and reduce flow energy in drainage channels, helping to prevent sediment transport and downstream scouring. Erosion control logs, placed strategically along slopes and disturbed areas, will stabilize soil, slow water movement, and promote sediment deposition. At site exits, rock construction exits will reduce the tracking of sediment onto adjacent roadways, thereby minimizing sediment-laden runoff entering the stream network. Together, these practices are designed to maintain the natural hydrology of the stream, reduce the intensity of peak flows, and preserve water quality during and after the regulated activity.

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**COTTONWOOD POND WATER QUALITY PROJECT-  
STORM WATER POLLUTION PLAN (SWPPP)**

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STORMWATER POLLUTION PREVENTION PLAN (SWP3):

This SWP3 has been developed in accordance with the TPDES Construction General Permit TXR150000 (CGP). The Texas Department of Transportation (TxDOT) ensures that project specifications include adequate best management practices (BMPs) for this project.

For all projects with soil disturbing activity and for projects that have Environmental, Permits, Issues, and Commitments (EPICs) dependent on stormwater controls and water quality measures TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office, Area Office, or electronically.

This SWP3 is consistent with requirements specified in applicable stormwater plans and the projects environmental permits, issues, and commitments (EPICs). A copy of the CGP is included in Attachment 2.12 of the SWP3 binder.

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ):  
N/A

1.2 PROJECT LIMITS:

From: 375' East of Ave of the Stars

To: Cottonwood Creek Trail

1.3 PROJECT COORDINATES:

BEGIN: (Lat) 30°32'26.26"N ,(Long) 97°49'05.09"W

END: (Lat) 30°32'10.37"N ,(Long) 97°48'23.72"W

1.4 TOTAL PROJECT AREA (Acres): 17.8 Ac

1.5 TOTAL AREA TO BE DISTURBED (Acres): 18.8 Ac

1.6 NATURE OF CONSTRUCTION ACTIVITY:

Regional pond expansion, pedestrian bridge construction, sidewalk, channel, and utility improvements

1.7 MAJOR SOIL TYPES:

Soil Type	Description
GC and CH w/ gravel	Dark brown fat clay (CH) overlaying hard, tan and gray limestone.

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):

PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below:

- ☐ PSLs determined during preconstruction meeting
- ☐ PSLs determined during construction
- ☒ No PSLs planned for construction

Type	Sheet #s

All off-ROW PSLs required by the Contractor are the Contractor's responsibility. The Contractor shall secure all permits required by local, state, federal laws for off-ROW PSLs. The contractor shall provide diagrams, areas of disturbance, acreage, and BMPs for all off-ROW PSLs within one mile of the project.

1.9 CONSTRUCTION ACTIVITIES:

(Use the following list as a starting point when developing the Construction Activity Schedule and Ceasing Record in Attachment 2.5.)

- ☒ Mobilization
- ☒ Install sediment and erosion controls
- ☒ Blade existing topsoil into windrows, prep ROW, clear and grub
- ☒ Remove existing pavement
- ☒ Grading operations, excavation, and embankment
- ☒ Excavate and prepare subgrade for proposed pavement widening
- ☒ Remove existing culverts, safety end treatments (SETs)
- ☒ Remove existing metal beam guard fence (MBGF), bridge rail
- ☒ Install proposed pavement per plans
- ☒ Install culverts, culvert extensions, SETs
- ☒ Install mow strip, MBGF, bridge rail
- ☐ Place flex base
- ☒ Rework slopes, grade ditches
- ☒ Blade windrowed material back across slopes
- ☒ Revegetation of unpaved areas
- ☒ Achieve site stabilization and remove sediment and erosion control measures
- ☐ Other:
- ☐ Other:
- ☐ Other:

1.10 POTENTIAL POLLUTANTS AND SOURCES:

- ☒ Sediment laden stormwater from stormwater conveyance over disturbed area
- ☒ Fuels, oils, and lubricants from construction vehicles, equipment, and storage
- ☒ Solvents, paints, adhesives, etc. from various construction activities
- ☒ Transported soils from offsite vehicle tracking
- ☒ Construction debris and waste from various construction activities
- ☒ Contaminated water from excavation or dewatering pump-out water
- ☒ Sanitary waste from onsite restroom facilities
- ☒ Trash from various construction activities/receptacles
- ☒ Long-term stockpiles of material and waste
- ☐

- ☐ Other:
- ☐ Other:
- ☐ Other:

1.11 RECEIVING WATERS:

Receiving waters must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. Include Segment # for receiving waters.

Tributaries	Classified Waterbody
	Cottonwood Creek

\* Add (\*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT

- ☒ Development of plans and specifications
- ☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
- ☒ Post Construction Site Notice
- ☒ Submit NOI/CSN to local MS4
- ☒ Perform SWP3 inspections
- ☒ Maintain SWP3 records and update to reflect daily operations
- ☒ Complete and submit Notice of Termination to TCEQ
- ☒ Maintain SWP3 records for 3 years
- ☐ Other:
- ☐ Other:
- ☐ Other:

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR

- ☒ Day To Day Operational Control
- ☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
- ☒ Post Construction Site Notice
- ☒ Submit NOI/CSN to local MS4
- ☒ Maintain schedule of major construction activities
- ☒ Install, maintain and modify BMPs
- ☒ Complete and submit Notice of Termination to TCEQ
- ☒ Maintain SWP3 records for 3 years
- ☐ Other:
- ☐ Other:
- ☐ Other:

1.14 LOCAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OPERATOR COORDINATION:

MS4 Entity
City of Cedar Park Public Works



STORMWATER POLLUTION PREVENTION PLAN (SWP3)

© 2023 July 2023 Sheet 1 of 2

Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.			SHEET NO.
				105
STATE	STATE DIST.	COUNTY		
TEXAS	AUS	WILLIAMSON		
CONT.	SECT.	JOB	HIGHWAY NO.	
-	-	3217-2301	-	

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

2.0 BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS, INSPECTION, AND MAINTENANCE

The Contractor shall be the responsible party for implementing the BMPs described herein and for complying with the SWP3 for control of erosion and sedimentation during day-to-day operations. The Contractor shall implement changes to this SWP3 approved by TxDOT within the times specified in this SWP3 or the CGP.

2.1 EROSION CONTROL AND SOIL STABILIZATION BMPs:

T / P

- ☐ ☐ Protection of Existing Vegetation
- ☐ ☐ Vegetated Buffer Zones
- ☐ ☐ Soil Retention Blankets
- ☐ ☐ Geotextiles
- ☐ ☐ Mulching/ Hydromulching
- ☐ ☐ Soil Surface Treatments
- ☒ ☐ Temporary Seeding
- ☐ ☒ Permanent Planting, Sodding or Seeding
- ☐ ☐ Biodegradable Erosion Control Logs
- ☒ ☐ Rock Filter Dams/ Rock Check Dams
- ☒ ☐ Vertical Tracking
- ☐ ☐ Interceptor Swale
- ☐ ☒ Riprap
- ☐ ☐ Diversion Dike
- ☐ ☐ Temporary Pipe Slope Drain
- ☐ ☐ Embankment for Erosion Control
- ☐ ☐ Paved Flumes
- ☐ ☐ Other: \_\_\_\_\_
- ☐ ☐ Other: \_\_\_\_\_
- ☐ ☐ Other: \_\_\_\_\_
- ☐ ☐ Other: \_\_\_\_\_

2.2 SEDIMENT CONTROL BMPs:

T / P

- ☒ ☐ Biodegradable Erosion Control Logs
- ☒ ☐ Dewatering Controls
- ☒ ☐ Inlet Protection
- ☒ ☐ Rock Filter Dams/ Rock Check Dams
- ☐ ☐ Sandbag Berms
- ☒ ☐ Sediment Control Fence
- ☒ ☐ Stabilized Construction Exit
- ☐ ☐ Floating Turbidity Barrier
- ☐ ☐ Vegetated Buffer Zones
- ☐ ☐ Vegetated Filter Strips
- ☐ ☐ Other: \_\_\_\_\_
- ☐ ☐ Other: \_\_\_\_\_
- ☐ ☐ Other: \_\_\_\_\_
- ☐ ☐ Other: \_\_\_\_\_

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

Sediment control BMPs requiring design capacity calculations (See SWP3 Attachment 1.3.):

T / P

- ☐ ☐ Sediment Trap

☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area

☐ 3,600 cubic feet of storage per acre drained
- ☐ ☐ Sedimentation Basin

☐ Not required (<10 acres disturbed)

☐ Required (>10 acres) and implemented.

☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area

☐ 3,600 cubic feet of storage per acre drained
- ☒ Required (>10 acres), but not feasible due to:

☐ Available area/Site geometry

☐ Site slope/Drainage patterns

☐ Site soils/Geotechnical factors

☐ Public safety

☒ Other: Existing water quality pond to be utilized in permanent

2.3 PERMANENT CONTROLS:

(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)

BMPs To Be Left In Place Post Construction:

Type	Stationing	
	From	To
Permanent Seeding	CL CHANNEL STA 10+33	POND STA 117+99
Riprap	CL CHANNEL STA 10+40	POND STA 118+60

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.4 OFFSITE VEHICLE TRACKING CONTROLS:

- ☒ Excess dirt/mud on road removed daily
- ☒ Haul roads dampened for dust control
- ☐ Loaded haul trucks to be covered with tarpaulin
- ☒ Stabilized construction exit
- ☐ Daily street sweeping

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

2.5 POLLUTION PREVENTION MEASURES:

- ☐ Chemical Management
- ☒ Concrete and Materials Waste Management
- ☒ Debris and Trash Management
- ☒ Dust Control
- ☒ Sanitary Facilities
- ☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

☐ Other: \_\_\_\_\_

2.6 VEGETATED BUFFER ZONES:

Natural vegetated buffers shall be maintained as feasible to protect adjacent surface waters. If vegetated natural buffer zones are not feasible due to site geometry, the appropriate additional sediment control measures have been incorporated into this SWP3.

Type	Stationing	
	From	To

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:

- ☒ Fire hydrant flushings
- ☒ Irrigation drainage
- ☒ Pavement washwater (where spills or leaks have not occurred, and detergents are not used)
- ☒ Potable water sources
- ☒ Springs
- ☒ Uncontaminated groundwater
- ☒ Water used to wash vehicles or control dust
- ☒ Other allowable non-stormwater discharges as allowed by TPDES GP TXR150000.

2.8 DEWATERING:

Dewatering discharges of accumulated stormwater, groundwater, and surface water including discharges from dewatering of trenches, excavations, foundations, vaults, and other points of accumulation are prohibited unless managed by appropriate controls to prevent and minimize the offsite discharge of sediment and other pollutants.

2.9 INSPECTIONS:

All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

When dewatering activities are present, a daily inspection will be conducted once per day during those activities and documented in accordance with CGP and TxDOT requirements.

2.10 MAINTENANCE:

Control measures shall be properly installed according to specifications. If it is determined that a BMP or control measure is not operating effectively, maintenance must be accomplished as soon as possible and before the next anticipated rain event, but in no case later than 7 calendar days after being able to access the site. Maintenance shall be performed by the Contractor as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.



STORMWATER POLLUTION PREVENTION PLAN (SWP3)

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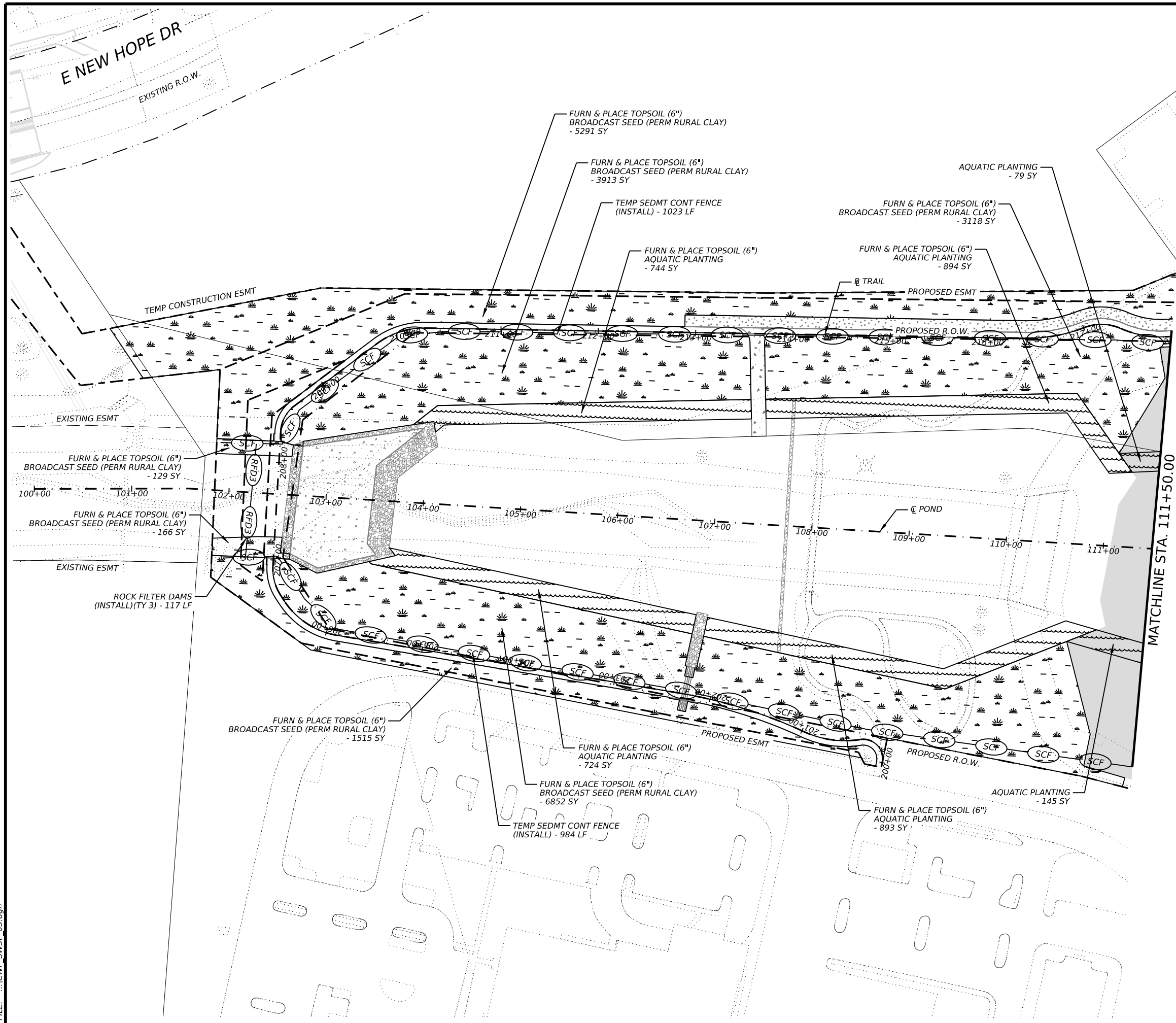


FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
			106
STATE	STATE DIST.	COUNTY	
TEXAS	AUS	WILLIAMSON	
CONT.	SECT.	JOB	HIGHWAY NO.
-	-	3217-2301	-



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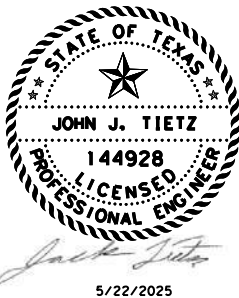
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- PROPOSED R.O.W.
- EXISTING DRAINAGE EASEMENT
- PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- PROPOSED ROCK FILTER DAM (RFD3)
- PROPOSED SILT CONT FENCE (SCF)
- PROPOSED EROSION CONT LOG (ECL)
- PROPOSED SEEDING
- PROPOSED AQUATIC PLANTING
- EXISTING POND GRADING

**NOTES:**

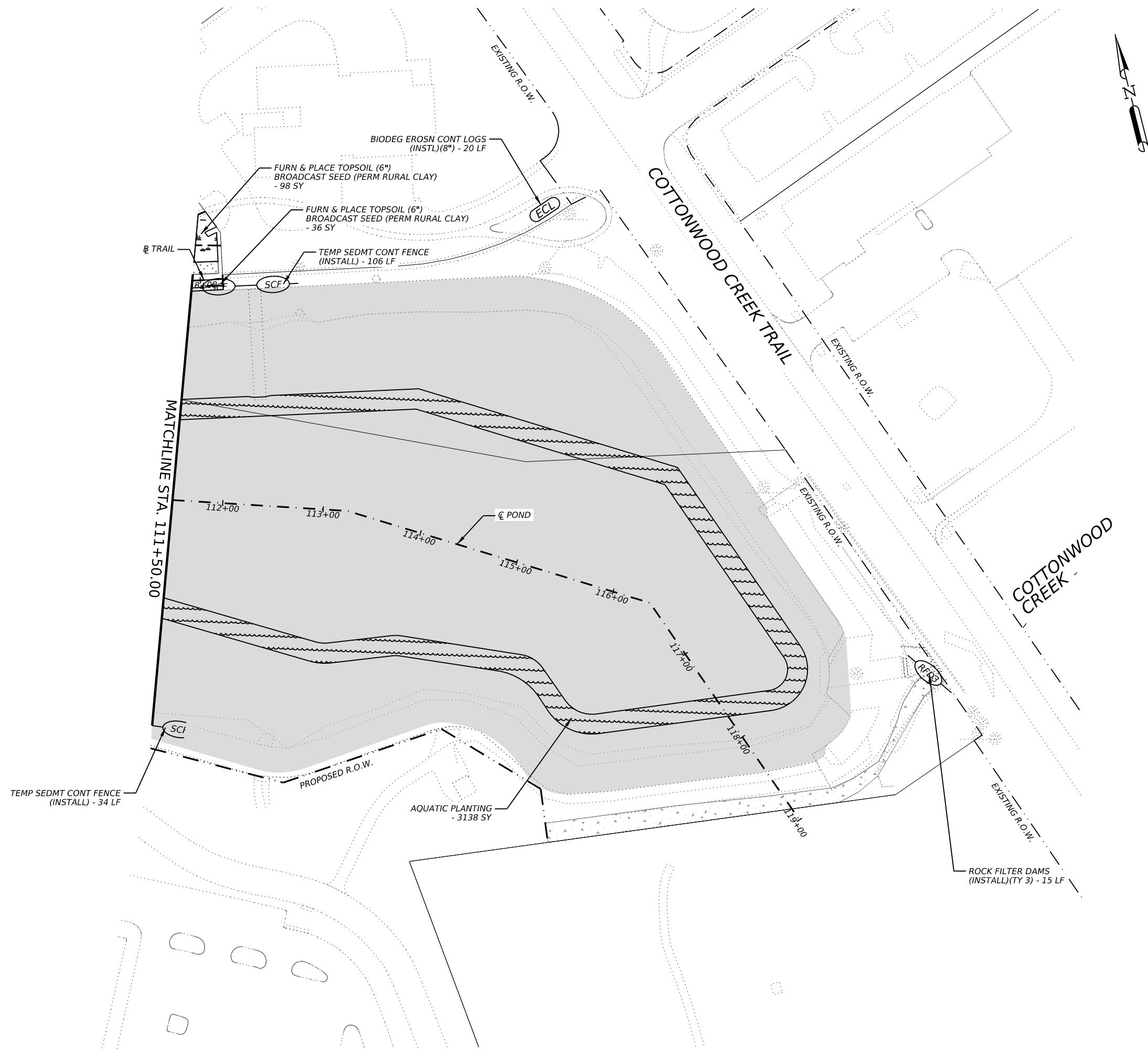
1. AQUATIC PLANTINGS SHALL BE LIMITED TO THE VEGETATIVE BENCH. PLANT SPACING SHALL BE 3 TO 4 FEET ON CENTER IN ACCORDANCE WITH TCEQ GUIDELINES. SPECIES SHALL INCLUDE SCIRPUS VALIDUS (SOFTSTEM BULRUSH) AND SCIRPUS CALIFORNICUS (CALIFORNIA BULRUSH).

0' 25' 50' 100'  
SCALE: 1"=100'



**COTTONWOOD POND  
EROSION CONTROL  
SHEETS**  
POND - BEGIN TO STA 111+50

SHEET 3 OF 4			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		109

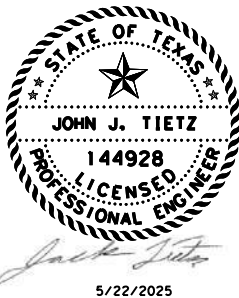
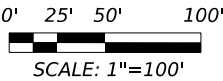


LEGEND:

- EXISTING R.O.W.
- - - PROPOSED R.O.W.
- - - EXISTING DRAINAGE EASEMENT
- - - PROPOSED EASEMENT
- EXISTING UTILITY
- EXISTING PLANIMETRICS
- (RFD3) PROPOSED ROCK FILTER DAM
- (SCF) PROPOSED SILT CONT FENCE
- (ECL) PROPOSED EROSION CONT LOG
- [Symbol] PROPOSED SEEDING
- [Symbol] PROPOSED AQUATIC PLANTING
- [Shaded Area] EXISTING POND GRADING

NOTES:

1. AQUATIC PLANTINGS SHALL BE LIMITED TO THE VEGETATIVE BENCH. PLANT SPACING SHALL BE 3 TO 4 FEET ON CENTER IN ACCORDANCE WITH TCEQ GUIDELINES. SPECIES SHALL INCLUDE SCIRPUS VALIDUS (SOFTSTEM BULRUSH) AND SCIRPUS CALIFORNICUS (CALIFORNIA BULRUSH).

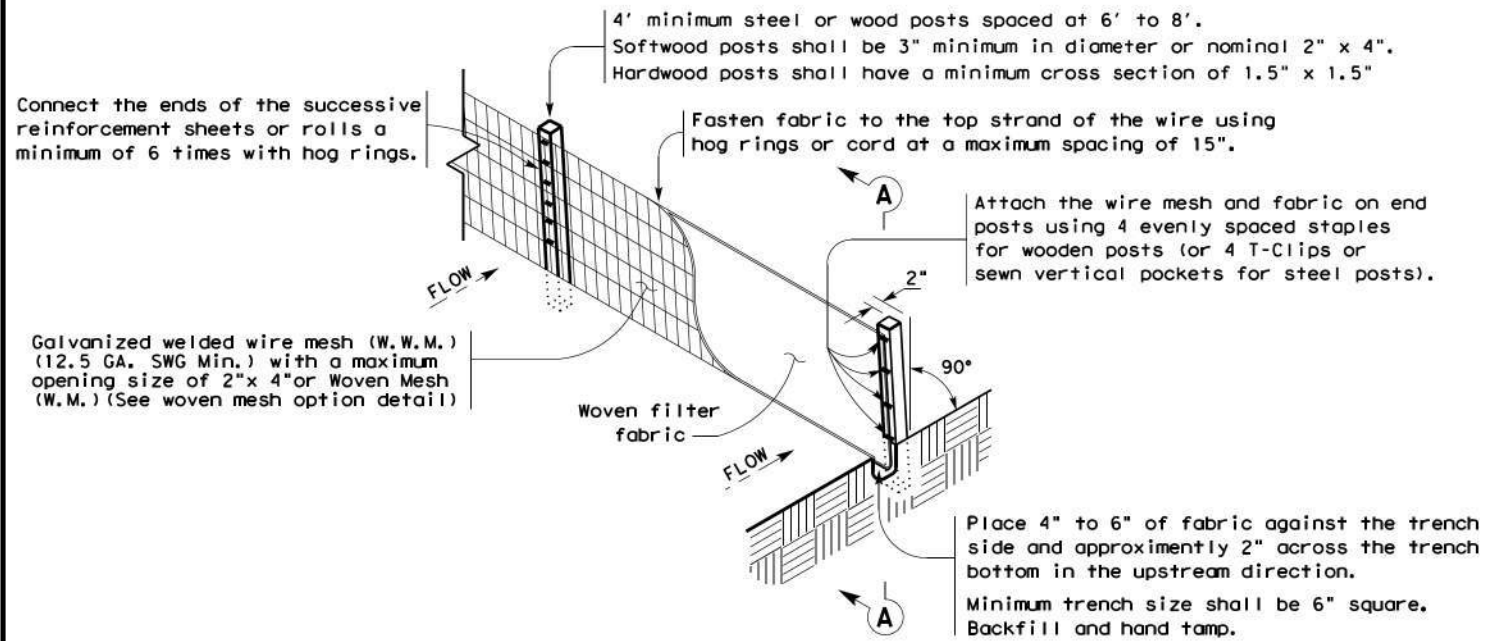


COTTONWOOD POND  
EROSION CONTROL  
SHEETS  
POND - STA 111+50 TO END

SHEET 4 OF 4			
CONT	SECT	JOB	HIGHWAY
-	-	3217-2301	-
DIST	COUNTY		SHEET NO.
AUS	WILLIAMSON		110

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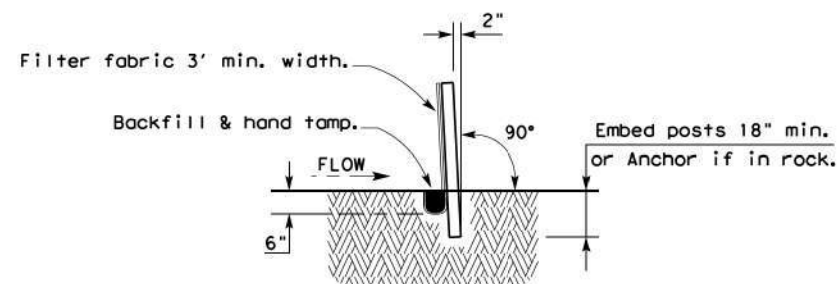
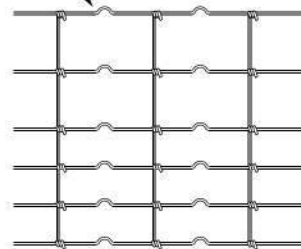
DATE  
FILE



#### TEMPORARY SEDIMENT CONTROL FENCE

SCF

Top of Fence



#### SECTION A-A

#### HINGE JOINT KNOT WOVEN MESH (OPTION) DETAIL

Galvanized hinge joint knot woven mesh (12.5 GA. SWG Min.) requires a minimum of five horizontal wires spaced at a maximum of 12 inches apart and all vertical wires spaced at a maximum of 12 inches apart.

#### SEDIMENT CONTROL FENCE USAGE GUIDELINES

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

Sediment control fence should be sized to filter a maximum flow through rate of 100 GPM/FT<sup>2</sup>. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

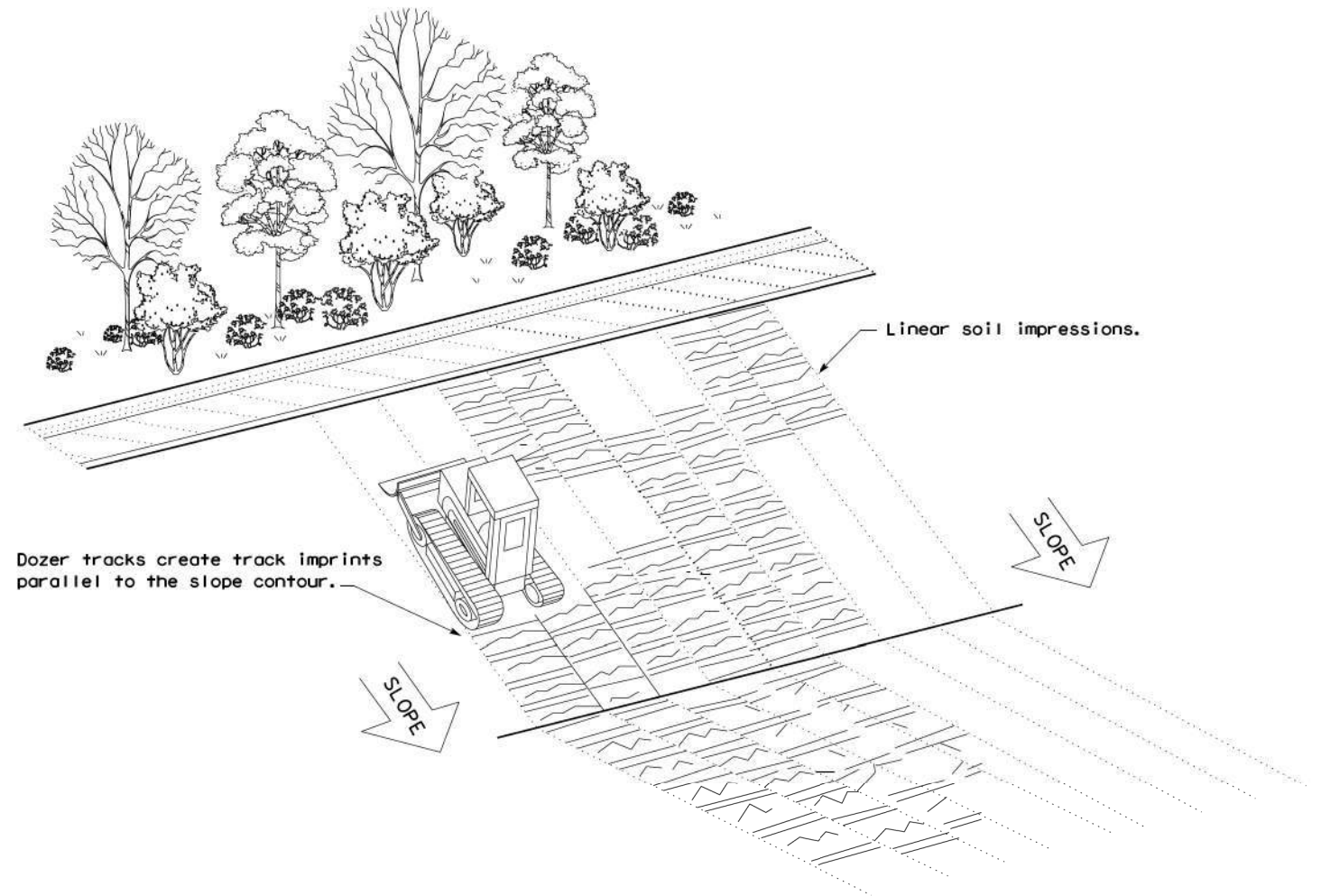
#### LEGEND

Sediment Control Fence


SCF

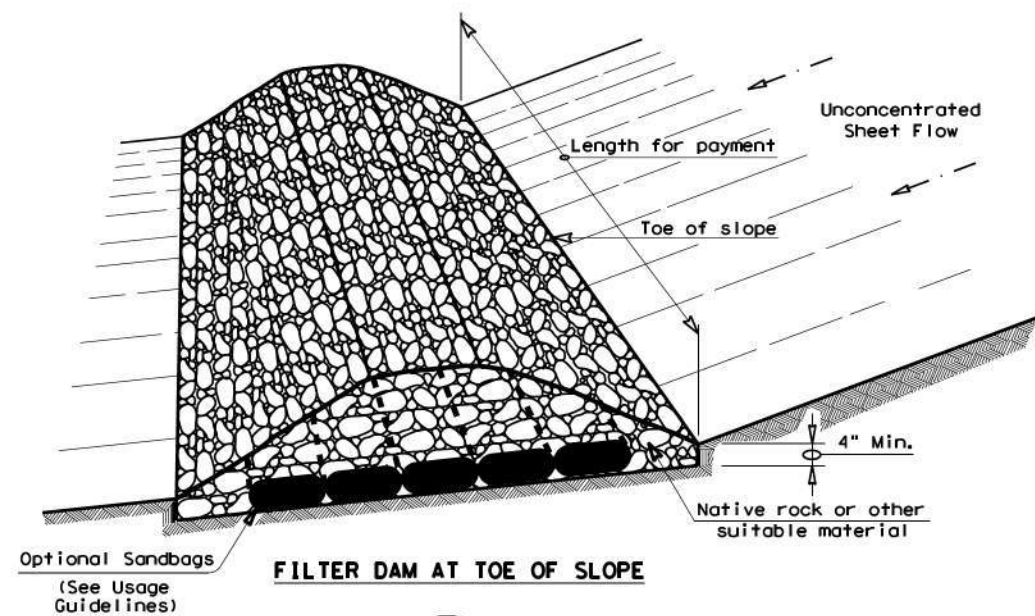
#### GENERAL NOTES

1. Vertical tracking is required on projects where soil distributing activities have occurred unless otherwise approved.
2. Perform vertical tracking on slopes to temporarily stabilize soil.
3. Provide equipment with a track undercarriage capable of producing linear soil impressions measuring a minimum of 12" in length by 2" to 4" in width by 1/2" to 2" in depth.
4. Do not exceed 12" between track impressions.
5. Install continuous linear track impressions where the minimum 12" length impressions are perpendicular to the slope or direction of water flow.



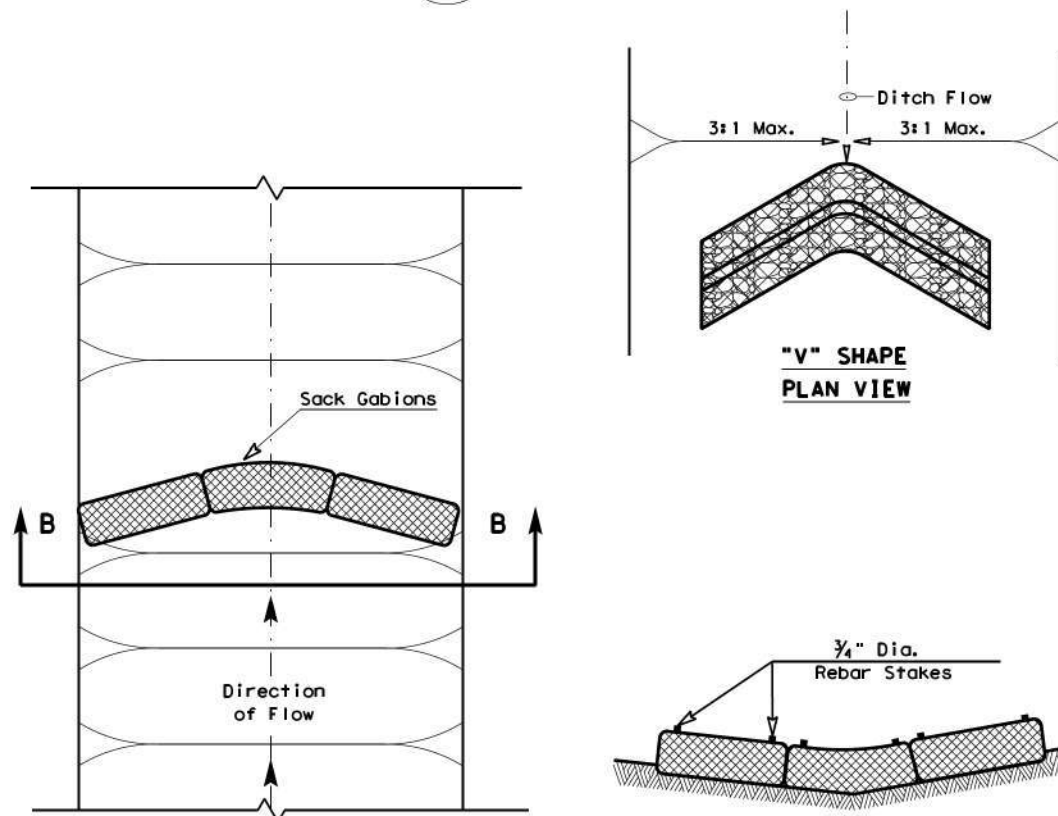
#### VERTICAL TRACKING

 <b>Texas Department of Transportation</b>				<b>Design Division Standard</b>	
<b>TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES FENCE &amp; VERTICAL TRACKING EC(1) - 16</b>					
FILE# ec116		DN# TxDOT	CK# KM	DN# VP	DN/CK# LS
© TxDOT: JULY 2016		CONT	SECT	JOB	HIGHWAY
REVISIONS		-	-	3217-2301	-
		DIST		COUNTY	SHEET NO.
		AUS		WILLIAMSON	112



**FILTER DAM AT TOE OF SLOPE**

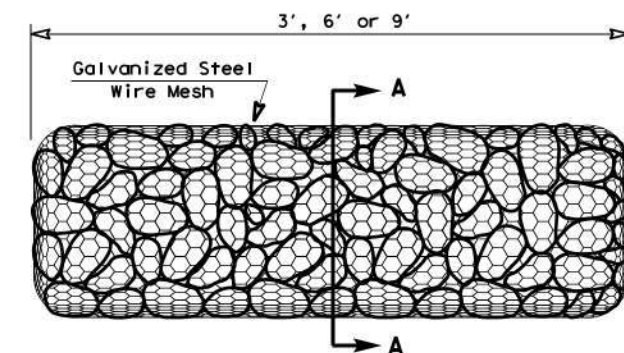
— RFD1 —



**"V" SHAPE  
PLAN VIEW**

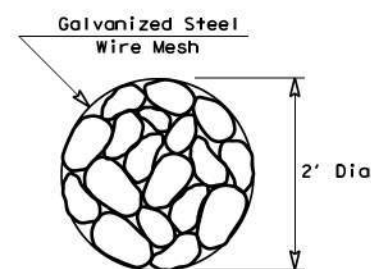
**PLAN VIEW**

**SECTION B-B**

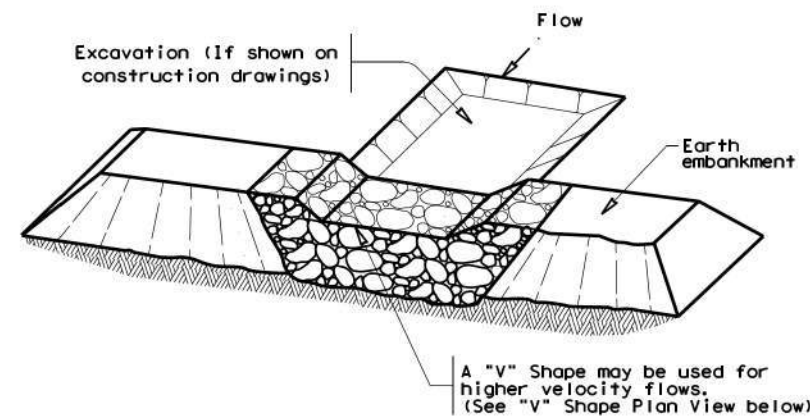


**TYPE 4 (SACK GABIONS)**

— RFD4 —

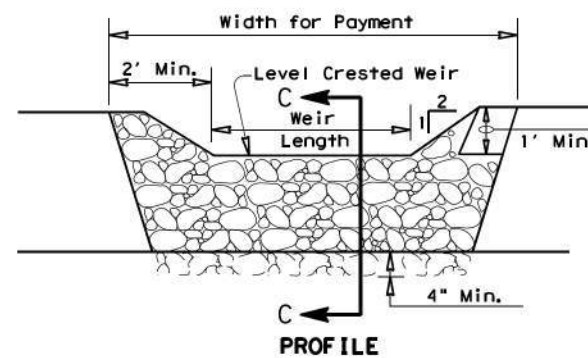


**SECTION A-A**

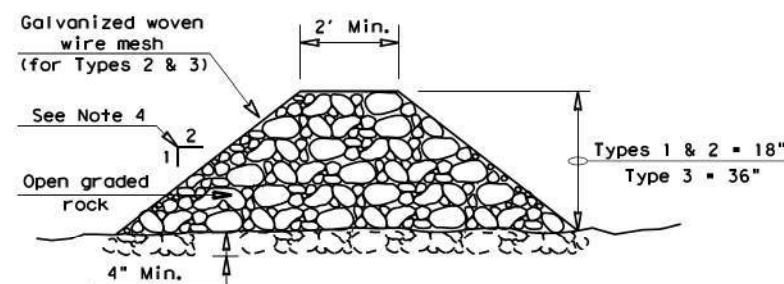


**FILTER DAM AT SEDIMENT TRAP**

— RFD1 — OR — RFD2 —



**PROFILE**



**SECTION C-C**

#### ROCK FILTER DAM USAGE GUIDELINES

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT<sup>2</sup> of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

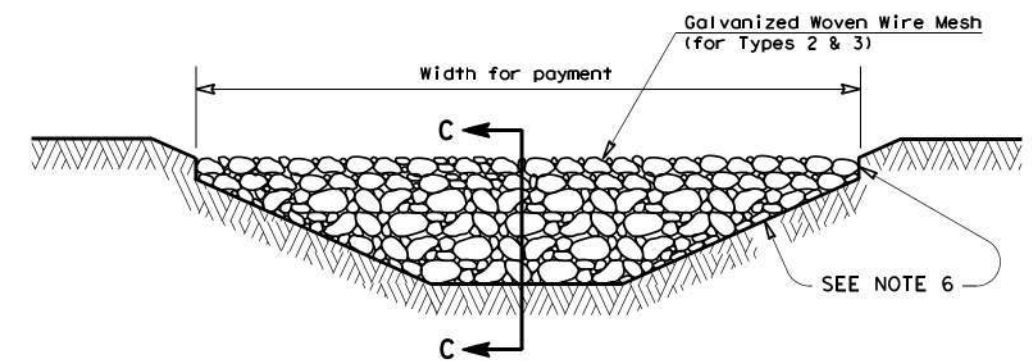
**Type 1 (18" high with no wire mesh) (3" to 6" aggregate):** Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approximately 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

**Type 2 (18" high with wire mesh) (3" to 6" aggregate):** Type 2 may be used in ditches and at dike or swale outlets.

**Type 3 (36" high with wire mesh) (4" to 8" aggregate):** Type 3 may be used in stream flow and should be secured to the stream bed.

**Type 4 (Sack gabions) (3" to 6" aggregate):** Type 4 May be used in ditches and smaller channels to form an erosion control dam.

**Type 5:** Provide rock filter dams as shown on plans.



**FILTER DAM AT CHANNEL SECTIONS**


— RFD1 — OR — RFD2 — OR — RFD3 —

#### GENERAL NOTES

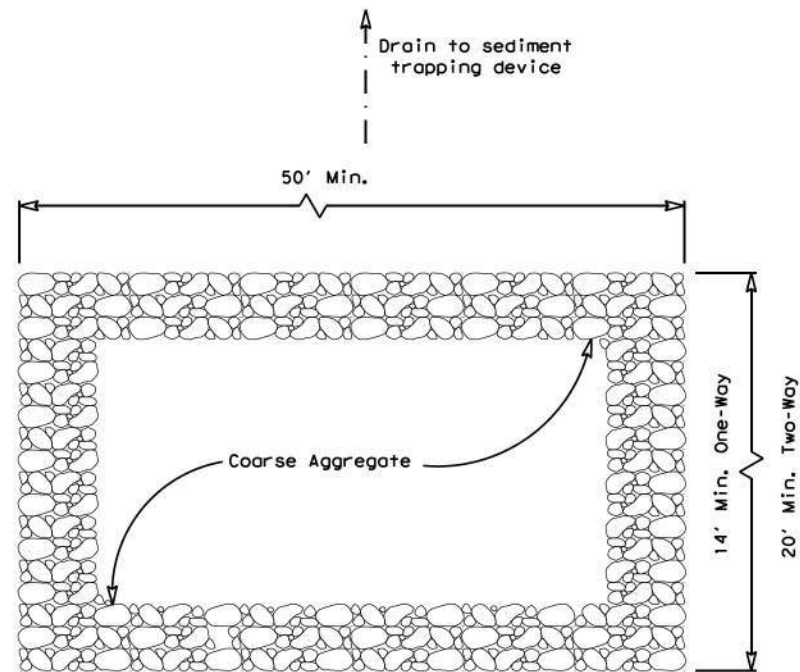
1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. For in stream use, the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with 3/4" dia. rebar stakes, and have a double-twisted hexagonal weave with a nominal mesh opening of 2 1/2" x 3 1/4".
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

#### PLAN SHEET LEGEND

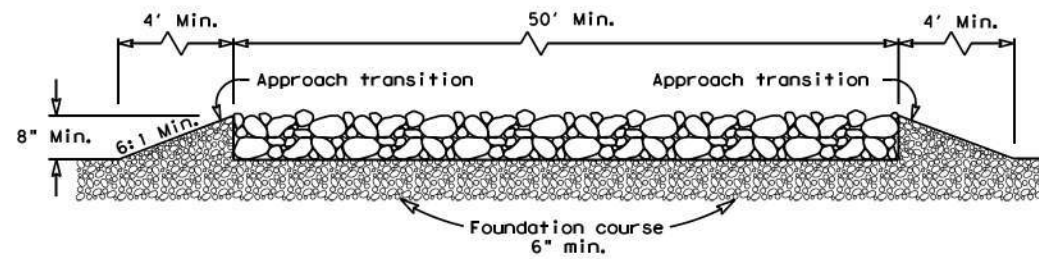
- Type 1 Rock Filter Dam — RFD1 —  
Type 2 Rock Filter Dam — RFD2 —  
Type 3 Rock Filter Dam — RFD3 —  
Type 4 Rock Filter Dam — RFD4 —

 <b>Texas Department of Transportation</b>				<b>Design Division Standard</b>	
<b>TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES ROCK FILTER DAMS EC (2) - 16</b>					
FILE: ec216		DN: TxDOT	CK: KM	DW: VP	DN/CK: LS
© TxDOT: JULY 2016		CONT	SECT	JOB	HIGHWAY
REVISIONS		-	-	3217-2301	-
		DIST		COUNTY	SHEET NO.
		AUS		WILLIAMSON	113





PLAN VIEW

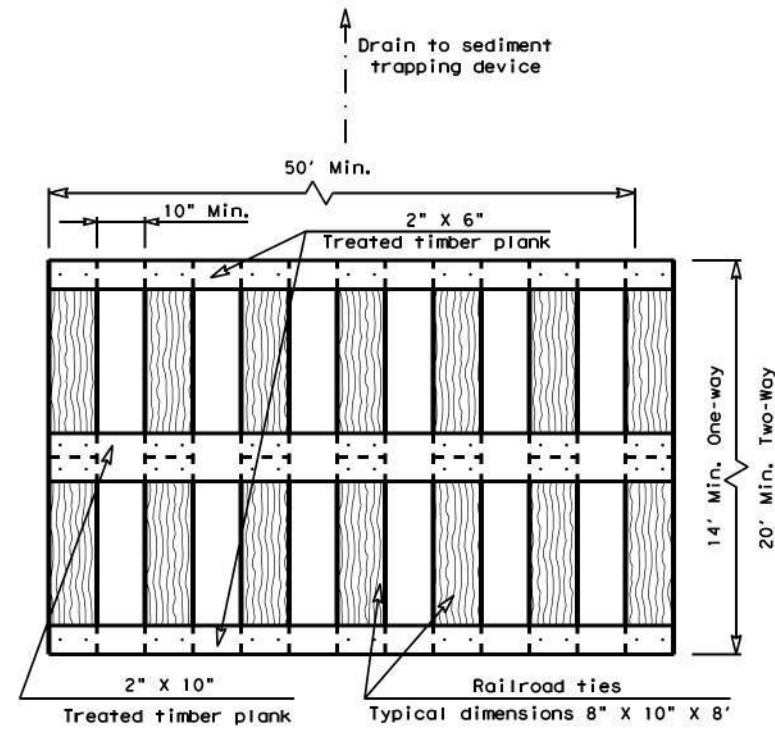


ELEVATION VIEW

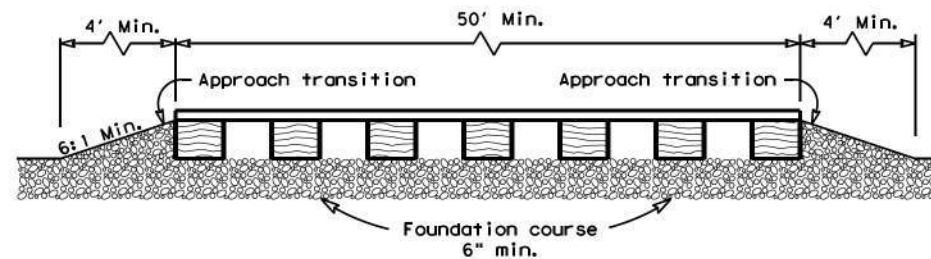
CONSTRUCTION EXIT (TYPE 1)  
ROCK CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 1)

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other materials approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.



PLAN VIEW

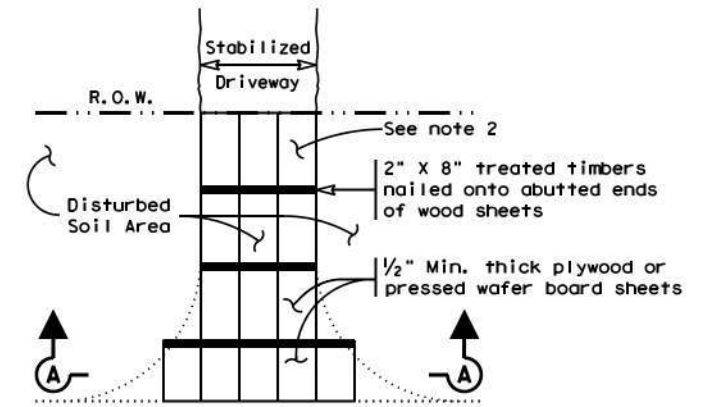


ELEVATION VIEW

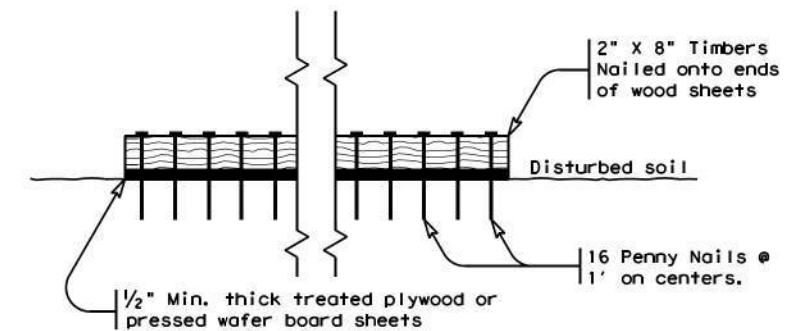
CONSTRUCTION EXIT (TYPE 2)  
TIMBER CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 2)

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50'.
2. The treated timber planks shall be attached to the railroad ties with 1/2" x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
8. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.




PLAN VIEW



SECTION A-A  
CONSTRUCTION EXIT (TYPE 3)  
SHORT TERM

GENERAL NOTES (TYPE 3)

1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.



Texas Department of Transportation

Design Division Standard

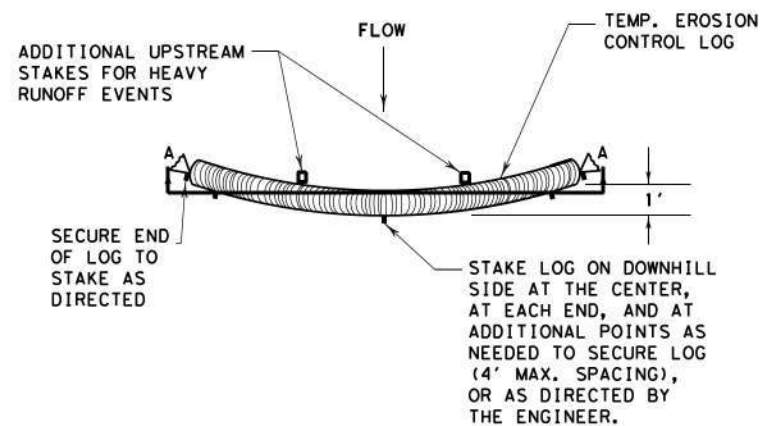
TEMPORARY EROSION,  
SEDIMENT AND WATER  
POLLUTION CONTROL MEASURES  
CONSTRUCTION EXITS  
EC(3) - 16

FILE: ec316	DN: TxDOT	CK: KM	DW: VP	DN/CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	-	-	3217-2301	-
	DIST	COUNTY		SHEET NO.
	AUS	WILLIAMSON		114

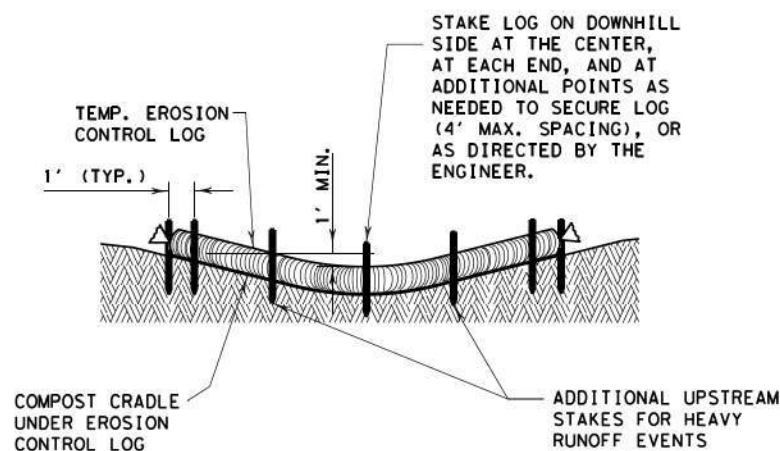


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DATE: FILE:



PLAN VIEW

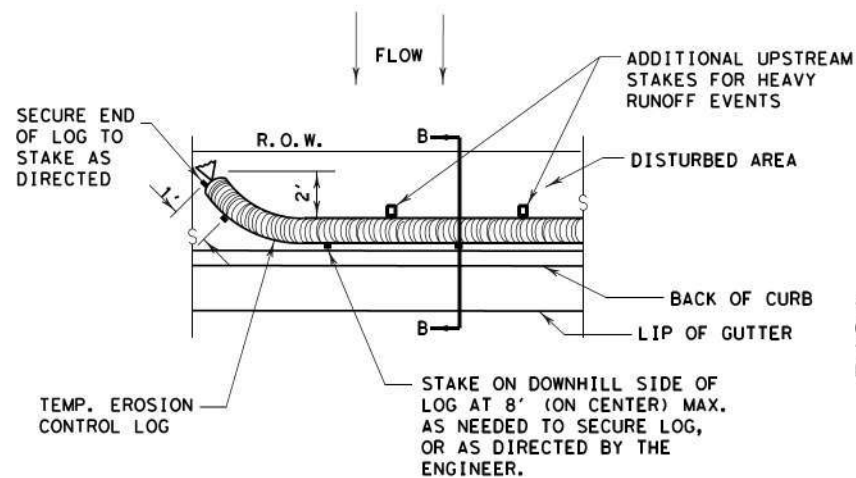


SECTION A-A  
EROSION CONTROL LOG DAM

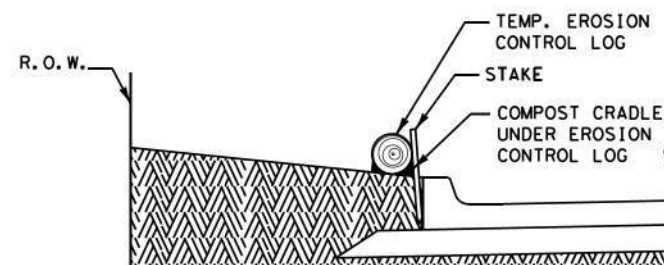
CL-D

LEGEND

- CL-D EROSION CONTROL LOG DAM
- CL-BOC EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY
- CL-SST EROSION CONTROL LOGS ON SLOPES STAKE AND TRENCHING ANCHORING
- CL-SSL EROSION CONTROL LOGS ON SLOPES STAKE AND LASHING ANCHORING
- CL-DI EROSION CONTROL LOG AT DROP INLET
- CL-CI EROSION CONTROL LOG AT CURB INLET
- CL-GI EROSION CONTROL LOG AT CURB & GRATE INLET

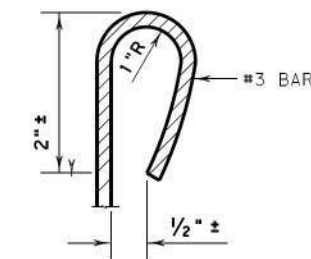


PLAN VIEW

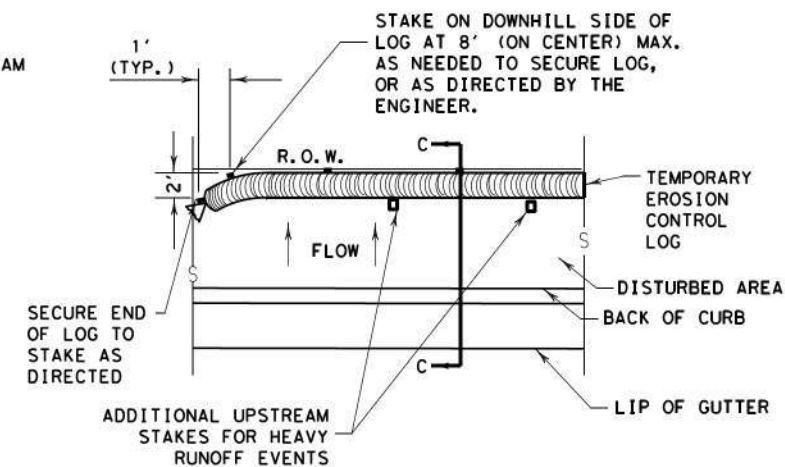


SECTION B-B  
EROSION CONTROL LOG AT BACK OF CURB

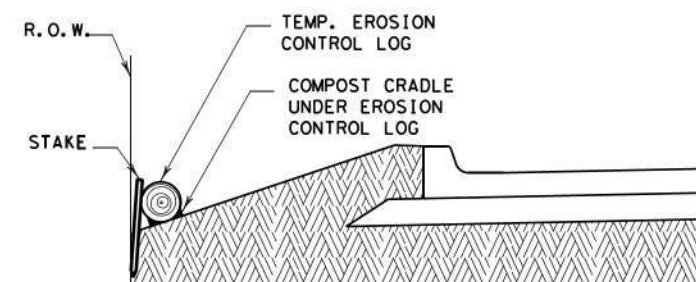
CL-BOC



REBAR STAKE DETAIL



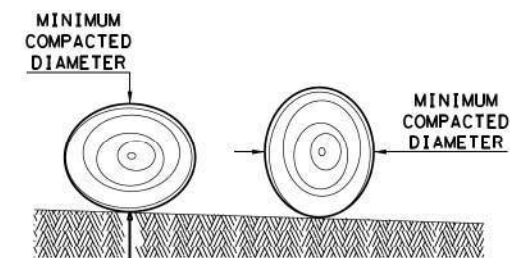
PLAN VIEW



SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

**Log Traps:** The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).


Control logs should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

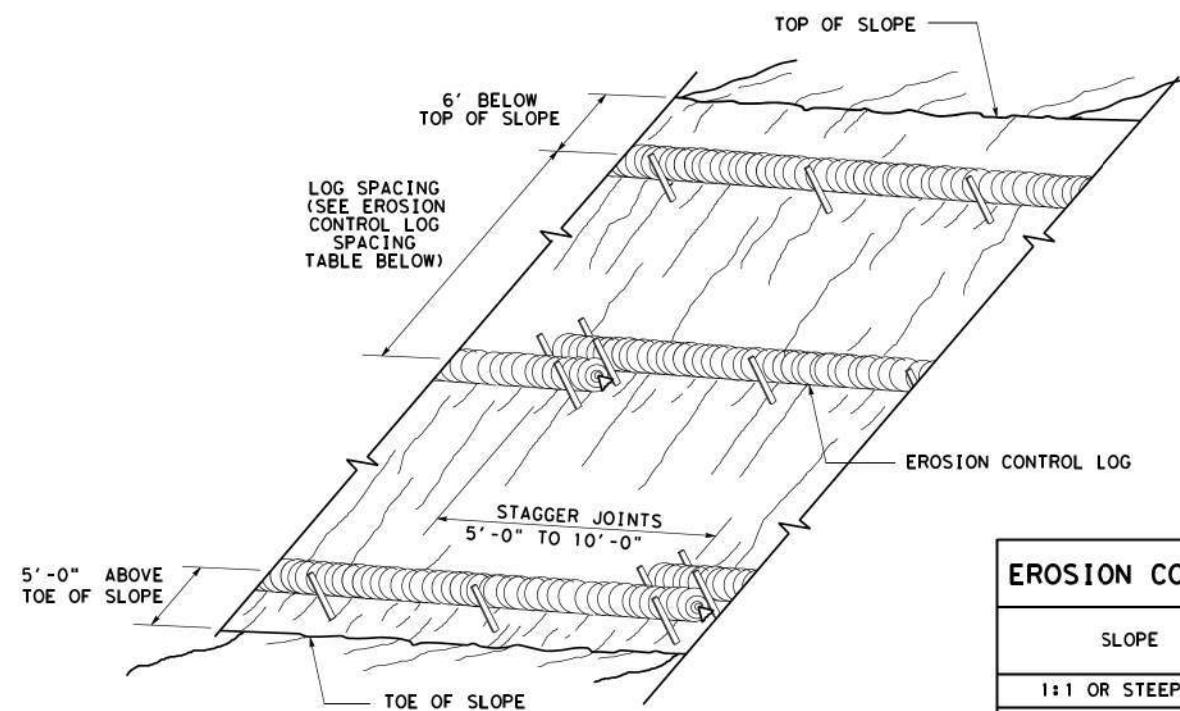
Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

SHEET 1 OF 3

 <b>Texas Department of Transportation</b>		<b>Design Division Standard</b>	
<b>TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES EROSION CONTROL LOG EC (9) - 16</b>			
FILE: ec916	DIST: TxDOT	CK: KM	DW: LS/PT
© TxDOT: JULY 2016	CONT	SECT	JOB
REVISIONS	-	-	3217-2301
	DIST	COUNTY	
	AUS	WILLIAMSON	
			SHEET NO.
			115

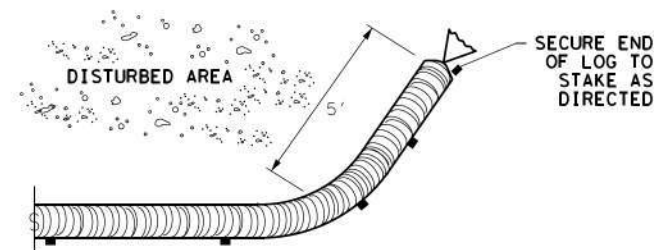
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DATE: FILE:



EROSION CONTROL LOGS ON SLOPES  
STAKE AND TRENCHING ANCHORING

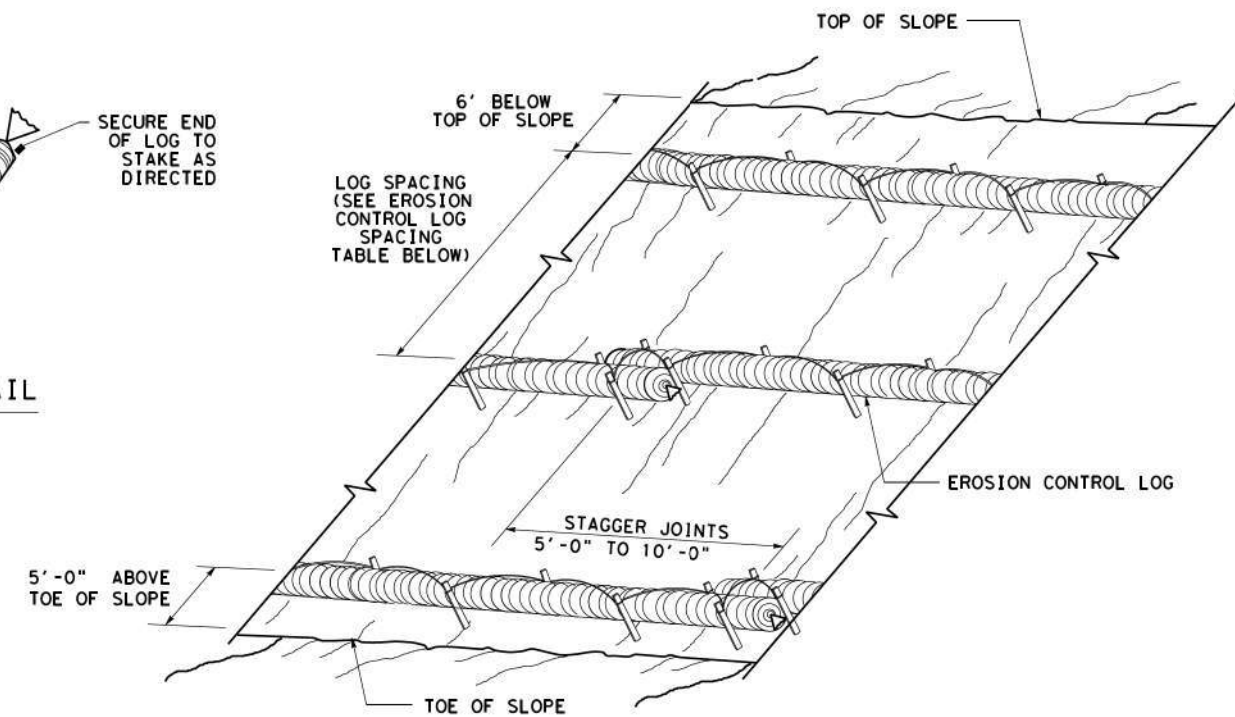
CL-SST



END SECTION RAP DETAIL

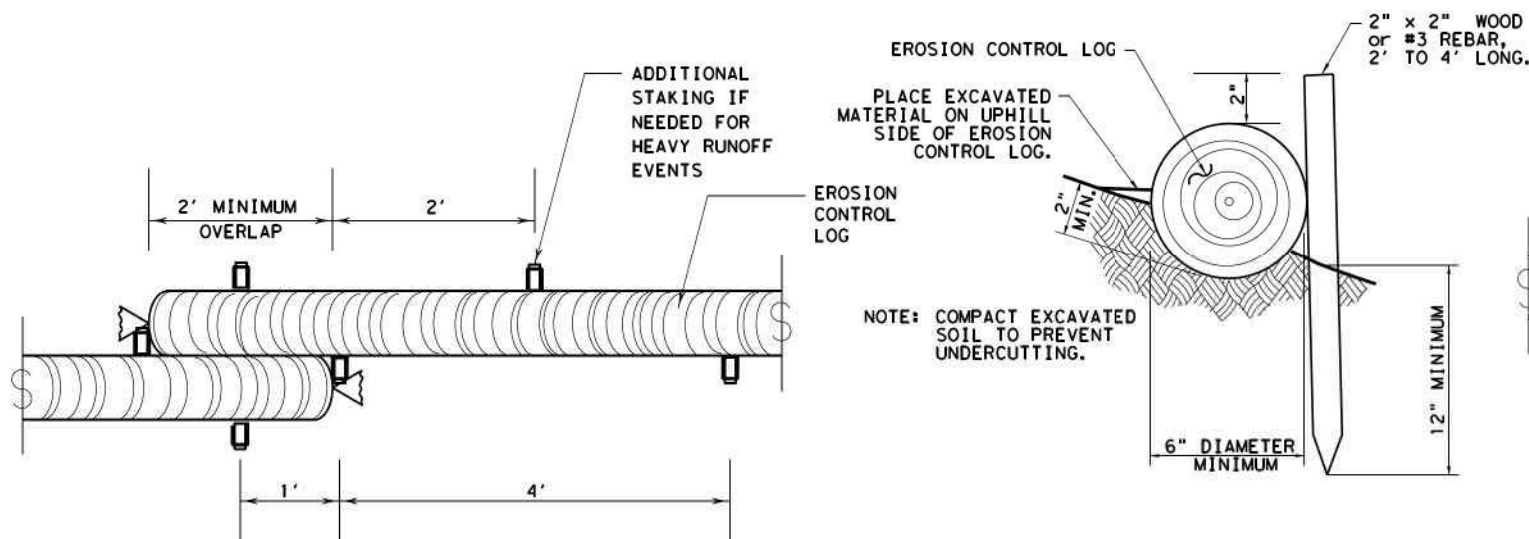
EROSION CONTROL LOG SPACING TABLE				
SLOPE	LOG DIAMETER			
	6"	8"	12"	18"
1:1 OR STEEPER	5'	10'	15'	20'
2:1	10'	20'	30'	40'
3:1	15'	30'	45'	60'
4:1 OR FLATTER	20'	40'	60'	80'

\* ADJUSTMENTS CAN BE MADE FOR SOIL TYPE:  
SOFT, LOAMY SOILS-ADJUST ROWS CLOSER TOGETHER;  
HARD, ROCKY SOILS- ADJUST ROWS FARTHER APART



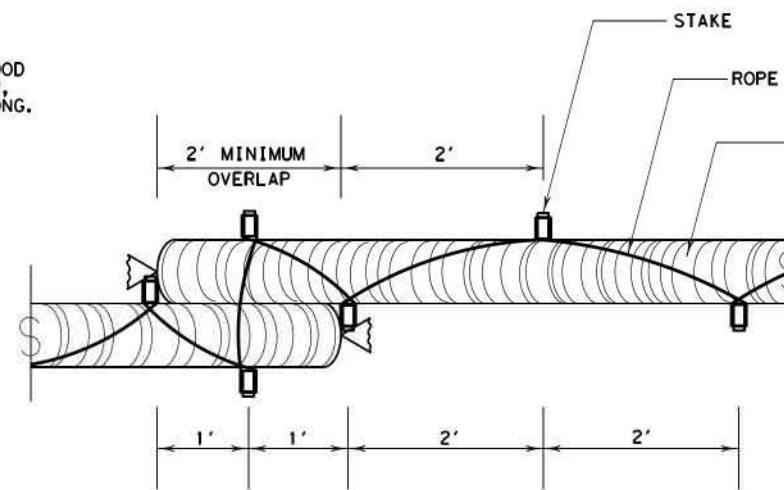
EROSION CONTROL LOGS ON SLOPES  
STAKE AND LASHING ANCHORING

CL-SSL



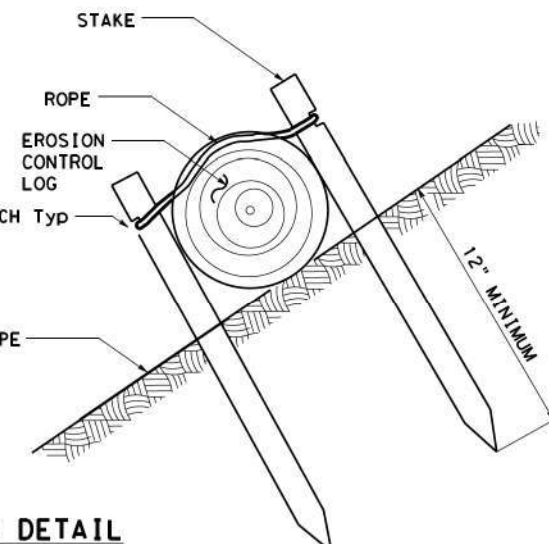
STAKE AND TRENCHING ANCHORING DETAIL

CL-SST



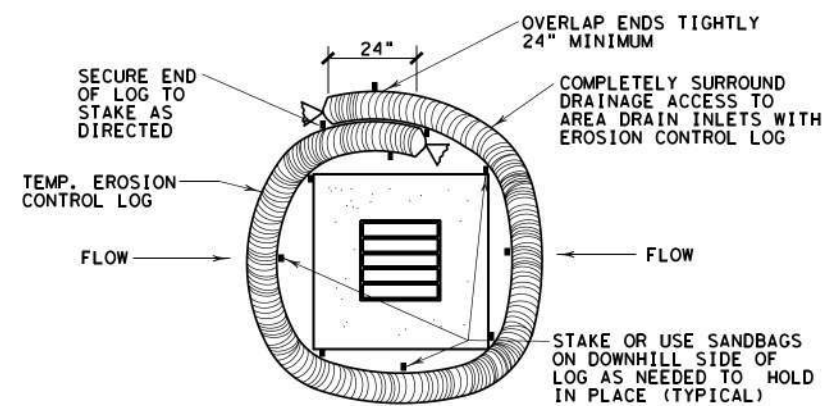
STAKE AND LASHING ANCHORING DETAIL

CL-SSL



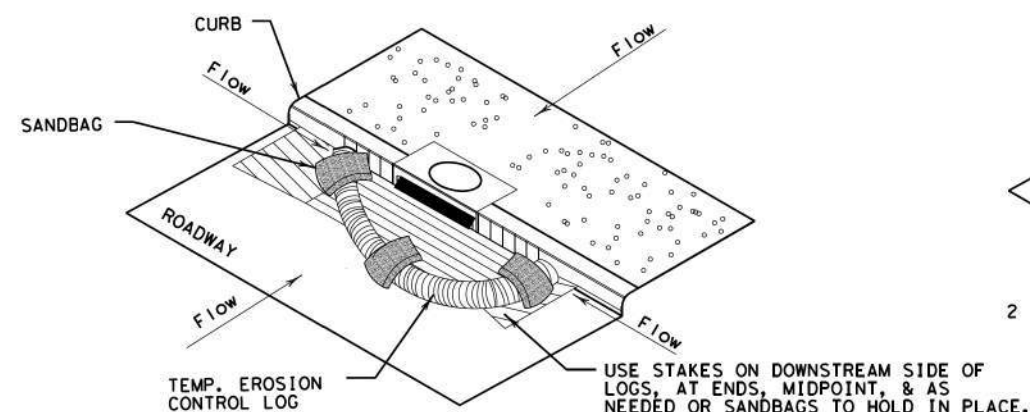
SHEET 2 OF 3

Texas Department of Transportation		Design Division Standard	
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES			
EROSION CONTROL LOG			
EC(9) - 16			
FILE: ec116	DW: TxDOT	CK: KM	DW: LS/PT
© TxDOT: JULY 2016	CONT	SECT	JOB
REVISIONS	-	-	3217-2301
DIST	AUS	COUNTY	WILLIAMSON
		SHEET NO.	116

DATE: \_\_\_\_\_  
FILE: \_\_\_\_\_

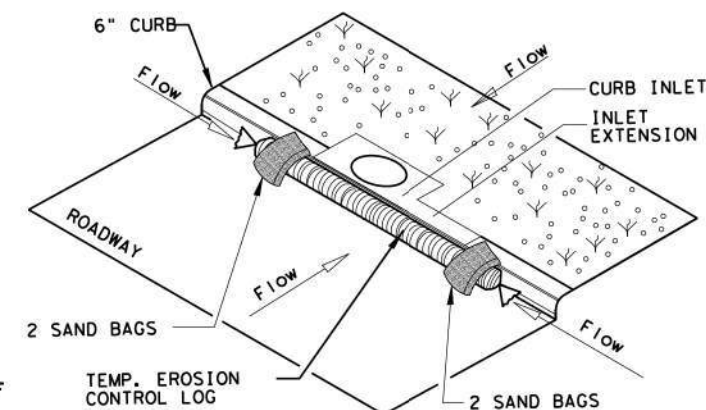
## EROSION CONTROL LOG AT DROP INLET

CL-DI



### EROSION CONTROL LOG AT CURB INLET

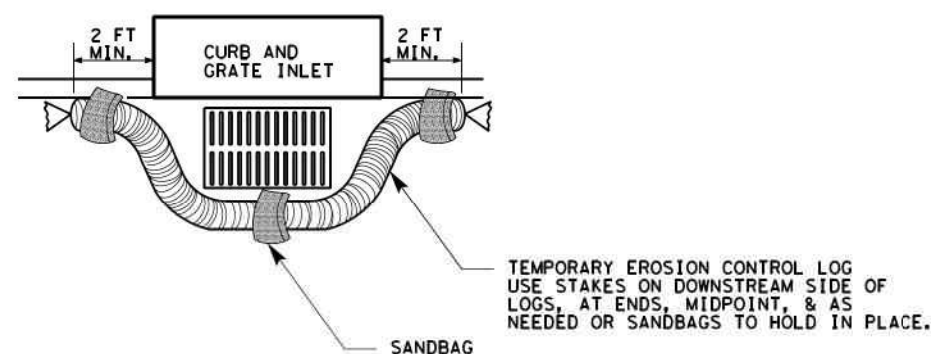
CL - CI



### EROSION CONTROL LOG AT CURB INLET

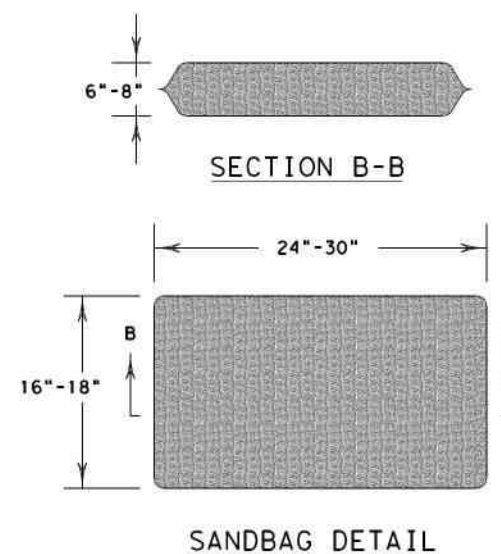
CL - CI

NOTE:  
EROSION CONTROL LOGS USED AT CURB INLETS  
SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE  
TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE  
STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.



EROSION CONTROL LOG AT CURB & GRADE INLET

CL-GI



SANDBAG DETAIL

SHEET 3 OF 3



**Texas Department of Transportation**

**Design  
Division  
Standard**

**TEMPORARY EROSION,  
SEDIMENT AND WATER  
POLLUTION CONTROL MEASURES  
EROSION CONTROL LOG  
EC(9) - 16**

FILE#	ec916	D#	TxDOT	C#	KM	D#	LS/PT	C#	LS
③	TxDOT: JULY 2016	CONT	SECT	JOB			HIGHWAY		
REVISIONS		-	-	3217-2301			-		
		DIST	COUNTY					SHEET N	
		AUS	WILLIAMSON					117	



# TCEQ Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity under TPDES General Permit (TXR150000)

## IMPORTANT:

- Use the [INSTRUCTIONS](#) to fill out each question in this form.
- Use the [CHECKLIST](#) to make certain you filled out all required information.  
Incomplete applications **WILL** delay approval or result in denial.
- Once processed your permit can be viewed at: <http://www.tceq.texas.gov/goto/wq-dpa>

**ePERMITS:** Sign up now for online NOI: <https://www3.tceq.texas.gov/steers/>  
Pay a \$225 reduced application fee by using ePermits.

## APPLICATION FEE:

- You must pay the **\$325** Application Fee to TCEQ for the paper application to be complete.
- Payment and NOI must be mailed to separate addresses.
- Did you know you can pay on line?
  - Go to <http://www.tceq.texas.gov/goto/epay>
  - Select Fee Type: GENERAL PERMIT CONSTRUCTION STORM WATER DISCHARGE NOI APPLICATION
- **Provide your payment information below, for verification of payment:**

Mailed      Check/Money Order Number: \_\_\_\_\_  
                  Name Printed on Check: \_\_\_\_\_  
                  Copy of check enclosed?      Yes

EPAY      Voucher Number: \_\_\_\_\_  
                  Is the Payment Voucher copy attached?      Yes

**RENEWAL: Is this NOI a Renewal of an existing General Permit Authorization?**  
**(Note: A permit cannot be renewed after June 3, 2013.)**

Yes      The Permit number is: TXR15\_\_\_\_\_

**(If a permit number is not provided, a new number will be assigned.)**

No

## 1) OPERATOR (Applicant)

- a)** If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? You may search for your CN at:  
<http://www.tceq.texas.gov/goto/cr-customer>

CN \_\_\_\_\_

**b) What is the Legal Name of the entity (applicant) applying for this permit?**

(The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal document forming the entity.)

**c) What is the contact information for the Operator (Responsible Authority)? The mailing address must be recognized by the US Postal Service (USPS). You may verify the address at: <https://tools.usps.com/go/ZipLookupAction!input.action>**

Prefix (Mr. Ms. Miss): \_\_\_\_\_  
First/Last Name: \_\_\_\_\_ Suffix: \_\_\_\_\_  
Title: \_\_\_\_\_ Credential: \_\_\_\_\_  
Phone Number: \_\_\_\_\_ Ext: \_\_\_\_\_ Fax Number: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
Internal Routing (Mail Code, Etc.): \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_  
If outside USA:  
Territory: \_\_\_\_\_ Country Code: \_\_\_\_\_ Postal Code: \_\_\_\_\_

**d) Indicate the type of Customer (The instructions will help determine your customer type):**

Individual	Limited Partnership	Sole Proprietorship-DBA
Joint Venture	General Partnership	Corporation
Trust	Estate	Federal Government
State Government	County Government	City Government
Other Government		

**e) Independent Operator? (If governmental entity, subsidiary, or part of a larger corporation, check "No".)**

Yes                      No

**f) Number of Employees:**

0-20;              21-100;              101-250;              251-500; or              501 or higher

**g) Customer Business Tax and Filing Numbers:**

(REQUIRED for Corporations and Limited Partnerships. Not Required for Individuals, Government, or Sole Proprietors)

State Franchise Tax ID Number: \_\_\_\_\_

Federal Tax ID: \_\_\_\_\_

Texas Secretary of State Charter (filing) Number: \_\_\_\_\_

DUNS Number (if known): \_\_\_\_\_

**2) APPLICATION CONTACT**

If TCEQ needs additional information regarding this application, who should be contacted?

Is the application contact the same as the applicant identified above?

Yes, go to Section 3).

No, complete section below



Prefix (Mr. Ms. Miss): \_\_\_\_\_  
First/Last Name: \_\_\_\_\_ Suffix: \_\_\_\_\_  
Title: \_\_\_\_\_ Credential: \_\_\_\_\_  
Organization Name: \_\_\_\_\_  
Phone Number: \_\_\_\_\_ Ext: \_\_\_\_\_ Fax Number: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
Internal Routing (Mail Code, Etc.): \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_  
Mailing Information if outside USA:  
Territory: \_\_\_\_\_ Country Code: \_\_\_\_\_ Postal Code: \_\_\_\_\_

### 3) REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

If the site of your business is part of a larger business site or if other businesses were located at this site before yours, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. Search TCEQ's Central Registry to see if the larger site may already be registered as a regulated site at:

<http://www.tceq.texas.gov/goto/cr-searchrn>

If the site is found, provide the assigned Regulated Entity Reference Number and provide the information for the site to be authorized through this application below. The site information for this authorization may vary from the larger site information.

a) TCEQ issued RE Reference Number (RN): RN \_\_\_\_\_

b) Name of project or site (the name known by the community where located):  
\_\_\_\_\_

c) In your own words, briefly describe the primary business of the Regulated Entity: (Do not repeat the SIC and NAICS code):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

d) County (or counties if > 1)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

e) Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

f) Does the site have a physical address?

Yes, complete Section A for a physical address.

No, complete section B for site location information.

#### **Section A:** Enter the physical address for the site.

Verify the address with USPS. If the address is not recognized as a delivery address, provide the address as identified for overnight mail delivery, 911 emergency or other online map tools to confirm an address.

Physical Address of Project or Site:

Street Number: \_\_\_\_\_ Street Name: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

**Section B:** Enter the site location information.

If no physical address (Street Number & Street Name), provide a written location access description to the site. (Example: located 2 miles west from intersection of Hwy 290 & IH35 accessible on Hwy 290 South)

City where the site is located or, if not in a city, what is the nearest city:

State: \_\_\_\_\_ ZIP Code where the site is located: \_\_\_\_\_

**4) GENERAL CHARACTERISTICS**

**a)** Is the project/site located on Indian Country Lands?

Yes - If the answer is Yes, you must obtain authorization through EPA, Region 6.

No

**b)** Is your construction activity associated with a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources?

Yes - If the answer is Yes, you may be under jurisdiction of the Railroad Commission of Texas and may need to obtain authorization through EPA, Region 6.

No

**c)** What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site?

Primary SIC Code: \_\_\_\_\_

**d)** If applicable, what is the Secondary SIC Code(s): \_\_\_\_\_

**e)** What is the total number of acres disturbed? \_\_\_\_\_

**f)** Is the project site part of a larger common plan of development or sale?

Yes - If the answer is Yes, the total number of acres disturbed can be less than 5 acres.

No - If the answer is No, the total number of acres disturbed must be 5 or more. If the total number of acres disturbed is less than 5 then the project site does not qualify for coverage through this Notice of Intent. Coverage will be denied. See the requirements in the general permit for small construction sites.

**g)** What is the name of the first water body(s) to receive the stormwater runoff or potential runoff from the site?

**h)** What is the segment number(s) of the classified water body(s) that the discharge will eventually reach?

**i) Is the discharge into an MS4?**

Yes - If the answer is Yes, provide the name of the MS4 operator below.

---

Note: The general permit requires you to send a copy of the NOI to the MS4 operator.

No

**j) Are any of the surface water bodies receiving discharges from the construction site on the latest EPA-approved CWA 303(d) List of impaired waters?**

Yes - If the answer is Yes, provide the name(s) of the impaired water body(s) below.

---

No

**k) Is the discharge or potential discharge within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer as defined in 30 TAC Chapter 213?**

Yes - If the answer is Yes, complete certification below by checking "Yes."

No

I certify that a copy of the TCEQ approved Plan required by the Edwards Aquifer Rule (30 TAC Chapter 213) is either included or referenced in the Stormwater Pollution Prevention Plan.

Yes

## 5) CERTIFICATION

Check Yes to the certifications below. Failure to indicate Yes to **ALL** items may result in denial of coverage under the general permit.


- a) I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000). Yes
- b) I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas. Yes
- c) I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed. Yes
- d) I certify that a Stormwater Pollution Prevention Plan has been developed, will be implemented prior to construction and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the general permit TXR150000. Note: For multiple operators who operate under a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator. Yes

### Operator Certification:

I, \_\_\_\_\_  
Typed or printed name Title

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under **30 Texas Administrative Code §305.44** to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signature:  Date: 06/04/2025  
(Use blue ink)

## NOTICE OF INTENT CHECKLIST (TXR150000)

- Did you complete everything? Use this checklist to be sure!
- Are you ready to mail your form to TCEQ? Go to the General Information Section of the Instructions for mailing addresses.

This checklist is for use by the operator to ensure a complete application. Missing information may result in denial of coverage under the general permit. (See NOI process description in the Instructions)

### Application Fee:

If paying by Check:

Check was mailed **separately** to the TCEQs Cashier's Office. (See Instructions for Cashier's address and Application address.)

Check number and name on check is provided in this application.

If using ePay:

The voucher number is provided in this application or a copy of the voucher is attached.

### PERMIT NUMBER:

Permit number provided – if this application is for renewal of an existing authorization.

### OPERATOR INFORMATION - Confirm each item is complete:

Customer Number (CN) issued by TCEQ Central Registry

Legal name as filed to do business in Texas (Call TX SOS 512/463-5555)

Name and title of responsible authority signing the application

Mailing address is complete & verifiable with USPS. [www.usps.com](http://www.usps.com)

Phone numbers/e-mail address

Type of operator (entity type)

Independent operator

Number of employees

For corporations or limited partnerships – Tax ID and SOS filing numbers

Application contact and address is complete & verifiable with USPS. <http://www.usps.com>

### REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE - Confirm each item is complete:

Regulated Entity Reference Number (RN) (if site is already regulated by TCEQ)

Site/project name/regulated entity

Latitude and longitude <http://www.tceq.texas.gov/gis/sqmaview.html>

County

Site/project physical address. Do not use a rural route or post office box.

Business description

### GENERAL CHARACTERISTICS - Confirm each item is complete:

Indian Country Lands –the facility is not on Indian Country Lands

Construction activity related to facility associated to oil, gas, or geothermal resources

Standard Industrial Classification (SIC) Code [www.osha.gov/oshstats/sicser.html](http://www.osha.gov/oshstats/sicser.html)

Acres disturbed is provided and qualifies for coverage through a NOI

Common plan of development or sale

Receiving water body(s)

Segment number(s)

Impaired water body(s)

MS4 operator

Edwards Aquifer rule

### CERTIFICATION

Certification statements have been checked indicating "Yes"

Signature meets 30 Texas Administrative Code (TAC) 305.44 and is original.



# Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity under TPDES General Permit (TXR150000)

## General Information and Instructions

### GENERAL INFORMATION

#### Where to Send the Notice of Intent (NOI):

##### BY REGULAR U.S. MAIL

Texas Commission on Environmental Quality  
Stormwater Processing Center (MC-228)  
P.O. Box 13087  
Austin, Texas 78711-3087

##### BY OVERNIGHT/EXPRESS MAIL

Texas Commission on Environmental Quality  
Stormwater Processing Center (MC-228)  
12100 Park 35 Circle  
Austin, TX 78753

#### TCEQ Contact List:

Application – status and form questions:	512/239-3700, <a href="mailto:swpermit@tceq.texas.gov">swpermit@tceq.texas.gov</a>
Technical questions:	512/239-4671, <a href="mailto:swgp@tceq.texas.gov">swgp@tceq.texas.gov</a>
Environmental Law Division:	512/239-0600
Records Management - obtain copies of forms:	512/239-0900
Reports from databases (as available):	512/239-DATA (3282)
Cashier's office:	512/239-0357 or 512/239-0187

#### Notice of Intent Process:

When your NOI is received by the program, the form will be processed as follows:

- 1) **Administrative Review:** Each item on the form will be reviewed for a complete response. In addition, the operator's legal name must be verified with Texas Secretary of State as valid and active (if applicable). The address(s) on the form must be verified with the US Postal service as receiving regular mail delivery. Never give an overnight/express mailing address.
- 2) **Notice of Deficiency:** If an item is incomplete or not verifiable as indicated above, a notice of deficiency (NOD) will be mailed to the operator. The operator will have 30 days to respond to the NOD. The response will be reviewed for completeness.
- 3) **Acknowledgment of Coverage:** An Acknowledgment Certificate will be mailed to the operator. This certificate acknowledges coverage under the general permit.  
-or-  
**Denial of Coverage:** If the operator fails to respond to the NOD or the response is inadequate, coverage under the general permit may be denied. If coverage is denied, the operator will be notified.

#### General Permit (Your Permit)

For NOIs submitted **electronically** through ePermits, provisional coverage under the general permit begins immediately following confirmation of receipt of the NOI form by the TCEQ.

For **paper** NOIs, provisional coverage under the general permit begins **7 days after a completed NOI is postmarked for delivery** to the TCEQ.

You should have a copy of your general permit when submitting your application. You may view and print your permit for which you are seeking coverage, on the TCEQ web site <http://www.tceq.texas.gov>. Search using key word TXR150000.

### **General Permit Forms**

The Notice of Intent (NOI), Notice of Termination (NOT), and Notice of Change (NOC) (including instructions) are available in Adobe Acrobat PDF format on the TCEQ web site <http://www.tceq.texas.gov>.

### **Change in Operator**

An authorization under the general permit is not transferable. If the operator of the regulated entity changes, the present permittee must submit a Notice of Termination and the new operator must submit a Notice of Intent. The NOT and NOI must be submitted no later than 10 days prior to the change in Operator status.

### **TCEQ Central Registry Core Data Form**

The Core Data Form has been incorporated into this form. Do not send a Core Data Form to TCEQ. After final acknowledgment of coverage under the general permit, the program will assign a Customer Number and Regulated Entity Number.

You can find the information on the Central Registry web site at <http://www15.tceq.texas.gov/crpub/>. You can search by the Regulated Entity (RN), Customer Number (CN) or Name (Permittee), or by your permit number under the search field labeled "Program ID". Capitalize all letters in the permit number.

The Customer (Permittee) is responsible for providing consistent information to the TCEQ, and for updating all CN and RN data for all authorizations as changes occur. For General Permits, a Notice of Change form must be submitted to the program area.

### **Fees associated with a General Permit**

Payment of the fee may be made by check or money order, payable to TCEQ, or through EPAY (electronic payment through the web).

**Application Fee:** This fee is required to be paid at the time the NOI is submitted. Failure to submit payment at the time the application is filed will cause delays in acknowledgment or denial of coverage under the general permit.

#### **Mailed Payments:**

Payment must be mailed under separate cover at one of the addresses below using the attached Application Fee submittal form. (DO NOT SEND A COPY OF THE NOI WITH THE APPLICATION FEE SUBMITTAL FORM)

BY REGULAR U.S. MAIL  
Texas Commission on Environmental Quality  
Financial Administration Division  
Cashier's Office, MC-214  
P.O. Box 13088  
Austin, Texas 78711-3088

BY OVERNIGHT/EXPRESS MAIL  
Texas Commission on Environmental Quality  
Financial Administration Division  
Cashier's Office, MC-214  
12100 Park 35 Circle  
Austin, TX 78753

**ePAY Electronic Payment:** <http://www.tceq.texas.gov/epay>

When making the payment you must select Water Quality, and then select the fee category "General Permit Construction Storm Water Discharge NOI Application". You must include a copy of the payment voucher with your NOI. Your NOI will not be considered complete without the payment voucher.

## INSTRUCTIONS FOR FILLING OUT THE NOI FORM

**Renewal of General Permit.** Dischargers holding active authorizations under the expired General Permit are required to submit a NOI to continue coverage. The existing permit number is required. If the permit number is not provided or has been terminated, expired, or denied a new permit number will be issued.

### 1. Operator (Applicant)

#### a) Enter assigned Customer Number (CN)

TCEQ's Central Registry will assign each customer a number that begins with CN, followed by nine digits. **This is not a permit number, registration number, or license number.**

If this customer has not been assigned a CN, leave the space for the CN blank.

If this customer has already been assigned this number, enter the permittee's CN.

#### b) Legal Name

Provide the current legal name of the permittee, as authorized to do business in Texas. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, that is filed in the county where doing business. You may contact the SOS at 512/463-5555, for more information related to filing in Texas. If filed in the county where doing business, provide a copy of the legal documents showing the legal name.

#### c) Operator Contact's (Responsible Authority) Contact Information and Mailing Address

Provide the first and last name, and the title of the person signing the Certification section of the application. This person must be an individual having signatory authority in accordance with 30 TAC Chapter §305.44. This person is also referred to as the Responsible Authority.

Provide a complete mailing address for receiving mail from the TCEQ. The address must be verifiable with the US Postal Service at

<https://tools.usps.com/go/ZipLookupAction!input.action> for regular mail delivery (not overnight express mail). If you find that the address is not verifiable using the USPS web search, please indicate the address is used by the USPS for regular mail delivery.

The area code and phone number should provide contact to the operator. Leave Extension blank if not applicable.

The fax number and e-mail address are optional and should correspond to the operator.

#### d) Type of Customer (Entity Type)

Check only one box that identifies the type of entity. Use the descriptions below to identify the appropriate entity type. Note that the selected entity type also indicates the name that must be provided as an applicant for a permit, registration or authorization.

##### **Sole Proprietorship – DBA**

A sole proprietorship is a customer that is owned by only one person and has not been incorporated. This business may:

- be under the person's name
- have its own name (doing business as or d.b.a.)
- have any number of employees

If the customer is a Sole Proprietorship or DBA, the 'legal name' of the individual business 'owner' must be provided. The DBA name is not recognized as the 'legal name' of the entity. The DBA name may be used for the site name (regulated entity).

**Individual**

An individual is a customer who has not established a business, but conducts an activity that needs to be regulated by the TCEQ.

**Partnership**

- A customer that is established as a partnership as defined by the Texas Secretary of State Office (TX SOS). A Limited Partnership or Limited Liability Partnership (Partnership) is required to file with the Texas Secretary of State. A General Partnership or Joint Venture is not required to register with the state.
- **Partnership (Limited Partnership or Limited Liability Partnership):** A limited partnership is defined in the Act as a partnership formed by two or more persons under the provisions of Section 3 of the Uniform Limited Partnership Act (Art. 6132a, Revised Civil Statutes of Texas) and having as members one or more general partners and one or more limited partners. The limited partners as such are not bound by the obligations of the partnership. Limited partners may not take part in the day-to-day operations of the business. A Limited Partnership must file with the Texas Secretary of State. A registered limited liability partnership is a general or limited partnership that is registered with the Texas Secretary of State. The partnership's name must contain the words "Registered Limited Liability Partnership" or the abbreviation "L.L.P." as the last words or letters of its name.
- **General Partnership:** A general partner may or may not invest, participates in running the partnership and is liable for all acts and debts of the partnership and any member of it. A General Partnership does not have limited partners. For a General Partnership, there is no registration with the state or even written agreement necessary for a general partnership to be formed. The legal definition of a partnership is generally stated as "an association of two or more persons to carry on as co-owners a business for profit" (Revised Uniform Partnership Act § 101 [1994]).
- **Joint Venture:** A joint venture is but another name for a special partnership. It might be distinguished from a general partnership in that the latter is formed for the transaction of a general business, while a joint venture is usually limited to a single transaction. That is, a joint venture is a special combination of persons in the nature of a partnership engaged in the joint prosecution of a particular transaction for mutual benefit or profit.

**Corporation**

A customer meets all of these conditions:

- is a legally incorporated entity under the laws of any state or country
- is recognized as a corporation by the Texas Secretary of State
- has proper operating authority to operate in Texas.
- The corporation's 'legal name' as filed with the Texas Secretary of State must be provided as applicant. An 'assumed' name of a corporation is not recognized as the 'legal name' of the entity.

**Government**

Federal, state, county, or city government (as appropriate)

The customer is either an agency of one of these levels of government or the governmental body itself. The government agency's 'legal name' must be provided as the

applicant. A department name or other description of the organization should not be included as a part of the 'legal name' as applicant.

**Trust or Estate**

A trust and an estate are fiduciary relationships governing the trustee/executor with respect to the trust/estate property.

**Other Government**

A utility district, water district, tribal government, college district, council of governments, or river authority. Write in the specific type of government.

**e) Independent Entity**

Check No if this customer is a subsidiary, part of a larger company, or is a governmental entity. Otherwise, check Yes.

**f) Number of Employees**

Check one box to show the number of employees for this customer's entire company, at all locations. This is not necessarily the number of employees at the site named in the application.

**g) Customer Business Tax and Filing Numbers**

These are required for Corporations and Limited Partnerships. These are not required for Individuals, Government, and Sole Proprietors.

**State Franchise Tax ID Number**

Corporations and limited liability companies that operate in Texas are issued a franchise tax identification number. If this customer is a corporation or limited liability company, enter this number here.

**Federal Tax ID**

All businesses, except for some small sole proprietors, individuals, or general partnerships should have a federal taxpayer identification number (TIN). Enter this number here. Use no prefixes, dashes, or hyphens. Sole proprietors, individuals, or general partnerships do not need to provide a federal tax ID.

**TX SOS Charter (filing) Number**

Corporations and Limited Partnerships required to register with the Texas Secretary of State are issued a charter or filing number. You may obtain further information by calling SOS at 512/463-5555.

**DUNS Number**

Most businesses have a DUNS (Data Universal Numbering System) number issued by Dun and Bradstreet Corp. If this customer has one, enter it here.

**2. APPLICATION CONTACT**

Provide the name, title and communication information of the person that TCEQ can contact for additional information regarding this application.

**3. REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE**

**a) Regulated Entity Reference Number (RN)**

A number issued by TCEQ's Central Registry to sites (a location where a regulated activity occurs) regulated by TCEQ. This is not a permit number, registration number, or license number. If this regulated entity has not been assigned an RN, leave this space blank.

If the site of your business is part of a larger business site, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. Search TCEQ's Central Registry to see if the larger site may already be registered as a regulated site at: <http://www.tceq.texas.gov/goto/cr-searchrn>

If the site is found, provide the assigned Regulated Entity Reference Number (RN) and provide the information for the site to be authorized through this application. The site information for this authorization may vary from the larger site information.

An example is a chemical plant where a unit is owned or operated by a separate corporation that is accessible by the same physical address of your unit or facility. Other examples include industrial parks identified by one common address but different corporations have control of defined areas within the site. In both cases, an RN would be assigned for the physical address location and the permitted sites would be identified separately under the same RN.

**b) Site/Project Name/Regulated Entity**

Provide the name of the site as known by the public in the area where the site is located. The name you provide on this application will be used in the TCEQ Central Registry as the Regulated Entity name.

**c) Description of Activity Regulated**

In your own words, briefly describe the primary business that you are doing that requires this authorization. Do not repeat the SIC Code description.

**d) County**

Identify the county or counties in which the regulated entity is located.

**e) Latitude and Longitude**

Enter the latitude and longitude of the site in degrees, minutes, and seconds or decimal form. For help obtaining the latitude and longitude, go to:

<http://www.tceq.texas.gov/gis/sqmapview.html> or <http://nationalmap.gov/ustopo>

**f) Site/Project (RE) Physical Address/Location Information**

Enter the complete address for the site in Section A if the address can be validated through the US Postal Service. If the physical address is not recognized as a USPS delivery address, you may need to validate the address with your local police (911 service) or through an online map site used to locate a site. Please confirm this to be a complete and valid address. Do not use a rural route or post office box for a site location.

If a site does not have an address that includes a street (or house) number and street name, enter NO ADDRESS for the street name in Section A. In Section B provide a complete written location description. For example: "The site is located 2 miles west from intersection of Hwy 290 & IH35, located on the southwest corner of the Hwy 290 South bound lane."

Provide the city (or nearest city) and zip code of the facility location.

**4. GENERAL CHARACTERISTICS**

**a) Indian Country Lands**

If your site is located on Indian Country Lands, the TCEQ does not have authority to process your application. You must obtain authorization through EPA, Region 6, Dallas. Do not submit this form to TCEQ.



**b) Construction activity associated with facility associated with exploration, development, or production of oil, gas, or geothermal resources**

If your activity is associated with oil and gas exploration, development, or production, you may be under jurisdiction of the Railroad Commission of Texas and may need to obtain authorization from EPA Region 6. For more information, see:

[http://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p\\_dir=&p\\_rloc=&p\\_tloc=&p\\_ploc=&pg=1&p\\_tac=&ti=16&pt=1&ch=3&rl=30](http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=30)

Construction activities associated with a facility related to oil, gas or geothermal resources may include the construction of a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel.

Where required by federal law, discharges of stormwater associated with construction activities under the Railroad Commission's jurisdiction must be authorized by the EPA and the Railroad Commission of Texas, as applicable. Activities under Railroad Commission of Texas jurisdiction include construction of a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources, such as a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility under the jurisdiction of the Railroad Commission of Texas; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel. The Railroad Commission of Texas also has jurisdiction over stormwater from land disturbance associated with a site survey that is conducted prior to construction of a facility that would be regulated by the Railroad Commission of Texas. Under 33 U.S.C. §1342(l)(2) and §1362(24), EPA cannot require a permit for discharges of stormwater from "field activities or operations associated with {oil and gas} exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities" unless the discharge is contaminated by contact with any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the facility. Under §3.8 of this title (relating to Water Protection), the Railroad Commission of Texas prohibits operators from causing or allowing pollution of surface or subsurface water. Operators are encouraged to implement and maintain best management practices (BMPs) to minimize discharges of pollutants, including sediment, in stormwater during construction activities to help ensure protection of surface water quality during storm events.

**c) Primary Standard Industrial Classification (SIC) Code**

Provide the SIC Code that best describes the construction activity being conducted at this site.

Common SIC Codes related to construction activities include:

- 1521 - Construction of Single Family Homes
- 1522 - Construction of Residential Bldgs. Other than Single Family Homes
- 1541 - Construction of Industrial Bldgs. and Warehouses

- 1542 - Construction of Non-residential Bldgs, other than Industrial Bldgs. and Warehouses
- 1611 - Highway and Street Construction, except Highway Construction
- 1622 - Bridge, Tunnel, and Elevated Highway Construction
- 1623 - Water, Sewer, Pipeline and Communications, and Power Line Construction

For help with SIC Codes, go to:

<http://www.osha.gov/pls/imis/sicsearch.html>

**d) Secondary SIC Code**

Secondary SIC Code(s) may be provided. Leave blank if not applicable. For help with SIC Codes, go to: <http://www.osha.gov/pls/imis/sicsearch.html>

**e) Total Number of Acres Disturbed**

Provide the approximate number of acres that the construction site will disturb. Construction activities that disturb less than one acre, unless they are part of a larger common plan that disturbs more than one acre, do not require permit coverage. Construction activities that disturb between one and five acres, unless they are part of a common plan that disturbs more than five acres, do not require submission of an NOI. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

If you have any questions about this item, please contact the stormwater technical staff by phone at (512)239-4671 or by email at [swgp@tceq.texas.gov](mailto:swgp@tceq.texas.gov).

**f) Common Plan of Development**

Construction activities that disturb less than five acres do not require submission of an NOI unless they are part of a common plan of development or for sale where the area disturbed is five or more acres. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

For more information on "What is a common plan of development?" go to:

[www.tceq.texas.gov/permitting/stormwater/common\\_plan\\_of\\_development\\_steps.html](http://www.tceq.texas.gov/permitting/stormwater/common_plan_of_development_steps.html)

For further information, go to the TCEQ stormwater construction webpage at:

[www.tceq.texas.gov/goto/construction](http://www.tceq.texas.gov/goto/construction) and search for "Additional Guidance and Quick Links". If you have any further questions about this item, please call the stormwater technical staff at (512)239-4671.

**g) Identify the water body(s) receiving stormwater runoff**

The stormwater may be discharged directly to a receiving stream or through a MS4 from your site. It eventually reaches a receiving water body such as a local stream or lake, possibly via a drainage ditch. You must provide the name of the water body that receives the discharge from the site (a local stream or lake).

If your site has more than one outfall you need to include the name of the first water body for each outfall, if they are different.

**h) Identify the segment number(s) of the classified water body(s)**

Identify the classified segment number(s) receiving a discharge directly or indirectly. Go to the following link to find the segment number of the classified water body where stormwater will flow from the site: [www.tceq.texas.gov/waterquality/monitoring/viewer.html](http://www.tceq.texas.gov/waterquality/monitoring/viewer.html)

You may also find the segment number in TCEQ publication GI-316:

[www.tceq.texas.gov/publications/gi/gi-316](http://www.tceq.texas.gov/publications/gi/gi-316)

If the discharge is into an unclassified receiving water and then crosses state lines prior to entering a classified segment, select the appropriate watershed:

- 0100 (Canadian River Basin)
- 0200 (Red River Basin)
- 0300 (Sulfur River Basin)
- 0400 (Cypress Creek Basin)
- 0500 (Sabine River Basin)

Call the Water Quality Assessments section at (512)239-4671 for further assistance.

**i) Discharge into MS4 – Identify the MS4 Operator**

The discharge may initially be into a municipal separate storm sewer system (MS4). If the stormwater discharge is into an MS4, provide the name of the entity that operates the MS4 where the stormwater discharges. An MS4 operator is often a city, town, county, or utility district, but possibly can be another form of government. Please note that the Construction General Permit requires the Operator to supply the MS4 with a copy of the NOI submitted to TCEQ. For assistance, you may call the technical staff at (512)239-4671.

**j) Surface Water bodies on list of impaired waters – Identify the impaired water body(s)**

Indicate Yes or No if any surface water bodies receiving discharges from the construction site are on the latest EPA-approved CWA 303(d) List of impaired waters. Provide the name(s) of surface water bodies receiving discharges or potential discharges from the construction site that are on the latest EPA-approved CWA 303(d) List of impaired waters. The EPA-approved CWA 303(d) List of impaired waters in Texas can be found at:

[www.tceq.texas.gov/waterquality/assessment/305\\_303.html](http://www.tceq.texas.gov/waterquality/assessment/305_303.html)

NOTE: Do not use any "draft" documents.

**k) Discharges to the Edwards Aquifer Recharge Zone and Certification**

See maps on the TCEQ website to determine if the site is located within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer at: [www.tceq.texas.gov/field/eapp/viewer.html](http://www.tceq.texas.gov/field/eapp/viewer.html)

If the discharge or potential discharge is within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, a site specific authorization approved by the Executive Director under the Edwards Aquifer Protection Program (30 TAC Chapter 213) is required before construction can begin. The certification must be answered "Yes" for coverage under the Construction General Permit. The TCEQ approved plan must be readily available for TCEQ staff to review at the time that the NOI is submitted.

The general permit requires the approved Contributing Zone Plan or Water Pollution Abatement Plan to be included or referenced as a part of the Stormwater Pollution Prevention Plan.

For questions regarding the Edwards Aquifer Protection Program, contact the appropriate TCEQ Regional Office. For projects in Hays, Travis and Williamson Counties: Austin Regional Office, 12100 Park 35 Circle, Austin, TX 78753, 512-339-2929. For Projects in Bexar, Comal, Kinney, Medina and Uvalde Counties: TCEQ San Antonio Regional Office, 14250 Judson Rd., San Antonio, TX 78233-4480, 210-490-3096.

## **5. CERTIFICATIONS**

Failure to indicate **Yes** to ALL of the certification items may result in denial of coverage under the general permit.

### **a) Certification of Understanding the Terms and Conditions of Construction General Permit (TXR150000)**

Provisional coverage under the Construction General Permit (TXR150000) begins 7 days after the completed paper NOI is postmarked for delivery to the TCEQ. (Electronic applications submitted through ePermits have immediate provisional coverage). You must obtain a copy and read the Construction General Permit before submitting your application. You may view and print the Construction General Permit for which you are seeking coverage at the TCEQ web site: [www.tceq.texas.gov/goto/construction](http://www.tceq.texas.gov/goto/construction)

### **b) Certification of Legal Name**

The full legal name of the applicant as authorized to do business in Texas is required. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, that is filed in the county where doing business. You may contact the SOS at (512)463 5555, for more information related to filing in Texas.

### **c) Understanding of Notice of Termination**

A permittee shall terminate coverage under this Construction General Permit through the submittal of a NOT when the operator of the facility changes, final stabilization has been reached, the discharge becomes authorized under an individual permit, or the construction activity never began at this site.

### **d) Certification of Stormwater Pollution Prevention Plan**

The SWP3 identifies the areas and activities that could produce contaminated runoff at your site and then tells how you will ensure that this contamination is mitigated. For example, in describing your mitigation measures, your site's plan might identify the devices that collect and filter stormwater, tell how those devices are to be maintained, and tell how frequently that maintenance is to be carried out. You must develop this plan in accordance with the TCEQ general permit requirements. This plan must be developed and implemented before you complete this NOI. The SWP3 must be available for a TCEQ investigator to review on request.

### **Operator Certification:**

The certification must bear an original signature of a person meeting the signatory requirements specified under 30 Texas Administrative Code (TAC) §305.44.

### **IF YOU ARE A CORPORATION:**

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(1) (see below). According to this code provision, any corporate representative may sign an NOI or similar form so long as the authority to sign such a document has been delegated to that person in accordance with corporate procedures. By signing the NOI or similar form, you are certifying that such authority has been delegated to you. The TCEQ may request documentation evidencing such authority.

**IF YOU ARE A MUNICIPALITY OR OTHER GOVERNMENT ENTITY:**

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(3) (see below). According to this code provision, only a ranking elected official or principal executive officer may sign an NOI or similar form. Persons such as the City Mayor or County Commissioner will be considered ranking elected officials. In order to identify the principal executive officer of your government entity, it may be beneficial to consult your city charter, county or city ordinances, or the Texas statute(s) under which your government entity was formed. An NOI or similar document that is signed by a government official who is not a ranking elected official or principal executive officer does not conform to §305.44(a)(3). The signatory requirement may not be delegated to a government representative other than those identified in the regulation. By signing the NOI or similar form, you are certifying that you are either a ranking elected official or principal executive officer as required by the administrative code. Documentation demonstrating your position as a ranking elected official or principal executive officer may be requested by the TCEQ.

If you have any questions or need additional information concerning the signatory requirements discussed above, please contact the Texas Commission on Environmental Quality's Environmental Law Division at (512)239-0600.

**30 Texas Administrative Code****§305.44. Signatories to Applications**

(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

Your transaction is complete. Thank you for using TCEQ ePay.

**Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt and the vouchers for your records. An email receipt has also been sent.**

Transaction Information

Trace Number:

582EA000673351

Date:

06/20/2025 03:40 PM

Payment Method:

CC - Authorization 0000201496

ePay Actor:

JOHN TIETZ

Actor Email:

jtietz@lja.com

IP:

170.55.94.226

TCEQ Amount:

\$325.00

Texas.gov Fee:

\$7.57

Texas.gov Price:

\$332.57\*

\* This service is provided by Texas.gov, the official website of Texas. The price of this service includes funds that support the ongoing operations and enhancements of Texas.gov, which is provided by a third party in partnership with the State.

Payment Contact Information

Name:

JOHN TIETZ

Company:

JOHN TIETZ

Address:

304 LEIPZIGER DRIVE, AUSTIN, TX 78746

Phone:

512-653-9399

Cart Items

Click on the voucher number to see the voucher details.

Voucher	Fee Description	AR Number	Amount
<a href="#">771892</a>	GENERAL PERMIT CONSTRUCTION STORM WATER DISCHARGE NOI APPLICATION		\$325.00
TCEQ Amount:			\$325.00

ePay Again

Exit ePay

**Note: It may take up to 3 working days for this electronic payment to be processed and be reflected in the TCEQ ePay system. Print this receipt for your records.**



# Texas Commission on Environmental Quality General Permit Payment Submittal Form

**Use this form to submit your Application Fee only if you are mailing your payment.**

- Complete items 1 through 5 below:
- Staple your check in the space provided at the bottom of this document.
- Do not mail this form with your NOI form.
- Do not mail this form to the same address as your NOI.

**Mail this form and your check to:**

***BY REGULAR U.S. MAIL***

Texas Commission on Environmental Quality  
Financial Administration Division  
Cashier's Office, MC-214  
P.O. Box 13088  
Austin, TX 78711-3088

***BY OVERNIGHT/EXPRESS MAIL***

Texas Commission on Environmental Quality  
Financial Administration Division  
Cashier's Office, MC-214  
12100 Park 35 Circle  
Austin, TX 78753

Fee Code: GPA

General Permit:

TXR150000

1. Check / Money Order Number: \_\_\_\_\_
2. Amount of Check/Money Order: \_\_\_\_\_
3. Date of Check or Money Order: \_\_\_\_\_
4. Name on Check or Money Order: \_\_\_\_\_
5. NOI INFORMATION

If the check is for more than one NOI, list each Project/Site (RE) Name and Physical Address exactly as provided on the NOI. DO NOT SUBMIT A COPY OF THE NOI WITH THIS FORM AS IT COULD CAUSE DUPLICATE PERMIT ENTRIES.

See Attached List of Sites (If more space is needed, you may attach a list.)

Project/Site (RE) Name: \_\_\_\_\_

Project/Site (RE) Physical Address:

**Staple Check in This Space**

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

I Randall Lueders  
Print Name  
Director of Engineering & Capital Projects  
Title - Owner/President/Other  
of City of Cedar Park  
Corporation/Partnership/Entity Name  
have authorized John Tietz, PE  
Print Name of Agent/Engineer  
of LJA Engineering, Inc.  
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:

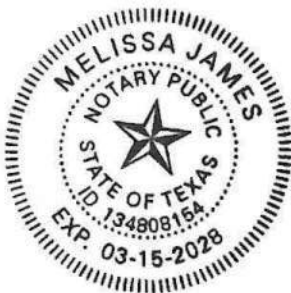
Randy Weders  
Applicant's Signature

5-22-25  
Date

THE STATE OF Texas §  
County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Randy Weders 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 22 day of May, 2025.



Melissa James  
NOTARY PUBLIC

Melissa James  
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 3/15/28



# Owner Authorization Form

## Edwards Aquifer Protection Program

### Instructions

Complete the following form by adding the requested information in the fields below. The form must be notarized for it to be considered complete. Attach it to other programmatic submittals required by 30 Texas Administrative Code (30 TAC), Chapter 213, and provide it to TCEQ's Edwards Aquifer Protection Program (EAPP) as part of your application.

If you have questions on how to fill out this form or about EAPP, please contact us by phone at 512-339-2929 or by e-mail at [eapp@tceq.texas.gov](mailto:eapp@tceq.texas.gov).

### Landowner Authorization

I, **CEDAR PARK HEALTH SYSTEM, L.P.**,

am the owner of the property located at:

**Legal Description: S11616 - TRIAD SUB SEC 1 (BLK A LT 1 REPLAT), BLOCK A, Lot 1A, ACRES 45.29**

and am duly authorized in accordance with 30 TAC 213.4(c)(2) and 213.4(d)(1), or 30 TAC 213.23(c)(2) and 213.23(d), relating to the right to submit an application, signatory authority, and proof of authorized signatory.

I do hereby authorize **THE CITY OF CEDAR PARK**

To conduct **AN APPLICATION FOR A CONTRIBUTING ZONE PLAN (CZP) PERMIT MODIFICATION AND APPROVAL TO FACILITATE PROPOSED IMPROVEMENTS TO THE COTTONWOOD REGIONAL WET BASIN POND**

**At LATITUDE: 30°32'2.00"N LONGITUDE: 97°48'36.34"W. 1401 MEDICAL PARKWAY, CEDAR PARK, TX 78613 AND GENERALLY LOCATED WEST OF COTTONWOOD CREEK TRAIL, EAST OF HIGHWAY 183A FRONTAGE ROAD, SOUTH OF E. NEW HOPE DR. AND NORTH OF MEDICAL PARKWAY.**

### Landowner Acknowledgement

I understand that **CEDAR PARK HEALTH SYSTEM, L.P.**

Is ultimately responsible for the compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation even if the responsibility for compliance and the right to possess and control the property referenced in the application has been contractually assumed by another legal entity. I further understand that any failure to comply with any condition of the executive director's approval is a violation and subject to administrative rule or orders and penalties as provided under 30 TAC 213.10, relating to enforcement. Such violations may also be subject to civil penalties.

**Landowner Signature**

Cedar Park Health System, L.P.

By: CP Hospital GP, LLC, its General Partner

By: R. Gabriel Ottinger

Name: R. Gabriel Ottinger

Title: Senior Vice President & Treasurer

6/18/25  
Date

THE STATE § OF TENNESSEE

County § of WILLIAMSON

BEFORE ME, the undersigned authority, on this day personally appeared

R. Gabriel Ottinger

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 18<sup>th</sup> day of June, 2025.

Michelle D. Seeley

NOTARY PUBLIC

Michelle D. Seeley  
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 8-21-2027



**Optional Attachments**

**Select All that apply:**

- ☐ Lease Agreement
- ☐ Signed Contract
- ☐ Deed Restricted Easement
- ☐ Other legally binding documents

# Application Fee Form

## Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Cottonwood Channel Pond and Wastewater Improvements

Regulated Entity Location: New Hope Drive from S Block House Dr to CR 180

Name of Customer: City of Cedar Park

Contact Person: Randall Lueders

Phone: 512-401-5354

Customer Reference Number (if issued): CN 600407951

Regulated Entity Reference Number (if issued): RN 105031397

### 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

☐ San Antonio Regional Office

☐ Mailed to: TCEQ - Cashier

☐ Overnight Delivery to: TCEQ - Cashier

Revenues Section

Mail Code 214

P.O. Box 13088

Austin, TX 78711-3088

12100 Park 35 Circle

Building A, 3rd Floor

Austin, TX 78753

(512)239-0357

### Site Location (Check All That Apply):

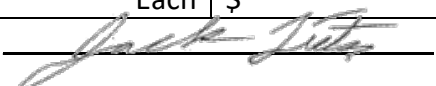
☐ Recharge Zone

☒ Contributing Zone

☐ Transition Zone

<i>Type of Plan</i>	<i>Size</i>	<i>Fee Due</i>
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	63.57 Acres	\$ 8,000
Sewage Collection System	L.F.	\$
Lift Stations without sewer lines	Acres	\$
Underground or Aboveground Storage Tank Facility	Tanks	\$
Piping System(s)(only)	Each	\$
Exception	Each	\$
Extension of Time	Each	\$

Signature: \_\_\_\_\_





Date: 06/04/2025

## 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***

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

#### ***Organized Sewage Collection Systems and Modifications***

<b><i>Project</i></b>	<b><i>Cost per Linear Foot</i></b>	<b><i>Minimum Fee- Maximum Fee</i></b>
Sewage Collection Systems	\$0.50	\$650 - \$6,500

#### ***Underground and Aboveground Storage Tank System Facility Plans and Modifications***

<b><i>Project</i></b>	<b><i>Cost per Tank or Piping System</i></b>	<b><i>Minimum Fee- Maximum Fee</i></b>
Underground and Aboveground Storage Tank Facility	\$650	\$650 - \$6,500

#### ***Exception Requests***

<b><i>Project</i></b>	<b><i>Fee</i></b>
Exception Request	\$500

#### ***Extension of Time Requests***

<b><i>Project</i></b>	<b><i>Fee</i></b>
-----------------------	-------------------

<b><i>Project</i></b>	<b><i>Fee</i></b>
Extension of Time Request	\$150



# TCEQ Core Data Form

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

## SECTION I: General Information

<b>1. Reason for Submission</b> (If other is checked please describe in space provided.)		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)		
<input type="checkbox"/> Renewal (Core Data Form should be submitted with the renewal form)	<input type="checkbox"/> Other	
<b>2. Customer Reference Number</b> (if issued)	<a href="#">Follow this link to search for CN or RN numbers in Central Registry**</a>	<b>3. Regulated Entity Reference Number</b> (if issued)
CN 600407951		RN 105031397

## SECTION II: Customer Information

<b>4. General Customer Information</b>		<b>5. Effective Date for Customer Information Updates</b> (mm/dd/yyyy)		5/23/2025					
<input type="checkbox"/> New Customer <input type="checkbox"/> Update to Customer Information <input checked="" type="checkbox"/> Change in Regulated Entity Ownership <input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)									
<i>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).</i>									
<b>6. Customer Legal Name</b> (If an individual, print last name first: eg: Doe, John)				<i>If new Customer, enter previous Customer below:</i>					
City of Cedar Park									
<b>7. TX SOS/CPA Filing Number</b>		<b>8. TX State Tax ID</b> (11 digits)		<b>9. Federal Tax ID</b> (9 digits)					
				<b>10. DUNS Number</b> (if applicable)					
<b>11. Type of Customer:</b>		<input type="checkbox"/> Corporation		<input type="checkbox"/> Individual      Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited					
Government: <input checked="" type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship		<input type="checkbox"/> Other:					
<b>12. Number of Employees</b>				<b>13. Independently Owned and Operated?</b>					
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input checked="" type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
<b>14. Customer Role</b> (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following									
<input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Owner & Operator <input type="checkbox"/> Other: <input type="checkbox"/> Occupational Licensee <input type="checkbox"/> Responsible Party <input type="checkbox"/> VCP/BSA Applicant									
<b>15. Mailing Address:</b>		405 Cypress Creek Rd., Bldg 1							
		City	Cedar Park	State	TX	ZIP	78613	ZIP + 4	3000
<b>16. Country Mailing Information</b> (if outside USA)						<b>17. E-Mail Address</b> (if applicable)			
						randall.lueders@cedarparktexas.gov			

<b>18. Telephone Number</b>	<b>19. Extension or Code</b>	<b>20. Fax Number (if applicable)</b>
( 512 ) 401-5354		(   ) -

## SECTION III: Regulated Entity Information

<b>21. General Regulated Entity Information</b> (If 'New Regulated Entity' is selected, a new permit application is also required.)								
<input type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input checked="" type="checkbox"/> Update to Regulated Entity Information								
<i>The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).</i>								
<b>22. Regulated Entity Name</b> (Enter name of the site where the regulated action is taking place.)								
Cottonwood Channel Pond and Wastewater Improvements								
<b>23. Street Address of the Regulated Entity:</b>  (No PO Boxes)	405 Cypress Creek Rd., Bldg 1							
	<b>City</b>	Cedar Park	<b>State</b>	TX	<b>ZIP</b>	78613	<b>ZIP + 4</b>	3000
<b>24. County</b>	Williamson							

If no Street Address is provided, fields 25-28 are required.

<b>25. Description to Physical Location:</b>	0.3 Miles North of FM1431 on West side of Country Road 185							
<b>26. Nearest City</b>					<b>State</b>	<b>Nearest ZIP Code</b>		
Cedar Park					TX	78613		
<i>Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).</i>								
<b>27. Latitude (N) In Decimal:</b>						<b>28. Longitude (W) In Decimal:</b>		
Degrees	Minutes		Seconds		Degrees	Minutes		Seconds
30	31		58		-97	48		28
<b>29. Primary SIC Code</b> (4 digits)	<b>30. Secondary SIC Code</b> (4 digits)		<b>31. Primary NAICS Code</b> (5 or 6 digits)			<b>32. Secondary NAICS Code</b> (5 or 6 digits)		
1629			237990					
<b>33. What is the Primary Business of this entity?</b> (Do not repeat the SIC or NAICS description.)								
<b>34. Mailing Address:</b>								
	<b>City</b>		<b>State</b>		<b>ZIP</b>		<b>ZIP + 4</b>	
<b>35. E-Mail Address:</b>								
<b>36. Telephone Number</b>	<b>37. Extension or Code</b>				<b>38. Fax Number (if applicable)</b>			
(   ) -					(   ) -			

**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.

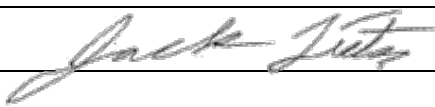
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input checked="" type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Wastewater	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

## **SECTION IV: Preparer Information**

<b>40. Name:</b>	John Tietz, P.E.		<b>41. Title:</b>	Project Manager
<b>42. Telephone Number</b>	<b>43. Ext./Code</b>	<b>44. Fax Number</b>	<b>45. E-Mail Address</b>	
( 512 ) 439-4764		( ) -	jtietz@lja.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.

<b>Company:</b>	LJA	<b>Job Title:</b>	John Tietz, P.E.	
<b>Name (In Print):</b>	John Tietz, P.E.		<b>Phone:</b>	( 512 ) 439- 4764
<b>Signature:</b>			<b>Date:</b>	6/4/2025



3 PGS  
PLAT

2015063602

## PLAT MAP RECORDING SHEET

**DEDICATOR: CEDAR PARK TOWN CENTER LP  
THE AINBINDER COMPANY  
MICHAEL AINBINDER**

**SUBDIVISION NAME: SWC NHR COMMERCIAL SUBDIVISION**

**PROPERTY IS DESCRIBED AS: 5.484 ACRES OUT OF THE S J DOVER  
SURVEY, ABSTRACT NUMBER 168, IN  
WILLIAMSON COUNTY, TEXAS.**

**SUBMITTED BY: CITY OF CEDAR PARK; SHANDRIAN JARVIS, (512) 401-5058**

**DIGITALLY RECORDED**

**FILED AND RECORDED  
OFFICIAL PUBLIC RECORDS 2015063602**



*Nancy E. Rister*

Nancy E. Rister, County Clerk

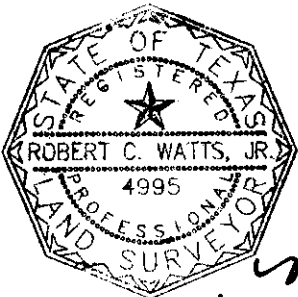
Williamson County, Texas

July 24, 2015 08:45 AM

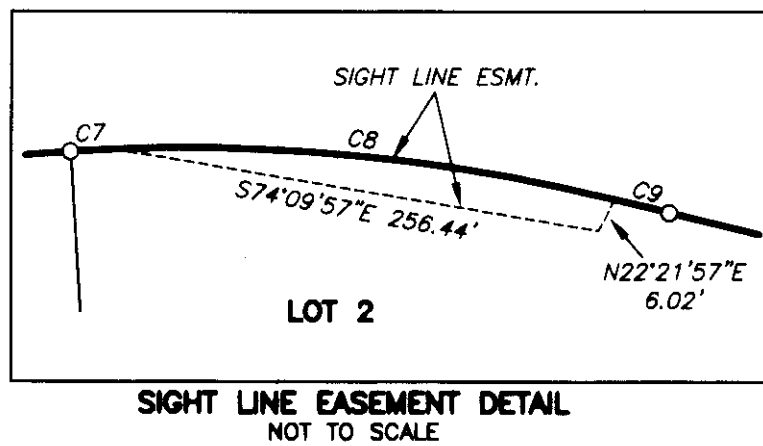
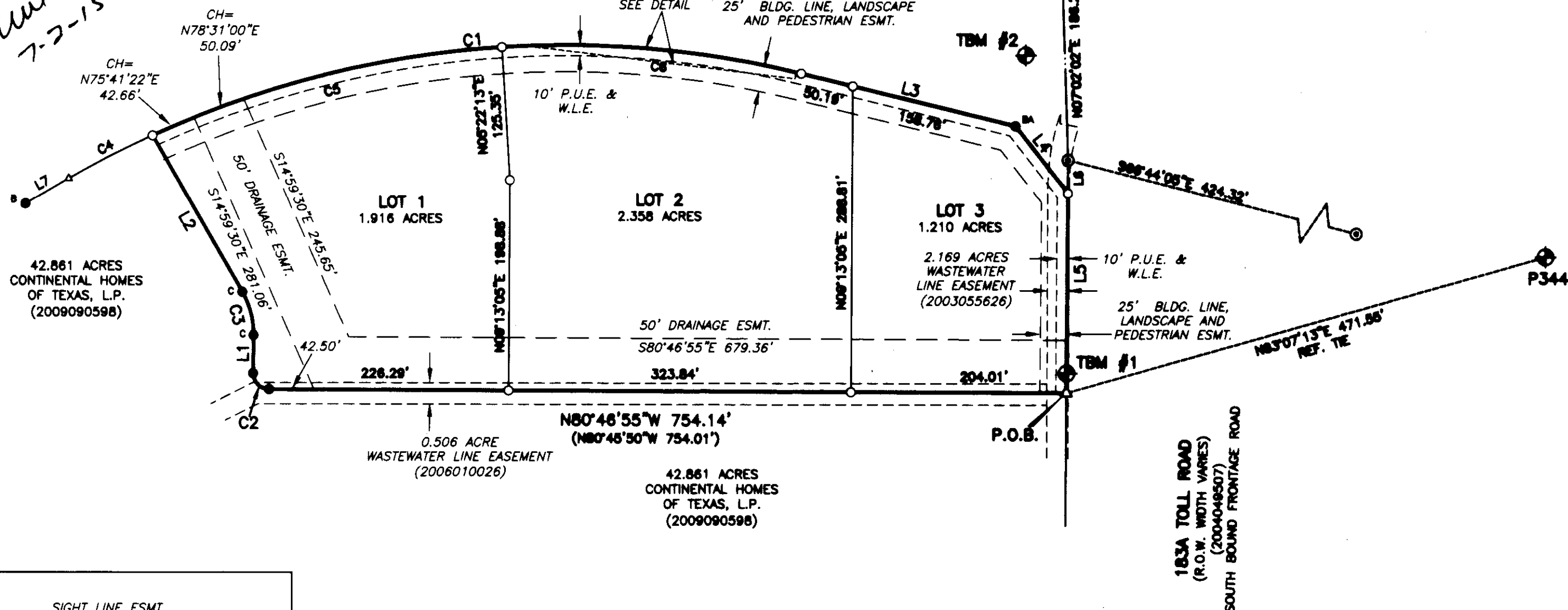
FEE: \$241.00 PHELPS



Doc # 2015063602



7-2-15



LINE TABLE			
LINE	BEARING	DISTANCE	(RECORD)
L1	N09°25'09"E	36.05'	(N09°14'10"E 36.03')
L2	N21°01'23"W	170.73'	(N21°01'24"W 170.73')
L3	S67°21'46"E	208.95'	(S67°21'47"E 208.95)
L4	S29°02'16"E	80.45'	(S29°56'24"E 80.53')
L5	S09°17'13"W	186.79'	(S09°17'06"W 186.79')
L6	N09°17'12"E	31.32'	(N09°17'08"E 31.33')
L7	S65°58'13"W	47.23'	(S65°57'18"W 47.23')

CURVE TABLE						
CURVE	RADIUS	DELTA	ARC	BEARING	CHORD	(RECORD CHORD)
C1	940.00'	38°18'05"	627.83'	S86°28'36"E	616.23'	(N86°28'36"W 616.18')
C2	15.00'	91°05'58"	23.85'	N35°52'41"W	21.42'	(N36°48'50"W 21.22')
C3	80.68'	30°13'29"	42.56'	N05°43'20"W	42.07'	(N05°53'37"W 42.12')
C4	940.00'	5°26'27"	89.26'	S71°50'04"W	89.23'	(S71°40'01"W 89.88')
C5	940.00'	20°51'57"	342.33'	N84°48'20"E	340.44'	
C6	940.00'	17°24'08"	285.50'	S64°02'38"E	284.41'	
C7	940.00'	1°23'04"	22.71'	S84°03'10"E	22.71'	
C8	940.00'	15°43'35"	258.01'	S75°29'51"E	257.20'	
C9	940.00'	0°17'30"	4.78'	S67°29'18"E	4.78'	

SETBACKS NOT SHOWN ON LOTS SHALL  
CONFORM TO THE CITY OF CEDAR PARK  
ZONING ORDINANCE.

THIS IS A GRID DRAWING.

BEARING BASIS: THE TEXAS COORDINATE  
SYSTEM OF 1983 (NAD83), CENTRAL ZONE,  
BASED ON GPS SOLUTIONS FROM THE  
NATIONAL GEODETIC SURVEY (NGS) ON-LINE  
POSITIONING USER SERVICE (OPUS) FOR  
CHAPARRAL CONTROL POINT "P344"  
4" ALUMINUM DISK SET IN CONCRETE

TEXAS CENTRAL ZONE STATE  
PLANE COORDINATES:  
N 10167796.57  
E 3089150.1373

SURFACE COORDINATES:  
N 10169080.68  
E 3089539.67

ELEVATION = 930.86'  
VERTICAL DATUM: NAVD 88 (GEOID 09)

COMBINED SCALE FACTOR = 0.999880014398  
(FOR SURFACE TO GRID CONVERSION)

INVERSE SCALE FACTOR = 1.000120  
(FOR GRID TO SURFACE CONVERSION)

SCALED ABOUT 0,0  
TEXAS CENTRAL ZONE 4203

OWNER:  
CEDAR PARK TOWN CENTER, LP  
2415 W. ALABAMA,  
SUITE # 205  
HOUSTON, TX 77098  
(T) 713-892-5600 (F) 713-892-5656  
  
ACREAGE: 5.484 AC.  
S.J. DOVER SURVEY, ABSTRACT NO. 168, WILLIAMSON CO.  
  
NUMBER OF LOTS: 3  
  
DATE: 4/17/15  
  
ENGINEERING BY:  
  
360 PROFESSIONAL SERVICES, INC.  
SCOTT J. FOSTER, P.E.  
PO BOX 3639  
CEDAR PARK, TX 78630-3639  
(T) 512-900-7662 (F) 512-900-7962  
  
SURVEYING BY:  
  
CHAPARRAL PROFESSIONAL LAND SURVEYING, INC.  
ROBERT C. WATTS, JR., RPLS  
3500 MCCALL LANE  
AUSTIN, TEXAS 78744  
(T) 512-443-1724 (F) 512-389-0943

TOTAL AREA OF SITE	5.484 ACRES
TOTAL AREA OF BLOCKS	5.484 ACRES
TOTAL NUMBER OF BLOCKS	1
TOTAL NUMBER OF LOTS	3

**BENCHMARK INFORMATION:**

TBM #1: SQUARE IN CONCRETE +/- 31' WEST OF THE WEST EDGE OF ASPHALT OF THE SOUTH BOUND ACCESS ROAD OF U.S. HIGHWAY 183A AND +/- 282' SOUTH OF THE INTERSECTION OF THE SOUTHBOUND ACCESS ROAD OF U.S. HIGHWAY 183A AND NEW HOPE ROAD.

ELEVATION = 927.92'  
VERTICAL DATUM: NAVD 88 (GEOID 09)

TBM #2: SQUARE IN SOUTHWEST CORNER OF A STORMSEWER INLET IN THE BRICK MEDIAN OF NEW HOPE ROAD, +/- 80' WEST OF THE INTERSECTION OF THE SOUTHBOUND ACCESS ROAD OF U.S. HIGHWAY 183A AND NEW HOPE ROAD.

ELEVATION = 929.62'  
VERTICAL DATUM: NAVD 88 (GEOID 09)

**Chaparral**  
Professional Land Surveying, Inc.  
Surveying and Mapping  
3500 McCall Lane  
Austin, Texas 78744  
512-443-1724  
Firm No. 10124500

PROJECT NO.:  
877-008

DRAWING NO.:  
877-008-PL

PLOT DATE:  
07/02/15

**PLOT SCALE:**  
1" = 100'

**DRAWN BY:**  
**JDB**

**SHEET**  
**01 OF 03**

SWC NHR COMMERCIAL  
SUBDIVISION

CITY OF CEDAR PARK  
PUBLIC WORKS DEPARTMENT  
STANDARD PLAT NOTES

- 1) INTENTIONALLY DELETED
- 2) ALL SUBDIVISION CONSTRUCTION SHALL CONFORM TO THE CITY OF CEDAR PARK CODE OF ORDINANCES, CONSTRUCTION STANDARDS, AND GENERALLY ACCEPTED ENGINEERING PRACTICES.
- 3) STORM WATER DETENTION FACILITIES ARE PROVIDED BY THE COTTONWOOD CREEK REGIONAL DETENTION POND FACILITY TO REDUCE POST-DEVELOPMENT PEAK RATES OF DISCHARGE OF THE 2, 10, 25 AND 100-YEAR STORM EVENTS.
- 4) THE OWNER OF THIS SUBDIVISION, AND HIS OR HER SUCCESSORS AND ASSIGNS, ASSUMES RESPONSIBILITY FOR PLANS FOR CONSTRUCTION OF SUBDIVISION IMPROVEMENTS WHICH COMPLY WITH APPLICABLE CODES AND REQUIREMENTS OF THE CITY OF CEDAR PARK. THE OWNER UNDERSTANDS AND ACKNOWLEDGES THAT PLAT VACATION OR REPLATTING MAY BE REQUIRED, AT THE OWNER'S SOLE EXPENSE, IF PLANS TO CONSTRUCT THIS SUBDIVISION DO NOT COMPLY WITH SUCH CODES AND REQUIREMENTS.
- 5) NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO THE CITY OF CEDAR PARK WATER DISTRIBUTION AND WASTEWATER COLLECTION FACILITIES.
- 6) THIS SUBDIVISION PLAT WAS APPROVED AND RECORDED BEFORE THE CONSTRUCTION AND ACCEPTANCE OF STREETS AND/OR OTHER SUBDIVISION IMPROVEMENTS. THE OWNER OF THIS SUBDIVISION AND HIS OR HER SUCCESSORS AND ASSIGNS, ARE RESPONSIBLE FOR THE CONSTRUCTION OF ALL STREETS, WATER SYSTEMS, WASTEWATER SYSTEMS, AND OTHER FACILITIES NECESSARY TO SERVE THE LOTS WITHIN THE SUBDIVISION.
- 7) SITE DEVELOPMENT CONSTRUCTION PLANS SHALL BE REVIEWED AND APPROVED BY THE CITY OF CEDAR PARK PRIOR TO ANY CONSTRUCTION.
- 8) WASTEWATER AND WATER SYSTEMS SHALL CONFORM TO TCEQ (TEXAS COMMISSION ON ENVIRONMENTAL QUALITY) AND STATE BOARD OF INSURANCE REQUIREMENTS. THE OWNER UNDERSTANDS AND ACKNOWLEDGES THE PLAT VACATION OR RE-PLATTING MAY BE REQUIRED, AT THE OWNER'S SOLE EXPENSE, IF PLANS TO DEVELOP THIS SUBDIVISION DO NOT COMPLY WITH SUCH CODES AND REQUIREMENTS.
- 9) NO BUILDINGS, FENCES, LANDSCAPING OR OTHER STRUCTURES ARE PERMITTED WITHIN DRAINAGE EASEMENTS SHOWN, EXCEPT AS APPROVED BY THE CITY OF CEDAR PARK PUBLIC WORKS DEPARTMENT.
- 10) PROPERTY OWNER SHALL PROVIDE FOR ACCESS TO DRAINAGE EASEMENTS AS MAY BE NECESSARY AND SHALL NOT PROHIBIT ACCESS BY CITY OF CEDAR PARK.
- 11) ALL EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE PROPERTY OWNER OR HIS OR HER ASSIGNS.
- 12) FISCAL SURETY FOR SUBDIVISION CONSTRUCTION, IN A FORM ACCEPTABLE TO THE CITY OF CEDAR PARK, SHALL BE PROVIDED PRIOR TO PLAT APPROVAL BY THE PLANNING AND ZONING COMMISSION.
- 13) IN ADDITION TO THE EASEMENT SHOWN HEREON, A TEN (10) FOOT WIDE PUBLIC UTILITY EASEMENT (P.U.E.) IS HEREBY DEDICATED ADJACENT TO STREET ROW ON ALL LOTS. A FIVE (5) FOOT WIDE P.U.E. IS HEREBY DEDICATED ALONG EACH SIDE LOT LINE. A SEVEN AND ONE HALF (7 ½) FOOT WIDE P.U.E. IS HEREBY DEDICATED ADJACENT TO ALL REAR LOT LINES.
- 14) COMMUNITY IMPACT FEES FOR INDIVIDUAL LOTS TO BE PAID PRIOR TO ISSUANCE OF ANY BUILDING PERMITS.
- 15) DEVELOPER SHALL BE RESPONSIBLE FOR ALL RELOCATION AND MODIFICATIONS TO EXISTING UTILITIES.
- 16) NO PORTION OF THIS TRACT IS WITHIN THE BOUNDARIES OF THE 100 YEAR FLOOD OF A WATERWAY THAT IS WITHIN THE FEDERAL EMERGENCY MANAGEMENT AGENCY, NATIONAL FLOOD INSURANCE PROGRAM, AS SHOWN ON MAP NO. 48491C0465E, DATED SEPTEMBER 26, 2008, FOR WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS.
- 17) TEMPORARY AND PERMANENT EASEMENTS TO BE PROVIDED AS REQUIRED FOR OFF-SITE WATER, WASTEWATER AND DRAINAGE IMPROVEMENTS.
- 18) ALL PROPOSED ACCESS POINTS AND/OR ACCESS EASEMENTS INTERSECTING WITH PUBLIC ROADWAY ROW ARE TO BE IN COMPLIANCE WITH CITY CODE SECTION 14.05.004 ACCESS STANDARDS.
- 19) THIS SITE IS LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE. DEVELOPMENT OF THIS SITE WILL COMPLY WITH ALL APPLICABLE TCEQ EDWARDS AQUIFER RULES.
- 20) THIS SUBDIVISION IS NOT SUBJECT TO THE LAKE TRAVIS NON-POINT SOURCE POLLUTION CONTROL ORDINANCE OF THE CEDAR PARK CITY CODE.
- 21) PRIOR TO SUBDIVISION/SITE PLAN APPROVAL, THE ENGINEER SHALL SUBMIT TO THE CITY OF CEDAR PARK (COCF) DOCUMENTATION OF SUBDIVISION/SITE REGISTRATION WITH THE TEXAS DEPARTMENT OF LICENSING AND REGULATIONS (TDLR) AND PROVIDE DOCUMENTATION OF REVIEW AND COMPLIANCE OF THE SUBDIVISION CONSTRUCTION PLANS WITH TEXAS ARCHITECTURAL BARRIERS ACT (TABA).
- 22) ALL PROPOSED FENCES AND WALLS ADJACENT TO INTERSECTING PUBLIC ROADWAY RIGHT-OF-WAY OR ADJACENT TO PRIVATE ACCESS POINTS SHALL BE IN COMPLIANCE WITH CITY CODE SECTION 14.05.007 SIGHT DISTANCE REQUIREMENTS. INSTALLING A FENCE OF WALL WHICH DOES NOT COMPLY WITH THE CITY'S SIGHT DISTANCE REQUIREMENTS OR FENCING REGULATIONS IS A VIOLATION OF THE CITY'S ORDINANCE AND MAY BE PUNISHABLE PURSUANT TO SECTION 1.01.009.

FIRE DEPARTMENT NOTES:

- 1) FIRE APPARATUS ACCESS ROADS AND WATER SUPPLY SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION.
- 2) CONSTRUCTION MUST COMPLY WITH ALL APPLICABLE FIRE CODES.

SUBDIVISION NOTES:

- 1) BUILDING LINE SETBACKS SHALL BE 25' FRONT YARD, AND SETBACKS NOT SHOWN ON LOTS SHALL CONFORM TO THE CITY OF CEDAR PARK ZONING ORDINANCE.
- 2) WHERE THERE ARE DOUBLE FRONTAGE LOTS, SIDEWALKS ON THE STREET TO WHICH ACCESS IS PROHIBITED ARE ALSO REQUIRED TO BE INSTALLED WHEN THE STREETS IN THE SUBDIVISION ARE CONSTRUCTED.
- 3) PRIOR TO CONSTRUCTION OF ANY IMPROVEMENTS ON LOTS IN THIS SUBDIVISION, BUILDING PERMITS WILL BE OBTAINED FROM THE CITY OF CEDAR PARK.
- 4) THIS SUBDIVISION SHALL COMPLY WITH THE TREE AND LANDSCAPE ORDINANCE OF THE CITY OF CEDAR PARK, TEXAS.
- 5) AN APPROVED PROTECTED TREE REMOVAL APPLICATION WILL BE OBTAINED FROM THE CITY OF CEDAR PARK URBAN FORESTER BEFORE ANY TREE IS REMOVED FROM THE DEVELOPMENT SITE WHICH MEETS THE PROTECTED DEFINITION AS PROVIDED IN THE TREE AND LANDSCAPE ORDINANCE OF THE CITY OF CEDAR PARK, TEXAS.
- 6) SIDEWALKS SHALL BE INSTALLED ON THE SUBDIVISION SIDE OF NEW HOPE ROAD. THOSE SIDEWALKS NOT ABUTTING A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL LOT SHALL BE INSTALLED WHEN THE ADJOINING STREET IS CONSTRUCTED. WHERE THERE ARE DOUBLE FRONTAGE LOTS, SIDEWALKS ON THE STREET TO WHICH ACCESS IS PROHIBITED ARE ALSO REQUIRED TO BE INSTALLED WHEN THE STREETS IN THE SUBDIVISION ARE CONSTRUCTED.
- 7) ASSIGNED CITY ADDRESS NUMBERS SHALL BE PERMANENTLY AFFIXED TO ALL STRUCTURES IN SUCH POSITIONS AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET.
- 8) AN APPROVED PROTECTED TREE REMOVAL APPLICATION WILL BE OBTAINED FROM THE CITY OF CEDAR PARK URBAN FORESTER BEFORE ANY TREE IS REMOVED FROM THE DEVELOPMENT SITE WHICH MEETS THE PROTECTED TREE OR HERITAGE TREE DEFINITIONS AS PROVIDED IN THE TREE AND LANDSCAPE ORDINANCE OF THE CITY OF CEDAR PARK, TEXAS.
- 9) THIS SUBDIVISION SHALL COMPLY WITH THE CORRIDOR OVERLAY ORDINANCE OF THE CITY OF CEDAR PARK.
- 10) PRIOR TO THE ISSUANCE OF A SITE DEVELOPMENT PERMIT FOR DEVELOPMENT WITHIN THIS SUBDIVISION, A SIGHT LINE ANALYSIS SHALL BE PROVIDED FOR EACH DRIVEWAY PROVIDING ACCESS TO THIS SUBDIVISION ALONG NEW HOPE DRIVE. THE SIGHT LINE ANALYSIS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER. A SIGHT LINE EASEMENT SHALL BE PROVIDED BY PLAT OR BY A RECORDED SEPARATE INSTRUMENT IN LOCATIONS IDENTIFIED IN THE SIGHT LINE ANALYSIS.
- 11) A RIGHT TURN DECELERATION LANE SHALL BE CONSTRUCTED TO ACCEPTABLE CITY OF CEDAR PARK STANDARDS FOR EACH NEW DRIVEWAY ALONG NEW HOPE DRIVE WHICH PROVIDES ACCESS TO THIS SUBDIVISION. THE TURN LANE IMPROVEMENTS FOR EACH DRIVEWAY SHALL BE COMPLETED PRIOR TO ANY CERTIFICATE OF OCCUPANCY BEING ISSUED BY THE CITY FOR ANY LOT WITHIN THIS SUBDIVISION.
- 12) PRIOR TO ANY CERTIFICATE OF OCCUPANCY BEING ISSUED BY THE CITY OF CEDAR PARK FOR THIS SUBDIVISION, THE EASTBOUND NEW HOPE DRIVE RIGHT TURN LANE APPROACHING THE 181A FRONTAGE ROAD SHALL BE EXTENDED, WITH THE TRANSITION OF THE EXTENDED TURN LANE TO BE RELOCATED TO THE CURB RETURN OF THE DRIVEWAY APRON ALIGNED WITH THE MEDIAN BREAK ON NEW HOPE DRIVE. THESE IMPROVEMENTS WILL INCLUDE RELOCATION OF UTILITIES AND SHARED USE PATH.

**Chaparral**  
Professional Land Surveying, Inc.  
Surveying and Mapping  
3500 McCall Lane  
Austin, Texas 78744  
512-443-1724  
Firm No. 10124500

PROJECT NO.:  
877-008  
DRAWING NO.:  
877-008-PL  
PLOT DATE:  
07/02/15  
PLOT SCALE:  
1" = 100'  
DRAWN BY:  
JDB  
SHEET  
02 OF 03

# SWC NHR COMMERCIAL SUBDIVISION

STATE OF TEXAS  
COUNTY OF WILLIAMSON

KNOW ALL MEN BY THE PRESENTS:

THAT CEDAR PARK TOWN CENTER, LP, BEING OWNER OF 5.484 ACRES IN THE S.J. DOVER SURVEY, ABSTRACT NO. 168 IN WILLIAMSON COUNTY, TEXAS, CONVEYED BY DEED OF RECORD IN DOCUMENT NO. 2007038429 OF THE OFFICIAL PUBLIC RECORDS OF TRAVIS COUNTY, TEXAS;

DO HEREBY SUBDIVIDE 5.484 ACRES IN ACCORDANCE WITH THE MAP OR PLAT ATTACHED HERETO, TO BE KNOWN AS

SWC NHR COMMERCIAL SUBDIVISION

AND DO HEREBY DEDICATE TO THE PUBLIC THE USE OF ALL STREETS AND EASEMENTS SHOWN HEREON, SUBJECT TO ANY AND ALL EASEMENTS OR RESTRICTIONS HERETOFORE GRANTED AND NOT RELEASED, AND THAT THERE ARE NO LIEN HOLDERS ON THE PROPERTY.

WITNESS MY HAND THIS 14<sup>th</sup> DAY OF July, 2015 A.D.

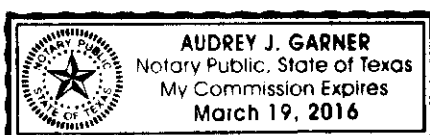
BY: Michael Ainbinder  
MICHAEL AINBINDER  
THE AINBINDER COMPANY  
2415 W. ALABAMA, SUITE 205  
HOUSTON, TEXAS 77098  
(713) 892-5600

STATE OF TEXAS  
COUNTY OF TRAVIS

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED MICHAEL AINBINDER KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND HE ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED.

WITNESS MY HAND AND SEALED IN MY OFFICE, THIS 14<sup>th</sup> DAY OF JULY, 2015, AD.

Audrey J. Garner  
NOTARY PUBLIC, STATE OF TEXAS



APPROVED THIS 21<sup>st</sup> DAY OF July, 2015, BY THE CITY PLANNING AND ZONING COMMISSION OF THE CITY OF CEDAR PARK, TEXAS AND AUTHORIZED TO BE FILED FOR RECORD BY THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

Audrey Wernecke  
AUDREY WERNECKE, CHAIR  
PLANNING AND ZONING COMMISSION

Kelly Brent  
KELLY BRENT, SECRETARY  
PLANNING AND ZONING COMMISSION

I, DIRECTOR OF PLANNING OF THE CITY OF CEDAR PARK, TEXAS, AUTHORIZE AND APPROVE THIS PLAT TO BE FILED FOR RECORD BY THE COUNTY CLERK OF WILLIAMSON COUNTY.

APPROVED: John L. Lyle  
DIRECTOR OF PLANNING

SURVEYOR'S CERTIFICATION:

STATE OF TEXAS  
KNOW ALL MEN BY THESE PRESENTS  
COUNTY OF WILLIAMSON

I, ROBERT C. WATTS, JR., REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE FROM AN ACTUAL SURVEY MADE ON THE GROUND OF THE PROPERTY LEGALLY DESCRIBED HEREON, AND THAT THERE ARE NO APPARENT DISCREPANCIES, CONFLICTS, OVERLAPPING OF IMPROVEMENTS, VISIBLE UTILITY LINES OR ROADS IN PLACE, EXCEPT AS SHOWN ON THE ACCOMPANYING PLAT, AND THAT THE ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF CEDAR PARK, TEXAS, CORNER MONUMENTS SHOWN THEREON WERE PROPERLY PLACED UNDER MY SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF CEDAR PARK, TEXAS.

THIS PLAT COMPLIES WITH CHAPTER 12, ARTICLE 12.06 OF THE CODE OF ORDINANCES OF THE CITY OF CEDAR PARK.

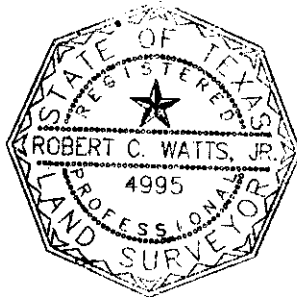
ALL PLOTTABLE EASEMENTS OF RECORD AS FOUND ON THE TITLE POLICIES ISSUED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, G.F. NO. 14004178, EFFECTIVE DATE 09/19/14 ARE SHOWN.

DATE OF SURVEY: SEPTEMBER 28, 2014

BEARING BASIS: GRID AZIMUTH FOR TEXAS CENTRAL ZONE STATE PLANE COORDINATES, 1983/93 HARN, BASED ON GPS SOLUTIONS FROM THE NATIONAL GEODETIC SURVEY (NGS) ON-LINE POSITIONING USER SERVICE (OPUS).

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT AUSTIN, TRAVIS COUNTY, TEXAS, THIS 2<sup>nd</sup> DAY OF JULY, 2015 A.D.

Robert C. Watts, Jr.  
ROBERT C. WATTS, JR.  
REGISTERED PROFESSIONAL LAND SURVEYOR  
NO. 4995 STATE OF TEXAS



SURVEYING BY:  
CHAPARRAL PROFESSIONAL LAND SURVEYING, INC.  
3500 McCall Lane  
AUSTIN, TEXAS 78744  
(512) 443-1724 PHONE  
TBPLS FIRM NO. 10124500

ENGINEER'S CERTIFICATION:

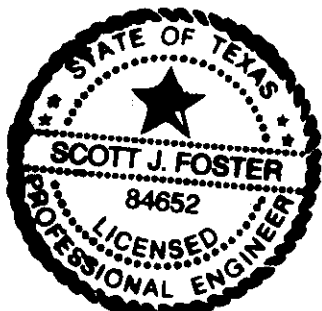
STATE OF TEXAS  
KNOW ALL MEN BY THESE PRESENTS  
COUNTY OF WILLIAMSON

ENGINEER'S CERTIFICATION:

I, SCOTT J. FOSTER, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF ENGINEERING, AND HEREBY CERTIFY THAT THIS PLAT IS FEASIBLE FROM AN ENGINEERING STANDPOINT AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

THE 100 YEAR FLOOD PLAIN IS CONTAINED WITHIN THE DRAINAGE EASEMENTS SHOWN HEREON. NO PORTION OF THIS TRACT IS WITHIN THE BOUNDARIES OF THE 100 YEAR FLOOD OF A WATERWAY THAT IS WITHIN THE FEDERAL EMERGENCY MANAGEMENT AGENCY, NATIONAL FLOOD INSURANCE PROGRAM, AS SHOWN ON MAP NO. 4891C0465E, DATED SEPTEMBER 26, 2008, FOR WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS.

Scott J. Foster, P.E.  
SCOTT J. FOSTER, P.E.



ENGINEERING BY:  
360 PROFESSIONAL SERVICES, INC.  
PO BOX 3639  
CEDAR PARK, TX 78630-3639  
TEXAS REGISTERED ENGINEERING FIRM F-4932

## METES AND BOUNDS DESCRIPTION

A DESCRIPTION OF 5.484 ACRES (APPROXIMATELY 238,902 SQ. FT.) IN THE S.J. DOVER SURVEY, ABSTRACT NO. 168 IN WILLIAMSON COUNTY, TEXAS, BEING ALL OF A 5.484 ACRE TRACT CONVEYED TO CEDAR PARK TOWN CENTER LP, IN A SPECIAL WARRANTY DEED DATED APRIL 20, 2007 AND RECORDED IN DOCUMENT NO. 2007038429 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 5.484 ACRES BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING at a 1/2" rebar with "Chaparral" cap set in the west right-of-way line of U.S. Highway 183A (right-of-way width varies), described in Document No. 2004049507 of the Official Public Records of Williamson County, Texas, being the southeast corner of said 5.484 acre tract and also being the easternmost northeast corner of a 42.861 acre tract described in Document No. 2009090598 of the Official Public Records of Williamson County, Texas;

THENCE with the south line of the 5.484 acre tract, same being the north line of said 42.861 acre tract, the following two (2) courses and distances:

1. North 80°46'55" West, a distance of 754.14 feet to a 1/2" rebar found;

2. With a curve to the right, having a radius of 15.00 feet, a delta angle of 91°05'59", an arc length of 23.85 feet, and a chord which bears North 35°52'41" West, a distance of 21.42 feet to a 1/2" rebar found in the west line of the 5.484 acre tract, same being an east line of the 42.861 acre tract;

THENCE with the west line of the 5.484 acre tract, same being an east line of the 42.861 acre tract, the following three (3) courses and distances:

1. North 09°25'09" East, a distance of 36.05 feet to a 1/2" rebar with "CSW" cap found;

2. With a curve to the left, having a radius of 80.68 feet, a delta angle of 30°13'29", an arc length of 42.56 feet, and a chord which bears North 05°43'20" West, a distance of 42.07 feet to a 1/2" rebar with "CSW" cap found;

3. North 21°01'23" West, a distance of 170.73 feet to a 1/2" rebar with "Chaparral" cap set in the south right-of-way line of New Hope Road (right-of-way width varies), being the northwest corner of the 5.484 acre tract and also being the northernmost northeast corner of the 42.861 acre tract, from which a 1/2" rebar with "BE" cap found in the south right-of-way line of New Hope Road, being the northwest corner of the 42.861 acre tract, bears, with a curve to the left, having a radius of 940.00 feet, a delta angle of 05°26'27", an arc length of 89.26 feet, and a chord which bears South 71°50'04" West, a distance of 89.23 feet and South 68°58'13" West, a distance of 47.23 feet;

THENCE with the south right-of-way line of New Hope Road, same being the north line of the 5.484 acre tract, the following three (3) courses and distances:

1. With a curve to the right, having a radius of 940.00 feet, a delta angle of 38°18'05", an arc length of 627.83 feet, and a chord which bears South 86°28'36" East, a distance of 616.23 feet to a 1/2" rebar with "Chaparral" cap set;

2. South 67°21'46" East, a distance of 208.95 feet to a 1/2" rebar with "BA" cap found;

3. South 29°02'16" East, a distance of 80.45 feet to a 1/2" rebar with "Chaparral" cap set in the west right-of-way line of U.S. Highway 183A, being the northeast corner of the 5.484 acre tract, from which a TXDOT type II disk found in the west right-of-way line of U.S. Highway 183A, bears North 09°17'12" East, a distance of 31.32 feet;

THENCE South 09°17'13" West, with the west right-of-way line of U.S. Highway 183A, same being the east line of the 5.484 acre tract, a distance of 188.79 feet to the POINT OF BEGINNING, containing 5.484 acres of land, more or less.

STATE OF TEXAS  
KNOW ALL MEN BY THESE PRESENTS  
COUNTY OF WILLIAMSON

I, NANCY RISTER, CLERK OF THE COUNTY COURT OF WILLIAMSON COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR

RECORD IN MY OFFICE, ON THIS 24<sup>th</sup> DAY OF July, 20 15 A.D., AT 8:27 O'CLOCK

A.M., AND

DULY RECORDED THIS 24<sup>th</sup> DAY OF July, 20 15 A.D., AT 8:45 O'CLOCK A.M., IN THE PLAT

RECORDS, OF SAID COURT AS DOCUMENT NO. 2015063602

WITNESS MY HAND AND SEAL OF THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE LAST DATE SHOWN ABOVE WRITTEN. NANCY RISTER, CLERK, COUNTY COURT, WILLIAMSON COUNTY, TEXAS

Connie Phelps  
BY: DEPUTY Connie Phelps



**Chaparral**  
Professional Land Surveying, Inc.  
Surveying and Mapping  
3500 McCall Lane  
Austin, Texas 78744  
512-443-1724  
Firm No. 10124500

PROJECT NO.:  
877-008  
DRAWING NO.:  
877-008-PL  
PLOT DATE:  
07/02/15  
PLOT SCALE:  
1" = 100'  
DRAWN BY:  
JDB  
SHEET  
03 OF 03

**DRAINAGE EASEMENT**

THE STATE OF TEXAS §

KNOW ALL MEN BY THESE PRESENTS:

THE COUNTY OF WILLIAMSON §

THAT CONTINENTAL HOMES OF TEXAS, L.P., a Texas limited partnership, acting herein by and through Richard N. Maier, Vice President of CHTEX of Texas, Inc., a Delaware corporation, its sole General Partner ("Grantor"), for and in consideration of good and valuable consideration to Grantor, the receipt and sufficiency of which is hereby acknowledged and confessed, and for which no lien or encumbrance, expressed or implied, is retained, has this day GRANTED and CONVEYED, and by these presents does GRANT and CONVEY unto the City of Cedar Park, Texas, a Texas municipal corporation ("Grantee"), a Drainage Easement for the construction, operation, maintenance, replacement, upgrade and repair of drainage lines and facilities, upon and across the following described land, to wit:

All of that certain 0.297 acre tract of land, lying and being situated in the City of Cedar Park, County of Williamson, State of Texas, described in EXHIBIT "A", attached hereto and made a part hereof for all purposes, to which reference is hereby made for a more particular description of said property.

TO HAVE AND TO HOLD the same perpetually to Grantee, together with the privilege at any and all times to enter said property, or any part thereof, for the purpose of constructing, operating, maintaining, replacing, upgrading and repairing said drainage lines and facilities, and for making connections therewith.

IN WITNESS WHEREOF, Grantors have caused this instrument to be executed on this 22 day of January, 2010, A.D.

CONTINENTAL HOMES OF TEXAS, L.P.  
a Texas limited partnership

BY: CHTEX of Texas, Inc.  
a Delaware corporation  
12554 Riata Vista Circle, 2<sup>nd</sup> Floor  
Austin, Texas 78727

BY:

Richard N. Maier  
Richard N. Maier, Vice President

THE STATE OF TEXAS §

THE COUNTY OF TRAVIS §

BEFORE ME, the undersigned authority, on this day personally appeared Richard N. Maier, Vice President of CHTEX of Texas, Inc., a Delaware corporation, sole General Partner of Continental Homes of Texas, L.P., a Texas limited partnership, known to me to be the person whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and consideration therein expressed and in the capacity therein stated.

WITNESS MY HAND AND SEAL this the 22 day of January, 2010, A.D.

Stacy M. Laine  
Notary Public in and for  
the State of Texas



Stacy M. Laine  
Printed name of Notary

My Commission expires on May 29, 2011



*Land Surveyors, Inc.*

8333 Cross Park Drive

Austin, Texas 78754

Office: 512.374.9722

Fax: 512.873.9743

METES AND BOUNDS DESCRIPTION

BEING 0.297 OF ONE ACRE OF LAND, OUT OF THE SHERWOOD J. DOVER SURVEY, ABSTRACT NO. 168 IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF A REMAINDER OF A 36.452 ACRE TRACT OF LAND CONVEYED TO CONTINENTAL HOMES OF TEXAS, L.P. BY DEED OF RECORD IN DOC. NO. 2008007358 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND ALSO BEING A PORTION OF A 42.861 ACRE TRACT OF LAND CONVEYED TO CONTINENTAL HOMES OF TEXAS, L.P. BY DEED OF RECORD IN DOC. NO. 2009090598 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING at a 1/2" rebar found for an angle point in the east line of said remainder of a 36.452 acre tract, the west line of said 42.861 acre tract, and also being the southeast corner of a 1.650 acre temporary access easement conveyed to the City of Cedar Park by instrument of record in Doc. No. 2008024342 of the Official Public Records of Williamson County, Texas;

THENCE North 35°23'47" East (record - North 35°23'47" East), along the east line of the remainder of a 36.452 acre tract, the west line of the 42.861 acre tract, and the east line of said 1.650 acre temporary access easement, a distance of 304.63 feet (record - 304.63 feet) to a 1/2" rebar found with plastic cap which reads "BASELINE INC" for a point of curvature;

THENCE along the east line of the remainder of a 36.452 acre tract and the west line of the 42.861 acre tract, and the following four (4) courses:

- 1) Along a tangential curve to the right, having a radius of 15.00 feet (record - 15.00 feet), a delta angle of 88°13'58" (record - 88°13'58"), an arc length of 23.10 feet (record - 23.10 feet), and a chord which bears North 79°30'46" East a distance of 20.88 feet (record - North 79°30'46" East a distance of 20.88 feet) to a 1/2" rebar found with plastic cap which reads "BASELINE INC";
- 2) North 33°37'45" East a distance of 58.00 feet (record - North 33°37'45" East a distance of 58.00 feet) to a 1/2" rebar found with plastic cap which reads "BASELINE INC";
- 3) North 56°22'15" West a distance of 0.37 feet (record - North 56°22'15" West a distance of 0.37 feet) to a 1/2" rebar found with plastic cap which reads "BASELINE INC" for a point of curvature;
- 4) Along a tangential curve to the right, having a radius of 15.00 feet (record - 15.00 feet), a delta angle of 86°24'04" (record - 86°24'04"), an arc length of 22.62 feet (22.62 feet), and a chord which bears North 13°10'13" West a distance of 20.54 feet (record - North 13°10'13" West a distance of 20.54 feet) to a 1/2" rebar found with plastic cap which reads "BASELINE INC";

THENCE crossing through the remainder of a 36.452 acre tract the following two (2) courses:



- 1) North  $08^{\circ}47'55''$  West a distance of 498.45 feet to a calculated point for the POINT OF BEGINNING;
- 2) North  $17^{\circ}14'02''$  West, a distance of 7.50 feet to a calculated point in the south line of a 0.056 acre wastewater easement conveyed to the City of Cedar Park by instrument of record in Doc. No. 2006010026 of the Official Public Records of Williamson County, Texas;

THENCE North  $72^{\circ}21'47''$  East, crossing through the remainder of a 36.452 acre tract, along the south line of said 0.506 acre wastewater easement, and crossing into the 42.861 acre tract, a distance of 240.85 feet to a calculated point;

THENCE South  $80^{\circ}47'08''$  East, crossing through the 42.861 acre tract and along the south line of the 0.506 acre wastewater easement, a distance of 767.38 feet to a calculated point in the east line of the 42.861 acre tract and the west right-of-way line of U.S. Highway 183-A (400' R.O.W.) as conveyed to the Central Texas Regional Mobility Authority by instrument of record in Doc. No. 2005007107 of the Official Public Records of Williamson County, Texas;

THENCE South  $09^{\circ}17'13''$  West (record - South  $09^{\circ}17'13''$  West), along the east line of the 42.861 acre tract and said west right-of-way line of U.S. Highway 183-A, a distance of 185.26 feet to a calculated point;

THENCE crossing through the 42.861 acre tract the following four (4) courses:

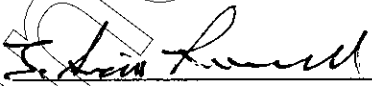
- 1) North  $80^{\circ}42'47''$  West a distance of 30.00 feet to a calculated point;
- 2) North  $09^{\circ}17'13''$  East a distance of 167.09 feet to a calculated point;
- 3) North  $35^{\circ}01'06''$  West a distance of 14.84 feet to a calculated point;
- 4) North  $80^{\circ}47'08''$  West a distance of 725.22 feet to a calculated point;

THENCE South  $72^{\circ}21'47''$  West, crossing through the 42.861 acre tract and crossing into the remainder of a 36.452 acre tract, a distance of 239.12 feet to the POINT OF BEGINNING.

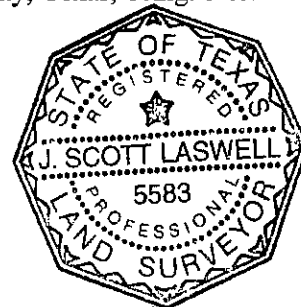
This parcel contains 0.297 of one acre of land, more or less, out of the Sherwood J. Dover Survey, Abstract No. 168, in Williamson County, Texas.

Description prepared from an on-the-ground survey made during November, 2007.

Bearing Basis: North line of Cedar Park Towncenter, Section I, a subdivision of record in Doc. No. 2003066921 of the Official Public Records of Williamson County, Texas, being: North  $85^{\circ}11'24''$  West.

  
J. Scott Laswell  
Registered Professional Land Surveyor  
State of Texas No. 5583

11/2/10  
Date



Attachments: Drawing - BaseLine\Projects\Cedar Park\Phase 9\Dwg\0.297 Ac.dwg  
File: Baseline\ Projects\Cedar Park\Phase 9\F\_Notes\0.297 Ac.doc



## LEGEND

- 1/2" IRON REBAR FOUND WITH PLASTIC CAP WHICH READS "BASELINE INC." (UNLESS OTHERWISE NOTED)
- 1/2" IRON REBAR SET WITH PLASTIC CAP WHICH READS "BASELINE INC."
- △ CALCULATED POINT
- O.P.R.W.C.T. OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
- P.R.W.C.T. PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS
- ( ) RECORD INFORMATION PER CEDAR PARK TOWNCENTER SECTION I DOC. NO. 2003066921 O.P.R.W.C.T.

LINE TABLE		
LINE	BEARING	LENGTH
L1	N 33°37'45" E	58.00'
(L1)	N 33°37'45" E	58.00'
L2	N 56°22'15" W	0.37'
(L2)	N 56°22'15" W	0.37'
L3	N 17°14'02" W	7.50'
L4	N 72°21'47" E	240.85'
L5	S 09°17'13" W	185.26'
(L5)	S 09°17'13" W	
L6	N 80°42'47" W	30.00'
L7	N 09°17'13" E	167.09'
L8	N 35°01'06" W	14.84'
L9	S 72°21'47" W	239.12'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	BEARING	CHORD
C1	15.00	23.10	88°13'58"	N79°30'46"E	20.88
(C1)	15.00	23.10	88°13'58"	N79°30'46"E	20.88
C2	15.00	22.62	86°24'04"	N13°10'13"W	20.54
(C2)	15.00	22.62	86°24'04"	N13°10'13"W	20.54

BEARING BASIS: NORTH LINE OF CEDAR PARK TOWNCENTER, SECTION I, A SUBDIVISION OF RECORD IN DOC. NO. 2003066921 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, BEING: NORTH 85°11'24" WEST.

SKETCH TO ACCOMPANY FIELD NOTES OF 0.297 OF ONE ACRE OF LAND OUT OF THE SHERWOOD J. DOVER SURVEY, ABSTRACT NO. 168 IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF A REMAINDER OF A 36.452 ACRE TRACT OF LAND CONVEYED TO CONTINENTAL HOMES OF TEXAS, L.P. BY DEED OF RECORD IN DOC. NO. 2008007358 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND ALSO BEING A PORTION A 42.861 ACRE TRACT OF LAND CONVEYED TO CONTINENTAL HOMES OF TEXAS, L.P. BY DEED OF RECORD IN DOC. NO. 2009090598 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.

**BASELINE LAND SURVEYORS, INC.**  
 PROFESSIONAL LAND SURVEYING SERVICES  
 8333 CROSS PARK DRIVE  
 AUSTIN, TEXAS 78754  
 OFFICE: 512.374.9722 FAX: 512.873.9743  
 SCOTT-BASELINE@AUSTIN.RR.COM

FILE: /PROJECTS/CEDAR PARK/PHASE 9/DWG/0.297 Ac. Perm Drainage Esmt.dwg  
 ATTACHMENT: S:\PROJECTS\CEDAR PARK\DOCS\FNOTES\0.297.DOC  
 SCALE (HOR.): 1"=200' SCALE (VERT.):  
 DATE: 01-12-2010 CHECKED BY: BWS DRAWN BY: JSL

SHEET  
 04 of 04

**FILED AND RECORDED**

OFFICIAL PUBLIC RECORDS 2010005492

*Nancy E. Rister*

01/28/2010 01:47 PM

SURRATT \$36.00

NANCY E. RISTER, COUNTY CLERK

WILLIAMSON COUNTY, TEXAS

② GRAY JANSING & ASSOCIATES INC  
8217 SHOAL CREEK BLVD STE 200  
AUSTIN, TX 78757

Official Public Records

*Nancy E. Rister*

Nancy E. Rister, County Clerk

2011 Jan 10 12:08 PM

Fee: \$ 36.00 Pages: 6

Williamson County Texas

**DRAINAGE EASEMENT**

THE STATE OF TEXAS §

KNOW ALL MEN BY THESE PRESENTS:

THE COUNTY OF WILLIAMSON §

THAT CONTINENTAL HOMES OF TEXAS, L.P., a Texas limited partnership, acting herein by and through Richard N. Maier, Vice President of CHTEX of Texas, Inc., a Delaware corporation, its sole General Partner ("Grantor"), for and in consideration of good and valuable consideration to Grantor, the receipt and sufficiency of which is hereby acknowledged and confessed, and for which no lien or encumbrance, expressed or implied, is retained, has this day GRANTED and CONVEYED, and by these presents does GRANT and CONVEY unto the City of Cedar Park, Texas, a Texas municipal corporation ("Grantee"), a Drainage Easement for the construction, operation, maintenance, replacement, upgrade and repair of drainage lines and facilities, upon and across the following described land, to wit:

All of that certain 0.038 acre tract of land, lying and being situated in the City of Cedar Park, County of Williamson, State of Texas, described in EXHIBIT "A", attached hereto and made a part hereof for all purposes, to which reference is hereby made for a more particular description of said property.

TO HAVE AND TO HOLD the same perpetually to Grantee, together with the privilege at any and all times to enter said property, or any part thereof, for the purpose of constructing, operating, maintaining, replacing, upgrading and repairing said drainage lines and facilities, and for making connections therewith.

IN WITNESS WHEREOF, Grantors have caused this instrument to be executed on this 2<sup>th</sup> day of January, 2011, A.D.

CONTINENTAL HOMES OF TEXAS, L.P.  
a Texas limited partnership

BY: CHTEX of Texas, Inc.  
a Delaware corporation  
12554 Riata Vista Circle, 2<sup>nd</sup> Floor  
Austin, Texas 78727

BY:

*Richard N. Maier*  
Richard N. Maier, Vice President

THE STATE OF TEXAS §

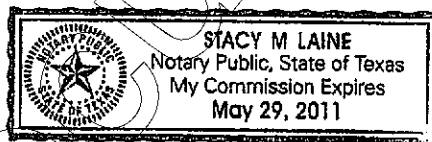
THE COUNTY OF TRAVIS §

BEFORE ME, the undersigned authority, on this day personally appeared Richard N. Maier, Vice President of CHTEX of Texas, Inc., a Delaware corporation, sole General Partner of Continental Homes of Texas, L.P., a Texas limited partnership, known to me to be the person whose name is subscribed to the foregoing instrument, and he acknowledged to me that he executed the same for the purposes and consideration therein expressed and in the capacity therein stated.

WITNESS MY HAND AND SEAL this the 4<sup>th</sup> day of January, 2011, A.D.

Stacy M. Laine

Notary Public in and for  
the State of Texas



Stacy M. Laine

Printed name of Notary

My Commission expires on May 29, 2011

Unofficial Document





## Land Surveyors, Inc.

8333 Cross Park Drive  
Austin, Texas 78754  
Office: 512.374.9722  
Fax: 512.873.9743

### METES AND BOUNDS DESCRIPTION

BEING 0.038 OF ONE ACRE OF LAND, OUT OF THE SHERWOOD J. DOVER SURVEY, ABSTRACT NO. 168 IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION OF A 42.861 ACRE TRACT OF LAND CONVEYED TO CONTINENTAL HOMES OF TEXAS, L.P. BY DEED OF RECORD IN DOC. NO. 2009090598 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

COMMENCING at a 1/2" rebar found for an angle point in the west line of said 42.861 acre tract, the east line of a remainder of a 36.452 acre tract of land conveyed to Continental Homes of Texas, L.P. by deed of record in Doc. No. 2008007358 of the Official Public Records of Williamson County, Texas, and also being the southeast corner of a 1.650 acre temporary access easement conveyed to the City of Cedar Park by instrument of record in Doc. No. 2008024342 of the Official Public Records of Williamson County, Texas;

THENCE North 35°23'47" East (record - North 35°23'47" East), along the east line of said remainder of a 36.452 acre tract, the west line of the 42.861 acre tract, and the east line of said 1.650 acre temporary access easement, a distance of 304.63 feet (record - 304.63 feet) to a 1/2" rebar found with plastic cap which reads "BASELINE INC" for a point of curvature;

THENCE along the east line of the remainder of a 36.452 acre tract and the west line of the 42.861 acre tract, and the following four (4) courses:

- 1) Along a tangential curve to the right, having a radius of 15.00 feet (record - 15.00 feet), a delta angle of 88°13'58" (record - 88°13'58"), an arc length of 23.10 feet (record - 23.10 feet), and a chord which bears North 79°30'46" East a distance of 20.88 feet (record - North 79°30'46" East a distance of 20.88 feet) to a 1/2" rebar found with plastic cap which reads "BASELINE INC";
- 2) North 33°37'45" East a distance of 58.00 feet (record - North 33°37'45" East a distance of 58.00 feet) to a 1/2" rebar found with plastic cap which reads "BASELINE INC";
- 3) North 56°22'15" West a distance of 0.37 feet (record - North 56°22'15" West a distance of 0.37 feet) to a 1/2" rebar found with plastic cap which reads "BASELINE INC" for a point of curvature;
- 4) Along a tangential curve to the right, having a radius of 15.00 feet (record - 15.00 feet), a delta angle of 86°24'04" (record - 86°24'04"), an arc length of 22.62 feet (22.62 feet), and a chord which bears North 13°10'13" West a distance of 20.54 feet (record - North 13°10'13" West a distance of 20.54 feet) to a 1/2" rebar found with plastic cap which reads "BASELINE INC";

THENCE North 76°15'24" East, crossing through the 42.861 acre tract, a distance of 895.41 feet to a calculated point in the east line of the 42.861 acre tract and the west right-of-way line of U.S. Highway 183-A (400' R.O.W.) as conveyed to the Central Texas Regional Mobility Authority by

instrument of record in Doc. No. 2005007107 of the Official Public Records of Williamson County, Texas, and being the POINT OF BEGINNING;

THENCE crossing through the 42.861 acre tract the following two (2) courses:

- 1) North  $80^{\circ}42'47''$  West a distance of 30.00 feet to a calculated point;
- 2) North  $09^{\circ}17'13''$  East a distance of 55.00 feet to a calculated point in the south line of a 0.297 acre drainage easement conveyed to the City of Cedar Park by instrument of record in Doc. No. 2010005492 of the Official Public Records of Williamson County, Texas;

THENCE South  $80^{\circ}42'47''$  East, crossing through the 42.861 acre tract and along the south line of said 0.297 acre drainage easement, a distance of 30.00 feet to a calculated point in the east line of the 42.861 acre tract, the west right-of-way line of said U.S. Highway 183-A, and being the southeast corner of the 0.297 acre drainage easement;

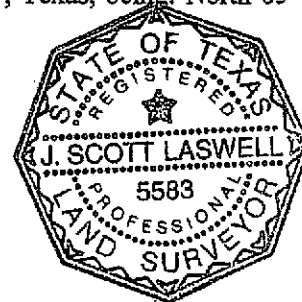
THENCE South  $09^{\circ}17'13''$  West (record - South  $09^{\circ}17'13''$  West), along the east line of the 42.861 acre tract and the west right-of-way line of U.S. Highway 183-A, a distance of 55.00 feet to the POINT OF BEGINNING.

This parcel contains 0.038 of one acre of land, more or less, out of the Sherwood J. Dover Survey, Abstract No. 168, in Williamson County, Texas.

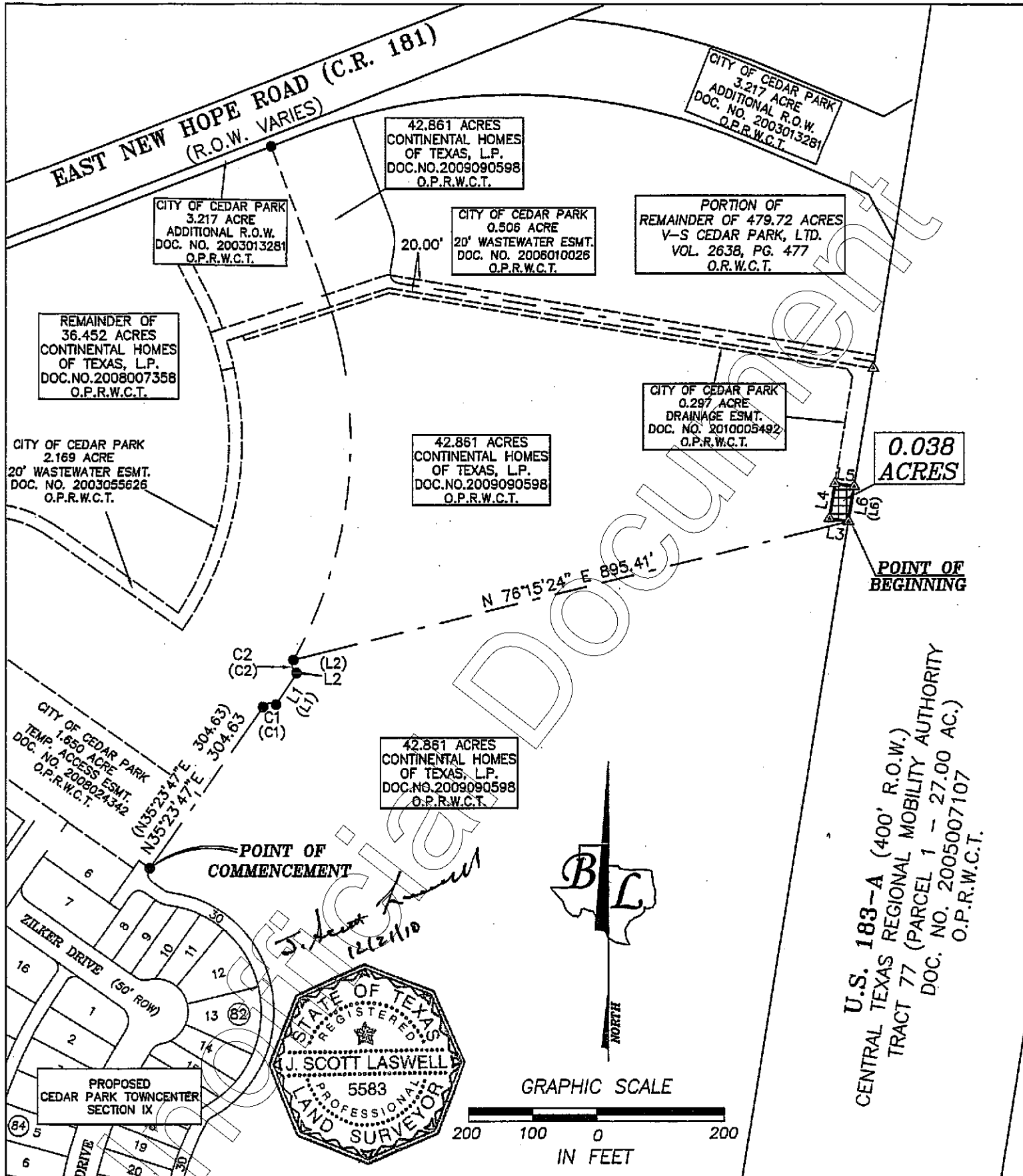
Description prepared from an on-the-ground survey made during November, 2007.

Bearing Basis: North line of Cedar Park Towncenter, Section I, a subdivision of record in Doc. No. 2003066921 of the Official Public Records of Williamson County, Texas, being: North  $85^{\circ}11'24''$  West.

J. Scott Laswell 12/21/10  
J. Scott Laswell Date  
Registered Professional Land Surveyor  
State of Texas No. 5583



Attachments: Drawing - Baseline\Projects\Cedar Park\Phase 9\Dwg\0.038 Ac.dwg  
File: Baseline\Projects\Cedar Park\Phase 9\F\_Notes\0.038 Ac.doc



SKETCH TO ACCOMPANY FIELD NOTES OF 0.038 OF ONE ACRE OF LAND OUT OF THE SHERWOOD J. DOVER SURVEY, ABSTRACT NO. 168 IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION A 42.861 ACRE TRACT OF LAND CONVEYED TO CONTINENTAL HOMES OF TEXAS, L.P. BY DEED OF RECORD IN DOC. NO. 2009090598 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.

**BASELINE LAND SURVEYORS, INC.**  
PROFESSIONAL LAND SURVEYING SERVICES  
8333 CROSS PARK DRIVE  
AUSTIN, TEXAS 78754  
OFFICE: 512.374.9722 FAX: 512.873.9743  
SCOTT-BASELINE@AUSTIN.RR.COM

FILE: /PROJECTS/CEDAR PARK/PHASE 9/DWG/0.038 Ac. Perm Drainage EsmLdwg  
ATTACHMENT: S:\PROJECTS\CEDAR PARK\DOCS\FNOTES\0.038.DOC  
SCALE (HOR.): 1"=200' SCALE (VERT.):  
DATE: 12-21-2010 CHECKED BY: RLW DRAWN BY: JSL

SHEET  
03 of 04

## LEGEND

- 1/2" IRON REBAR FOUND WITH PLASTIC CAP WHICH READS "BASELINE INC." (UNLESS OTHERWISE NOTED)
- 1/2" IRON REBAR SET WITH PLASTIC CAP WHICH READS "BASELINE INC."
- ▲ CALCULATED POINT
- O.P.R.W.C.T. OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS
- P.R.W.C.T. PLAT RECORDS OF WILLIAMSON COUNTY, TEXAS
- ( ) RECORD INFORMATION PER CEDAR PARK TOWNCENTER SECTION I DOC. NO. 2003066921 O.P.R.W.C.T.

LINE TABLE		
LINE	BEARING	LENGTH
L1	N 33°37'45" E	58.00'
(L1)	N 33°37'45" E	58.00'
L2	N 56°22'15" W	0.37'
(L2)	N 56°22'15" W	0.37'
L3	N 80°42'47" W	30.00'
L4	N 09°17'13" E	55.00'
L5	S 80°42'47" E	30.00'
L6	S 09°17'13" W	55.00'
(L6)	S 09°17'13" W	

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	BEARING	CHORD
C1	15.00	23.10	88°13'58"	N79°30'46"E	20.88
(C1)	15.00	23.10	88°13'58"	N79°30'46"E	20.88
C2	15.00	22.62	86°24'04"	N13°10'13"W	20.54
(C2)	15.00	22.62	86°24'04"	N13°10'13"W	20.54

BEARING BASIS: NORTH LINE OF CEDAR PARK TOWNCENTER, SECTION I, A SUBDIVISION OF RECORD IN DOC. NO. 2003066921 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, BEING: NORTH 85°11'24" WEST.

SKETCH TO ACCOMPANY FIELD NOTES OF 0.038 OF ONE ACRE OF LAND OUT OF THE SHERWOOD J. DOVER SURVEY, ABSTRACT NO. 168 IN WILLIAMSON COUNTY, TEXAS, AND BEING A PORTION A 42.861 ACRE TRACT OF LAND CONVEYED TO CONTINENTAL HOMES OF TEXAS, L.P. BY DEED OF RECORD IN DOC. NO. 2009090598 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS.

**BASELINE LAND SURVEYORS, INC.**  
 PROFESSIONAL LAND SURVEYING SERVICES  
 8333 CROSS PARK DRIVE  
 AUSTIN, TEXAS 78754  
 OFFICE: 512.374.9722 FAX: 512.873.9743  
 SCOTT-BASELINE@AUSTIN.RR.COM

FILE: /PROJECTS/CEDAR PARK/PHASE 9/DWG/0.038 Ac. Perm Drainage Esmt.dwg  
 ATTACHMENT: S:\PROJECTS\CEDAR PARK\DOCS\FNOTES\0.038.DOC  
 SCALE (HOR.): 1"=200' SCALE (VERT.):  
 DATE: 12-21-2010 CHECKED BY: BWB DRAWN BY: JSL

SHEET  
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