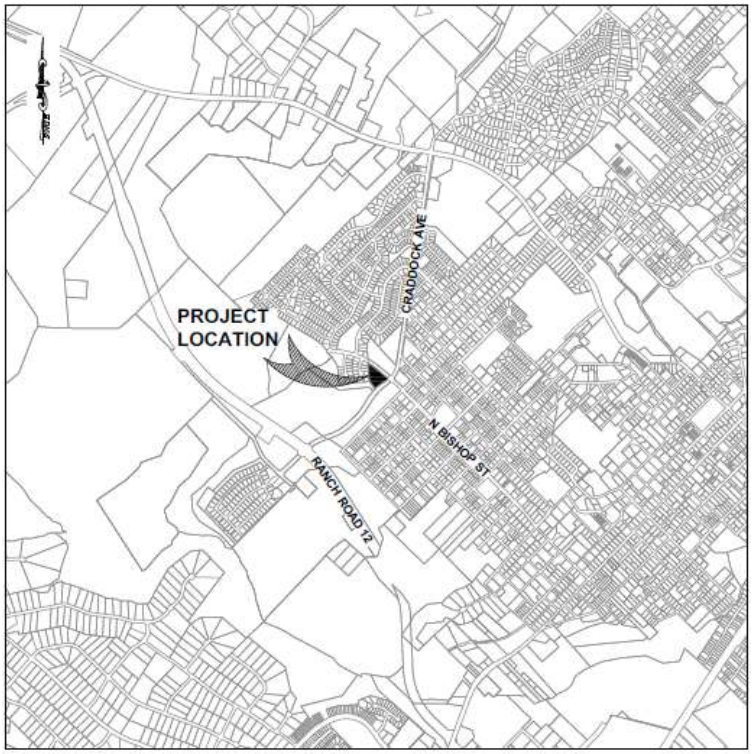
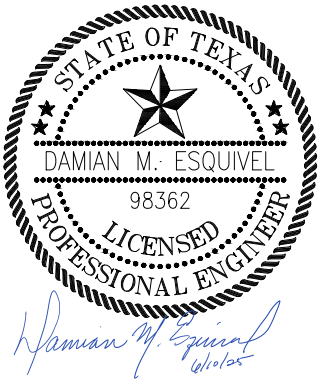
B.B. RETAIL/MARKET
1131 CRADDOCK AVE, SAN MARCOS TX 78666
WATER POLLUTION ABATEMENT PLAN

JUNE 2025



LOCATION MAP
N.T.S.

Owner/Developer:
MS Joint Venture LLC
Malek Al-Sayyed
2402 Lake Austin Blvd
Austin, Texas 78703



Prepared by:
Alejandro Jimenez, E.I.T.
Damian Esquivel, P.E.

LIQUE ENGINEERS

TBPE FIRM NO. 20405
816 CAMARON, STE. 110
SAN ANTONIO, TEXAS 78212

Contents

TCEQ Application Cover Page

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

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

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

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

Technical Review

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

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

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

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.

4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: Retail/Market 1311 Craddock Ave						**2. Regulated Entity No.:**			
3. Customer Name:Al-Sayyed Inc.						**4. Customer No.: 603515503**			
5. Project Type: **(Please circle/check one)**	New		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**		2.04	
9. Application Fee:	$4,000.00		**10. Permanent BMP(s):**			Sand Filter Pond			
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**						
13. County:	Hays		**14. Watershed:**			San Marcos River Watershed			

Application Distribution

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

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

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

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

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	___	___	___	___
Region (1 req.)	___	___	___	___	___
County(ies)	___	___	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village ___Hollywood Park ___San Antonio (SAWS) ___Shavano Park	___Bulverde ___Fair Oaks Ranch ___Garden Ridge ___New Braunfels ___Schertz	NA	___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. Damian Esquivel Print Name of Customer/Authorized Agent Damian M. Esquivel 4/10/2025 Signature of Customer/Authorized Agent Date

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

General Information Form

General Information Form

Texas Commission on Environmental Quality

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

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

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

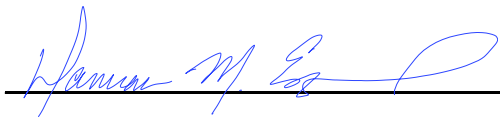
Signature

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

Print Name of Customer/Agent: Damian Esquivel P.E.

Date: 10/10/25

Signature of Customer/Agent:



Project Information

1. Regulated Entity Name: Retail/Market 1311 Craddock Ave
2. County: Hays
3. Stream Basin: _____
4. Groundwater Conservation District (If applicable): _____
5. Edwards Aquifer Zone:

   ☒ Recharge Zone
   ☐ Transition Zone

6. Plan Type:

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

7. Customer (Applicant):

Contact Person: Malek Al-Sayyed
Entity: Al-Sayyed Inc.
Mailing Address: 1071 Springdale Rd
City, State: Austin TX Zip: 78721
Telephone: _____ FAX: _____
Email Address: malek694@gmail.com

8. Agent/Representative (If any):

Contact Person: Damian Esquivel
Entity: Lique Engineers LLC
Mailing Address: 816 Camaron St
City, State: San Antonio TX Zip: 78212
Telephone: 2105494207 FAX: _____
Email Address: damian@lique.us

9. Project Location:

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

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

Intersection of Bishop and Craddock, 1311 Craddock Ave., San Marcos TX 78666

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

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

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

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

☐ Survey staking will be completed by this date: _____

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

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

15. Existing project site conditions are noted below:

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

Prohibited Activities

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

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

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

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

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

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

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

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

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

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

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

Administrative Information

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

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

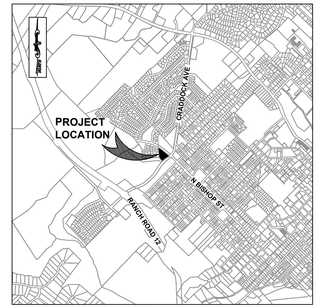
19. ☒ Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

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

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

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

ATTACHMENT A



LOCATION MAP
NOT TO SCALE

LEGEND

PROPERTY LINE _____

NO.	DATE	COMMENTS

RETAIL/MARKET
1311 CRADDOCK AVE
SAN MARCOS, TEXAS 78666

AERIAL MAP

LIQUE ENGINEERS &SURVEYING
TBPELS # - 20405 &
- 10194727
816 Camaron Ste. 110
San Antonio,TX. 78212
Phone: 210-549-4207

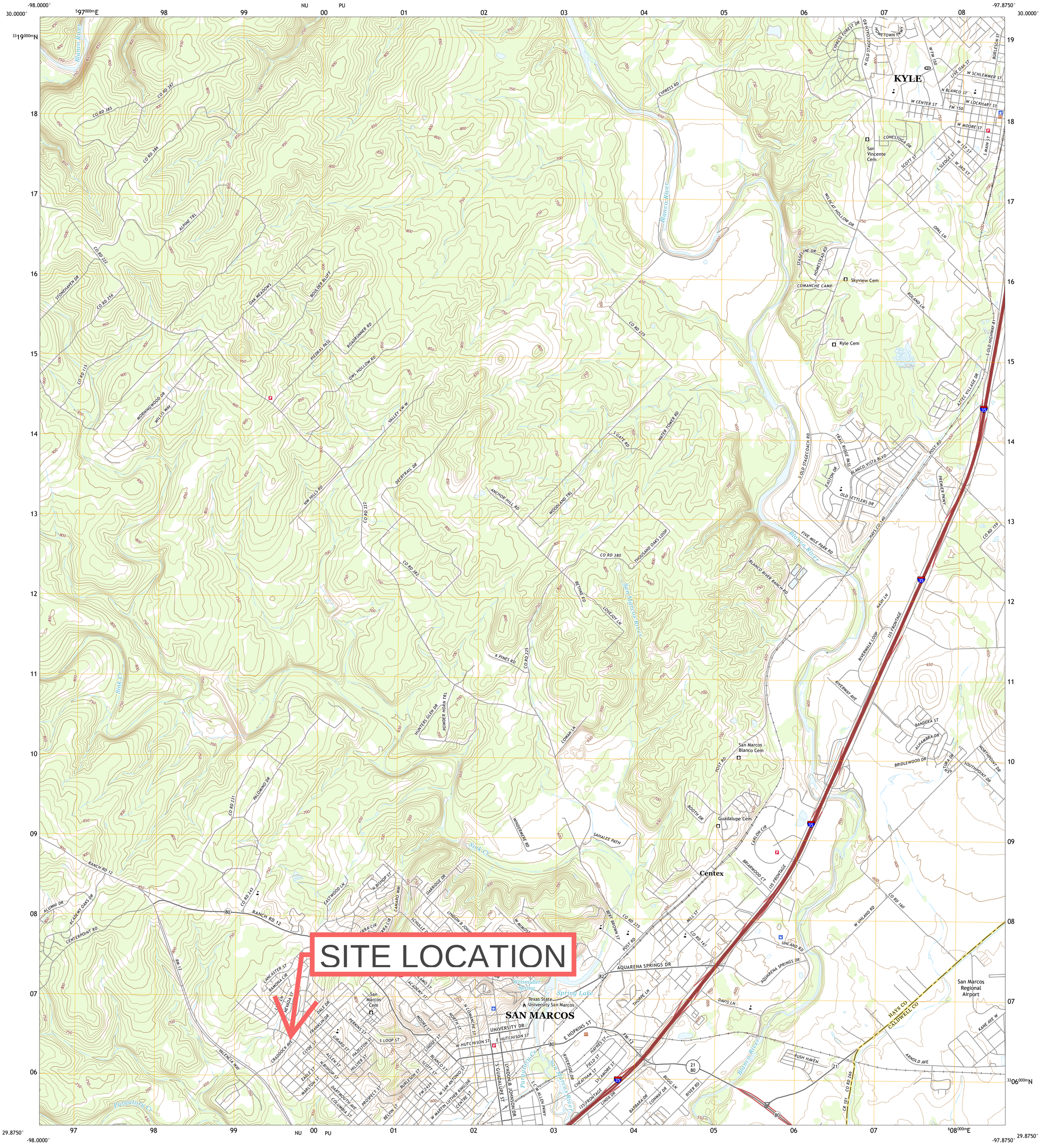
Date: Nov 27, 2024, 11:18am User ID: alejandro.jimenez
File: P:\1160\01\08 - Bishop and Craddock (Retail)\Civil Drainage_Design\Exhibits\AERIAL MAP.dwg

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

ATTACHMENT B

SAN MARCOS NORTH QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, October 2016 - November 2016
Roads..... U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018
Contours.....National Elevation Dataset, 2019
Boundaries.....Multiple sources; see metadata file 2019 - 2021

Wetlands.....FWS National Wetlands Inventory Not Available

MN
GN
0°32' 9 MILS
3°50' 68 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
NU PU
Grid Zone Designation 14R

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1 MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard.

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES
1 Driftwood
2 Mountain City
3 Buda
4 Wimberley
5 Uhland
6 Hunter
7 San Marcos South
8 Martindale

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

SAN MARCOS NORTH, TX
2022

NSN, 7643016398095
NGA REF NO. USGSX24K39669

Attachment C
Project Description

The proposed mixed use (Retail/Market) commercial development is located at the intersection of N Bishop Street and Craddock Avenue in San Marcos, Texas. Lot 1, Block A of the Bishop's Corner Plat and is a total of 2.04 acres. The site includes a variable width water quality easement on the northwest portion of the property.

The proposed development is located within City of San Marcos limits and within the Edwards Aquifer Recharge Zone. The property is located within Zone "X" of the FEMA Flood Insurance Rate Map 48209C0389F, dated September 2, 2005. (See Exhibit D-FEMA Map). Zone "X" denotes areas determined to be outside the limits of the 500-year floodplain.

This proposed commercial development is located at 1311 Craddock Ave, San Marcos, TX 78666 and will increase impervious cover of the previously undeveloped tract to 50,000 SF (1.15 acres) for ultimate conditions of the site. The sites runoff will be routed to a proposed sand filter pond. Once the runoff has been treated it will be released to the northwest corner of the site.

Geologic Assessment

GEOLOGIC ASSESSMENT (WPAP)

CRADDOCK AVENUE TRACT
1311 CRADDOCK AVENUE
SAN MARCOS, TEXAS

FROST GEOSCIENCES, INC. PROJECT NO.: FGS-E25116
MARCH 3, 2025

Prepared exclusively for

Lique Group
816 Cameron Street, Suite 110
San Antonio, Texas 78212

Frost GeoSciences
Geotechnical ▪ Construction Materials
Geologic ▪ Environmental

Frost GeoSciences
Geotechnical ▪ Construction Materials
Geologic ▪ Environmental

Frost Geosciences, Inc.
13406 Western Oak
Helotes, Texas 78023
Office (210)-372-1315
Fax (210)-372-1318
www.frostgeosciences.com
TBPE Firm Registration # F-9227
TBPG Firm Registration # 50040

March 3, 2025

Lique Group
816 Cameron Street, Suite 110
San Antonio, Texas 78212

Attn: Mr. Alejandro Jimenez, EIT

SUBJECT:
Geologic Assessment (WPAP)
for the Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
Craddock Avenue Tract
1311 Craddock Avenue
San Marcos, Texas
FGS Project N^{o} FGS-E25116

Dear Mr. Jimenez:

Frost GeoSciences, Inc., (FGS) is pleased to submit the enclosed Geologic Assessment completed for the above referenced project site as it relates to 30 TAC §213.5(b)(3), effective June 1, 1999. Our investigation was conducted, and this report was prepared in general accordance with the Texas Commission on Environmental Quality (TCEQ) "Instructions to Geologists", TCEQ-0585-Instructions (Rev. 10-1-04).

If you have any questions regarding this report, or if Frost GeoSciences, Inc. may be of additional assistance to you on this project, please feel free to call our office. It has been a pleasure to work with you and we wish to thank you for the opportunity to be of service to you on this project. We look forward to being of continued service.

We appreciate the opportunity to perform these services for Lique Group. Please contact the undersigned if you have questions regarding this report.

Respectfully submitted,
Frost GeoSciences, Inc.

Ethan Levine
Field Geologist

Steve Frost, C.P.G., P.G.
Principal Geologist

Copies Submitted: (1) Mr. Alejandro Jimenez, EIT; Lique Group

TABLE OF CONTENTS

GEOLOGIC ASSESSMENT

Texas Commission on Environmental Quality

For Regulated Activities on The Edwards Aquifer Recharge/transition Zones and Relating to 30 TAC §213.5(b)(3), 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. My signature certifies that I am qualified as a geologist as defined by 30 TAC Chapter 213.

Print Name of Geologist: Steve Frost, C.P.G., P.G. Telephone: (210) 372-1315

Date: March 3, 2025 Fax: (210) 372-1318

Representing: Frost GeoSciences, Inc. #50040 (Name of Company and TBPG or TBPE registration number)

Signature of the Geologist:

Regulated Entity Name: Craddock Avenue Tract

Project Information

1. Date(s) Geologic Assessment was performed: February 24, 2025
2. Type of Project:

   ☒ WPAP ☐ AST
   ☐ SCS ☐ UST
3. Location of Project:

   ☒ Recharge Zone
   ☐ Transition Zone
   ☐ Contributing Zone within the Transition Zone

4. ☒ **Attachment A - Geologic Assessment Table**. Completed Geologic Assessment Table (Form TCEQ-0585-Table) is attached.

5. ☒ Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map

Table 1 - Soil Units, Infiltration Characteristics and Thickness

Soil Name	Group*	Thickness(feet)
CrD	C	1.5
DeB	B	1.5

Soil Group Definitions (Abbreviated)

A. Soils having a high infiltration rate when thoroughly wetted.
B. Soils having a moderate infiltration rate when thoroughly wetted.
C. Soils having a slow infiltration rate when thoroughly wetted.
D. Soils having a very slow infiltration rate when thoroughly wetted

6. ☒ **Attachment B – Stratigraphic Column**. A stratigraphic column showing formations, members, and thicknesses is attached. The outcropping unit, if present, should be at the top of the stratigraphic column. Otherwise, the uppermost unit should be at the top of the stratigraphic column.

7. ☒ **Attachment C – Site Geology**. A narrative description of the site-specific geology including any features identified in the Geologic Assessment Table, a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure(s), and karst characteristics is attached.

8. ☒ **Attachment D – Site Geologic Map(s)**. The Site Geologic Map must be the same scale as the applicant's Site Plan.

   Applicant's Site Plan Scale: 1" = 30'
   Site Geologic Map Scale: 1" = 30'
   Site Soils Map Scale (if more than 1 soil type): 1" = 500'

9. Method of collecting positional data:

   ☒ Global Positioning System (GPS) technology.
   ☒ Other method(s). Please describe method of data collection: Google Earth Aerial Imagery

10. ☒ The project site and boundaries are clearly shown and labeled on the Site Geologic Map.

11. ☒ Surface geologic units are shown and labeled on the Site Geologic Map.

12. ☒ Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

    ☐ Geologic or manmade features were not discovered on the project site during the field investigation.

13. ☒ The Recharge Zone boundary is shown and labeled, if appropriate.

14. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.): If applicable, the information must agree with Item No. 20 of the WPAP Application Section.

    ☒ There is 1 well present on the project site and the locations are shown and labeled. (Check all of the following that apply.)

    ☒ The wells appear to not be in use and to have been properly abandoned.
    ☐ The wells are not in use and will be properly abandoned.
    ☐ The wells are in use and comply with 16 TAC Chapter 76.

    ☐ There are no wells or test holes of any kind known to exist on the project site.

Administrative Information

15. ☒ 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.

STRATIGRAPHIC COLUMN

[Hydrogeologic subdivisions modified from Maclay and Small (1976); groups, formations, and members modified from Rose (1972); lithology modified from Dunham (1962); and porosity type modified from Choquette and Pray (1970). CU, confining unit; AQ, aquifer]

Hydrogeologic subdivision			Group, formation, or member			Hydrologic function	Thickness (feet)	Lithology	Field identification	Cavern development	Porosity/ permeability type
Upper Cretaceous	Upper confining units		Eagle Ford Group			CU	30 – 50	Brown, flaggy shale and argillaceous limestone	Thin flagstones; petroliferous	None	Primary porosity lost/ low permeability
			Buda Limestone			CU	40 – 50	Buff, light gray, dense mudstone	Porcelaneous limestone with calcite-filled veins	Minor surface karst	Low porosity/low permeability
			Del Rio Clay			CU	40 – 50	Blue-green to yellow-brown clay	Fossiliferous; *Ilymatogyra arietina*	None	None/primary upper confining unit
Lower Cretaceous	I	Edwards aquifer	Georgetown Formation			Karst AQ; not karst CU	2 – 20	Reddish-brown, gray to light tan marly limestone	Marker fossil; *Waconella wacoensis*	None	Low porosity/low permeability
	II		Edwards Group	Person Formation	Cyclic and marine members, undivided	AQ	80 – 90	Mudstone to packstone; *miliolid* grainstone; chert	Thin graded cycles; massive beds to relatively thin beds; crossbeds	Many subsurface; might be associated with earlier karst development	Laterally extensive; both fabric and not fabric/water-yielding
	III				Leached and collapsed members, undivided	AQ	70 – 90	Crystalline limestone; mudstone to grainstone; chert; collapsed breccia	Bioturbated iron-stained beds separated by massive limestone beds; stromatolitic limestone	Extensive lateral development; large rooms	Majority not fabric/one of the most permeable
	IV				Regional dense member	CU	20 – 24	Dense, argillaceous mudstone	Wispy iron-oxide stains	Very few; only vertical fracture enlargement	Not fabric/low permeability; vertical barrier
	V			Kainer Formation	Grainstone member	AQ	50 – 60	*Miliolid* grainstone; mudstone to wackestone; chert	White crossbedded grainstone	Few	Not fabric/ recrystallization reduces permeability
	VI				Kirschberg evaporite member	AQ	50 – 60	Highly altered crystalline limestone; chalky mudstone; chert	Boxwork voids, with neospar and travertine frame	Probably extensive cave development	Majority fabric/one of the most permeable
	VII				Dolomitic member	AQ	110 – 130	Mudstone to grainstone; crystalline limestone; chert	Massively bedded light gray, *Toucasia* abundant	Caves related to structure or bedding planes	Mostly not fabric; some bedding plane-fabric/water-yielding
	VIII				Basal nodular member	Karst AQ; not karst CU	50 – 60	Shaly, nodular limestone; mudstone and *miliolid* grainstone	Massive, nodular and mottled, *Exogyra texana*	Large lateral caves at surface; a few caves near Cibolo Creek	Fabric; stratigraphically controlled/large conduit flow at surface; no permeability in subsurface
	Lower confining unit		Upper member of the Glen Rose Limestone			CU; evaporite beds AQ	350 – 500	Yellowish tan, thinly bedded limestone and marl	Stair-step topography; alternating limestone and marl	Some surface cave development	Some water production at evaporite beds/relatively impermeable

Frost GeoSciences

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Craddock Avenue Tract **PROJECT NUMBER:** FGS-E25116

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
S-1	29° 53' 3.88"N	97° 58' 2.00"N	MB	30	Kdg	0.5	0.5	0.5	-	-	-	-	OF	1	31	31		YES		HILLSIDE
S-2	29° 53' 3.91"N	97° 58' 2.07"N	MB	30	Kdg	0.5	0.5	0.5	-	-	-	-	OF	1	31	31		YES		HILLSIDE
S-3	29° 53' 3.94"N	97° 58' 2.15"N	MB	30	Kdg	0.5	0.5	0.5	-	-	-	-	OF	1	31	31		YES		HILLSIDE
S-4	29° 53' 3.94"N	97° 58' 2.22"N	MB	30	Kdg	0.5	0.5	0.5	-	-	-	-	OF	1	31	31		YES		HILLSIDE
S-5	29° 53' 4.62"N	97° 58' 2.07"N	MB	30	Kdg	0.5	0.5	0.5	-	-	-	-	F	-	30	30		YES		HILLSIDE

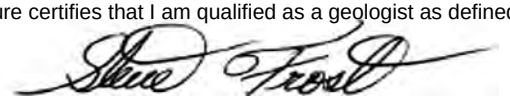
Datum: NAD 83

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Commission on Environmental Quality's Instructions to Geologists.
The information presented here complies with that document and is a true representation of the conditions observed in the field.
My signature certifies that I am qualified as a geologist as defined by 30 TAC 213.



Steve Frost, PG

Date: March 3, 2025

TCEQ-0585-Table (Rev. 10-01-04)

LOCATION

The project site is an approximately 2-acre tract of land located immediately west of the intersection of North Bishop Street and Craddock Avenue in San Marcos, Hays County, Texas. An overall view of the area is shown on copies of the Site Map, the Street Map, the U.S.G.S. Topographic Map, the EAA-Edwards Aquifer Recharge Zone and Contributing Zone Map, the FIRM Map, a 2023 aerial photograph, and a NRCS Web Soil Survey aerial photograph at a scale of 1"=500'. These maps are included as Figures 1 through 9 in Appendix A.

METHODOLOGY

The Geologic Assessment was performed by Steve Frost, C.P.G., P.G., Senior Geologist and Ethan Levine with Frost GeoSciences, Inc. Mr. Frost is a Licensed Professional Geoscientist in the State of Texas (License # 315).

Frost GeoSciences, Inc. researched the geology of the area immediately west of the intersection of North Bishop Street and Craddock Avenue. The research included, but was not limited to: the Geologic Atlas of Texas Seguin Sheet, FEMA maps, Edwards Aquifer Recharge Zone Maps, U.S.G.S. 7.5 Minute Quadrangle Maps, the U.S.G.S. Water-Resources Investigations Report 95-4265, and the U.S.D.A. Soil Survey of Hays County, Texas.

After reviewing the available information, a field investigation was performed to identify any geologic or man-made Potential Recharge Features (PRFs). A transect spacing of approximately 50 feet, or less depending on vegetation thickness, was used to inspect the project area. A 2023 aerial photograph, in conjunction with a hand-held Garmin GPS 73 Global Positioning System with an Estimated Potential Error ranging from 10 to 14 feet, was used to navigate around the property and identify the locations of PRFs, as recommended in the "Instructions to Geologists", TCEQ-0585-Instructions (Rev. 10-1-04). The locations of any PRFs noted in the field were marked with blue and white flagging. The flagging is numbered with the same potential recharge feature I.D. # that is used on the Site Geologic Map. The Site Geologic Map, indicating the limits of the project site, and the locations of PRFs and rock outcrops noted on the project site, is included in Appendix C of this report. A copy of a 2023 aerial photograph indicating the limits of the project site, and the locations of PRFs and rock outcrops noted on the project site, is included on Figure 9 in Appendix A. The Geologic Assessment Form TCEQ-0585, (Rev. 2-11-15), Stratigraphic Column, and the Geologic Assessment Table have been filled with the appropriate information for this project site and are included pages 1 through 5 of this report.

RESEARCH & OBSERVATIONS

7.5 Minute Quadrangle Map Review

According to the U.S.G.S. 7.5 Minute Quadrangle Map, San Marcos North, Texas Sheet (1998), the elevation across the project site ranges from 700 to 730 feet above mean sea level. The project site has a total relief of approximately 30 feet. The project site is located on a slight topographic high. Runoff from the project site appears to flow to the southwest into a tributary of Purgatory Creek. No structures or improvements are depicted on the project site. Urban streets are depicted to the immediate east and south of the project site. A copy of the U.S.G.S. 7.5 Minute Quadrangle Map indicating the location of the project site is included as Figure 3 in Appendix A.

Recharge/Transition Zone

According to the E.A.A. Edwards Aquifer Recharge Zone and Contributing Zone Map, San Marcos North (2014), the Official Edwards Aquifer Recharge Zone Map, San Marcos North Sheet (1998), and the TCEQ website: Edwards Aquifer Viewer – https://tceq.maps.arcgis.com/apps/webappviewer/index.html, the project site is located within the Recharge Zone of the Edwards Aquifer. A copy of the E.A.A. Edwards Aquifer Recharge Zone and Contributing Zone Map indicating the location of the project site is included on Figure 5 in Appendix A.

100-Year Floodplain

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the Flood Insurance Maps, Community Panel Numbers 48209C0388G and 48209C0389G for Hays County, Texas, dated January 17, 2025, were reviewed to determine if the project site is located in areas prone to flooding. According to the review of the above-mentioned panel numbers, the Flood Maps indicate that the project site is located within "Zone X". The Panel Legend defines Zone X as areas determined to be outside the 0.2% annual chance floodplain. A copy of the above referenced FIRM panels indicating the location of the project site is included on Figure 6 in Appendix A.

Soils

According to the United States Department of Agricultural (USDA) Natural Resources Conservation Service (NRCS) Soil Survey of Comal and Hays County (1984) and the USDA NRCS Web Soil Survey (WSS) website: https://websoilsurvey.nrcs.usda.gov, the project site is located primarily on the Comfort-Rock outcrop complex, undulating (CrD), with a small portion of the southeast corner of the project site located on the Denton silty clay, 1-3% slopes (DeB). A copy of the aerial photo (approximate scale: 1"=500') obtained from the Web Soil Survey (WSS) website: https://websoilsurvey.nrcs.usda.gov has been included on Figure 7 in Appendix A

- The **Comfort-Rock outcrop complex, undulating (CrD)** consists of shallow, clayey soils and Rock outcrops on the side slopes, hilltops, and ridgetops in the uplands area of the Edwards Plateau. This soil complex is composed of the Comfort extremely stony clay (~49% to ≥95% of the complex), the Rock outcrop (5-36% of the complex), and small amounts of the Rumple, Purves, Eckert, and Real soils. Typically, the surface layer of the Comfort soil is dark brown extremely stony clay about 6 inches thick. Stones and cobbles (some as much as 4' across) cover approximately 45% of the surface. The subsoil extends to a depth of 13 inches. It is dark reddish brown extremely stony clay. The underlying material is indurated fractured limestone. The soil is mildly alkaline and non-calcareous throughout. The soil is well drained, surface runoff is slow to medium, permeability is slow, and the available

water capacity is very low. Water erosion is a slight hazard. Typically, the Rock outcrop is dolomitic limestone that is barren of soil except in narrow fractures in the rock. Some areas may have as much as 3 inches of soil on top of the outcrop.

- The **Denton silty clay, 1-3% slopes (DeB)** is a moderately deep, gently sloping soil located on valley slopes on uplands in the Edwards Plateau. Typically, the surface layer is dark grayish brown silty clay approximately 14 inches thick. The underlying layer extends to a depth of 25 inches and is dark brown silty clay. The subsoil extends to a depth of 33 inches. It is light yellowish brown silty clay. The underlying material to a depth of 36 inches is light brown and reddish yellow silty clay. It is underlain by fractured limestone interbedded with calcareous clayey marl. The soil is moderately alkaline and calcareous throughout. This is a well-drained and slowly permeable soil. Runoff is medium. The available water capacity is medium and erosion is a slight hazard.

Narrative Description of the Site Geology

Based on a visual inspection of the ground surface, the overall potential for fluid flow from the project site into the Edwards Aquifer appears to be low. The locations of the Potential Recharge Features (PRFs) observed on the project site are identified on the 2023 aerial photograph on Figure 10 in Appendix A, and on the Site Geologic Map provided in Appendix C. Color photos of the project site and observed PRFs are included in Appendix B.

PRF #S-1 is a former water-well in a square concrete pad. The former well appears to have been plugged and abandoned. Frost GeoSciences rates the feature as low on figure 1 of the TCEQ-0585-Instructions (Rev. 10-01-04). The feature scores a 31 on the sensitivity scale, column 10 of the Geologic Assessment Table included on page 5 of this report. Frost GeoSciences, Inc. does not consider the former water well to be a sensitive feature.

PRFs #S-2, #S-3, and #S-4 are post holes with concrete setting for fence posts. The post holes are approximately 6x6 inches wide and appeared to be filled in with soil and organic material at the time of the site reconnaissance. Frost GeoSciences rates these features as low on figure 1 of the TCEQ-0585-Instructions (Rev. 10-01-04). The features score a 31 on the sensitivity scale, column 10 of the Geologic Assessment Table included on page 5 of this report. Frost GeoSciences, Inc. does not consider the post holes to be sensitive features.

PRF #S-5 is a manhole cover associated with a sanitary sewer easement observed along the northeastern property boundary. Frost GeoSciences rates the relative infiltration of this feature as low on figure 1 of the TCEQ-0585-Instructions (Rev. 10-01-04). This features scores a 31 on the sensitivity scale, column 10 in the Geologic Assessment Table on page 5 of this report. Frost GeoSciences, Inc. does not consider the manhole cover to be a sensitive feature.

The project site is covered by moderate to sparse stand of vegetative cover with open, grassy areas. Site visit photos indicating the condition of the property at the time of the on-site inspection are included in Appendix B. Overall vegetation on the project site consists of Live oak (Quercus virginiana), Texas mesquite (Prosopis glandulosa), prickly pear cactus (Opuntia engelmannii) (Opuntia lindheimeri), and native grasses and opportunists as understory. The variations in the vegetative cover on the property are visible in the 2023 aerial photographs on Figures 9 and 10 in Appendix A. A copy of the site layout indicating the boundary of the project site and the elevations is included on the Site Geologic Map in Appendix C of this report.

According to the site plan provided by Lique Group, the surveyed elevations on the project site range from 726 to 706 feet. According to this survey, the total relief on the project site is approximately 20 feet. A copy of the site plan indicating the boundary of the project site and the elevations is included on the Site Plan on Figure 1 in Appendix A and the Site Geologic Map in Appendix C of this report.

According to the Bureau of Economic Geology Geologic Atlas of Texas, Seguin, Texas (1979) the project site is located primarily on the Cretaceous Edwards Limestone (Ked), with a portion of the southeastern corner located on the Cretaceous Del Rio Clay and Georgetown Formation, undivided (Kdg). A copy of the BEG Seguin Sheet Geologic Map and the USGS WRI 95-4265 Map are included on Figures 8A and 8B in Appendix A. A copy of the Stratigraphic Column highlighting the outcropping formations is included on Page 3 of this report.

The **Edwards Limestone (Ked)** is fine to coarse grained limestone, dolomite, and abundant chert. The limestone is a white to light gray, aphanitic to fine grained, massive to thin bedded, hard, and brittle. The limestone contains rudistid biostromes and a considerable amount of miliolid biosparite. The dolomite is fine to very fine grained, porous, medium gray to grayish brown. The chert occurs as nodules and plates. The amount will vary from bed to bed with some intervals being free of chert. The Edwards Limestone weathers forming recrystallized, honeycombed, and cavernous zones. Typical fossils present are rudistids (as reefs and as individuals), shell fragments, and milliolids. Solution zones and collapse breccia are common. The thickness of the Edwards Limestone is approximately 300 to 500 feet.

The **Del Rio Clay and Georgetown Formation, undivided (Kdg)** consists of calcareous and gypsiferous, blocky medium gray clay with limestone and marl. The majority of the limestone is light gray, fine grained, argillaceous, nodular, and moderately indurated. The remaining limestone is white, hard, brittle, and thick bedded. The marl is light gray to yellowish gray, and soft. Marine megafossils include Kingena wacoensis, Gryphaea washitaensis, abundant Exogyra arientina, and other pelecypods. Typically, this formation becomes less calcareous and more gypsiferous near the upper contact. Often contains thin lenticular beds of highly calcareous siltstone. Pyrite nodules are common. Overall thickness of the formation ranges from 30 to 120 feet.

BEST MANAGEMENT PRACTICES

Based on a visual inspection of the ground surface, the overall potential for fluid flow from the project site into the Edwards Aquifer appears to range from low to moderate. The potential always exists to encounter solution cavities within the subsurface during excavating activities. Frost GeoSciences, Inc. is of the opinion that it is very important for construction personnel to be informed of the potential to encounter cavities in the subsurface that lack a surface expression. Construction personnel should also be informed of the proper protocol to follow in the event a karst feature is encountered during the development of the project site.

DISCLAIMER

This report has been prepared in general accordance with the "Instructions to Geologists", TCEQ-0585-Instructions (Rev. 10-1-04) by a Licensed Texas Professional Geoscientist. All areas of the project site were carefully inspected for features that could contribute to the recharge of the Edwards Aquifer; however, this survey cannot preclude the presence of subsurface karst features that lack surface expression. This report is not intended to be a definitive investigation of all possible geologic or karst features at this site. All conclusions, opinions, and recommendations for Best Management Practices (BMP's) in this report are based on information obtained while researching the project and on the site conditions at the time of our field investigation.

This report has been prepared for the exclusive use of Lique Group. This report is based on available known records, a visual inspection of the project site, and the work generally accepted for a Geologic Assessment for Regulated Activities / Developments on the Edwards Aquifer Recharge / Transition Zone, relating to 30 TAC §213.5(b)(3), effective June 1, 1999.

REFERENCES

1. USGS - 7.5 Minute Topographic Quadrangle of San Marcos North, 1998

2. E.A.A. Edwards Aquifer Recharge Zone and Contributing Zone Map, San Marcos North (2014).

3. Official Edwards Aquifer Recharge Zone Map, San Marcos North, 1998

4. The Texas Commission on Environmental Quality (TCEQ) website: Edwards Aquifer Viewer – https://tceq.maps.arcgis.com/apps/webappviewer/index.html

5. Hanson, J.A. and Small, T.A., 1995, Geologic Framework and Hydrogeologic Subdivisions of the Edwards Aquifer Outcrop, Hays County, Texas, U.S. Geological Survey Water Resources Investigations 95-4265

6. Barnes, V.L., 1979, Geologic Atlas of Texas Seguin Sheet, Bureau of Economic Geology and University of Texas at Austin, Geologic Atlas of Texas

7. Federal Emergency Management Agency, Federal Insurance Administration, National Flood Insurance Program, Flood Insurance Map, Community Panel Numbers 48209C0388G and 48209C0389G, dated January 17, 2025

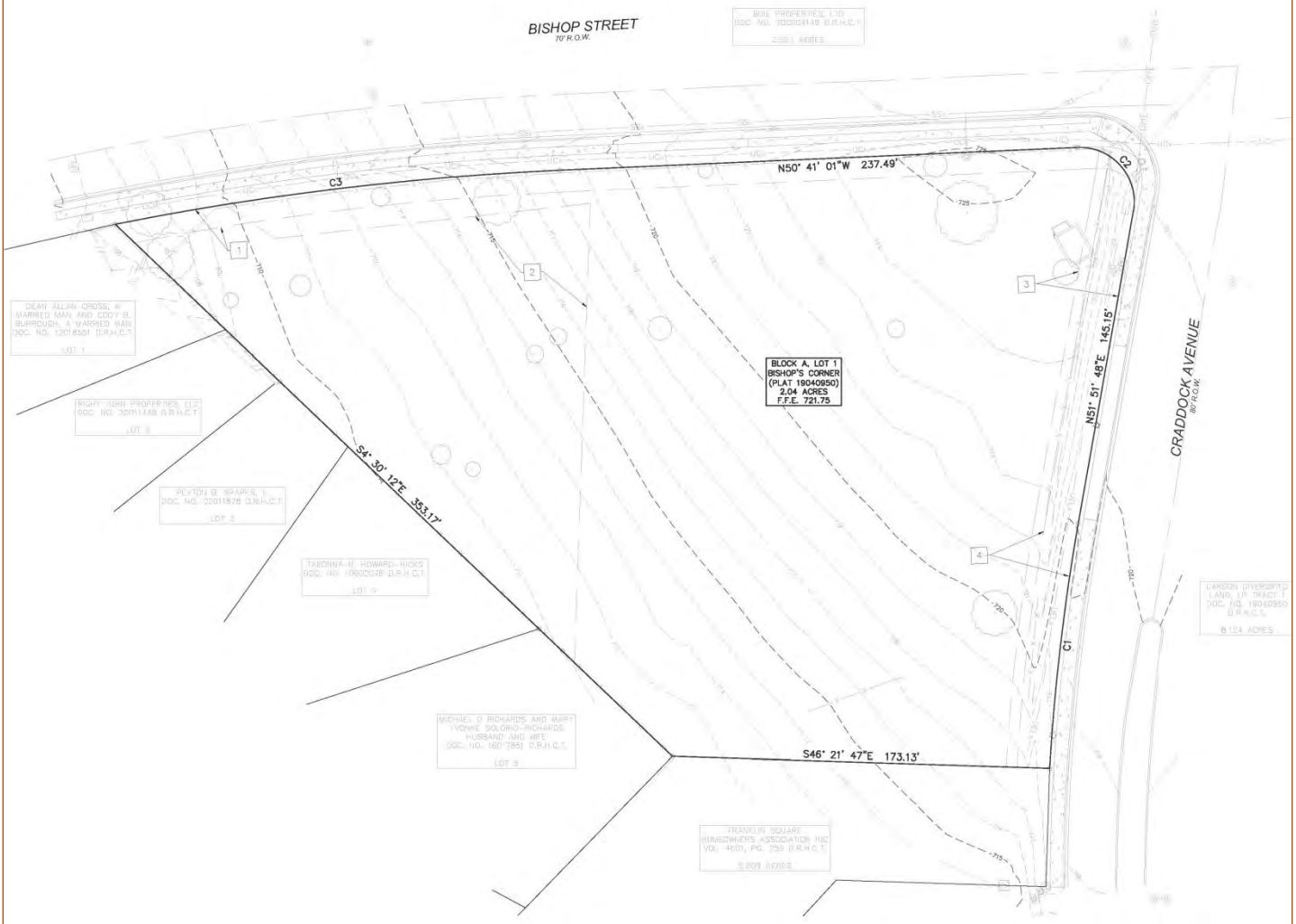
8. United States Department of Agriculture Soil Conservation Service Soil Survey of Comal and Hays Counties 1984

9. USDA NRCS Web Soil Survey (WSS) website: https://websoilsurvey.nrcs.usda.gov (2014)

10. TCEQ-0585-Instructions (Rev. 10-1-04), "Instructions to Geologists for Geologic Assessments on the Edwards Aquifer Recharge/Transition Zone"

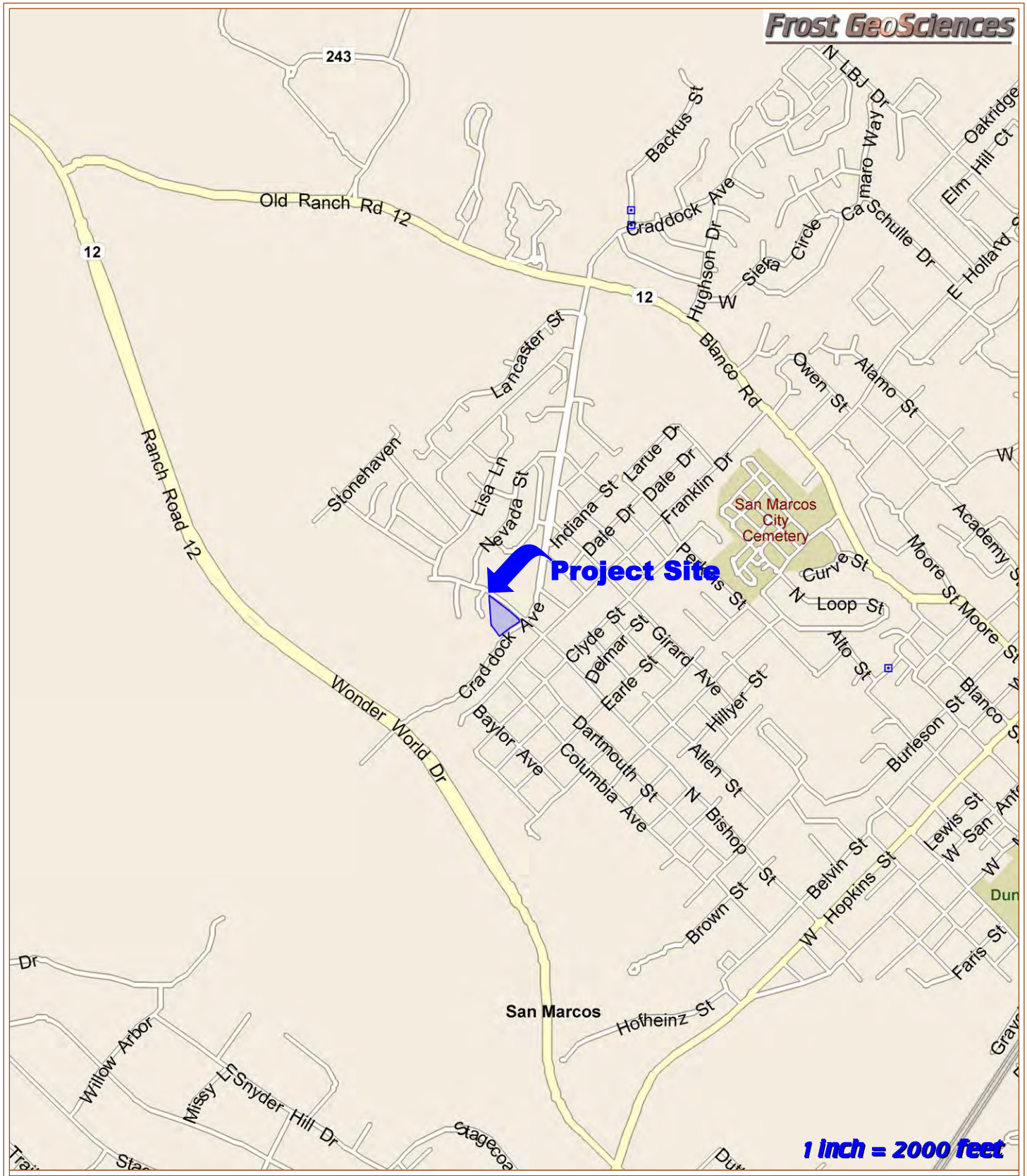
APPENDIX A

SITE LOCATION FIGURES

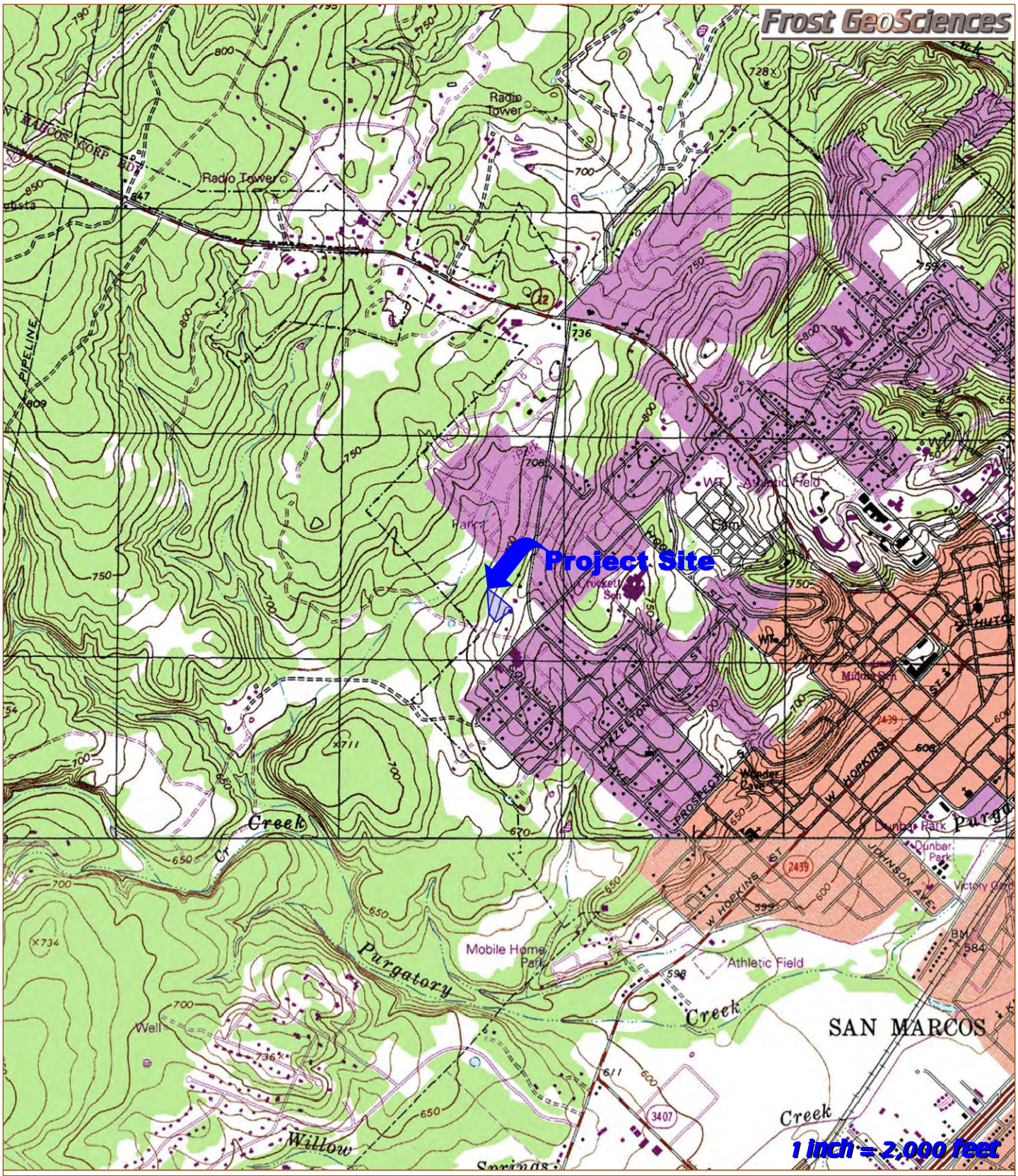


Not to scale

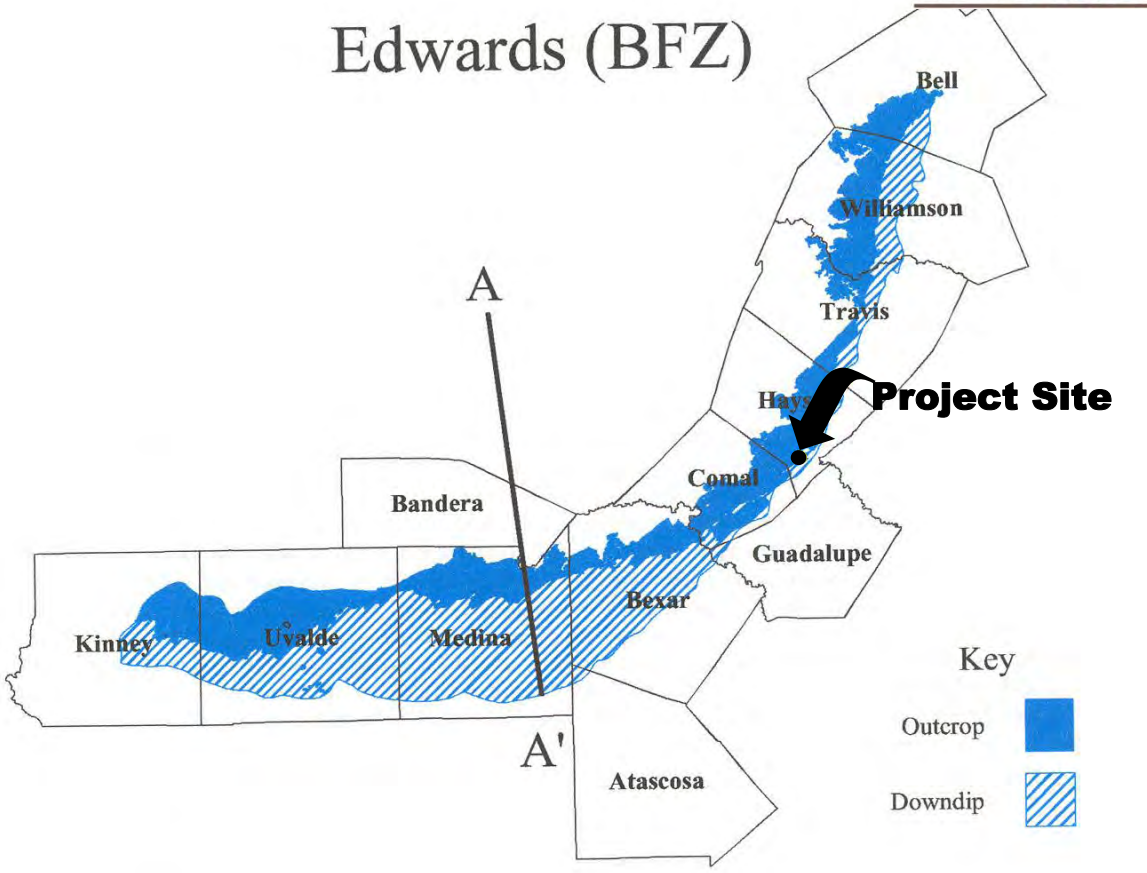
PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities/Development on the Edwards Aquifer Recharge/Transition Zone Craddock Avenue Tract Hays County, Texas	Site Plan
	PROJECT No.: FGS-E25116 / **DATE:** March 3, 2025

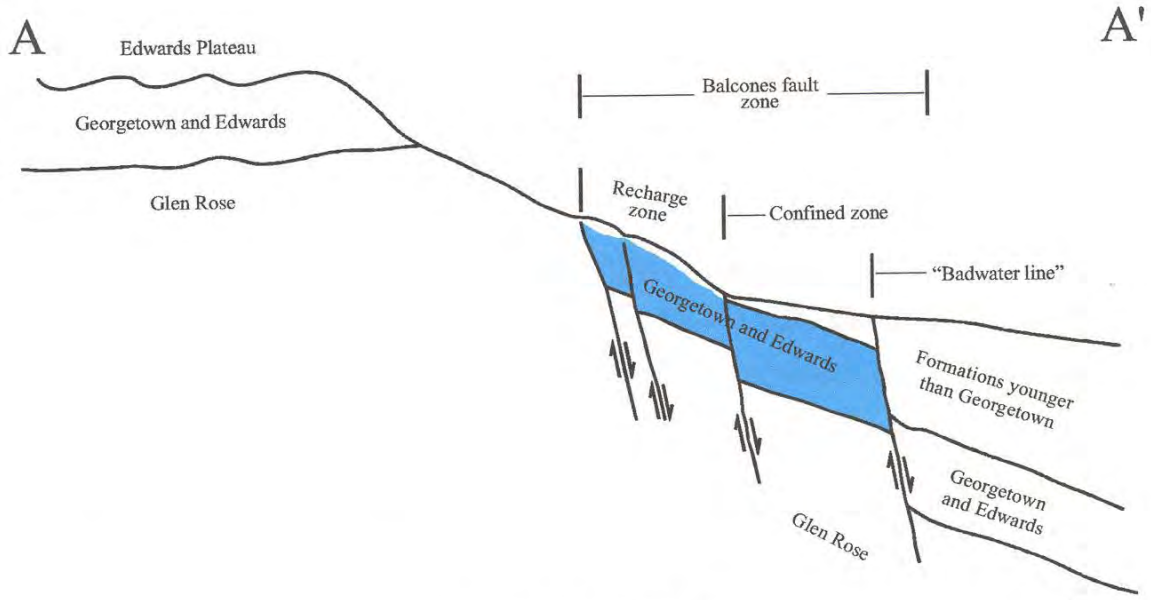


PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities/Development on the Edwards Aquifer Recharge/Transition Zone Craddock Avenue Tract Hays County, Texas	Street Map Microsoft Streets and Trips (2013)
PROJECT No.: FGS-E25116	**DATE:** March 3, 2025



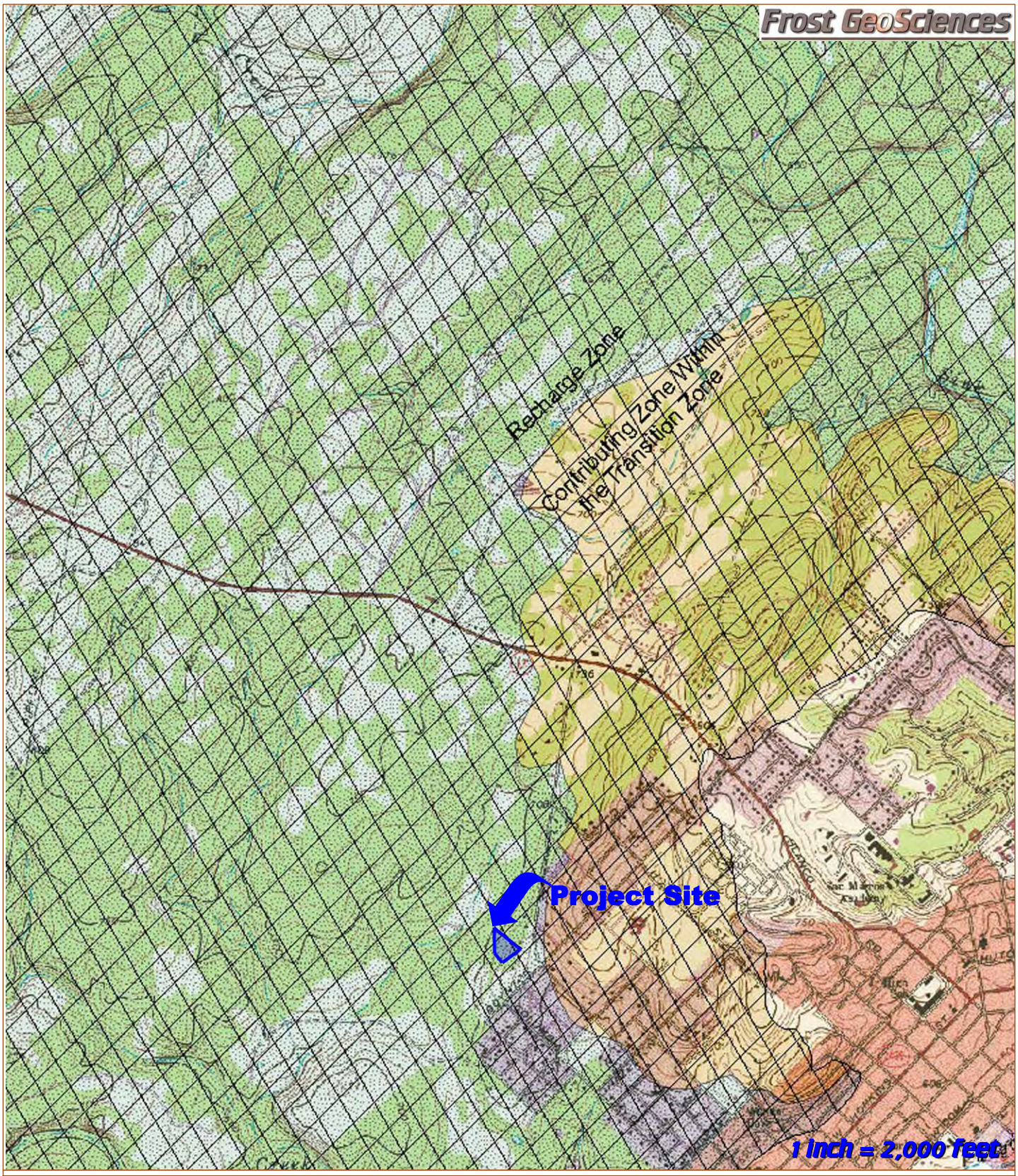
PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities/Development on the Edwards Aquifer Recharge/Transition Zone Craddock Avenue Tract Hays County, Texas	U.S.G.S. 7.5 Minute Quadrangle Map San Marcos North, TX Sheet (1998)
	PROJECT No.: FGS-E25116 / **DATE:** March 3, 2025





Modified from Maclay and Small, 1986

PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities/Development on the Edwards Aquifer Recharge/Transition Zone Craddock Avenue Tract Hays County, Texas	Edwards Aquifer Reference Map (1986)
PROJECT No.: FGS-E25116	**DATE:** March 3, 2025

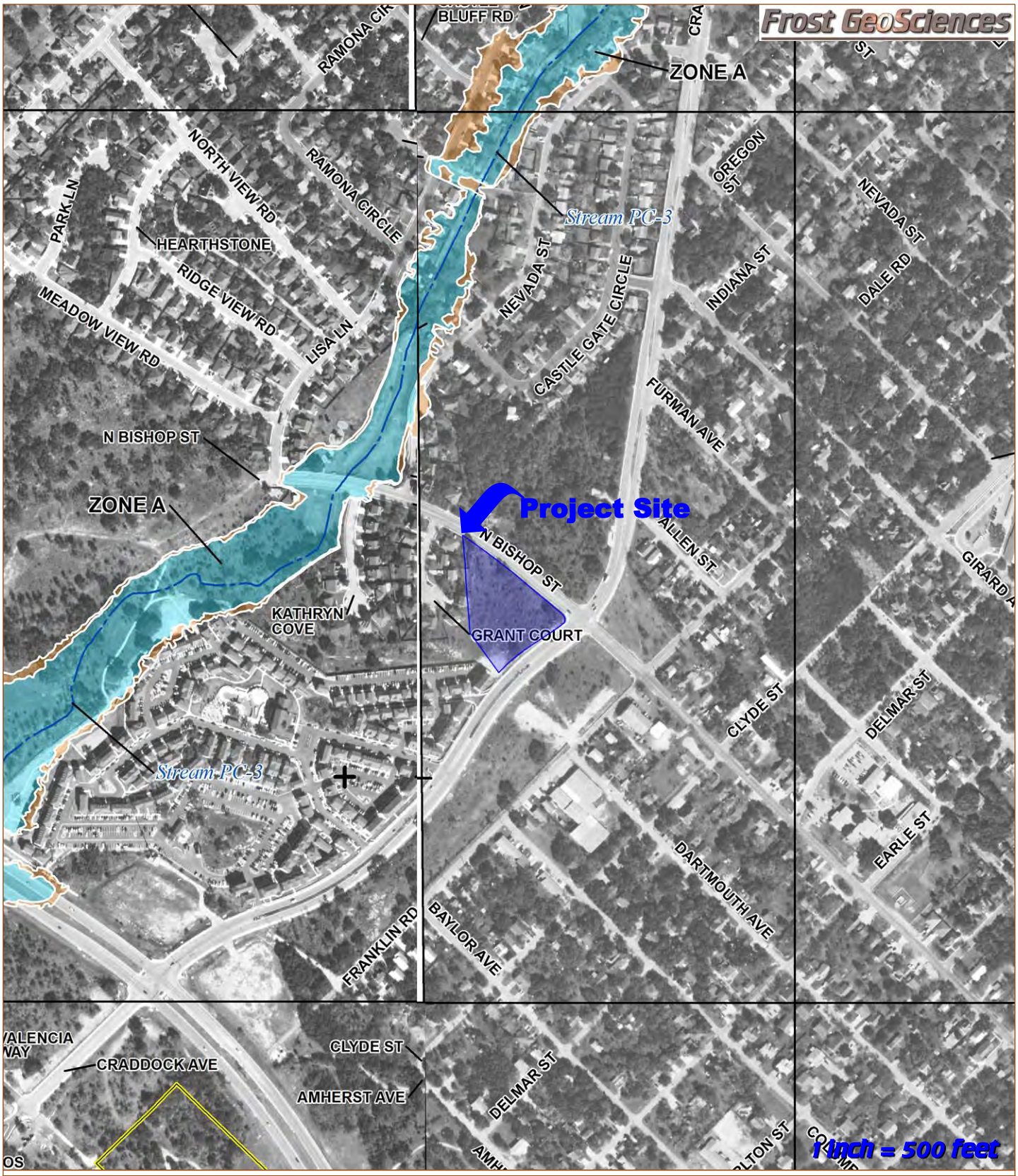


PROJECT NAME:
Geologic Site Assessment (WPAP)
for Regulated Activities/Development on the
Edwards Aquifer Recharge/Transition Zone
Craddock Avenue Tract
Hays County, Texas

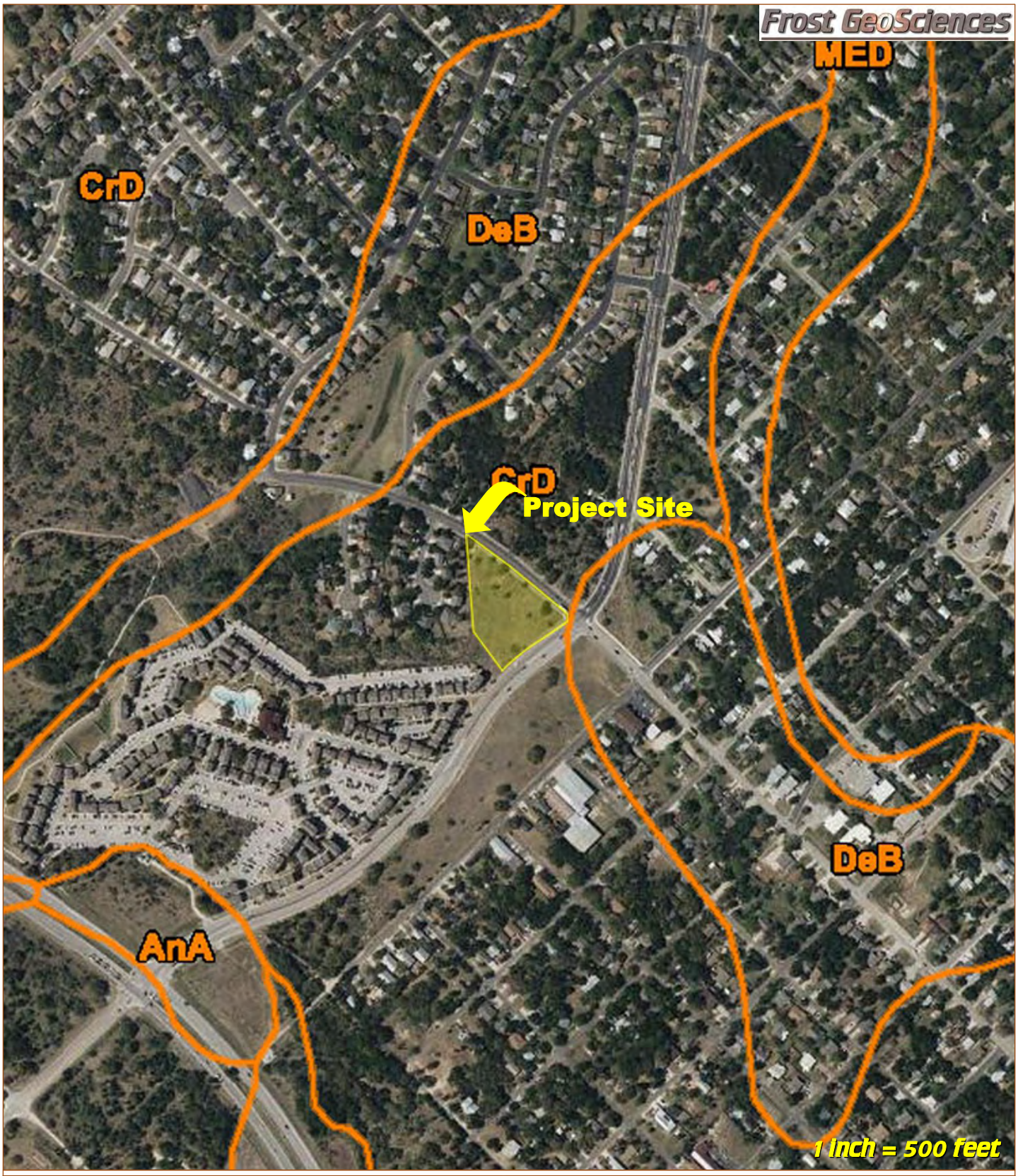
EAA Recharge & Contributing Zone Map
San Marcos North, Texas (2014)

PROJECT No.: FGS-E25116

DATE: March 3, 2025

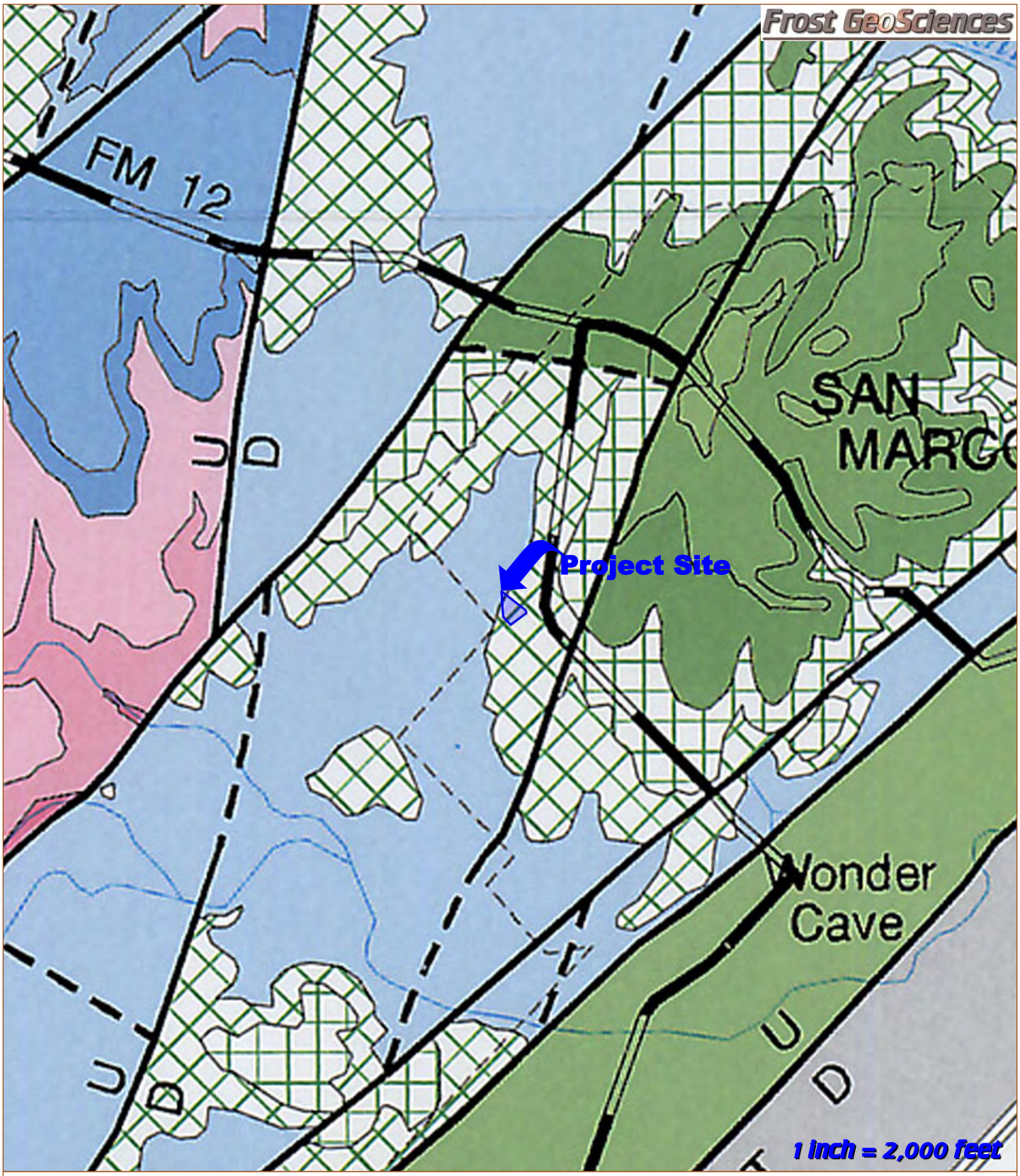


PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities/Development on the Edwards Aquifer Recharge/Transition Zone Craddock Avenue Tract Hays County, Texas	Flood Insurance Rate Map (FIRM) Community Panel # 48029C0388G&389G Revised 1/17/2025
PROJECT No.: FGS-E25116	**DATE:** March 3, 2025



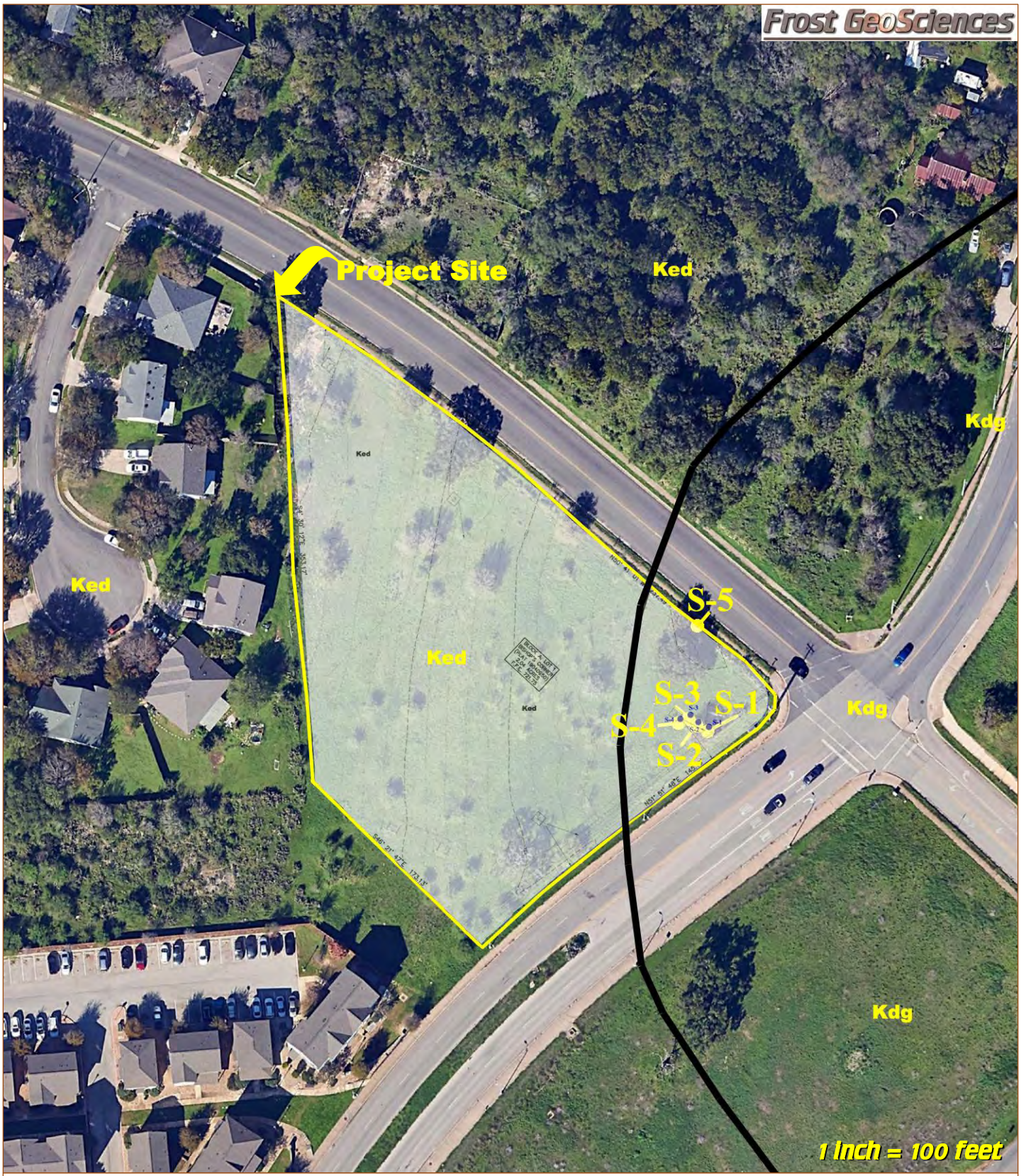
PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities/Development on the Edwards Aquifer Recharge/Transition Zone Craddock Avenue Tract Hays County, Texas	Soils Map Bexar County Soil Survey NRCS website: websoilsurvey.nrcs.usda.gov
	PROJECT No.: FGS-E25116 / **DATE:** March 3, 2025

PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities/Development on the Edwards Aquifer Recharge/Transition Zone Craddock Avenue Tract Hays County, Texas	Bureau of Economic Geology Geologic Atlas of Texas, Seguin Sheet (1979)
	PROJECT No.: FGS-E25116 / **DATE:** March 3, 2025



PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities/Development on the Edwards Aquifer Recharge/Transition Zone Craddock Avenue Tract Hays County, Texas	Geologic Framework and Hydrogeologic Subdivisions of the Edwards Aquifer Outcrop, WRI 95-4265 (1995)
	PROJECT No.: FGS-E25116 / **DATE:** March 3, 2025

PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities/Development on the Edwards Aquifer Recharge/Transition Zone Craddock Avenue Tract Hays County, Texas	2023 Aerial Photograph Google Earth Aerial Imagery
	PROJECT No.: FGS-E25116 / **DATE:** March 3, 2025



PROJECT NAME: Geologic Site Assessment (WPAP) for Regulated Activities/Development on the Edwards Aquifer Recharge/Transition Zone Craddock Avenue Tract Hays County, Texas	2023 Aerial Photograph with PRFs Google Earth Aerial Imagery
	PROJECT No.: FGS-E25116 / **DATE:** March 3, 2025

APPENDIX B

SITE PHOTOGRAPHS

	
Photo #1 – View to the north of the southern portion of the Site.	Photo #2 – View to the south of the western portion of the Site.
	
Photo #3 – View to the north of the northern portion of the Site.	Photo #4 – View to the south of the eastern portion of the Site.

Photo #5 – View of PRF S-1 located in the south-eastern corner of the Site.

Photo #6 – View of PRF S-2 located in the south-eastern corner of the Site.

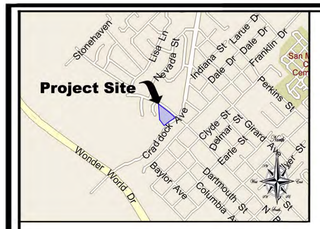
Photo #7 – View of PRF S-3 located in the south-eastern corner of the Site.

Photo #8 – View of PRF S-4 located in the south-eastern corner of the Site.

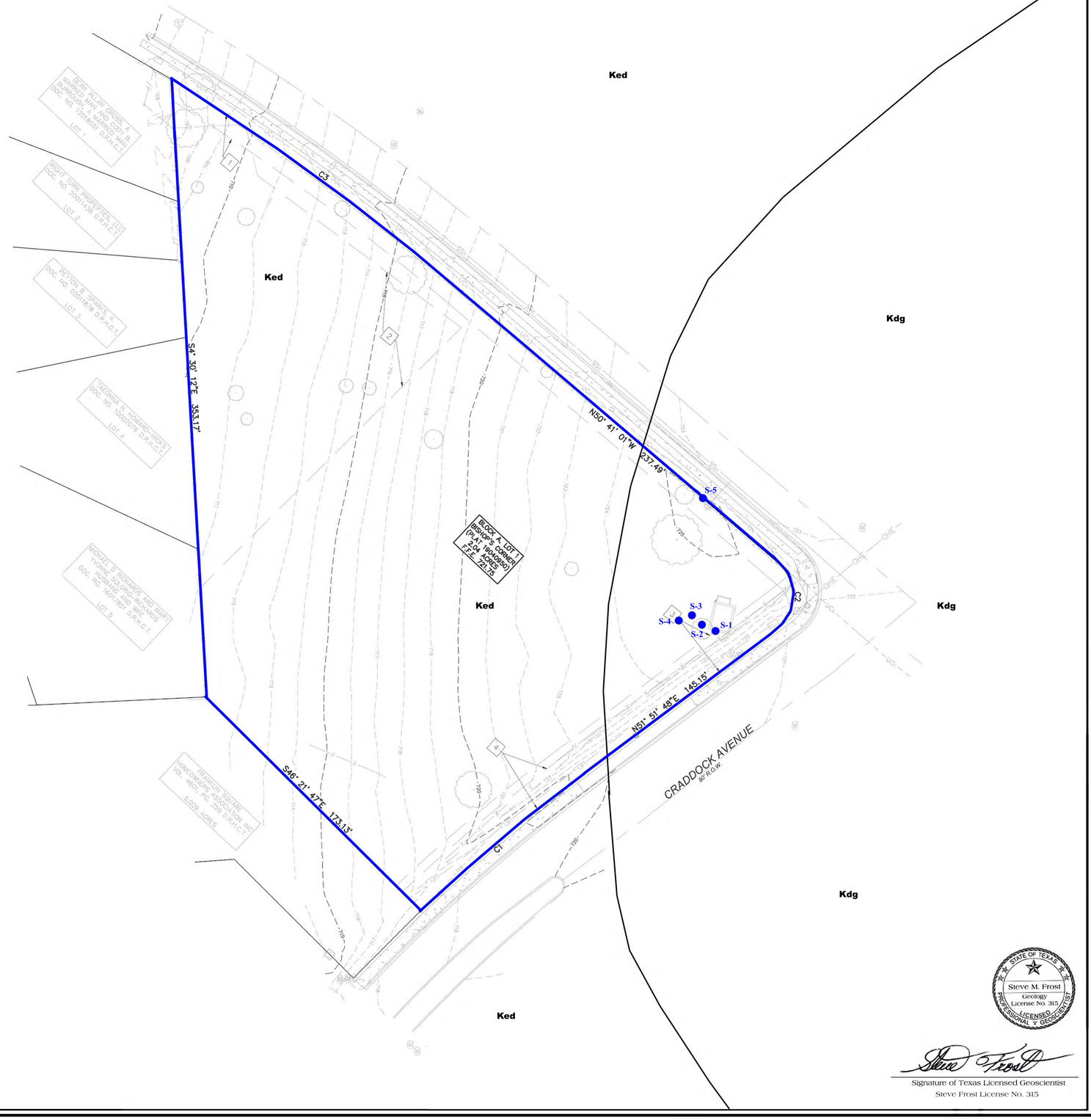
	
Photo #9 – View to the south of PRFs S-1, S-2, S-3, and S-4.	Photo #10 – View to the south of the south-eastern corner of the Site.
	
Photo #11 – View of PRF S-5 located in the south-eastern corner of the Site along the western boundary of the Site.	Photo #12 – Additional view of PRF S-5 located in the south-eastern corner of the Site along the western boundary of the Site.

APPENDIX C

GEOLOGIC MAP



Location Map



Signature of Texas Licensed Geoscientist
Steve Frost License No. 315

STATE OF TEXAS
Steve M. Frost
Geology
License No. 315
LICENSED PROFESSIONAL GEOSCIENTIST

Frost GeoSciences
Geotechnical ▪ Construction Materials
Geologic ▪ Environmental
13406 Western Oak ▪ Helotes, Texas 78023
Phone: (210) 372-1315 ▪ Fax: (210) 372-1318

Site Geologic Map

Geologic Site Assessment (WPAP)
for Regulated Activities / Development on the
Edwards Aquifer Recharge / Transition Zone
for the

Craddock Avenue Tract
1311 Craddock Avenue
Hays County, Texas

Frost GeoSciences, Inc. Control # FGS-E25116

Legend

- Potential Recharge Feature (PRF)
- Formation Contact
- Fault
- Site Boundary

Kdg - Cretaceous Del Rio Clay/Georgetown Formation (undivided)
Ked - Cretaceous Edwards Limestone

Floodplain Information Obtained From
FIRM: Flood Insurance Rate Map
Comal County, Texas: Panel # 48029C0388G & 389G, Revised 1/17/2025

Fault Information Obtained From:
Bureau of Economic Geology, Geologic Atlas of Texas, Seguin Sheet (1984)
U.S. Geological Survey, Water Resources Investigations Report 95-4265 (1995)

North
NW NE West East SW SE South

Graphic Scale

30 0 15 30 60

(In Feet)

1 inch = 30 feet
Representative Fraction 1:360

Contour Interval - 1 foot

Water Pollution Abatement Plan Application Form

Water Pollution Abatement Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b), Effective June 1, 1999

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

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

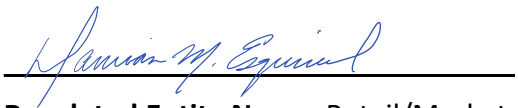
Signature

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **Water Pollution Abatement Plan Application Form** is hereby submitted for TCEQ review and Executive Director approval. The form was prepared by:

Print Name of Customer/Agent: Damian Esquivel, P.E.

Date: 7/3/25

Signature of Customer/Agent:



Regulated Entity Name: Retail/Market 1311 Craddock

Regulated Entity Information

1. The type of project is:

   ☐ Residential: Number of Lots:_____
   ☐ Residential: Number of Living Unit Equivalents:_____
   ☒ Commercial
   ☐ Industrial
   ☐ Other:_____

2. Total site acreage (size of property):2.04

3. Estimated projected population:N/A - Commerical

4. The amount and type of impervious cover expected after construction are shown below:

Table 1 - Impervious Cover Table

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	16425.08	÷ 43,560 =	0.377
Parking	23226.97	÷ 43,560 =	0.533
Other paved surfaces	10347.95	÷ 43,560 =	0.238
Total Impervious Cover	50000	÷ 43,560 =	1.148

Total Impervious Cover 1.148 **÷ Total Acreage** 2.039 **X 100 =** 56.30**% Impervious Cover**

5. ☒ **Attachment A - Factors Affecting Surface Water Quality**. A detailed description of all factors that could affect surface water and groundwater quality that addresses ultimate land use is attached.

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

For Road Projects Only

Complete questions 7 - 12 if this application is exclusively for a road project.

7. 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.

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

   ☐ Concrete
   ☐ Asphaltic concrete pavement
   ☐ Other: _____

9. Length of Right of Way (R.O.W.): _____ feet.

   Width of R.O.W.: _____ feet.
   L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.

    Width of pavement area: _____ feet.
    L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
    Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = _____% impervious cover.

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

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

12. ☐ 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

13. ☒ **Attachment B - 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 the 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

14. The character and volume of wastewater is shown below:

100% Domestic	2346 Gallons/day
0% Industrial	_____Gallons/day
0% Commingled	_____Gallons/day
TOTAL gallons/day 2346	

15. Wastewater will be disposed of by:

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

☐ **Attachment C - 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):

☐ Private service laterals from the wastewater generating facilities will be connected to an existing SCS.

☐ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

☐ The SCS was previously submitted on_____.

☐ The SCS was submitted with this application.

☒ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to Executive Director approval.

☒ The sewage collection system will convey the wastewater to the City of San Marcos Wastewater (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

16. ☒ All private service laterals will be inspected as required in 30 TAC §213.5.

Site Plan Requirements

Items 17 – 28 must be included on the Site Plan.

17. ☒ The Site Plan must have a minimum scale of 1" = 400'.

Site Plan Scale: 1" = 30'.

18. 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): 48209C0389F

19. ☒ 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, open space, etc. are shown on the plan.

☒ The layout of the development is shown with existing contours at appropriate, but not greater than ten-foot intervals. Finished topographic contours will not differ from the existing topographic configuration and are not shown. Lots, recreation centers, buildings, roads, open space, etc. are shown on the site plan.

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

☒ There are 1 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

☐ The wells are not in use and have been properly abandoned.
☒ The wells are not in use and will be properly abandoned.
☐ The wells are in use and comply with 16 TAC §76.

☐ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

☒ All sensitive geologic or manmade features identified in the Geologic Assessment are shown and labeled.
☐ No sensitive geologic or manmade features were identified in the Geologic Assessment.
☐ **Attachment D - Exception to the Required Geologic Assessment**. A request and justification for an exception to a portion of the Geologic Assessment is attached.

22. ☒ The drainage patterns and approximate slopes anticipated after major grading activities.

23. ☒ Areas of soil disturbance and areas which will not be disturbed.

24. ☒ Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

25. ☒ Locations where soil stabilization practices are expected to occur.

26. ☐ Surface waters (including wetlands).

    ☒ N/A

27. ☐ Locations where stormwater discharges to surface water or sensitive features are to occur.

    ☒ There will be no discharges to surface water or sensitive features.

28. ☒ Legal boundaries of the site are shown.

Administrative Information

29. ☒ 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.

30. ☒ Any modification of this WPAP will require Executive Director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

Attachment A

Factors Affecting Water Quality

Potential pollution sources consist of cleaning chemicals, customer littering, and automobile waste. Onsite stormwater pipe will convey flows to the proposed sand filter with sediment chamber to treat runoff prior to release.

Attachment B

Volume and Character of Stormwater

Reference attached summary at the end of this section.

Attachment C

Suitability Letter from Authorized Agent

No Proposed OSSF

Attachment D

Exception to the Required Geologic Assessment

No Exception Requested

Project Description

The proposed mixed use commercial development is located at the intersection of N Bishop Street and Craddock Avenue in San Marcos, Texas. Lot 1, Block A of the Bishop's Corner Plat and is a total of 2.04 acres. The site includes a variable width water quality easement on the northwest portion of the property, reference attached plat.

The proposed development is located within City of San Marcos limits and within the Edwards Aquifer Recharge Zone. The property is located within Zone "X" of the FEMA Flood Insurance Rate Map 48209C0389F, dated September 2, 2005. (See Exhibit D-FEMA Map). Zone "X" denotes areas determined to be outside the limits of the 500-year floodplain. There are no waterways creating water quality or buffer zones on or near the site. A geologic assessment was performed and found no sensitive features on site.

Existing Conditions

The project site has slopes of 3-7% and is currently undeveloped with negligible impervious cover. In the current conditions the majority of stormwater generated onsite generally sheet flows east to west towards adjacent residential properties. The calculations in the table below show existing peak flowrates. Minimal offsite flows are captured within the site as the adjacent gutters along Bishop and Craddock convey runoff away from the site. The computed composite runoff coefficients are summarized in the table below. The SCS method was selected for stormwater peak flowrate calculations due to site acreage and conducted in accordance with chapter 3.2 of the CoSM Stormwater Technical Manual. Drainage area 1A is a total of 1.93 acres, associated with computation point 1 with a time of concentration of 12 mins, reference attached Existing Hydrology Exhibit. Drainage Areas DA-2 and DA-3 are fully pervious with a minimum time of concentration of 5 minutes. As the site is fully enclosed in hydrologic soil group D soils, CN values of 98 and 84 were chosen for impervious areas (parking lots, roofs, driveways, etc.) and open space fair condition cover respectively. See the table below for a summary of Composite CN Values calculations.

Existing Curve Number Calculations

Computation Point	Drainage Area	Area (ac.)	Hydrologic Condition	Imp. Cover (acre)	Pervious Cover (acre)	% Imp.	CN (Imp.)	CN (Pervious)	Weighted CN
1	DA-1A	1.93	D	0.01	1.92	0.00	98	84	84.04
2	DA-2	0.09	D	0.00	0.09	0.00	98	84	84.00
3	DA-3	0.09	D	0.00	0.09	0.00	98	84	84.00

Proposed/Ultimate Conditions

This site is allocated 50,000 square feet (1.15 Acres) of impervious cover out of the remaining 14.13 acres of impervious cover vested by Section 5.1 of Document 13028582 of the O.P.R. of Hays County. This site maximum impervious cover was utilized to determine the ultimate conditions of the site and appropriately size stormwater infrastructure to mitigate the additional runoff generated at 50,000 square feet of impervious cover. All stormwater infrastructure was designed mitigate peak flows for the 1%/4%/10%/50% annual chance storm events to existing conditions. The site utilizes curbs, a grate inlet, and a curb inlet to capture runoff generated onsite and convey the stormwater towards the proposed outfall located at the sedimentation basin/sand filter pond system, and ultimately to computation point 1, reference Proposed Hydrology Exhibit. See the table below for a summary of proposed Composite CN Values calculations.

Proposed Curve Number Calculations

Computation Point	Drainage Area	Area (ac.)	Hydrologic Condition	Imp. Cover (acre)	Pervious Cover (acre)	% Imp.	CN (Imp.)	CN (Pervious)	Weighted CN
1	DA-1A	1.48	D	1.15	0.33	77.81	98	84	94.89
2	DA-2	0.09	D	0.01	0.09	5.66	98	84	84.79
3	DA-3	0.09	D	0.00	0.09	0.00	98	84	84.00
4	DA-1C	0.15	D	0.00	0.15	0.00	98	84	84.00
5	DA-1B	0.31	D	0.00	0.31	0.25	98	84	84.04
6	DA-1A+DA-1B DA-1C	1.93	D	1.15	0.79	59.40	98	84	92.32

Water Quality/Flood Control Sand Filter Media Basin

As previously mentioned, additional runoff generated onsite due to the increased total impervious cover of 50,000 sq ft will be mitigated to existing conditions via a sand filter pond. The sand filter pond is in Austin Sand Filter Pond online configuration and utilizes a rock gabion wall to separate the sedimentation basin and sand filter media area, reference attached Pond Plan sheet. A water quality volume of 8782.77 cu ft was calculated in accordance with Chapter 3.2.2 of CoSM Stormwater Technical Manual. 4771.97 cu ft was calculated based on design rainfall calculations. Thus, the total required water quality volume totals 10,539 cu ft based on TSS removal requirements and the additional sedimentation factor, reference water quality volume calculations. The proposed pond provides 10663.36 cu ft at stage 3 ft (Elevation 713.00'), and 25,700.36 cu ft stage 5.25 ft (Elevation 715.25'). A total sand filter area of 585.52 sq ft was calculated in compliance with Chapter 3.4.7 TCEQ Complying with Edwards Aquifer Rules Technical Guidance Manual Sand Filter Systems. Hydraflow Hydrographs Extension for Autodesk Civil 3D was utilized to analyze the proposed/ultimate stormwater conditions and produced a resultant total storage volume requirement of 7,017 CU FT at the 25 YR Storm, at a maximum elevation of 714.17 ft. An additional foot of pond depth was provided for freeboard requirements (online facilities, 25 YR Storm Event). 100 Year storm produced a maximum pond elevation of 714.38 ft with a total storage volume of 8,552 CU FT. Calculations and hydrographs provided within the Detention Exhibits Section of the report. The system was designed to mitigate peak flows for the 1%/4%/10%/50% annual chance storm events to existing conditions. A summary table of existing/proposed/ultimate conditions discharge values is shown below, also reference proposed/ultimate hydrology exhibit for associated drainage areas.

PROPOSED RUN OFF SUMMARY

POINT OF ANALYSIS	Contributing Drainage Areas	Area	Storm Event	Existing Flow (cfs)	Proposed Flow (cfs)	Detention Discharge (cfs)	Net Change (cfs)	Detention Storage (cf)
1	DA-1A	1.48	2yr	-	4.176	-	-	-
1	DA-1A	1.48	10yr	-	7.741	-	-	-
1	DA-1A	1.48	25yr	-	10.47	-	-	-
1	DA-1A	1.48	100yr	-	15.66	-	-	-
2	DA-2	0.09	2yr	0.256	0.259	-	0.003	-
2	DA-2	0.09	10yr	0.505	0.509	-	0.004	-
2	DA-2	0.09	25yr	0.698	0.702	-	0.004	-
2	DA-2	0.09	100yr	1.065	1.068	-	0.003	-
3	DA-3	0.09	2yr	0.256	0.256	-	0.000	-
3	DA-3	0.09	10yr	0.505	0.505	-	0.000	-
3	DA-3	0.09	25yr	0.698	0.698	-	0.000	-
3	DA-3	0.09	100yr	1.065	1.065	-	0.000	-
4	DA-1C	0.46	2yr	-	0.426	-	-	-
4	DA-1C	0.46	10yr	-	0.842	-	-	-
4	DA-1C	0.46	25yr	-	1.164	-	-	-
4	DA-1C	0.46	100yr	-	1.776	-	-	-
5	DA-1B	1.94	2yr	-	0.881	-	-	-
5	DA-1B	1.94	10yr	-	1.74	-	-	-
5	DA-1B	1.94	25yr	-	2.406	-	-	-
5	DA-1B	1.94	100yr	-	3.67	-	-	-
6	DA-1A, DA-1B, DA-1C	3.42	2yr	4.287	5.275	4.282	-0.005	4316.0
6	DA-1A, DA-1B, DA-1C	3.42	10yr	9.084	9.934	9.080	-0.004	6023.0
6	DA-1A, DA-1B, DA-1C	3.42	25yr	12.570	13.510	12.500	-0.070	7017.0
6	DA-1A, DA-1B, DA-1C	3.42	100yr	19.210	20.300	19.200	-0.010	8552.0

LEGAL DESCRIPTION:

LOT 1, A TOTAL OF 2.04 ACRES OUT OF THE BISHOPS CORNER FINAL PLAT, AS RECORDED UNDER DOCUMENT NUMBER 21064214, OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS.

CONTROL POINTS:

CP #1
ELEVATION: 721.13
NORTHING: 13870531.6750'
EASTING: 2295776.2450'

CP #2
ELEVATION: 711.25
NORTHING: 13870519.0580'
EASTING: 2295490.2580'

EASEMENTS:

1. 10' PUBLIC UTILITY EASEMENT DOC#: 21064214, P.R.H.C.T.
2. WATER QUALITY EASEMENT DOC#: 21064214, P.R.H.C.T.
3. 20' PUBLIC UTILITY EASEMENT VOL. 4709, PG. 417 D.R.H.C.T.
4. 15' DRAINAGE EASEMENT VOL. 3753, PG. 572 D.R.H.C.T.

TRENCH EXCAVATION SAFETY PROTECTION:

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

CAUTION!!:

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

INSPECTION AND MAINTENANCE

1. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.
4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

GENERAL NOTES:

MATERIALS

1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
2. CLEAN, OPEN GRADED 3-" TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-" TO 8-INCH DIAMETER ROCK MAY BE USED.

INSTALLATION

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A HEIGHT NOT LESS THAN 18 INCHES.
4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
6. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

INSPECTION AND MAINTENANCE

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
3. REPAIR ANY LOOSE WIRE SHEATHING.
4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
5. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

GENERAL MATERIALS:

1. THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGH OF 6 OZ/SQ YD, A MULLEN BURST RATING OF 140 LB/SQ IN, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4 INCH WASHED STONE OR COMMERCIAL RACK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION:

1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF THE EXIT ROADWAY, WHICHEVER IS GREATER.
3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2% CONSTRUCTION A RIDGE OF 6 TO 8 INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

TCEQ WPAP GENERAL CONSTRUCTION NOTES

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

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

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

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

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

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

7. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN TCEQ-0592 (REV. JULY 15, 2015) PAGE 2 OF 2 WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.

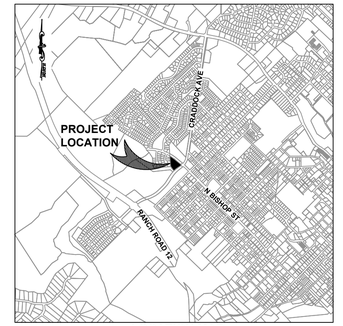
8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.

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

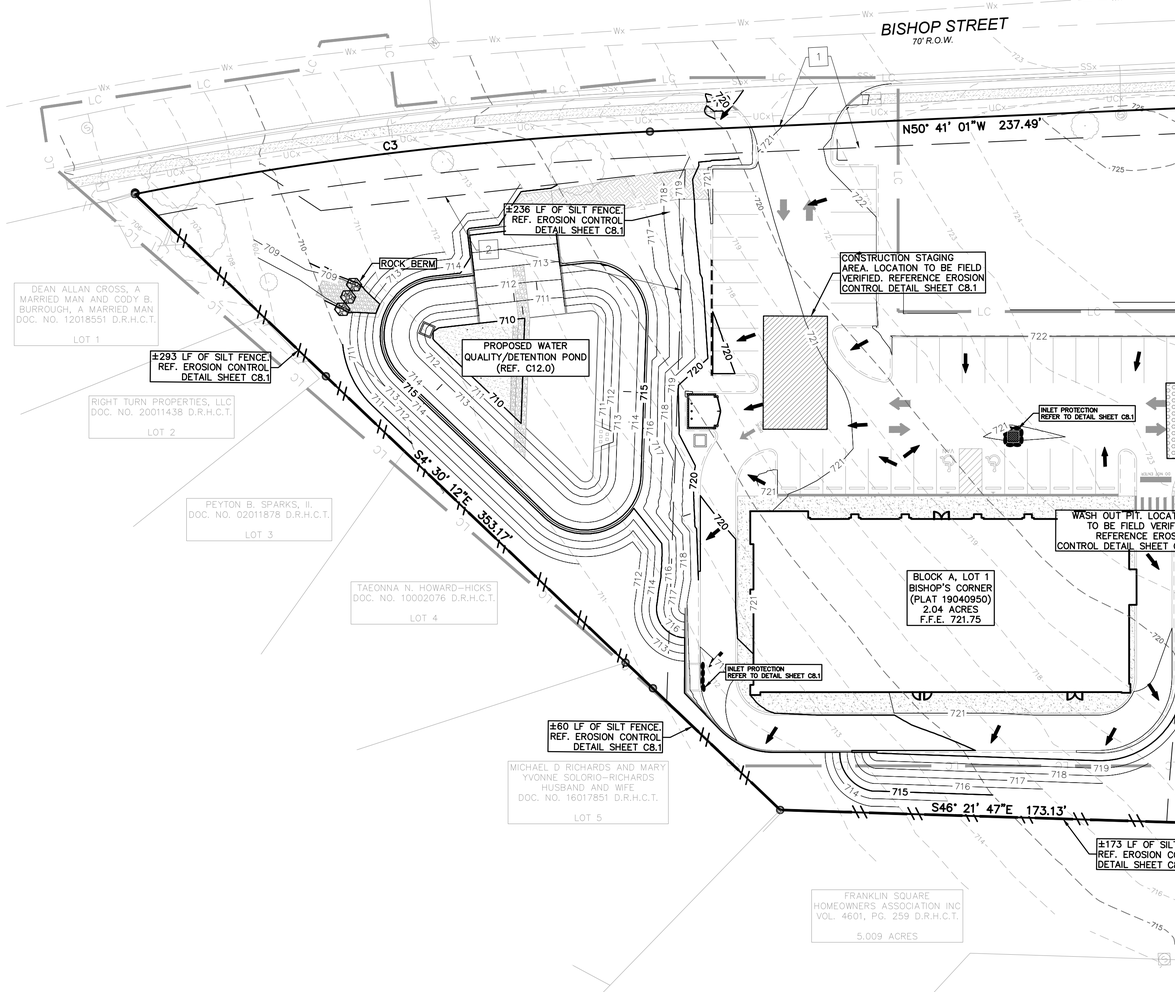
10. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO 21ST DAY, STABILIZATION MEASURES ARE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

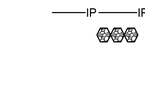
11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
   - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
   - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
   - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.



LOCATION MAP
NOT TO SCALE





AUSTIN REGIONAL OFFICE
12100 PARK 35 CIRCLE, BUILDING A
AUSTIN, TEXAS 78753-1808
PHONE (512) 339-2929
FAX (512) 339-3795

SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

LEGEND

PROPERTY LINE	———
ADJACENT PROPERTY LINE	———
LIMITS OF CONSTRUCTION	LC
CONTROL POINT	△
EX. MAJOR CONTOURS	—100—
EX. MINOR CONTOURS	—101—
PROPOSED CONTOURS	737
EXISTING WOOD FENCE	//——//——//
EXISTING WATER VALVE	W
EXISTING WATER METER	W
EXISTING SANITARY SEWER MANHOLE	S
EXISTING OVERHEAD ELECTRICAL	OHE
EXISTING UNDERGROUND ELECTRICAL	UELx
EXISTING COMMUNICATION	UCx
EXISTING WATER LINE	Wx
EXISTING SANITARY SEWER	SSx
EXISTING UTILITY POLE	⌀
GUY WIRE	⟶
EXISTING LIGHT POLE	☼
PROPOSED FINISH FLOOR ELEVATION	F.F.E. = 721.75
PROPOSED CURB	
PROPOSED RIBBON CURB	
PROPOSED SAW-TOOTH CURB	
PROPOSED CONCRETE TRUCK WASHOUT PIT	
PROPOSED CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA.	
PROPOSED STABILIZED CONSTRUCTION ENTRANCE	
PROPOSED SILT FENCE	//——//
INLET PROTECTION	IP——IP
ROCK BERM	

CURVE TABLE					
CURVE#	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	113.02'	994.00'	6°30'53"	N48° 29' 55"E	112.96'
C2	44.75'	25.00'	102°33'28"	N0° 35' 23"E	39.01'
C3	205.64'	1365.00'	8°37'54"	N55° 05' 03"W	205.44'

STATE OF TEXAS
DAMIAN M. ESQUIVEL
98362
LICENSED
PROFESSIONAL ENGINEER

NO.	DATE	COMMENTS

RETAIL/MARKET
1311 CRADDOCK AVE
SAN MARCOS, TEXAS 78666

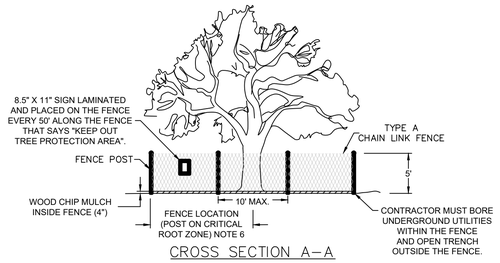
EROSION CONTROL PLAN

LIQUE ENGINEERS & SURVEYING
TBPELS # - 20405 &
- 10194727
816 Camaron Ste. 110
San Antonio,TX. 78212
Phone: 210-549-4207

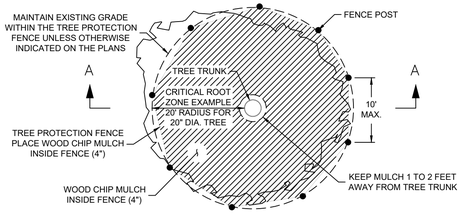
JOB:	SCALE:
160-01-08	1" = 30'

SHEET NO.
C8.0

Date: May 28, 2025, 7:17pm User ID: alejandro.jimenez
File: \\Lique_server01\p\160\01\08 - Bishop and Craddock (Retail)\Civil\C8.0 - EROSION CONTROL PLAN.dwg



CROSS SECTION A–A

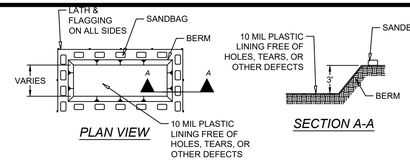


PLAN VIEW

NOTES:

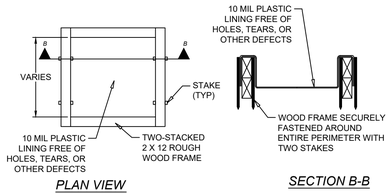
1. SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
2. IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
3. NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
4. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
5. SEE TREE PRESERVATION PLAN FOR ANY MODIFICATIONS WITHIN THE TREE PROTECTION AREA.
6. ROOT PROTECTION ZONE EQUALS TO CRITICAL ROOT ZONE AND IS DETERMINED BY MEASURING THE TREE'S DIAMETER AT 54 INCHES FROM THE NATURAL GROUND LEVEL. FOR EVERY INCH IN DIAMETER THERE IS 1 FOOT RADIUS TREE PROTECTION.

TREE PROTECTION FENCE TYPE A – CHAIN LINK



PLAN VIEW SECTION A-A

TYPE "BELOW GRADE"



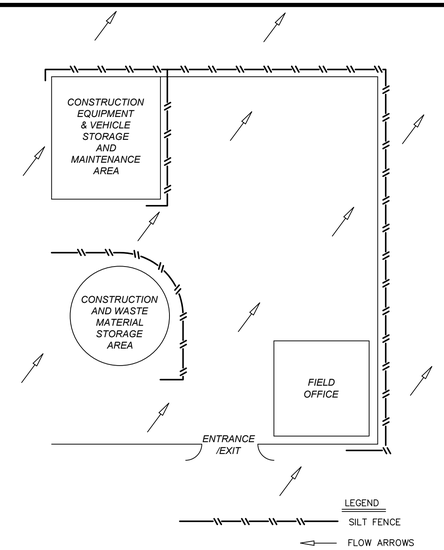
PLAN VIEW SECTION B-B

TYPE "ABOVE GRADE"

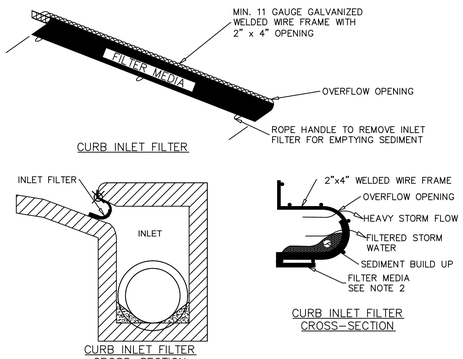
GENERAL NOTES:

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

CONCRETE TRUCK WASHOUT PIT



TYPICAL CONSTRUCTION STAGING AREA



CURB INLET FILTER

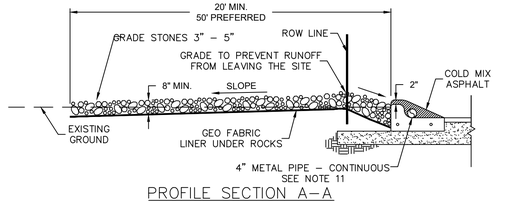
CURB INLET FILTER CROSS-SECTION SHOWING INLET PLACEMENT

CURB INLET FILTER CROSS-SECTION

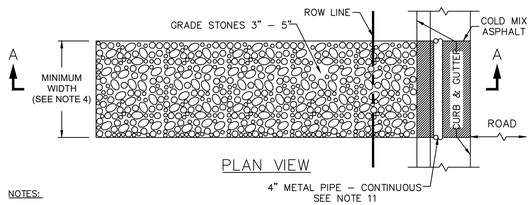
NOTE:

1. THE INLET FILTER SHALL BE INSERTED INTO THE CURB INLET TO CREATE A COMPRESSION FIT IN THE INLET
2. THE FILTER MEDIA FOR PROJECTS WITHIN CITY OF SAN MARCOS JURISDICTION IS TO BE WOVEN FILTER FABRIC WITH A MINIMUM WATER FLOW RATE OF 300 GALLONS A MINUTE PER SQUARE FOOT(300 GAL/MIN/SF).
3. THE FILTER MEDIA IS TO BE ATTACHED TO THE WIRE FRAME WITH HOG RINGS LEAVING AN OVERFLOW OPENING ABOVE THE FILTER MEDIA.
4. INSPECTION SHALL BE MADE BY THE CONTRACTOR WEEKLY AND WITHIN 24 HOURS OF A RAIN EVENT AND SILT ACCUMULATION MUST BE REMOVED WHEN THE DEPTH REACHES 2 INCHES.
5. INLET FILTER WILL BE REMOVED UPON STABILIZATION OF SEDIMENT SOURCES

CURB INLET PROTECTION



PROFILE SECTION A–A

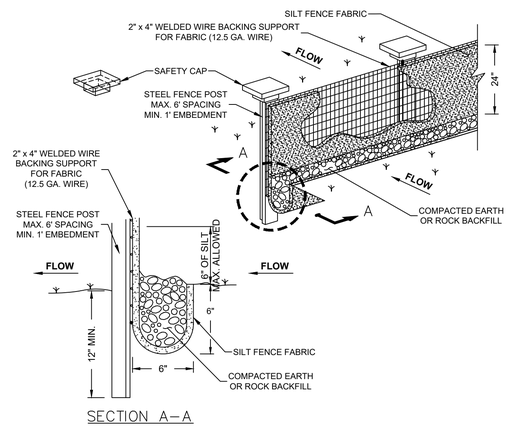


PLAN VIEW

NOTES:

1. STONE SIZE: 3–5" OPEN GRADED ROCK.
2. LENGTH: 50' PREFERRED OR AS EFFECTIVE BUT NOT LESS THAN 20'.
3. THICKNESS: NOT LESS THAN 8".
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. DIMENSIONS OF SITE WILL DICTATE THE DIMENSIONS OF THE STABILIZED CONSTRUCTION ENTRANCES IF THE PREFERRED DIMENSIONS ARE NOT POSSIBLE ON SITE.
6. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
7. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASUREMENT DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENT THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
8. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
9. WHEN ALL SITE WORK IS COMPLETED, REMOVE STABILIZED CONSTRUCTION ENTRANCE COMPLETELY. REGRADE TO ORIGINAL CONDITION, ELEVATION AND RESTORE TO MATCH EXISTING OR PROPOSED CONDITIONS.
10. TOP OF GRADE STONES SHALL MATCH TOP OF EXISTING PAVEMENT OR CURB. COLD MIX ASPHALT & 4" METAL PIPE OR ALTERNATIVE WILL NOT BE REQUIRED WHERE THERE IS NO CATCH OR SPILL CURB.
11. PRE–FABRICATED CURB RAMPS ARE AN ACCEPTABLE ALTERNATIVE TO COLD MIX ASPHALT AND 4" METAL PIPE.

STABILIZED CONSTRUCTION ENTRANCE

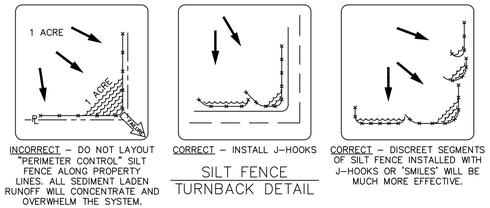


SECTION A–A

NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS SHALL MATCH THE TOP OF THE FENCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1'.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 6" DEEP AND 6" WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY AND REPAIR OR REPLACEMENT SHALL BE MADE WITHIN 24 HOURS OF INSPECTION.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS PERMANENTLY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WITHIN 24 HOURS WHEN IT REACHES A DEPTH OF 6" OR AS DIRECTED BY OWNER. THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. INSTALL J–HOOK SPACING PER ENGINEER'S DESIGN , BUT NOT TO EXCEED 200'.

SILT FENCE

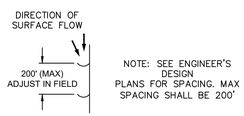


SILT FENCE TURNBACK DETAIL

SILT FENCE PLACEMENT FOR PERIMETER CONTROL

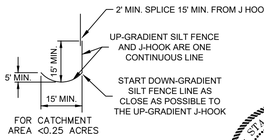
PLAN VIEW

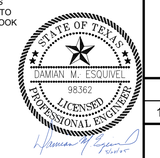
I. SPACING REQUIREMENTS:



NOTE: SEE ENGINEER'S DESIGN PLANS FOR SPACING. MAX SPACING SHALL BE 200'

II. SIZING REQUIREMENTS:





NO.	DATE	COMMENTS

RETAIL/MARKET
1311 CRADDOCK AVE
SAN MARCOS, TEXAS 78666

EROSION CONTROL DETAILS

LIQUE ENGINEERS & SURVEYING
TBPELS # - 20405 & # - 10194727
816 Camaron Ste. 110
San Antonio,TX. 78212
Phone: 210-549-4207

JOB:	SCALE:
160-01-08	

SHEET NO.
C8.1

Date: May 28, 2025, 7:17pm User ID: alejandro.jimenez
File: \\Lique_server01\p\160\01\08 – Bishop and Craddock (Retail)\Civil\C8.0 – EROSION CONTROL PLAN.dwg

Temporary Stormwater Section

Temporary Stormwater Section

Texas Commission on Environmental Quality

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

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

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

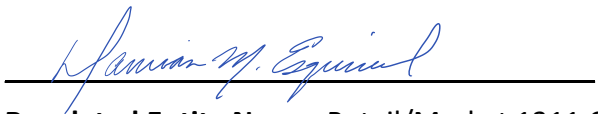
Signature

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

Print Name of Customer/Agent: Damian Esquivel, P.E.

Date: 7/3/25

Signature of Customer/Agent:



Regulated Entity Name: Retail/Market 1311 Craddock Ave

Project Information

Potential Sources of Contamination

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

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

   ☑ The following fuels and/or hazardous substances will be stored on the site: Underground Fuel Tanks

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

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

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

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

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

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

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

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

Sequence of Construction

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

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

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

6. ☒ Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project: Upper San Marcos River

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☒ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

Attachment A
Spill Response Actions
Prevention and Control

The goal is to prevent or reduce pollutant discharge to drainage systems or watercourses from leaks and spills. This is achieved by:

1. Reducing spill chances
2. Stopping spill sources
3. Containing and cleaning up spills
4. Properly disposing of spill materials
5. Training employees

Education

1. Educate staff on "significant spills" for each material and appropriate responses.
2. Inform employees about spill reporting requirements to TCEQ.
3. Train on potential dangers to humans and environment from spills.
4. Conduct regular meetings on proper disposal procedures.
5. Implement ongoing education for new employees.
6. Ensure contractor supervision of spill prevention measures.

General Measures

1. Contain and clean up spills immediately, including oil, petroleum products, and substances listed under 40 CFR parts 110, 117, and 302.
2. Store hazardous materials in covered, vandalism-proof containers.
3. Keep spill cleanup materials readily accessible.
4. Designate responsible individuals for control measures.
5. Protect spills from stormwater runoff during rainfall.
6. Never bury or wash spills with water.
7. Properly dispose of used cleanup materials and contaminated spill material.
8. Prevent water used for cleaning from entering storm drains or watercourses.
9. Keep Material Safety Data Sheets (MSDS) and proper storage, cleanup, and spill reporting instructions accessible.
10. Maintain clean and organized waste storage areas with ample cleanup supplies.

Cleanup Procedures

1. Clean up spills immediately using appropriate methods (e.g., rags for small spills, damp mops for general cleanup, absorbent material for larger spills).
2. Never hose down or bury dry material spills.
3. Dispose of hazardous cleanup materials as hazardous waste.

Spill Categories and Responses

Minor Spills
- Typically involve small quantities of oil, gasoline, paint, etc.
- Can be controlled by first responder
- Use absorbent materials instead of hosing down
- Contain spread, recover materials, clean contaminated area

Semi-Significant Spills
- Can be controlled by first responder with aid of other personnel
- May require cessation of other activities
- Follow specific cleanup steps (contain, notify foreman, use "dry" cleanup methods, etc.)

Significant/Hazardous Spills
- For reportable quantities:
  1. Notify TCEQ within 24 hours (512-339-2929 Austin, 210-490-3096 San Antonio)
  2. Contact Environmental Release Hotline after hours (1-800-832-8224)
  3. Notify National Response Center (800-424-8802) for federal reportable quantities
  4. Obtain services of a spills contractor or Haz-Mat team
  5. Consult other agencies as needed (e.g., Police, Fire Department)

Vehicle and Equipment Maintenance
-Designate a specific area for maintenance, away from drainage courses, with secondary containment
-Inspect onsite vehicles and equipment regularly for leaks and repair immediately
-Check incoming vehicles for leaks and prohibit leaking equipment onsite
-Use secondary containment (e.g., drain pans) when changing fluids
-Place drip pans under idle paving equipment
-Use absorbent materials for small spills; dispose of properly
-Transfer used fluids to proper waste or recycling containers promptly
-Drain oil filters before disposal; consider recycling
-Store cracked batteries in non-leaking secondary containers

Vehicle and Equipment Fueling
-Designate fueling areas away from drainage courses
-Discourage "topping off" fuel tanks
-Always use secondary containment when fueling

Attachment B
Potential Sources of Contamination
-The main potential sources include:
-Construction equipment leaks
-Re-fueling spills
-Portable toilets
-Total suspended solids (TSS) from construction activities

Attachment C
Sequence of Major Activities
-Install temporary BMPs – 0.13 Acres Disturbed
-Minor site grading – 0.17 Acres Disturbed
-Major grading – 1.72 Acres Disturbed
-Utility installation – 0.36 Acres Disturbed
-Finished grading – 1.89 Acres Disturbed

Attachment D
Temporary BMPs and Measures
-Install silt fence on the downgradient side of the site
-Construct stabilized construction exit before any site work
-Place silt fence downgradient of each proposed improvement
-Seed disturbed areas
-Use existing vegetation in conjunction with BMPs

Attachment E
Request to Temporarily Seal A Feature
No Request to Seal Feature

Attachment F
Structural Practices
-Stabilized Construction Entrance/Exit
-Rock gabions
-Silt fence

Attachment G
Drainage Area Map
Drainage Area Map attached to this section

Attachment H
Temporary Sediment Pond Plans and Calculations
No sediment ponds will be constructed due to the minimal soil disturbance (less than 10 acres). Silt fences will be used for the smaller drainage areas.

Attachment I
Inspection and Maintenance for BMPs
-Contractor to inspect controls and fences weekly and after rainfall
-Document changes on Site Plan, including person, task, and date
-Immediately repair damaged areas
-Maintain construction entrance to prevent sediment tracking
-Remove sediment from silt fence when buildup reaches 6 inches
-Replace torn fabric or install parallel fencing
-Relocate obstructing sections if necessary
-Dispose of sediment and fencing properly after construction
-Allow TCEQ staff full access for inspections
-Document all inspections and maintenance on WPAP Site Plan

Attachment J
Schedule of Interim and Permanent Soil Stabilization Practices
Areas which are disturbed by construction staging and storage areas will be hydro mulched with the appropriate seed mixture. Areas between the edge of pavement and property line will also by hydro mulched. There will be no fill slopes exceeding a 3:1 slope, and all fill slopes will be hydro mulched. Installation and acceptable mixtures of hydro mulch are as follows:

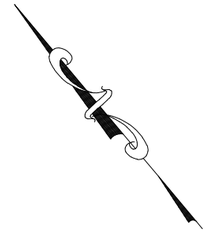
Materials:

Hydraulic Mulches: Wood fiber mulch can be applied alone or as a component of hydraulic matrices. Wood fiber applied alone is typically applied at the rate of 2,000 to 4,000 lb/acre. Wood fiber mulch is manufactured from wood or wood waste from lumber mills or from urban sources.

Installation:

(1) Prior to application, roughen embankment and fill areas by rolling with a crimping or punching type roller or by track walking. Track walking shall only be used where other methods are impractical.

(2)Avoid mulch over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.



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0 40 80

LEGEND

PROPERTY LINE

EXISTING PERVIOUS AREA

EXISTING IMPERVIOUS AREA

EXISTING IMPERVIOUS COVER TABLE	
TOTAL SITE AREA (S.F.)	88,829
TOTAL SITE AREA (AC)	2.04
EXISTING IMPERVIOUS COVER SHOWN (S.F.)	226
EXISTING IMPERVIOUS COVER (AC)	0.005
TOTAL IMPERVIOUS COVER SHOWN (%)	0.2

BISHOP AND CRADDOCK
SITE PLAN EXHIBIT

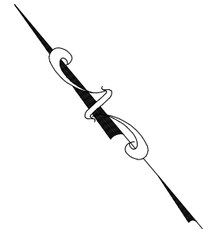
Checked By: -

Drawn By: -

Scale: 1"=40' | Date: 10-08-24

JOB: 160-01-08 | SHEET NO. 1 OF 1

LIQUE ENGINEERS & SURVEYING
TBPELS #: 20405 & 10194727
816 Camaron Ste. 110
San Antonio,TX. 78212
Phone: 210-549-4207



SCALE: 1"=40'

0 40 80

LEGEND

PROPERTY LINE

PROPOSED PERVIOUS AREA

PROPOSED IMPERVIOUS AREA

PROPOSED IMPERVIOUS COVER TABLE	
TOTAL SITE AREA (S.F.)	88,829
TOTAL SITE AREA (AC)	2.04
PROPOSED INCREASE IMPERVIOUS COVER SHOWN (S.F.)	43,857
PROPOSED TOTAL IMPERVIOUS COVER	44,083 1.01 AC
TOTAL IMPERVIOUS COVER SHOWN (%)	49.63

NOTE: A SITE MAXIMUM TOTAL IMPERVIOUS COVER OF 50,000 SF WAS UTILIZED FOR HYDROLOGY AND SWM POND CALCULATIONS.

BISHOP AND CRADDOCK SITE PLAN EXHIBIT	
Checked By: -	
Drawn By: -	
Scale: 1"=40'	Date: 10-08-24
JOB: 160-01-08	SHEET NO. 1 OF 1

LIQUE
ENGINEERS & SURVEYING
TBPELS #: 20405 & 10194727
816 Camaron Ste. 110
San Antonio,TX. 78212
Phone: 210-549-4207

Date: Oct 11, 2024, 11:28am User ID: alejandro.jimenez
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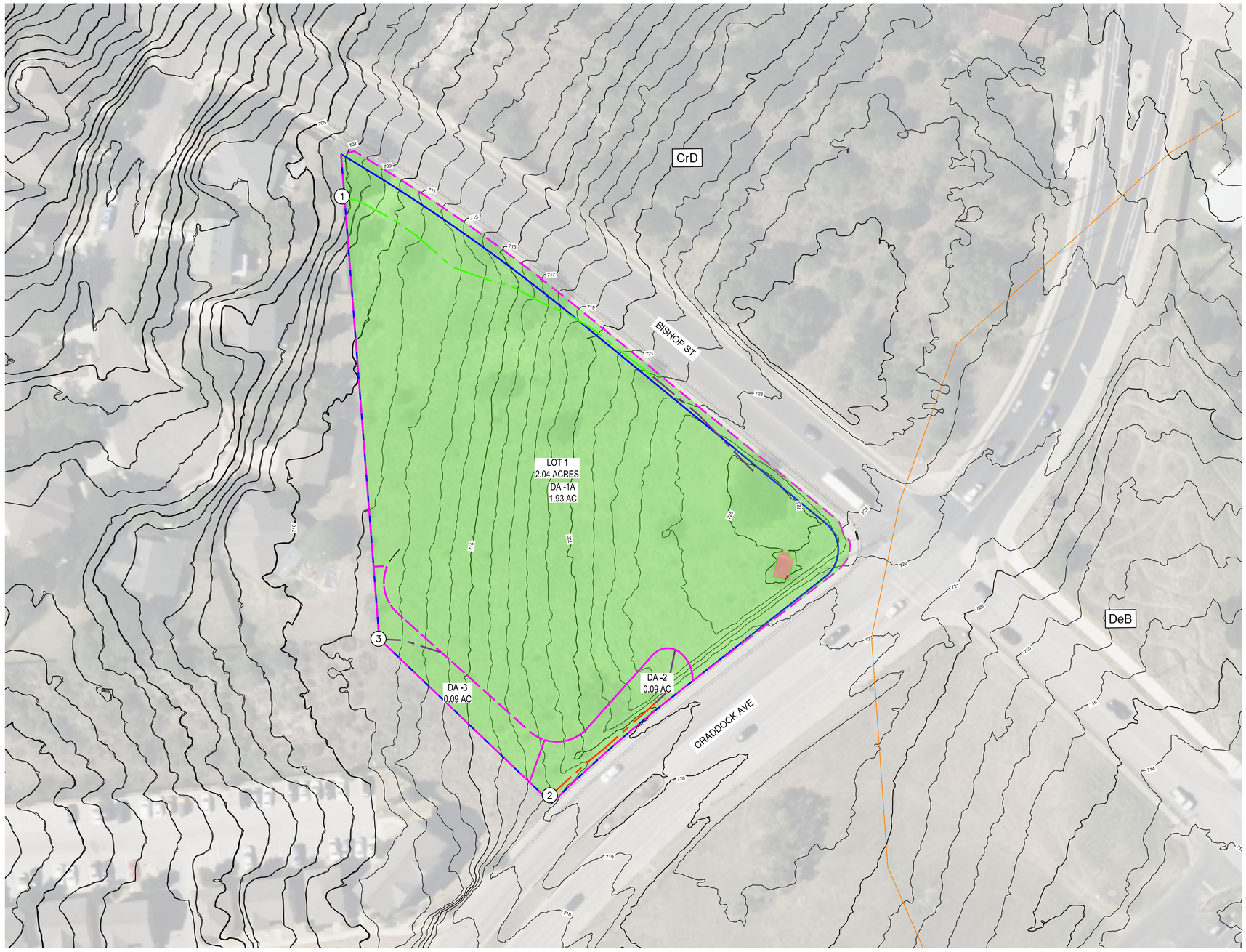

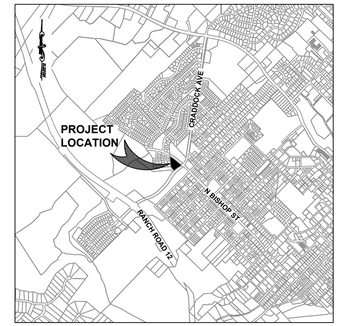

LOCATION MAP
NOT TO SCALE

0 40 80 Feet

SCALE : 1" : 40'

LEGEND

- EXISTING 1' CONTOURS (2024 HAYS AND WILLIAMSON COUNTY LIDAR) — 100
- DRAINAGE AREA
- PROPERTY BOUNDARY
- EXISTING SHEET FLOW
- EXISTING SHALLOW CONCENTRATED FLOW
- EXISTING CHANNEL FLOW
- SOILS BOUNDARY
- DRAINAGE AREA — DA-X
- AREA ACREAGE — XX.XX AC
- STUDY POINT — X
- EXISTING UNDEVELOPED AREAS CN VALUE = 84 - (OPEN SPACE, FAIR)
- EXISTING COMMERCIAL (IMPERVIOUS) AREAS CN VALUE = 98 - (IMPERVIOUS AREAS - PARKING LOTS, ROOFS, DRIVEWAYS, ETC.)

Existing Curve Number Calculations

Computation Point	Drainage Area	Area (ac.)	Hydrologic Condition	Imp. Cover (acre)	Pervious Cover (acre)	% Imp.	CN (Imp.)	CN (Pervious)	Weighted CN
1	DA-1A	1.93	D	0.01	1.92	0.00	98	84	84.04
2	DA-2	0.09	D	0.00	0.09	0.00	98	84	84.00
3	DA-3	0.09	D	0.00	0.09	0.00	98	84	84.00

Time of Concentration

Computation Point	Sheet Flow						Shallow Concentrated Flow					Channel Flow			Total	Computation Point
	n	L (ft)	P_2 (in)	s (ft/ft)	t_c calculated (min)	t_c (min)	Paved?(y/n)	V (ft/sec)	L (ft)	s (ft/ft)	t_c (min)	L (ft)	V (ft/sec)	t_c (min)	t_c (min)	
1	0.130	100	4.15	0.0100	10.12	10.12	N	3.61	260	0.0500	1.20	92	6.0	0.26	**12**	1
2	0.130	42	4.15	0.0480	2.70	5.00	N	-			-	102	6.0	0.28	**5**	2
3	0.130	45	4.15	0.1888	1.65	5.00	N	-			-	0	6.0	0.00	**5**	3

Existing Run Off Summary

Point of Analysis	Contributing Drainage Areas	Area	Storm Event	Existing Flow (cfs)
1	DA-1A	1.93	2yr	4.287
1	DA-1A	1.93	10yr	9.084
1	DA-1A	1.93	25yr	12.57
1	DA-1A	1.93	100yr	19.21
2	DA-2	0.09	2yr	0.256
2	DA-2	0.09	10yr	0.505
2	DA-2	0.09	25yr	0.698
2	DA-2	0.09	100yr	1.065
3	DA-3	0.09	2yr	0.256
3	DA-3	0.09	10yr	0.505
3	DA-3	0.09	25yr	0.698
3	DA-3	0.09	100yr	1.065

NO.	DATE	COMMENTS

RETAIL/MARKET
1311 CRADDOCK AVE
SAN MARCOS, TEXAS 78666
EXISTING HYDROLOGY

LIQUE ENGINEERS & SURVEYING
TBPELS # - 20405 &
- 10194727
816 Camaron Ste. 110
San Antonio,TX. 78212
Phone: 210-549-4207

STATE OF TEXAS
DAMIAN M. ESQUIVEL
98362
LICENSED PROFESSIONAL ENGINEER

JOB:	SCALE:
160-01-08	1" = 40'

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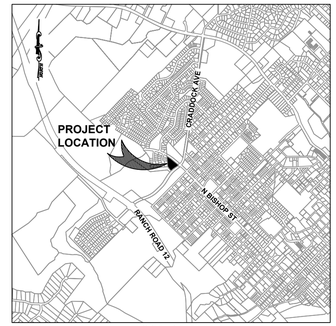
Stage Storage			
Stage (ft)	Elevation (ft)	Incremental Storage (cu ft)	Total Storage (cu ft)
0.00	710.00	0.00	0.00
1.00	711.00	2815.18	2815.18
2.00	712.00	3533.03	6348.20
3.00	713.00	4315.16	10663.36
4.00	714.00	5740.00	16403.36
5.00	715.00	7311.00	23714.36
5.25	715.25	1986.00	25700.36



LOCATION MAP
NOT TO SCALE

0 40 80 Feet

SCALE : 1" : 40'

LEGEND

- EXISTING 1' CONTOURS (2024 HAYS AND WILLIAMSON COUNTY LIDAR) — 100
- DRAINAGE AREA
- PROPERTY BOUNDARY
- PROPOSED SHEET FLOW
- PROPOSED SHALLOW CONCENTRATED FLOW
- PROPOSED CHANNEL FLOW
- SOILS BOUNDARY
- DRAINAGE AREA — DA-X
- AREA ACREAGE — XX.XX AC
- STUDY POINT — (X)
- PROPOSED UNDEVELOPED AREAS CN VALUE = 84 - (OPEN SPACE, FAIR)
- PROPOSED COMMERCIAL (IMPERVIOUS) AREAS CN VALUE = 98 - (IMPERVIOUS AREAS - PARKING LOTS, ROOFS, DRIVEWAYS, ETC.)

STATE OF TEXAS
DAMIAN M. ESQUIVEL
98362
LICENSED
PROFESSIONAL ENGINEER

Proposed Curve Number Calculations									
Computation Point	Drainage Area	Area (ac.)	Hydrologic Condition	Imp. Cover (acre)	Pervious Cover (acre)	% Imp.	CN (Imp.)	CN (Pervious)	Weighted CN
1A	DA-1A	1.48	D	1.15	0.33	77.81	98	84	94.89
2	DA-2	0.09	D	0.01	0.09	5.66	98	84	84.79
3	DA-3	0.09	D	0.00	0.09	0.00	98	84	84.00
1C	DA-1C	0.15	D	0.00	0.15	0.00	98	84	84.00
1B	DA-1B	0.31	D	0.00	0.31	0.25	98	84	84.04
1	DA-1A+DA-1B DA-1C	1.93	D	1.15	0.79	59.40	98	84	92.32

Time of Concentration															
Computation Point	Sheet Flow					Shallow Concentrated Flow					Channel Flow			Total	Computation Point
	n	L (ft)	P_2 (in)	s (ft/ft)	t_c (min)	Paved?(y/n)	V (ft/sec)	L (ft)	s (ft/ft)	t_c (min)	L (ft)	V (ft/sec)	t_c (min)	t_c (min)	
1A	0.130	100	4.15	0.0100	10.12	Y	4.55	100	0.0500	0.37	92	6.0	0.26	**11**	1A
2	0.130	42	4.15	0.0480	5.00	N	-			-	102	6.0	0.28	**5**	2
3	0.130	45	4.15	0.1888	5.00	N	-			-	0	6.0	0.00	**5**	3
1C	0.130	67	4.15	0.1126	5.00	N	-			-	0	6.0	0.00	**5**	1C
1B	0.130	100	4.15	0.0750	5.00	N	3.61	100	0.0500	0.46	0	6.0	0.00	**5**	1B
1	0.130	100	4.15	0.0100	10.12	Y	4.55	100	0.0500	0.37	177	6.0	0.49	**11**	1

Proposed Run Off Summary							
Point of Analysis	Contributing Drainage Areas	Area	Storm Event	Existing Flow (cfs)	Proposed Flow (cfs)	Detention Discharge (cfs)	Net Change (cfs)	Detention Storage (cf)
1A	DA-1A	1.48	2yr	-	4.176	-	-	-
1A	DA-1A	1.48	10yr	-	7.741	-	-	-
1A	DA-1A	1.48	25yr	-	10.47	-	-	-
1A	DA-1A	1.48	100yr	-	15.66	-	-	-
2	DA-2	0.09	2yr	0.256	0.259	-	0.003	-
2	DA-2	0.09	10yr	0.505	0.509	-	0.004	-
2	DA-2	0.09	25yr	0.698	0.702	-	0.004	-
2	DA-2	0.09	100yr	1.065	1.068	-	0.003	-
3	DA-3	0.09	2yr	0.256	0.256	-	0.000	-
3	DA-3	0.09	10yr	0.505	0.505	-	0.000	-
3	DA-3	0.09	25yr	0.698	0.698	-	0.000	-
3	DA-3	0.09	100yr	1.065	1.065	-	0.000	-
1C	DA-1C	0.46	2yr	-	0.426	-	-	-
1C	DA-1C	0.46	10yr	-	0.842	-	-	-
1C	DA-1C	0.46	25yr	-	1.164	-	-	-
1C	DA-1C	0.46	100yr	-	1.776	-	-	-
1B	DA-1B	1.94	2yr	-	0.881	-	-	-
1B	DA-1B	1.94	10yr	-	1.74	-	-	-
1B	DA-1B	1.94	25yr	-	2.406	-	-	-
1B	DA-1B	1.94	100yr	-	3.67	-	-	-
1	DA-1A, DA-1B, DA-1C	3.42	2yr	4.287	5.275	4.282	-0.005	4316.0
1	DA-1A, DA-1B, DA-1C	3.42	10yr	9.084	9.934	9.080	-0.004	6023.0
1	DA-1A, DA-1B, DA-1C	3.42	25yr	12.570	13.510	12.500	-0.070	7017.0
1	DA-1A, DA-1B, DA-1C	3.42	100yr	19.210	20.300	19.200	-0.010	8552.0

NO.	DATE	COMMENTS

RETAIL/MARKET
1311 CRADDOCK AVE
SAN MARCOS, TEXAS 78666

PROPOSED/ULTIMATE HYDROLOGY

LIQUE ENGINEERS & SURVEYING
TBPELS # - 20405 &
- 10194727
816 Camaron Ste. 110
San Antonio,TX. 78212
Phone: 210-549-4207

JOB:	SCALE:
160-01-08	1" = 40'

SHEET NO.
C15.0

Date: May 28, 2025, 7:18pm User ID: alejandro.jimenez
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Permanent Stormwater Section

Permanent Stormwater Section

Texas Commission on Environmental Quality

for Regulated Activities on the Edwards Aquifer Recharge Zone and Relating to 30 TAC §213.5(b)(4)(C), (D)(Ii), (E), and (5), 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.

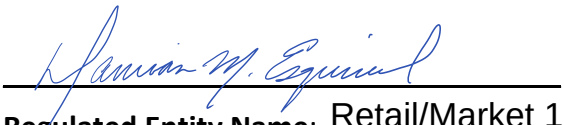
Signature

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 **Permanent Stormwater Section** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of Customer/Agent: Damian Esquivel P.E.

Date: 7/3/25

Signature of Customer/Agent



Regulated Entity Name: Retail/Market 1311 Craddock

Permanent Best Management Practices (BMPs)

Permanent best management practices and measures that will be used during and after construction is completed.

1. ☒ Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

   ☐ N/A

2. ☒ 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

3. ■ 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

4. 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.

5. 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 A - 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.

6. ■ **Attachment B - 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.

7. ☒ **Attachment C - 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.

8. ☐ **Attachment D - BMPs for Surface Streams**. A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is attached. Each feature identified in the Geologic Assessment as sensitive has been addressed.

☒ N/A

9. ☒ The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

☒ The permanent sealing of or diversion of flow from a naturally-occurring sensitive feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed.

☐ **Attachment E - Request to Seal Features**. A request to seal a naturally-occurring sensitive feature, that includes, for each feature, a justification as to why no reasonable and practicable alternative exists, is attached.

10. ☒ **Attachment F - Construction Plans**. All construction plans and design calculations for the proposed permanent BMP(s) and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. The plans are attached and, if applicable include:

☒ Design calculations (TSS removal calculations)

☒ TCEQ construction notes

☒ All geologic features

☒ All proposed structural BMP(s) plans and specifications

☐ N/A

11. ■ **Attachment G - Inspection, Maintenance, Repair and Retrofit Plan**. A plan for the inspection, maintenance, repairs, and, if necessary, retrofit of the permanent BMPs and measures is attached. The plan includes all of the following:

    ■ Prepared and certified by the engineer designing the permanent BMPs and measures
    ■ Signed by the owner or responsible party
    ■ Procedures for documenting inspections, maintenance, repairs, and, if necessary retrofit
    ■ A discussion of record keeping procedures

    ☐ N/A

12. ☐ **Attachment H - 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

13. ☐ **Attachment I -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 results in water quality degradation.

    ■ N/A

Responsibility for Maintenance of Permanent BMP(s)

Responsibility for maintenance of best management practices and measures after construction is complete.

14. ■ 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.

    ☐ N/A

15. ■ 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.

    ☐ N/A

Attachment A
20% or Less Impervious Cover Waiver
N/A

Attachment B
BMPs for Upgradient Stormwater
Upgradient stormwater is captured onsite via grate inlets and curb inlets and conveyed to the sand filter pond.

Attachment C
BMPs for On-Site Stormwater
Onsite stormwater flows are treated with the previously mentioned sand filter pond. Refer to hydrology maps and temporary stormwater section.

Attachment D
BMPs for Surface Streams
N/A

Attachment E
Request to Seal Feature
N/A

Attachment F
Construction Plans
Reference attached plans at the end of this section.

Attachment G
Inspection, Maintenance, Repair, and Retrofit Plan
Reference attached maintenance plan.

Attachment H
Pilot-Scale Field Testing Plan
N/A

Attachment I
Measures for Minimizing Surface Stream Contamination
N/A

SAND FILTER POND MAINTENANCE PLAN
RETAIL/MARKET 1311 CRADDOCK

The following are guidelines for the overall maintenance of the detention basin.

- *Inspections.* BMP facilities must be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. During each inspection, erosion areas inside and downstream of the BMP must be identified and repaired or revegetated immediately. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) must be identified and repaired immediately. 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.
- *Sediment Removal.* Remove sediment from the inlet structure and sedimentation chamber when sediment buildup reaches a depth of 6 inches or when the proper functioning of inlet and outlet structures is impaired. Sediment should be cleared from the inlet structure at least every year and from the sedimentation basin at least every 5 years.
- *Media Replacement.* Maintenance of the filter media is necessary when the drawdown time exceeds 48 hours. When this occurs, the upper layer of sand should be removed and replaced with new material meeting the original specifications. Any discolored sand should also be removed and replaced. In filters that have been regularly maintained, this should be limited to the top 2 to 3 inches.
- *Debris and Litter Removal.* Debris and litter will accumulate near the sedimentation basin outlet device and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.
- *Erosion Control.* The pond side slopes and embankment may periodically suffer from slumping and erosion, although this should not occur often if the soils are properly compacted during construction. Regrading and revegetation may be required to correct the problems.
- *Filter Underdrain.* Clean underdrain piping network to remove any sediment buildup as needed to maintain design drawdown time.
- *Mowing.* Grass areas in and around sand filters must be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. Vegetation on the pond embankments should be mowed as appropriate to prevent the establishment of woody vegetation.

I agree to perform the above maintenance items on the Sand Filter Basin.

MALEK AL SAYYED
OWNER (Please print name)

04-30-25
DATE

AL-Sayyed, malek
SIGNATURE

LIQUE ENGINEERS
816 Camaron, Ste. 110 San Antonio, TX 78212

LEGAL DESCRIPTION:

LOT 1, A TOTAL OF 2.04 ACRES OUT OF THE BISHOPS CORNER FINAL PLAT, AS RECORDED UNDER DOCUMENT NUMBER 21064214, OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS.

CONTROL POINTS:

CP #1
ELEVATION: 721.13
NORTHING: 13870531.6750'
EASTING: 2295776.2450'

CP #2
ELEVATION: 711.25
NORTHING: 13870519.0580'
EASTING: 2295490.2580'

EASEMENTS:

1. 10' PUBLIC UTILITY EASEMENT DOC#: 21064214, P.R.H.C.T.
2. WATER QUALITY EASEMENT DOC#: 21064214, P.R.H.C.T.
3. 20' PUBLIC UTILITY EASEMENT VOL. 4709, PG. 417 D.R.H.C.T.
4. 15' DRAINAGE EASEMENT VOL. 3753, PG. 572 D.R.H.C.T.

TRENCH EXCAVATION SAFETY PROTECTION:

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

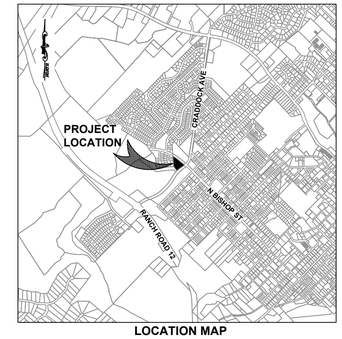
CAUTION!!:
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS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

GENERAL UTILITY NOTES

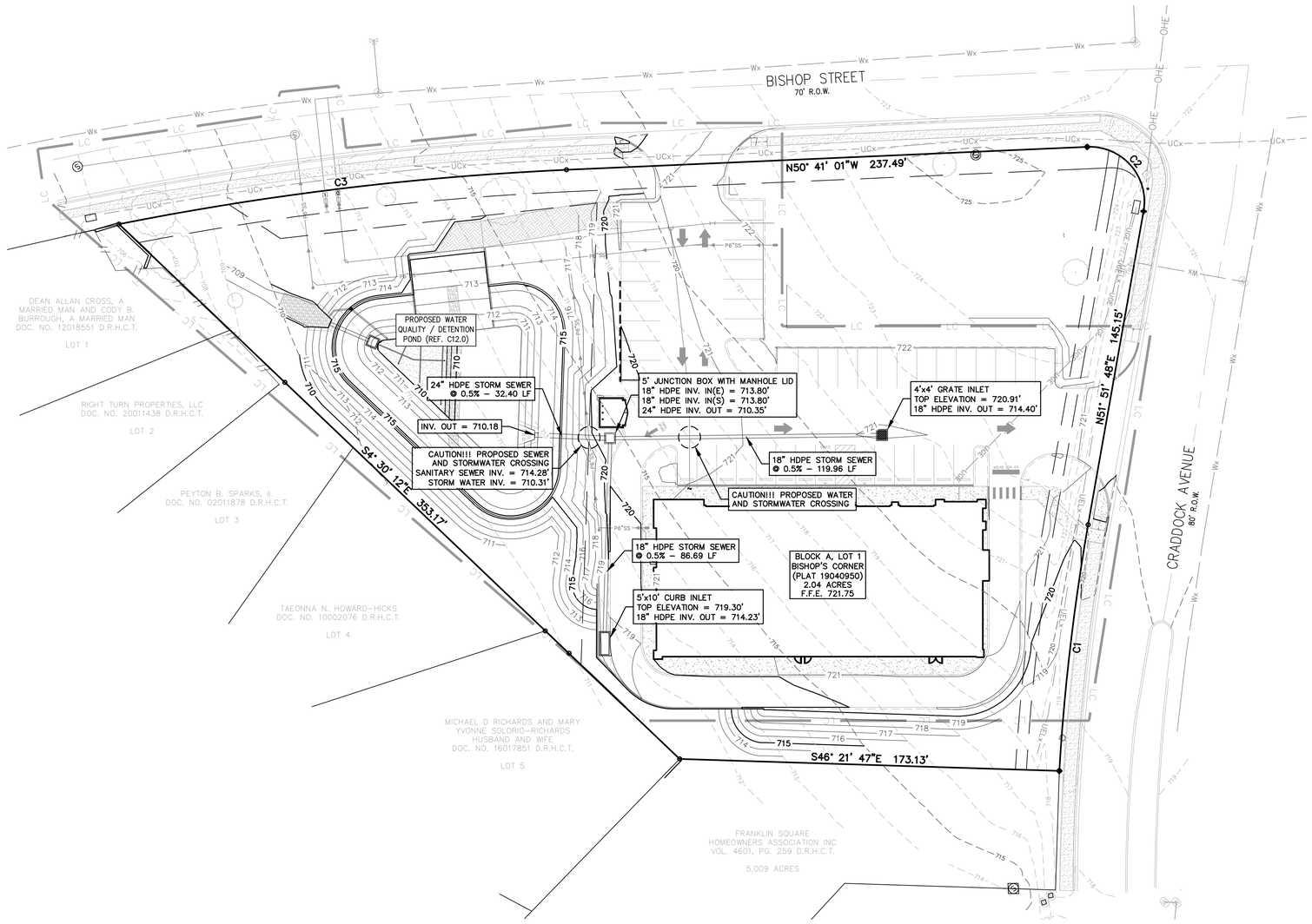
1. THERE ARE NUMEROUS UTILITY CROSSINGS ON THIS PROJECT. THE CONTRACTOR SHALL VERIFY ALL GRAVITY LINE CROSSINGS (SANITARY SEWER, STORM SEWER, WALL DRAINS, ETC.) TO ENSURE NO CONFLICTS OCCUR PRIOR TO UTILITY LINE CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IF GRAVITY LINE VERTICAL ADJUSTMENTS ARE NECESSARY. CONTRACTOR IS EXPECTED TO MAKE ADJUSTMENT OF NON-GRAVITY UTILITY LINES AS NECESSARY TO AVOID CONFLICTS AND MAINTAIN THE MINIMUM BURY DEPTHS OF EACH UTILITY AS SPECIFIED.
2. WHEN SANITARY SEWER LINES ARE INSTALLED IN THE VICINITY OF POTABLE WATER MAINS, SUCH INSTALLATION OF SANITARY SEWER AND WATER FACILITIES SHALL BE IN STRICT COMPLIANCE WITH TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) CHAPTER 290 - 'PUBLIC DRINKING WATER', SUBCHAPTER D, 'RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS' AND CHAPTER 217 - 'DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS'.
3. FITTINGS FOR WATER AND SANITARY SEWER SHOWN ON THE DRAWINGS REPRESENT GENERAL ALIGNMENT AND INSTALLATION INTENTION AND DO NOT REPRESENT ALL FITTINGS REQUIRED FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL INCIDENTAL FITTINGS AND APPURTENANCES FOR HORIZONTAL AND VERTICAL ALIGNMENT ADJUSTMENTS, MATERIAL ADAPTERS, PIPE SIZE REDUCTION, TIE-INS TO EXISTING MAINS, INSTALLATION SPECIALTIES, ETC.
4. WHERE EXISTING UTILITY VAULTS AND BOXES EXIST WITHIN THE PROJECT AREA, CONTRACTOR SHALL ADJUST THESE VAULTS/BOXES TO FINISH GRADE. WHERE INDICATED, CONTRACTOR SHALL FURNISH AND INSTALL NEW VAULTS, BOXES, COVERS, ETC. AS IDENTIFIED ON THE PLANS. WHERE EXISTING VAULTS/BOXES ARE DAMAGED DURING CONSTRUCTION, CONTRACTOR SHALL FURNISH AND INSTALL NEW VAULTS/BOXES.

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

NOTE:
ALL SIDEWALKS, CURBS, RAMPS, AND DRIVE APPROACHES IN THE RIGHT OF WAY SHALL BE IN COMPLIANCE WITH CURRENT TEXAS ACCESSIBILITY STANDARDS AND CITY OF DONNA AND HIDALGO COUNTY DESIGN STANDARDS PRIOR TO FINAL INSPECTION APPROVAL.



LOCATION MAP
NOT TO SCALE



SCALE: 1"=30'
0 30 60

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMITS OF CONSTRUCTION (LC)
- CENTERLINE
- EASEMENT LINE
- CONTROL POINT
- EX. MAJOR CONTOURS (100)
- EX. MINOR CONTOURS (101)
- EXISTING WOOD FENCE
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SANITARY SEWER MANHOLE
- EXISTING OVERHEAD ELECTRICAL (OHE)
- EXISTING UNDERGROUND ELECTRICAL (UELx)
- EXISTING COMMUNICATION (UCx)
- EXISTING WATER LINE (Wx)
- EXISTING SANITARY SEWER (SSx)
- EXISTING UTILITY POLE
- GUY WIRE
- EXISTING LIGHT POLE
- PROPOSED FINISH FLOOR ELEVATION — F.F.E. = 721.75
- PROPOSED CONTOURS (737)
- PROPOSED 1-1/2" PVC WATER SERVICE
- PROPOSED 6" SANITARY SEWER SERVICE (P6"SS)
- PROPOSED CLEAN OUT
- PROPOSED WATER METER
- PROPOSED BACKFLOW PREVENTER
- PROPOSED WATER SERVICE FIXTURES
- PROPOSED HDPE STORM SEWER

CURVE TABLE					
CURVE#	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	113.02'	994.00'	6°30'53"	N48° 29' 55"E	112.96'
C2	44.75'	25.00'	102°33'28"	N0° 35' 23"E	39.01'
C3	205.64'	1365.00'	8°37'54"	N55° 05' 03"W	205.44'

STATE OF TEXAS
DAMIAN M. ESQUIVEL
98362
LICENSED
PROFESSIONAL ENGINEER

NO.	DATE	COMMENTS

RETAIL/MARKET
1311 CRADDOCK AVE
SAN MARCOS, TEXAS 78666

STORM SEWER PLAN

LIQUE ENGINEERS & SURVEYING
TBPELS # - 20405 &
- 10194727
816 Camaron Ste. 110
San Antonio,TX. 78212
Phone: 210-549-4207

JOB:	SCALE:
160-01-08	1" = 30'

SHEET NO.
C5.1

Date: May 28, 2025, 7:16pm User ID: alejandro.jimenez
File: \\Lique_server01\p\160\01\08 - Bishop and Craddock (Retail)\Civil\C5.1 - STORM SEWER PLAN.dwg

LEGAL DESCRIPTION:

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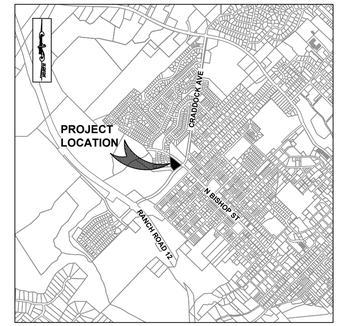
2. WATER QUALITY EASEMENT DOC#: 21064214, P.R.H.C.T.
3. 20' PUBLIC UTILITY EASEMENT VOL. 4709, PG. 417 D.R.H.C.T.
4. 15' DRAINAGE EASEMENT VOL. 3753, PG. 572 D.R.H.C.T.

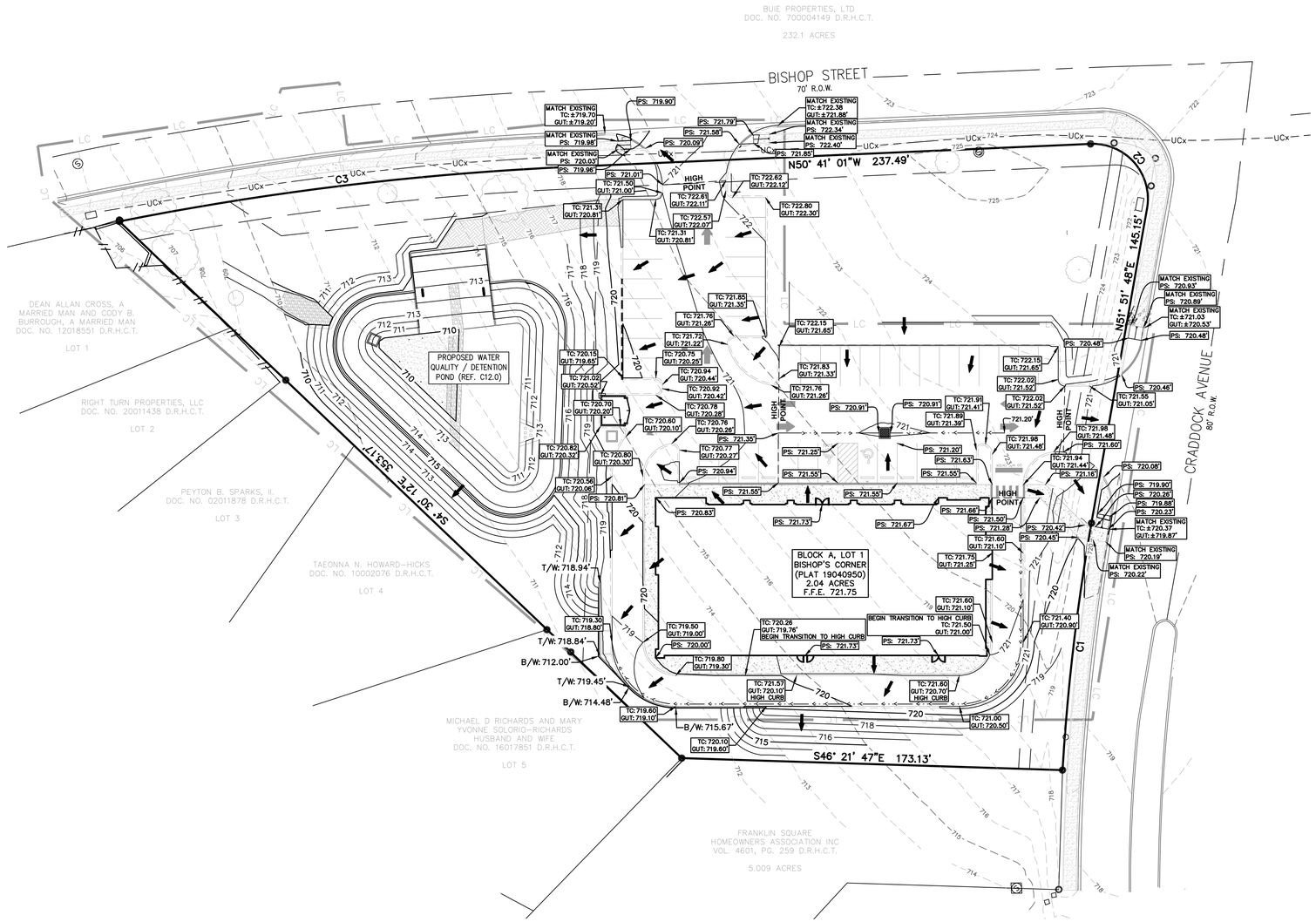
GRADING NOTES:

1. ALL GRADES AND CONTOURS SHOWN ARE FINAL, TOP OF FINISHED SURFACE ELEVATIONS UNLESS OTHERWISE NOTED. CONTRACTOR SHALL SUBTRACT THICKNESS OF PAVEMENT, BASE, TOP SOIL, SOD, ETC. TO ACHIEVE SUBGRADE ELEVATION.
2. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
3. NO ABRUPT CHANGE OF GRADE SHALL OCCUR IN THE ROADWAYS, PARKING AREAS, OR SIDEWALKS.
4. CONTRACTOR SHALL CONSTRUCT TO OBTAIN GRADES SHOWN HEREON ± ONE-TENTH (0.10) FOOT.
5. ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND LANDSCAPING PLANS.
6. UTILITIES SHOWN ON THE PLANS ARE FROM THE BEST INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
7. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ORIGINAL OR BETTER CONDITION ANY DAMAGES DONE TO EXISTING BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, SIDEWALKS, OR DRIVEWAYS (NO SEPARATE PAY ITEM).
9. DUE TO FEDERAL REGULATION TITLE 49, PART 192.181, GAS COMPANY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL NECESSARY UTILITY COMPANIES FOR PROVIDING TEMPORARY UTILITY SERVICES DURING CONSTRUCTION. THE CONTRACTOR SHALL PAY FOR ALL TEMPORARY UTILITY SERVICES.
11. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS, AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
13. ALL EXCAVATION IS UNCLASSIFIED.
14. ALL CURBS ARE 6 INCH UNLESS OTHERWISE SPECIFIED.
15. SEE CIVIL DETAIL SHEETS FOR APPLICABLE DETAILS.
16. ALL CONSTRUCTION AREAS WITHIN THE SITE SHALL BE STRIPPED OF ALL VEGETATION AND LOOSE TOPSOIL. ANY POCKETS OF DEBRIS ENCOUNTERED SHOULD ALSO BE REMOVED.
17. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO DEVELOP THE CONTRACTOR'S PLANS TO IMPLEMENT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S PLANS SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH, AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
18. REFER TO GEOTECHNICAL REPORT FOR SUBSURFACE INFORMATION AND CONSTRUCTION GUIDELINES.
19. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 2% UNLESS OTHERWISE SHOWN.
20. TREE PROTECTION SHALL BE PERFORMED IN ACCORDANCE WITH LANDSCAPE PLANS AND SPECIFICATIONS.
21. MAXIMUM SLOPE ON HANDICAP ACCESSIBLE PARKING SPACES IS 2% IN ANY DIRECTION. CROSS SLOPES ON SIDEWALKS AND FLATWORK AROUND BUILDINGS SHALL NOT EXCEED 2% SLOPE ALONG THE LENGTH OF SIDEWALKS SHALL NOT EXCEED 5%



LOCATION MAP
NOT TO SCALE

SCALE: 1"=30'
0 30 60



LEGEND

PROPERTY LINE	
ADJACENT PROPERTY LINE	
LIMITS OF CONSTRUCTION	LC
CENTERLINE	
EASEMENT LINE	
EX. MAJOR CONTOURS	100
EX. MINOR CONTOURS	101
CONTROL POINT	
EXISTING WATER VALVE	W
EXISTING WATER METER	W
EXISTING SANITARY SEWER MANHOLE	S
EXISTING WOOD FENCE	
PROPOSED FINISH FLOOR ELEVATION	F.F.E. = 721.75
PROPOSED CURB	
PROPOSED RIBBON CURB	
PROPOSED SAW-TOOTH CURB	
FLOW ARROW	XX.X%
PROPOSED CONTOURS	737
PROPOSED FLOWLINE SWALE	
PROPOSED HIGH POINT	HIGH POINT
PROPOSED SPOT GRADE (TOP OF CURB AND GUTTER)	TC: 00.00' GUT: 00.00'
PROPOSED SPOT GRADE	PS: 00.00'

CURVE TABLE					
CURVE#	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	113.02'	994.00'	6°30'53"	N48° 29' 55"E	112.96'
C2	44.75'	25.00'	102°33'28"	N0° 35' 23"E	39.01'
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STATE OF TEXAS
DAMIAN M. ESQUIVEL
98362
LICENSED PROFESSIONAL ENGINEER

NO.	DATE	COMMENTS

RETAIL/MARKET
1311 CRADDOCK AVE
SAN MARCOS, TEXAS 78666
GRADING PLAN

LIQUE ENGINEERS & SURVEYING
TBPELS # - 20405 &
- 10194727
816 Camaron Ste. 110
San Antonio,TX. 78212
Phone: 210-549-4207

JOB:	SCALE:
160-01-08	1" = 30'

SHEET NO.
C6.0

Date: May 28, 2025, 7:16pm User ID: alejandro.jimenez
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TSS Removal Calculations/BMP Design

LIQUE ENGINEERS

REGISTRATION NUMBER: 20405

Water Quality Volume Sizing Per Ch 3.2.2 of CoSM Stormwater Technical Manual

$50000 ft^2\ (maximum\ allowable\ impervious\ cover) * \frac{1\ acre}{43560\ ft^2} = 1.147\ acres$

$\frac{91249.56\ ft^2 * acre}{43560\ ft^2} = 2.095\ acres\ (total\ area\ contributing\ to\ WQV)$

$L_m = T * 34.0 * A_t * P = 0.89\ (EARZ) * 34.0 * 1.147\ acres * 33\ inches = 1145.37\ lb\ of\ TSS$

$L_r = (SCM\ Efficiency) * P * (A_I * 34.6 + A_P * 0.54)$

$L_r = 0.89\ (Sand\ Filter) * 33\ inches * (1.147\ acres * 34.6\ + (2.095 - 1.147) acres * 0.54)$

$L_r = 1180.62\ lb\ of\ TSS$

$F = \frac{L_m}{L_r} = \frac{1145.37\ lb}{1180.62 lb} = 0.97$

$IC = \frac{1.147\ acres}{2.095\ acres} = 0.547$

$Runoff\ Coefficient = 1.72 * IC^3 - 1.97 * IC^2 + 1.23IC + 0.02 = 0.385$

$WQV = Rainfall\ depth * Runoff\ Coefficient * Area = \frac{3}{12} ft * 0.385 * 91249.56\ ft^2$

$WQV = 8782.77\ cubic\ ft$ per TSS Requirement

$WQV = Rainfall\ depth * Runoff\ Coefficient * Area = \frac{1.63}{12} ft * 0.385 * 91249.56\ ft^2$

$WQV = 4771.97\ cubic\ ft$ per Design Rainfall

$TSS\ Requirement\ WQV > Design\ Rainfall\ WQV\ \ \therefore WQV = \mathbf{8782.77\ cubic\ ft}$

Per 3.4.7 *Complying with Edwards Aquifer Rules Technical Guidance Manual Sand Filter Systems*

$A_f = \frac{WQV * 1.2}{18} = \mathbf{585.52}\ ft^2\ \ (Separate\ Sedimentation\ Basin\ and\ 20\%\ Sedimentation\ Factor)$

Watershed Model Schematic

Legend

Hyd.	Origin	Description
1	SCS Runoff	DA-1A Existing Conditions
2	SCS Runoff	DA-2 Existing Conditions
3	SCS Runoff	DA-3 Existing Conditions

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

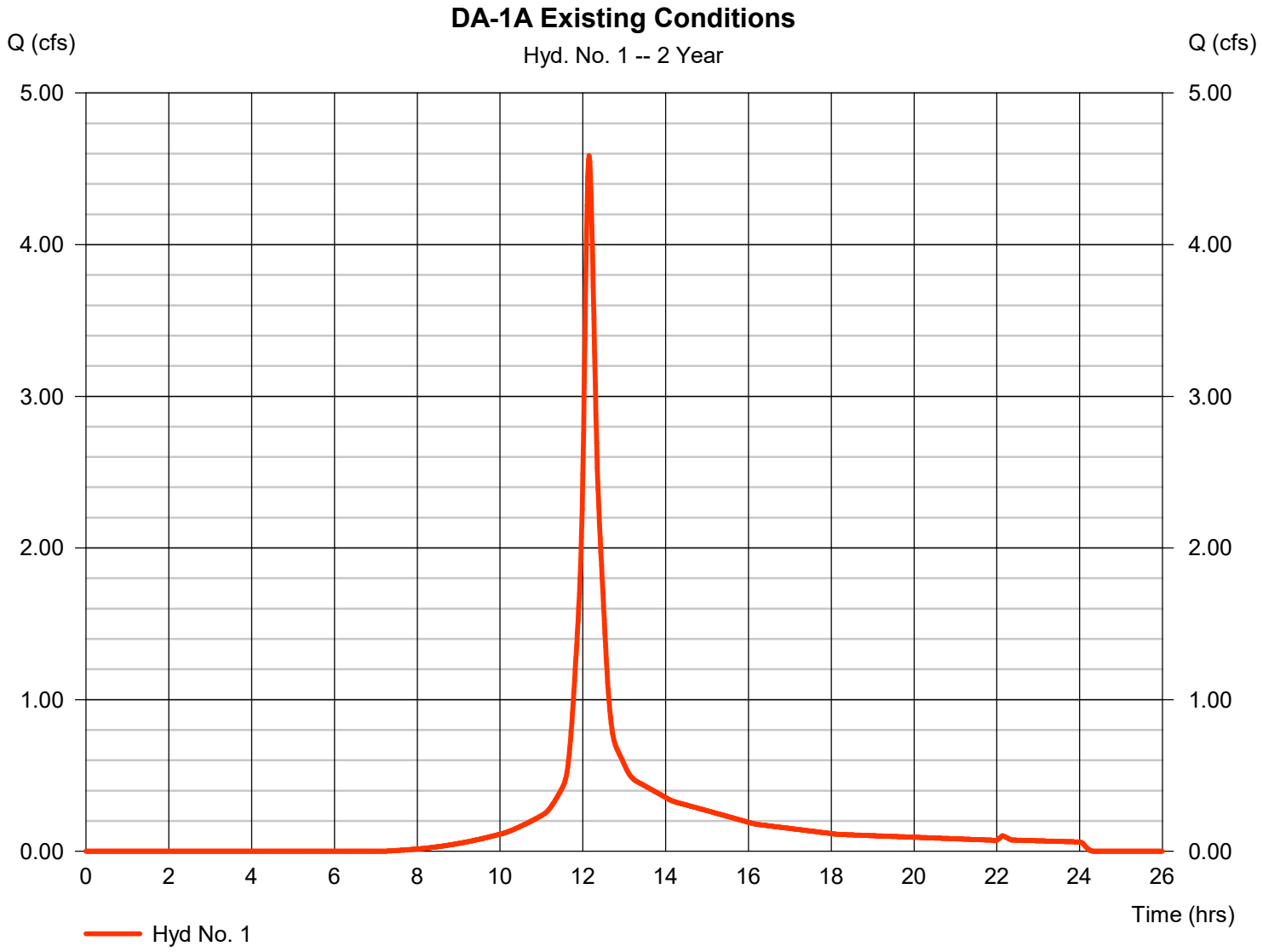
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.587	1	729	17,267	------	------	------	DA-1A Existing Conditions
2	SCS Runoff	0.256	2	724	767	------	------	------	DA-2 Existing Conditions
3	SCS Runoff	0.256	2	724	767	------	------	------	DA-3 Existing Conditions

Hydrograph Report

Hyd. No. 1

DA-1A Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.587 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.15 hrs
Time interval	=	1 min	Hyd. volume	=	17,267 cuft
Drainage area	=	1.930 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.00 min
Total precip.	=	4.15 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

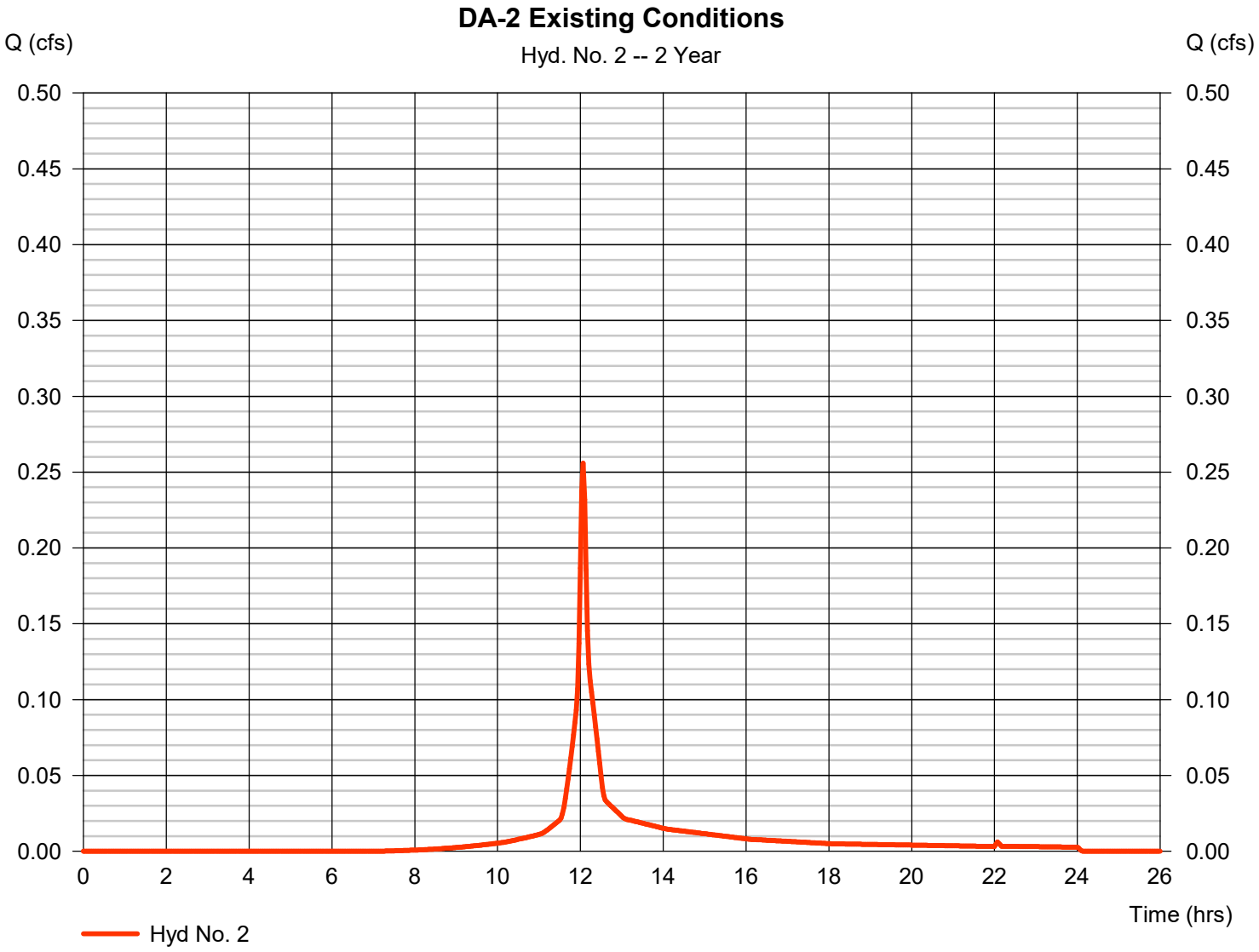


Hydrograph Report

Hyd. No. 2

DA-2 Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.256 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	767 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.15 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

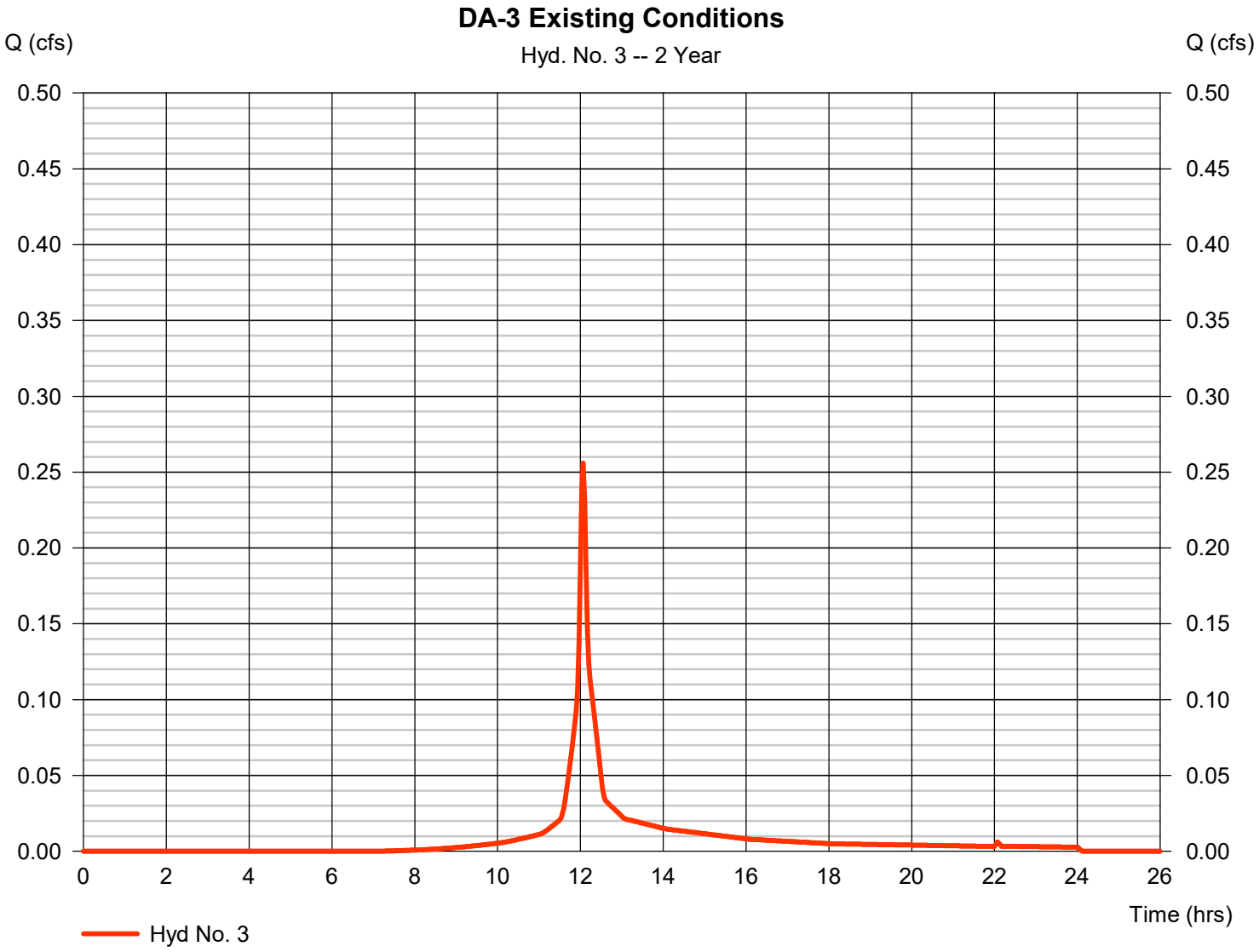


Hydrograph Report

Hyd. No. 3

DA-3 Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.256 cfs
Storm frequency	=	2 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	767 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.15 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

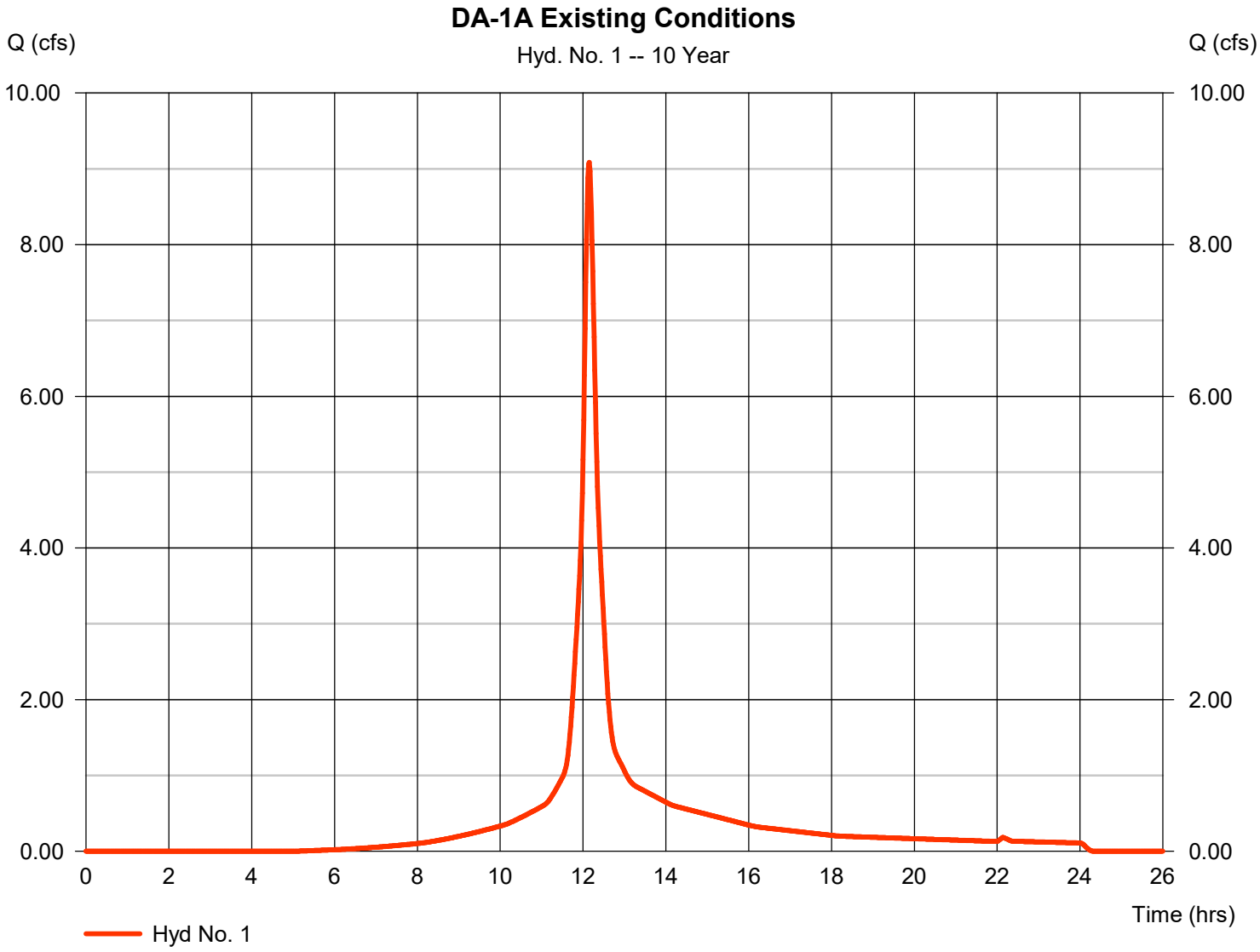
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	9.084	1	729	34,923	------	------	------	DA-1A Existing Conditions
2	SCS Runoff	0.505	2	724	1,551	------	------	------	DA-2 Existing Conditions
3	SCS Runoff	0.505	2	724	1,551	------	------	------	DA-3 Existing Conditions

Hydrograph Report

Hyd. No. 1

DA-1A Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	9.084 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.15 hrs
Time interval	=	1 min	Hyd. volume	=	34,923 cuft
Drainage area	=	1.930 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.00 min
Total precip.	=	6.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

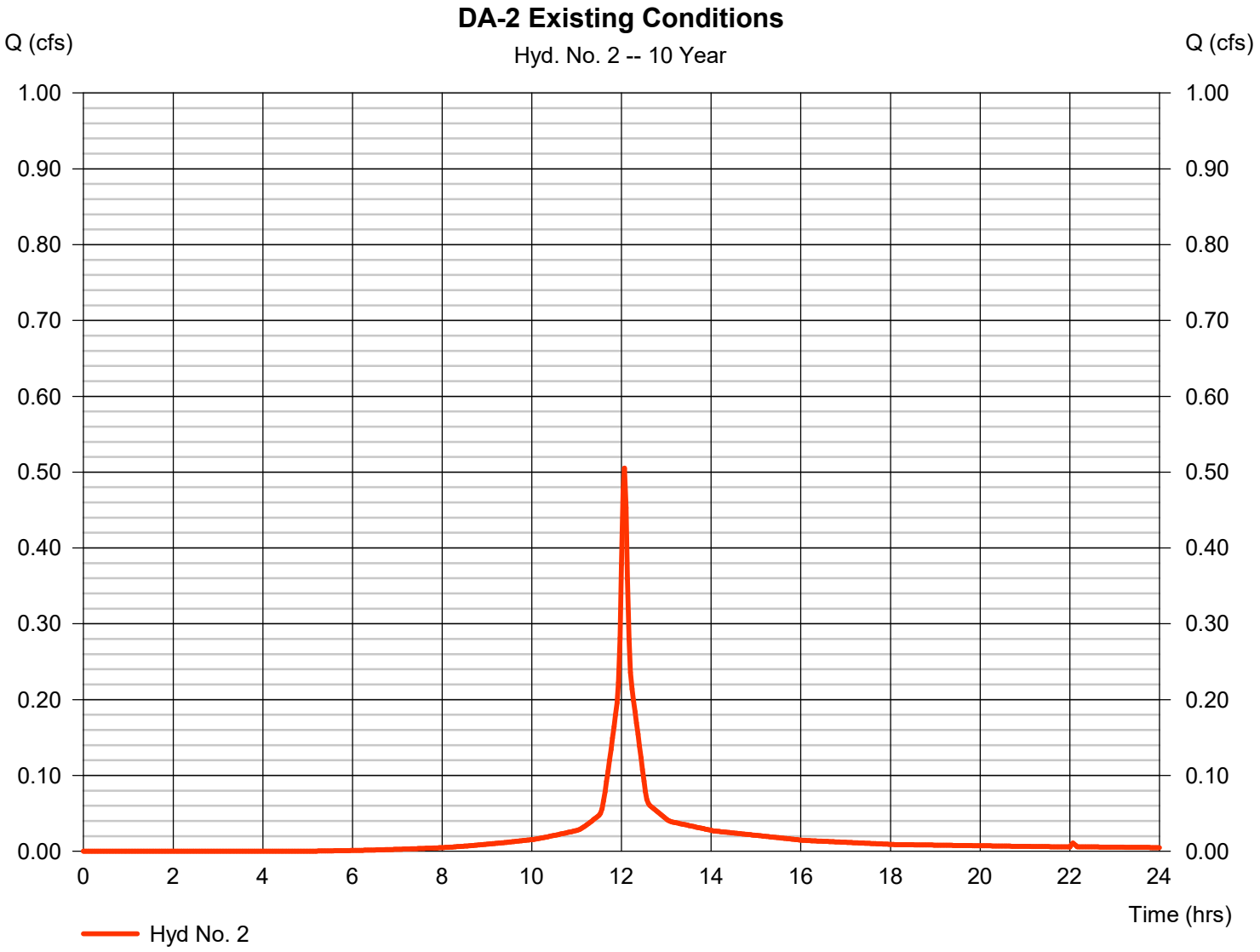


Hydrograph Report

Hyd. No. 2

DA-2 Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.505 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	1,551 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

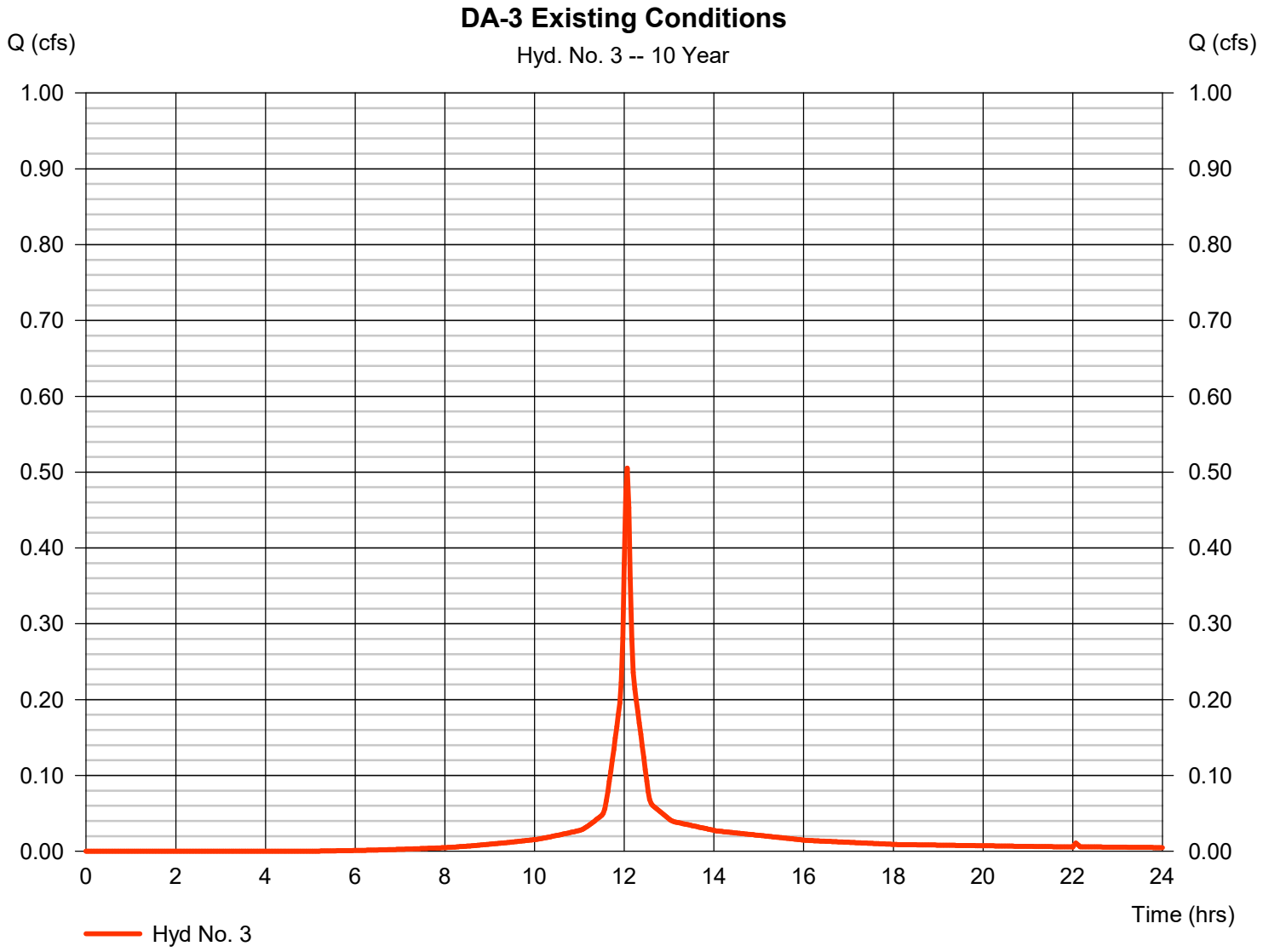


Hydrograph Report

Hyd. No. 3

DA-3 Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.505 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	1,551 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

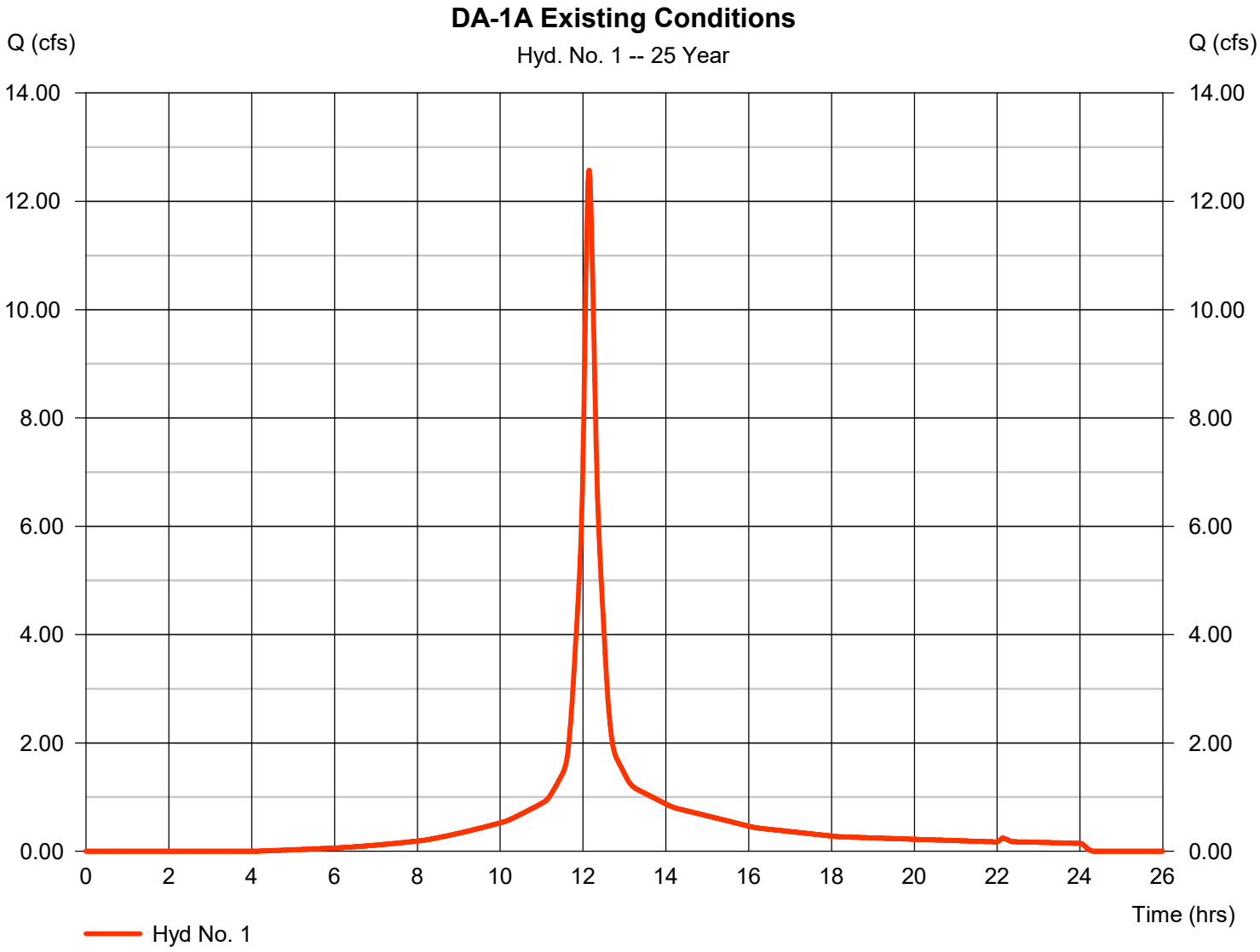
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	12.57	1	729	49,149	------	------	------	DA-1A Existing Conditions
2	SCS Runoff	0.698	2	724	2,183	------	------	------	DA-2 Existing Conditions
3	SCS Runoff	0.698	2	724	2,183	------	------	------	DA-3 Existing Conditions

Hydrograph Report

Hyd. No. 1

DA-1A Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	12.57 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.15 hrs
Time interval	=	1 min	Hyd. volume	=	49,149 cuft
Drainage area	=	1.930 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.00 min
Total precip.	=	9.07 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

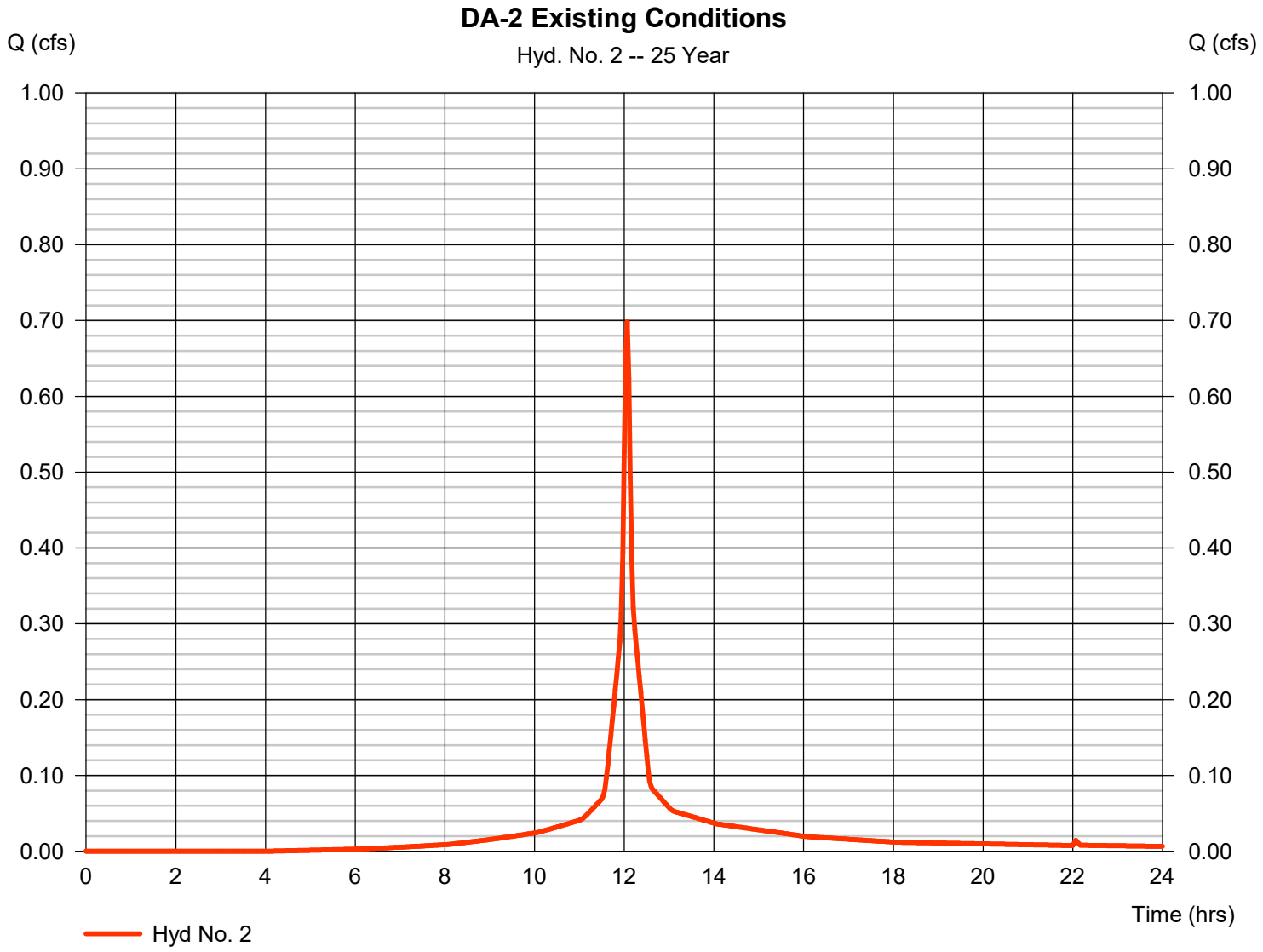


Hydrograph Report

Hyd. No. 2

DA-2 Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.698 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	2,183 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	9.07 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

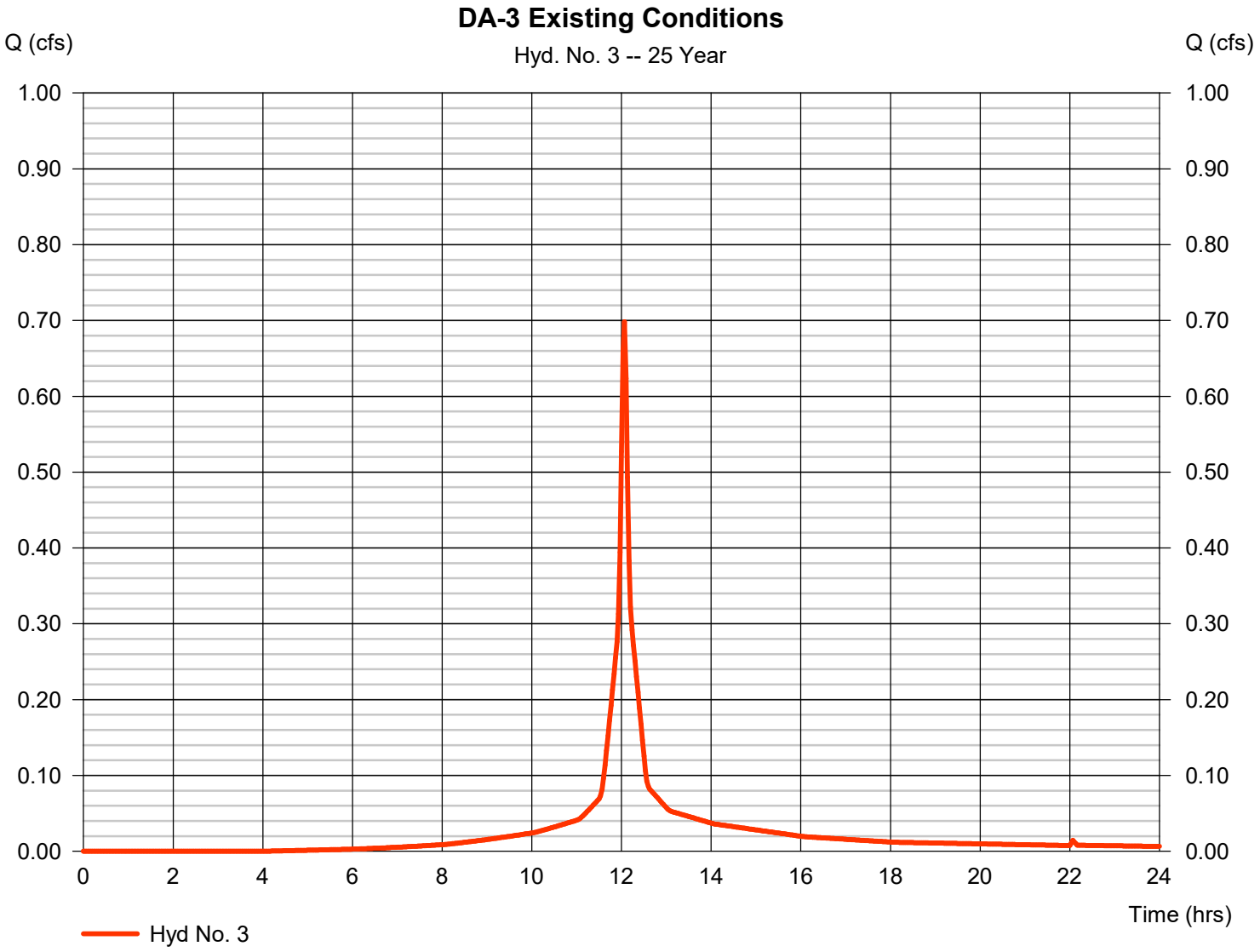


Hydrograph Report

Hyd. No. 3

DA-3 Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.698 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	2,183 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	9.07 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

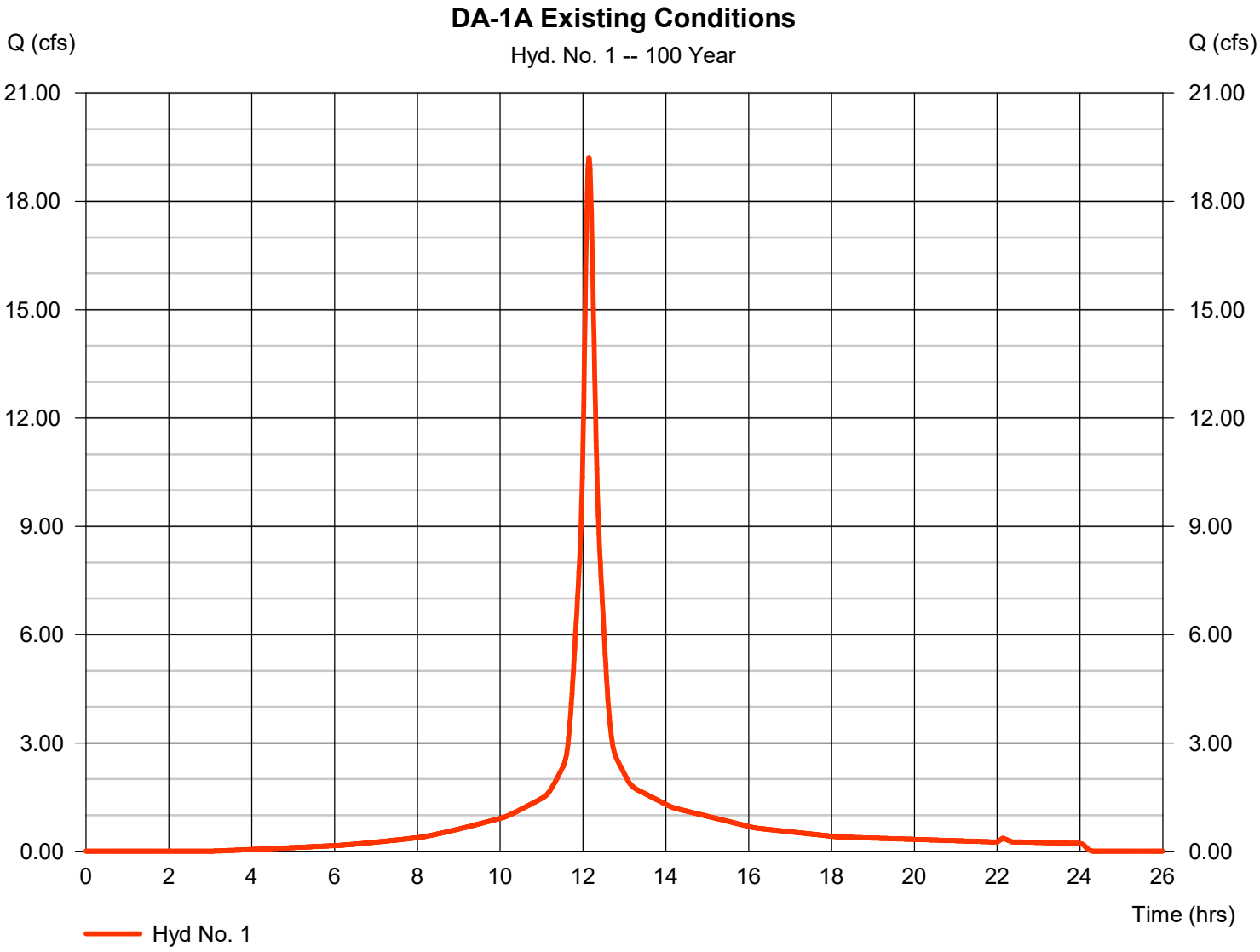
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	19.21	1	728	76,969	------	------	------	DA-1A Existing Conditions
2	SCS Runoff	1.065	2	724	3,418	------	------	------	DA-2 Existing Conditions
3	SCS Runoff	1.065	2	724	3,418	------	------	------	DA-3 Existing Conditions

Hydrograph Report

Hyd. No. 1

DA-1A Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	19.21 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.13 hrs
Time interval	=	1 min	Hyd. volume	=	76,969 cuft
Drainage area	=	1.930 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	12.00 min
Total precip.	=	13.20 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

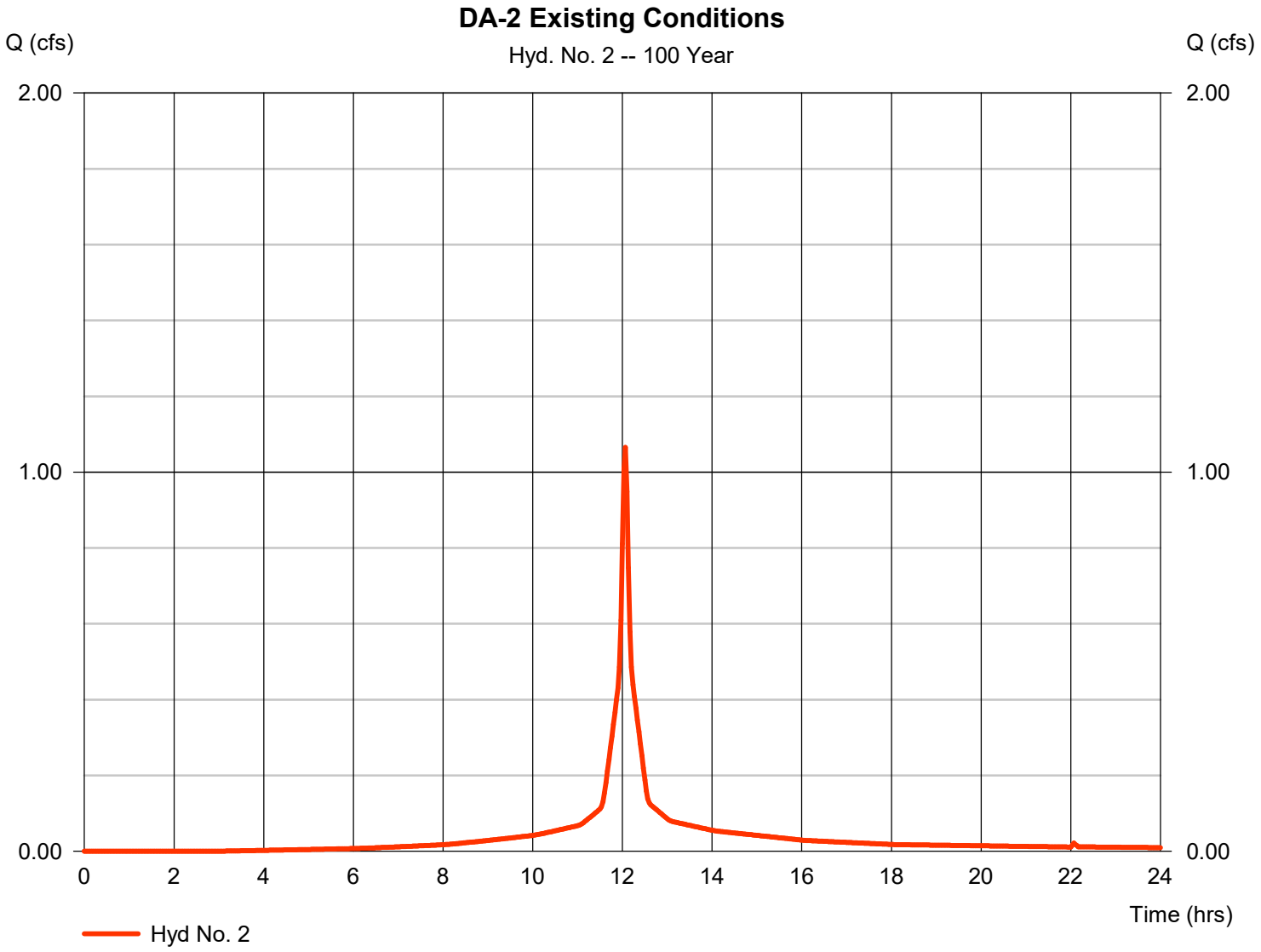


Hydrograph Report

Hyd. No. 2

DA-2 Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.065 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	3,418 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	13.20 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

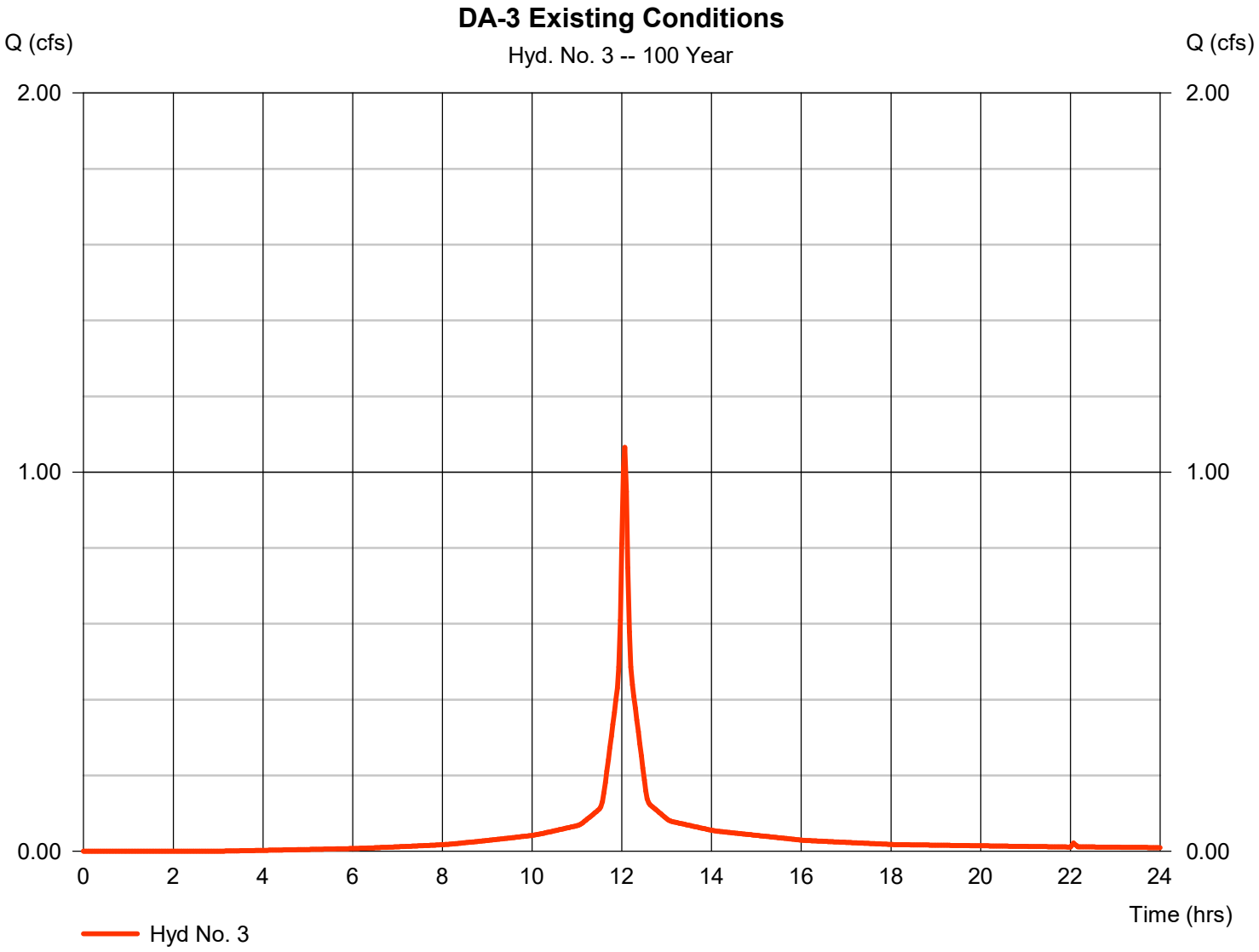


Hydrograph Report

Hyd. No. 3

DA-3 Existing Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.065 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.07 hrs
Time interval	=	2 min	Hyd. volume	=	3,418 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	13.20 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Watershed Model Schematic

Legend

Hyd.	Origin	Description
1	SCS Runoff	DA-1A Proposed Conditions
2	SCS Runoff	DA-2 Proposed Condtions
3	SCS Runoff	DA-3 Proposed Conditions
4	SCS Runoff	DA-1C Proposed Conditions
5	SCS Runoff	DA-1B Proposed Conditions
6	SCS Runoff	DA-1A + DA-1B + DA-1C Proposed Conditions
7	Reservoir	SCS Flood Control Pond

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

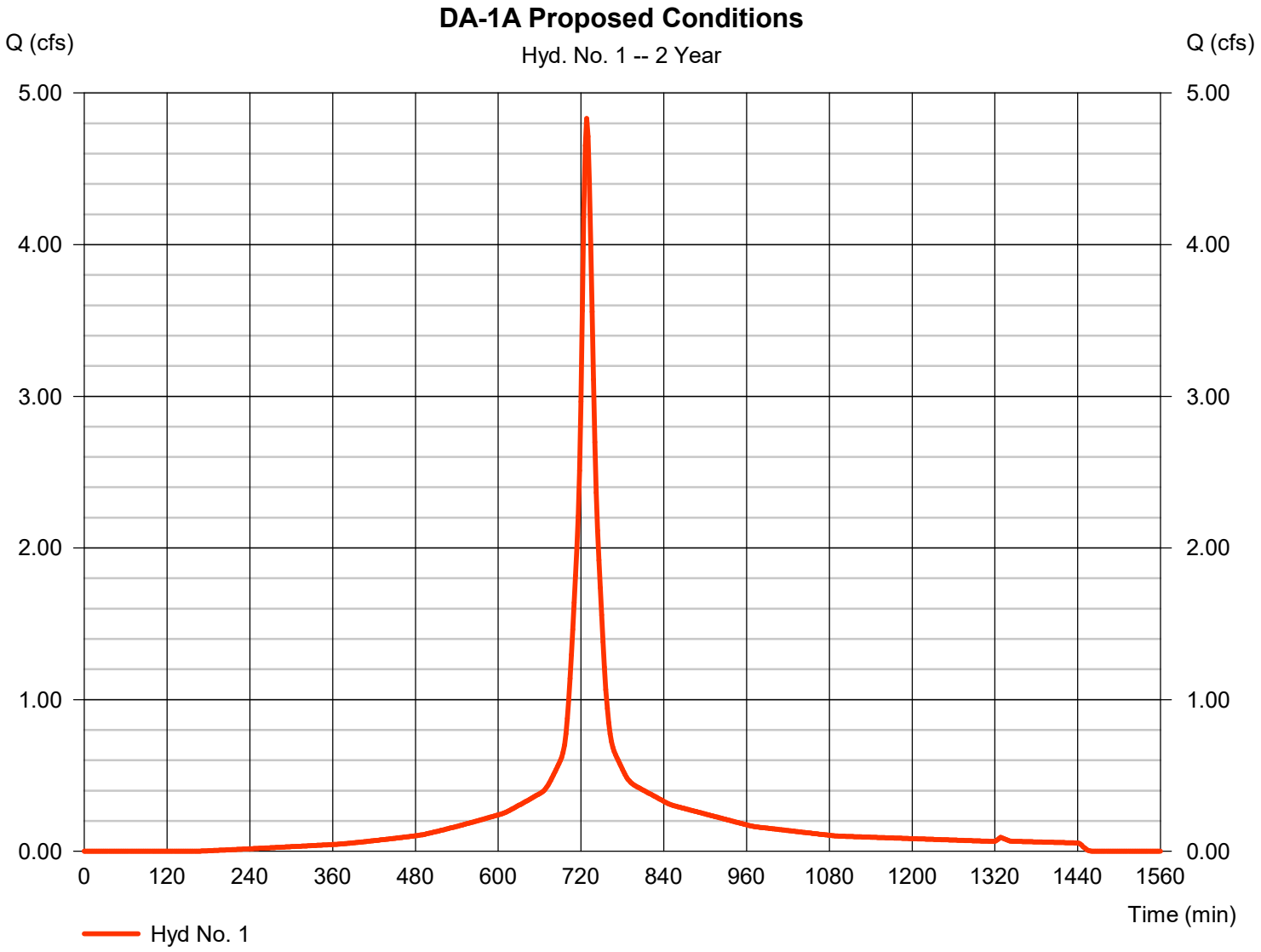
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.832	2	728	19,769	------	------	------	DA-1A Proposed Conditions
2	SCS Runoff	0.263	2	724	789	------	------	------	DA-2 Proposed Condtions
3	SCS Runoff	0.256	2	724	767	------	------	------	DA-3 Proposed Conditions
4	SCS Runoff	0.426	2	724	1,278	------	------	------	DA-1C Proposed Conditions
5	SCS Runoff	0.881	2	724	2,641	------	------	------	DA-1B Proposed Conditions
6	SCS Runoff	5.983	2	728	23,794	------	------	------	DA-1A + DA-1B + DA-1C Proposed C
7	Reservoir	4.282	2	736	23,791	6	713.75	4,316	SCS Flood Control Pond

Hydrograph Report

Hyd. No. 1

DA-1A Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.832 cfs
Storm frequency	=	2 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	19,769 cuft
Drainage area	=	1.480 ac	Curve number	=	94.9
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.00 min
Total precip.	=	4.15 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

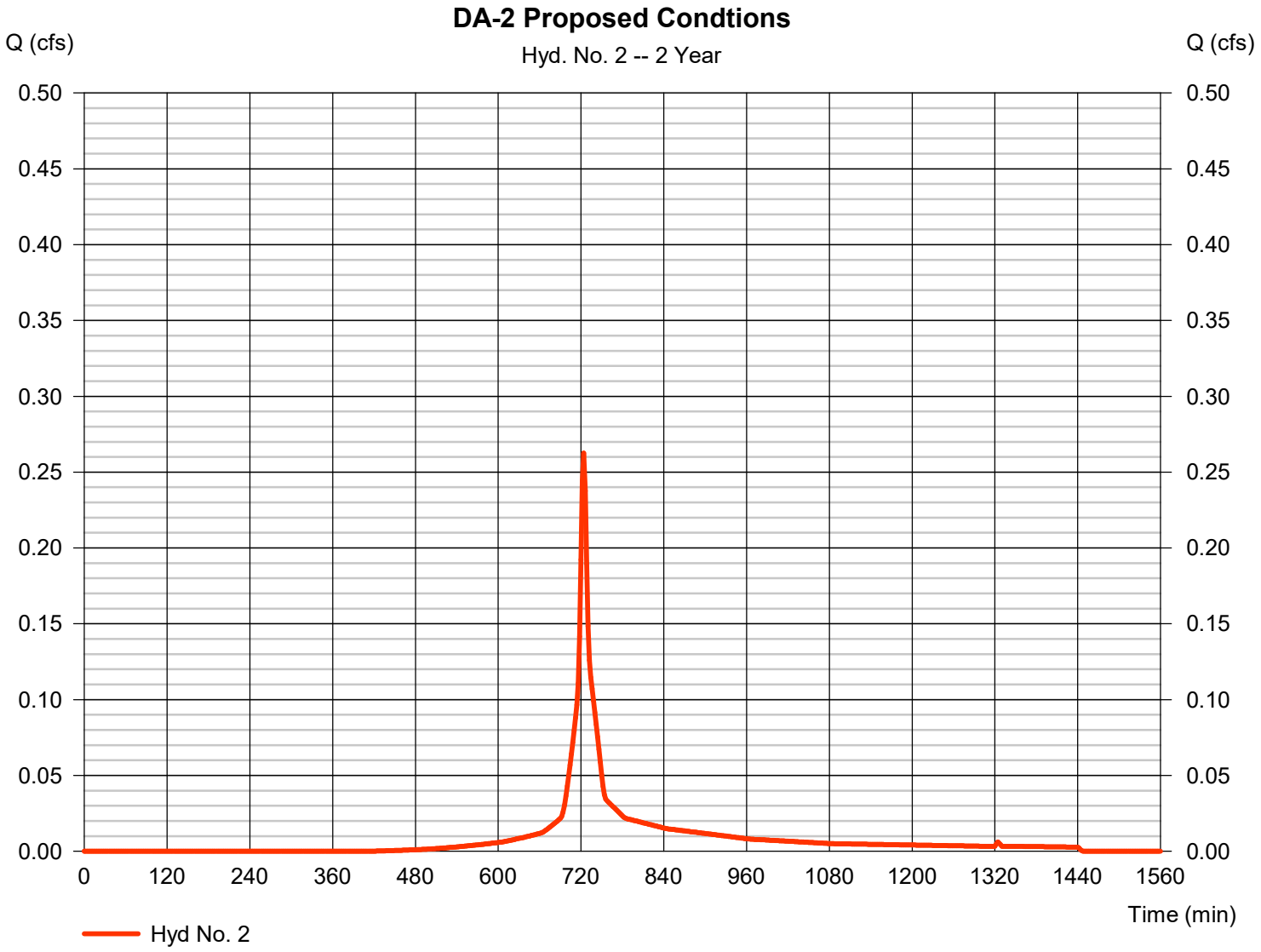


Hydrograph Report

Hyd. No. 2

DA-2 Proposed Condtions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.263 cfs
Storm frequency	=	2 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	789 cuft
Drainage area	=	0.090 ac	Curve number	=	84.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.15 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

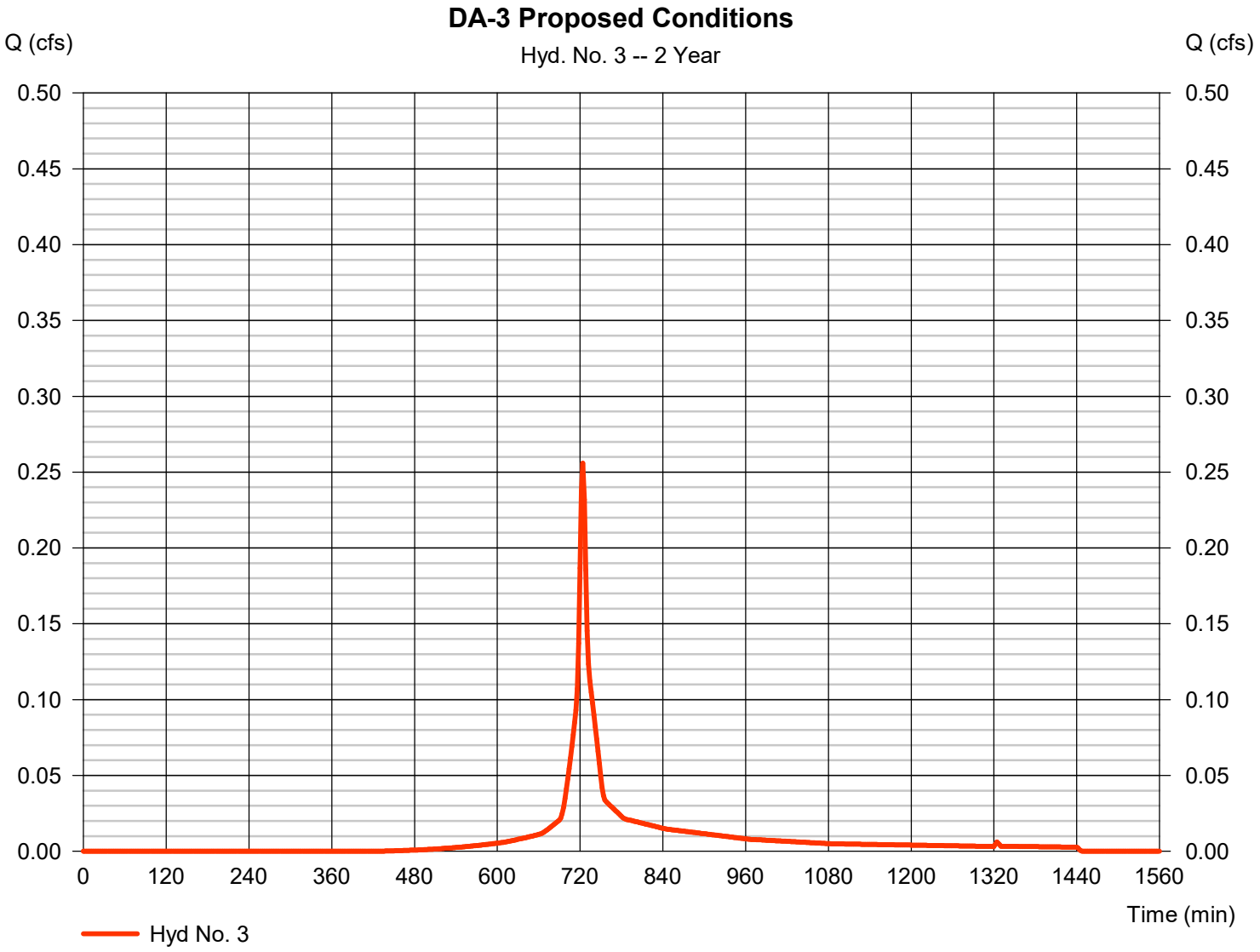


Hydrograph Report

Hyd. No. 3

DA-3 Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.256 cfs
Storm frequency	=	2 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	767 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.15 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

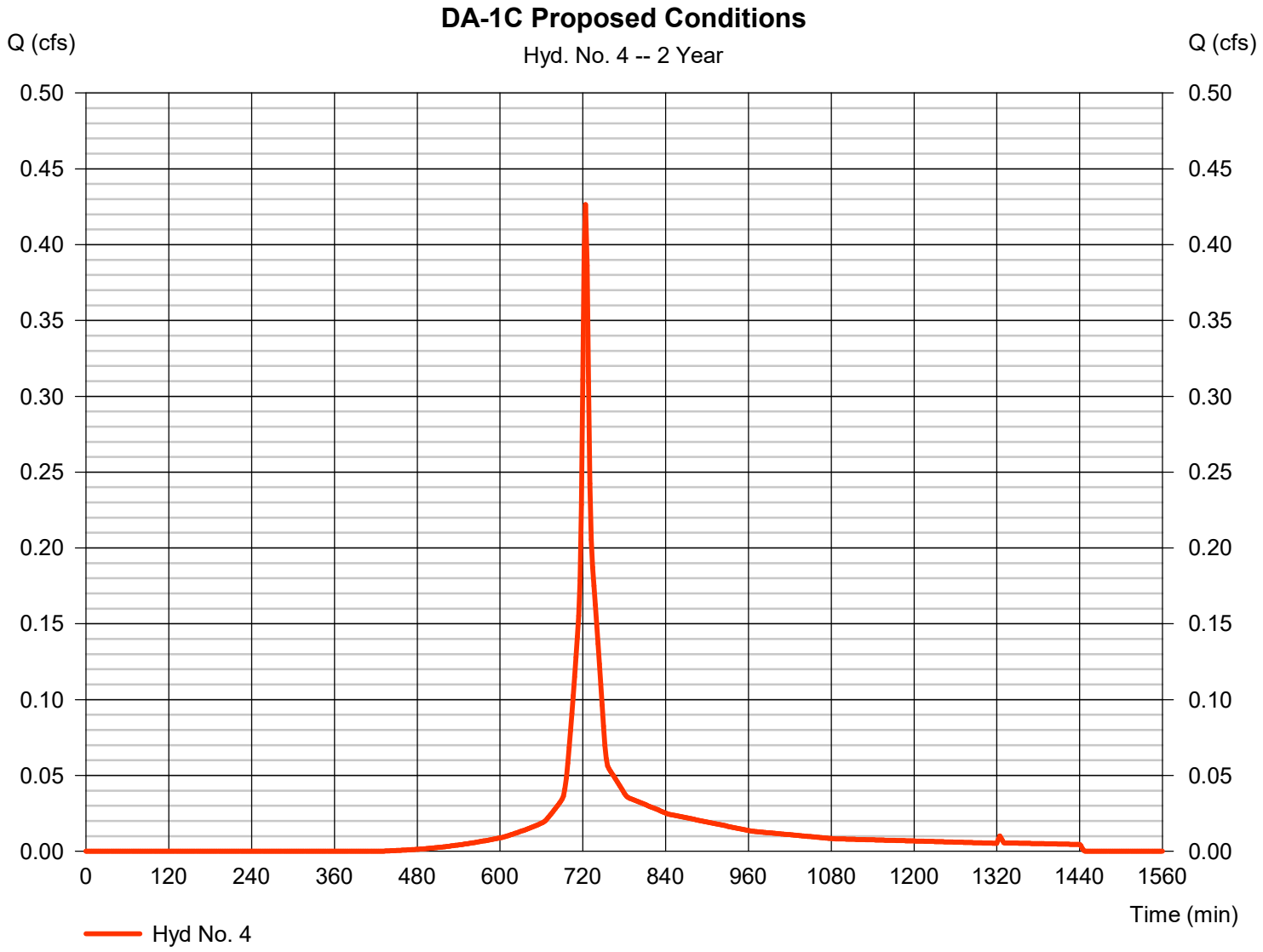


Hydrograph Report

Hyd. No. 4

DA-1C Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.426 cfs
Storm frequency	=	2 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	1,278 cuft
Drainage area	=	0.150 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.15 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

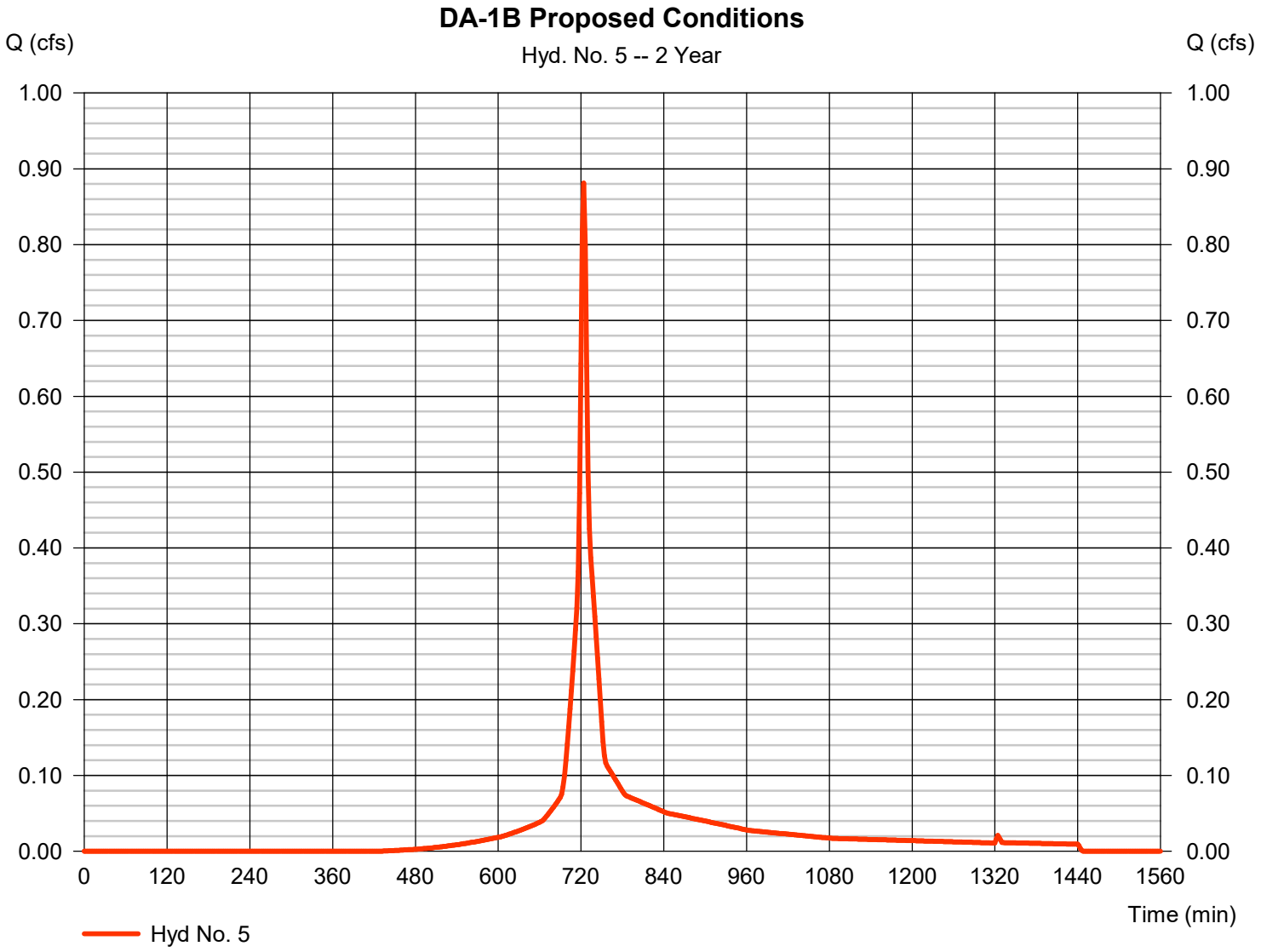


Hydrograph Report

Hyd. No. 5

DA-1B Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.881 cfs
Storm frequency	=	2 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	2,641 cuft
Drainage area	=	0.310 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	4.15 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

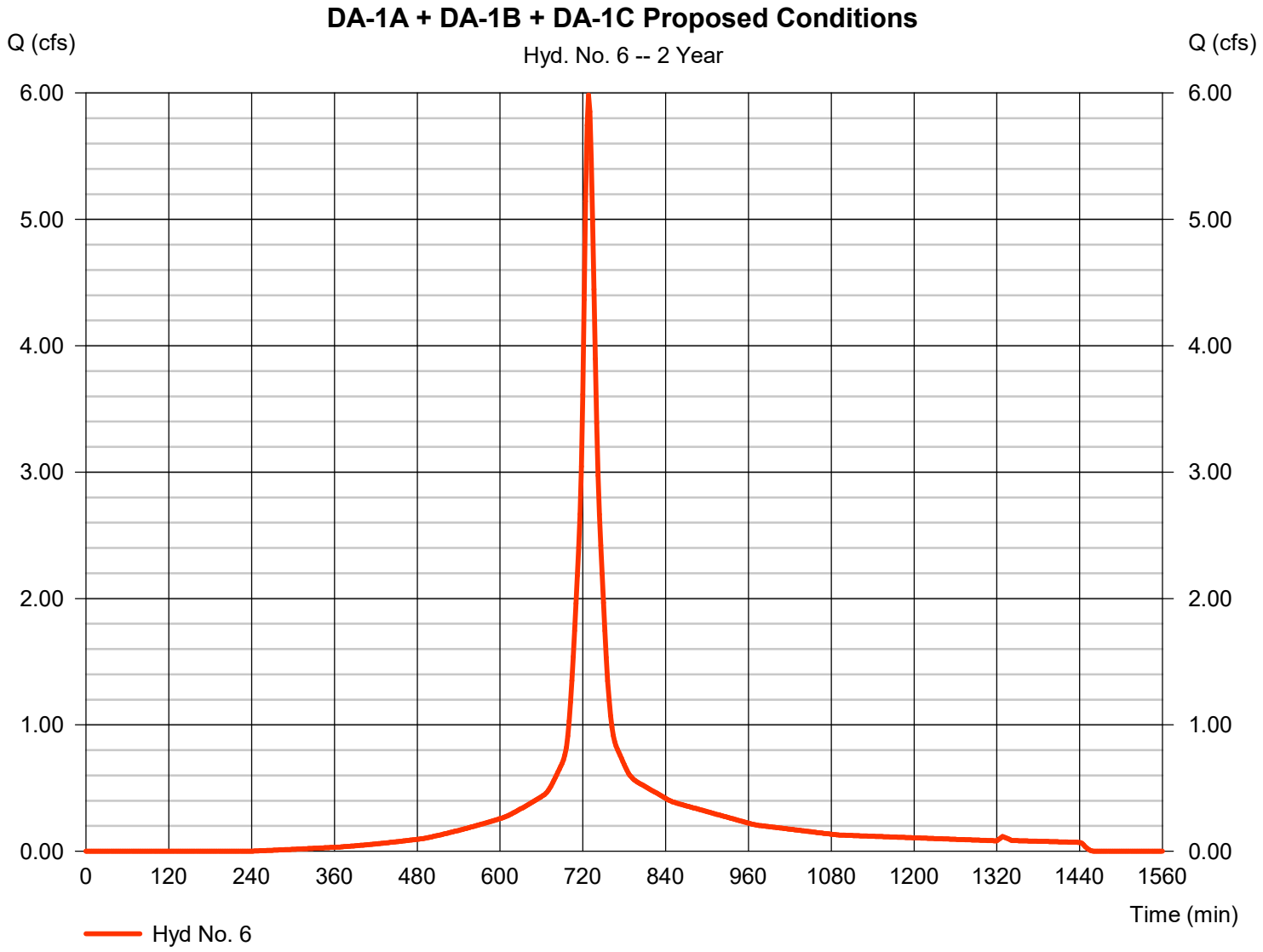


Hydrograph Report

Hyd. No. 6

DA-1A + DA-1B + DA-1C Proposed Conditions

Hydrograph type	= SCS Runoff	Peak discharge	= 5.983 cfs
Storm frequency	= 2 yrs	Time to peak	= 728 min
Time interval	= 2 min	Hyd. volume	= 23,794 cuft
Drainage area	= 1.930 ac	Curve number	= 92.3
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 11.00 min
Total precip.	= 4.15 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



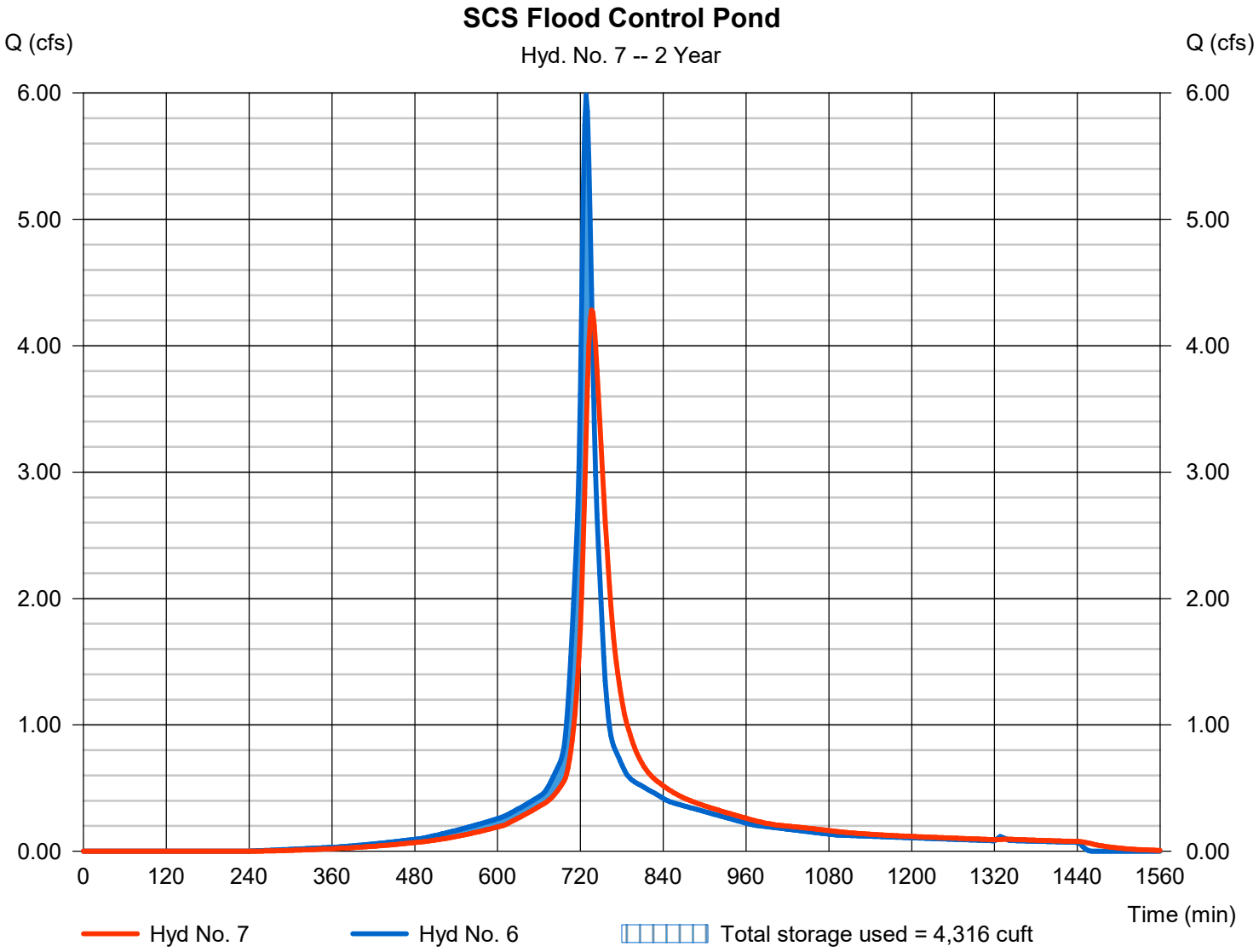
Hydrograph Report

Hyd. No. 7

SCS Flood Control Pond

Hydrograph type	=	Reservoir	Peak discharge	=	4.282 cfs
Storm frequency	=	2 yrs	Time to peak	=	736 min
Time interval	=	2 min	Hyd. volume	=	23,791 cuft
Inflow hyd. No.	=	6 - DA-1A + DA-1B + DA-1C Proposed Conditions	Max. Elevation	=	713.75 ft
Reservoir name	=	SCS POND	Max. Storage	=	4,316 cuft

Storage Indication method used.



Pond Report

Pond No. 1 - SCS POND

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 713.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	713.00	4,724	0	0
1.00	714.00	6,821	5,740	5,740
2.00	715.00	7,813	7,311	13,051
2.25	715.25	8,074	1,986	15,036

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	Inactive	Inactive	Inactive	0.00
Span (in)	= 18.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 708.50	0.00	0.00	0.00
Length (ft)	= 20.00	0.00	0.00	0.00
Slope (%)	= 0.50	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

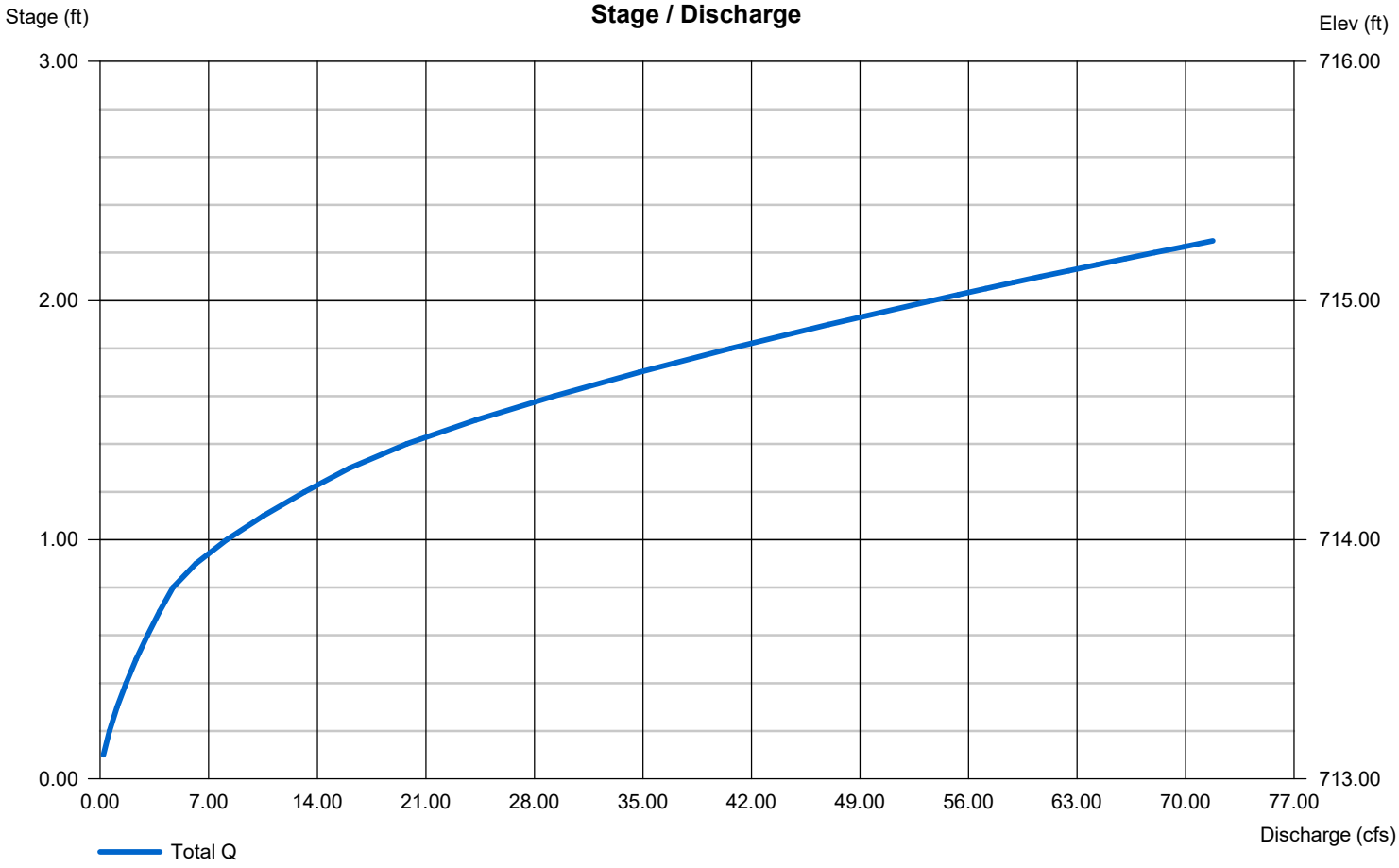
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 1.97	5.40	6.00	Inactive
Crest El. (ft)	= 713.00	713.80	714.31	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	Rect	Rect	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

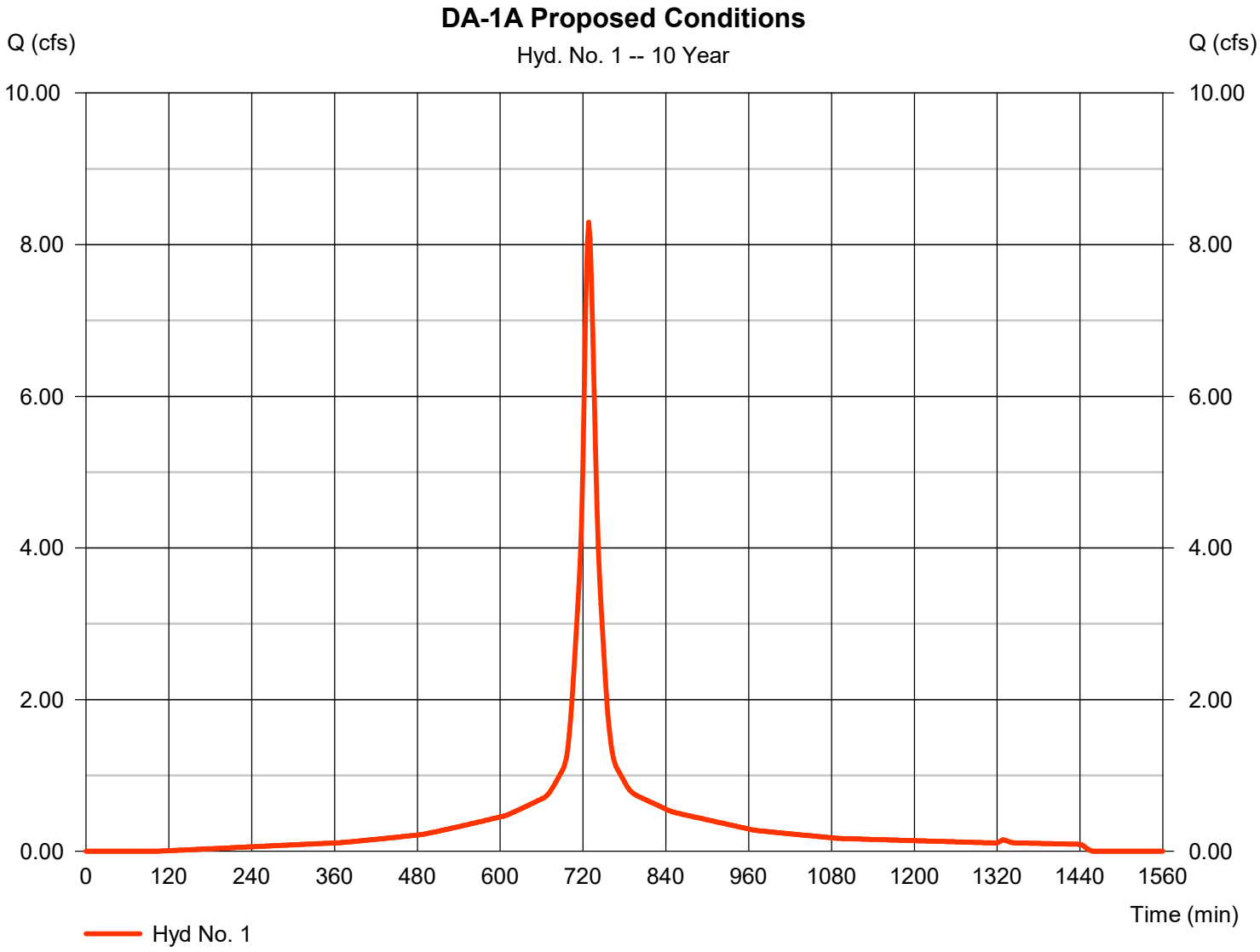
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	8.295	2	728	34,984	------	------	------	DA-1A Proposed Conditions
2	SCS Runoff	0.512	2	724	1,578	------	------	------	DA-2 Proposed Condtions
3	SCS Runoff	0.505	2	724	1,551	------	------	------	DA-3 Proposed Conditions
4	SCS Runoff	0.842	2	724	2,585	------	------	------	DA-1C Proposed Conditions
5	SCS Runoff	1.740	2	724	5,342	------	------	------	DA-1B Proposed Conditions
6	SCS Runoff	10.57	2	728	43,426	------	------	------	DA-1A + DA-1B + DA-1C Proposed C
7	Reservoir	9.080	2	734	43,423	6	714.04	6,023	SCS Flood Control Pond

Hydrograph Report

Hyd. No. 1

DA-1A Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	8.295 cfs
Storm frequency	=	10 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	34,984 cuft
Drainage area	=	1.480 ac	Curve number	=	94.9
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.00 min
Total precip.	=	6.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

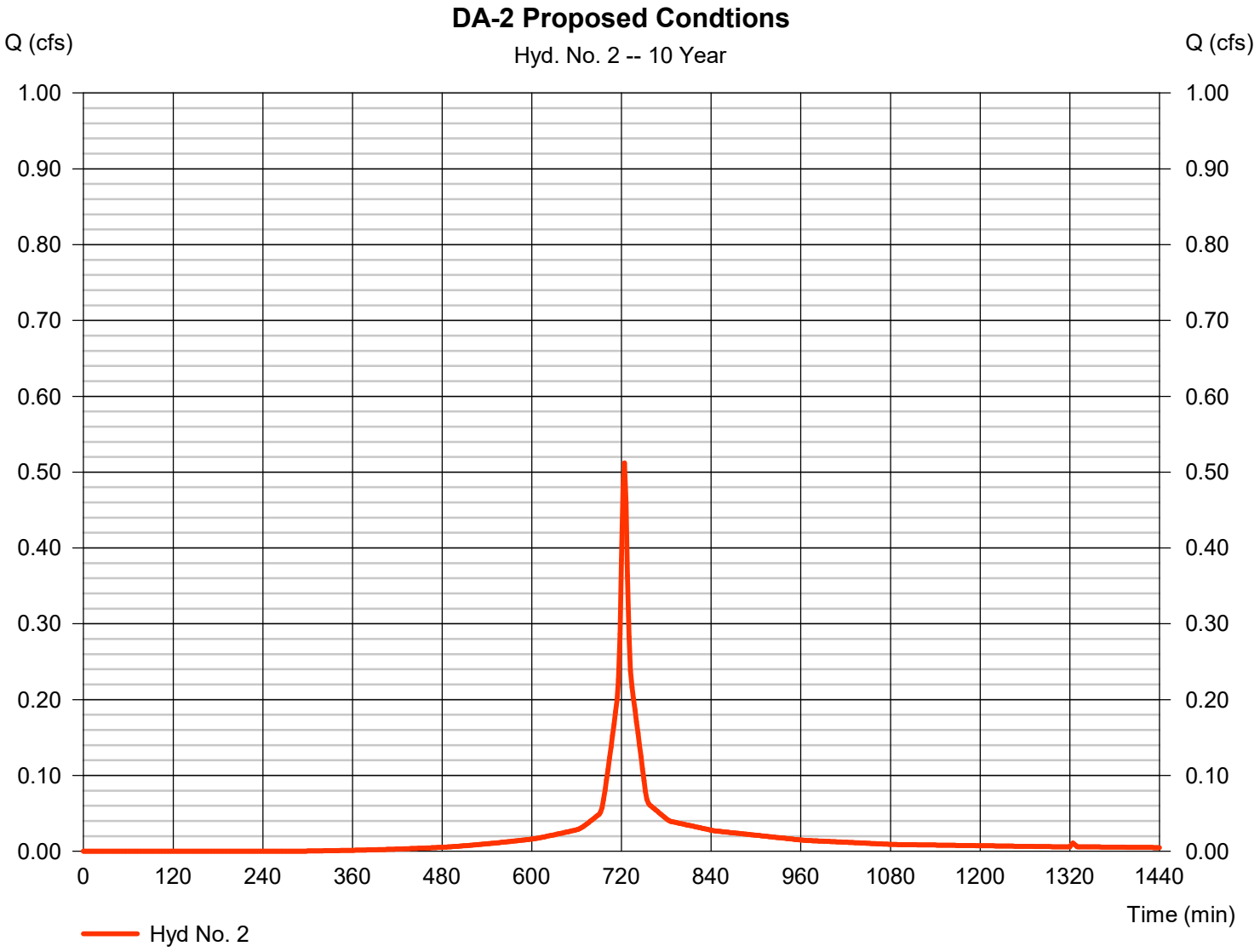


Hydrograph Report

Hyd. No. 2

DA-2 Proposed Condtions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.512 cfs
Storm frequency	=	10 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	1,578 cuft
Drainage area	=	0.090 ac	Curve number	=	84.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

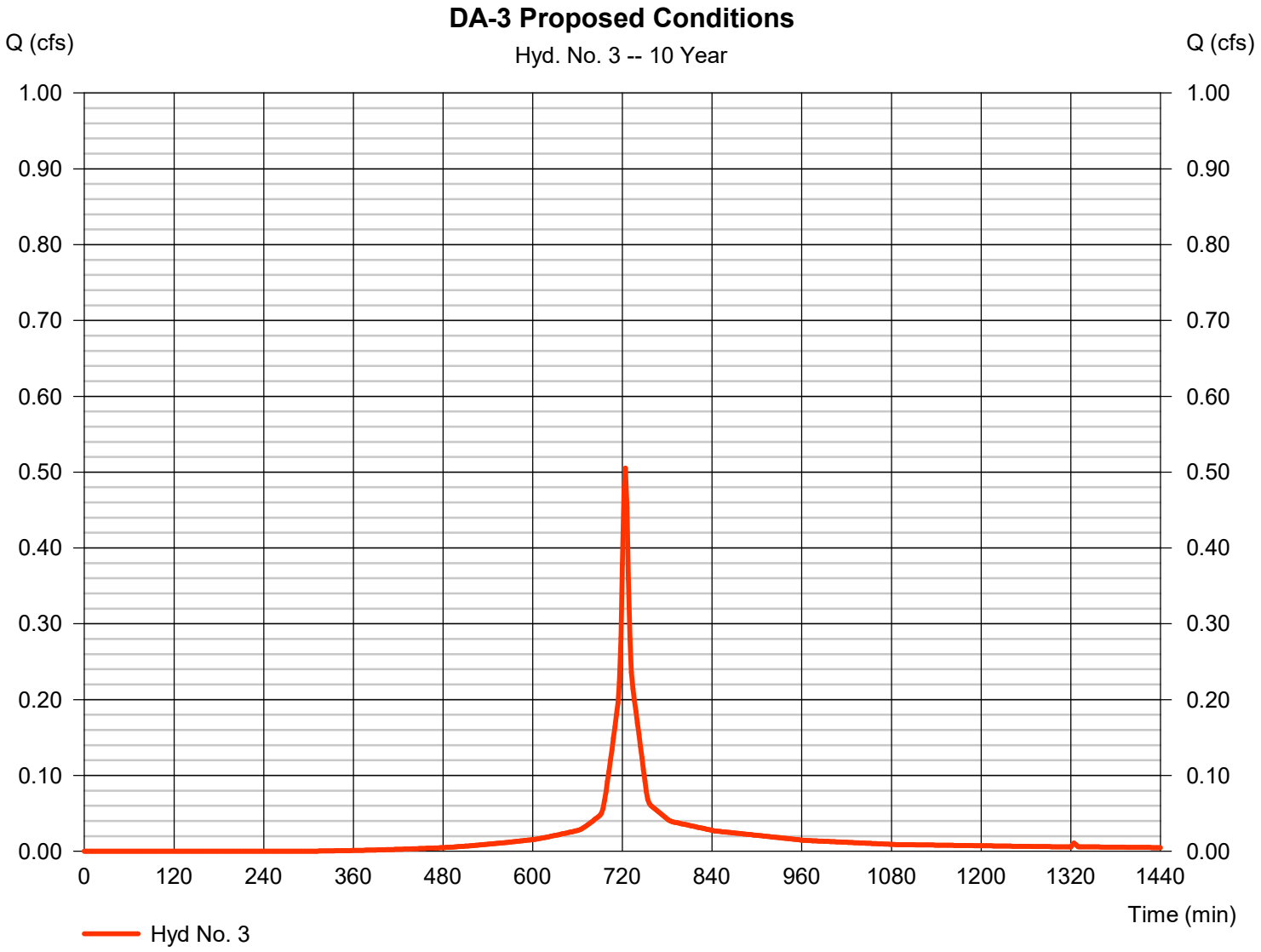


Hydrograph Report

Hyd. No. 3

DA-3 Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.505 cfs
Storm frequency	=	10 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	1,551 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

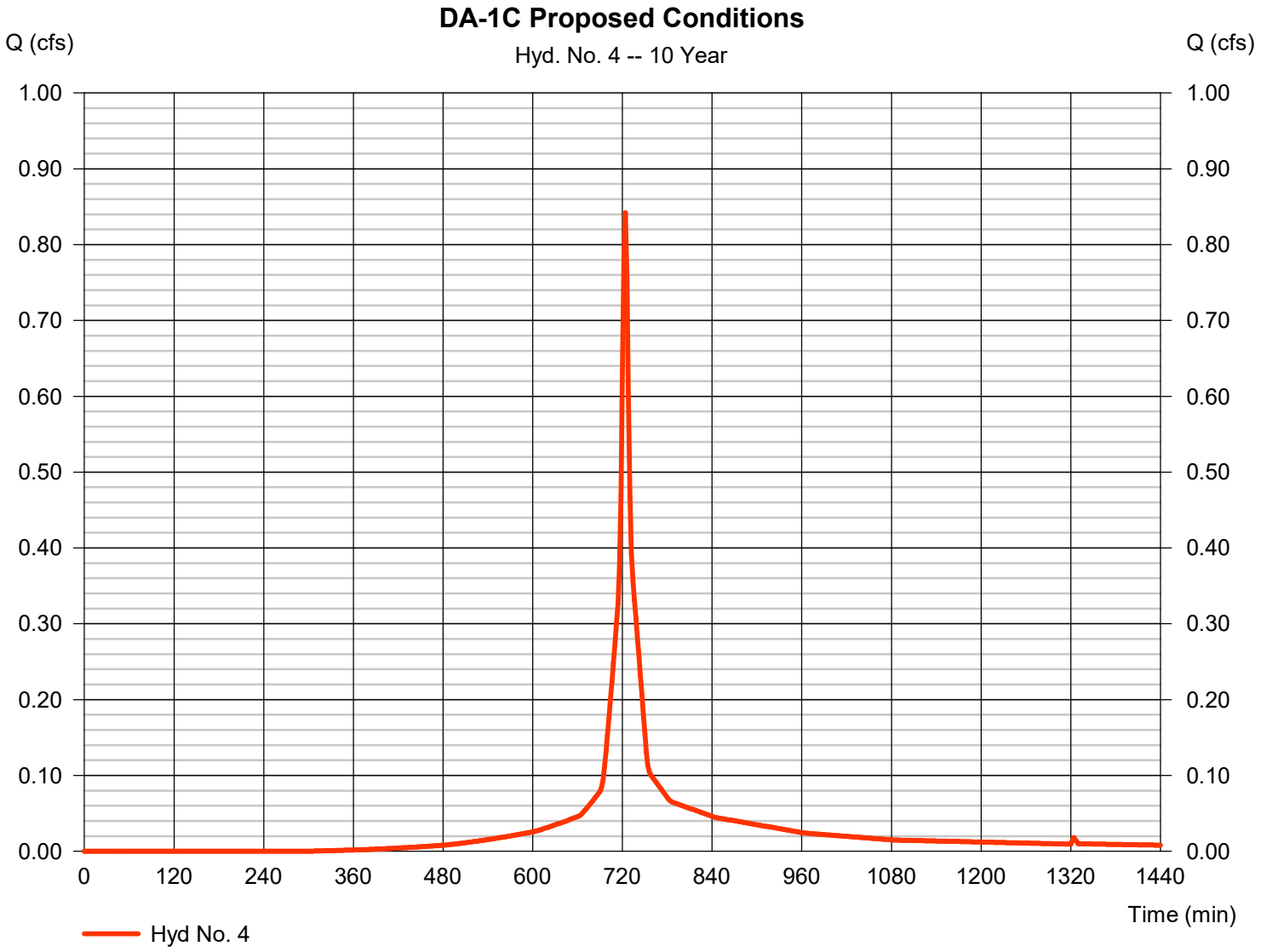


Hydrograph Report

Hyd. No. 4

DA-1C Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.842 cfs
Storm frequency	=	10 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	2,585 cuft
Drainage area	=	0.150 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

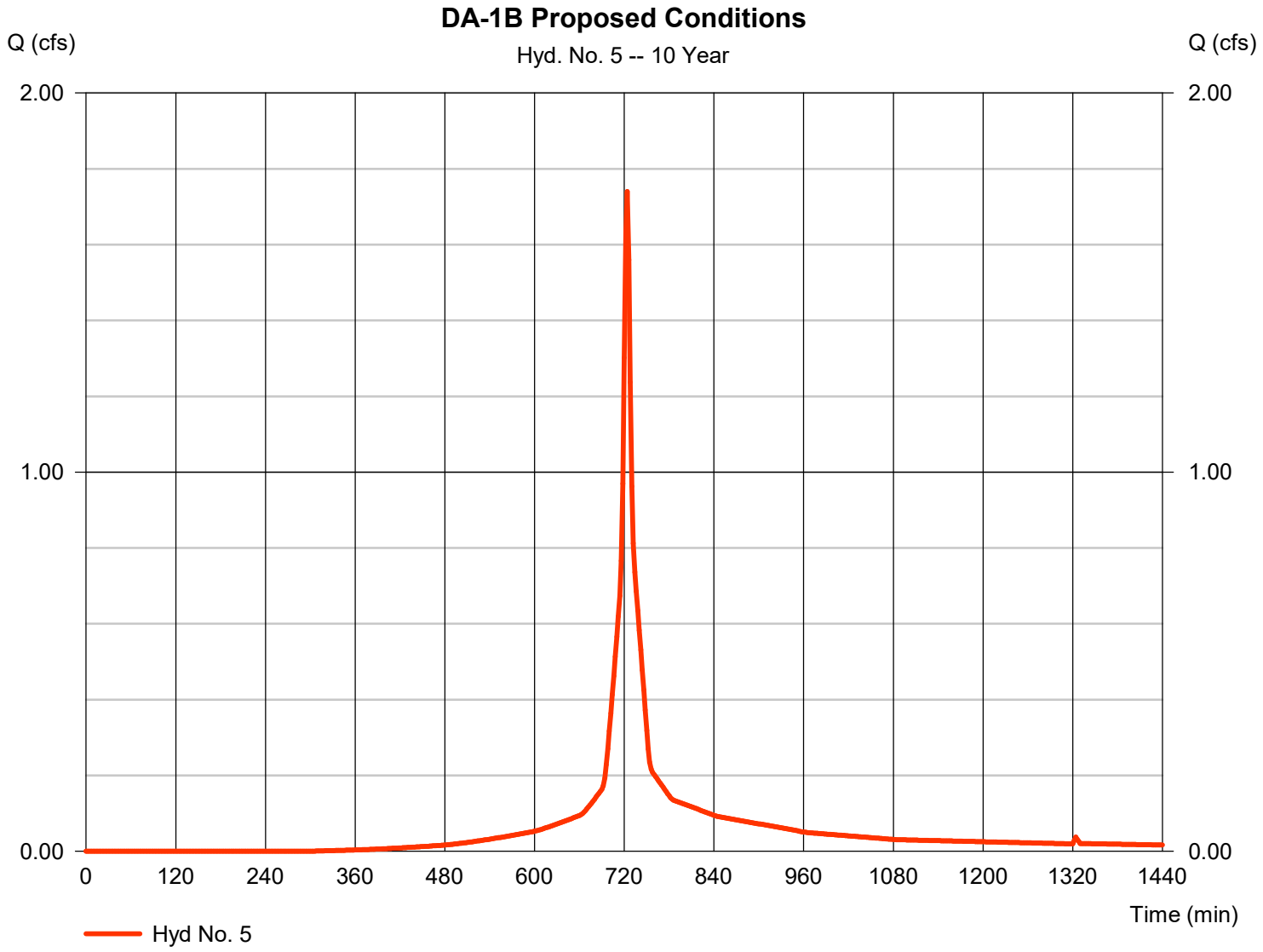


Hydrograph Report

Hyd. No. 5

DA-1B Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.740 cfs
Storm frequency	=	10 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	5,342 cuft
Drainage area	=	0.310 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	6.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

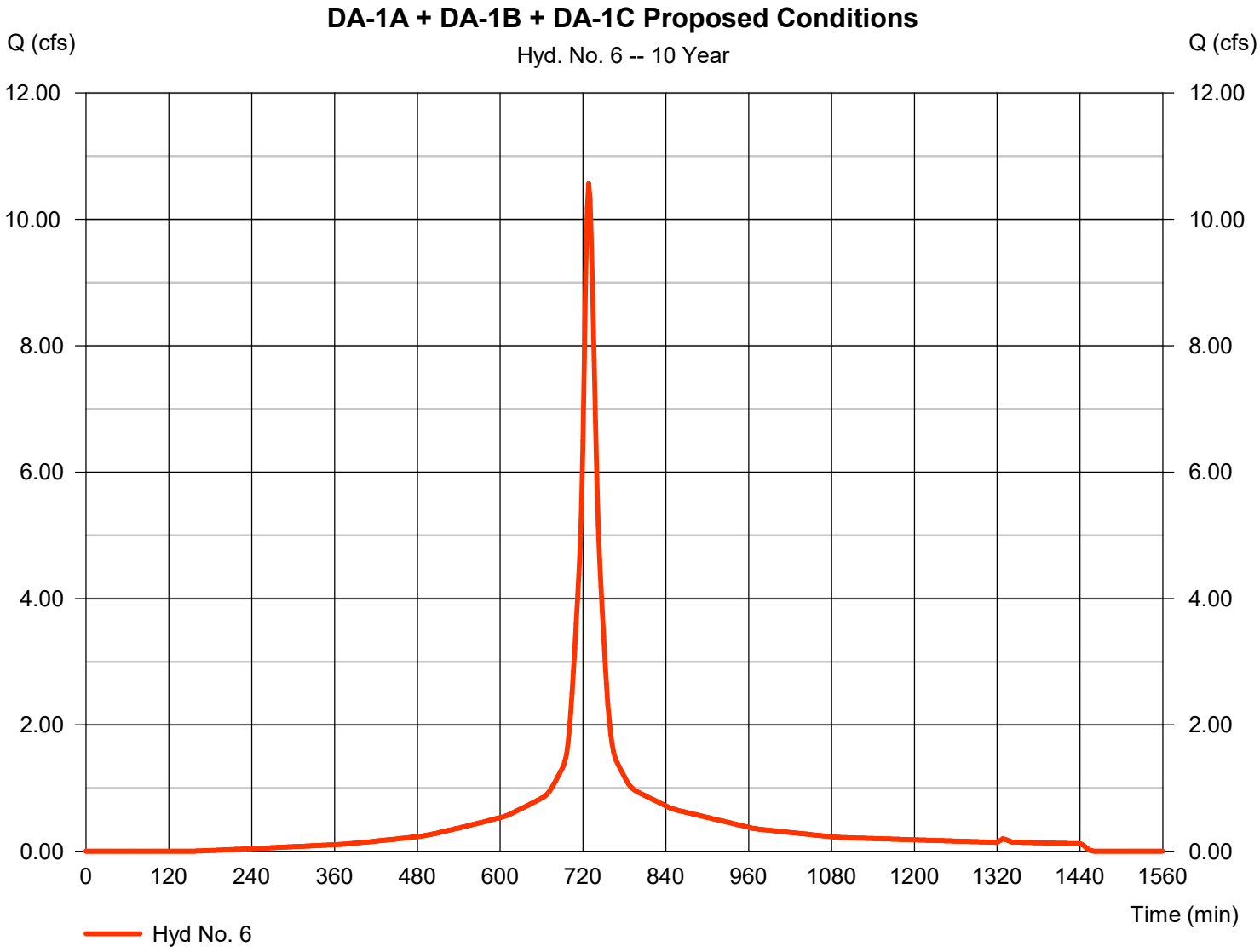


Hydrograph Report

Hyd. No. 6

DA-1A + DA-1B + DA-1C Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.57 cfs
Storm frequency	=	10 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	43,426 cuft
Drainage area	=	1.930 ac	Curve number	=	92.3
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.00 min
Total precip.	=	6.92 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



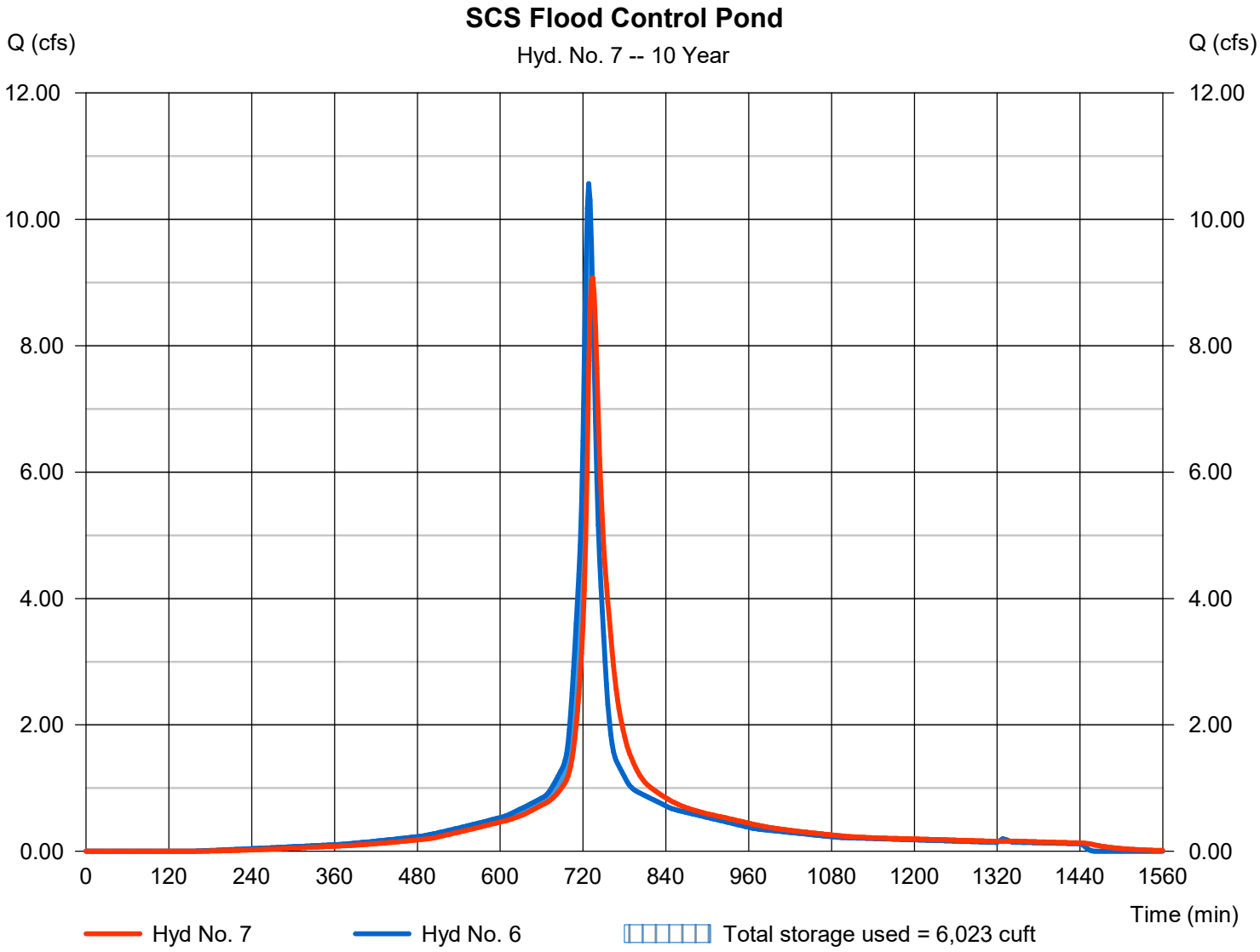
Hydrograph Report

Hyd. No. 7

SCS Flood Control Pond

Hydrograph type	=	Reservoir	Peak discharge	=	9.080 cfs
Storm frequency	=	10 yrs	Time to peak	=	734 min
Time interval	=	2 min	Hyd. volume	=	43,423 cuft
Inflow hyd. No.	=	6 - DA-1A + DA-1B + DA-1C Proposed Conditions	Max. Elevation	=	714.04 ft
Reservoir name	=	SCS POND	Max. Storage	=	6,023 cuft

Storage Indication method used.



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

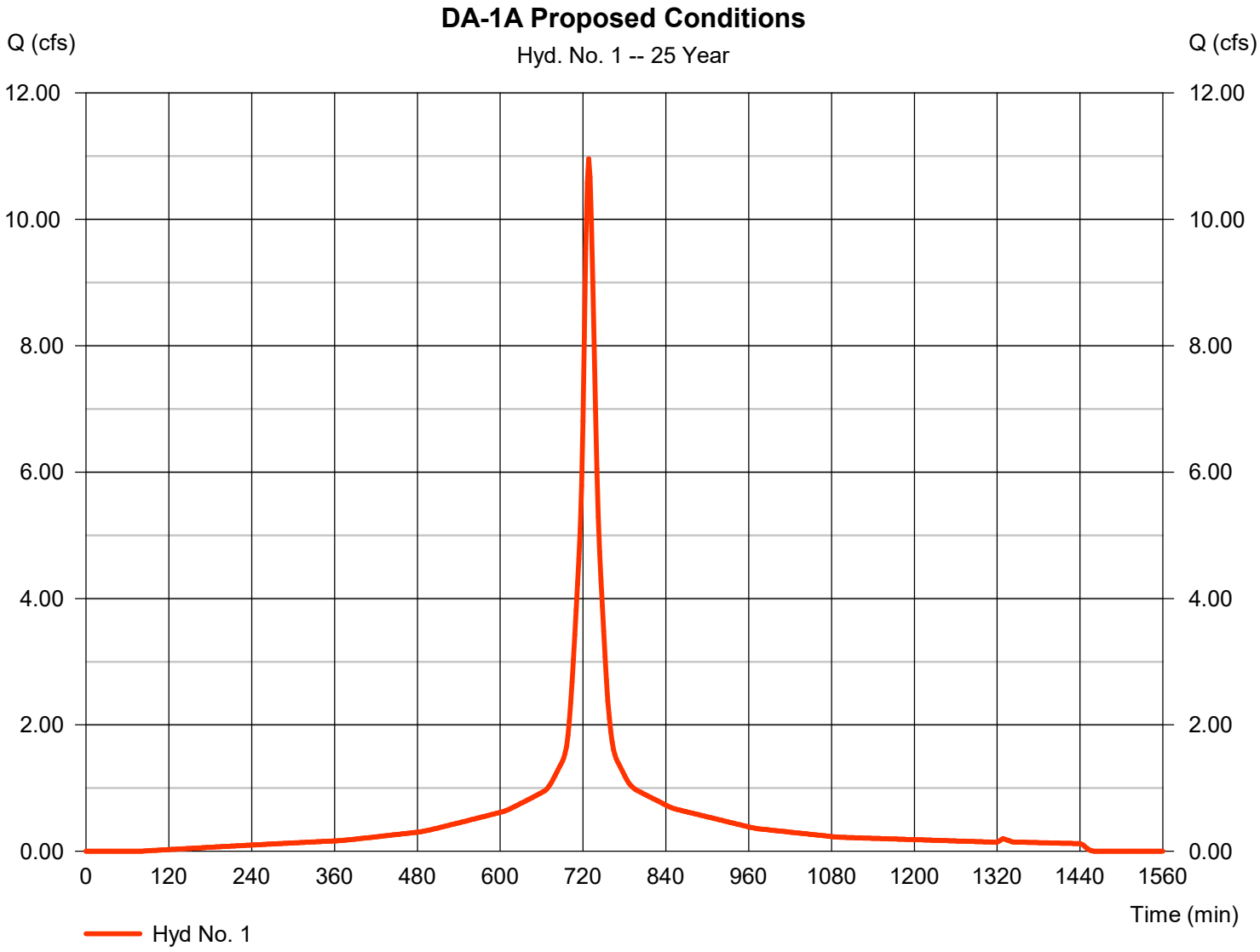
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	10.96	2	728	46,846	------	------	------	DA-1A Proposed Conditions
2	SCS Runoff	0.705	2	724	2,213	------	------	------	DA-2 Proposed Condtions
3	SCS Runoff	0.698	2	724	2,183	------	------	------	DA-3 Proposed Conditions
4	SCS Runoff	1.164	2	724	3,638	------	------	------	DA-1C Proposed Conditions
5	SCS Runoff	2.406	2	724	7,519	------	------	------	DA-1B Proposed Conditions
6	SCS Runoff	14.08	2	728	58,813	------	------	------	DA-1A + DA-1B + DA-1C Proposed C
7	Reservoir	12.50	2	732	58,810	6	714.17	7,017	SCS Flood Control Pond

Hydrograph Report

Hyd. No. 1

DA-1A Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.96 cfs
Storm frequency	=	25 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	46,846 cuft
Drainage area	=	1.480 ac	Curve number	=	94.9
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.00 min
Total precip.	=	9.07 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

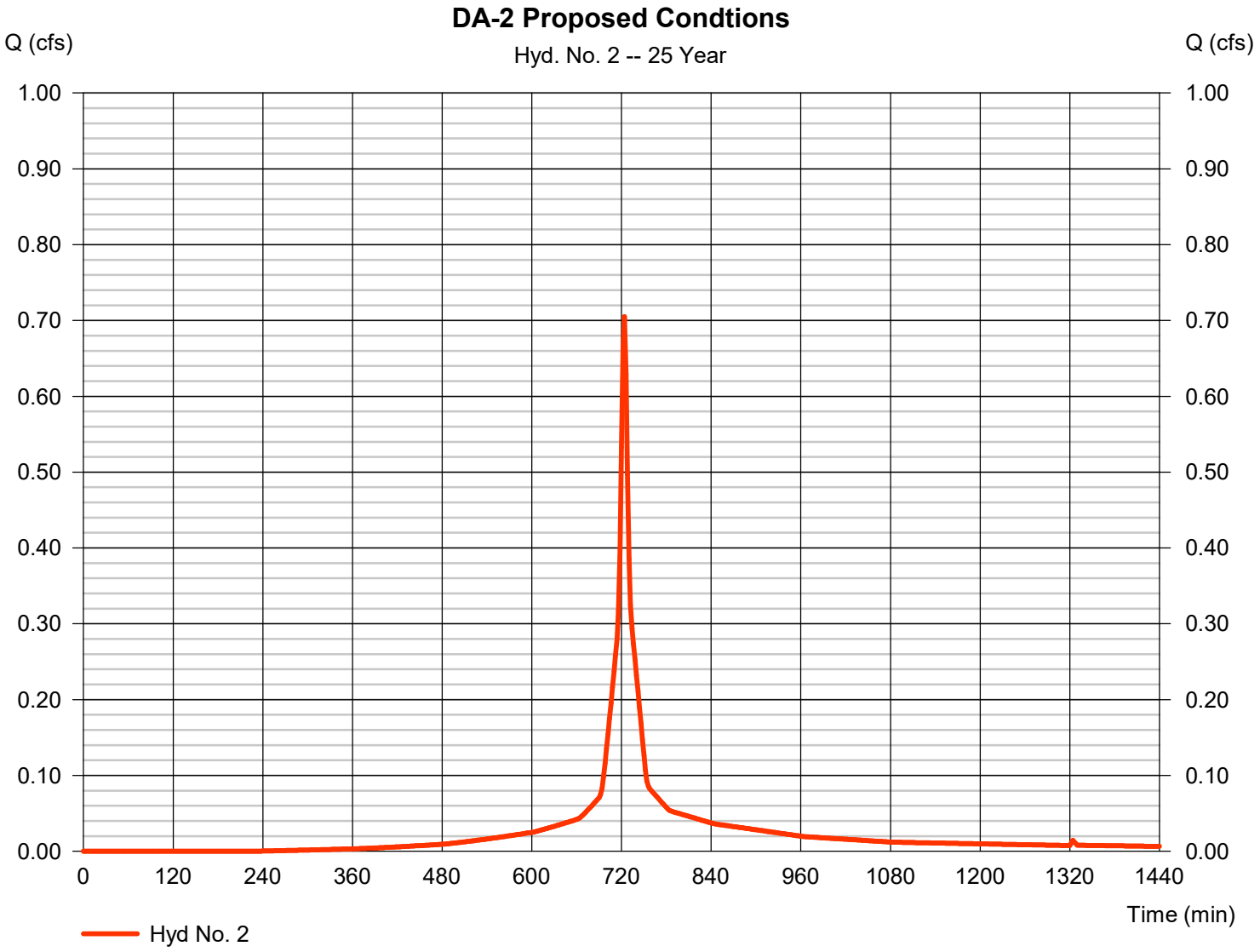


Hydrograph Report

Hyd. No. 2

DA-2 Proposed Condtions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.705 cfs
Storm frequency	=	25 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	2,213 cuft
Drainage area	=	0.090 ac	Curve number	=	84.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	9.07 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

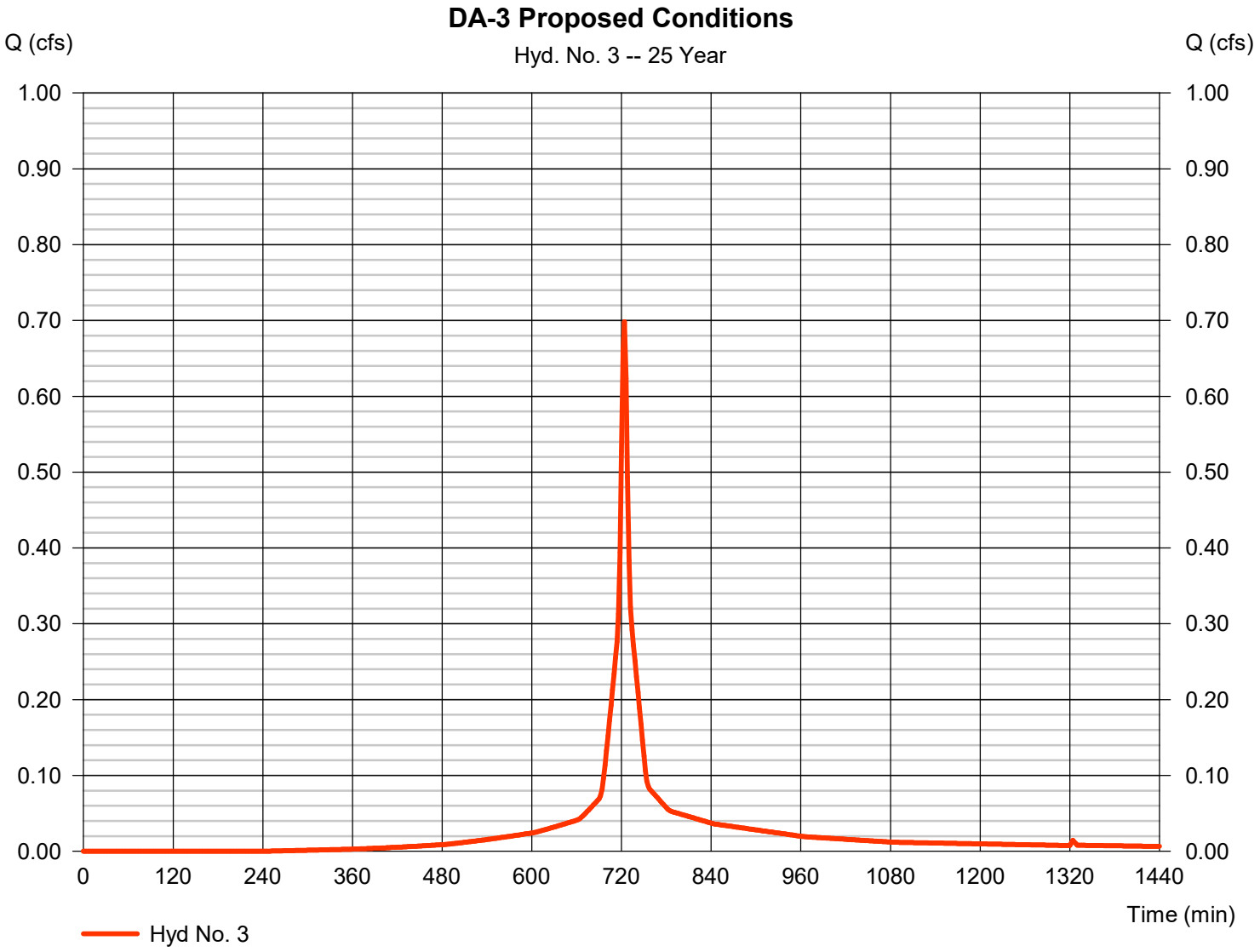


Hydrograph Report

Hyd. No. 3

DA-3 Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.698 cfs
Storm frequency	=	25 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	2,183 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	9.07 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

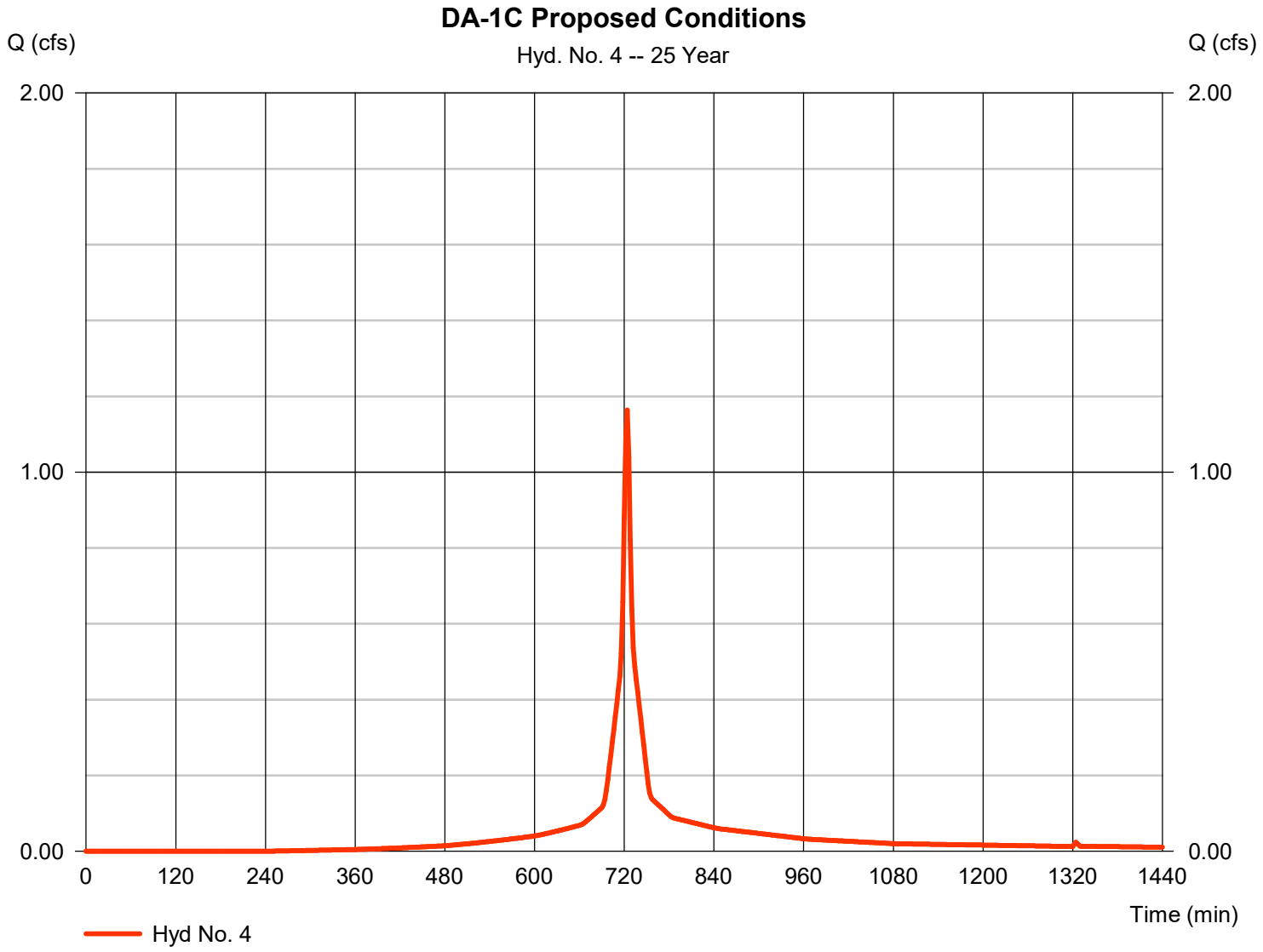


Hydrograph Report

Hyd. No. 4

DA-1C Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.164 cfs
Storm frequency	=	25 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	3,638 cuft
Drainage area	=	0.150 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	9.07 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

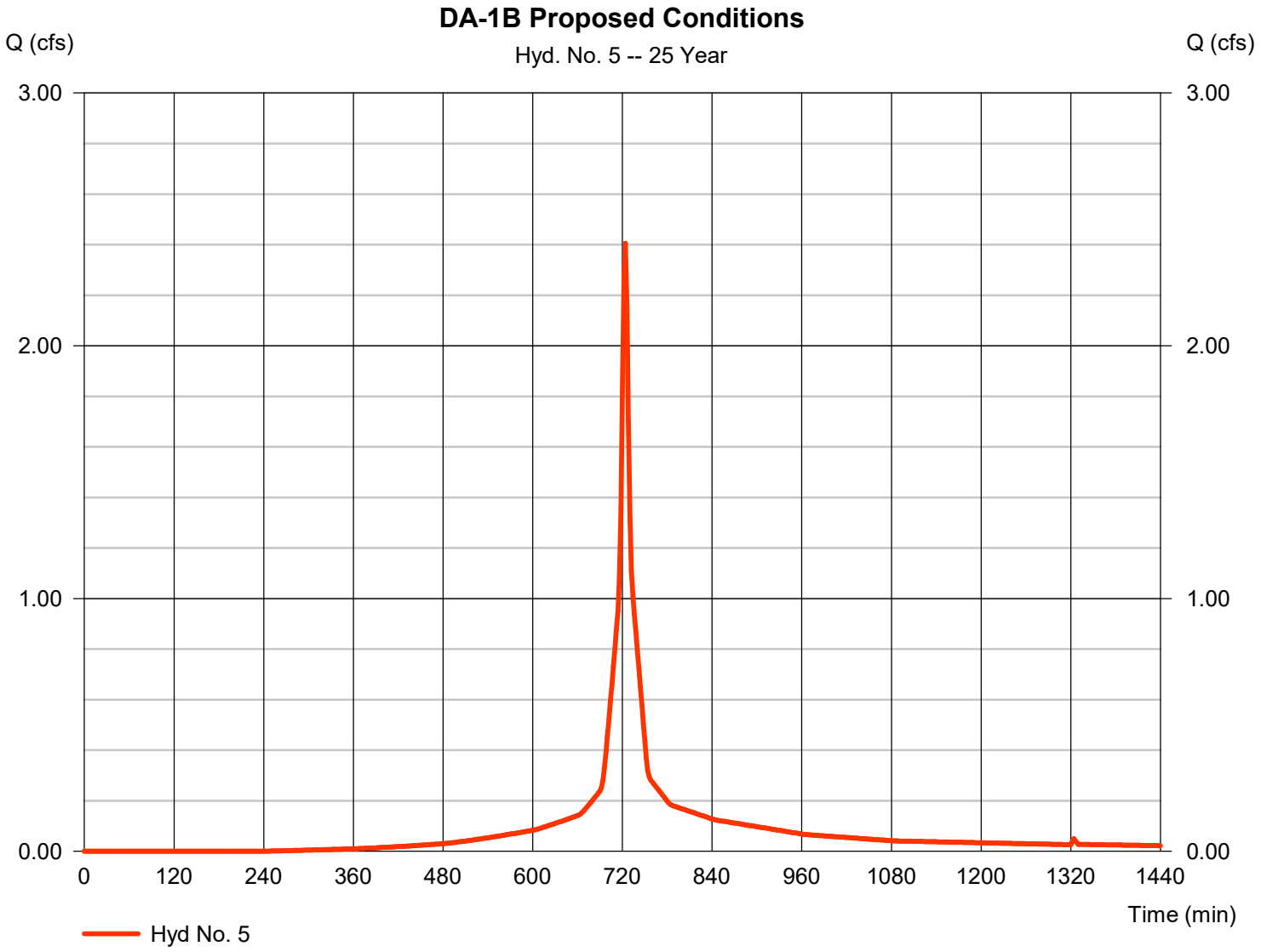


Hydrograph Report

Hyd. No. 5

DA-1B Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.406 cfs
Storm frequency	=	25 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	7,519 cuft
Drainage area	=	0.310 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	9.07 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

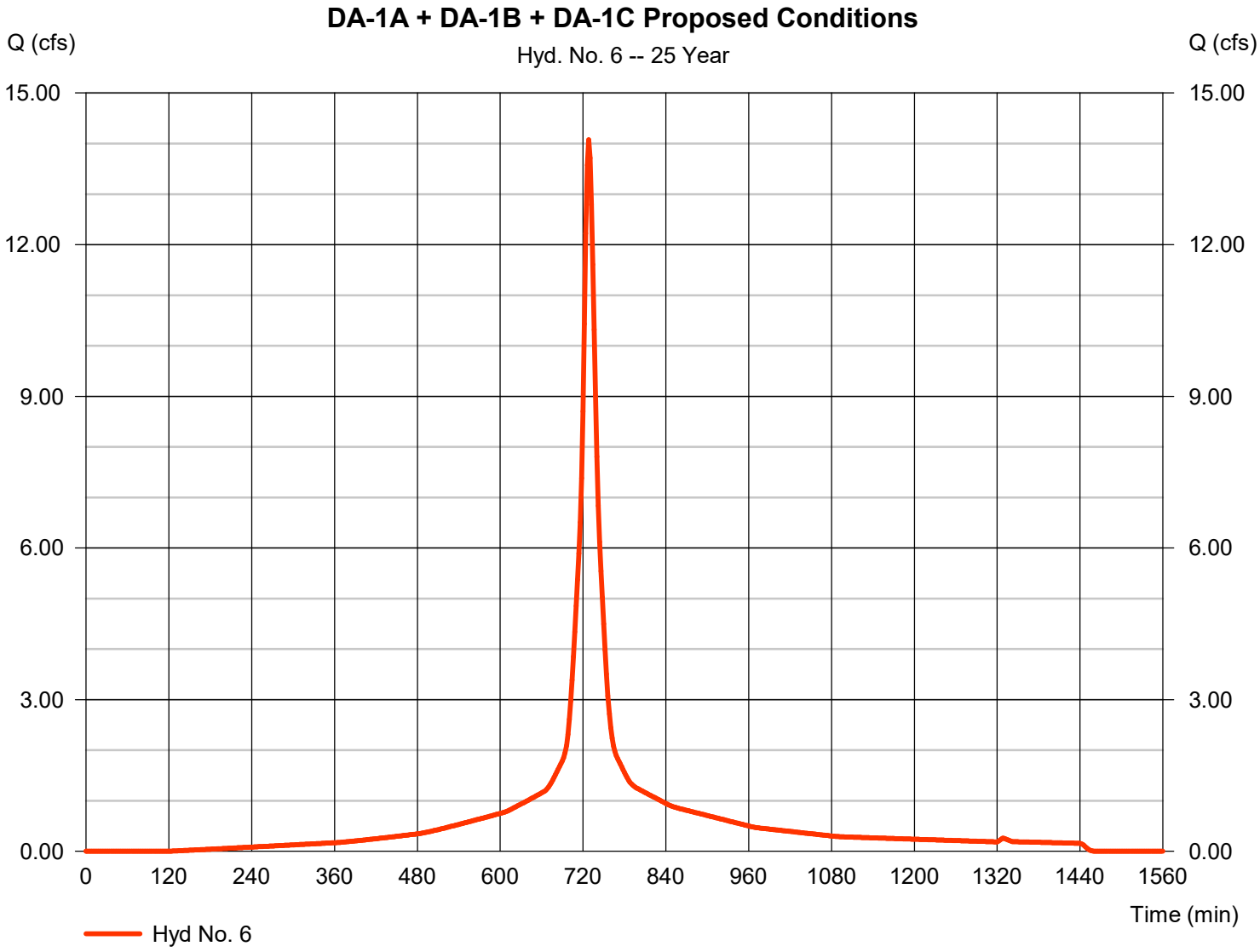


Hydrograph Report

Hyd. No. 6

DA-1A + DA-1B + DA-1C Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	14.08 cfs
Storm frequency	=	25 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	58,813 cuft
Drainage area	=	1.930 ac	Curve number	=	92.3
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.00 min
Total precip.	=	9.07 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



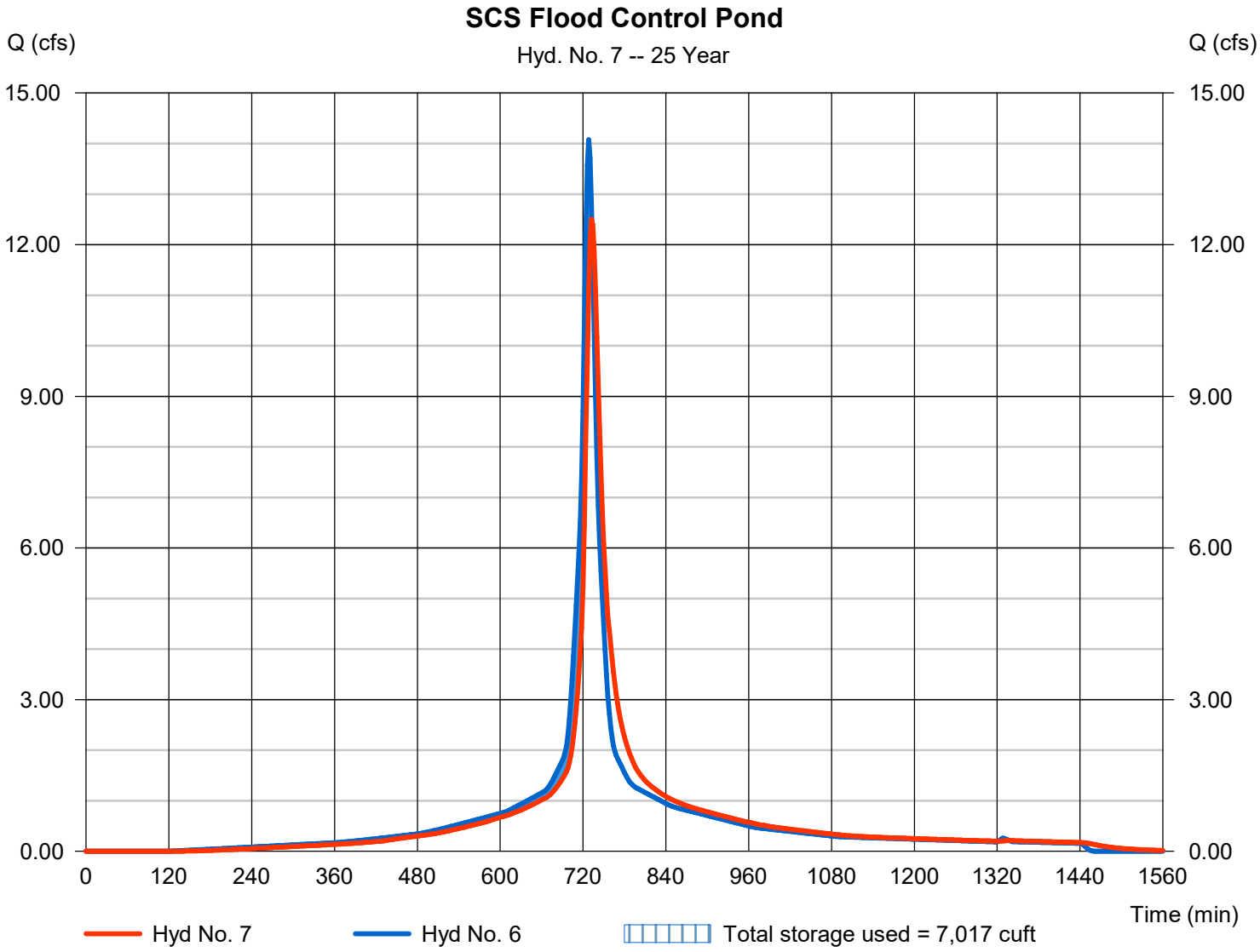
Hydrograph Report

Hyd. No. 7

SCS Flood Control Pond

Hydrograph type	=	Reservoir	Peak discharge	=	12.50 cfs
Storm frequency	=	25 yrs	Time to peak	=	732 min
Time interval	=	2 min	Hyd. volume	=	58,810 cuft
Inflow hyd. No.	=	6 - DA-1A + DA-1B + DA-1C Proposed Conditions	Max. Elevation	=	714.17 ft
Reservoir name	=	SCS POND	Max. Storage	=	7,017 cuft

Storage Indication method used.



Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

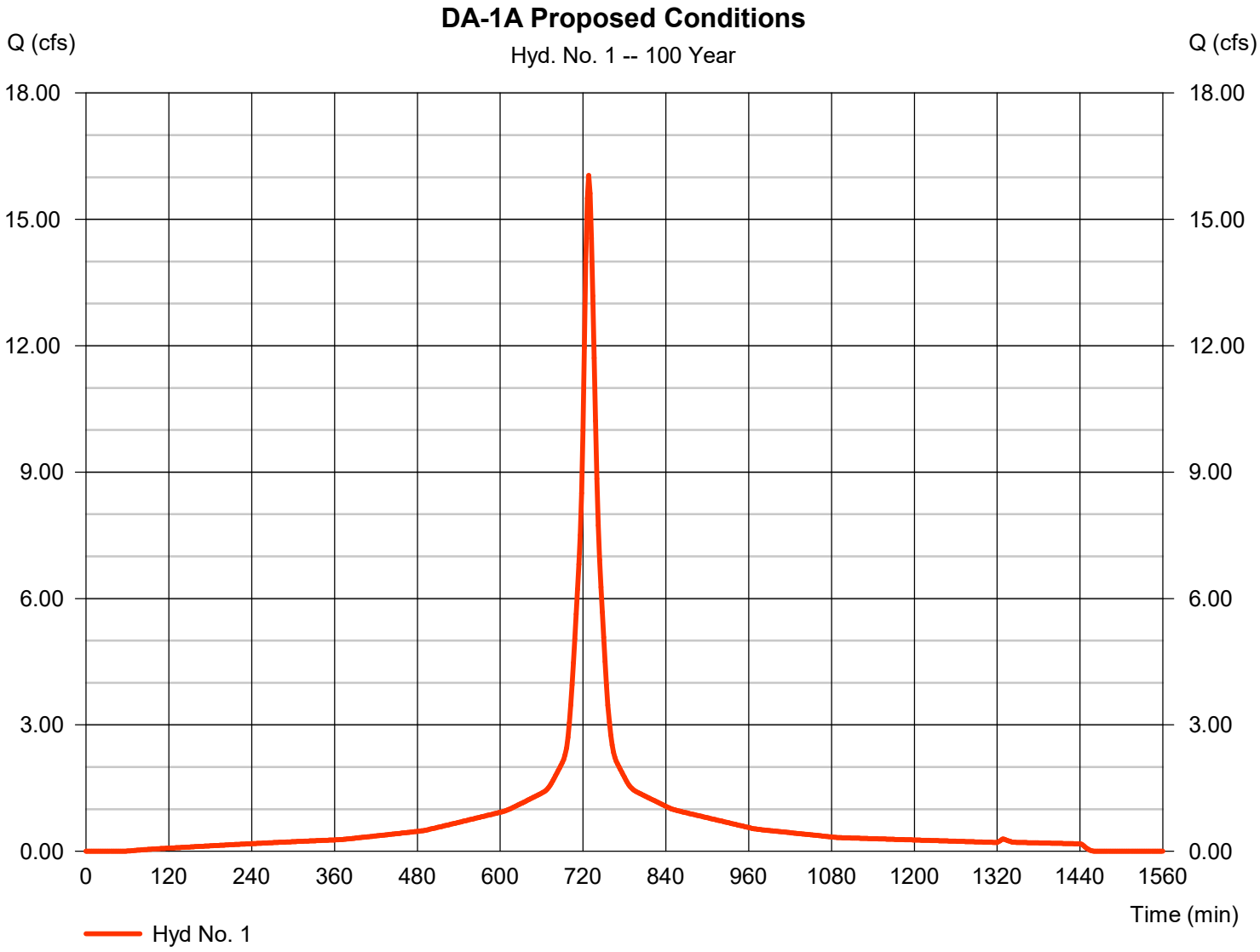
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	16.05	2	728	69,676	------	------	------	DA-1A Proposed Conditions
2	SCS Runoff	1.071	2	724	3,451	------	------	------	DA-2 Proposed Condtions
3	SCS Runoff	1.065	2	724	3,418	------	------	------	DA-3 Proposed Conditions
4	SCS Runoff	1.776	2	724	5,697	------	------	------	DA-1C Proposed Conditions
5	SCS Runoff	3.670	2	724	11,774	------	------	------	DA-1B Proposed Conditions
6	SCS Runoff	20.76	2	728	88,498	------	------	------	DA-1A + DA-1B + DA-1C Proposed C
7	Reservoir	19.20	2	732	88,495	6	714.38	8,552	SCS Flood Control Pond

Hydrograph Report

Hyd. No. 1

DA-1A Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	16.05 cfs
Storm frequency	=	100 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	69,676 cuft
Drainage area	=	1.480 ac	Curve number	=	94.9
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.00 min
Total precip.	=	13.20 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

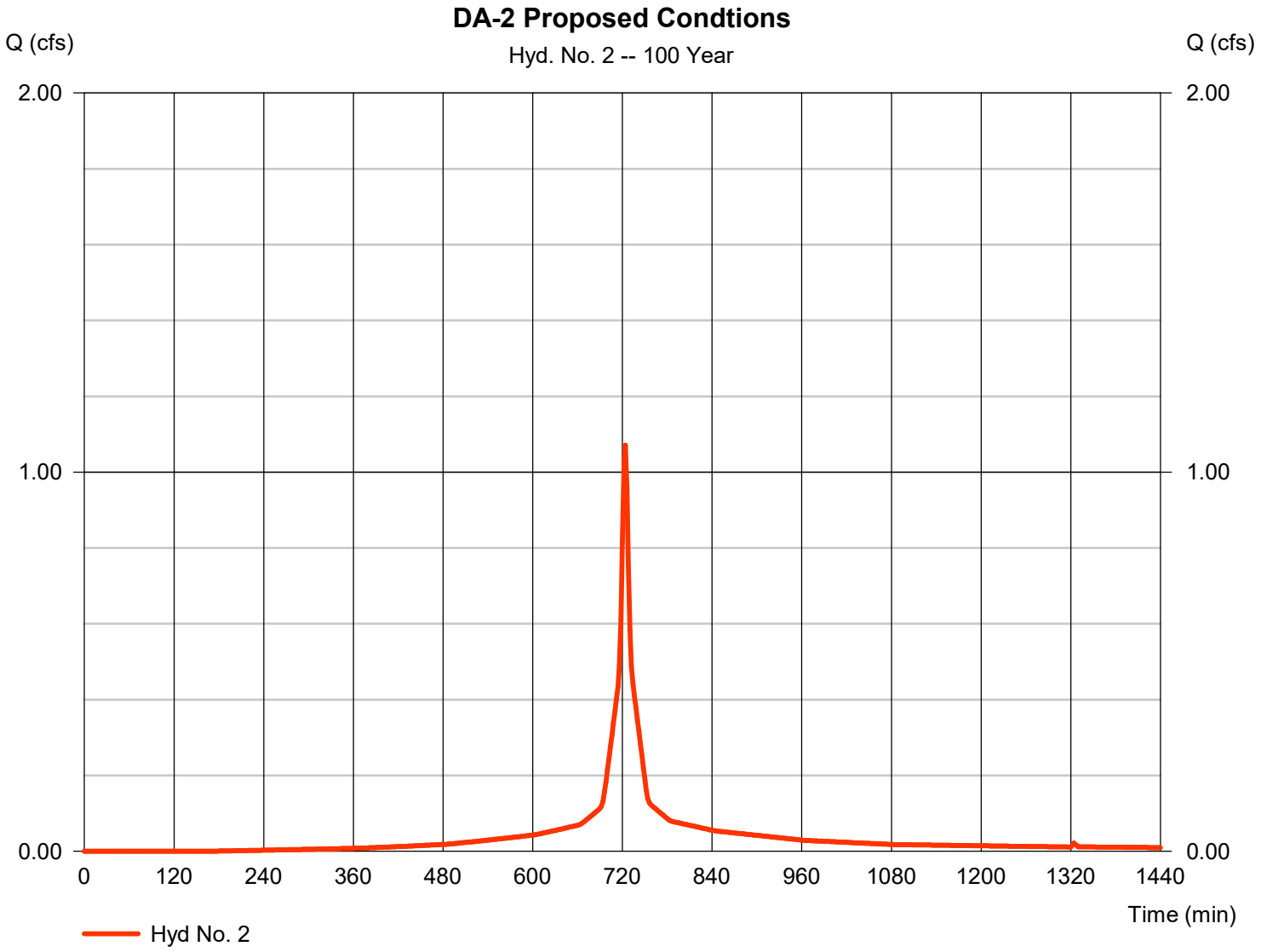


Hydrograph Report

Hyd. No. 2

DA-2 Proposed Condtions

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.071 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	3,451 cuft
Drainage area	=	0.090 ac	Curve number	=	84.8
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	13.20 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

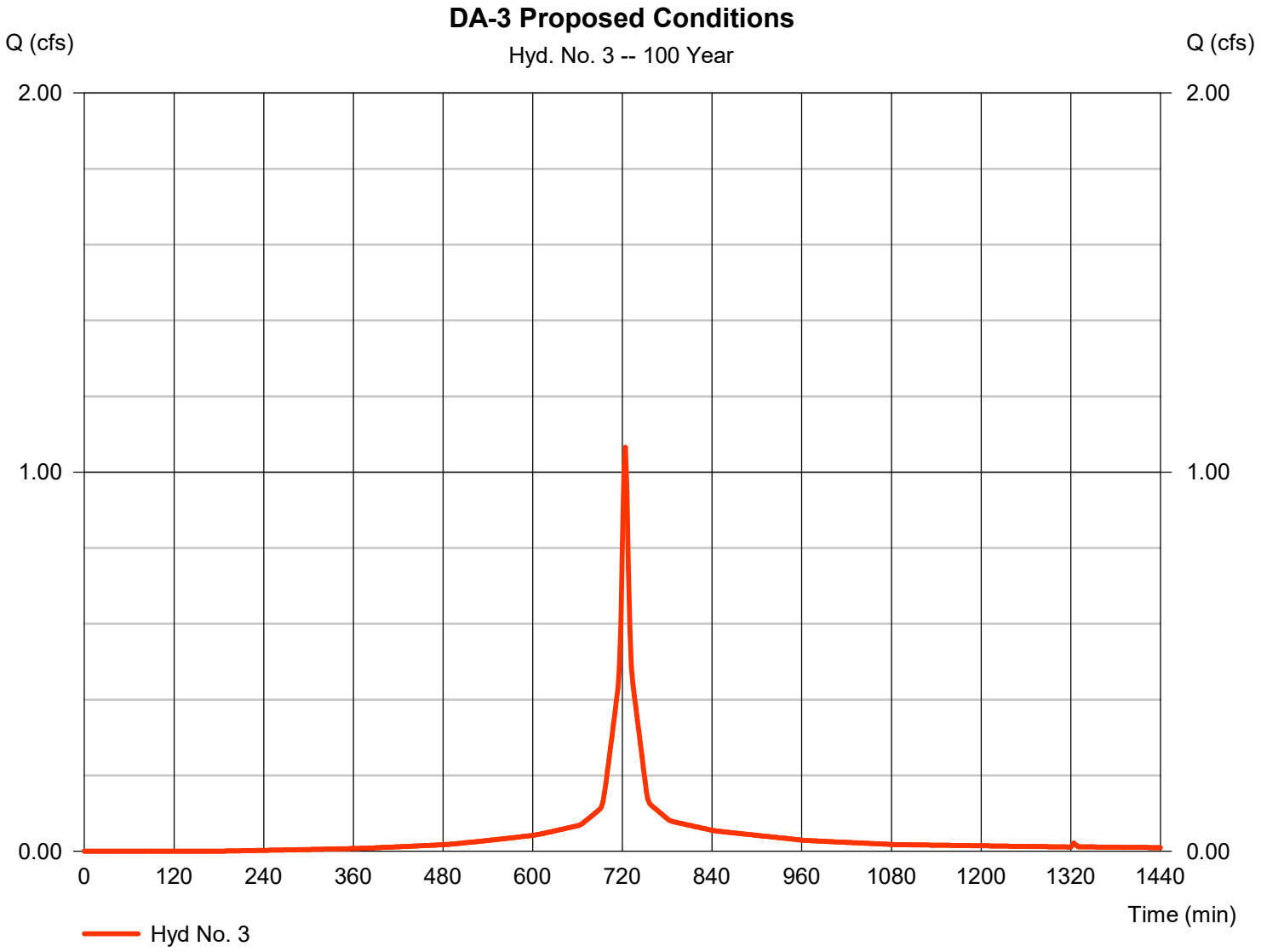


Hydrograph Report

Hyd. No. 3

DA-3 Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.065 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	3,418 cuft
Drainage area	=	0.090 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	13.20 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

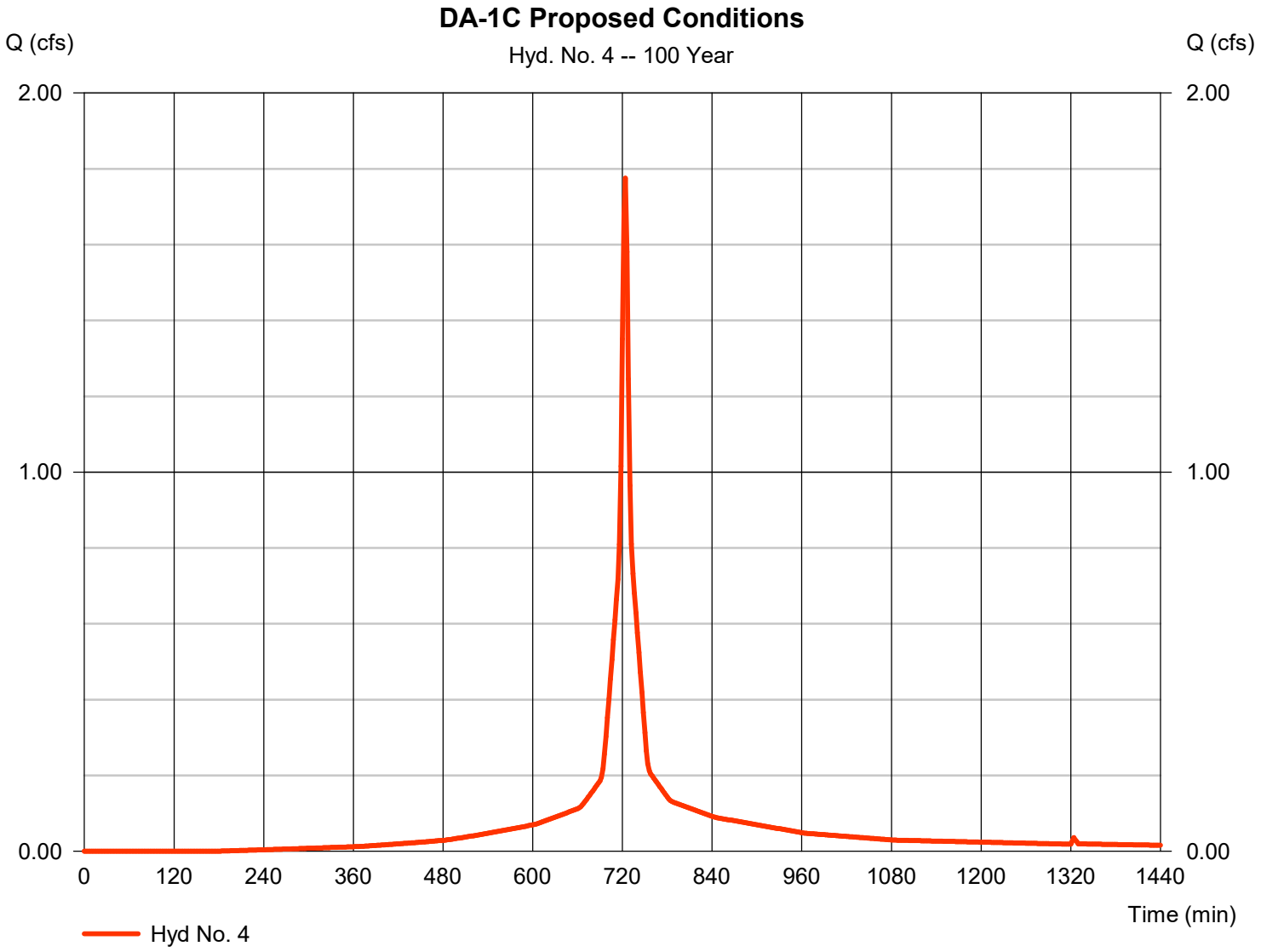


Hydrograph Report

Hyd. No. 4

DA-1C Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.776 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	5,697 cuft
Drainage area	=	0.150 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	13.20 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

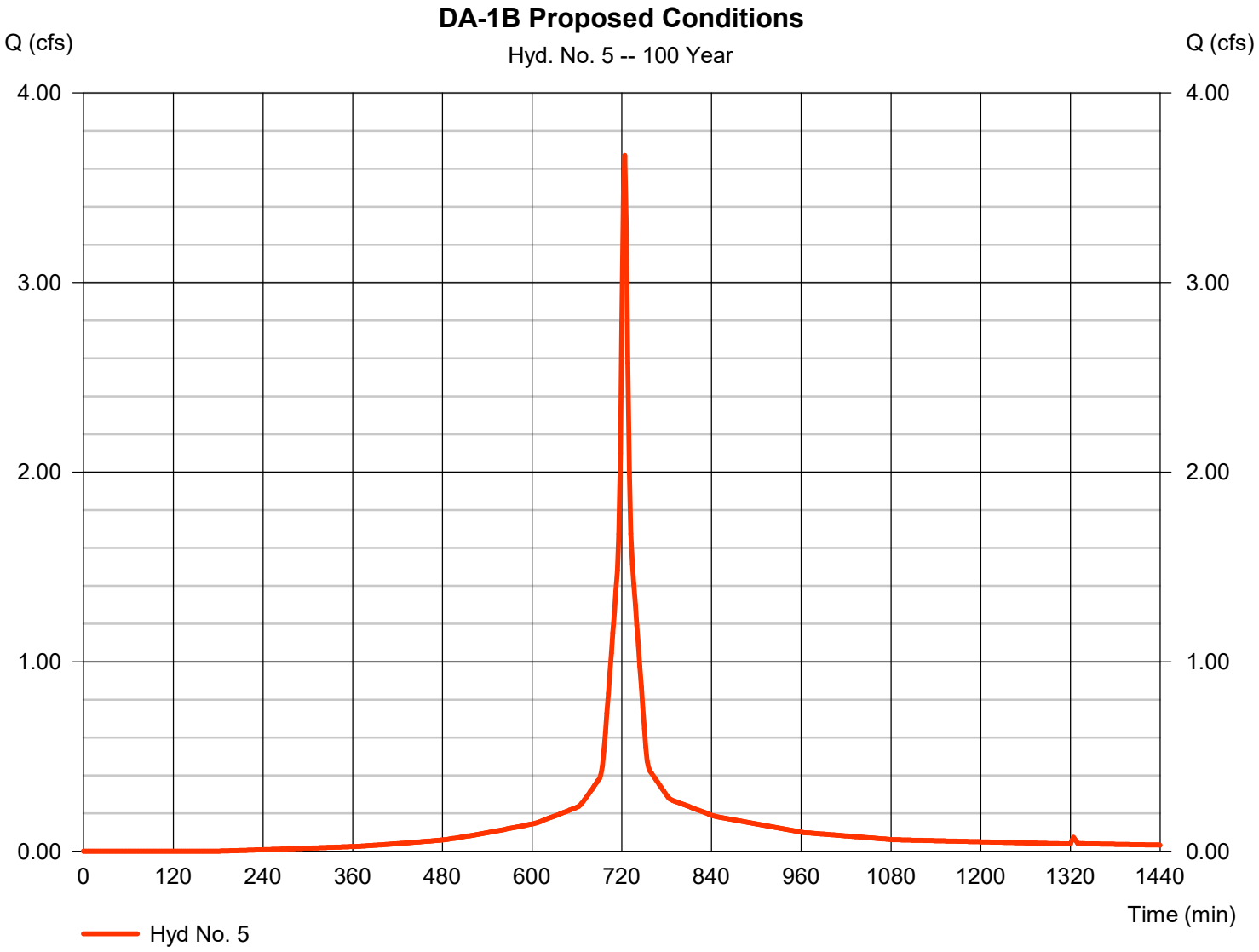


Hydrograph Report

Hyd. No. 5

DA-1B Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.670 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	11,774 cuft
Drainage area	=	0.310 ac	Curve number	=	84
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	13.20 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

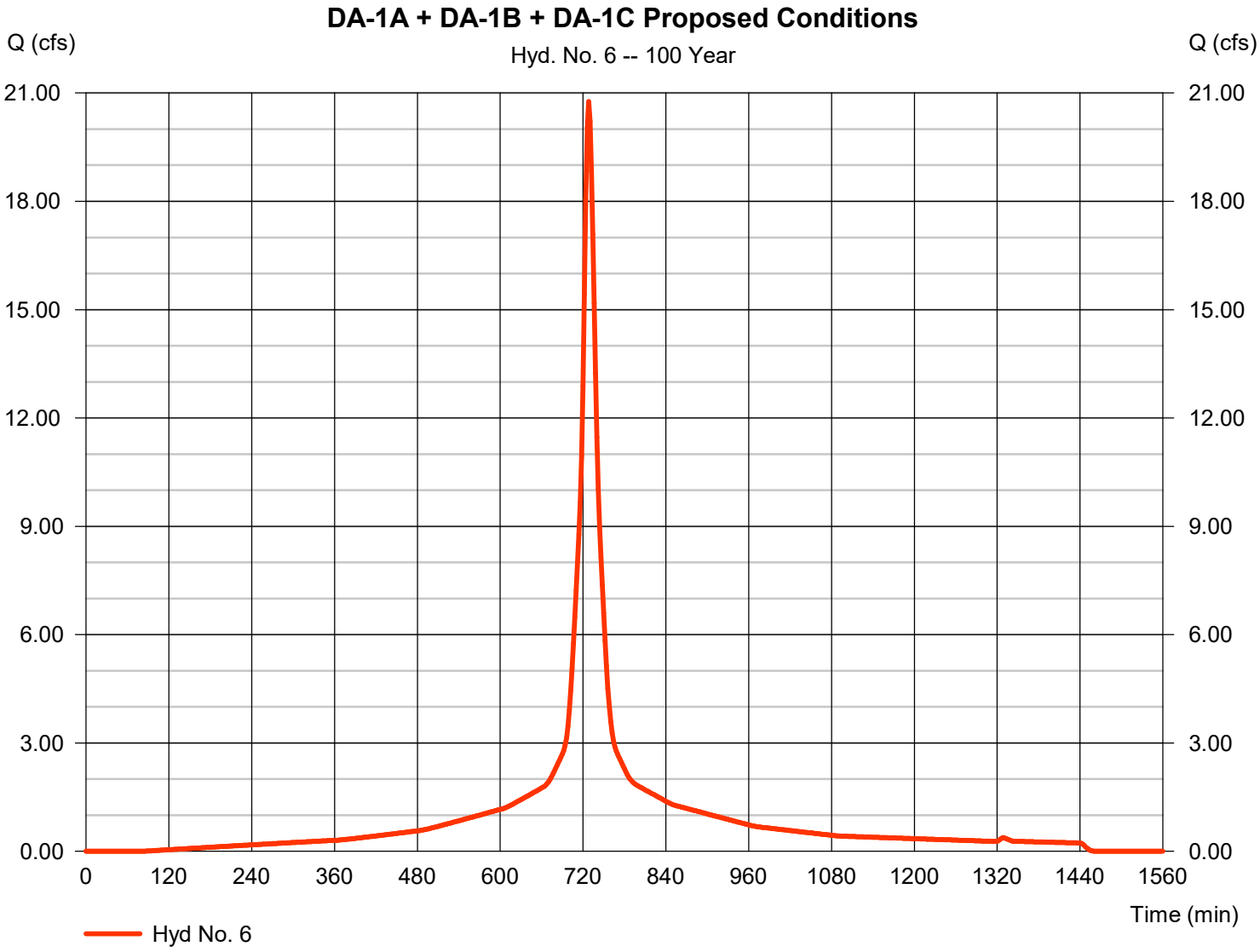


Hydrograph Report

Hyd. No. 6

DA-1A + DA-1B + DA-1C Proposed Conditions

Hydrograph type	=	SCS Runoff	Peak discharge	=	20.76 cfs
Storm frequency	=	100 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	88,498 cuft
Drainage area	=	1.930 ac	Curve number	=	92.3
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.00 min
Total precip.	=	13.20 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



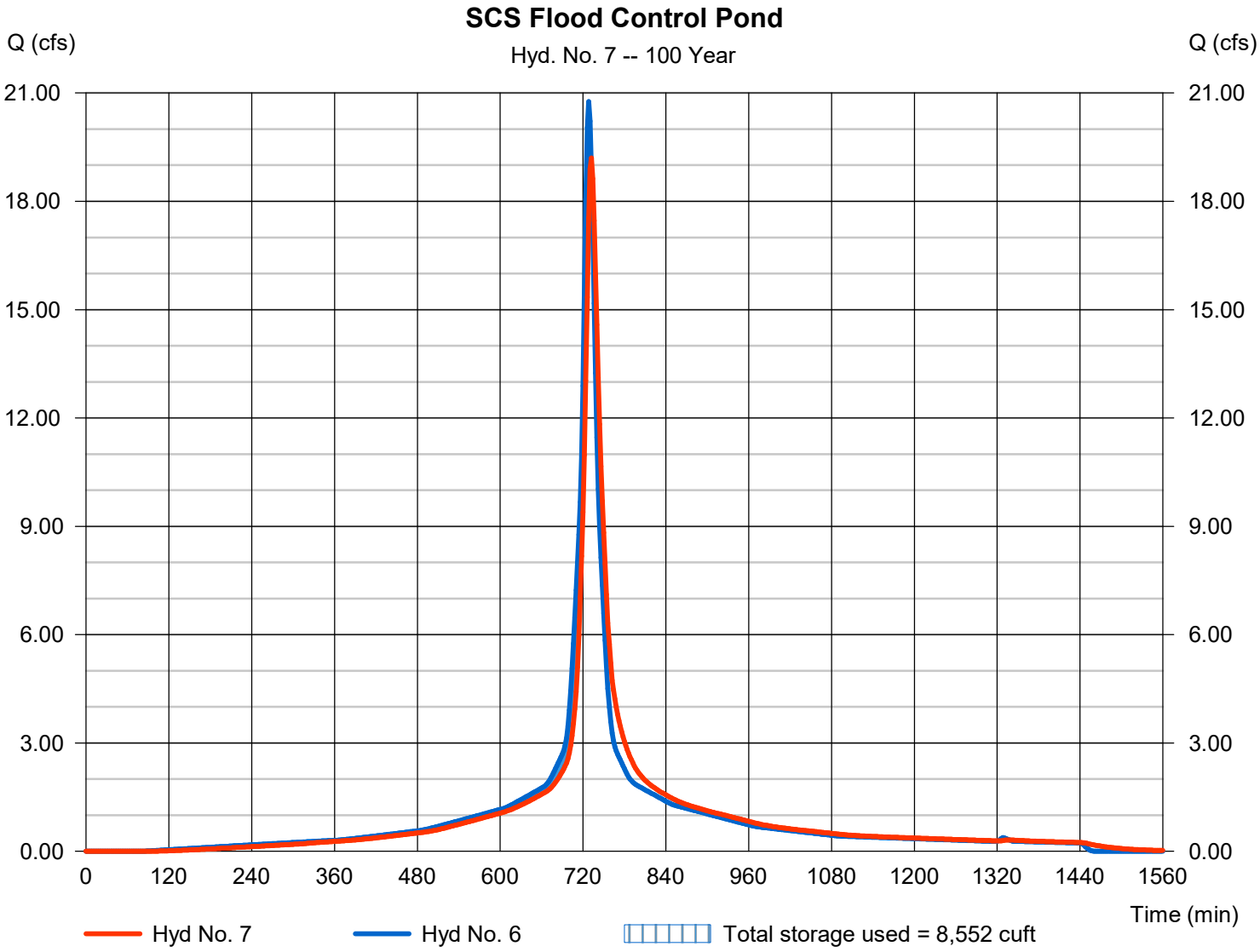
Hydrograph Report

Hyd. No. 7

SCS Flood Control Pond

Hydrograph type	=	Reservoir	Peak discharge	=	19.20 cfs
Storm frequency	=	100 yrs	Time to peak	=	732 min
Time interval	=	2 min	Hyd. volume	=	88,495 cuft
Inflow hyd. No.	=	6 - DA-1A + DA-1B + DA-1C Proposed Conditions	Max. Elevation	=	714.38 ft
Reservoir name	=	SCS POND	Max. Storage	=	8,552 cuft

Storage Indication method used.



Agent Authorization Form

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

Malek Al-Sayyed,
Print Name

Owner,
Title - Owner/President/Other

Al-Sayyed Inc.,
Corporation/Partnership/Entity Name

ave authorized Damian Esquivel
Print Name of Agent/Engineer

f Lique Engineers, LLC
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:

Al-Sayyed Mabee
Applicant's Signature

01-17-25
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Mabee Al-Sayyed 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 22nd day of January, 2025

MARIELA GARCIA
Notary ID #134868703
My Commission Expires
April 24, 2028

NOTARY PUBLIC

Mariela Garcia
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 04/24/28

Application Fee Form

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Retail/Market Bishop and Craddock
Regulated Entity Location: 1311 Craddock Ave, San Marcos TX 78666
Name of Customer: Malek Al-Sayyed
Contact Person: Damian Esquivel P.E Phone: 210-549-4207
Customer Reference Number (if issued):CN 603515503
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☒ Hays ☐ Travis ☐ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☒ Recharge Zone ☐ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	2.04 Acres	$ 4,000
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: 7/3/25

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

Core Data Form

TCEQ Use Only

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

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 603515503		**RN**

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	1/7/2025

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

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

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

Al-Sayyed Inc

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
~~0~~156214500	32002033572		

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

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

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

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

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	1071 SPRINGDALE RD						
	City	AUSTIN	**State**	TX	**ZIP**	78721	**ZIP + 4**	1949

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

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

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected, a new permit application is also required.)*

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

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

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

Retail/Market 1311 Craddock Ave

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	1311 Craddock Ave							
	City	San Marcos	**State**	TX	**ZIP**	78666	**ZIP + 4**	
24. County	Hays County							

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

25. Description to Physical Location:	

26. Nearest City	**State**	**Nearest ZIP Code**

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).

27. Latitude (N) In Decimal: 29.884526			**28. Longitude (W) In Decimal:** -97.967368		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
5411		445120	

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

Retail/Market

34. Mailing Address:	**1311 Craddock Ave**							
	City	**San Marcos**	**State**	**TX**	**ZIP**	**78666**	**ZIP + 4**	

35. E-Mail Address:	

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

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

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

SECTION IV: Preparer Information

40. Name:	Damian Esquivel	**41. Title:**	Principal/Authorized Agent

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(210 **)** 549-4207		**( ) -**	damian@lique.us

SECTION V: Authorized Signature

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

Company:	Lique Engineers LLC	**Job Title:**	Authorized Agent/Managing Member/Engineer
Name *(In Print):*	Damian Esquivel	**Phone:**	(210) 367-6934
Signature:	Damian M. Esquivel	**Date:**	7/3/25