Contributing Zone Plan – Table of Contents

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: Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2						**2. Regulated Entity No.: N/A**			
3. Customer Name: Toll Southwest, LLC						**4. Customer No.: CN602840076**			
5. Project Type: (Please circle/check one)	New		Modification			Extension		Exception	
6. Plan Type: (Please circle/check one)	WPAP	**X** CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	**X** Residential		Non-residential			**8. Site (acres):**		**79.20**	
9. Application Fee:	$6,500		**10. Permanent BMP(s):**			Vegetative Filter Strips, Batch Detention			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Hays		**14. Watershed:**			Blanco River			

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)	___Edwards Aquifer Authority _X_Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs _X_Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	___	___	___	___
Region (1 req.)	___	___	___	___	___
County(ies)	___	___	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village ___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. John Barcellona
Print Name of Customer/Authorized Agent John Barcellona 8-25-23
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):	

Section II

Contributing Zone Plan (TCEQ-10257)

Contributing Zone Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Contributing Zone to the Edwards Aquifer and Relating to 30 TAC §213.24(1), Effective June 1, 1999

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

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

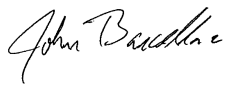
Signature

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

Print Name of Customer/Agent: John Barcellona

Date: 8-25-23

Signature of Customer/Agent:



Regulated Entity Name: Clara Vista, Phase 1 & 6 Creeks Boulevard Phase 2

Project Information

1. County: Hays
2. Stream Basin: Blanco River
3. Groundwater Conservation District (if applicable): Barton Springs/Edwards Aquifer
4. Customer (Applicant):

   Contact Person: Adrienne Donatucci
   Entity: Toll Southwest, LLC
   Mailing Address: 1320 Arrow Point Dr, Suite 401
   City, State: Cedar Park, Texas Zip: 78613
   Telephone: 412-780-2312 Fax: 512-528-5036
   Email Address: adonatucci@tollbrothers.com

5. Agent/Representative (If any):

   Contact Person: John Barcellona
   Entity: Costello Inc
   Mailing Address: 9050 N Capital of Texas Hwy Bldg 3, Suite 390
   City, State: Austin, Texas Zip: 78759
   Telephone: 512-646-3463 Fax: N/A
   Email Address: jbarcellona@costelloinc.com

6. Project Location:

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

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

   0.33 miles west of the intesection of South Six Creeks Blvd & Jackson River Lp, Kyle Texas, and part of a 201.377 acre tract of land out of the Caleb W Baker Survey.

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

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

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

10. ☒ **Attachment C - Project Narrative**. A detailed narrative description of the proposed project is attached. The project description is consistent throughout the application and contains, at a minimum, the following details:

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

11. Existing project site conditions are noted below:

    ☐ Existing commercial site
    ☐ Existing industrial site

☐ Existing residential site
☐ Existing paved and/or unpaved roads
☒ Undeveloped (Cleared)
☒ Undeveloped (Undisturbed/Not cleared)
☐ Other: _____

12. The type of project is:

☒ Residential: # of Lots: 125
☒ Residential: # of Living Unit Equivalents: 125
☐ Commercial
☐ Industrial
☐ Other: _____

13. Total project area (size of site): 103.68 Acres

    Total disturbed area: 79.20 Acres

14. Estimated projected population: 438

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

Table 1 - Impervious Cover

Impervious Cover of Proposed Project	*Sq. Ft.*	*Sq. Ft./Acre*	*Acres*
Structures/Rooftops	526,000	÷ 43,560 =	12.07
Parking	0	÷ 43,560 =	0.00
Other paved surfaces	682,150	÷ 43,560 =	15.66
Total Impervious Cover	1,208,150	÷ 43,560 =	27.73

Total Impervious Cover 27.73 **÷ Total Acreage** 79.20 **X 100 =** 35.01**% Impervious Cover**

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

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

For Road Projects Only

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

☒ N/A

18. Type of project:

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

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

- ☐ Concrete
- ☐ Asphaltic concrete pavement
- ☐ Other: _____

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

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

21. Pavement Area:

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.

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

☐ N/A

26. Wastewater will be disposed of by:

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

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

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

☒ Sewage Collection System (Sewer Lines):

The sewage collection system will convey the wastewater to the Kyle Wastewater Treatment Plant (WWTP) (name) Treatment Plant. The treatment facility is:

☒ Existing.
☐ Proposed.

☒ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

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

☒N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
1			
2			
3			
4			
5			

Total x 1.5 = _____ Gallons

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

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

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

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

Table 3 - Secondary Containment

Length (L)(Ft.)	*Width(W)(Ft.)*	*Height (H)(Ft.)*	*L x W x H = (Ft3)*	*Gallons*

Total: _____ Gallons

30. Piping:

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

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

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

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

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

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

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

Site Plan Requirements

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

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

    Site Plan Scale: 1" = 100'.

35. 100-year floodplain boundaries:

    ☒ Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

    ☐ No part of the project site is located within the 100-year floodplain.

    The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): _____.

36. ☐ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.

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

37. ☒ A drainage plan showing all paths of drainage from the site to surface streams.

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

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

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

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

42. ☒ Surface waters (including wetlands).

    ☐ N/A

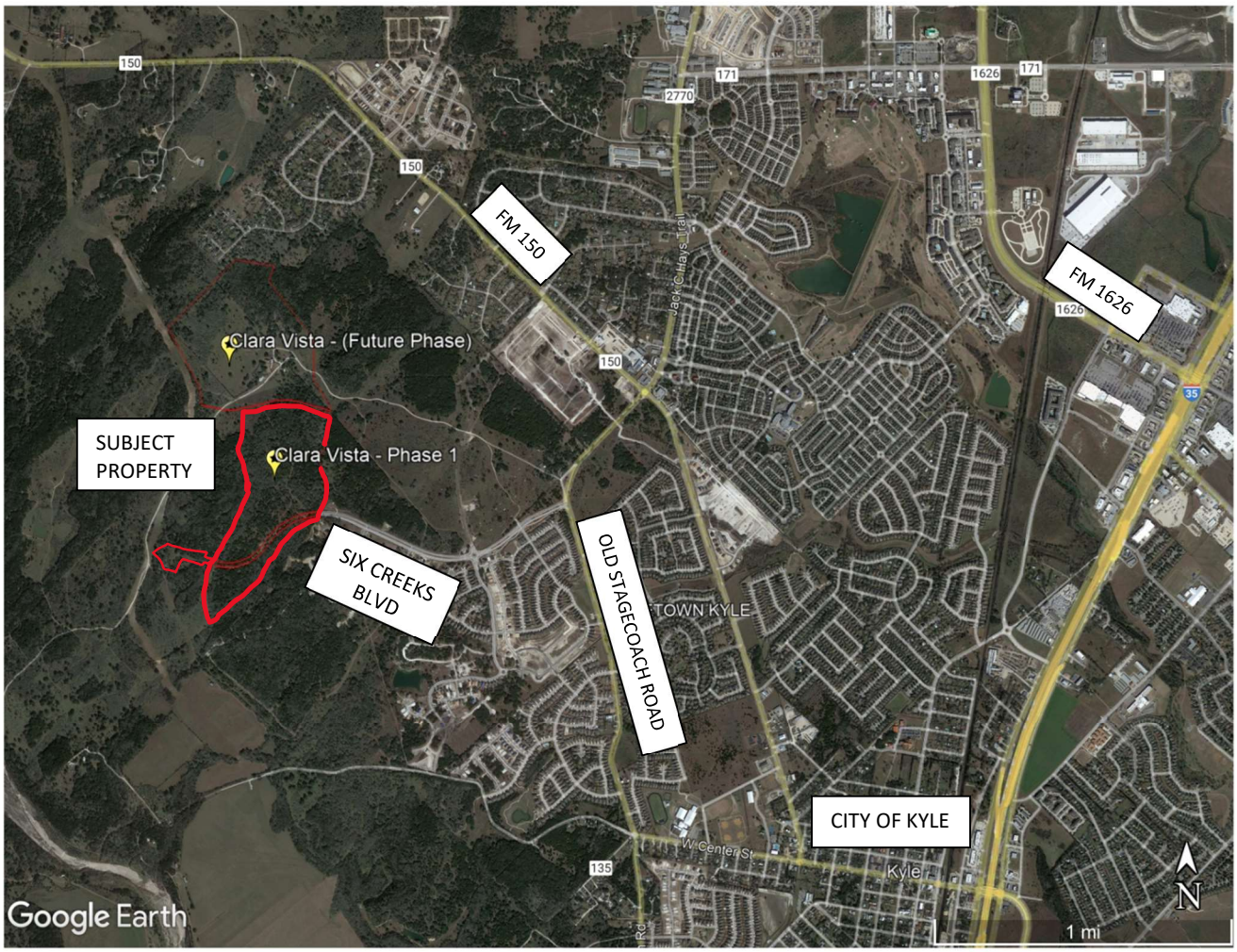
43. ☐ Locations where stormwater discharges to surface water.

    ☒ There will be no discharges to surface water.

44. ☐ Temporary aboveground storage tank facilities.

    ☒ Temporary aboveground storage tank facilities will not be located on this site.

ATTACHMENT A: ROAD MAP



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

MOUNTAIN CITY QUADRANGLE
TEXAS–HAYS CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

(DRIPPING SPRINGS)

(SIGNAL HILL)

(OAK HILL)

(WIMBERLEY)

(SAN MARCOS NORTH)

(UHLAND)

(DRIFTWOOD)

(BUDA)

Project Location

Produced by the United States Geological Survey

Control by USGS and NOS/NOAA

Compiled from aerial photographs taken 1967. Revisions shown in purple compiled from aerial photographs taken 1986 and other sources and have been field checked. Map edited 1994
Conflicts may exist between some updated features and previously mapped contours

North American Datum of 1927 (NAD 27). Projection and 10000-foot ticks : Texas Coordinate System, south central zone (Lambert Conformal Conic)
Blue 1000-meter Universal Transverse Mercator ticks, zone 14

North American Datum of 1983 (NAD 83) is shown by dashed corner ticks. The values of the shift between NAD 27 and NAD 83 for 7.5-minute intersections are obtainable from National Geodetic Survey NADCON software

Areas covered by dashed light blue pattern are subject to controlled inundation

UTM GRID AND 1994 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
MN
GN
0°32′ 9 MILS
6½° 116 MILS

SCALE 1:24000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

TEXAS
QUADRANGLE LOCATION
3097-222

ROAD CLASSIFICATION
Primary highway, hard surface — Light-duty road, hard or improved surface
Secondary highway, hard surface — Unimproved road
Interstate Route — U. S. Route — State Route

MOUNTAIN CITY, TEX.
30097-A8-TF-024

1968
REVISED 1994
DMA 6444 III SW-SERIES V882

INTERIOR-GEOLOGICAL SURVEY, RESTON, VIRGINIA-1994

TCEQ Contributing Zone Plan

Attachment C - Project Narrative
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

Water, Sewer Drainage and Paving to serve Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2 will be part of the first phase of a three-phase residential development providing housing to the Austin market. The project consists of a 201.377 acre parcel of land plus a roadway extension, located at the end of South Six Creeks Boulevard in Kyle, Hays County, Texas. Phase 1 of the development will be limited to a 93.47-acre plat boundary, plus ROW and detention for 6 Creeks Boulevard. The total disturbed area within the limits described will be 79.20 Acres. The subject property is currently undeveloped and being cleared in accordance with a previously approved CZP (Approved on 12/23/22). This approval is limited to 68.91 Acres of clearing within our property. An additional 10.29 Acres of clearing is proposed with this application to extend 6 Creeks Boulevard beyond the original limits. The property is bordered to the east and west by tributaries of the Blanco River which parallels the eastern boundary, flowing through it, running north to south.

No offsite flows drain through the area of proposed disturbance. There are off-site flows "passing through" the Blanco River tributaries described previously, but we are not treating those flows. This creek will be protected from construction runoff by both temporary and permanent BMP's, which will include silt fence, natural vegetative filter strips and batch detention basins. These will be designed to meet water quality improvements for this phase, as well as future phases of development, which will include additional BMP's as needed.

The development of this section will result in an increase of impervious cover, currently estimated at 27.73 acres per the impervious cover guidelines set forth in the TCEQ manual. To mitigate this impact, we will be proposing a series of Batch Detention Basins and vegetated filter strips to meet City of Austin and TCEQ pollutant removal criteria.

TCEQ Contributing Zone Plan

Attachment D - Factors Affecting Surface Water Quality
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1
6 Creeks Boulevard Phase 2

Water, Sewer Drainage and Paving to serve Clara Vista Phase 1 is likely going to have the following factors affecting surface water quality during construction and when completed:

1. Sediment
2. Runoff
3. Trash
4. Fuel
5. Chemicals

BMP's will be used to minimize the impact of these pollutants and are described in other sections of this application. The project site consists of undeveloped prairie/woodland with slopes on site vary from 0.5% to 9%. The underlying soil in this phase is primarily lean to fat clay over limestone. The site will be developed into a single-family subdivision with an estimated increase of 27.73 acres impervious cover, including sidewalks, roadways, residential driveways and dwellings. The increase in impervious cover will cause the typical increases in the Total Suspended Solids (TSS) from rainfall events. There is also an expectation of consistent traffic and parked vehicles due to the proposed facility residents, therefore there may be an increase in fuels and other chemicals released from vehicles which may also increase the TSS for the site.

TCEQ Contributing Zone Plan

Attachment E - Volume and Character of Stormwater
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

The volume and character of stormwater at the project site for both existing and post-development conditions are as follows:

Development of Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2 will result in a net increase of 27.73 acres of impervious cover. The runoff coefficient of the site will be altered from prairie to single family residential with all associated improvements. On-site impervious cover will consist of new building rooftops, concrete sidewalks and asphalt drive and parking areas. The runoff from the proposed development increases peak runoff and TSS loads. For reference, sheets 8-10 (C1.00, C1.01 & C1.02) of the Clara Vista construction plans detail the change in drainage patterns between the existing and proposed conditions, as well as the change in impervious cover. Sheet 8-10 of the 6 Creek Boulevard plans shows this information for proposed pond K.

Mitigation for development impacts is proposed within batch detention ponds and vegetative filter strips. The City of Austin requires pollutant removal rates in excess of the 80% TSS reduction required by the TCEQ. Water Quality Volume (WQV) is used as a basis for the design of the proposed CoA sedimentation and filtration pond is calculated by following CoA guidelines. Calculations showing the pond design meets CoA and TCEQ design targets are provided in the for both the interim and ultimate conditions.

Please find the Attached Calculations for Sediment Removal.

Clara Vista - TSS Removal Calculations (Phase 1 Condition)

Loading Calculations		
Site Area:	201.38	ac
Total Proposed IC:	30.12	ac
Load Removal Required (L_M):	27,034	lbs/yr
Load Removal Provided (L_P):	27,056	lbs/yr
Load Removal Remaining:	-21	lbs/yr

BMP Calculations	Inputs						Outputs		
	Total On-Site DA to BMP (ac)	Pre-development On-Site IC to BMP (ac)	Post-development On-Site IC to BMP (ac)	Off-Site DA to BMP (ac)	Off-Site IC to BMP (ac)	L_M (lbs/yr)	L_R (lbs/yr)	F	Volume (cf)
Pond G	25.70	0.00	10.14	0.00	0.00	9,950	10,790	0.92	68,129
Pond H	5.54	0.00	1.79	0.00	0.00	1,749	1,922	0.91	11,722
Pond I	24.36	0.00	11.26	1.14	0.00	10,844	11,917	0.91	64,665
Pond J	12.26	0.00	3.76	0.00	0.00	3,750	4,040	0.93	30,704
Pond K	0.38	0.00	0.34	0.07	0.00	326	358	0.91	2,214
VFS-F	1.17	0.00	0.44	0.00	0.00	436	436	1.00	N/A

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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

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

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

where:

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

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

County =	Hays	
Total project area included in plan * =	201.38	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	30.12	acres
Total post-development impervious cover fraction * =	0.15	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	27034	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 12

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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Characters shown in red are data entry fields.
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Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**G**	
Total drainage basin/outfall area =	**25.70**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**10.14**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.39**	
$L_{M\ THIS\ BASIN}$ =	**9,103**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**Batch Detention**	
Removal efficiency =	**91**	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**25.70**	acres
A_I =	**10.14**	acres
A_P =	**15.56**	acres
L_R =	**10,790**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**9,950**	lbs.
F =	**0.92**	

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

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

Rainfall Depth =	**2.00**	inches
Post Development Runoff Coefficient =	**0.30**	
On-site Water Quality Volume =	**56,774**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**11,355**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**68,129**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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Characters shown in red are data entry fields.
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Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**H**	
Total drainage basin/outfall area =	**5.54**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**1.79**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.32**	
$L_{M\ THIS\ BASIN}$ =	**1,608**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**Batch Detention**	
Removal efficiency =	**91**	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**5.54**	acres
A_I =	**1.79**	acres
A_P =	**3.75**	acres
L_R =	**1,922**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**1,749**	lbs.
F =	**0.91**	

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

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

Rainfall Depth =	**1.80**	inches
Post Development Runoff Coefficient =	**0.27**	
On-site Water Quality Volume =	**9,769**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**1,954**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**11,722**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
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Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**I**	
Total drainage basin/outfall area =	**24.36**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**11.26**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.46**	
$L_{M\ THIS\ BASIN}$ =	**10,111**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**Batch Detention**	
Removal efficiency =	**91**	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**24.36**	acres
A_I =	**11.26**	acres
A_P =	**13.10**	acres
L_R =	**11,917**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**10,844**	lbs.
F =	**0.91**	

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

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

Rainfall Depth =	**1.80**	inches
Post Development Runoff Coefficient =	**0.34**	
On-site Water Quality Volume =	**53,738**	cubic feet

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

Off-site area draining to BMP =	**1.14**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0.00**	
Off-site Runoff Coefficient =	**0.02**	
Off-site Water Quality Volume =	**149**	cubic feet
Storage for Sediment =	**10,777**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**64,665**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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Characters shown in red are data entry fields.
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2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	**J**	
Total drainage basin/outfall area =	**12.26**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**3.76**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.31**	
$L_{M\ THIS\ BASIN}$ =	**3,371**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**Batch Detention**	
Removal efficiency =	**91**	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**12.26**	acres
A_I =	**3.76**	acres
A_P =	**8.50**	acres
L_R =	**4,040**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**3,750**	lbs.
F =	**0.93**	

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

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

Rainfall Depth =	**2.20**	inches
Post Development Runoff Coefficient =	**0.26**	
On-site Water Quality Volume =	**25,586**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**5,117**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**30,704**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**J**	
Total drainage basin/outfall area =	**0.38**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.34**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.90**	
$L_{M\ THIS\ BASIN}$ =	**309**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**Batch Detention**	
Removal efficiency =	**91**	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**0.38**	acres
A_I =	**0.34**	acres
A_P =	**0.04**	acres
L_R =	**358**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**326**	lbs.
F =	**0.91**	

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

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

Rainfall Depth =	**1.80**	inches
Post Development Runoff Coefficient =	**0.74**	
On-site Water Quality Volume =	**1,836**	cubic feet

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

Off-site area draining to BMP =	**0.07**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0.00**	
Off-site Runoff Coefficient =	**0.02**	
Off-site Water Quality Volume =	**10**	cubic feet
Storage for Sediment =	**369**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**2,214**	cubic feet

Water Ridge Tract - TSS Removal Calculations (Six Creeks Blvd. Proposed Condition)

Loading Calculations		
Site Area:	201.38	ac
Total Proposed IC:	5.08	ac
Load Removal Required (L_M):	4,425	lbs/yr
Load Removal Provided (L_P):	4,825	lbs/yr
Load Removal Remaining:	-400	lbs/yr

BMP Calculations	Inputs						Outputs		
	Total On-Site DA to BMP (ac)	Pre-development On-Site IC to BMP (ac)	Post-development On-Site IC to BMP (ac)	Off-Site DA to BMP (ac)	Off-Site IC to BMP (ac)	L_M (lbs/yr)	L_R (lbs/yr)	F	Volume (cf)
Pond H	3.28	0.00	0.00	0.00	0.00	45	52	0.87	411
Pond I	29.64	0.00	4.72	1.14	0.00	4,478	5,147	0.87	32,279
Pond K	0.38	0.00	0.34	0.07	0.00	302	347	0.87	1,772

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Six Creeks Blvd. Phase 2
Date Prepared: 8/23/2023

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
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Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

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

where:

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

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

County =	Williamson	
Total project area included in plan * =	201.38	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	5.08	acres
Total post-development impervious cover fraction * =	0.03	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	4425	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 3

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER

Michael A. Kenney

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Six Creeks Blvd. Phase 2
Date Prepared: 8/23/2023

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
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Characters shown in red are data entry fields.
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2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	**H**	
Total drainage basin/outfall area =	**3.28**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.00**	
$L_{M\ THIS\ BASIN}$ =	**0**	lbs.

Pond H

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**
Removal efficiency = **91** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**3.28**	acres
A_I =	**0.00**	acres
A_P =	**3.28**	acres
L_R =	**52**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**45**	lbs.
F =	**0.87**	

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

Rainfall Depth =	**1.44**	inches
Post Development Runoff Coefficient =	**0.02**	
On-site Water Quality Volume =	**343**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**69**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**411**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Six Creeks Blvd. Phase 2
Date Prepared: 8/23/2023

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

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

Drainage Basin/Outfall Area No. =	**I**	
Total drainage basin/outfall area =	**29.64**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**4.72**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.16**	
$L_{M\ THIS\ BASIN}$ =	**4,108**	lbs.

Pond I

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**
Removal efficiency = **91** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**29.64**	acres
A_I =	**4.72**	acres
A_P =	**24.92**	acres
L_R =	**5,147**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = **4,478** lbs.

F = **0.87**

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

Rainfall Depth =	**1.44**	inches
Post Development Runoff Coefficient =	**0.17**	
On-site Water Quality Volume =	**26,780**	cubic feet

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

Off-site area draining to BMP =	**1.14**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0.00**	
Off-site Runoff Coefficient =	**0.02**	
Off-site Water Quality Volume =	**119**	cubic feet
Storage for Sediment =	**5,380**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**32,279**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Six Creeks Blvd. Phase 2
Date Prepared: 8/23/2023

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

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

Drainage Basin/Outfall Area No. =	**K**	
Total drainage basin/outfall area =	**0.38**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.34**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.90**	
$L_{M\ THIS\ BASIN}$ =	**299**	lbs.

Pond K

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**
Removal efficiency = **91** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**0.38**	acres
A_I =	**0.34**	acres
A_P =	**0.04**	acres
L_R =	**347**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**302**	lbs.
F =	**0.87**	

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

Rainfall Depth =	**1.44**	inches
Post Development Runoff Coefficient =	**0.74**	
On-site Water Quality Volume =	**1,468**	cubic feet

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

Off-site area draining to BMP =	**0.07**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0.00**	
Off-site Runoff Coefficient =	**0.02**	
Off-site Water Quality Volume =	**8**	cubic feet
Storage for Sediment =	**295**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**1,772**	cubic feet

Clara Vista - TSS Removal Calculations (Ultimate Condition)

Loading Calculations		
Site Area:	201.38	ac
Total Proposed IC:	64.61	ac
Load Removal Required (L_M):	57,993	lbs/yr
Load Removal Provided (L_P):	58,137	lbs/yr
Load Removal Remaining:	-144	lbs/yr

BMP Calculations	Inputs						Outputs		
	Total On-Site DA to BMP (ac)	Pre-development On-Site IC to BMP (ac)	Post-development On-Site IC to BMP (ac)	Off-Site DA to BMP (ac)	Off-Site IC to BMP (ac)	L_M (lbs/yr)	L_R (lbs/yr)	F	Volume (cf)
Pond A	26.48	0.00	7.63	0.00	0.00	7,411	8,235	0.90	49,420
Pond C	10.07	0.00	2.64	0.00	0.00	2,573	2,859	0.90	17,735
Pond D	5.28	0.00	1.56	0.00	0.00	1,510	1,678	0.90	9,989
Pond E	36.57	0.00	12.80	0.00	0.00	12,314	13,682	0.90	76,607
Pond F	16.65	0.00	6.94	0.00	0.00	6,635	7,373	0.90	38,849
Pond G	25.83	0.00	10.15	0.00	0.00	9,950	10,803	0.92	68,310
Pond H	5.54	0.00	1.79	0.00	0.00	1,730	1,922	0.90	11,071
Pond I	24.36	0.00	11.26	1.14	0.00	10,725	11,917	0.90	61,072
Pond J	12.76	0.00	4.09	0.00	0.00	3,951	4,390	0.90	25,371
Pond K	0.38	0.00	0.34	0.07	0.00	322	358	0.90	2,091
VFS-D	0.64	0.00	0.18	0.00	0.00	185	185	1.00	N/A
VFS-E	2.79	0.00	0.83	0.00	0.00	831	831	1.00	N/A

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Ultimate Condition**
Date Prepared: **8/23/2023**

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

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

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

where:

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

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

County =	Hays	
Total project area included in plan * =	201.38	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	64.61	acres
Total post-development impervious cover fraction * =	0.32	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	57993	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 13

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Ultimate Condition**
Date Prepared: **8/23/2023**

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Characters shown in red are data entry fields.
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2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	**A**	
Total drainage basin/outfall area =	**26.48**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**7.63**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.29**	
$L_{M\ THIS\ BASIN}$ =	**6,850**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**26.48**	acres
A_I =	**7.63**	acres
A_P =	**18.85**	acres
L_R =	**8,235**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**7,411**	lbs.
F =	**0.90**	

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

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

Rainfall Depth =	**1.70**	inches
Post Development Runoff Coefficient =	**0.25**	
On-site Water Quality Volume =	**41,183**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**8,237**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**49,420**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Ultimate Condition**
Date Prepared: **8/23/2023**

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Characters shown in red are data entry fields.
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2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	**C**	
Total drainage basin/outfall area =	**10.07**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**2.64**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.26**	
$L_{M\ THIS\ BASIN}$ =	**2,366**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**10.07**	acres
A_I =	**2.64**	acres
A_P =	**7.44**	acres
L_R =	**2,859**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**2,573**	lbs.
F =	**0.90**	

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

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

Rainfall Depth =	**1.70**	inches
Post Development Runoff Coefficient =	**0.24**	
On-site Water Quality Volume =	**14,779**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**2,956**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**17,735**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Ultimate Condition**
Date Prepared: **8/23/2023**

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Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields.
Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**D**	
Total drainage basin/outfall area =	**5.28**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**1.56**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.29**	
$L_{M\ THIS\ BASIN}$ =	**1,397**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**5.28**	acres
A_I =	**1.56**	acres
A_P =	**3.73**	acres
L_R =	**1,678**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**1,510**	lbs.
F =	**0.90**	

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

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

Rainfall Depth =	**1.70**	inches
Post Development Runoff Coefficient =	**0.26**	
On-site Water Quality Volume =	**8,324**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**1,665**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**9,989**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Ultimate Condition**
Date Prepared: **8/23/2023**

Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields.
Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**E**	
Total drainage basin/outfall area =	**36.57**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**12.80**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.35**	
$L_{M\ THIS\ BASIN}$ =	**11,487**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**36.57**	acres
A_I =	**12.80**	acres
A_P =	**23.77**	acres
L_R =	**13,682**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**12,314**	lbs.
F =	**0.90**	

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

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

Rainfall Depth =	**1.70**	inches
Post Development Runoff Coefficient =	**0.28**	
On-site Water Quality Volume =	**63,839**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**12,768**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**76,607**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Ultimate Condition**
Date Prepared: **8/23/2023**

Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields.
Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**F**	
Total drainage basin/outfall area =	**16.65**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**6.94**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.42**	
$L_{M\ THIS\ BASIN}$ =	**6,233**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**16.65**	acres
A_I =	**6.94**	acres
A_P =	**9.70**	acres
L_R =	**7,373**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**6,635**	lbs.
F =	**0.90**	

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

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

Rainfall Depth =	**1.70**	inches
Post Development Runoff Coefficient =	**0.32**	
On-site Water Quality Volume =	**32,374**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**6,475**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**38,849**	cubic feet

TCEQ Contributing Zone Plan

Attachment F - Suitability Letter from Authorized Agent

Water, Sewer, Drainage and Paving to Serve Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2

No on-site sewage facilities (OSSF) are proposed on site.

Section not applicable to this project

TCEQ Contributing Zone Plan

Attachment G - Alternative Secondary Containment Methods
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

No ground storage tanks are proposed in this project.

Section not applicable to this project

TCEQ Contributing Zone Plan

Attachment H - AST Containment Structure Drawings

Water, Sewer, Drainage and Paving to Serve Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2

No ground storage tanks are proposed in this project.

Section not applicable to this project

TCEQ Contributing Zone Plan

Attachment I - 20% or Less Impervious Cover Waiver

Water, Sewer, Drainage and Paving to Serve Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2

The site will not be used for multi-family residential developments, schools, or small business sites.

Section not applicable to this project

TCEQ Contributing Zone Plan

Attachment J - BMPs For Upgradient Stormwater
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

Clara Vista Phase 1 will not be receiving any offsite sheet flows. Since Phase 1 is bordered on three sides by tributaries to the Blanco River, any upgradient stormwater will be intercepted by these drainage features. A high point is located at the north end of phase 1 and directs drainage away from our north boundary. Please see the attached exhibit for reference.

A portion of 6 Creeks Boulevard Phase 2 (West, Near Pond K) will receive a small amount of offsite sheet flow from the north. This upgradient stormwater will be filtered through silt fence and directed into ponds K and I for treatment.

BT4-010
112.37-ac

BT4-020
9.53-ac

BT4-030
175.28-ac

BT4-040
79.83-ac

BT4-050
299.1-ac

BT4B-010
17.4-ac

BT4-060
18.36-ac

BT4A-010
172.41-ac

BT4B-020
23.96-ac

BT4B-030
16.18-ac

BT4-070
76.73-ac

BT4-080
19.31-ac

BT4-090
64.06-ac

BT4-100
126.8-ac

LowerBlancoRiverTrib6

LowerBlancoRiverTrib6A

LowerBlancoRiverTrib5

LowerBlancoRiverTrib4E

LowerBlancoRiverTrib4D

LowerBlancoRiverTrib4C

LowerBlancoRiverTrib4B

LowerBlancoRiverTrib4

LowerBlancoRiverTrib3

LowerBlancoRiverTrib3A

LowerBlancoRiverTrib4A

Legend

- Natural Site Outfall Locations
- Water Ridge Site
- Creeks

2017 LiDAR

Elevation

High : 893.526

Low : 655.938

N

0 400

Feet

1 in = 400 ft

Costello

Costello, Inc.
Engineering and Surveying
TBPE Firm Registration No. 280

WATERRIDGE TRACT

TOPOGRAPHY AND WATERSHEDS

JOB NO.: 2021223-MDP-00	DATE: JUL 2022	BY: MAK

EXHIBIT 2

Date Saved: 7/25/2022 8:42:52 PM Y:\05_LAND_DEV\02_Projects\Toll Brothers\WaterRidge\11_Drainage\GIS\Exhibits\EX 2 - WaterRidge_Topography.mxd

TCEQ Contributing Zone Plan

Attachment K - BMPs For On-Site Stormwater
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

The following best management practices (BMPs) will be used to prevent pollution of the surface water from on-site stormwater:

1. **Batch Detention** - The batch detention basins for this project will all function for the purposes of sedimentation control and water quality. Ponds shall capture runoff for a fixed amount of time and then release it using an automated controller and valve. This process is designed to capture the first flush of stormwater runoff and settle out particulates at high efficiency before discharge. Please see section 02 – Attachment E for the sizing and TSS removal calculations.
2. **Vegetative Filter Strips**-Along the borders of disturbed areas that run off into water ways on the project, Vegetative Filter Strips (VFS) will be maintained to reduce sediments and contaminants from entering the surface water adjacent to the project site. Please see section 02 – Attachment E for the sizing and TSS removal calculations.
3. **Silt Fence**-Installed along the downstream borders of the site, below all proposed construction activity. Silt fence will be installed to intercept sediment while allowing water to slowly percolate through. This is a temporary measure that will be removed after the disturbed area is re-vegetated.

TCEQ Contributing Zone Plan

Attachment L - BMPs For Surface Streams
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

The following best management practices (BMPs) will be used to prevent pollution of the existing surface streams from our site flows:

1. **Batch Detention / Sedimentation Basin**- Batch Detention ponds for this project will be located between the development and the existing streams to intercept natural runoff from the site. Ponds will be rough cut and function as sedimentation ponds in the interim conditions during the construction phase and will be fitted with temporary dewatering skimmers prior to completion of the batch detention elements. The temporary dewatering skimmers will be removed when the batch detention comes online. Please see section 02 – Attachment E for the sizing and TSS removal calculations.
2. **Vegetative Filter Strips**-Along the borders of disturbed areas that run off into water ways on the project, Vegetative Filter Strips (VFS) will be maintained to reduce sediments and contaminants from entering the surface water adjacent to the project site. Please see section 02 – Attachment E for the sizing and TSS removal calculations.
3. **Silt Fence**-Installed along the downstream borders of the site, below all proposed construction activity. Silt fence will be installed to intercept sediment while allowing water to slowly percolate through. This is a temporary measure that will be removed after the disturbed area is re-vegetated.

TCEQ Contributing Zone Plan

Attachment M - Construction Plans
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

Please find the attached construction plans for Clara Vista Phase 1 and 6 Creeks Boulevard development. Plans have been cut reduced for clarity.

PHASES 2 & 3

LIMITS OF PREVIOUSLY APPROVED CLEARING TCEQ APPROVAL DATE 12-23-22

LIMITS OF PREVIOUSLY APPROVED CLEARING TCEQ APPROVAL DATE 12-23-22

NOT CONSTRUCTED

N 6 CREEKS BOULEVARD (80' R.O.W.) (DOC. NO. 19038653)

Existing N. 6 Creeks BLVD.

SPOILS

VEGETATIVE FILTER STRIP

STABILIZED CONSTRUCTION ENTRANCE

CITY OF KYLE 100' STREAM BUFFER

VEGETATIVE FILTER STRIP

waterridge 150 district section 1 DOC. NO. 19038654 M.P.R.H.C.T.

LOWER BLANCO RIVER TRIBUTARY 4

650LF DOUBLE ROW SILT FENCE

HMBRR LP#2 DOC. NO. 17034180 608.70 ACRES O.P.R.H.C.T.

EXISTING 500 YR FLOODPLAIN

CALCULATED EXISTING 100 YR FLOODPLAIN

LOWER BLANCO RIVER TRIBUTARY 4B

169024 BLANCO RIVER RANCH PROPERTIES

EXISTING SPOILS PILE FOR C&G PHASE 1 TO REMAIN AND BE USED FOR ADDITIONAL CLEARING

6 CREEKS PHASE 1 SECTION 8A

6 CREEKS BOULEVARD phase 1, section 3 (row only) doc. no. 21038206 M.P.R.H.C.T.

EXISTING STABILIZED CONSTRUCTION ENTRANCE FOR C&G PHASE 1 TO REMAIN AND BE USED FOR ADDITIONAL CLEARING

S 6 CREEKS BOULEVARD (R.O.W. VARIES) (DOC. NO. 21038206)

waterridge 150 district section 1 DOC. NO. 19038654 M.P.R.H.C.T.

6 CREEKS BLVD CLEARING AND GRUBBING PHASE 2

PRELIMINARY CALCULATED 100 YR FLOODPLAIN

FUTURE BLVD.

HMBRR LP#2 DOC. NO. 17034180 608.70 ACRES O.P.R.H.C.T.

VEGETATIVE FILTER STRIP

LOC

UNDISTURBED AREA

169046 BLANCO RIVER RANCH PROPERTIES

250LF DOUBLE ROW SILT FENCE

CALEB W. BAKER SURVEY ABSTRACT NO. 31 HAYS COUNTY, TEXAS

waterridge 150 district section 2 DOC. NO. 19038655 M.P.R.H.C.T.

HMBRR LP#2 DOC. NO. 17034180 608.70 ACRES O.P.R.H.C.T.

ZONE A FLOODPLAIN

EXISTING 500 YR FLOODPLAIN

CALEB W. BAKER SURVEY ABSTRACT NO. 31 HAYS COUNTY, TEXAS

PRELIMINARY CALCULATED 100 YR FLOODPLAIN

ZONE A FLOODPLAIN

ZONE "X"

CREEK CENTERLINE

N

0 200' 400'

SCALE: 1" = 200'

LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
	SF	TREE PROTECTION FENCING SILT FENCE
		VEGETATIVE FILTER STRIP
		ADDITIONAL CLEARING AND LIMITS OF CONSTRUCTION

NOTES:

1. IF DISTURBED AREA IS NOT WORKED FOR MORE THAN 14 DAYS, DISTURBED AREA SHALL BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING (ECM 1.4.4.B.3 SECTION 5, 1)
2. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AN/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON THE SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF KYLE RULES AND REGULATIONS.
3. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING PER ECM 1.4.5(A), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
4. THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY (ECM 1.4.4.D.4)
5. THE CONTRACTOR MAY NOT BLOCK, DIRECT, IMPEDE OR REROUTE PEDESTRIAN AND VEHICULAR TRAFFIC, NOT PLACE A BARRICADE OR OTHER TRAFFIC CONTROL DEVICE IN A RIGHT-OF-WAY, WITHOUT FIRST OBTAINING A TEMPORARY USE OF RIGHT-OF-WAY PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION.
6. SILT FENCE TYPE AND INSTALLATION SHALL COMPLY WITH ECM 1.4.2(G)
7. FOR OFF-SITE UTILITY CONSTRUCTION, PERPENDICULAR EROSION CONTROL MUST BE INSTALLED EVERY 30 FEET AS THE TRENCH IS BACKFILLED.
8. TREE PROTECTION FENCE MUST ENCLOSE, AT A MINIMUM THE HALF CRITICAL ROOT ZONES OF TREES TO BE PRESERVED.
9. NO GRADING AND NO CONSTRUCTION ACTIVITIES ARE PERMITTED WITHIN THE TREE PROTECTION FENCE.
10. NO UTILITY ASSIGNMENTS OR FENCE FOOTERS WILL BE ALLOWED WITHIN THE HALF CRITICAL ROOT ZONES OF TREES TO BE PRESERVED.
11. REFER TO "GENERAL NOTES" SHEETS FOR ADDITIONAL EROSION CONTROL NOTES.
12. REFER TO "TREE LIST" SHEET FOR TREE REMOVAL INFORMATION.
13. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY SEDIMENT TRANSPORTED FROM THE LOC TO THE OFFSITE DETENTION AND WATER QUALITY POND(S).
14. CONTRACTOR RESPONSIBLE FOR INSTALLING ALL EROSION CONTROL MEASURES AND BMP'S SHOWN ON THIS SHEET. CONTRACTOR RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL MEASURES UNTIL VEGETATION HAS BEEN FULLY RESTORED AND ENGINEER HAS INSPECTED AND APPROVED.
15. CONTRACTOR IS RESPONSIBLE FOR ALL GRADING AROUND THE CRITICAL ROOT ZONES OF ALL TREES NOT SHOWN AS BEING REMOVED. GRADING TO MATCH EXISTING GRADE AROUND CRITICAL ROOT ZONES.
16. IF OFF-SITE DISCHARGES ARE OBSERVED DURING THE COURSE OF CLEARING & GRUBBING, ADDITIONAL STORMWATER BMPs WILL BE REQUIRED PER THE CITY OF KYLE STORMWATER PROGRAM.

BENCHMARK NOTES:

1. ALL BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCE TO THE TEXAS COORDINATE SYSTEM OF 1983, TEXAS SOUTH-CENTRAL ZONE 4204, AND ARE BASED ON THE NORTH AMERICAN DATUM OF 1983(2011) EPOCH 2010.00. ALL DISTANCES SHOWN HEREON ARE SURFACE DISTANCES. COORDINATES WERE ADJUSTED FROM STATE PLANE GRID TO SURFACE USING A SCALED ADJUSTMENT FACTOR OF 1.00010. (RECIPROCAL of 1.00010=0.9999000099).
2. FIELD WORK ON REFERENCED PROJECT WAS SURVEYED AND LOCATED BY URBAN CIVIL ON MAY 7-26, 2021 AND AUGUST 9-24, 2021.
3. SOME FEATURES SHOWN ON THIS SURVEY MAY BE OUT OF SCALE FOR CLARITY.
4. A LEGAL DESCRIPTION WAS WRITTEN IN CONJUNCTION WITH THIS SURVEY PREPARED IN OUR OFFICE ON SEPTEMBER 3, 2021, PROJECT NO. 2014.04.NB.

IMPACTED AREAS:

CLEARING AREA: 79.20 Ac.

UNDISTURBED AREA: 24.48 Ac.

ADDITIONAL CLEARING AREA: 10.29 Ac.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY., BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 - CLEARING PLAN
KYLE, TEXAS 78640

EROSION SEDIMENTATION CONTROL

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED
PROFESSIONAL ENGINEER

9/8/2023

04B

OF 21 SHEETS

C:\CHILES CONSULTING\CHILES CONSULTING, LLC\CHILES - SHARE\CLIENTS\COSTELLO\CLARAVISTA\PHASE 1 C&G\DRIVE_Y\05_LAND_DEV\02_PROJECTS\TOLL BROTHERS\WATERRIDGE\05_CADD\04_SHEET SI\EXHIBIT\03 CLV PH 1 - EROSION CONTROL PLAN TCEQ.DWG

APPROVED BY:

LEON BARBA, P.E., CITY ENGINEER — DATE

HARPER WILDER, PUBLIC WORKS DIRECTOR — DATE

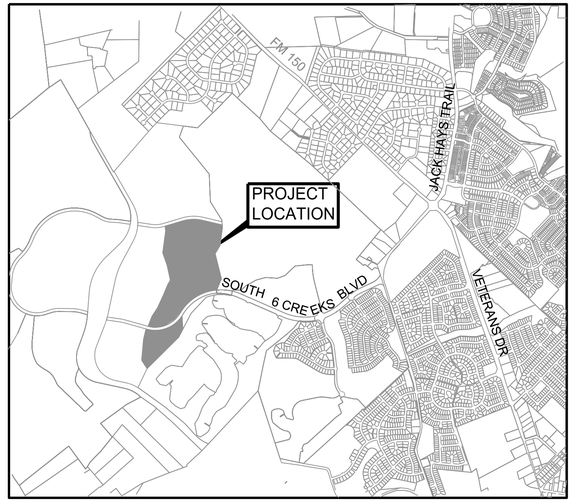
PLANNING DEPARTMENT — DATE

CLARA VISTA - PHASE 1

PHASE 1 - WATER, SEWER DRAINAGE & PAVING

PROJECT NO. CP-23-0150

CITY OF KYLE ETJ, HAYS COUNTY, TEXAS



VICINITY MAP
SCALE: 1" = 2000'

SUBMITTAL DATE: MARCH 7, 2023

PROJECT NUMBER: CP-23-0150

ZONING: R-1-1 SINGLE FAMILY RESIDENTIAL

DEVELOPMENT AGREEMENT: BLANCO RIVER RANCH
(PHASE TWO RESIDENTIAL-SAVANNAH DISTRICT) DEVELOPMENT AGREEMENT
FILED: RECORED 4/19/2022

THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY, REGULATORY COMPLIANCE, AND ADEQUACY OF THESE PLANS AND/ OR SPECIFICATIONS WHETHER OR NOT THE PLANS AND/OR SPECIFICATIONS WERE REVIEWED BY THE CITY ENGINEER(S).

STORMWATER MANAGEMENT:
ONSITE WATER QUALITY AND DETENTION THROUGH BATCH DETENTION.

FLOODPLAIN:
THE TRACT SHOWN HEREON LIES WITHIN ZONE "AE" AND ZONE "A" AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION, AS SHOWN ON MAP NO. 48209C0270F, DATED SEPTEMBER 02, 2005 FOR HAYS COUNTY, TEXAS AND INCORPORATED AREAS.

THIS FLOOD PLAIN NOTE DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

WATERSHED:
THIS SUBDIVISION IS LOCATED WITHIN THE BLANCO RIVER WATERSHED.

ENVIRONMENTAL:
THIS SUBDIVISION PROJECT IS LOCATED IN THE EDWARDS AQUIFER CONTRIBUTING ZONE WITH IN THE TRANSITION ZONE.

A PORTION OF THE OFF-SITE WASTEWATER FORCE MAIN IS IN THE EDWARDS AQUIFER RECHARGE ZONE.

Control Point Table				
Point #	Northing	Easting	Elevation	Raw Description
2	13918167.90	2313263.95	785.42	CP IRSC
3	13915569.94	2313667.78	757.14	CP IRSC
4	13915562.83	2313757.32	760.82	CP NLS PK W/WASHER LSI SURVEYING
5	13915570.71	2313793.88	762.19	CP IRSC 1/2 LSI CONTROL
9	13912986.31	2311666.80	717.59	CP IRSC 1/2 LSI CONTROL

GENERAL NOTES:

THIS PROJECT IS REFERENCED FOR ALL BEARING AND COORDINATE BASIS TO THE TEXAS COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83 – 2011 ADJUSTMENT), SOUTH CENTRAL ZONE (4204).

DISTANCES AND AREAS SHOWN HEREON ARE SURFACE VALUES REPRESENTED IN U.S. SURVEY FEET BASED ON A GRID-TO-SURFACE COMBINED ADJUSTMENT FACTOR OF 1.0000306449.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID 12B).

REVISIONS/CORRECTIONS					
REV NO.	DESCRIPTION	DATE	REVISE (R) ADD (A) VOID (V) SHEET NO.'S	APPROVED BY:	APPROVAL DATE:

PROJECT INFORMATION:

OWNER / DEVELOPER: TOLL BROTHERS
1320 ARROW POINT DR., STE 401, CEDAR PARK, TX 78613
412-780-2312

ENGINEER: COSTELLO, INC. TBPE 280
9050 N CAPITAL OF TX HWY, BLDG. 3, SUITE 390
AUSTIN, TX 78759
512-646-3456

SURVEYOR: LANDESIGN SERVICES, INC. TBPELS 10001800
10090 W HIGHWAY 29
LIBERTY HILL, TX 78642
512-238-7901

AGENT: COSTELLO, INC. TBPE 280
9050 N CAPITAL OF TX HWY, BLDG. 3, SUITE 390
AUSTIN, TX 78759
512-646-3456

Costello

Engineering and Surveying
9050 N Capital of TX Hwy, Bldg. 3, Ste 390
Austin, Texas 78759
(512)646-3456
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED
PROFESSIONAL ENGINEER

JOHN D. BARCELLONA, P.E.
COSTELLO, INC. TBPE NO. 280

8/15/2023
DATE

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES

Sheet List Table	
Sheet Number	Sheet Title
C0.00	COVER SHEET
C0.01	PLAT SHEET 1 OF 4
C0.02	PLAT SHEET 2 OF 4
C0.03	PLAT SHEET 3 OF 4
C0.04	PLAT SHEET 4 OF 4
C0.05	GENERAL NOTES
C0.06	TCEQ NOTES
C1.00	OVERALL DRAINAGE PLAN SHEET 1 OF 3
C1.01	OVERALL DRAINAGE PLAN SHEET 2 OF 3
C1.02	OVERALL DRAINAGE PLAN SHEET 3 OF 3
C1.03	DRAINAGE CALCULATIONS SHEET 1 OF 2
C1.04	DRAINAGE CLACULATIONS SHEET 2 OF 2
C1.05	PLAN AND PROFILE SD LINE-A
C1.06	PLAN AND PROFILE SD LINE-A1 & SD LINE-G1
C1.07	PLAN AND PROFILE SD LINE-B
C1.08	PLAN AND PROFILE SD LINE-C & SD LINE-C2
C1.09	PLAN AND PROFILE SD LINE-B1 & SD LINE-D
C1.10	PLAN AND PROFILE SD LINE-D
C1.11	PLAN AND PROFILE SD LINE-F
C1.12	PLAN AND PROFILE SD LINE-D1 & SD LINE-D2
C1.13	PLAN AND PROFILE SD LINE-E1
C1.14	PLAN AND PROFILE SD LINE-E1 & SD LINE-E3
C1.15	PLAN AND PROFILE SD LINE-C1
C1.16	PLAN AND PROFILE SD LINE-F1 & SD LINE-E2
C1.17	PLAN AND PROFILE SD OUTFALL "A" AND SD OUTFALL "B"
C1.18	DRAINAGE DETAIL SHEET 1 OF 2
C1.19	DRAINAGE DETAIL SHEET 2 OF 2
C2.00	PLAN AND PROFILE BRAMBLE BOULEVARD - STA. 1+00 TO STA. 10+80
C2.01	PLAN AND PROFILE BRAMBLE BOULEVARD - STA. 10+80 TO 12+11
C2.02	PLAN AND PROFILE ALPINE CROSSING DRIVE - STA. 1+97.68 TO STA. 9+60
C2.03	PLAN AND PROFILE ALPINE CROSSING DRIVE - STA. 9+60 TO STA. STA 13+47.32 AND FIRE ACCESS DRIVEWAY
C2.04	PLAN AND PROFILE LAVACA DRIVE - STA. 1+00 TO STA. 9+40
C2.05	PLAN AND PROFILE LAVACA DRIVE - STA. 9+40 TO STA. 17+86.59
C2.06	PLAN AND PROFILE DAWN DRIVE - STA. 1+00 TO STA. 8+00
C2.07	PLAN AND PROFILE DAWN DRIVE - STA. 8+00 TO STA. 10+29.09 AND ROCKPORT ROAD STA. 1+00 TO STA. 6+40
C2.08	PLAN AND PROFILE ROCKPORT ROAD STA. 6+40 TO STA. 10+88.49 AND PONDEROSA DRIVE STA. 1+00 TO STA. 4+20
C2.09	PLAN AND PROFILE PONDEROSA DRIVE - STA. 4+20 TO STA. 8+46.77 AND SHINER AVENUE - STA. 1+00 TO STA. 4+20
C2.10	PLAN AND PROFILE SHINER AVENUE - STA. 4+20 TO STA. 6+88.90 AND CLEARFORK LANE - STA. 0+51.90 TO STA. 4+04.47
C2.11	PLAN AND PROFILE THISTLE PATH WAY
C2.12	PLAN AND PROFILE SONORA STREET
C2.13	STREET DETAILS
C3.00	SIGNAGE AND STRIPING LAYOUT SHEET 1 OF 3
C3.01	SIGNAGE AND STRIPING LAYOUT SHEET 2 OF 3
C3.02	SIGNAGE AND STRIPING LAYOUT SHEET 3 OF 3
C3.03	SIGNAGE DETAILS SHEET 1 OF 2
C3.04	SIGNAGE DETAILS SHEET 2 OF 2
C4.00	OVERALL SANITARY SEWER PLAN SHEET 1 OF 3
C4.01	OVERALL SANITARY SEWER PLAN SHEET 2 OF 3
C4.02	OVERALL SANITARY SEWER PLAN SHEET 3 OF 3
C4.03	PLAN AND PROFILE SANITARY SEWER LINE A
C4.04	PLAN AND PROFILE SANITARY SEWER LINE B SHEET 1 OF 3
C4.05	PLAN AND PROFILE SANITARY SEWER LINE B SHEET 2 OF 3
C4.06	PLAN AND PROFILE SANITARY SEWER LINE B SHEEET 3 OF 3 AND F
C4.07	PLAN AND PROFILE SANITARY SEWER LINE C AND LINE D SHEET 1 OF 2
C4.08	PLAN AND PROFILE SANITARY SEWER LINE D SHEET 2 OF 2
C4.09	PLAN AND PROFILE SANITARY SEWER LINE E SHEET 1 OF 2
C4.10	PLAN AND PROFILE SANITARY SEWER LINE E SHEET 2 OF 2
C4.11	PLAN AND PROFILE SANITARY SEWER LINE O
C4.12	PLAN AND PROFILE SANITARY SEWER LINE O AND LINE P
C4.13	PLAN AND PROFILE SANITARY SEWER LINE R AND LINE N
C4.14	WASTEWATER DETAILS
C5.00	OVERALL WATER DISTRIBUTION PLAN 1 OF 3
C5.01	OVERALL WATER DISTRIBUTION PLAN 2 OF 3
C5.02	OVERALL WATER DISTRIBUTION PLAN 3 OF 3
C5.03	PROP 12" WATERLINE STA. 0+00.00 TO STA. 10+40.00
C5.04	PROP 12" WATERLINE STA. 10+40.00 TO END
C5.05	WATER DETAILS
C5.06	OVERALL UTILITY PLAN 1 OF 3
C5.07	OVERALL UTILITY PLAN 2 OF 3
C5.08	OVERALL UTILITY PLAN 3 OF 3
C6.00	SWPPP SHEET 1 OF 3
C6.01	SWPPP SHEET 2 OF 3
C6.02	SWPPP SHEET 3 OF 3
C6.03	SWPPP DETAILS
C6.04	ENVIRONMENTAL CONTROL DETAILS
C7.00	POND J PLAN
C7.01	POND J CROSS SECTIONS
C7.02	POND G PLAN
C7.03	POND G CROSS SECTONS
C7.04	POND NOTES AND DETAILS
C8.01	OVERALL LOT GRADING
C9.01	STREET LIGHT PLAN 1 OF 2
C9.02	STREET LIGHT PLAN 1 OF 2

P:\CLARA VISTA PH 1 20212231\DGNS\20212223_PH1-C0.00_COVER SHEET.dgn
7/26/2023
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LEGEND

◉	1/2" REBAR WITH CAP STAMPED "ATWELL" FOUND (OR AS NOTED)
○	1/2" REBAR WITH CAP STAMPED "LSI SURVEY" SET
R.O.W.	RIGHT-OF-WAY
P.U.E.	PUBLIC UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
M.U.E.	MUNICIPAL UTILITY EASEMENT
W.W.E.	WASTEWATER EASEMENT
. . . . .	SIDEWALK
P.R.H.C.T.	PLAT RECORDS OF HAYS COUNTY, TEXAS
O.P.R.H.C.T.	OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS
— 1 —	FEMA 1% ANNUAL CHANCE OF FLOOD PLAIN

OWNER: TOLL SOUTHWEST, LLC
1140 VIRGINIA DRIVE, FT. WASHINGTON, PA 19034

ACREAGE: 93.46 ACRES

SURVEY: CALEB W. BAKER SURVEY NO. 15
ABSTRACT NO. 31

DATE: 05/02/2023

SURVEYOR: LANDESIGN SERVICES, INC.
10090 W. HIGHWAY 29
LIBERTY HILL, TEXAS 78642
TBPELS NO. 10001800
512-238-7901

ENGINEER: COSTELLO, INC.
9050 N CAPITAL OF TEXAS HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
TBPELS NO. 100486
512-646-3456

LINEAR FEET OF STREET: 9,000 FT.

LOT TABLE

RESIDENTIAL DEVELOPMENT LOTS:	128 LOTS
POND LOTS:	4 LOT
D.E. & M.U.E. LOTS:	8 LOTS
TOTAL:	140 LOTS

LAND USE SUMMARY TABLE

RESIDENTIAL DEVELOPMENT LOTS:	38.23 ACRES
R.O.W. DEDICATIONS:	12.76 ACRES
POND LOTS:	39.41 ACRES
D.E. & M.U.E. LOTS:	3.06 ACRES
TOTAL:	93.46 ACRES

GRAPHIC SCALE
100' 80' 60' 40' 20' 0' 50' 100'

GENERAL NOTES:

THIS PROJECT IS REFERENCED FOR ALL BEARING AND COORDINATE BASIS TO THE TEXAS COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD83 – 2011 ADJUSTMENT), SOUTH CENTRAL ZONE (4204).

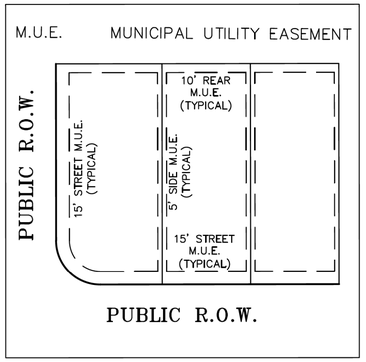
DISTANCES AND AREAS SHOWN HEREON ARE SURFACE VALUES REPRESENTED IN U.S. SURVEY FEET BASED ON A GRID-TO-SURFACE COMBINED ADJUSTMENT FACTOR OF 1.000030645.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (GEOID 12B).

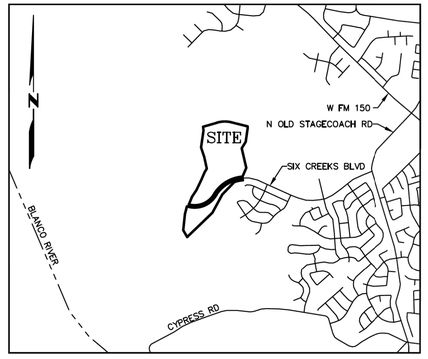
SOME FEATURES SHOWN HEREON MAY BE OUT OF SCALE FOR CLARITY.

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

A FIFTEEN (15) FOOT M.U.E. IS HEREBY DEDICATED ADJACENT TO ALL STREET ROW, A FIVE (5) FOOT M.U.E. IS HEREBY DEDICATED ALONG EACH SIDE LOT LINE, AND A TEN (10) FOOT M.U.E. IS HEREBY DEDICATED ADJACENT TO ALL REAR LOT LINES ON ALL LOTS.



LOT DIAGRAM
(TYPICAL)



VICINITY MAP
(1" = 3000')

6 CREEKS BOULEVARD, PHASE 4
(RIGHT OF WAY ONLY)
4.190 ACRES
DOC. NO. 19038651
P.R.H.C.T.

TOLL SOUTHWEST, LLC
TRACT ONE (107.906 ACRES)
DOC. NO. 22021196
O.P.R.H.C.T.

CALEB W. BAKER SURVEY NO. 15
ABSTRACT NO. 31

BLANCO RIVER RANCH PROPERTIES, LP
(1,971.29 ACRES)
VOL. 5230, PG. 583
O.P.R.H.C.T.

HMBRR LP#2
(608.70 ACRES)
DOC. NO. 17034180
O.P.R.H.C.T.

CITY OF KYLE CITY LIMITS
CITY OF KYLE E.T.J.

ROCKPORT RD (60' R.O.W.)
DAWN DR (60' R.O.W.)
LAVACA DR (60' R.O.W.)
BRAMBLE BLVD (60' R.O.W.)
PONDEROSA DR (60' R.O.W.)

N: 13916835.21
E: 2312190.78

N: 13916847.35
E: 2313701.29

"URBAN CIVIL"

ILLEGIBLE

MATCHLINE SHEET 1
SHEET 2

LSI LANDESIGN SERVICES, INC.
10090 W HIGHWAY 29, LIBERTY HILL, TEXAS 78642
TBPELS FIRM NO. 10001800
512-238-7901

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

CLARA VISTA AT WATER RIDGE PHASE 1

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

PLAT
SHEET 1 OF 4

REVISIONS	
DATE	DESCRIPTION

PROJECT NAME: CES WATERRIDGE
JOB NUMBER: 22-013
DATE: 06/23/23 | SCALE: 1" = 100'
DRAWING FILE PATH: K:\22013 - CES WATERRIDGE\CAD\DWGS\CLARA VISTA PH 1.DWG
FIELDNOTE FILE PATH: K:\.22013 – CES WATERRIDGE\.DESCRIPTIONS
RPLS: FWF | TECH: JRM | PARTYCHIEF: TN
CHECKED BY: HAS | FIELDBOOK: : 1/403

DRAWING NAME: CLARA VISTA PH 1

SHEET
01 of 06

SHEET C0.01
OF 83 SHEETS

DRAWING PATH: K:\22013 - CES WATERRIDGE\CAD\DWGS\CLARA VISTA PH 1.DWG SHEET PLOT SIZE: ARCH FULL BLEED C (18.00 X 24.00 INCHES) LAST SAVED: 6/23/2023 11:48 AM PLOT DATE: 6/23/2023 11:49 AM

P:\CLARA VISTA PH 1 2021\223\DGNS\2021223_PH1-C0.01_PLAT 1 OF 4.dgn
7/26/2023 2:23:43 PM

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

MATCHLINE SHEET 1
SHEET 2

MATCHLINE SHEET 2
SHEET 3

CALEB W. BAKER SURVEY NO. 15
ABSTRACT NO. 31

BLANCO RIVER RANCH PROPERTIES, LP
(1,971.29 ACRES)
VOL. 5230, PG. 583
O.P.R.H.C.T.

HMBRR LP#2
(608.70 ACRES)
DOC. NO. 17034180
O.P.R.H.C.T.

PONDEROSA DR (60' R.O.W.)

LAVACA DR
(60' R.O.W.)

SHINNER AVE (60' R.O.W.)

BRAMBLE BLVD (60' R.O.W.)

CLEARFORK LN
(60' R.O.W.)

ALPINE CROSSING DR (60' R.O.W.)

MILAM CREEK DRIVE
(50' R.O.W.)

CITY OF KYLE CITY LIMITS
CITY OF KYLE E.T.J.

"URBAN CIVIL"
N: 13915138.49
E: 2313529.12

"PAPE DAWSON"

6 CREEKS BOULEVARD
PHASE 1, SECTION 3
(RIGHT OF WAY ONLY)
DOC. NO. 21038005
P.R.H.C.T.

6 CREEKS
PHASE 1, SECTION 8A
DOC. NO. 21058478
P.R.H.C.T.

6 CREEKS
PHASE 1, SECTION 9
DOC. NO. 23013655
P.R.H.C.T.

LOT 114

GRAPHIC SCALE
100' 80' 60' 40' 20' 0' 50' 100'

LANDESIGN SERVICES, INC.
10090 W HIGHWAY 29, LIBERTY HILL, TEXAS 78642
TBPELS FIRM NO. 10001800
512-238-7901

CLARA VISTA AT WATER RIDGE
PHASE 1

REVISIONS	
DATE	DESCRIPTION

PROJECT NAME: CES WATERRIDGE	
JOB NUMBER: 22-013	SCALE: 1" = 100'
DATE: 06/23/23	
DRAWING FILE PATH: K:\22013 - CES WATERRIDGE\CAD\DWGS\CLARA VISTA PH 1.DWG	
FIELDNOTE FILE PATH: K:\22013 - CES WATERRIDGE\DESCRIPTIONS	
RPLS: FWF	TECH: JRM
CHECKED BY: HAS	FIELDBOOK: 1/403

DRAWING NAME: CLARA VISTA PH 1

SHEET
02 of 06

DESIGNED:	
DESIGN CHECKED:	
DRAWN:	
COGO CHECKED:	
SURVEY CHECKED:	
QA/QC:	DATE:
QA/QC REVISIONS:	

NO.	REVISION	DATE	BY

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY., BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

PLAT
SHEET 2 OF 4

SHEET C0.02
OF 83 SHEETS

DRAWING PATH: K:\22013 - CES WATERRIDGE\CAD\DWGS\CLARA VISTA PH 1.DWG SHEET PLOT SIZE: ARCH FULL BLEED C (18.00 X 24.00 INCHES) LAST SAVED: 6/23/2023 11:48 AM PLOT DATE: 6/23/2023 11:49 AM

P:\CLARA VISTA PH 1 2021223\DGNS\2021223_PH1-C0.02_PLAT 2 OF 4.dgn
7/26/2023 2:23:51 PM

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

GRAPHIC SCALE
100' 80' 60' 40' 20' 0' 50' 100'

N

BLANCO RIVER RANCH PROPERTIES, LP
(1,971.29 ACRES)
VOL. 5230, PG. 583
O.P.R.H.C.T.

6 CREEKS BOULEVARD, PHASE 2
(RIGHT OF WAY ONLY)
6.044 ACRES
DOC. NO. 19038648
P.R.H.C.T.

BLANCO RIVER RANCH PROPERTIES, LP
(1,971.29 ACRES)
VOL. 5230, PG. 583
O.P.R.H.C.T.

CALEB W. BAKER SURVEY NO. 15
ABSTRACT NO. 31

MATCHLINE SHEET 2
SHEET 3

S 6 CREEKS BLVD
(80' R.O.W.)

ALPINE CROSSING DR
(60' R.O.W.)

SONORA ST
(60' R.O.W.)

THISTLE PATH WAY
(60' R.O.W.)

TRACT 1
POINT OF BEGINNING

TRACT 2
POINT OF BEGINNING

"URBAN CIVIL"

CITY OF KYLE CITY LIMITS
CITY OF KYLE E.T.J.

LOT 114
6 CREEKS
PHASE 1, SECTION 9
DOC. NO. 23013655
P.R.H.C.T.

N: 13913091.94
E: 2311650.46

LANDESIGN SERVICES, INC.
10090 W HIGHWAY 29, LIBERTY HILL, TEXAS 78642
TBPELS FIRM NO. 10001800
512-238-7901

CLARA VISTA AT WATER RIDGE
PHASE 1

REVISIONS	
DATE	DESCRIPTION

PROJECT NAME: CES WATERRIDGE
JOB NUMBER: 22-013
DATE: 06/23/23 | SCALE: 1" = 100'
DRAWING FILE PATH: K:\22013 - CES WATERRIDGE\CAD\DWGS\CLARA VISTA PH 1.DWG
FIELDNOTE FILE PATH: K:\22013 - CES WATERRIDGE\DESCRIPTIONS
RPLS: FWF | TECH: JRM | PARTYCHIEF: TN
CHECKED BY: HAS | FIELDBOOK: 1/403

DRAWING NAME: CLARA VISTA PH 1

SHEET 03 of 06

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: _____ DATE: _____
QA/QC REVISIONS:

NO.	REVISION	DATE	BY

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

PLAT
SHEET 3 OF 4

SHEET C0.03
OF 83 SHEETS

FUTURE NORTH
6 CREEKS BLVD

PROPERTY BOUNDARY

FUTURE DEVELOPMENT

FUTURE DEVELOPMENT

1- 8" PLUG&CLAMP

PROP. BARRICADE

1-8" GATE VALVE, M.J.
1-8" VALVE BOX, COMPLETE

108 LF ~ 8" PVC

8 LF ~ 8" PVC

1-8"x45° BEND, M.J.

10 LF ~ 8" PVC

1-8"x45° BEND, M.J.

57 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

1-8"x11.25° BEND, M.J.

244 LF ~ 8" PVC

194 LF ~ 8" PVC

1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

1-8"x11.25° BEND, M.J.

422 LF ~ 8" PVC

1- 12" PLUG&CLAMP

PROP. BARRICADE

9 LF ~ 8" PVC

1-8"x45° BEND, M.J.

11 LF ~ 8" PVC

1-8"x45° BEND, M.J.

147 LF ~ 12" PVC

1-12" GATE VALVE, M.J.
1-12" VALVE BOX, COMPLETE

1-12"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

ROCKPORT RD
(60' R.O.W.)

1-8"x11.25° BEND, M.J.

24 LF ~ 8" PVC

1-8"X8" TEE, M.J. ANCHOR
1-8" GATE VALVE, M.J.
1-8" VALVE BOX, COMPLETE

1-12"X8" TEE, M.J. ANCHOR
1-8" GATE VALVE, M.J.
1-8" VALVE BOX, COMPLETE

150 LF ~ 8" PVC

1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

1-8"X8" TEE, M.J. ANCHOR
2-8" GATE VALVE, M.J.
2-8" VALVE BOX, COMPLETE

5 LF ~ 8" PVC

45 LF ~ 8" PVC

2-8"x22.5° BEND, M.J.

8 LF ~ 8" PVC

1-8"x45° BEND, M.J.

121 LF ~ 8" PVC

16 LF ~ 8" PVC

1-8"x45° BEND, M.J.

35 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

77 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

LAVACA DR
(60' R.O.W.)

PROPERTY BOUNDARY

241 LF ~ 8" PVC

1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

242 LF ~ 8" PVC

1-8"X8" TEE, M.J. ANCHOR
2-8" GATE VALVE, M.J.
2-8" VALVE BOX, COMPLETE

1-8"x11.25° BEND, M.J.

98 LF ~ 8" PVC

96 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

101 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

202 LF ~ 8" PVC

1-8"x45° BEND, M.J.

7 LF ~ 8" PVC

1-8"x45° BEND, M.J.

9 LF ~ 8" PVC

1-8"x45° BEND, M.J.

339 LF ~ 12" PVC

1-12"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

500' YR. FLOOD PLAIN

100' YR. FLOOD PLAIN

DAWN DR
(60' R.O.W.)

1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

109 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

108 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

44 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

102 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

1-8"x11.25° BEND, M.J.

92 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

88 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

93 LF ~ 8" PVC

1-8"x11.25° BEND, M.J.

91 LF ~ 8" PVC

1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

PONDEROSA DR
(60' R.O.W.)

365 LF ~ 8" PVC

1-8"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

1-12"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

1-12"X8" TEE, M.J. ANCHOR
1-12" GATE VALVE, M.J.
1-8" GATE VALVE, M.J.
1-8" VALVE BOX, COMPLETE
1-12" VALVE BOX, COMPLETE

451 LF ~ 12" PVC

1-12"x6" ANCHOR TEE, M.J.
1-6" GATE VALVE, M.J.
1-6" VALVE BOX, COMPLETE
6" D.I. PIPE, CUT AS REQUIRED
1-STD FIRE HYDRANT
(SEE CITY OF KYLE STD. DETAIL)

BRAMBLE BLVD
(60' R.O.W.)

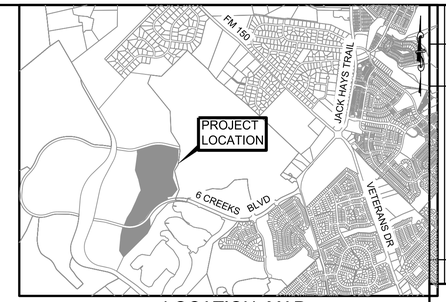
2-12"x22.50° BEND, M.J.

6 LF
12" PVC

283 LF ~ 12" PVC

MATCH LINE SEE SHEET C5.01

ALL PVC WATERLINE PIPE SHALL BE
C-900 CLASS 200 DR 14)
UNLESS OTHERWISE NOTED



LOCATION MAP
N.T.S.

N

60 30 0 60 120

SCALE: 1" = 60'

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY BOUNDARY
- RIGHT OF WAY
- EASEMENT
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED TEE
- PROPOSED BEND
- PROPOSED WATER CAP
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER

WATER NOTES:

1. ALL 8" AND 12" WATER LINES TO BE AWWA C-900 CURRENT, PRESSURE CLASS 305 PIS (DR-14), UNLESS OTHERWISE NOTED ON THE PLANS.
2. ALL WATER AND WASTEWATER SERVICES ARE TO BE PLACED WITHIN RIGHT OF WAY OR PUBLIC UTILITY EASEMENTS. NO SERVICES ARE TO BE LOCATED IN SIDEWALKS OR CURB RAMPS. ALL FIRE HYDRANTS ARE TO BE PLACED IN RIGHT-OF-WAY.
3. WATER AND WASTEWATER SERVICES SHOWN ON PLANS ARE GRAPHICAL REPRESENTATIONS AND NOT TO SCALE. ACTUAL SERVICES SHALL BE PLACED PER DETAIL.
4. ALL GATE VALVES TO BE INSTALLED PER COA DETAIL 511-AW-01 AT P.C. OF CURB AT ALL INTERSECTIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. FIRE HYDRANTS SHALL BE CONSTRUCTED PER COL DETAIL #101-4. FIRE HYDRANTS MUST BE LOCATED IN THE RIGHT-OF-WAY AND MAY NOT BE CLOSER THAN 7.5' TO A STORM INLET.
6. HOME BUILDERS ARE REQUIRED TO INSTALL PRESSURE REDUCING VALVES ON THE PROPERTY OWNER'S SIDE OF EACH METER.
7. WATER LINES SHALL CONFORM TO COA STANDARD SPECIFICATION 510.3.
8. ALL PIPE WITHIN ENCASEMENT PIPE SHALL BE RESTRAINED.
9. CENTER ONE 9' SLEEVE OF 4" SCH. 40 PVC FOR WATER SERVICE AT STORM SEWER CROSSINGS.
10. A BLUE TYPE II-B-B REFLECTORIZED PAVEMENT MARKER, CONFORMING TO STANDARD SPECIFICATION ITEM NO. 8635, SHALL BE PLACED 2 TO 3 FEET OFFSET FROM THE CENTERLINE OF PAVED STREETS, ON THE SIDE OF AND IN LINE WITH, ALL NEWLY INSTALLED FIRE HYDRANTS.
11. HYDRANTS SHALL BE FLOW TESTED BY CONTRACTORS AND RESULTS PROVIDED TO FIRE MARSHAL'S AND CITY ENGINEER'S OFFICES, THE HYDRANT BONNET TO FLANGE AND NOZZLE CAPS SHALL BE PAINTED THE APPROVED COLOR CORRESPONDING WITH THE APPROPRIATE FLOW RATE.

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY., BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

OVERALL WATER DISTRIBUTION PLAN
SHEET 1 OF 3

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED PROFESSIONAL ENGINEER

8/15/2023

SHEET C5.00
OF 83 SHEETS

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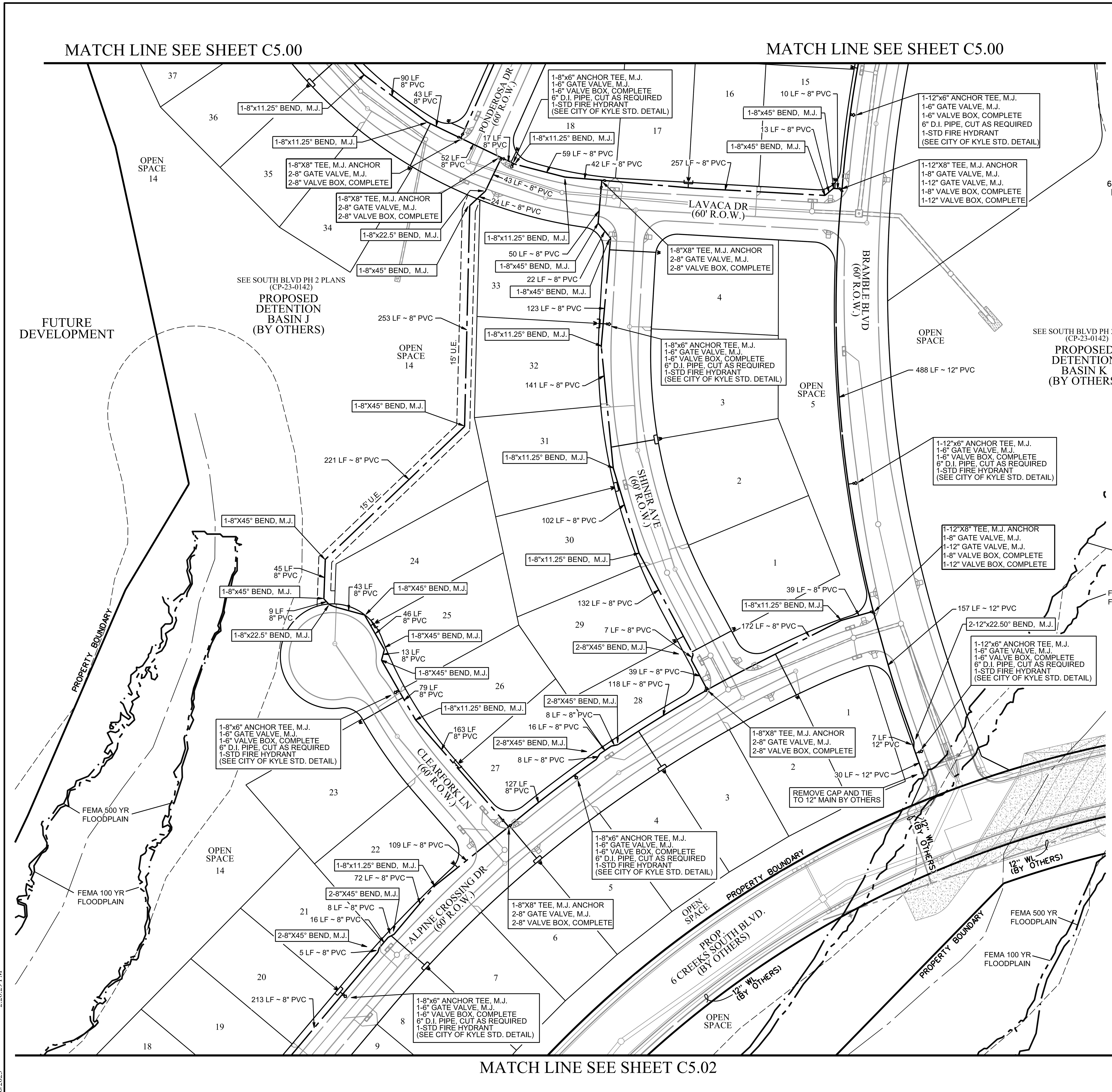
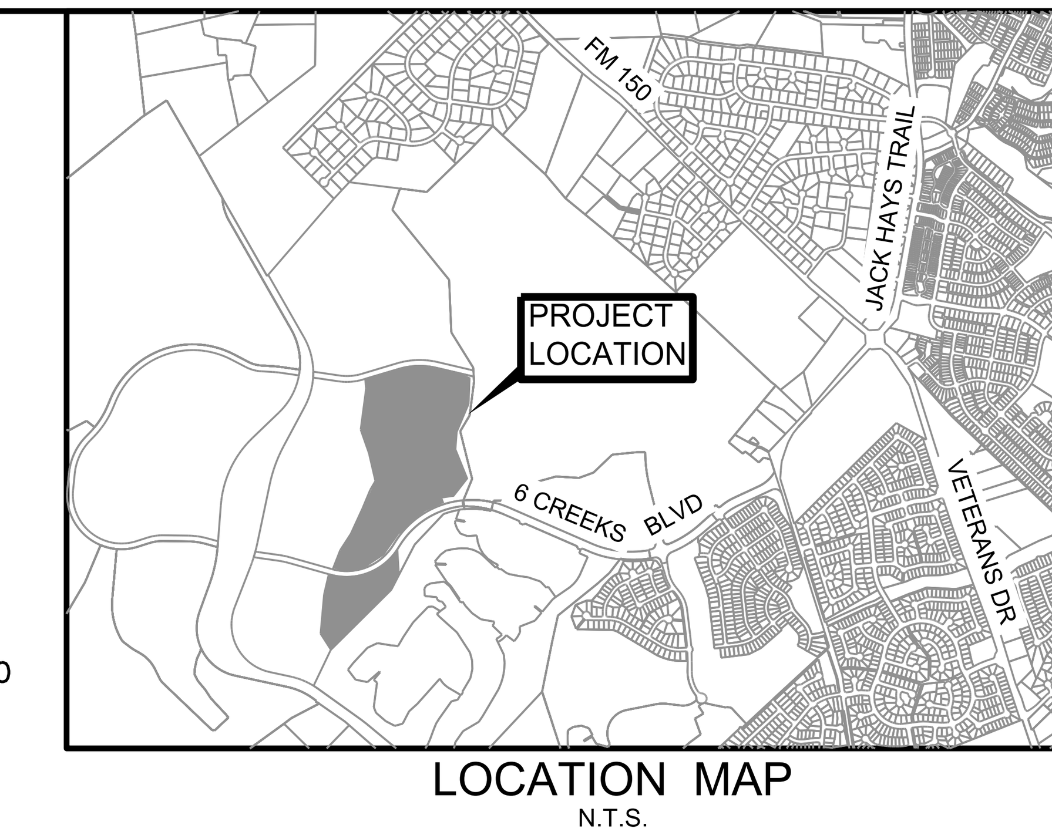
FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION





LOCATION MAP
N.T.S.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY BOUNDARY
- RIGHT OF WAY
- EASEMENT
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED TEE
- PROPOSED BEND
- PROPOSED WATER CAP
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER

WATER NOTES:

1. ALL 8" AND 12" WATER LINES TO BE AWWA C-900 CURRENT, PRESSURE CLASS 305 PIS (DR-14), UNLESS OTHERWISE NOTED ON THE PLANS.
2. ALL WATER AND WASTEWATER SERVICES ARE TO BE PLACED WITHIN RIGHT OF WAY OR PUBLIC UTILITY EASEMENTS. NO SERVICES ARE TO BE LOCATED IN SIDEWALKS OR CURB RAMPS. ALL FIRE HYDRANTS ARE TO BE PLACED IN RIGHT-OF-WAY.
3. WATER AND WASTEWATER SERVICES SHOWN ON PLANS ARE GRAPHICAL REPRESENTATIONS AND NOT TO SCALE. ACTUAL SERVICES SHALL BE PLACED PER DETAIL.
4. ALL GATE VALVES TO BE INSTALLED PER COA DETAIL 511-AW-01 AT P.C. OF CURB AT ALL INTERSECTIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. FIRE HYDRANTS SHALL BE CONSTRUCTED PER COL DETAIL #101-4. FIRE HYDRANTS MUST BE LOCATED IN THE RIGHT-OF-WAY AND MAY NOT BE CLOSER THAN 7.5' TO A STORM INLET.
6. HOME BUILDERS ARE REQUIRED TO INSTALL PRESSURE REDUCING VALVES ON THE PROPERTY OWNER'S SIDE OF EACH METER.
7. WATER LINES SHALL CONFORM TO COA STANDARD SPECIFICATION 510.3.
8. ALL PIPE WITHIN ENCASEMENT PIPE SHALL BE RESTRAINED.
9. CENTER ONE 9' SLEEVE OF 4" SCH. 40 PVC FOR WATER SERVICE AT STORM SEWER CROSSINGS.
10. A BLUE TYPE II-B-B REFLECTORIZED PAVEMENT MARKER, CONFORMING TO STANDARD SPECIFICATION ITEM NO. 8635, SHALL BE PLACED 2 TO 3 FEET OFFSET FROM THE CENTERLINE OF PAVED STREETS, ON THE SIDE OF AND IN LINE WITH, ALL NEWLY INSTALLED FIRE HYDRANTS.
11. HYDRANTS SHALL BE FLOW TESTED BY CONTRACTORS AND RESULTS PROVIDED TO FIRE MARSHAL'S AND CITY ENGINEER'S OFFICES. THE HYDRANT BONNET TO FLANGE AND NOZZLE CAPS SHALL BE PAINTED THE APPROPRIATE COLOR CORRESPONDING WITH THE APPROPRIATE FLOW RATE.

ALL PVC WATERLINE PIPE SHALL BE
(C-900 CLASS 200 DR 14)
UNLESS OTHERWISE NOTED

NO. | REVISION | DATE | BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC:
QA/QC REVISIONS:
DATE:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

OVERALL WATER DISTRIBUTION PLAN SHEET 2 OF 3

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET C5.01
OF 83 SHEETS

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P:\CLARA VISTA PH 1 20212231\DGNS\2021223_PH1-C5.01_WATER LAYOUT 2 OF 3.dgn
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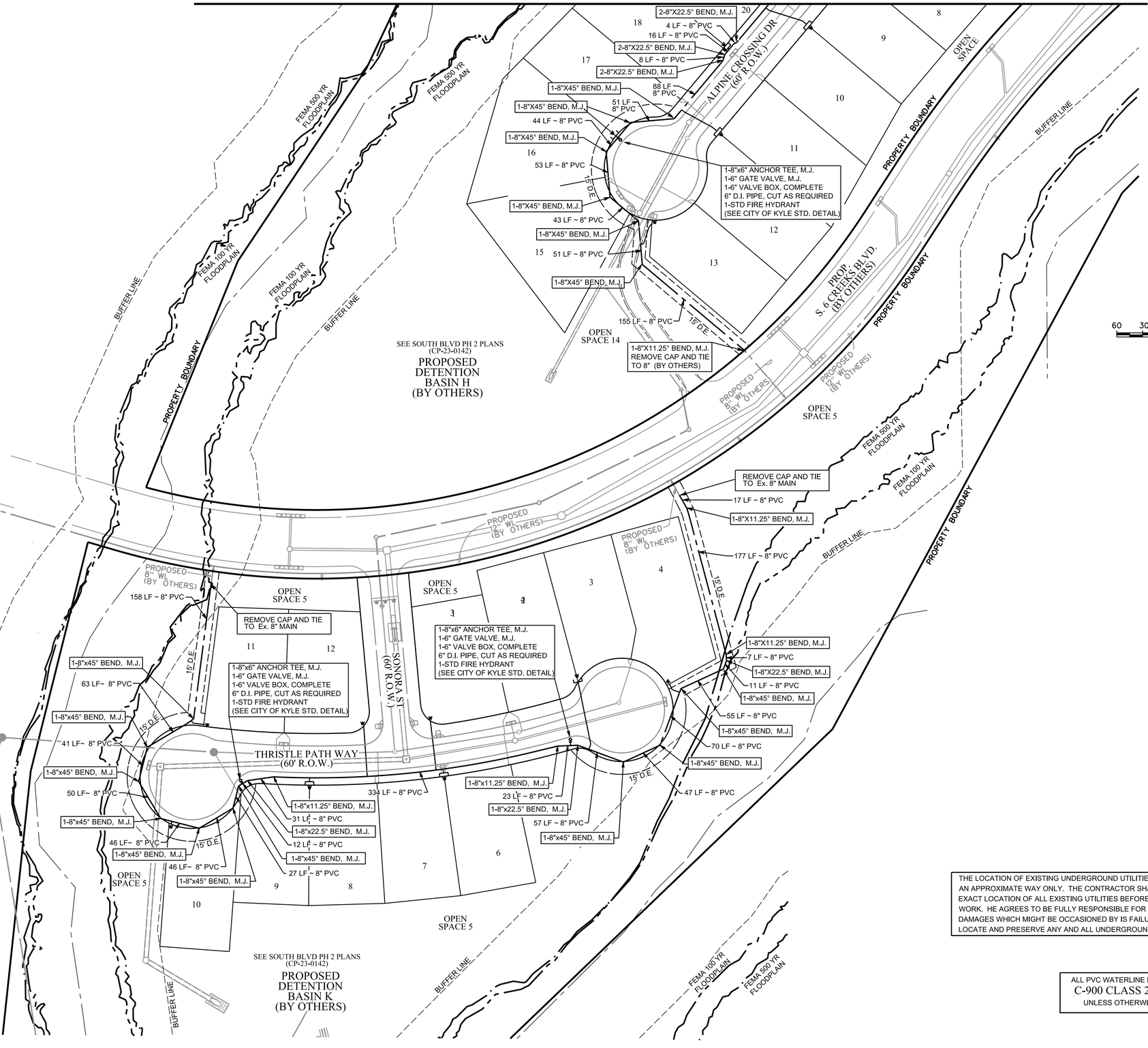
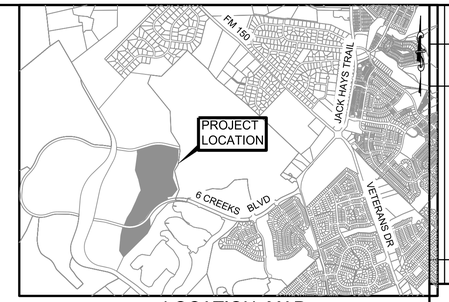
7/26/2023

MATCH LINE SEE SHEET C5.01





LOCATION MAP
N.T.S.

N

60 30 0 60 120

SCALE: 1" = 60'

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY BOUNDARY
- RIGHT OF WAY
- EASEMENT
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED TEE
- PROPOSED BEND
- PROPOSED WATER CAP
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- EXISTING STORM SEWER
- PROPOSED STORM SEWER

WATER NOTES:

1. ALL 8" AND 12" WATER LINES TO BE AWWA C-900 CURRENT, PRESSURE CLASS 305 PIS (DR-14), UNLESS OTHERWISE NOTED ON THE PLANS.
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4. ALL GATE VALVES TO BE INSTALLED PER COA DETAIL 511-AW-01 AT P.C. OF CURB AT ALL INTERSECTIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. FIRE HYDRANTS SHALL BE CONSTRUCTED PER COL DETAIL #101-4. FIRE HYDRANTS MUST BE LOCATED IN THE RIGHT-OF-WAY AND MAY NOT BE CLOSER THAN 7.5' TO A STORM INLET.
6. HOME BUILDERS ARE REQUIRED TO INSTALL PRESSURE REDUCING VALVES ON THE PROPERTY OWNER'S SIDE OF EACH METER.
7. WATER LINES SHALL CONFORM TO COA STANDARD SPECIFICATION 510.3.
8. ALL PIPE WITHIN ENCASEMENT PIPE SHALL BE RESTRAINED.
9. CENTER ONE 9' SLEEVE OF 4" SCH. 40 PVC FOR WATER SERVICE AT STORM SEWER CROSSINGS.
10. A BLUE TYPE II-B-B REFLECTORIZED PAVEMENT MARKER, CONFORMING TO STANDARD SPECIFICATION ITEM NO. 863S, SHALL BE PLACED 2 TO 3 FEET OFFSET FROM THE CENTERLINE OF PAVED STREETS, ON THE SIDE OF AND IN LINE WITH, ALL NEWLY INSTALLED FIRE HYDRANTS.
11. HYDRANTS SHALL BE FLOW TESTED BY CONTRACTORS AND RESULTS PROVIDED TO FIRE MARSHAL'S AND CITY ENGINEER'S OFFICES. THE HYDRANT BONNET TO FLANGE AND NOZZLE CAPS SHALL BE PAINTED THE APPROVED COLOR CORRESPONDING WITH THE APPROPRIATE FLOW RATE.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES

ALL PVC WATERLINE PIPE SHALL BE C-900 CLASS 200 DR 14) UNLESS OTHERWISE NOTED

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

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TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

OVERALL WATER DISTRIBUTION PLAN
SHEET 3 OF 3

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET C5.02
OF 83 SHEETS

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

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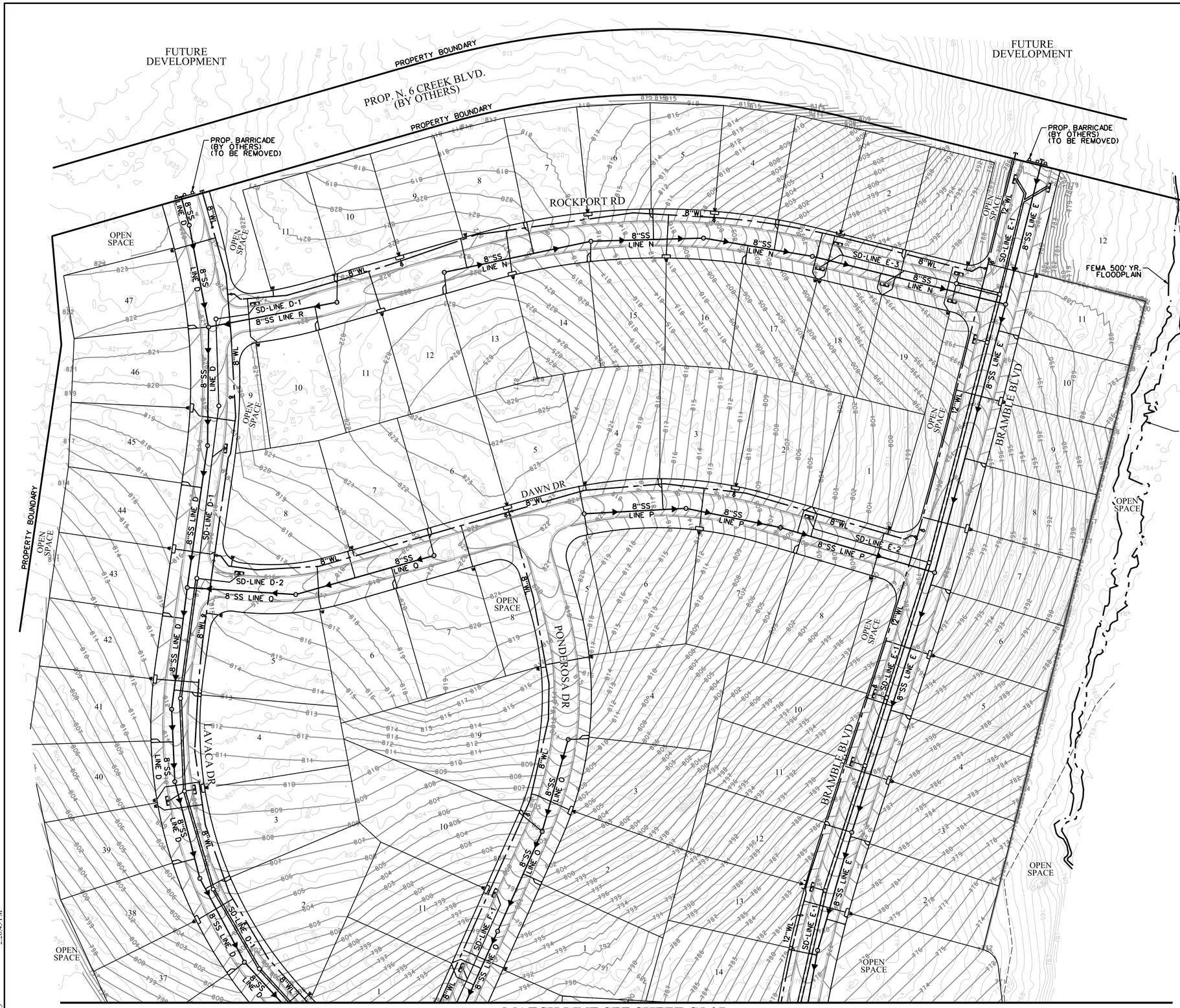

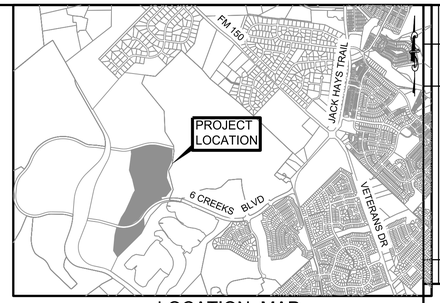

LOCATION MAP
N.T.S.

N

60 30 0 60 120

SCALE: 1" = 60'

LEGEND

- SECTION BOUNDARY
- EXISTING CONTOUR
- PROPOSED CONTOUR
- 100 YR FEMA FLOODPLAIN ZONE
- 500 YR FEMA FLOODPLAIN ZONE
- EXISTING POTABLE WATER
- PROPOSED POTABLE WATER
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED STREET LIGHT

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

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CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

OVERALL UTILITY PLAN
SHEET 1 OF 3

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET C5.06
OF 83 SHEETS

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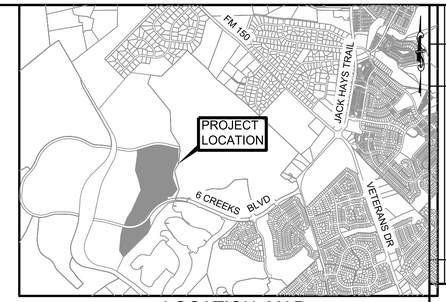
FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

MATCH LINE SEE SHEET C5.06

MATCH LINE SEE SHEET C5.08



LOCATION MAP
N.T.S.

N

60 30 0 60 120

SCALE: 1" = 60'

LEGEND

- SECTION BOUNDARY
- EXISTING CONTOUR
- PROPOSED CONTOUR
- 100 YR FEMA FLOODPLAIN ZONE
- 500 YR FEMA FLOODPLAIN ZONE
- EXISTING POTABLE WATER
- PROPOSED POTABLE WATER
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED STREET LIGHT

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

OVERALL UTILITY PLAN
SHEET 2 OF 3

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET C5.07
OF 83 SHEETS

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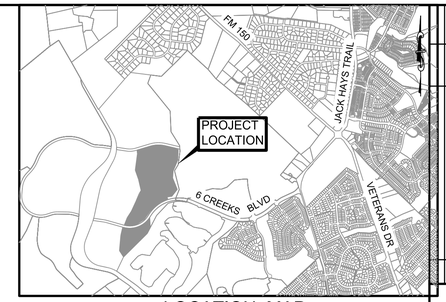

LOCATION MAP
N.T.S.

LEGEND

- SECTION BOUNDARY
- EXISTING CONTOUR
- PROPOSED CONTOUR
- 100 YR FEMA FLOODPLAIN ZONE
- 500 YR FEMA FLOODPLAIN ZONE
- EXISTING POTABLE WATER
- PROPOSED POTABLE WATER
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- PROPOSED STREET LIGHT

NO.	REVISION	DATE	BY

DESIGNED: ____
DESIGN CHECKED: ____
DRAWN: ____
COGO CHECKED: ____
SURVEY CHECKED: ____
QA/QC: ____ DATE: ____
QA/QC REVISIONS: ____

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ENGINEERING AND SURVEYING
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AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

OVERALL UTILITY PLAN
SHEET 3 OF 3

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET C5.08
OF 83 SHEETS

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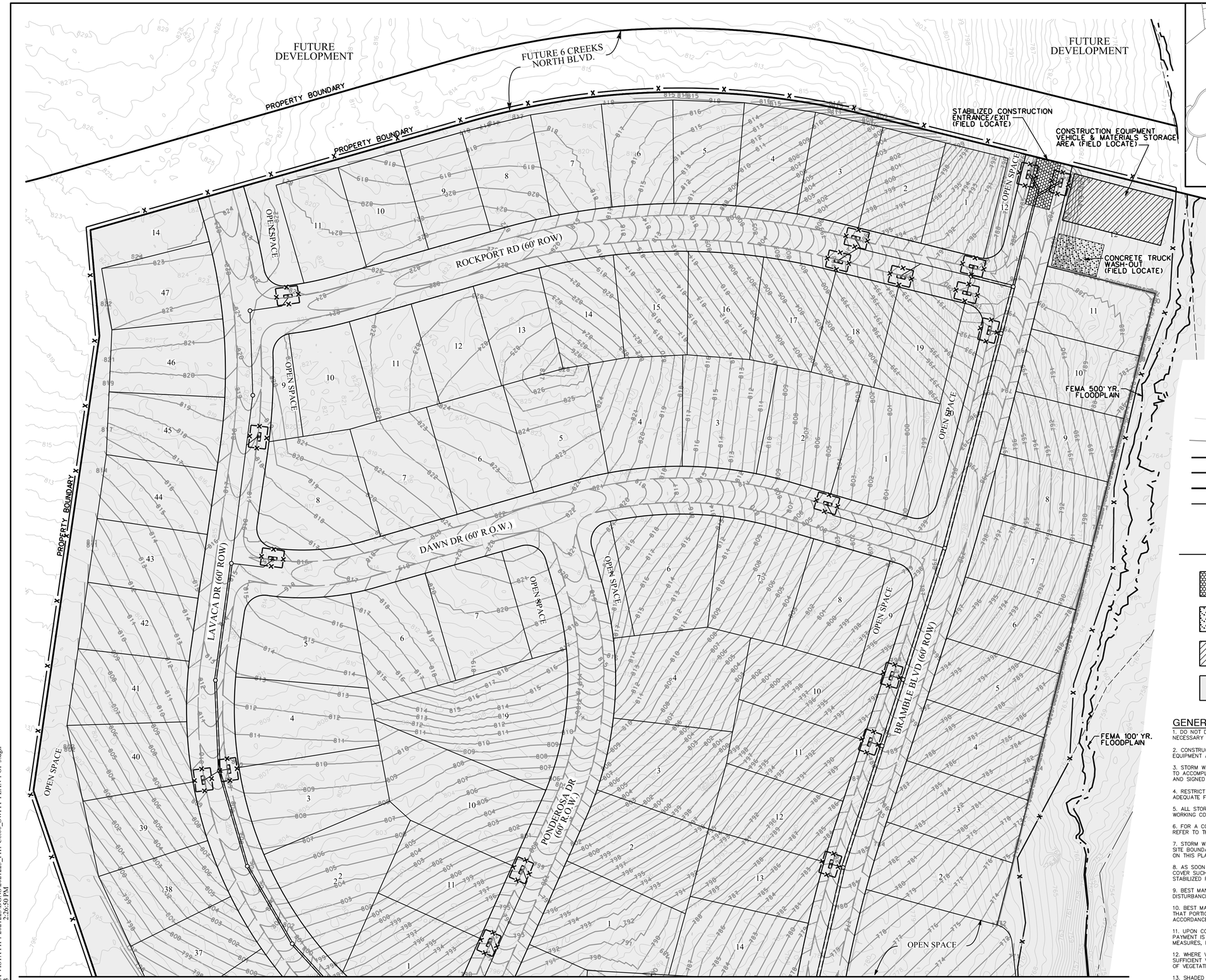

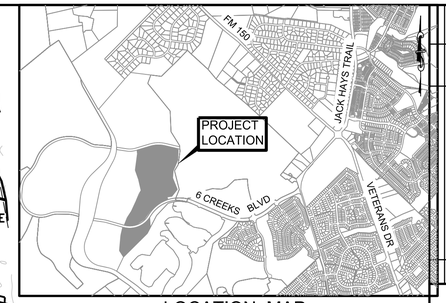

LOCATION MAP
N.T.S.

N

60 30 0 60 120

SCALE: 1" = 60'

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- 100 YR FEMA FLOODPLAIN ZONE
- 500 YR FEMA FLOODPLAIN ZONE
- PROPERTY BOUNDARY
- RIGHT OF WAY
- INLET PROTECTION REQUIRED
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)
- CONCRETE TRUCK WASH-OUT (FIELD LOCATE)
- CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)
- DISTURBED AREA (+/- 93.47 ACRES)

GENERAL NOTES:

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

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

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

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

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

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

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

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

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

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

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

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

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

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY., BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

SWPPP PLAN
SHEET 1 OF 3

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET C6.00
OF 83 SHEETS

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

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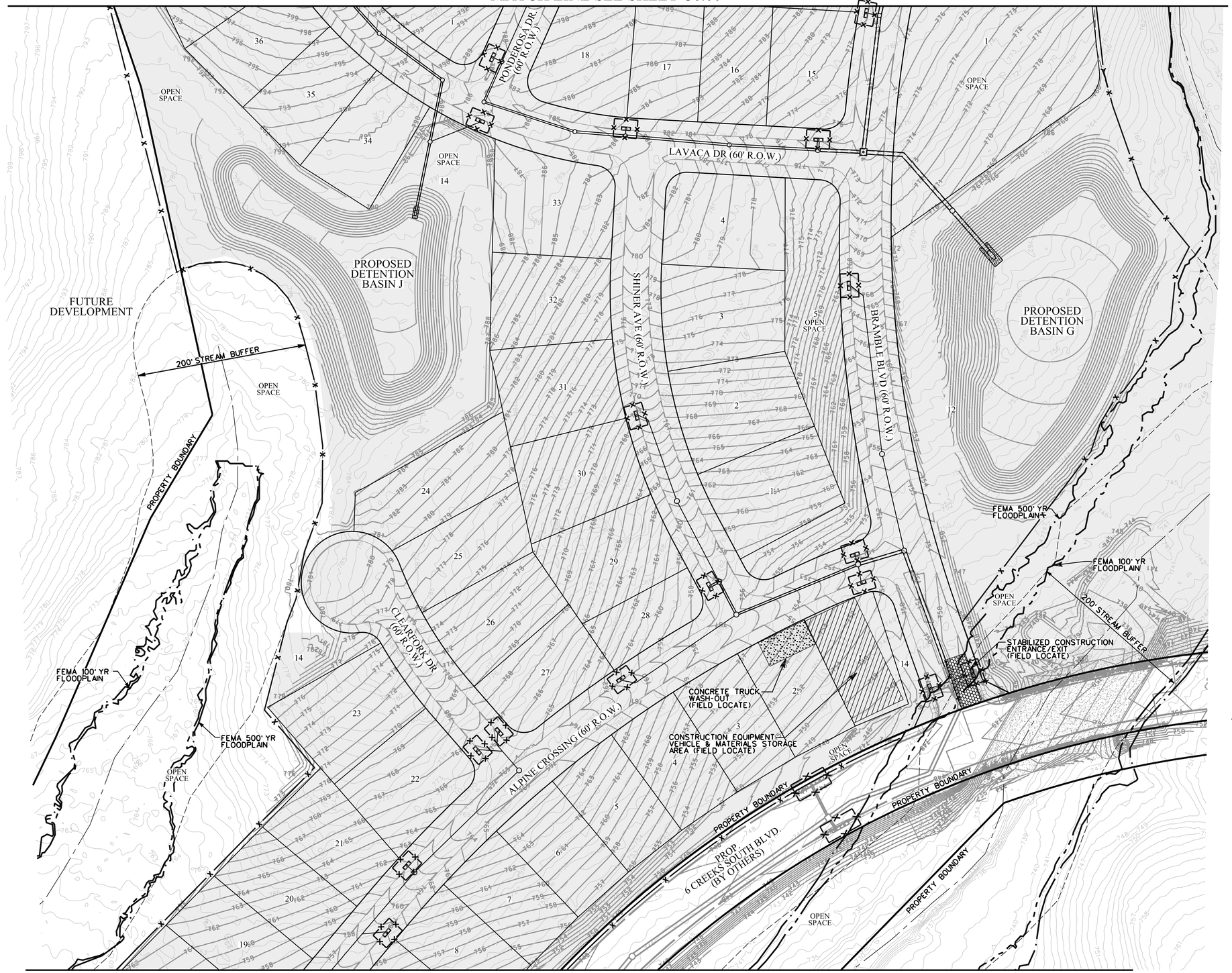

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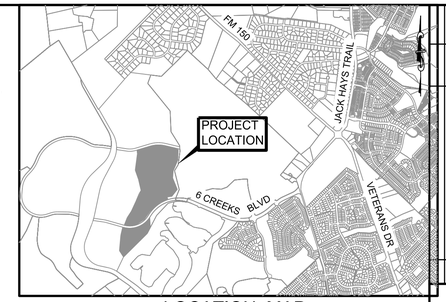

LOCATION MAP
N.T.S.

N

60 30 0 60 120
SCALE: 1" = 60'

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- 100 YR FEMA FLOODPLAIN ZONE
- 500 YR FEMA FLOODPLAIN ZONE
- PROPERTY BOUNDARY
- RIGHT OF WAY
- INLET PROTECTION REQUIRED
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)
- CONCRETE TRUCK WASH-OUT (FIELD LOCATE)
- CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)
- DISTURBED AREA (+/- 93.47 ACRES)

GENERAL NOTES:

1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
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COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

SWPPP PLAN
SHEET 2 OF 3

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET C6.01
OF 83 SHEETS

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

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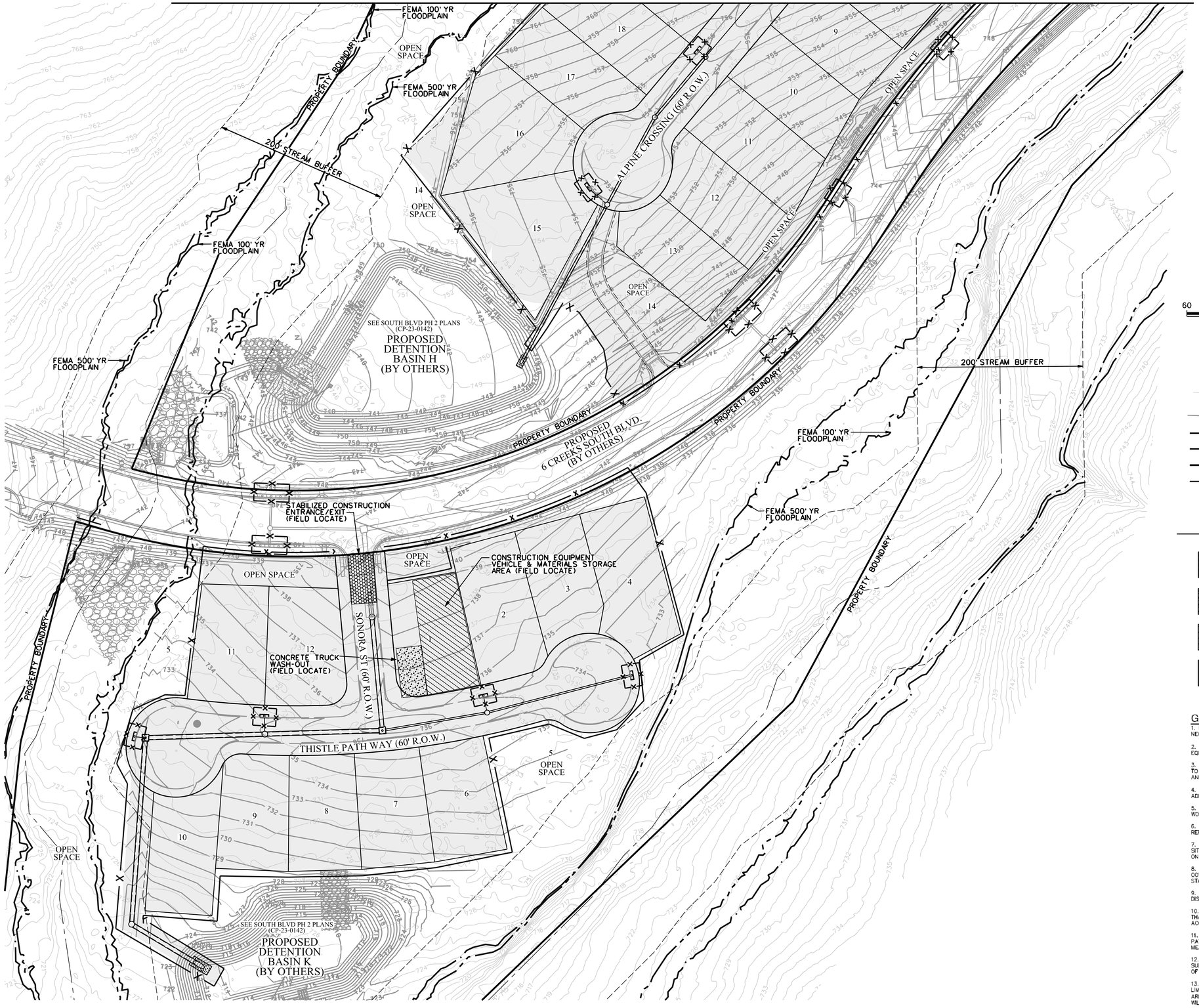
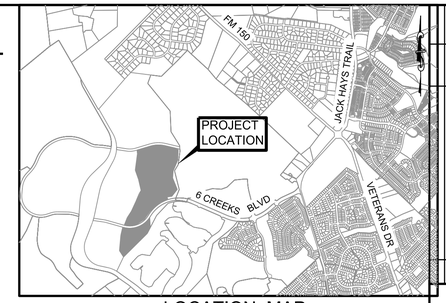
MATCH LINE SEE SHEET C6.01





LOCATION MAP
N.T.S.

N

60 30 0 60 120
SCALE: 1" = 60'

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- 100 YR FEMA FLOODPLAIN ZONE
- 500 YR FEMA FLOODPLAIN ZONE
- PROPERTY BOUNDARY
- RIGHT OF WAY
- INLET PROTECTION REQUIRED
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NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY., BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

SWPPP PLAN
SHEET 3 OF 3

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET C6.02
OF 83 SHEETS

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7/26/2023
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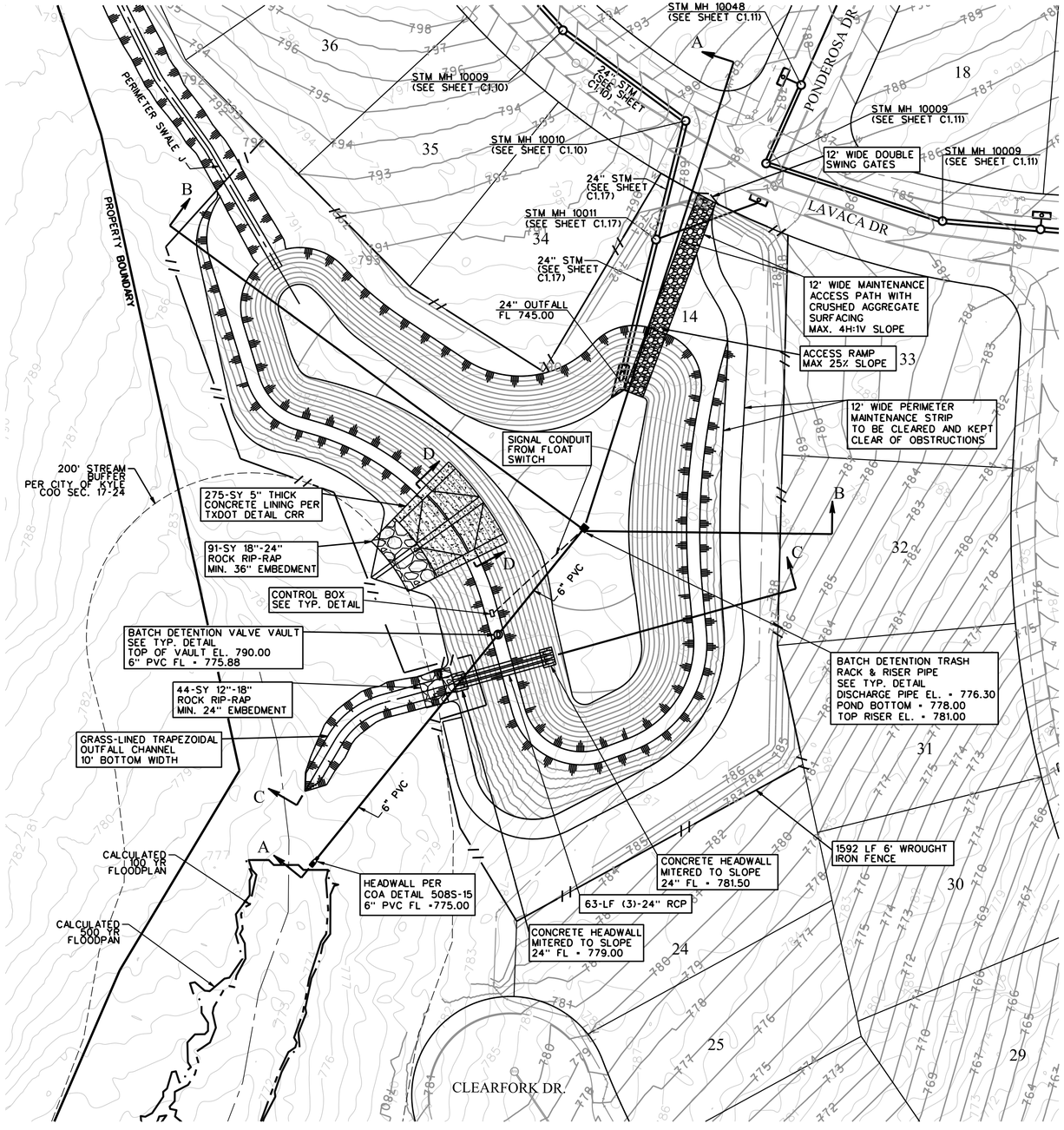

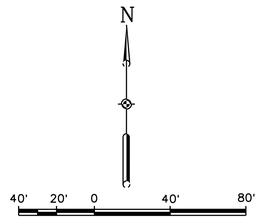

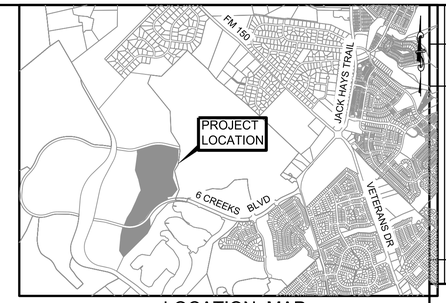

LOCATION MAP
N.T.S.

LEGEND

- SECTION BOUNDARY
- EXISTING CONTOUR
- PROPOSED CONTOUR
- 100 YR FEMA FLOODPLAIN ZONE
- 500 YR FEMA FLOODPLAIN ZONE
- EXISTING POTABLE WATER
- PROPOSED POTABLE WATER
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- ROCK RIP RAP

NOTE:
1. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO INSTALLATION OF UTILITIES.
2. ALL PIPE VELOCITIES ARE CONFIRMED LESS THAN 20 FPS.

FOR TYPICAL SECTIONS SEE SHEET C7.01

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

POND J

STATE OF TEXAS
MICHAEL A KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET C7.00
OF 83 SHEETS

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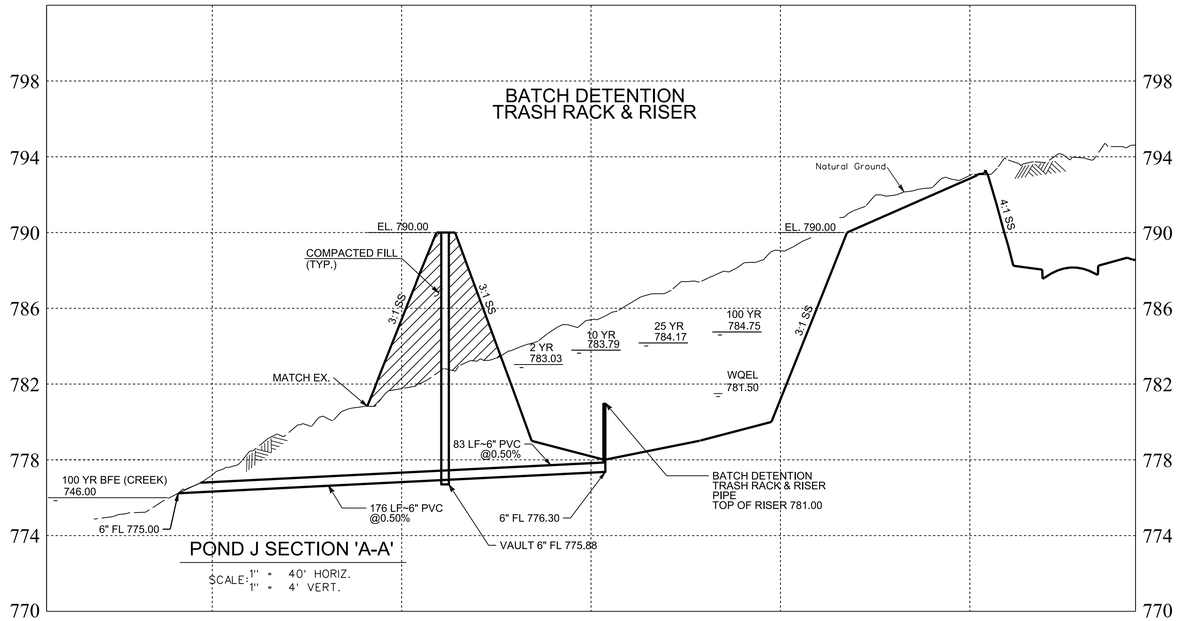
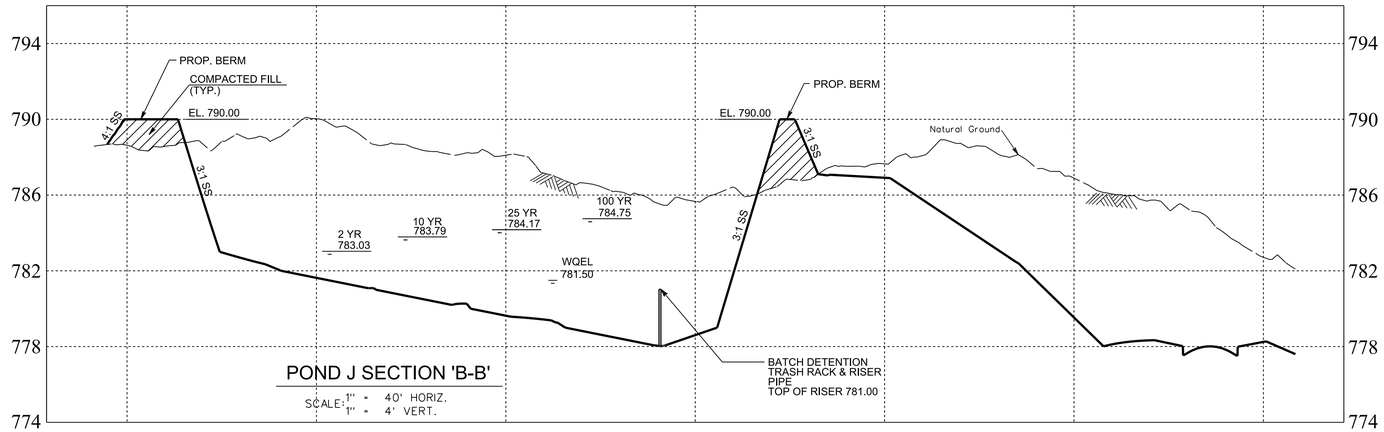
8/15/2023
10:08:51 AM



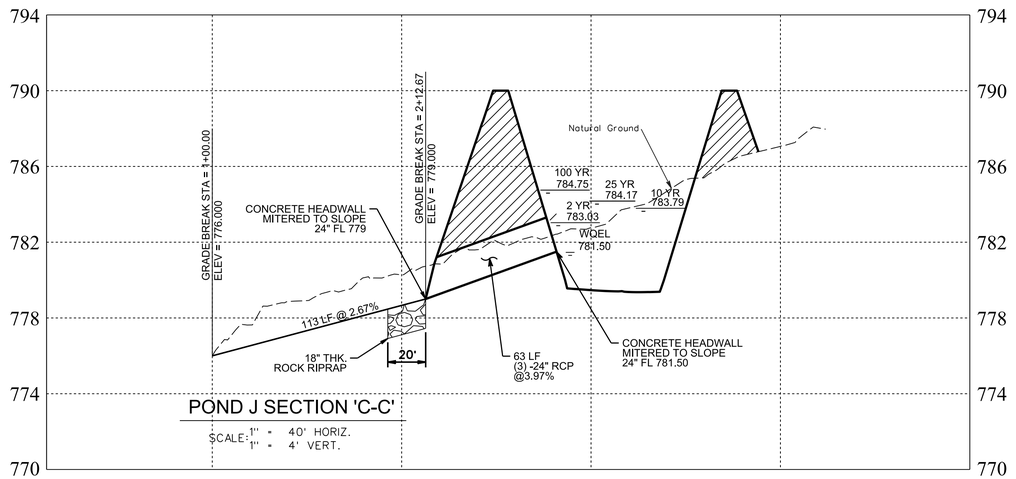
POND J SECTION 'A-A'

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



POND J SECTION 'B-B'

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



POND J SECTION 'C-C'

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

POND J SECTION 'D-D' (SPILLWAY)

SCALE: N.T.S.

PROFILE LEGEND

PROPOSED FINISHED GRADE
EXISTING GRADE (CENTER)

PROFILE SCALE

HORIZONTAL: 1" = 40', VERTICAL: 1" = 4'

NOTE:
1. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO INSTALLATION OF UTILITIES.
2. ALL PIPE VELOCITIES ARE CONFIRMED LESS THAN 20 FPS.

NO.	REVISION	DATE	BY

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DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY., BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

POND J - SECTIONS "A-A" & "B-B"

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET C7.01
OF 83 SHEETS

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8/15/2023
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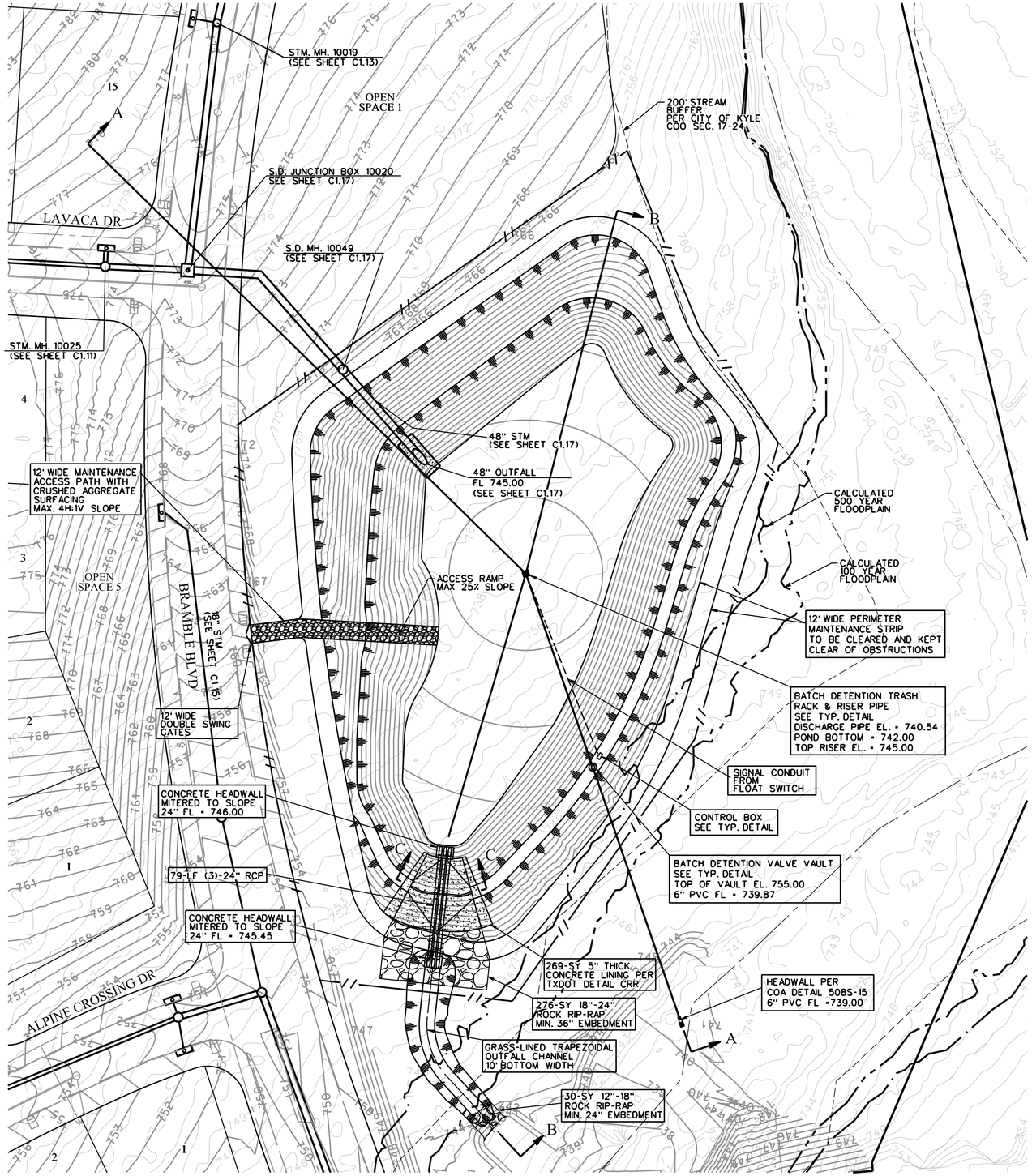

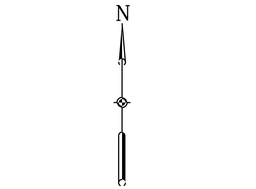

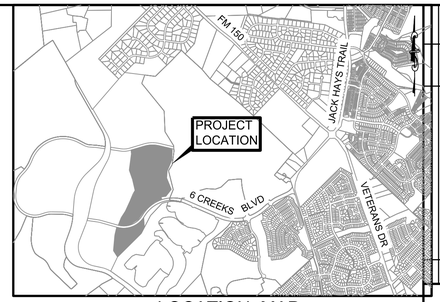

LOCATION MAP
N.T.S.

LEGEND

- SECTION BOUNDARY
- EXISTING CONTOUR
- PROPOSED CONTOUR
- 100 YR FEMA FLOODPLAIN ZONE
- 500 YR FEMA FLOODPLAIN ZONE
- EXISTING POTABLE WATER
- PROPOSED POTABLE WATER
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- ROCK RIP RAP

NOTE:
1. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO INSTALLATION OF UTILITIES.
2. ALL PIPE VELOCITIES ARE CONFIRMED LESS THAN 20 FPS.

FOR TYPICAL SECTIONS SEE SHEET C7.03

NO.	REVISION	DATE	BY

DESIGNED: ____
DESIGN CHECKED: ____
DRAWN: ____
COGO CHECKED: ____
SURVEY CHECKED: ____
QA/QC: ____ DATE: ____
QA/QC REVISIONS: ____

ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

POND G

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET C7.02
OF 83 SHEETS

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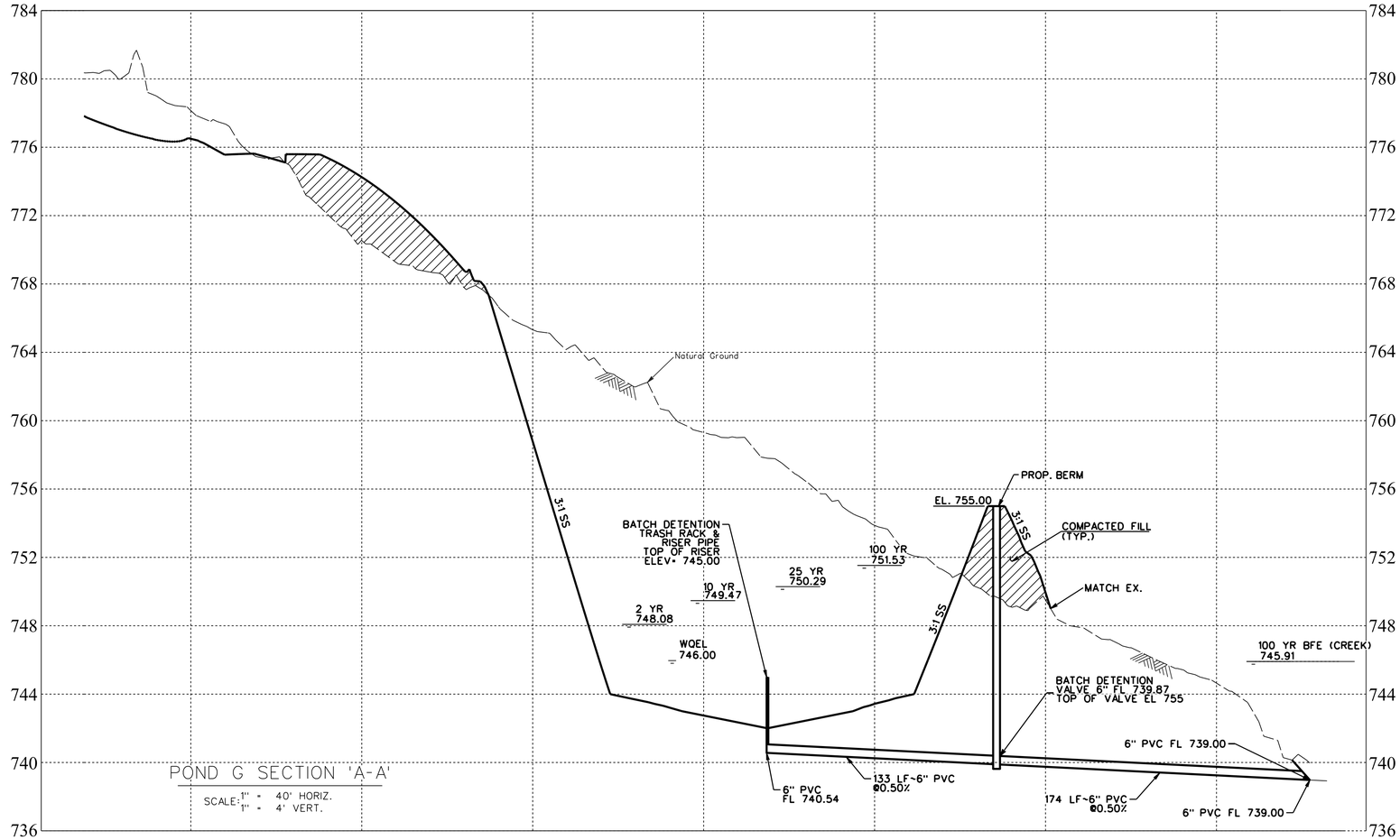
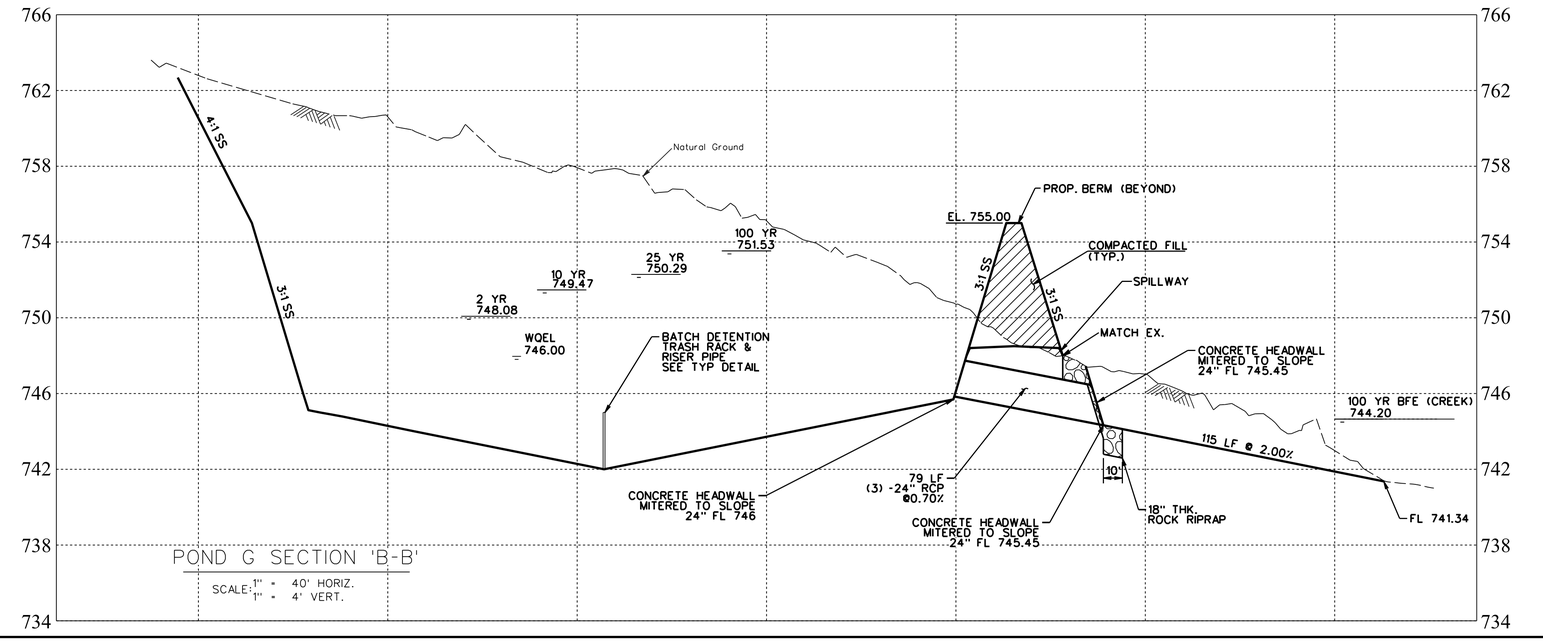


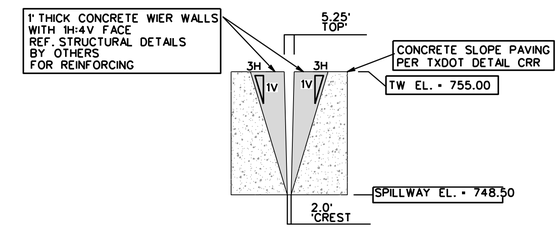
POND G SECTION 'A-A'

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



POND G SECTION 'B-B'

SCALE: 1" = 40' HORIZ.
1" = 4' VERT.



POND G SECTION 'C-C'
(SPILLWAY)

SCALE: N.T.S.

PROFILE LEGEND

PROPOSED FINISHED GRADE
EXISTING GRADE (CENTER)

PROFILE SCALE
HORIZONTAL: 1" = 40', VERTICAL: 1" = 4'

NOTE:
1. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO INSTALLATION OF UTILITIES.
2. ALL PIPE VELOCITIES ARE CONFIRMED LESS THAN 20 FPS.

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

POND G -
SECTIONS "A-A" & "B-B":

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET C7.03
OF 83 SHEETS

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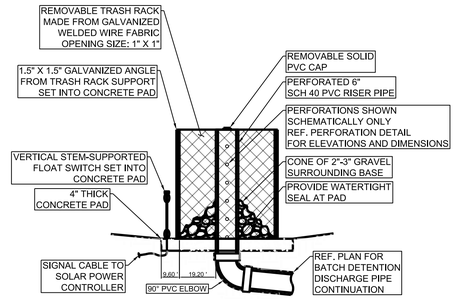
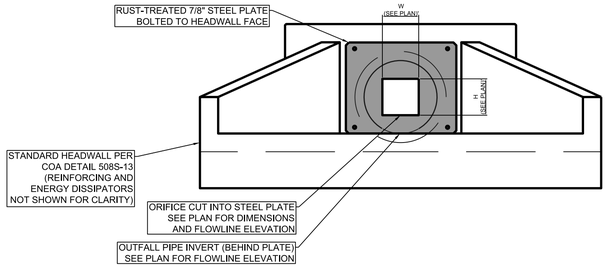


* FLOAT SWITCH TO BE STEM-MOUNTED VERTICAL LEVEL SENSOR SUCH AS GRAINGER MODEL C3975-1000 OR APPROVED EQUAL.

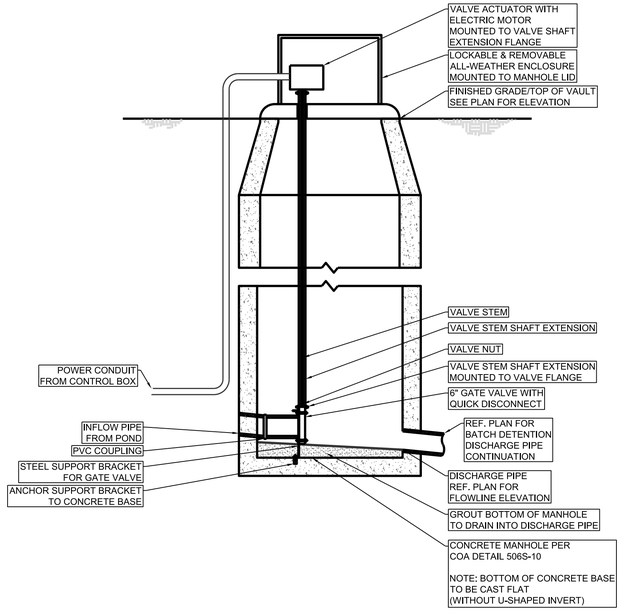
BATCH DETENTION TRASH RACK & RISER PIPE DETAIL

N.T.S.



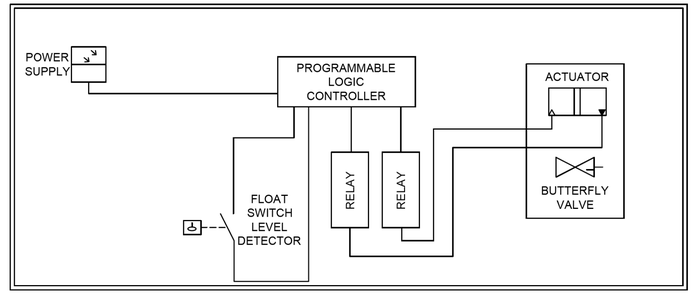
POND OUTLET PIPE AND HEADWALL WITH RESTRICTOR PLATE DETAIL

N.T.S.



BATCH DETENTION VALVE VAULT DETAIL

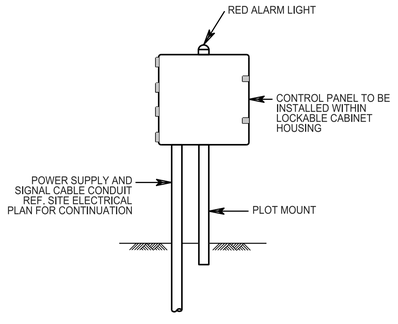
N.T.S.



ACTUATOR VALVE POWER & CONTROLLER CIRCUIT BLOCK DIAGRAM

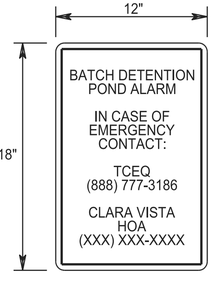
NOTES:

1. BATCH DETENTION POND SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RG-348 MANUAL (ADDENDUM).
2. THE BATCH DETENTION POND AND RISER PIPE / TRASH RACK WILL FUNCTION AS THE DEWATERING OUTLET AND SHALL BE BE INSTALLED AND FUNCTIONAL PRIOR TO ANY GENERAL GRADING AND UTILITY WORK.
3. SYSTEM POWER SHALL BE PROVIDED BY ON-SITE ELECTRICAL SUPPLY SYSTEM. REFER TO ELECTRICAL PLANS FOR CONDUIT AND POWER SUPPLY INFORMATION.
4. ACTUATOR SHALL BE ELECTRONIC QUARTER-TURN WITH MANUAL OVERRIDE AND POSITION INDICATOR.
5. ACTUATOR SHALL BE "AVID 12V ACTUATOR, EPI-6" OR EQUIVALENT.
6. ACTUATOR VALVE TO BE SET AT "NORMALLY OPEN" POSITION.
7. LOGIC CONTROLLER SHALL BE SET TO CLOSE VALVE IMMEDIATELY UPON RAINFALL DETECTION (I.E. FLOAT SWITCH ACTIVATION) AND OPEN VALVE 12 HOURS AFTER CLOSING. VALVE TO REMAIN OPEN UNTIL 2 HRS FOLLOWING BASIN EMPTY SIGNAL (I.E. FLOAT SWITCH RETURNED TO BASELINE).
8. LOGIC CONTROLLER SHALL HAVE TEST SEQUENCE, ON/OFF/RESET SWITCH AND THE PROGRAMMING SHALL BE FIELD UPLOADABLE.
9. ALL WIRING SHALL BE INSTALLED IN CONDUIT AND BURIED. CONTACT ENGINEER FOR ADDITIONAL CONTROLLER SCHEMATICS.
10. VALVE CONTROLS SHALL BE ENCLOSED WITHIN A POLE-MOUNTED, NEMA 3R, LOCKABLE PARTS CABINET HAVING 304 STAINLESS STEEL CONSTRUCTION. THE CABINET DOOR OPENING SHALL BE DOUBLE-FLANGED, WITH A KEYHOLE AND COVER AS AN INTEGRAL PART OF THE DOOR. THE CABINET SHALL HAVE PROVISIONS TO PROP THE DOOR OPEN AT APPROXIMATELY 90° AND 120° POSITIONS.
11. CONTRACTOR TO INSTALL LIBERTY ALARM MODEL ALM-2W OR EQUIVALENT AT CONTROLLER PANEL.
12. ATTACH ALARM RESPONSE SIGN TO CONTROLLER POLE. REFERENCE ALARM RESPONSE SIGN DETAIL THIS SHEET.
13. ALL EXPOSED CONCRETE THAT IS VISIBLE IS REQUIRED TO BE MADE OF STONE OR CLAD IN STONE INCLUDING BUT NOT LIMITED TO LEDGESTONE, FIELDSTONE, CAST STONE, OR OTHER DECORATIVE MATERIALS SUCH AS STAMPED AND TINTED CONCRETE THAT RESEMBLES STONE OR BRICK AS APPROVED BY THE DIRECTOR OF PLANNING. ALL OTHER EXPOSED CONCRETE IS REQUIRED TO BE MADE OF STONE OR CLAD IN STONE AS LISTED ABOVE OR TEXTURED AND TINTED IN EARTHEN COLORS. FOR THE PURPOSE OF THIS SPECIFICATION, "VISIBLE", PER SECTION 7(A) OF THE COMPOSITE ZONING ORDINANCE, IS DEFINED AS BEING NOTICEABLE BY A PERSON OF AVERAGE HEIGHT WALKING ON A STREET, SIDEWALK, OR TRAIL, OR ABLE TO BE SEEN BY A NEIGHBORING PROPERTY THAT IS TWO STORIES IN HEIGHT. ALL PROPOSED POND WALLS MEET THE DEFINITION OF "VISIBLE" PER THIS CRITERIA.
14. FENCING IS NOT PROPOSED. IF FENCING IS ADDED LATER IT SHALL BE CONSTRUCTED OF WROUGHT IRON OR BLACK, DECORATIVE TUBULAR MATERIAL.



CONTROL PANEL

N.T.S.



ALARM RESPONSE SIGN

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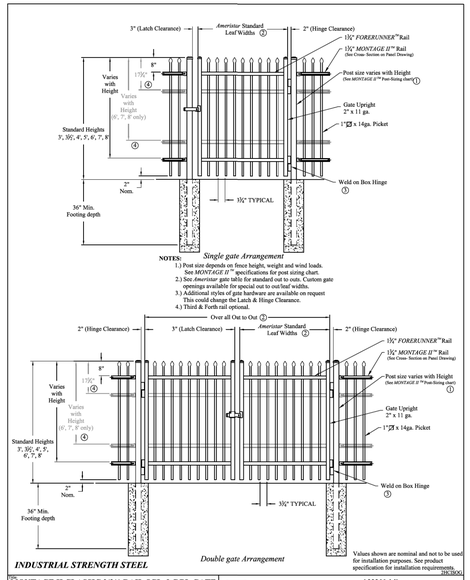

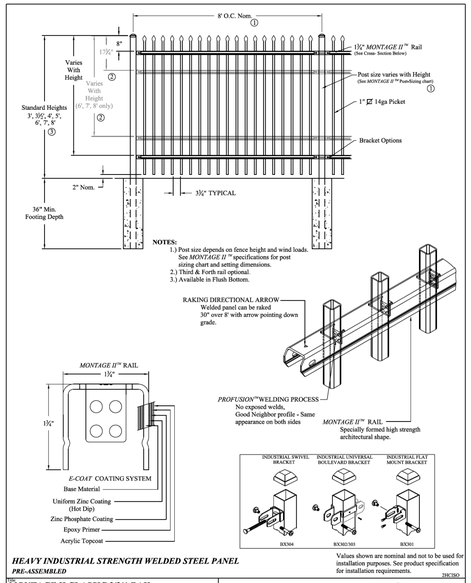

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
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COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

POND NOTES AND DETAILS

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET C7.04
OF 83 SHEETS

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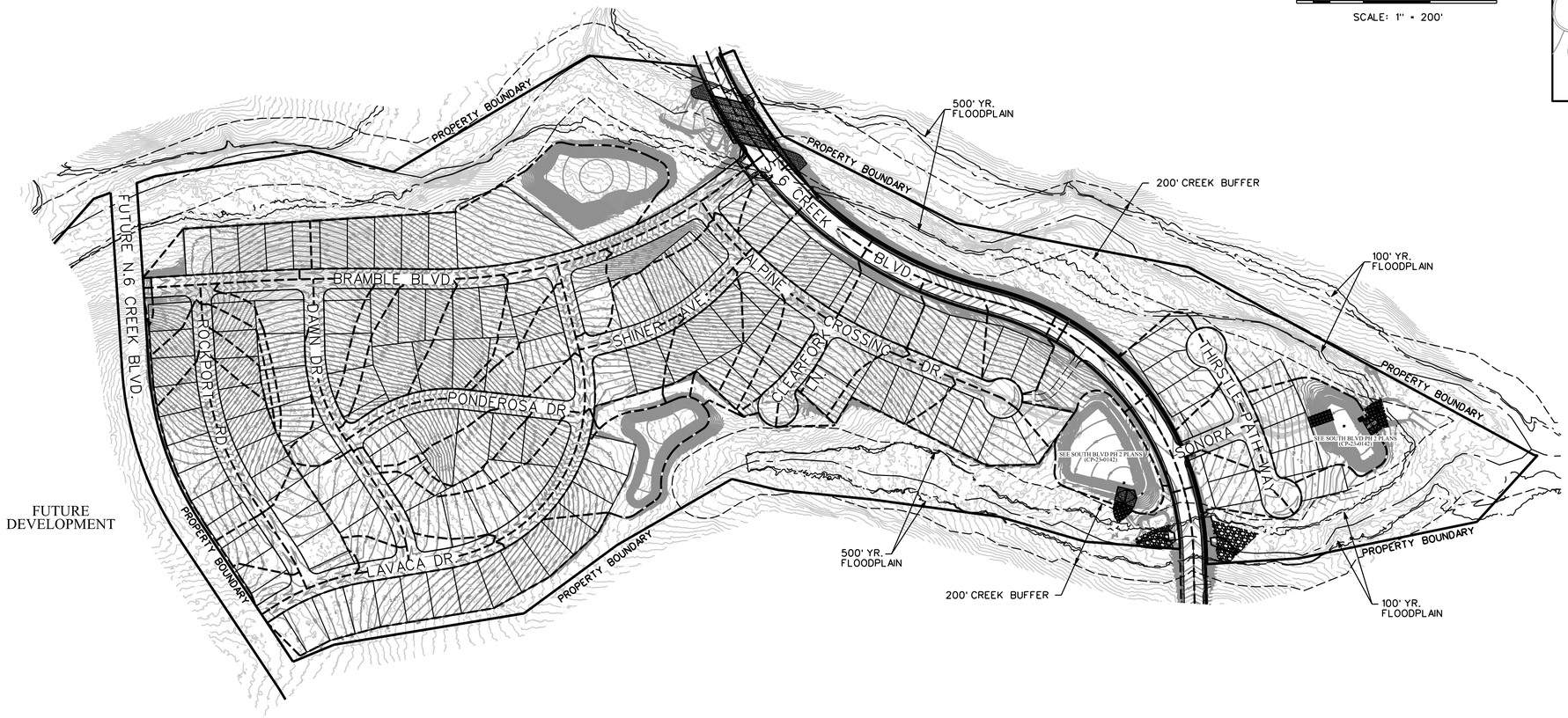

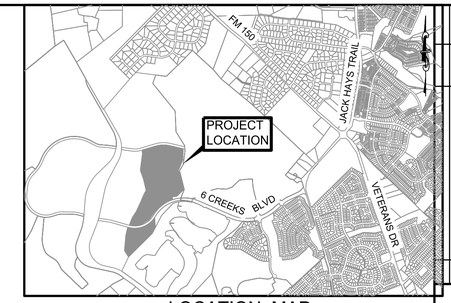

LOCATION MAP
N.T.S.

200 100 0 200 400
SCALE: 1" = 200'

LEGEND

- DRAINAGE BOUNDARY
- 100 YEAR OVERLAND FLOW (EXTREME EVENT)
- 904 EXISTING CONTOUR
- 905 PROPOSED CONTOUR

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
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AUSTIN, TEXAS 78759
(512)646-3466 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
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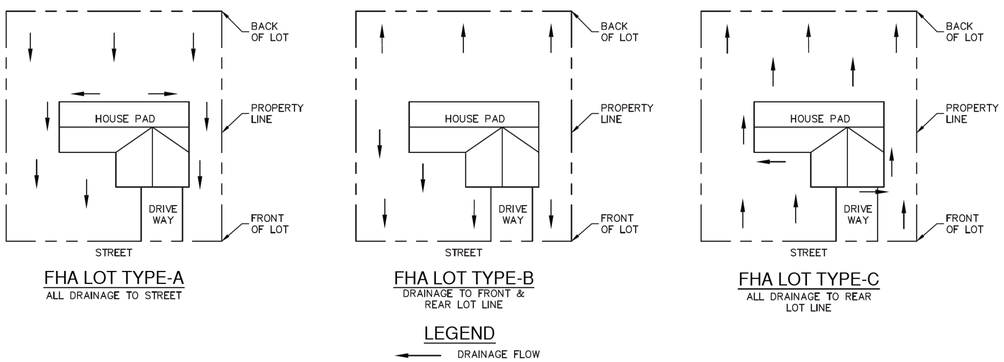

FHA LOT TYPE-A
ALL DRAINAGE TO STREET

FHA LOT TYPE-B
DRAINAGE TO FRONT & REAR LOT LINE

FHA LOT TYPE-C
ALL DRAINAGE TO REAR LOT LINE

LEGEND
DRAINAGE FLOW

CLARA VISTA - PHASE 1 CONSTRUCTION PLANS
KYLE, TEXAS 78640

OVERALL LOT GRADING

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET C8.01
OF 83 SHEETS

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GENERAL CONSTRUCTION NOTES:

1. THIS SITE IS LOCATED IN HAYS COUNTY WITHIN THE CITY OF KYLE.
2. RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT, THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS , ACCURACY, AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEW FOR CODE COMPLIANCE BY THE CITY ENGINEER.
3. UTILITY EASEMENTS SHALL BE IN ACCORDANCE WITH CITY CODE, SECTION 41-141, A FIFTEEN (15) FOOT PUBLIC UTILITY EASEMENT IN HEREBY DEDICATED ADJACENT TO ALL STREET RIGHT-OF-WAY.
4. SIDEWALK, PEDESTRIAN CROSSING AND OTHER PUBLIC AMENITIES TO BE DEDICATED TO THE CITY OF KYLE SHALL MEET OR EXCEED ALL CURRENT ADA STANDARDS OF ACCESSIBILITY DESIGN AND ALL CURRENT FEDERAL AND STATE LAWS REGARDING ACCESS FOR PEOPLE WITH DISABILITIES FOR TITLE II ENTITIES.
5. TYPICAL LANDSCAPE MAINTENANCE, CUTTING AND TRIMMING, WITHIN THE SUBDIVISION, ALL EASEMENTS, DETENTION PONDS, AND RIGHT-OF-WAYS OF THE PAVEMENT TO BE THE RESPONSIBILITY OF THE PROPERTY OWNER AND OR PROPERTY OWNER ASSOCIATIONS.
6. ONE CALL NOTE: CONTRACTOR MUST CALL CITY OF KYLE (512-262-3024) FOR LOCATION OF CITY UTILITIES.
7. NO OBSTRUCTIONS ARE TO BE PLACES WITHIN THE DRAINAGE EASEMENTS.

P.I.C.P.

FOR

6 CREEKS BOULEVARD PHASE 2

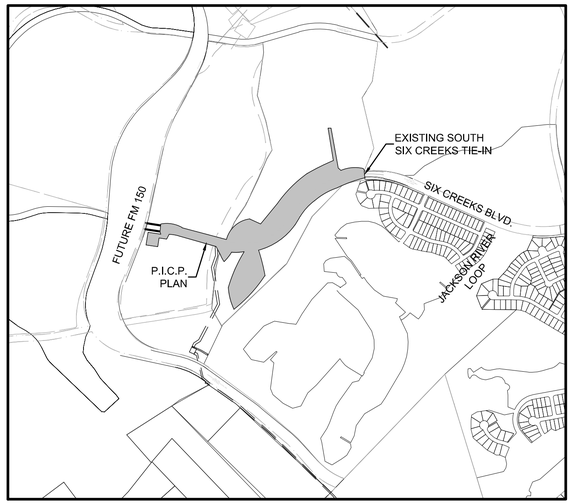
CITY OF KYLE

HAYS COUNTY, TEXAS

CP-23-0147

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE DEVELOPMENT AGREEMENT (INSTRUMENT# 22021442, FILED AND RECORDED: 04/29/2022) BETWEEN THE CITY OF KYLE, A TEXAS HOME RULE CITY AND MUNICIPAL CORPORATION, AND BLANCO RIVER RANCH PROPERTIES LP A TEXAS LIMITED PARTNERSHIP, THE PROPERTY SELLER, AND TOLL SOUTHWEST, A DELAWARE LIMITED LIABILITY COMPANY, THE PROPERTY OWNER.

**CLEARING AND GRUBBING INCLUDING TREE REMOVAL IN THIS PLAN SET HAS BEEN APPROVED BY PROJECT NUMBER CP-22-0143.



VICINITY MAP
SCALE: 1" = 1000'

PROJECT DESCRIPTION:
2,844 LINER FEET OF ROADWAY FROM STATION 14+27 TO 42+71

ADDRESS: SOUTH 6 CREEKS
KYLE, TX 78640
SUBMISSION NO.: 1
SUBMITTAL DATE: FEBRUARY 28, 2023

SUMMARY NOTES:

LEGAL DESCRIPTION:	6 CREEKS BOULEVARD PHASE 2 (FUTURE ROW), LOT ROW, ACRES 6.044
WATERSHED:	THIS PROJECT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE, BUT IS LOCATED WITHIN THE CONTRIBUTING ZONE AND WITHIN THE TRANSITION ZONE.
FLOODPLAIN NOTE:	A PORTION OF THIS PROJECT LIES WITHIN THE 100-YEAR FLOODPLAIN AS DELINEATED ON THE FLOOD INSURANCE RATE MAP NO.48209C027F AND 48209C0835F EFFECTIVE DATE OF SEPTEMBER 2, 2005, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY
OWNER:	TOLL BROTHERS, INC. 1320 ARROW POINT DRIVE SUITE 401 CEDAR PARK, TX 78613 412-780-2312
ENGINEER:	COSTELLO, INC. TBPE 280 9050 N. CAPITAL OF TX, HWY, BLDG. 3, STE. 390 AUSTIN, TX 78759 512-646-3456
SURVEYOR:	LANDESIGN SERVICES, INC. 10090 W. HIGHWAY 29 LIBERTY HILL, TEXAS 78642 512-238-7901

REVISIONS/CORRECTIONS					
SHEET LIST	DESCRIPTION	DATE	REVISE (R) ADD (A) VOID (V) SHEET NO.'S	ACCEPTED BY:	APPROVAL DATE:

John Barcellona — 15/08/2023
JOHN D. BARCELLONA, P.E. — DATE
COSTELLO, INC. TBPE NO. 280

I, STEVEN BUFFUM, P.E., CERTIFY THAT THESE ENGINEERING DOCUMENTS ARE COMPLETE, ACCURATE AND ADEQUATE FOR THE INTENDED PURPOSES, INCLUDING CONSTRUCTION, BUT ARE NOT AUTHORIZED FOR CONSTRUCTION PRIOR TO FORMAL CITY APPROVAL.

APPROVED:

LEON BARBA, CITY ENGINEER — DATE

HARPER, DIRECTOR OF PUBLIC WORKS — DATE

PLANNING DEPARTMENT — DATE

CITY OF KYLE FIRE DEPARTMENT — DATE

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

Costello
Engineering and Surveying
9050 N. Capital of Texas Hwy, Bldg. 3,
Suite 390
Austin, Texas 78759
(512)646-3456
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No 100486

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NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

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(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

COVER SHEET

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 01
OF 106 SHEETS

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CP-23-0147

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75	COMBINATION RAIL 2
76	COMBINATION RAIL 3
77	COMBINATION RAIL 4
78	SEALED EXPANSION JOINT - TYPE M
79	OVERALL STORM PLAN
80	SS LN 'A01' PLAN & PROFILE 5+50-12+50 LATERALS A02-A03
81	SS LN 'A01' PLAN & PROFILE 12+50 - 18+00 LATERALS A04-A05, C01
82	SS LN 'A01' PLAN & PROFILE 18+00 - END - LATERALS A06-A08
83	SS LN 'B01' AND 'B02' PLAN & PROFILES
84	SS LINE 'D' PLAN & PROFILE
85	SS CULVERT 'F' PLAN & PROFILE
86	INLET CALCULATIONS
87	INTERIM CHANNEL I
88	INTERIM CHANNEL OS-K
89	INTERIM CHANNEL OS-K1
90	INTERIM CHANNEL OS-K1 2
91	PAVING AND DRAINAGE DETAILS
92	DRAINAGE DETAILS 1 OF 5
93	DRAINAGE DETAILS 2 OF 5
94	DRAINAGE DETAILS 3 OF 5
95	DRAINAGE DETAILS 4 OF 5
96	DRAINAGE DETAILS 5 OF 5
97	W LN 'A01' PLAN & PROFILE STA 1+00 - 10+00
98	W LN 'A01' PLAN & PROFILE STA 10+00 - 19+00
99	W LN 'A01' PLAN & PROFILE STA 19+00 - 27+00
100	W LN 'A01' PLAN & PROFILE STA. 27+00 - END
101	WW LN 'A' & 'B' PLAN & PROFILE START TO END
102	WATER DETAILS
103	WASTEWATER DETAILS
104	STREET LIGHTING PLAN
105	LIGHTING DETAILS 1
106	LIGHTING DETAILS 2

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY. BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

SHEET INDEX

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED
PROFESSIONAL ENGINEER

8/15/2023

SHEET 02
OF 106 SHEETS

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

CP-23-0147

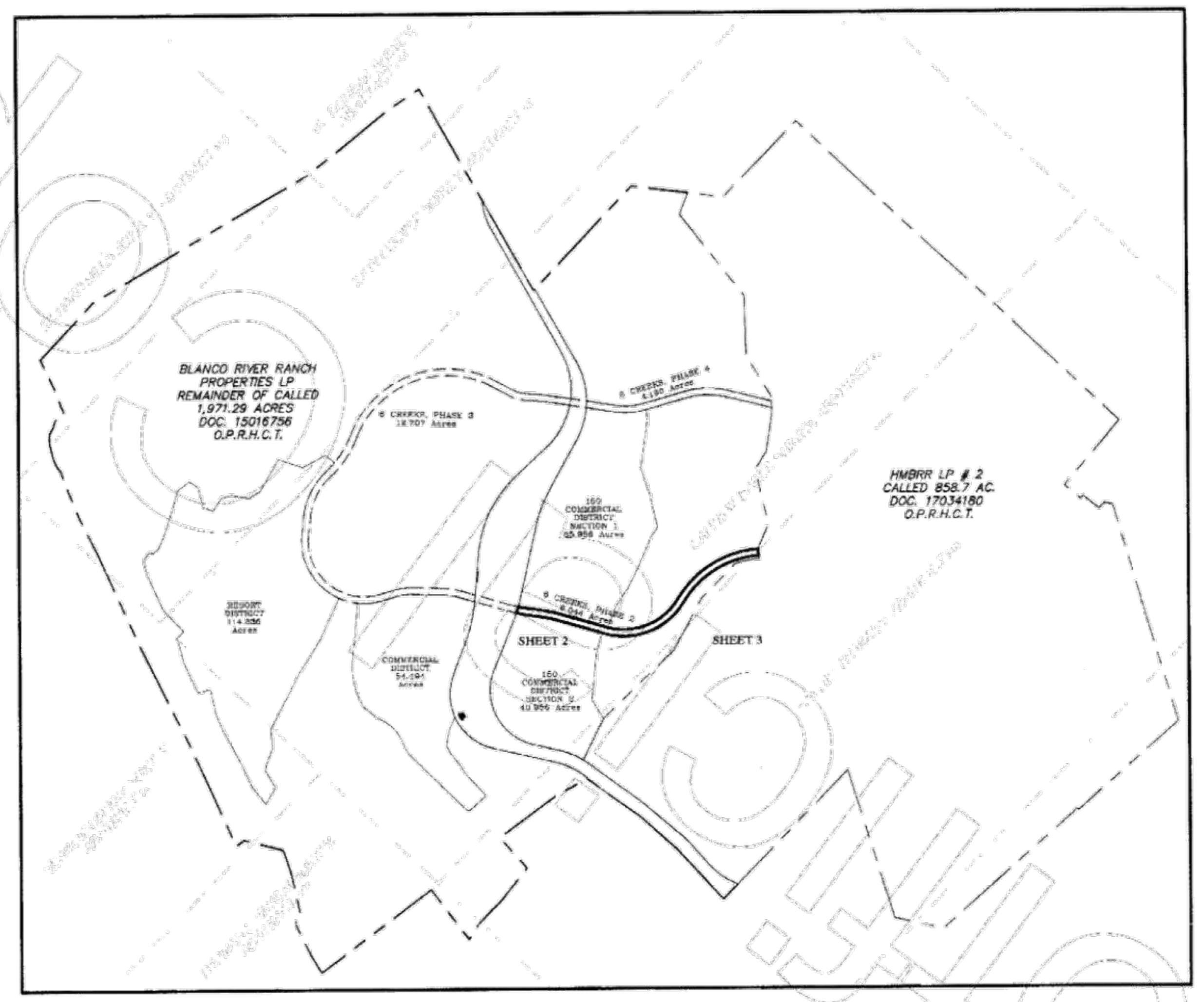
C:\USERS\MICHAELK\CHILES CONSULTING, LLC\CHILES - COSTELLO\6 CREEKS BLVD PHASE 2\04_SHEETS\COVER SHEET.DWG

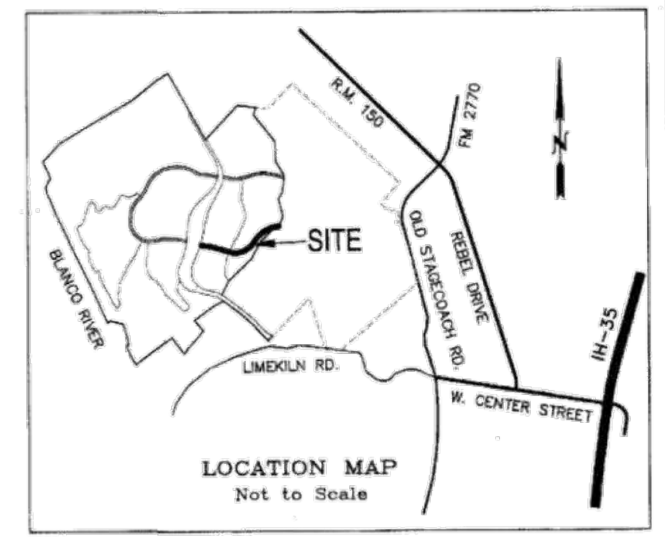
PLAT OF
6 CREEKS BOULEVARD, PHASE 2
(RIGHT OF WAY ONLY)
KYLE, HAYS COUNTY, TEXAS

19038648 PLAT Total Pages: 5
Filed and Recorded: 10/24/2019 10:34:58 AM

GENERAL NOTES:

1. THIS FINAL PLAT IS LOCATED ENTIRELY WITHIN HAYS COUNTY.
2. A PORTION OF THIS PLAT LIES WITHIN THE BOUNDARIES OF THE EDWARDS AQUIFER RECHARGE ZONE AND/OR CONTRIBUTING ZONE.
3. THIS PLAT IS LOCATED WITHIN THE BOUNDARY OF THE HAYS CONSOLIDATED INDEPENDENT SCHOOL DISTRICT.
4. A PORTION OF THIS PROPERTY IS LOCATED WITHIN A DESIGNATED 100-YEAR FLOOD PLAIN AS DELINEATED ON THE FLOOD INSURANCE RATE MAP NO. 48209C0270F, 48209C0835F EFFECTIVE DATE OF SEPTEMBER 2, 2005, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
5. STREETS TO BE ACCESSED WILL BE CONSTRUCTED WITH CURB AND GUTTER OR RIBBON GUTTER.
6. LINEAR FOOTAGE OF STREET IMPROVEMENTS: 10,550 L.F.
7. AREA WITHIN NEW ROAD RIGHT-OF-WAY = 64.794 ACRES.
9. GREENBELT/DRAINAGE EASEMENTS SHALL BE MAINTAINED BY THE HOME OWNERS ASSOCIATION.
10. THIS SUBDIVISION IS WITHIN THE INCORPORATED CITY OF KYLE, TEXAS.
11. ELECTRICITY PROVIDED BY PEDERNALES ELECTRIC COOPERATIVE.
12. THE WASTEWATER TREATMENT PLANT IS OWNED AND OPERATED BY THE CITY OF KYLE, TEXAS.
13. WASTEWATER SERVICE IS PROVIDED BY THE CITY OF KYLE, TEXAS (SEE NOTE ABOVE).
14. WATER IS PROVIDED BY THE CITY OF KYLE, TEXAS
15. THE REQUIREMENT CONCERNING CONSTRUCTION STANDARDS FOR MAILBOXES INSTALLED WITHIN THE RIGHT-OF-WAY OF STREETS AND HIGHWAYS AND REQUIRING ALL SUCH MAILBOXES TO BE MADE OF COLLAPSIBLE MATERIALS, AS DEFINED IN THE ORDINANCE. COMMUNITY MAILBOXES SHALL HAVE A SEPARATE LIGHT/STREET LIGHT TO ILLUMINATE THE MAILBOX AREA.
16. THIS SITE IS LOCATED WITHIN HAYS COUNTY ESD#5.
17. CONSTRUCTION STANDARDS AND SPECIFICATIONS WILL BE AS AGREED TO IN THE BLANCO RIVER RANCH (PHASE ONE RESIDENTIAL AREA) DE-ANNEXATION AND DEVELOPMENT AGREEMENT APPROVED BY THE HAYS COUNTY COMMISSIONER'S COURT ON MARCH 21, 2017.
18. THIS PROJECT IS LOCATED IN THE BLANCO RIVER WATERSHED.
19. A 15-FOOT MUNICIPAL UTILITY EASEMENT AND DRAINAGE EASEMENT IS HEREBY DEDICATED ADJACENT TO ALL STREET RIGHT-OF-WAY WITHIN WATER RIDGE BOULEVARD.
20. PRIOR TO CONSTRUCTION OF ANY IMPROVEMENTS IN THIS SUBDIVISION, SITE DEVELOPMENT PERMITS AND BUILDING PERMITS WILL BE OBTAINED FROM THE CITY OF KYLE.
21. SIDEWALKS SHALL BE BUILT ALONG BOTH SIDES OF ALL STREETS WITHIN WATER RIDGE BOULEVARD. ALL SIDEWALKS SHALL BE A MINIMUM OF 4-FEET IN WIDTH AND BUILT IN COMPLIANCE WITH THE LATEST ADA STANDARDS. HANDICAP RAMPS ARE TO BE BUILT AS PART OF THE SUBDIVISION CONSTRUCTION AND SHALL BE IN PLACE PRIOR TO SUBDIVISION ACCEPTANCE.
22. THE PROPERTY IS SUBJECT TO THAT CERTAIN BLANCO RIVER RANCH INTERIM ANNEXATION AND DEVELOPMENT AGREEMENT DATED EFFECTIVE ON OR ABOUT MAY 6, 2016, AND THAT CERTAIN FIRST AMENDMENT TO THE BLANCO RIVER RANCH INTERIM ANNEXATION AND DEVELOPMENT AGREEMENT DATED EFFECTIVE OCTOBER 15, 2019, RECORDED UNDER INSTRUMENT NUMBER 19038529 OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS (REFERRED TO COLLECTIVELY AS THE "AGREEMENTS") AND THE DEVELOPERS AND OWNER OF THE PROPERTY ARE REQUIRED TO DEVELOP THE PROPERTY IN COMPLIANCE WITH THE AGREEMENTS. RECORDING OF THE FINAL PLATS DOES NOT WAIVE COMPLIANCE WITH THE AGREEMENT OR APPLICABLE CITY ORDINANCES UNLESS A WAIVER HAS BEEN SPECIFICALLY GRANTED.
23. NO BUILDING PERMITS OR SITE DEVELOPMENT PERMITS MAY BE ISSUED FOR DEVELOPMENT OF THE PROPERTY UNTIL BLANCO RIVER RANCH PROPERTIES, LP, OR ITS SUCCESSORS OR ASSIGNS HAS SUBMITTED AND OBTAINED APPROVAL OF ANY PLATS OR REPLATS THAT ARE REQUIRED TO CAUSE THE PROPERTY TO BE DEVELOPED IN COMPLIANCE WITH THE AGREEMENT AND THE CITY'S ORDINANCES AND REGULATIONS, OBTAINED THE REQUIRED ZONING APPROVALS, OBTAINED APPROVAL OF CONSTRUCTION PLANS FOR ALL INFRASTRUCTURE NEEDED TO SERVE THE PROPERTY AND EITHER CONSTRUCTED SUCH INFRASTRUCTURE OR POSTED FISCAL SURETY GUARANTEEING CONSTRUCTION OF THE INFRASTRUCTURE IN A FORM ACCEPTABLE TO THE CITY, AND HAS OTHERWISE COMPLIED WITH THE REQUIREMENTS OF THE CITY'S ORDINANCES FOR ISSUANCE OF BUILDING PERMITS OR SITE DEVELOPMENT PERMITS.





LOCATION MAP
Not to Scale

1. BEARINGS ARE REFERENCED TO TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, NAD 83.
2. ELEVATIONS ARE BASED ON NAVD 1988 DATUM.
3. 1/2" IRON RODS WITH CAPS SET STAMPED "ATWELL" AT ALL CORNERS, UNLESS OTHERWISE NOTED.

BM# 1533
SQUARE CUT ON NORTH SIDE OF HEADWALL ON EAST SIDE OF STAGECOACH ROAD ±500 FEET NORTH OF CURRENT MAIN ENTRANCE TO BLANCO RIVER RANCH PROPERTY

TEXAS COORDINATE SYSTEM SOUTH CENTRAL ZONE
NORTHING = 13913816.24
EASTING = 2318381.37
ELEVATION = 790.59 NAVD88

BM#1532
COTTON SPINDLE SET IN POWER POLE NEAREST TO BARN SINGLE POLE OFF-SHOOT FROM MAIN POWER POLE LINE CROSSING 250± ACRE TRACT.

TEXAS COORDINATE SYSTEM SOUTH CENTRAL ZONE
NORTHING = 13912922.21
EASTING = 2317057.03
ELEVATION = 829.57 NAVD88

LOT SIZE	NO.
>10 ACRES	0
5 TO 10 ACRES	1
2 TO 5 ACRES	0
1 TO 2 ACRES	0
< 1 ACRE	0

TOTAL NO. SINGLE FAMILY LOTS: 0
TOTAL NO. OPEN SPACE, & DRAINAGE EASEMENT LOTS: 0
TOTAL NO. RIGHT OF WAY LOTS: 1
TOTAL NO. BLOCKS: 1

LOT AREA	N/A		
STREET ROW AREA	6.044 AC.		
TOTAL AREA	N/A		
CENTERLINE STREET LINEAR FOOTAGE			
STREET NAME	ROW WIDTH	LENGTH	TYPE
6 CREEKS BLVD.	80'	3,291'	COLLECTOR
TOTAL LINEAR FEET OF STREET ROW = 3,291			

OWNER / DEVELOPER:
BLANCO RIVER RANCH PROPERTIES, LP

SURVEYOR:
ATWELL, LLC
3815 S. CAPITAL OF TEXAS HIGHWAY
SUITE 300
AUSTIN, TEXAS 78704
O: 512-904-0505
F: 512-904-0509

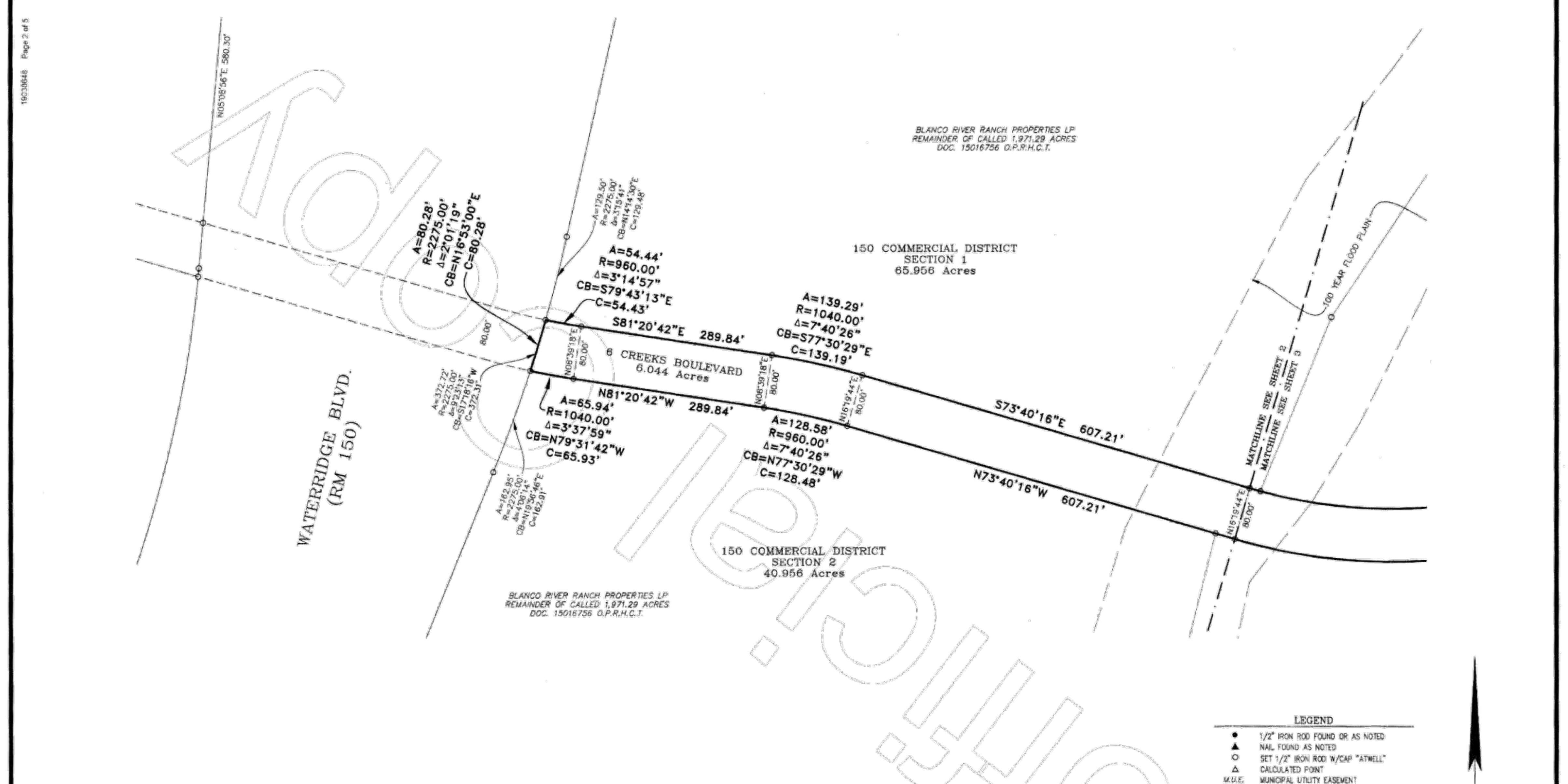
ENGINEER:
ATWELL, LLC
3815 S. CAPITAL OF TEXAS HIGHWAY
SUITE 300
AUSTIN, TEXAS 78704
O: 512-904-0505
F: 512-904-0509
TBPE NO.

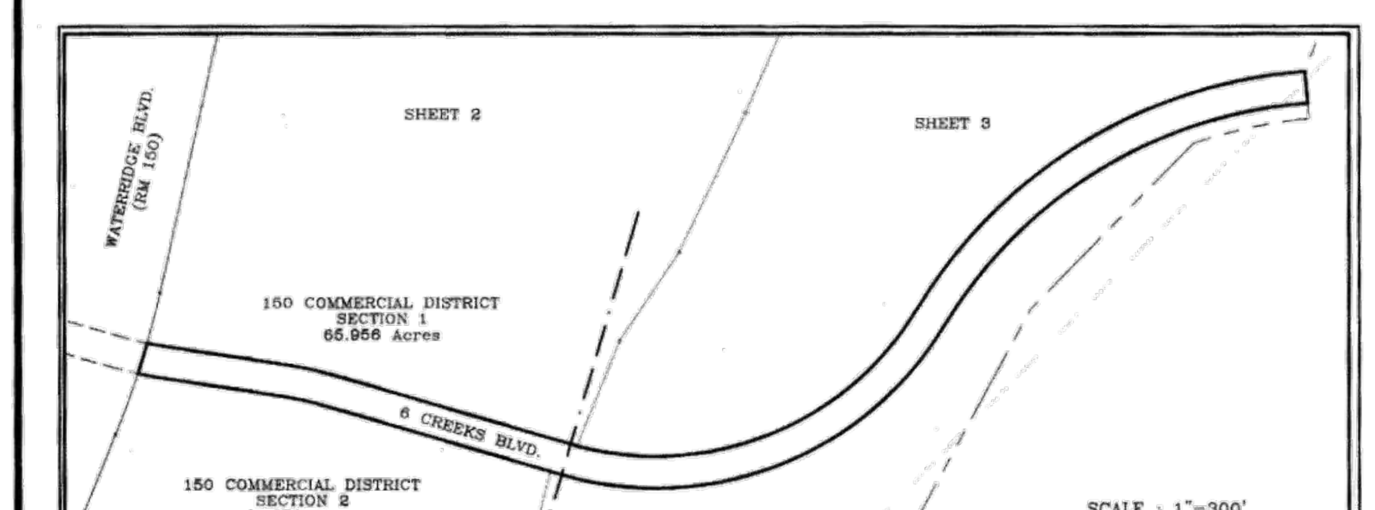
ATWELL
866.850.4200 www.atwell-group.com
3815 S. CAPITAL OF TEXAS HIGHWAY, SUITE 300
AUSTIN, TX 78704
FIRM NO. 10193726

DATE: OCT., 2019	REVISIONS:	DATE	BY
SCALE: 1"=100'			
CHECKED BY: PCS			
DRAFTED BY: SAR			
JOB NUMBER: 18009004.03-06			

SHEET 1 OF 4

19038648 Page 2 of 5





SHEET LAYOUT MAP

PLAT OF
6 CREEKS BOULEVARD, PHASE 2
(RIGHT OF WAY ONLY)
KYLE, HAYS COUNTY, TEXAS

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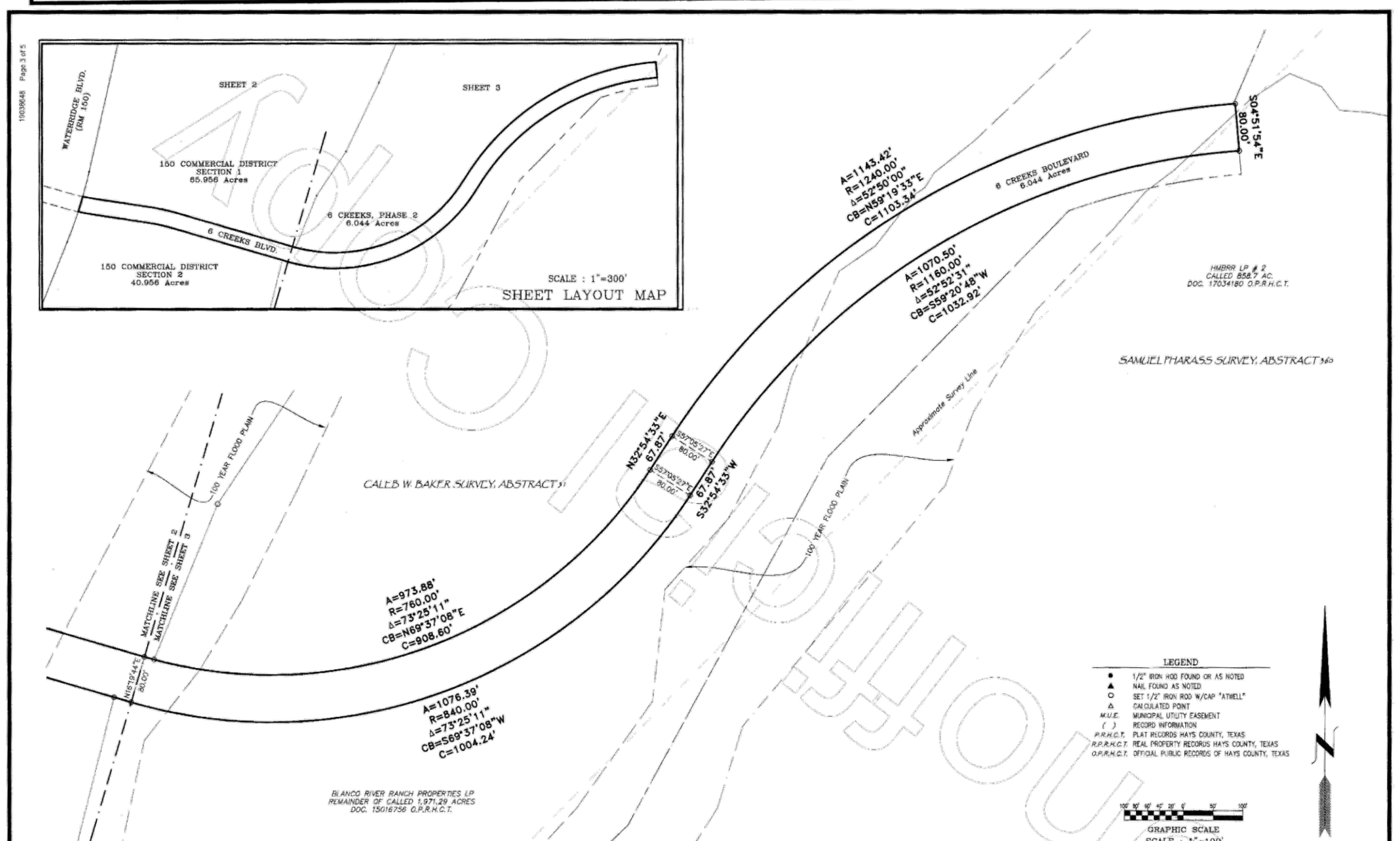
SHEET 2 OF 4

19038648 Page 3 of 5



PLAT OF
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SHEET 3 OF 4

19038648 Page 4 of 5

STATE OF TEXAS :
COUNTY OF HARRIS :

KNOW ALL MEN BY THESE PRESENTS:

THAT, BLANCO RIVER RANCH PROPERTIES, LP EXISTING UNDER THE LAWS OF THE STATE OF TEXAS, WITH HOME ADDRESS AT 2005 OXFORD AVE. AUSTIN, TEXAS, OWNERS OF THE REMAINDER OF THAT CERTAIN 1,971.29 ACRES LOCATED IN THE CALEB W. BAKER SURVEY, A-31, IN HAYS COUNTY, TEXAS, AS CONVEYED BY DEEDS RECORDED IN DOCUMENT NO. 15016756 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, DO HEREBY SUBDIVIDE 6.044 ACRES OF LAND TO BE KNOWN AS "6 CREEKS PHASE 2 (RIGHT OF WAY ONLY)" IN ACCORDANCE WITH THE ATTACHED MAP OR PLAT SUBJECT TO ANY EASEMENTS AND/OR RESTRICTIONS HERETOFORE GRANTED, AND DO HEREBY DEDICATE TO THE PUBLIC USE OF THE STREETS AND EASEMENTS SHOWN HEREON.

WITNESS MY HAND THIS THE 21 DAY OF October 2019 A.D.

BY: ______________________
BLANCO RIVER RANCH, LP

STATE OF TEXAS :
COUNTY OF HARRIS :

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED GREGG T. REYES, MANAGING PARTNER KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

GIVEN UNDER MY HAND, THIS THE 21 DAY OF October 2019 A.D.

NOTARY PUBLIC IN AND FOR Harris County, TEXAS

JOIEUX MONIQUE BISHOP
Notary Public, State of Texas
Comm. Expires 06-01-2020
Notary ID 11582892

STATE OF TEXAS :
COUNTY OF HARRIS :

THAT, ALLEGIANCE BANK MEMORIAL SPRING BRANCH BANKING OFFICE, TRUSTEE, THE LIEN HOLDER OF THE TRACT OF LAND SHOWN HEREON AND DESCRIBED IN A DEED RECORDED IN DOCUMENT NO. 15016757 AND EXTENSIONS RECORDED IN DOCUMENT NO. 18007605 and 19002292 OF THE OFFICIAL PUBLIC RECORDS, HAYS COUNTY TEXAS, DOES HEREBY CONSENT TO THE SUBDIVISION OF SAID TRACT OF LAND AS SHOWN HEREON, DOES FURTHER HEREBY JOIN, APPROVE, AND CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND TO THE DEDICATION TO THE PUBLIC THE USE OF THE STREETS, PUBLIC TRAILS, AND EASEMENTS SHOWN HEREON.
TO CERTIFY WHICH, WITNESS BY MY HAND THIS 21 DAY OF October A.D. 2019.

JACK MCCULLOUGH SENIOR VICE PRESIDENT
ALLEGIANCE BANK MEMORIAL SPRING BRANCH BANKING OFFICE

STATE OF TEXAS :
COUNTY OF HARRIS :

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR SAID COUNTY AND STATE, ON THIS DAY PERSONALLY APPEARED JACK MCCULLOUGH KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

GIVEN UNDER MY HAND, THIS THE 21 DAY OF October, 2019 A.D.

NOTARY PUBLIC IN AND FOR Texas, Harris COUNTY, TEXAS

Karen Quinonez Arevalo
NOTARY PUBLIC
STATE OF TEXAS
126404135
EXP. 9-2-2023

STATE OF TEXAS :
COUNTY OF HAYS :

I, DAVID B. FUSILIER, P.E., A LICENSED PROFESSIONAL ENGINEER, DO HEREBY CERTIFY THAT NO PORTION OF ANY RESIDENTIAL LOT IS LOCATED WITHIN A DESIGNATED 100-YEAR FLOOD ZONE AREA, AS DELINEATED ON THE FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 48209C0270F, EFFECTIVE DATE OF SEPTEMBER 2, 2005. ADDITIONALLY, STORM WATER RUNOFF FROM THE 100-YEAR STORM EVENT SHALL BE CONTAINED WITHIN THE DRAINAGE FACILITIES TO BE LOCATED WITHIN THE RIGHTS-OF-WAY AND/OR GREENBELT/DRAINAGE LOTS OR EASEMENTS SHOWN ON THE ATTACHED PLAT.

DAVID B. FUSILIER — 10/22/2019 (DATE)
REGISTERED PROFESSIONAL ENGINEER NO. 87710
STATE OF TEXAS
ATWELL, LLC
3815 S. CAPITAL OF TEXAS HWY, STE. 300
AUSTIN, TEXAS 78704

STATE OF TEXAS
DAVID B. FUSILIER
87710
LICENSED
PROFESSIONAL ENGINEER

STATE OF TEXAS :
COUNTY OF HAYS :

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM AN ACCURATE AND ON-THE-GROUND SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION, IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF HAYS COUNTY, TEXAS.

PAUL C. SAUVE, JR., RPLS 2518 — 9/26/2019 (DATE)
ATWELL, LLC
3815 S. CAPITAL OF TEXAS HWY, STE. 300
AUSTIN, TEXAS 78704

STATE OF TEXAS
REGISTERED
PAUL C. SAUVE, JR.
2518
PROFESSIONAL
LAND SURVEYOR

THIS FINAL PLAT, 6 CREEKS BOULEVARD PHASE 2, (RIGHT OF WAY ONLY) HAS BEEN SUBMITTED TO AND CONSIDERED BY THE PLANNING AND ZONING COMMISSION OF THE CITY OF KYLE, TEXAS AND IS HEREBY APPROVED BY SUCH PLANNING AND ZOINING COMMISSION.

DATED THIS THE 22nd DAY OF October, 2019

BY: Michele Christie
CHAIRMAN

STATE OF TEXAS §
COUNTY OF HAYS §

I, ELAINE H. CARDENAS, COUNTY CLERK OF HAYS COUNTY, TEXAS, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT OF WRITING WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE ON THE 24th DAY OF October, A.D. 2019, AT 10:34 O'CLOCK A M., IN THE PLAT RECORDS OF HAYS COUNTY, TEXAS, IN INSTRUMENT NUMBER 19038648.

WITNESS MY HAND AND SEAL OF OFFICE, THIS THE 24th DAY OF October, A.D. 2019.

ELAINE H. CARDENAS
COUNTY CLERK
HAYS COUNTY, TEXAS

PLAT OF
6 CREEKS BOULEVARD, PHASE 2
(RIGHT OF WAY ONLY)
KYLE, HAYS COUNTY, TEXAS

ATWELL
866.850.4200 www.atwell-group.com
3815 S. CAPITAL OF TEXAS HIGHWAY, SUITE 300
AUSTIN, TX 78704
FIRM NO. 10193726

DATE: OCT., 2019	REVISIONS:	DATE	BY
SCALE: 1"=100'			
CHECKED BY: PCS			
DRAFTED BY: SAR			
JOB NUMBER: 18009004.03-06			

SHEET 4 OF 4

N

100' 0' 100' 200'

SCALE 1" = 100'

LEGEND

- 504 — EXISTING CONTOUR
- 505 — PROPOSED CONTOUR
- FEMA ZONE A
- 500YR — ENGINEER'S CALCULATED EXISTING 500 YR FLOODPLAIN
- 100YR — ENGINEER'S CALCULATED EXISTING 100 YR FLOODPLAIN
- RIGHT OF WAY

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY., BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

EXISTING CONDITIONS

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET 05
OF 106 SHEETS

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

CP-23-0147

C:\USERS\MICHAELK\CHILES CONSULTING, LLC\CHILES - COSTELLO\6 CREEKS BLVD PHASE 2\04_SHEETS\EXISTING CONDITIONS PLAN.DWG

N

100' 0' 100' 200'

SCALE 1" = 100'

LEGEND

- EXISTING CONTOUR
- PROPERTY BOUNDARY
- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- TP — TP — TREE PROTECTION
- FEMA ZONE A
- 100YR — CALCULATED 100 YEAR FLOODPLAIN
- FULLY DEVELOPED 100 YEAR FLOODPLAIN
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT AREA
- STAGING AND SPOILS AREA

NOTES:

1. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY & HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. ALL STORM WATER LEAVING THE SITE DURING CONSTRUCTION ACTIVITIES MUST PASS THROUGH THE SILT FENCE AND ROCK BERMS.
3. REFERENCE "GENERAL NOTES" SHEETS FOR EROSION CONTROL NOTES AND SEQUENCE OF CONSTRUCTION.
4. THE CITY ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE THROUGHOUT THE DURATION OF THE PROJECT.
5. THE CONTRACTOR SHALL CLEAN UP SPOILS THAT MIGRATE INTO EXISTING R.O.W. A MINIMUM OF ONCE DAILY.
6. SILT FENCE AND ROCK BERMS TO BE REMOVED ONLY DURING ACTIVE CONSTRUCTION IN THIS AREA. SILT FENCE AND ROCK BERMS MUST BE REINSTALLED AT THE END OF EACH DAY.
7. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEED TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING.
8. STABILIZED CONSTRUCTION ENTRANCES SHALL BE REQUIRED AT POINT OS ACCESS FROM PUBLIC R.O.W.
9. INLET PROTECTION IS REQUIRED AFTER INLET CONSTRUCTION.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello

ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY. BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX

TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

EROSION AND SEDIMENTATION CONTROL PLAN

STATE OF TEXAS
JOHN D. BARCELLONA
97462
LICENSED PROFESSIONAL ENGINEER

8/15/2023

SHEET 06
OF 106 SHEETS

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

CP-23-0147

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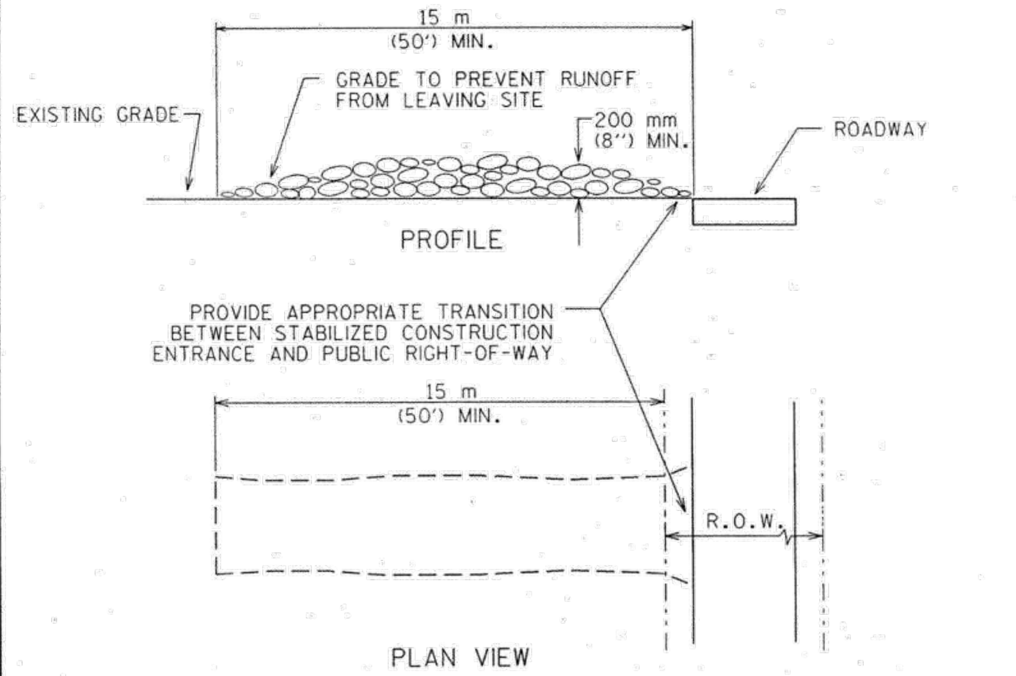
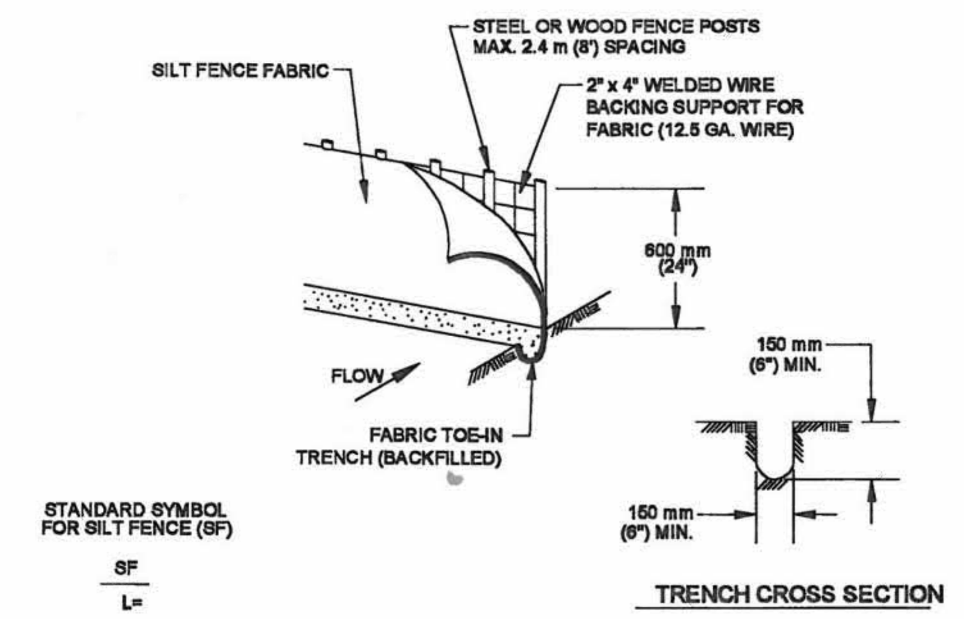


NOTES:

1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. 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 AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. 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 MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

STABILIZED CONSTRUCTION ENTRANCE



1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 Inches) DEPTH, USE STEEL POSTS.

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 150 mm (6 Inches) DEEP AND 150 mm (6 Inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

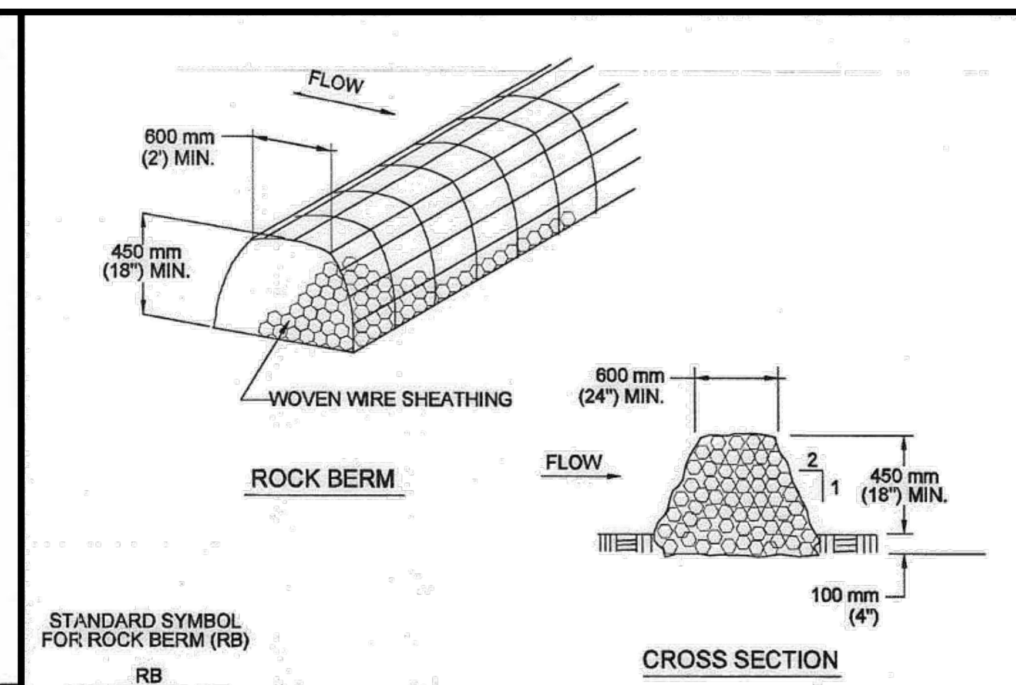
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 Inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

SILT FENCE



NOTES:

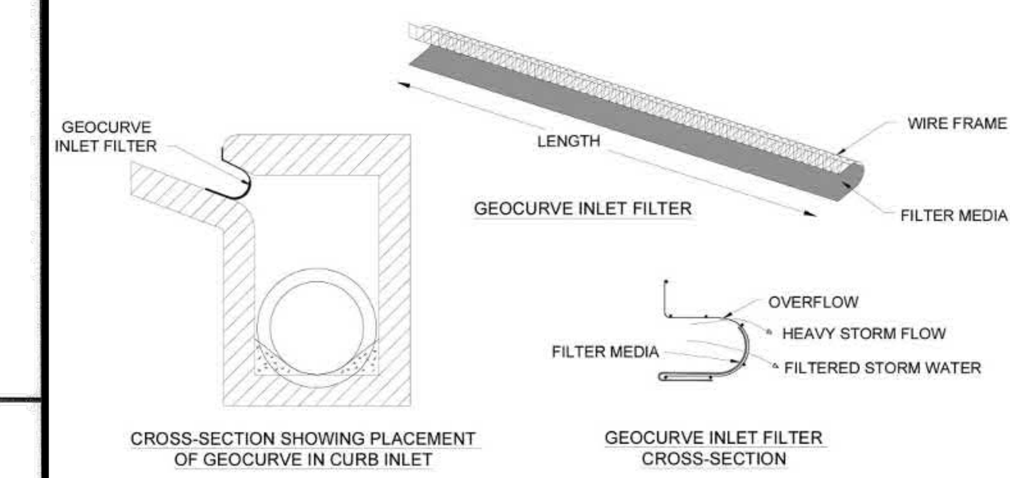
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

ROCK BERM

GeoSolutions, Inc. Product Data Sheet

GeoCurve Inlet Filter

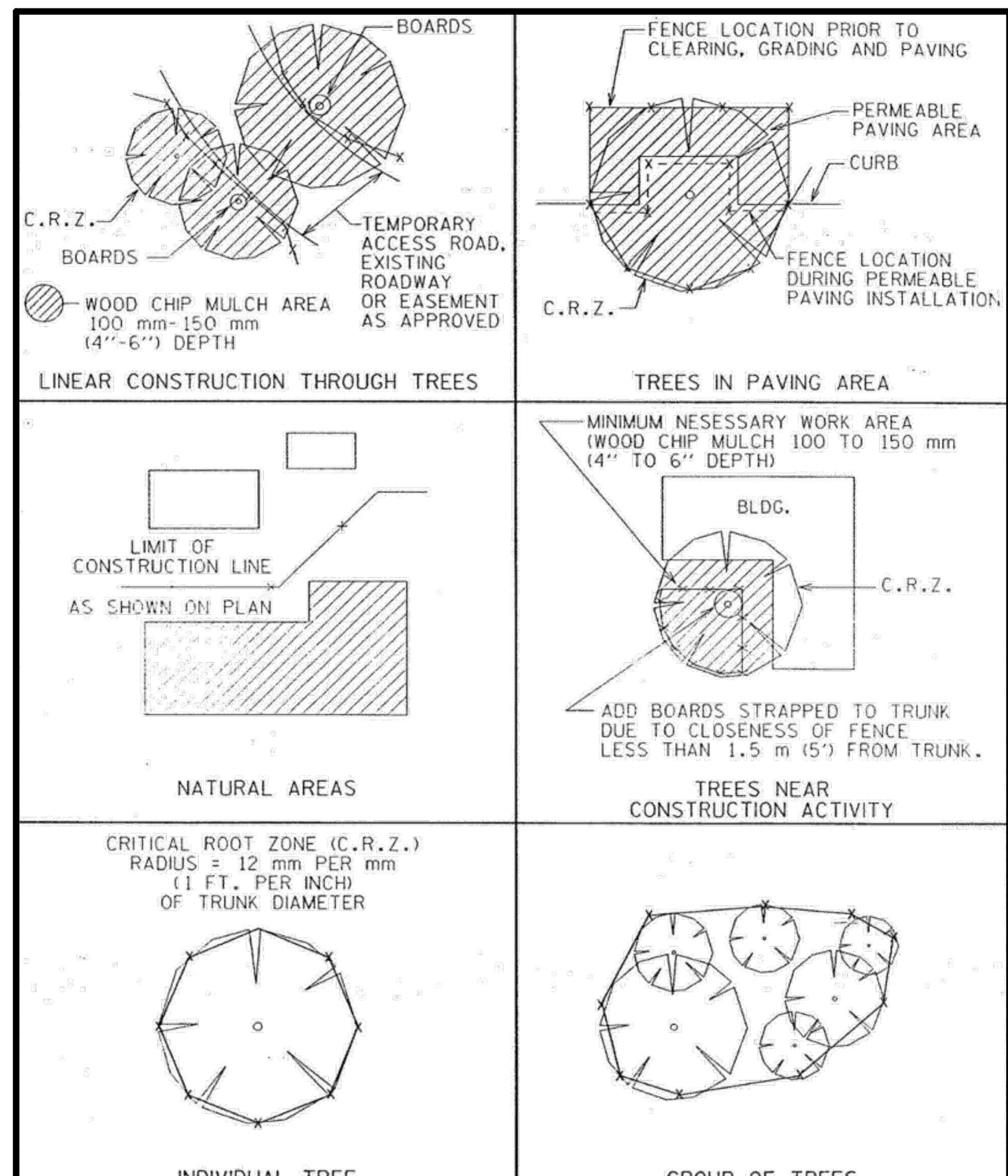
The GeoCurve Inlet Filter is a stormwater filter for placement into a stormwater curb inlet for the purpose of capturing debris and sediment that is transported by stormwater runoff. The device is comprised of a filter media (woven monofilament filter fabric) affixed to the lower portion of a "C" shaped 12 gauge welded wire frame (2" x 4" openings) with an upper retention flange. The device effectively filters stormwater, can easily be removed for maintenance and cleaning and incorporates an overflow window for heavy storm events.



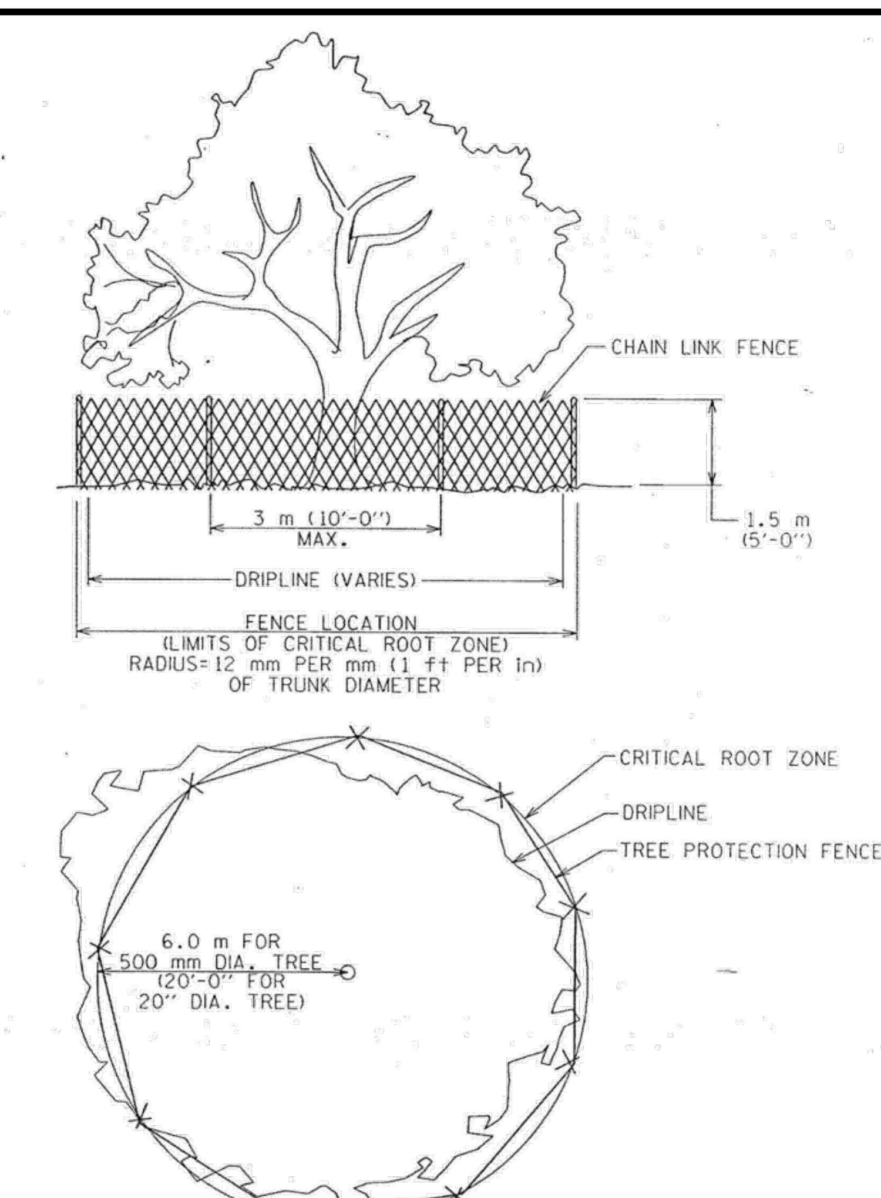
FILTER MEDIA PROPERTIES: Mono-filament Woven Filter Fabric

PROPERTY	ASTM TEST METHOD	VALUE	C.O.A. REQ'T
Fabric Weight	D 3776	4.5 oz/sy	3 oz/sy
Grab Tensile Strength	D 4632	170 lbs	----
Mullen Burst Strength	D 3786	410 lbs/sq in	120 lbs/sq in
UV Stability	D 4355	80 %	70 %
Water Flow Rate	D 4491	325 gal/min/sf	275 gal/min/sf

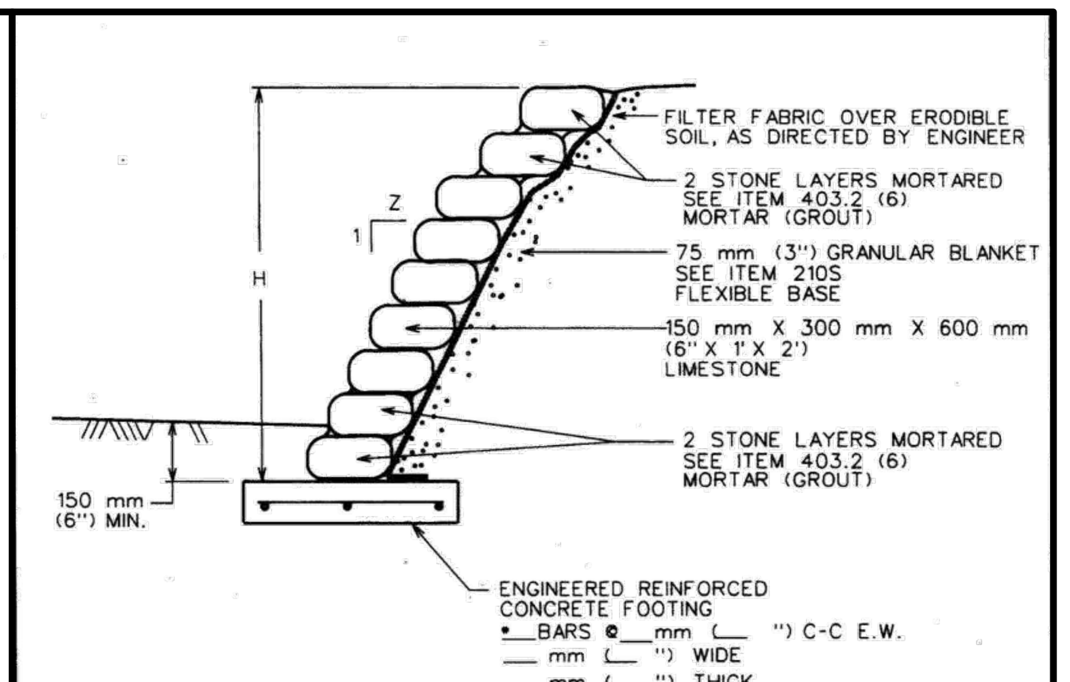
GeoSolutions, Inc. 4417 Burleson Road Austin, Texas 78744 512-330-0796



TREE PROTECTION FENCE LOCATIONS



TREE PROTECTION FENCE TYPE A - CHAIN LINK



THIS STANDARD APPLIES ONLY UNDER THE FOLLOWING CONDITIONS:

A. H AND Z ARE SPECIFIED ON THE DRAWING.
B. GROUNDWATER IS NO HIGHER THAN THE BOTTOM OF THE FOOTING.
C. THE MATERIAL BELOW THE FOOTING IS FIRM AND STABLE.
D. THE MATERIAL BEHIND THE WALL HAS A LEVEL SURFACE.
E. THE MATERIAL IN FRONT OF THE WALL HAS A SLOPE NO STEEPER THAN 4 HORIZONTAL TO 1 VERTICAL.
F. THE FACE OF THE WALL IS NO STEEPER THAN 1 HORIZONTAL TO 2 VERTICAL.
G. SURCHARGE LOADS BEHIND THE WALL ARE NO CLOSER THAN DISTANCE H FROM THE TOP OF WALL.

NOTES:

1. DESIGN AND CONSTRUCTION OF ROCK WALL SHALL CONFORM TO THE REQUIREMENTS OF CITY CODE 16-7-2, PLACEMENT OF FENCES IN STREET CORNER AREAS, AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL FOR MINIMIM SIGHT DISTANCE.
2. CONCRETE SHALL CONFORM TO ITEM 403S, "CONCRETE FOR STRUCTURES".

DRY STACK ROCK WALL FOR SLOPE PROTECTION

INLET PROTECTION:

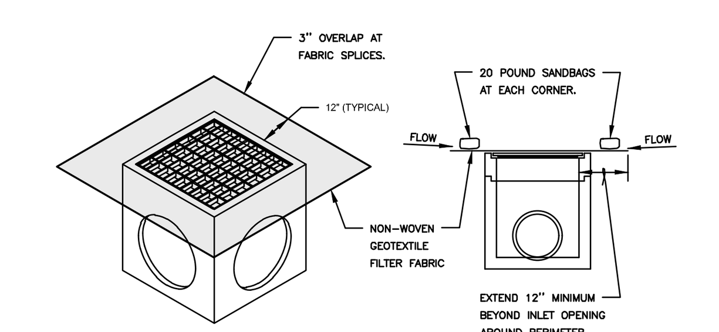
1. DESCRIPTION - TEMPORARY SEDIMENT BARRIER MADE OF NON-WOVEN POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE MATERIAL WHICH IS WATER PERMEABLE BUT WILL TRAP WATER-BORNE SEDIMENT FOR PROTECTION OF CURB INLETS WITH AN OPENING TO ALLOW THE PASSAGE OF RUNOFF FOR HIGHER FLOWS.

2. PURPOSE - TO INTERCEPT AND DETAIN WATER BORNE SEDIMENT FROM UNPROTECTED AREAS OF LIMITED EXTENT.

3. CONDITIONS WHERE PRACTICE APPLIES - INLET PROTECTION WITH OVERFLOW OPENING IS TO BE USED FOR EVERY INLET NEEDING PROTECTION TO MINIMIZE OVER TOPPING OF CURBS AND CREATION OF ADDITIONAL EROSION BEHIND THE INLET STRUCTURE. METHODS WHERE INLET PROTECTION IS ALLOWABLE SHALL BE ALL CONSTRUCTION IN A STREET OR R.O.W. INCLUDING STREET CUTS, MILLING OPERATIONS, REPAIR OR MAINTENANCE TO ASPHALT OR SUBGRADE, CONSTRUCTION OF TURN LANES, UTILITY INSTALLATIONS, CONCRETE OR ASPHALT SAW CUTTING, OR AT THE DIRECTION OF CITY OF AUSTIN PERSONNEL.

4. DESIGN CRITERIA - THE INLET PROTECTION IS ACROSS THE OPENING A CURB INLET WHERE CONSTRUCTION IN THE ROADWAY HAS THE POTENTIAL FOR SEDIMENT TO RUN OFF TO THE CURB INLET. IT IS NOT TO BE USED AS A SUBSTITUTE FOR EROSION CONTROLS OUTSIDE THE ROADWAY WHERE CONTROLS COULD KEEP THE SEDIMENT OUT OF THE ROADWAY.
- DRAINAGE AREA - LESS THE TWO (2) ACRES (RECOMMENDED).
- MATERIAL - THE FABRIC MUST CORRESPOND TO STANDARD SPECIFICATION ITEM 642.2, SILT FENCE, (1) FABRIC. THE WIRE MESH SUPPORT MUST CORRESPOND TO STANDARD SPECIFICATION ITEM 642.2 SILT FENCE (3) WIRE FENCE.
- COVERAGE - THE FABRIC/WIRE SHOULD COMPLETELY COVER THE OPENING OF THE INLET AND EXTEND BEYOND THE INLET OPENING BY 2' ON EITHER SIDE. THE FABRIC/WIRE SHOULD EXTEND OUTWARD INTO THE GUTTER TWELVE (12) INCHES AND OVER THE TOP OF THE INLET BY TWELVE (12) INCHES. WHERE SECTIONS OF THE FABRIC OVERLAP, THEY SHALL OVERLAP AT LEAST THREE (3) INCHES.
- OPENING - THE OPENING SHOULD BE FOUR (4) INCHES IN HEIGHT EXTENDING DOWNWARD FROM THE SOFFIT OF THE INLET OPENING AND EXTEND THE FULL LENGTH OF THE INLET.
- ATTACHMENT - THE FABRIC SHALL BE SECURELY ATTACHED TO THE WIRE MESH. THE FABRIC/WIRE SHALL BE HELD IN PLACE WITH SAND BAGS FILLED WITH SAND OR PEA GRAVEL, LOCATED AT THE ENDS AND ACROSS THE LENGTH AT TWO (2) FOOT ON CENTER. WHERE MINIMUM CLEARANCE CAUSES TRAFFIC TO DRIVE IN THE GUTTER, A 1" X 4" BOARD MAY BE NAILED TO THE GUTTER WITH CONCRETE NAILS IN LIEU OF SANDBAGS.

5. MAINTENANCE - ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF TWO (2) INCHES OR ONE -THIRD THE HEIGHT OF THE INLET THROAT, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.

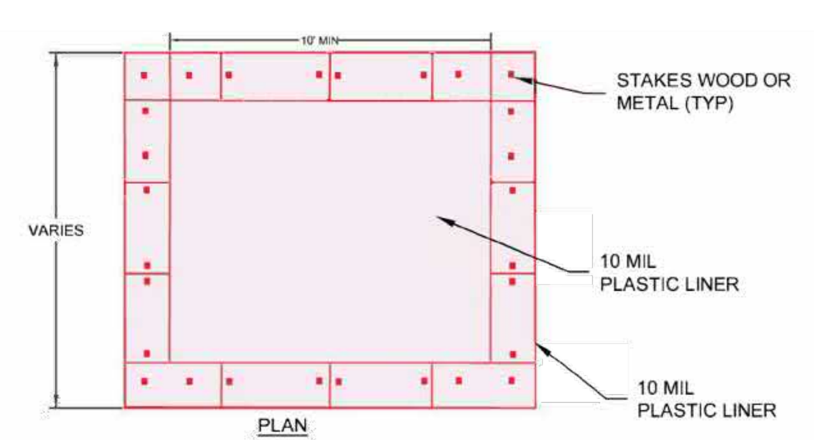


NOTES:

1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
3. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

AREA & TRENCH DRAIN INLET PROTECTION

N.T.S.



NOTES :

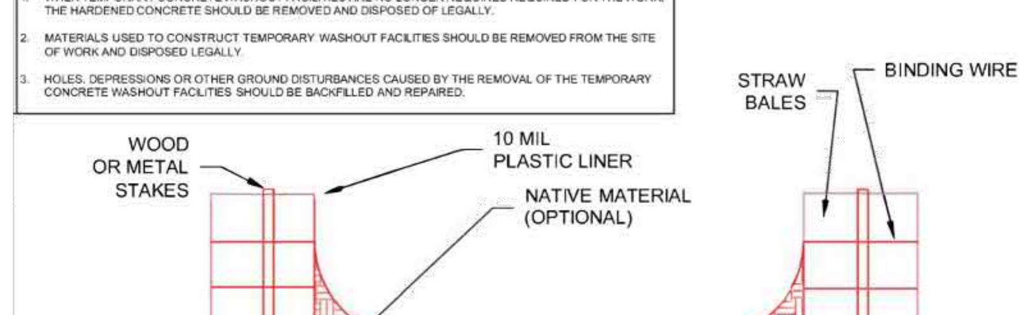
1. THE CITY RECOMMENDS PREFABRICATED CONCRETE WASHOUT CONTAINERS IF A PREFABRICATED CONCRETE WASHOUT CONTAINER IS NOT UTILIZED, THIS DETAIL IS REQUIRED.
2. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASE IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
3. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
4. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORMWATER RUNOFF.
5. LOCATE WASHOUT AREA AT LEAST 50 FT FROM SENSITIVE FEATURES, FLOODPLAIN, STORM DRAINS, OPEN DITCHES OR WATER BODIES.
6. TEMPORARY WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
7. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

MATERIALS :

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

MAINTENANCE :

1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF LEGALLY.
2. MATERIALS USED TO CONSTRUCT TEMPORARY WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF WORK AND DISPOSED LEGALLY.
3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.



CONCRETE WASHOUT DETAIL

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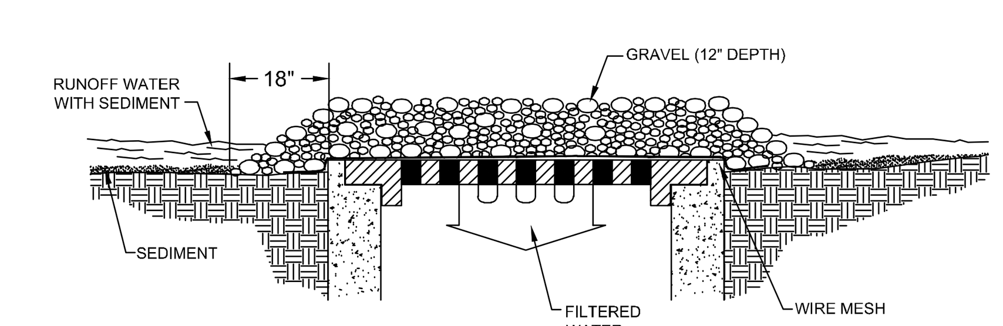


NOTE:

A. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.

B. AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ABOVE. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.

C. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS IT'S FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.

INLET PROTECTION/SEDIMENT FILTER

N.T.S.

NO. | REVISION | DATE | BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

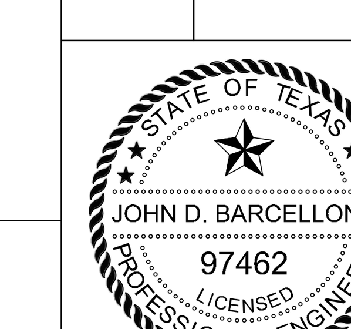
Costello

ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX

TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

EROSION AND SEDIMENTATION CONTROL DETAILS



8/15/2023

SHEET 07
OF 106 SHEETS

CP-23-0147

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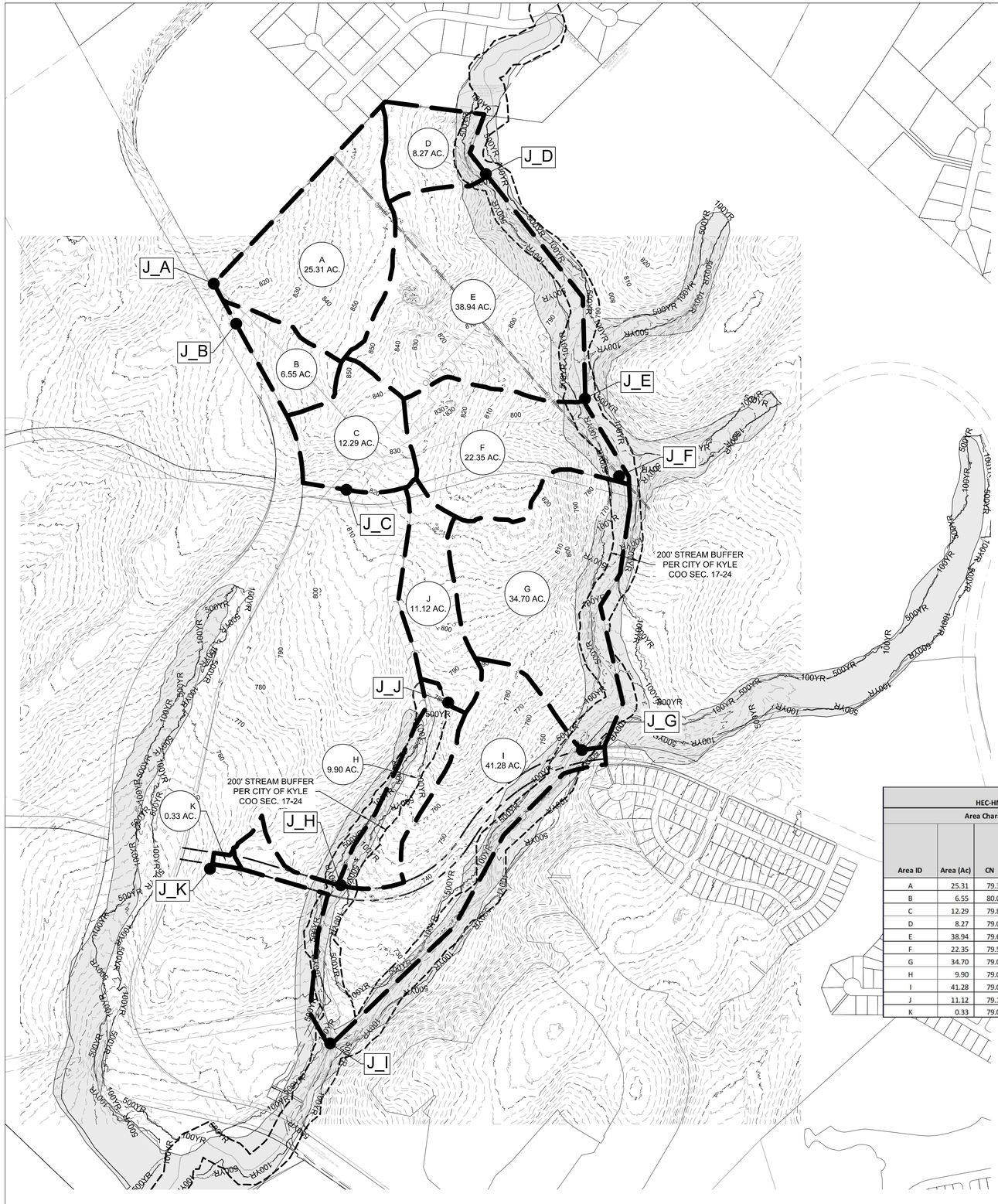

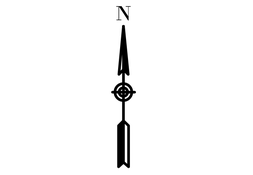

LEGEND

- EXISTING CONTOUR (504)
- PROPOSED CONTOUR (500)
- PROPERTY BOUNDARY
- DRAINAGE DIVIDE
- TOC FLOWPATH
- POI _ — DISCHARGE POINT
- DA # / AREA — EXISTING DRAINAGE AREA CALLOUT

Hydrologic POI	Peak Discharge (cfs)			
	2 Year	10 Year	25 Year	100 Year
J_A	51	98	131	183
J_B	16	31	41	57
J_C	33	64	84	117
J_D	18	34	46	64
J_E	85	160	211	295
J_F	53	100	133	185
J_G	61	118	158	223
J_H	20	39	52	74
J_I	91	177	235	330
J_J	26	51	67	94
J_K	1	2	2	3

CLARA VISTA - EXISTING CONDITIONS
HEC-HMS INPUTS, ROUTING, AND DISCHARGE DATA

CLARA VISTA - EXISTING CONDITIONS
TIME OF CONCENTRATION CALCULATIONS (TR-55 METHODOLOGY)

	Area Characteristics						Peak Discharge (cfs)				Sheet Flow					Shallow Concentrated Flow				Channel Flow			
Area ID	Area (Ac)	CN	% Imp.	Tc (min)	Tlag (min)		2 Year	10 Year	25 Year	100 Year	Sheet Flow Length (ft)	Sheet Flow 'n' Value	P_2 (inches)	Sheet Flow Slope (ft/ft)	Sheet Flow Travel Time (min)	SCF Length (ft)	SCF Slope (ft/ft)	SCF Velocity (fps)	SCF Travel Time (min)	Channel Flow Length (ft)	Channel Slope (ft/ft)	Channel Velocity (fps) (Bank-Full)	Channel Flow Travel Time (min)
A	25.31	79.3	0.0%	25.3	15.2		51	98	131	183	99	0.41	4.19	0.022	18.2	1154	0.028	2.7	7.1	0			
B	6.55	80.0	0.0%	17.1	10.2		16	31	41	57	100	0.24	4.19	0.013	14.8	461	0.044	3.4	2.3	0			
C	12.29	79.8	0.0%	13.6	8.1		33	64	84	117	100	0.24	4.19	0.042	9.3	838	0.041	3.3	4.3	0			
D	8.27	79.0	0.0%	21.7	13.0		18	34	46	64	100	0.41	4.19	0.021	18.8	549	0.067	4.2	2.2	156	0.021	4.00	0.7
E	38.94	79.6	4.8%	23.5	14.1		85	160	211	295	100	0.24	4.19	0.015	14.1	1732	0.041	3.3	8.8	137	0.006	4.00	0.6
F	22.35	79.5	3.3%	19.2	11.5		53	100	133	185	100	0.24	4.19	0.020	12.5	1253	0.050	3.6	5.8	205	0.020	4.00	0.9
G	34.70	79.0	0.0%	32.4	19.4		61	118	158	223	99	0.41	4.19	0.012	23.5	1705	0.049	3.6	7.9	220	0.020	4.00	0.9
H	9.90	79.0	0.0%	23.9	14.3		20	39	52	74	100	0.41	4.19	0.024	17.9	142	0.074	4.4	0.5	1311	0.028	4.00	5.5
I	41.28	79.0	0.0%	20.3	12.2		91	177	235	330	100	0.41	4.19	0.028	16.6	877	0.063	4.0	3.6	0			
J	11.12	79.1	0.0%	17.9	10.8		26	51	67	94	100	0.24	4.19	0.025	11.4	772	0.033	2.9	4.4	519	0.031	4.00	2.2
K	0.33	79.0	0.0%	11.6	7.0		1	2	2	3	100	0.24	4.19	0.025	11.4	63	0.086	4.7	0.2	0			

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY., BLDG 3, SUITE 390
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(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

EXISTING DRAINAGE AREA MAP

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 08
OF 106 SHEETS

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CP-23-0147

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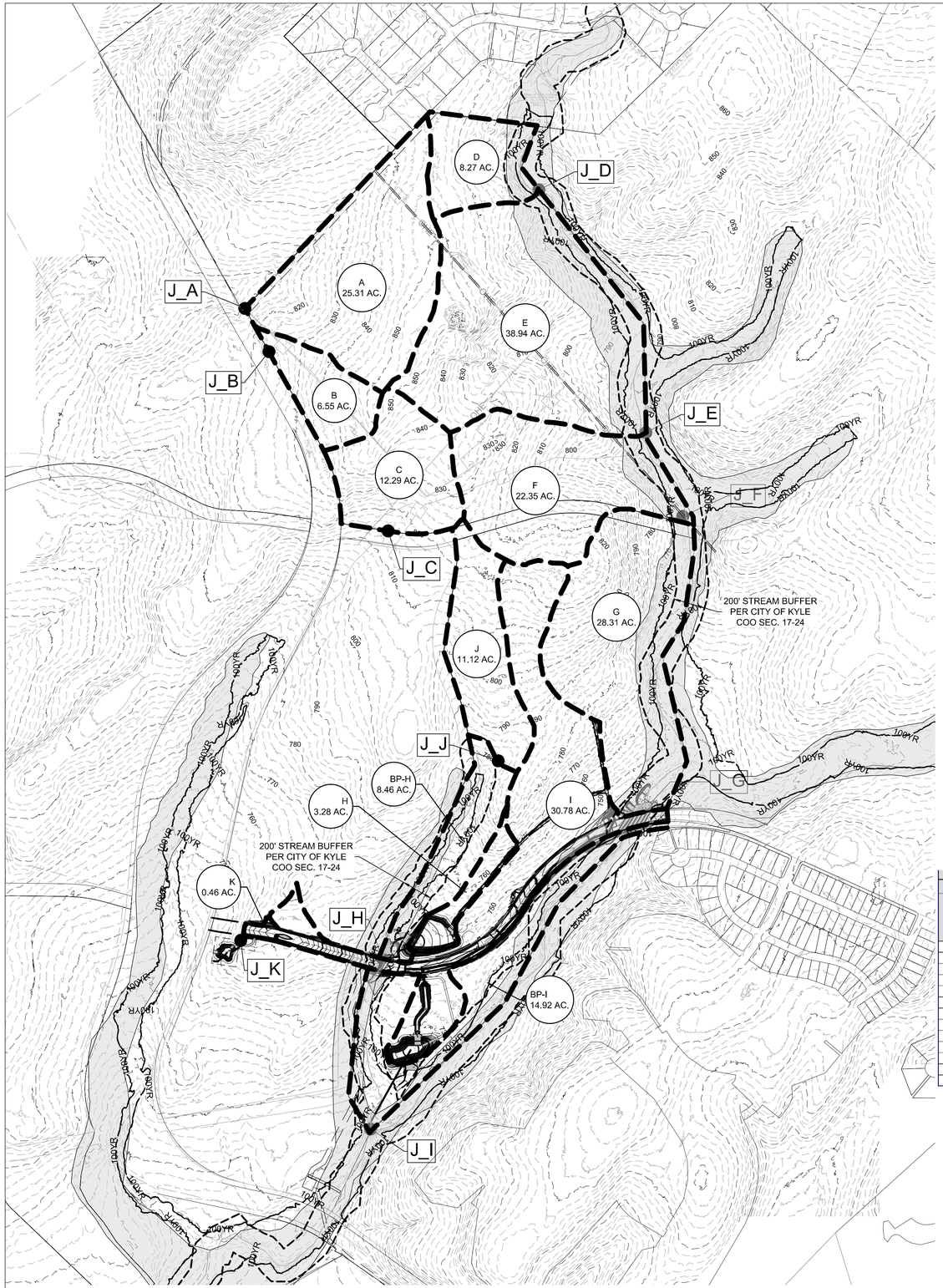

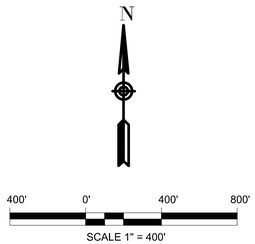

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY BOUNDARY
- DRAINAGE DIVIDE
- TOC FLOWPATH
- PROPOSED STORM LINE
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP
- POI _ — DISCHARGE POINT
- DA # / AREA — PROPOSED DRAINAGE AREA CALLOUT

Analysis Point	2 Year (Existing)	2 Year (S. 6 Creeks)	2 Year Δ (S6C - EX)	10 Year (Existing)	10 Year (S. 6 Creeks)	10 Year Δ (S6C - EX)	25 Year (Existing)	25 Year (S. 6 Creeks)	25 Year Δ (S6C - EX)	100 Year (Existing)	100 Year (S. 6 Creeks)	100 Year Δ (S6C - EX)
J_A	50.7	50.7	0.0	98.4	98.4	0.0	130.8	130.8	0.0	183.3	183.3	0.0
J_B	16.2	16.2	0.0	31.0	31.0	0.0	40.9	40.9	0.0	57.0	57.0	0.0
J_C	33.2	33.2	0.0	63.5	63.5	0.0	84.0	84.0	0.0	117.1	117.1	0.0
J_D	17.7	17.7	0.0	34.4	34.4	0.0	45.7	45.7	0.0	64.2	64.2	0.0
J_E	84.5	81.9	-2.6	160.3	158.1	-2.2	211.4	209.5	-1.9	294.5	293.1	-1.4
J_F	52.6	51.5	-1.1	100.4	99.4	-1.0	132.6	131.8	-0.8	184.8	184.2	-0.6
J_G	60.5	53.4	-7.1	118.4	104.3	-14.1	157.9	138.9	-19.0	222.5	195.5	-27.0
J_H	20.2	17.3	-2.9	39.4	33.7	-5.7	52.4	45.6	-6.8	73.5	65.8	-7.7
J_I	91.0	72.0	-19.0	177.1	163.7	-13.4	235.4	223.7	-11.7	330.2	318.1	-12.1
J_J	26.0	26.0	0.0	50.5	50.5	0.0	67.1	67.1	0.0	94.0	94.0	0.0
J_K	0.9	0.8	-0.1	1.8	1.6	-0.2	2.4	2.1	-0.3	3.3	2.9	-0.4

HEC-HMS INPUTS, ROUTING, AND DISCHARGE DATA						TIME OF CONCENTRATION CALCULATIONS (TR-55 METHODOLOGY)																	
Area Characteristics						Sheet Flow					Shallow Concentrated Flow				Channel Flow				Street Flow				Storm Sewer			
Area ID	Area (Ac)	CN	% Imp.	Tc (min)	Tlag (min)	Sheet Flow Length (ft)	Sheet Flow 'n' Value	P_2 (inches)	Sheet Flow Slope (ft/ft)	Sheet Flow Travel Time (min)	SCF Length (ft)	SCF Slope (ft/ft)	SCF Velocity (fps)	SCF Travel Time (min)	Channel Flow Length (ft)	Channel Slope (ft/ft)	Channel Velocity (fps) (Bank-Full)	Channel Flow Travel Time (min)	Street Flow Length (ft)	Street Slope (ft/ft)	Street Velocity (fps) (Curb-Full)	Street Flow Travel Time (min)	Storm Sewer Flow Length (ft)	Storm Sewer Slope (ft/ft)	Storm Sewer Velocity (fps) (Pipe-Full)	Storm Sewer Flow Travel Time (min)
A	25.31	79.3	0.0%	25.3	15.2	99	0.41	4.19	0.022	18.2	1154	0.028	2.7	7.1	0				0				0		8.0	
B	6.55	80.0	0.0%	17.1	10.2	100	0.24	4.19	0.013	14.8	461	0.044	3.4	2.3	0				0				0			
BP-H	8.46	79.0	0.0%	23.9	14.3	100	0.41	4.19	0.024	17.9	142	0.074	4.4	0.5	1310	0.028	4.00	5.5	0				0			
BP-I	14.92	79.0	0.1%	19.7	11.8	100	0.41	4.19	0.052	13.1	358	0.067	4.2	1.4	1232	0.024	4.00	5.1	0				0			
C	12.29	79.8	0.0%	13.6	8.1	100	0.24	4.19	0.042	9.3	838	0.041	3.3	4.3	0				0				0			
D	8.27	79.0	0.0%	21.7	13.0	100	0.41	4.19	0.021	18.8	549	0.067	4.2	2.2	156	0.021	4.00	0.7	0				0			
E	38.94	79.6	0.0%	23.5	14.1	100	0.24	4.19	0.015	14.1	1732	0.041	3.3	8.8	137	0.006	4.00	0.6	0				0			
F	22.35	79.5	0.0%	19.2	11.5	100	0.24	4.19	0.020	12.5	1253	0.050	3.6	5.8	205	0.020	4.00	0.9	0				0			
G	28.31	79.0	0.0%	27.8	16.7	100	0.41	4.19	0.017	20.4	783	0.093	4.9	2.7	1146	0.014	4.00	4.8	0				0			
H	3.28	79.3	0.0%	17.4	10.5	100	0.41	4.19	0.044	13.9	164	0.083	4.6	0.6	695	0.024	4.00	2.9	0				0			
I	30.78	79.2	15.3%	25.3	15.2	100	0.41	4.19	0.028	16.6	564	0.061	4.0	2.4	657	0.033	4.00	2.7	0				1725	0.006	8.0	3.6
J	11.12	79.1	0.0%	17.9	10.8	100	0.24	4.19	0.025	11.4	772	0.033	2.9	4.4	519	0.031	4.00	2.2	0				0			
K	0.46	79.0	75.5%	8.9	5.4	75	0.24	4.19	0.036	7.9	0				0				168	0.033	3.0	0.9	72	0.014	8.0	0.1

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NO.	REVISION	DATE	BY

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COGO CHECKED:
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QA/QC REVISIONS:

ENGINEERING AND SURVEYING
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TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

PROPOSED DRAINAGE AREA MAP

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET 09
OF 106 SHEETS

CP-23-0147

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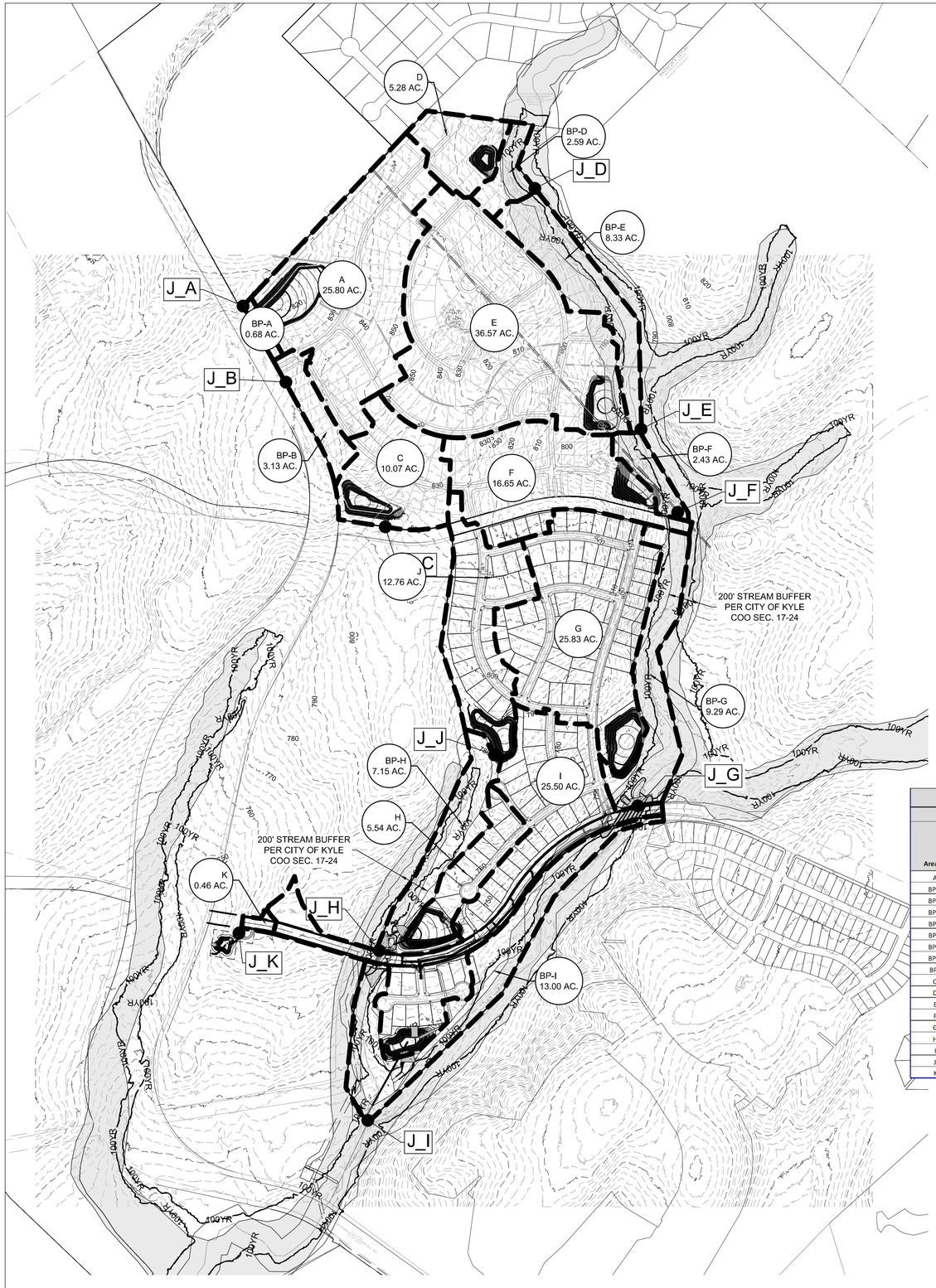

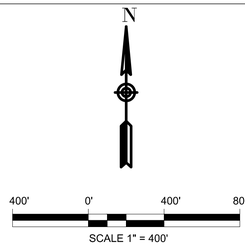

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY BOUNDARY
- DRAINAGE DIVIDE
- TOC FLOWPATH
- PROPOSED STORM LINE
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP
- POI _ — DISCHARGE POINT
- DA # / AREA — PROPOSED DRAINAGE AREA CALLOUT

Analysis Point	2 Year (Existing)	2 Year (Ultimate)	2 Year Δ (ULT - EX)	10 Year (Existing)	10 Year (Ultimate)	10 Year Δ (ULT - EX)	25 Year (Existing)	25 Year (Ultimate)	25 Year Δ (ULT - EX)	100 Year (Existing)	100 Year (Ultimate)	100 Year Δ (ULT - EX)
J_A	50.7	41.5	-9.2	98.4	82.0	-16.4	130.8	110.4	-20.4	183.3	157.0	-26.3
J_B	16.2	11.6	-4.6	31.0	21.4	-9.6	40.9	28.0	-12.9	57.0	38.5	-18.5
J_C	33.2	25.0	-8.2	63.5	50.2	-13.3	84.0	67.6	-16.4	117.1	95.2	-21.9
J_D	17.7	16.2	-1.5	34.4	30.5	-3.9	45.7	43.1	-2.6	64.2	63.5	-0.7
J_E	84.5	73.6	-10.9	160.3	145.2	-15.1	211.4	194.6	-16.8	294.5	276.7	-17.8
J_F	52.6	36.9	-15.7	100.4	65.1	-35.3	132.6	87.7	-44.9	184.8	126.2	-58.6
J_G	60.5	56.5	-4.0	118.4	112.2	-6.2	157.9	144.4	-13.5	222.5	197.8	-24.7
J_H	20.2	19.1	-1.1	39.4	37.9	-1.5	52.4	50.0	-2.4	73.5	69.6	-3.9
J_I	91.0	88.6	-2.4	177.1	173.9	-3.2	235.4	229.9	-5.5	330.2	317.4	-12.8
J_J	26.0	22.1	-3.9	50.5	45.1	-5.4	67.1	60.9	-6.2	94.0	83.5	-10.5
J_K	0.9	0.8	-0.1	1.8	1.6	-0.2	2.4	2.1	-0.3	3.3	2.9	-0.4

CLARA VISTA - ULTIMATE CONDITIONS
HEC-HMS INPUTS, ROUTING, AND DISCHARGE DATA

CLARA VISTA - ULTIMATE CONDITIONS
TIME OF CONCENTRATION CALCULATIONS (TR-55 METHODOLOGY)

Area Characteristics						Sheet Flow					Shallow Concentrated Flow				Channel Flow				Street Flow				Storm Sewer			
Area ID	Area (Ac)	CN	% Imp.	Tc (min)	Tlag (min)	Sheet Flow Length (ft)	Sheet Flow 'n' Value	P_2 (inches)	Sheet Flow Slope (ft/ft)	Sheet Flow Travel Time (min)	SCF Length (ft)	SCF Slope (ft/ft)	SCF Velocity (fps)	SCF Travel Time (min)	Channel Flow Length (ft)	Channel Slope (ft/ft)	Channel Velocity (fps) (Bank-Full)	Channel Flow Travel Time (min)	Street Flow Length (ft)	Street Slope (ft/ft)	Street Velocity (fps) (Curb-Full)	Street Flow Travel Time (min)	Storm Sewer Flow Length (ft)	Storm Sewer Slope (ft/ft)	Storm Sewer Velocity (fps) (Pipe-Full)	Storm Sewer Flow Travel Time (min)
A	25.80	79.4	29.6%	19.9	12.0	68	0.24	4.19	0.007	14.2	78	0.022	2.4	0.5	0				229	0.016	2.0	1.9	1569	0.012	8.0	3.3
BP-A	0.68	79.6	0.0%	10.7	6.4	100	0.24	4.19	0.034	10.1	148	0.062	4.0	0.6	0				0				0			
BP-B	3.13	80.0	10.2%	6.1	3.7	59	0.24	4.19	0.052	5.6	108	0.046	3.4	0.5	0				0				0			
BP-D	2.59	80.0	14.1%	9.4	5.6	76	0.24	4.19	0.033	8.2	242	0.118	5.5	0.7	108	0.018	4.00	0.4	0				0			
BP-E	8.33	80.0	17.5%	14.5	8.7	74	0.24	4.19	0.055	6.5	318	0.078	4.5	1.2	1623	0.024	4.00	6.8	0				0			
BP-F	2.43	80.0	8.9%	10.1	6.0	100	0.24	4.19	0.073	7.4	87	0.096	5.0	0.3	568	0.021	4.00	2.4	0				0			
BP-G	9.30	80.0	8.6%	14.7	8.8	100	0.24	4.19	0.116	6.2	167	0.062	4.0	0.7	1888	0.015	4.00	7.9	0				0			
BP-H	7.15	80.0	6.7%	16.7	10.0	100	0.41	4.19	0.078	11.1	50	0.081	4.6	0.2	1298	0.030	4.00	5.4	0				0			
BP-I	13.00	80.0	7.8%	23.0	13.8	100	0.41	4.19	0.032	15.8	358	0.032	2.9	2.1	1232	0.024	4.00	5.1	0				0			
C	10.07	80.0	26.2%	10.3	6.2	87	0.24	4.19	0.051	7.7	339	0.029	2.8	2.1	0				0				296	0.046	8.0	0.6
D	5.28	80.0	29.5%	12.2	7.3	87	0.24	4.19	0.031	9.4	0				0				162	0.029	2.5	1.1	783	0.016	8.0	1.6
E	36.57	80.0	35.0%	17.8	10.7	72	0.24	4.19	0.010	12.7	82	0.009	1.6	0.9	0				93	0.030	2.5	0.6	1734	0.033	8.0	3.6
F	16.65	80.0	41.7%	14.5	8.7	94	0.24	4.19	0.028	10.4	209	0.020	2.3	1.5	0				150	0.055	3.0	0.8	821	0.037	8.0	1.7
G	25.83	80.0	39.3%	11.4	6.9	80	0.24	4.19	0.044	7.6	376	0.043	3.4	1.9	0				0		2.0		932	0.056	8.0	1.9
H	5.54	80.0	32.4%	7.2	4.3	89	0.24	4.19	0.145	5.1	85	0.055	3.8	0.4	0				138	0.036	3.0	0.8	461	0.029	8.0	1.0
I	25.50	80.0	44.2%	15.8	9.5	80	0.24	4.19	0.042	7.7	71	0.024	2.5	0.5	0				180	0.057	2.5	1.2	3064	0.017	8.0	6.4
J	12.76	80.0	32.0%	19.0	11.4	61	0.24	4.19	0.006	13.9	105	0.006	1.2	1.4	0				131	0.009	2.0	1.1	1224	0.033	8.0	2.5
K	0.46	79.0	75.5%	8.9	5.4	75	0.24	4.19	0.036	7.9	0				0				168	0.033	3.0	0.9	72	0.014	8.0	0.1

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COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY. BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

ULTIMATE DRAINAGE AREA MAP

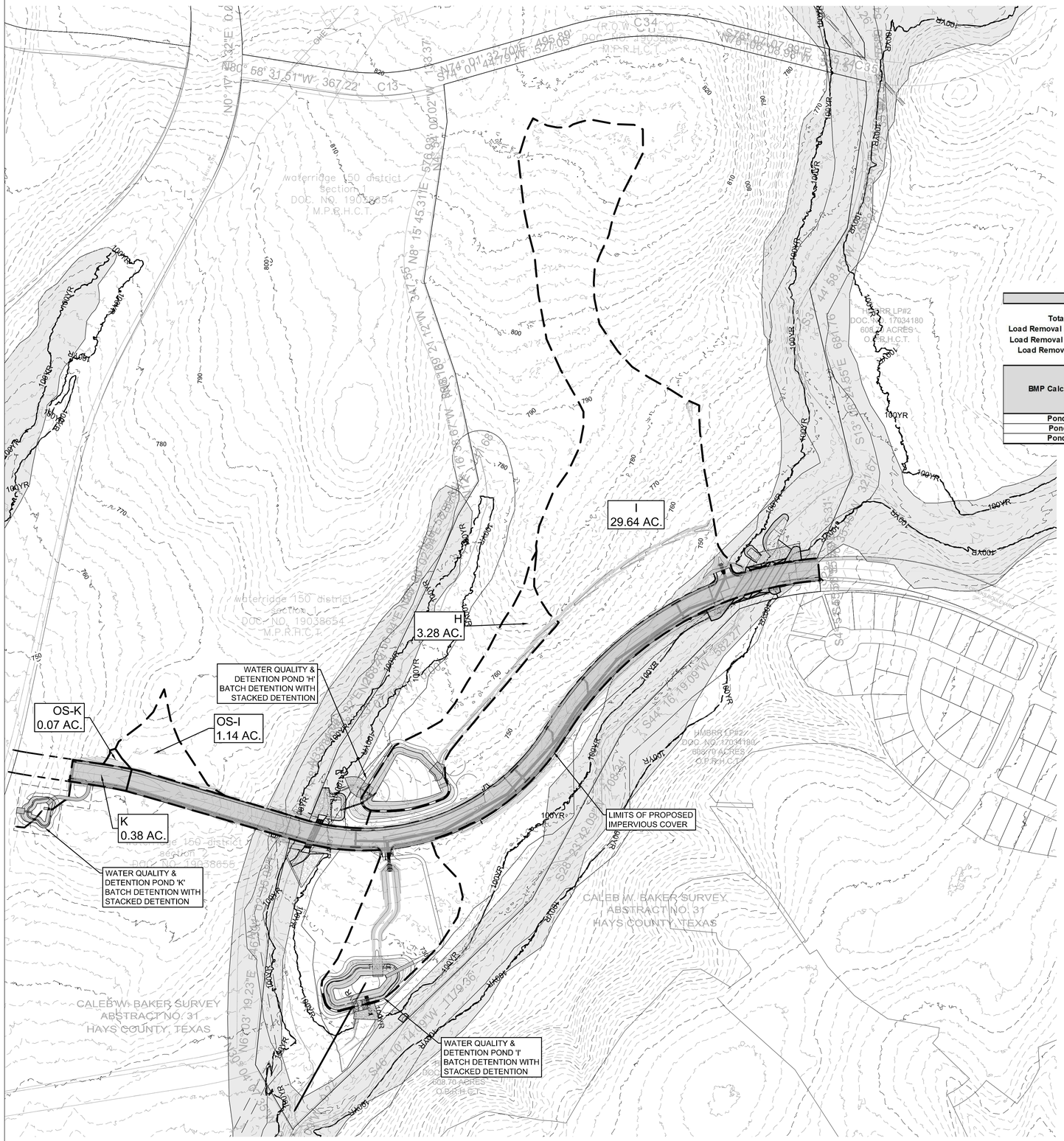
STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 10
OF 106 SHEETS

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

CP-23-0147

C:\USERS\MICHAELK\CHILES CONSULTING, LLC\CHILES - COSTELLO\6 CREEKS BLVD PHASE 2\04_SHEETS\03 ULTIMATE DRAINAGE AREA MAP.DWG



N

200' 0' 200' 400'

SCALE 1" = 200'

Water Ridge Tract - TSS Removal Calculations (South 6 Creeks Blvd. Proposed Condition)

Loading Calculations		
Site Area:	201.38	ac
Total Proposed IC:	5.08	ac
Load Removal Required (L_M):	4,425	lbs/yr
Load Removal Provided (L_P):	4,825	lbs/yr
Load Removal Remaining:	-400	lbs/yr

BMP Calculations	Inputs						Outputs		
	Total On-Site DA to BMP (ac)	Pre-development On-Site IC to BMP (ac)	Post-development On-Site IC to BMP (ac)	Off-Site DA to BMP (ac)	Off-Site IC to BMP (ac)	L_M (lbs/yr)	L_R (lbs/yr)	F	Volume (cf)
Pond H	3.28	0.00	0.00	0.00	0.00	45	52	0.87	411
Pond I	29.64	0.00	4.72	1.14	0.00	4,478	5,147	0.87	32,279
Pond K	0.38	0.00	0.34	0.07	0.00	302	347	0.87	1,772

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SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

PROPOSED WATER QUALITY PLAN

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET 11
OF 106 SHEETS

CP-23-0147

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Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: South 6 Creeks Blvd. Phase 2
Date Prepared: 4/25/2023

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

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

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

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

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

County =	Williamson	
Total project area included in plan * =	201.38	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	5.08	acres
Total post-development impervious cover fraction * =	0.03	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	4425	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 3

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: South 6 Creeks Blvd. Phase 2
Date Prepared: 4/25/2023

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

Drainage Basin/Outfall Area No. =	H		
Total drainage basin/outfall area =	3.28	acres	
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres	
Post-development impervious area within drainage basin/outfall area =	0.00	acres	
Post-development impervious fraction within drainage basin/outfall area =	0.00		Pond H
$L_{M\ THIS\ BASIN}$ =	0	lbs.	

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention
Removal efficiency = 91 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	3.28	acres
A_I =	0.00	acres
A_P =	3.28	acres
L_R =	52	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 45 lbs.

F = 0.87

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

Rainfall Depth =	1.44	inches
Post Development Runoff Coefficient =	0.02	
On-site Water Quality Volume =	343	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	69	
Total Capture Volume (required water quality volume(s) x 1.20) =	411	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: South 6 Creeks Blvd. Phase 2
Date Prepared: 4/25/2023

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Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	I		
Total drainage basin/outfall area =	29.64	acres	
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres	
Post-development impervious area within drainage basin/outfall area =	4.72	acres	
Post-development impervious fraction within drainage basin/outfall area =	0.16		Pond I
$L_{M\ THIS\ BASIN}$ =	4,108	lbs.	

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention
Removal efficiency = 91 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	29.64	acres
A_I =	4.72	acres
A_P =	24.92	acres
L_R =	5,147	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 4,478 lbs.

F = 0.87

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

Rainfall Depth =	1.44	inches
Post Development Runoff Coefficient =	0.17	
On-site Water Quality Volume =	26,780	cubic feet

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

Off-site area draining to BMP =	1.14	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	119	cubic feet
Storage for Sediment =	5,380	
Total Capture Volume (required water quality volume(s) x 1.20) =	32,279	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: South 6 Creeks Blvd. Phase 2
Date Prepared: 4/25/2023

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Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	K		
Total drainage basin/outfall area =	0.38	acres	
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres	
Post-development impervious area within drainage basin/outfall area =	0.34	acres	
Post-development impervious fraction within drainage basin/outfall area =	0.90		Pond K
$L_{M\ THIS\ BASIN}$ =	299	lbs.	

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention
Removal efficiency = 91 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	0.38	acres
A_I =	0.34	acres
A_P =	0.04	acres
L_R =	347	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 302 lbs.

F = 0.87

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

Rainfall Depth =	1.44	inches
Post Development Runoff Coefficient =	0.74	
On-site Water Quality Volume =	1,468	cubic feet

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

Off-site area draining to BMP =	0.07	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	8	cubic feet
Storage for Sediment =	295	
Total Capture Volume (required water quality volume(s) x 1.20) =	1,772	cubic feet

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY., BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

PROPOSED WATER QUALITY CALCULATIONS

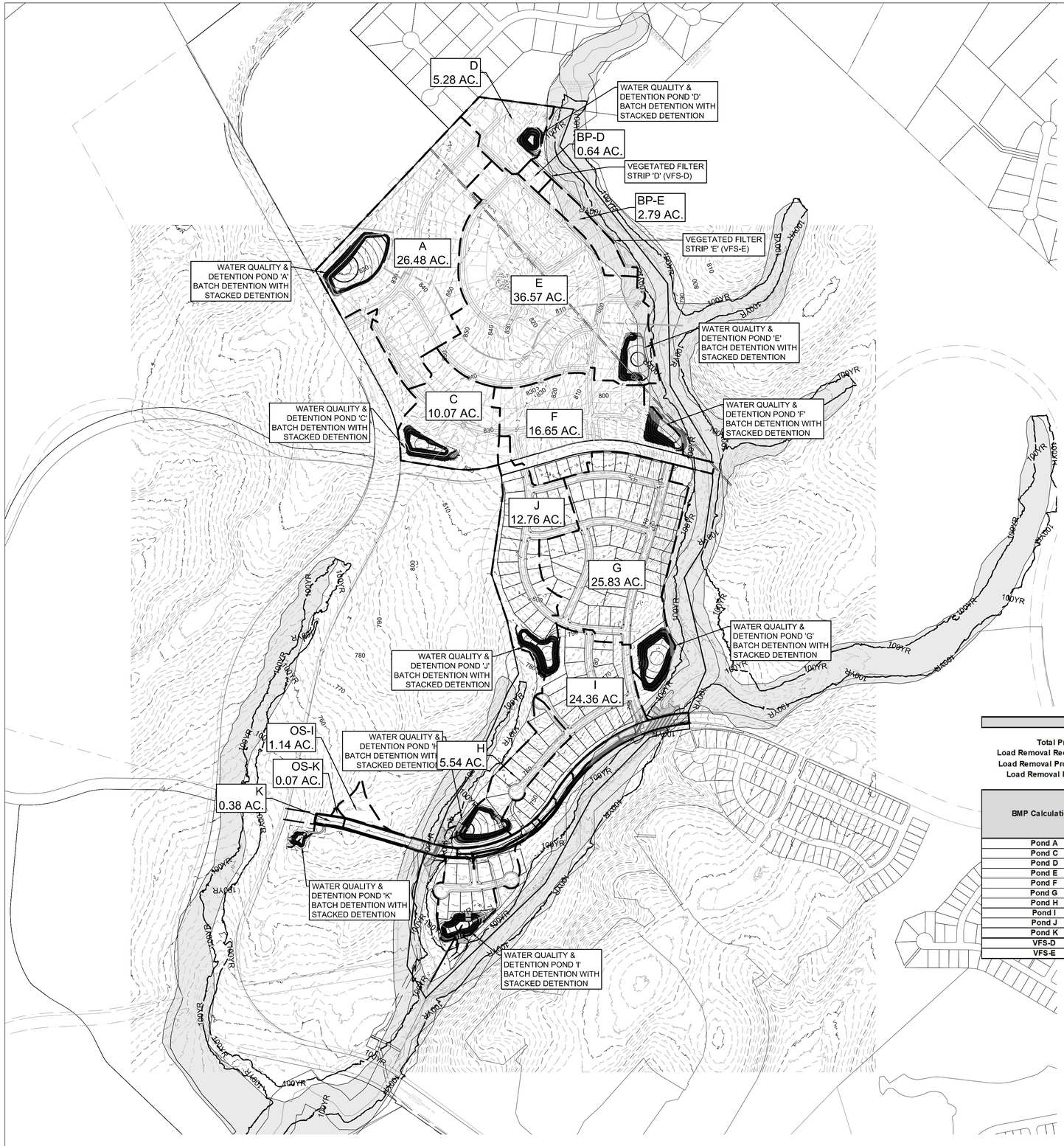
STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

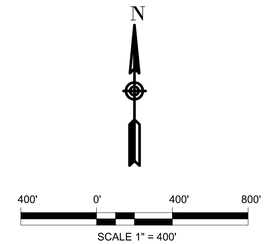
SHEET 12
OF 106 SHEETS

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

CP-23-0147

C:\USERS\MICHAELK\CHILES CONSULTING, LLC\CHILES - COSTELLO\6 CREEKS BLVD PHASE 2\04_SHEETS\04-05 PROPOSED WATER QUALITY PLAN.DWG





Clara Vista - TSS Removal Calculations (Ultimate Condition)

Loading Calculations		
Site Area:	201.38	ac
Total Proposed IC:	64.61	ac
Load Removal Required (L_M):	57,993	lbs/yr
Load Removal Provided (L_P):	58,137	lbs/yr
Load Removal Remaining:	-144	lbs/yr

BMP Calculations	Inputs						Outputs		
	Total On-Site DA to BMP (ac)	Pre-development On-Site IC to BMP (ac)	Post-development On-Site IC to BMP (ac)	Off-Site DA to BMP (ac)	Off-Site IC to BMP (ac)	L_M (lbs/yr)	L_R (lbs/yr)	F	Volume (cf)
Pond A	26.48	0.00	7.63	0.00	0.00	7,411	8,235	0.90	49,420
Pond C	10.07	0.00	2.64	0.00	0.00	2,573	2,859	0.90	17,735
Pond D	5.28	0.00	1.56	0.00	0.00	1,510	1,678	0.90	9,989
Pond E	36.57	0.00	12.80	0.00	0.00	12,314	13,682	0.90	76,607
Pond F	16.65	0.00	6.94	0.00	0.00	6,635	7,373	0.90	38,849
Pond G	25.83	0.00	10.15	0.00	0.00	9,950	10,803	0.92	68,310
Pond H	5.54	0.00	1.79	0.00	0.00	1,730	1,922	0.90	11,071
Pond I	24.36	0.00	11.26	1.14	0.00	10,725	11,917	0.90	61,072
Pond J	12.76	0.00	4.09	0.00	0.00	3,951	4,390	0.90	25,371
Pond K	0.38	0.00	0.34	0.07	0.00	322	358	0.90	2,091
VFS-D	0.64	0.00	0.18	0.00	0.00	185	185	1.00	N/A
VFS-E	2.79	0.00	0.83	0.00	0.00	831	831	1.00	N/A

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SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

ULTIMATE WATER QUALITY PLAN

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 13
OF 106 SHEETS

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Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009 — **Project Name:** Clara Vista - Ultimate Condition — **Date Prepared:** 6/22/2023

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

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

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

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

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

County =	Hays	
Total project area included in plan * =	201.38	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan * =	64.61	acres
Total post-development impervious cover fraction * =	0.32	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	57993	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 13

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009 — **Project Name:** Clara Vista - Ultimate Condition — **Date Prepared:** 6/22/2023

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

Drainage Basin/Outfall Area No. = A

Total drainage basin/outfall area =	26.48	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	7.63	acres
Post-development impervious fraction within drainage basin/outfall area =	0.29	
$L_{M\ THIS\ BASIN}$ =	6,850	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention

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

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

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

A_C =	26.48	acres
A_I =	7.63	acres
A_P =	18.85	acres
L_R =	8,235	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 7,411 lbs.

F = 0.90

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

Rainfall Depth =	1.70	inches
Post Development Runoff Coefficient =	0.25	
On-site Water Quality Volume =	41,183	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	8,237	
Total Capture Volume (required water quality volume(s) x 1.20) =	**49,420**	cubic feet

Texas Commission on Environmental Quality

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

Drainage Basin/Outfall Area No. = C

Total drainage basin/outfall area =	10.07	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	2.64	acres
Post-development impervious fraction within drainage basin/outfall area =	0.26	
$L_{M\ THIS\ BASIN}$ =	2,366	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention

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

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

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

A_C =	10.07	acres
A_I =	2.64	acres
A_P =	7.44	acres
L_R =	2,859	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 2,573 lbs.

F = 0.90

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

Rainfall Depth =	1.70	inches
Post Development Runoff Coefficient =	0.24	
On-site Water Quality Volume =	14,779	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	2,956	
Total Capture Volume (required water quality volume(s) x 1.20) =	**17,735**	cubic feet

Texas Commission on Environmental Quality

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

Drainage Basin/Outfall Area No. = D

Total drainage basin/outfall area =	5.28	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.56	acres
Post-development impervious fraction within drainage basin/outfall area =	0.29	
$L_{M\ THIS\ BASIN}$ =	1,397	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention

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

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

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

A_C =	5.28	acres
A_I =	1.56	acres
A_P =	3.73	acres
L_R =	1,678	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 1,510 lbs.

F = 0.90

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

Rainfall Depth =	1.70	inches
Post Development Runoff Coefficient =	0.26	
On-site Water Quality Volume =	8,324	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	1,665	
Total Capture Volume (required water quality volume(s) x 1.20) =	**9,989**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009 — **Project Name:** Clara Vista - Ultimate Condition — **Date Prepared:** 6/22/2023

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

Drainage Basin/Outfall Area No. = E

Total drainage basin/outfall area =	36.57	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	12.80	acres
Post-development impervious fraction within drainage basin/outfall area =	0.35	
$L_{M\ THIS\ BASIN}$ =	11,487	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention

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

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

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

A_C =	36.57	acres
A_I =	12.80	acres
A_P =	23.77	acres
L_R =	13,682	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 12,314 lbs.

F = 0.90

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

Rainfall Depth =	1.70	inches
Post Development Runoff Coefficient =	0.28	
On-site Water Quality Volume =	63,839	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	12,768	
Total Capture Volume (required water quality volume(s) x 1.20) =	**76,607**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009 — **Project Name:** Clara Vista - Ultimate Condition — **Date Prepared:** 6/22/2023

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

Drainage Basin/Outfall Area No. = F

Total drainage basin/outfall area =	16.65	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	6.94	acres
Post-development impervious fraction within drainage basin/outfall area =	0.42	
$L_{M\ THIS\ BASIN}$ =	6,233	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention

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

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

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

A_C =	16.65	acres
A_I =	6.94	acres
A_P =	9.70	acres
L_R =	7,373	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 6,635 lbs.

F = 0.90

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

Rainfall Depth =	1.70	inches
Post Development Runoff Coefficient =	0.32	
On-site Water Quality Volume =	32,374	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	6,475	
Total Capture Volume (required water quality volume(s) x 1.20) =	**38,849**	cubic feet

Texas Commission on Environmental Quality

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

Drainage Basin/Outfall Area No. = G

Total drainage basin/outfall area =	25.83	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	10.15	acres
Post-development impervious fraction within drainage basin/outfall area =	0.39	
$L_{M\ THIS\ BASIN}$ =	9,113	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention

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

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

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

A_C =	25.83	acres
A_I =	10.15	acres
A_P =	15.68	acres
L_R =	10,803	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 9,950 lbs.

F = 0.92

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

Rainfall Depth =	2.00	inches
Post Development Runoff Coefficient =	0.30	
On-site Water Quality Volume =	56,925	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	11,385	
Total Capture Volume (required water quality volume(s) x 1.20) =	**68,310**	cubic feet

Texas Commission on Environmental Quality

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

Drainage Basin/Outfall Area No. = H

Total drainage basin/outfall area =	5.54	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.79	acres
Post-development impervious fraction within drainage basin/outfall area =	0.32	
$L_{M\ THIS\ BASIN}$ =	1,608	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention

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

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

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

A_C =	5.54	acres
A_I =	1.79	acres
A_P =	3.75	acres
L_R =	1,922	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 1,730 lbs.

F = 0.90

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

Rainfall Depth =	1.70	inches
Post Development Runoff Coefficient =	0.27	
On-site Water Quality Volume =	9,226	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	1,845	
Total Capture Volume (required water quality volume(s) x 1.20) =	**11,071**	cubic feet

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TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

NO.	REVISION	DATE	BY

DESIGNED:
DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

ULTIMATE WATER QUALITY CALCULATIONS (1 OF 2)

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET 14
OF 106 SHEETS

CP-23-0147

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C:\USERS\MICHAELK\CHILES CONSULTING, LLC\CHILES - COSTELLO\6 CREEKS BLVD PHASE 2\04_SHEETS\06-08 ULTIMATE WATER QUALITY PLAN.DWG

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Clara Vista - Ultimate Condition
Date Prepared: 6/22/2023

Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields.
Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**I**	
Total drainage basin/outfall area =	24.36	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	11.26	acres
Post-development impervious fraction within drainage basin/outfall area =	0.46	
$L_{M\ THIS\ BASIN}$ =	10,111	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	24.36	acres
A_I =	11.26	acres
A_P =	13.10	acres
L_R =	11,917	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	10,725	lbs.
F =	0.90	

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

Rainfall Depth =	1.70	inches
Post Development Runoff Coefficient =	0.34	
On-site Water Quality Volume =	50,753	cubic feet

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

Off-site area draining to BMP =	1.14	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	141	cubic feet
Storage for Sediment =	10,179	
Total Capture Volume (required water quality volume(s) x 1.20) =	61,072	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Clara Vista - Ultimate Condition
Date Prepared: 6/22/2023

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

Drainage Basin/Outfall Area No. =	**J**	
Total drainage basin/outfall area =	12.76	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	4.09	acres
Post-development impervious fraction within drainage basin/outfall area =	0.32	
$L_{M\ THIS\ BASIN}$ =	3,671	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	12.76	acres
A_I =	4.09	acres
A_P =	8.67	acres
L_R =	4,390	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	3,951	lbs.
F =	0.90	

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

Rainfall Depth =	1.70	inches
Post Development Runoff Coefficient =	0.27	
On-site Water Quality Volume =	21,142	cubic feet

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

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	4,228	
Total Capture Volume (required water quality volume(s) x 1.20) =	25,371	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Clara Vista - Ultimate Condition
Date Prepared: 6/22/2023

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

Drainage Basin/Outfall Area No. =	**K**	
Total drainage basin/outfall area =	0.38	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.34	acres
Post-development impervious fraction within drainage basin/outfall area =	0.90	
$L_{M\ THIS\ BASIN}$ =	309	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	0.38	acres
A_I =	0.34	acres
A_P =	0.04	acres
L_R =	358	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	322	lbs.
F =	0.90	

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

Rainfall Depth =	1.70	inches
Post Development Runoff Coefficient =	0.74	
On-site Water Quality Volume =	1,734	cubic feet

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

Off-site area draining to BMP =	0.07	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	9	cubic feet
Storage for Sediment =	349	
Total Capture Volume (required water quality volume(s) x 1.20) =	2,091	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Clara Vista - Ultimate Condition
Date Prepared: 6/22/2023

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

Drainage Basin/Outfall Area No. =	**BP-D**	
Total drainage basin/outfall area =	0.64	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.18	acres
Post-development impervious fraction within drainage basin/outfall area =	0.29	
$L_{M\ THIS\ BASIN}$ =	165	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	0.64	acres
A_I =	0.18	acres
A_P =	0.46	acres
L_R =	185	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	185	lbs.
F =	1.00	

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Clara Vista - Ultimate Condition
Date Prepared: 6/22/2023

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

Drainage Basin/Outfall Area No. =	**BP-E**	
Total drainage basin/outfall area =	2.79	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.83	acres
Post-development impervious fraction within drainage basin/outfall area =	0.30	
$L_{M\ THIS\ BASIN}$ =	741	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	2.79	acres
A_I =	0.83	acres
A_P =	1.97	acres
L_R =	831	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	831	lbs.
F =	1.00	

NO.	REVISION	DATE	BY

DESIGNED: ____
DESIGN CHECKED: ____
DRAWN: ____
COGO CHECKED: ____
SURVEY CHECKED: ____
QA/QC: ____ DATE: ____
QA/QC REVISIONS: ____

ENGINEERING AND SURVEYING
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TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

ULTIMATE WATER QUALITY CALCULATIONS (2 OF 2)

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 15
OF 106 SHEETS

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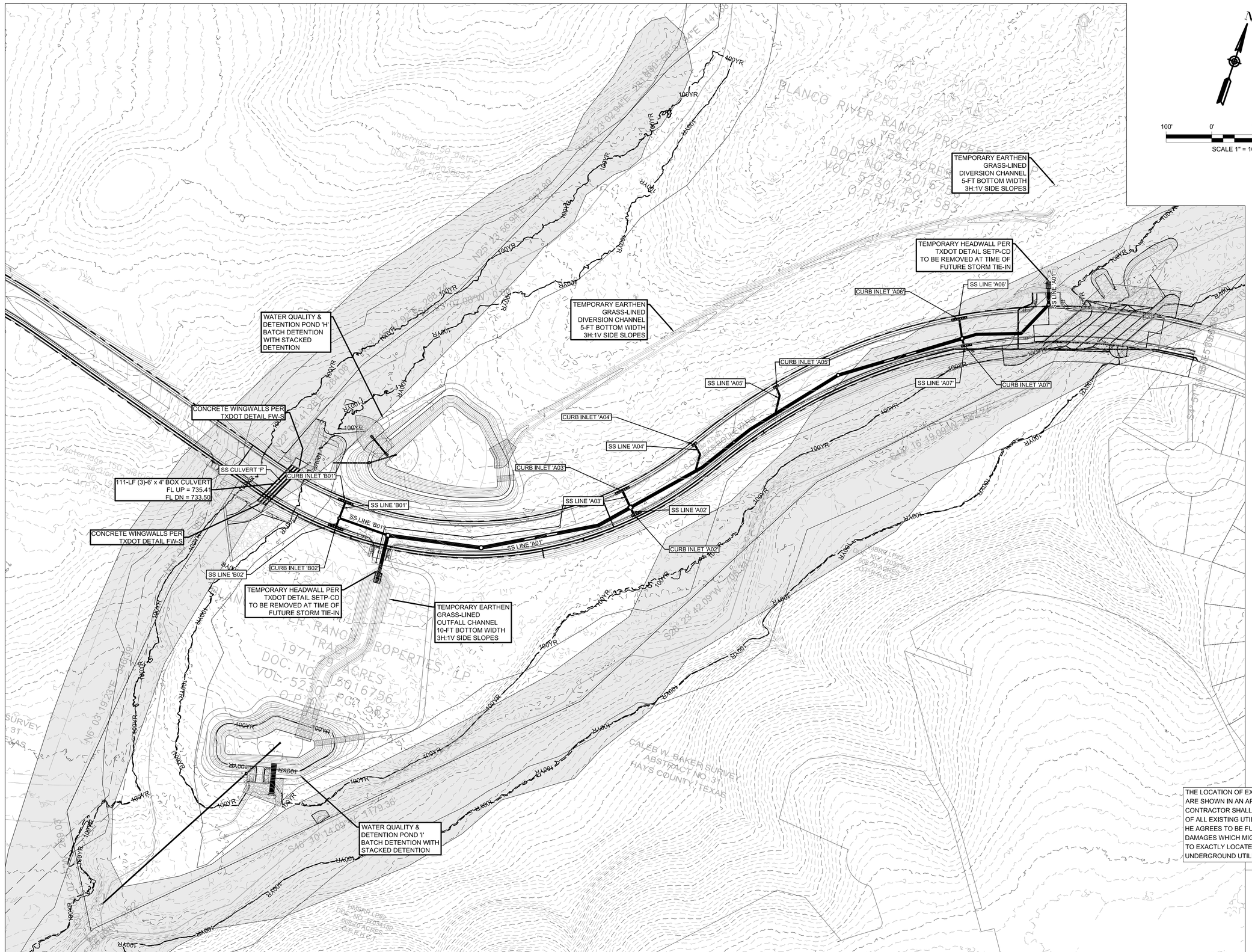

NO.	REVISION	DATE	BY

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DESIGN CHECKED:
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SURVEY CHECKED:
QA/QC: DATE:
QA/QC REVISIONS:

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9050 N. CAPITAL HWY., BLDG 3, SUITE 390
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TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

OVERALL DRAINAGE PLAN

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

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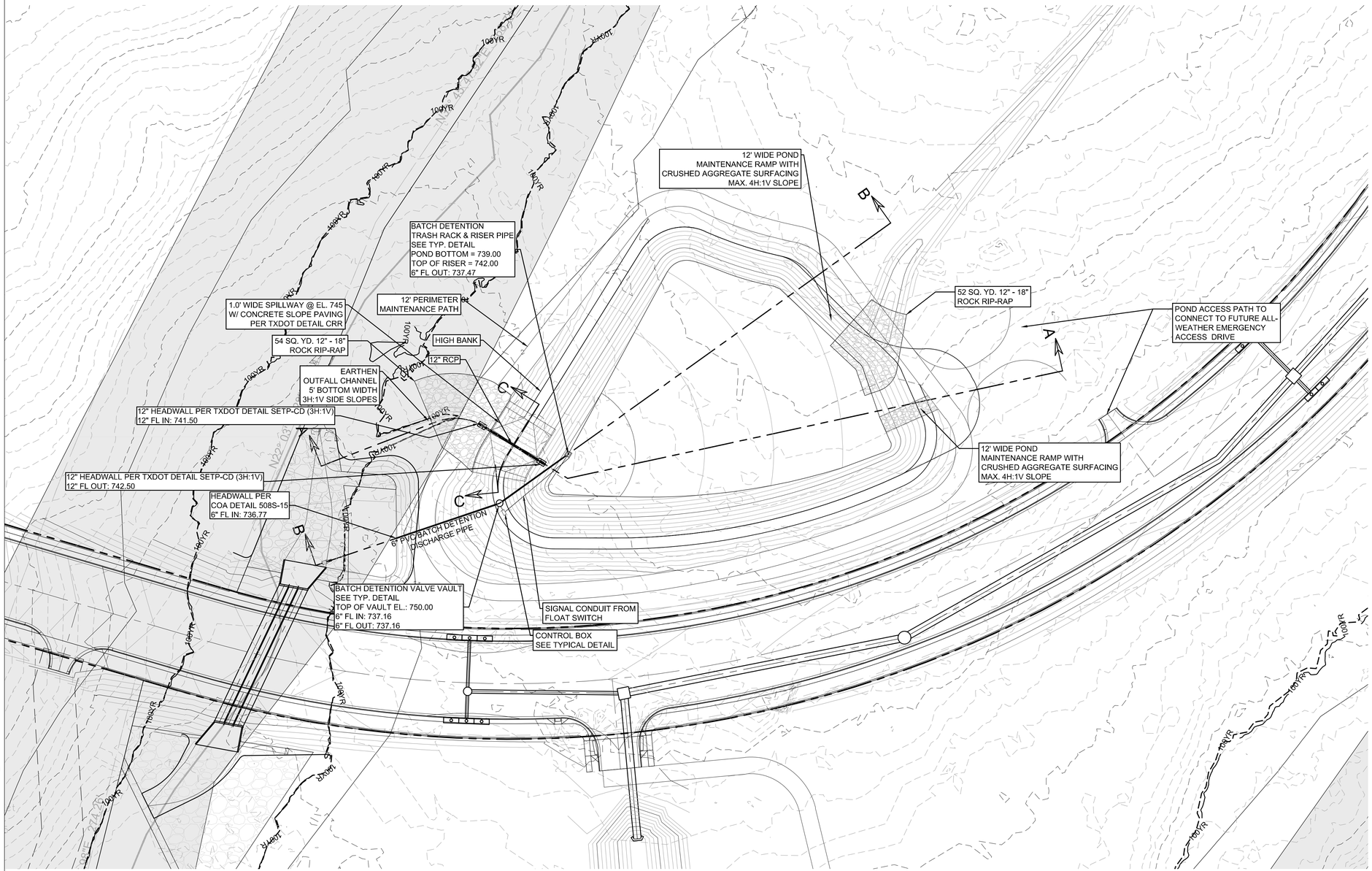

N

40' 0' 40' 80'

SCALE 1" = 40'

LEGEND

- EXISTING CONTOUR (504)
- PROPOSED CONTOUR (500)
- PROPOSED STORM LINE
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP

PROFILE LEGEND

- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
- 25 YR HYDRAULIC GRADE LINE
- 100 YR HYDRAULIC GRADE LINE

PROFILE SCALE
HORIZONTAL: 1" = 40', VERTICAL: 1" = 4'

1000.0 / 1000.01
EXISTING GROUND — PROPOSED GROUND
3+00

NOTE:
1. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO INSTALLATION OF UTILITIES.
2. ALL PIPE VELOCITIES ARE CONFIRMED LESS THAN 20 FPS.

Stage-Storage Table - Pond H					
Elevation	Area (sf)	Area (ac)	Volume (cf)	Volume (ac-ft)	
739.00	0	0.00000	0	0.00	
740.00	3,117	0.07156	1,039	0.02	
741.00	9,284	0.21313	6,966	0.16	
742.00	18,220	0.41827	20,469	0.47	
742.50	**22,992**	**0.52782**	**30,749**	**0.71**	**WQV**
743.00	27,764	0.63737	43,419	1.00	
744.00	32,182	0.73880	73,365	1.68	
745.00	34,415	0.79006	106,657	2.45	
746.00	36,707	0.84268	142,212	3.26	
747.00	39,057	0.89663	180,088	4.13	
748.00	41,465	0.95191	220,343	5.06	
749.00	43,932	1.00854	263,036	6.04	
750.00	46,456	1.06648	308,224	7.08	

Elevation-Discharge Table - Pond H				
Storm Event	Water Surface Elevation		Discharge (cfs)	
	S. 6 Creeks	Ultimate	S. 6 Creeks	Ultimate
2-Year	742.70	743.29	0.1-cfs	1.4-cfs
10-Year	743.21	744.16	1.2-cfs	3.9-cfs
25-Year	743.60	744.83	2.4-cfs	5.1-cfs
100-Year	744.34	745.82	4.3-cfs	8.9-cfs

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Costello
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TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

POND H PLAN

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET 17
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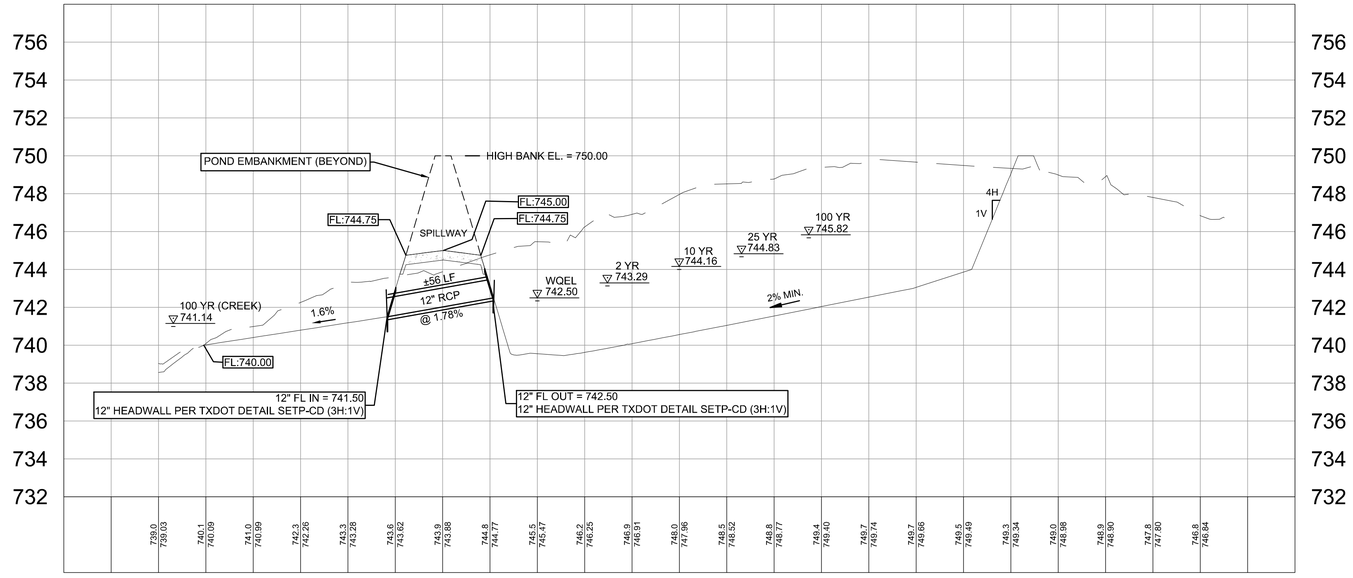
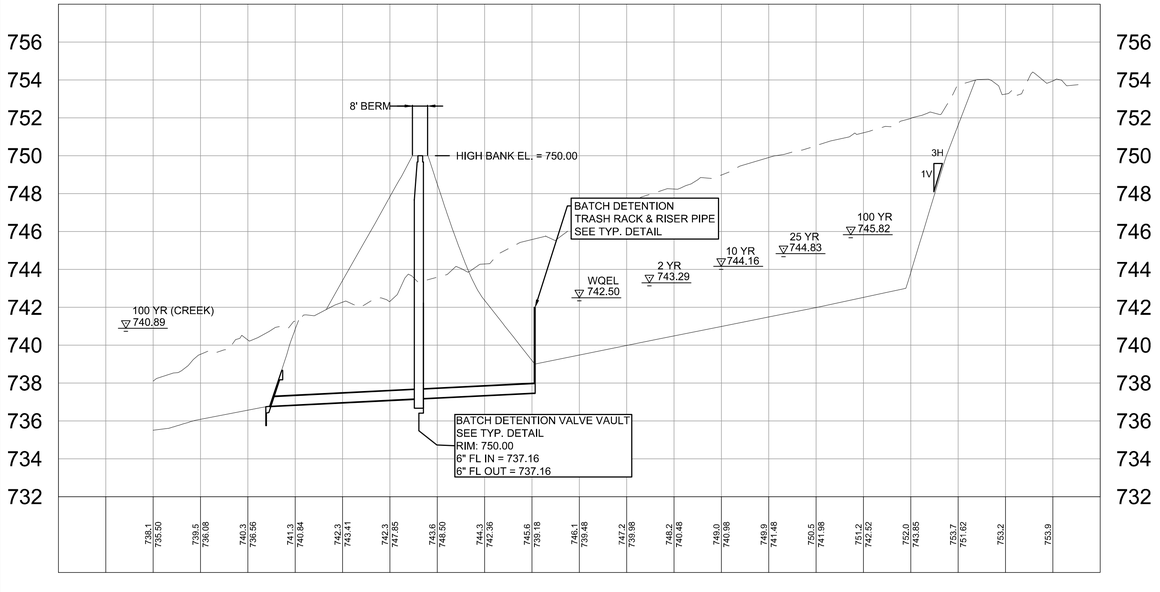
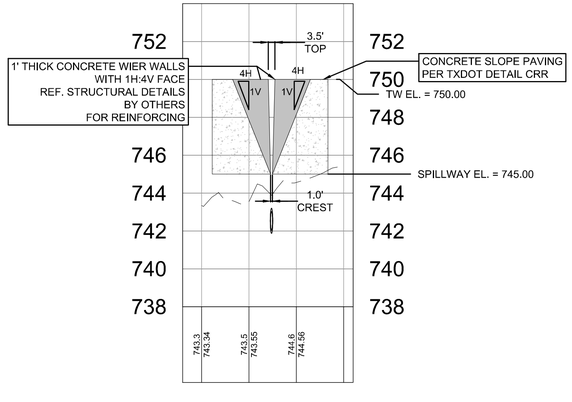
POND H SECTION A-A



POND H SECTION B-B



POND H SECTION C-C



LEGEND

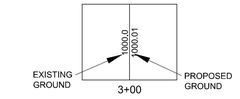
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM LINE
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP

PROFILE LEGEND

- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
- 25 YR HYDRAULIC GRADE LINE
- 100 YR HYDRAULIC GRADE LINE

PROFILE SCALE

HORIZONTAL: 1" = 40', VERTICAL: 1" = 4'



NOTE:
1. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO INSTALLATION OF UTILITIES.
2. ALL PIPE VELOCITIES ARE CONFIRMED LESS THAN 20 FPS.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY IS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

POND H SECTIONS

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

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Stage-Storage Table - Pond I					
Elevation	Area (sf)	Area (ac)	Volume (cf)	Volume (ac-ft)	
709.00	0	0.00000	0	0.00	
710.00	4,938	0.11336	1,646	0.04	
711.00	8,493	0.19497	8,282	0.19	
712.00	10,650	0.24449	17,833	0.41	
713.00	12,147	0.27886	29,223	0.67	
714.00	13,707	0.31467	42,142	0.97	
715.00	15,331	0.35195	56,654	1.30	
715.70	**16,512**	**0.37906**	**67,796**	**1.56**	**WQV**
716.00	17,018	0.39068	72,825	1.67	
717.00	18,769	0.43088	90,712	2.08	
718.00	20,582	0.47250	110,380	2.53	
719.00	22,459	0.51559	131,894	3.03	
720.00	24,400	0.56015	155,317	3.57	
721.00	26,403	0.60613	180,712	4.15	
722.00	28,460	0.65335	208,137	4.78	
723.00	30,590	0.70225	237,655	5.46	

Elevation-Discharge Table - Pond I				
Storm Event	Water Surface Elevation		Discharge (cfs)	
	S. 6 Creeks	Ultimate	S. 6 Creeks	Ultimate
2-Year	718.23	718.49	50.2-cfs	59.6-cfs
10-Year	719.28	719.35	112.9-cfs	119.0-cfs
25-Year	719.72	719.77	152.7-cfs	157.7-cfs
100-Year	720.31	720.34	215.0-cfs	217.8-cfs

LEGEND

- 504 EXISTING CONTOUR
- 500 PROPOSED CONTOUR
- PROPOSED STORM LINE
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP

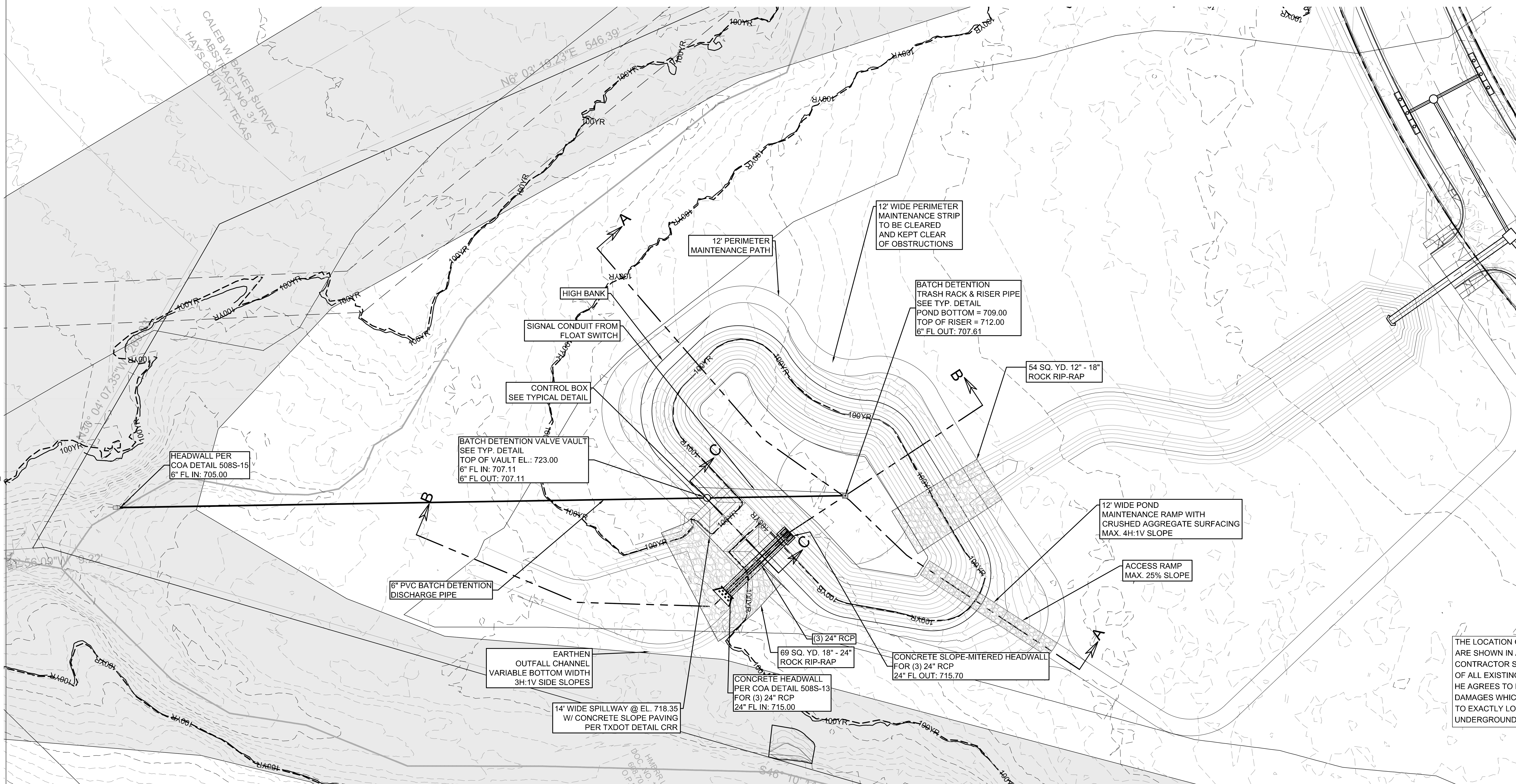
40' 0' 40' 80'
SCALE 1" = 40'

PROFILE LEGEND
- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
- 25 YR HYDRAULIC GRADE LINE
- 100 YR HYDRAULIC GRADE LINE

PROFILE SCALE
HORIZONTAL: 1" = 40', VERTICAL: 1" = 4'

1000.0
1000.01
EXISTING GROUND
PROPOSED GROUND
3+00

NOTE:
1. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO INSTALLATION OF UTILITIES.
2. ALL PIPE VELOCITIES ARE CONFIRMED LESS THAN 20 FPS.



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DESIGN CHECKED:
DRAWN:
COGO CHECKED:
SURVEY CHECKED:
QA/QC:
QA/QC REVISIONS:
DATE:

Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

POND I PLAN

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED PROFESSIONAL ENGINEER
Michael A. Kenney
8/15/2023

SHEET 19 OF 106 SHEETS
CP-23-0147

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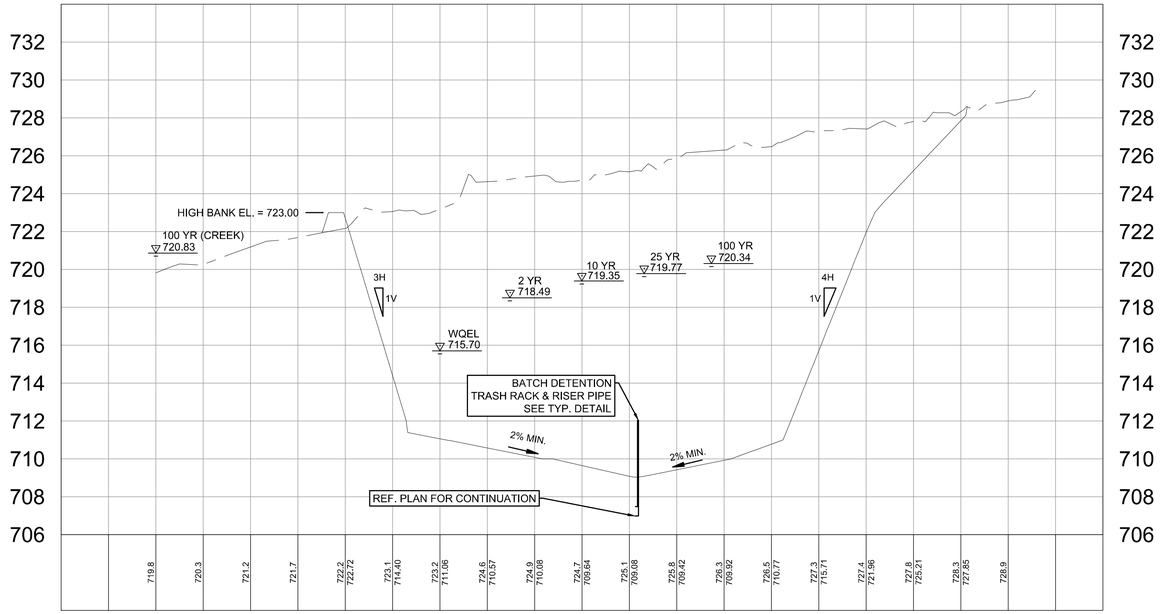
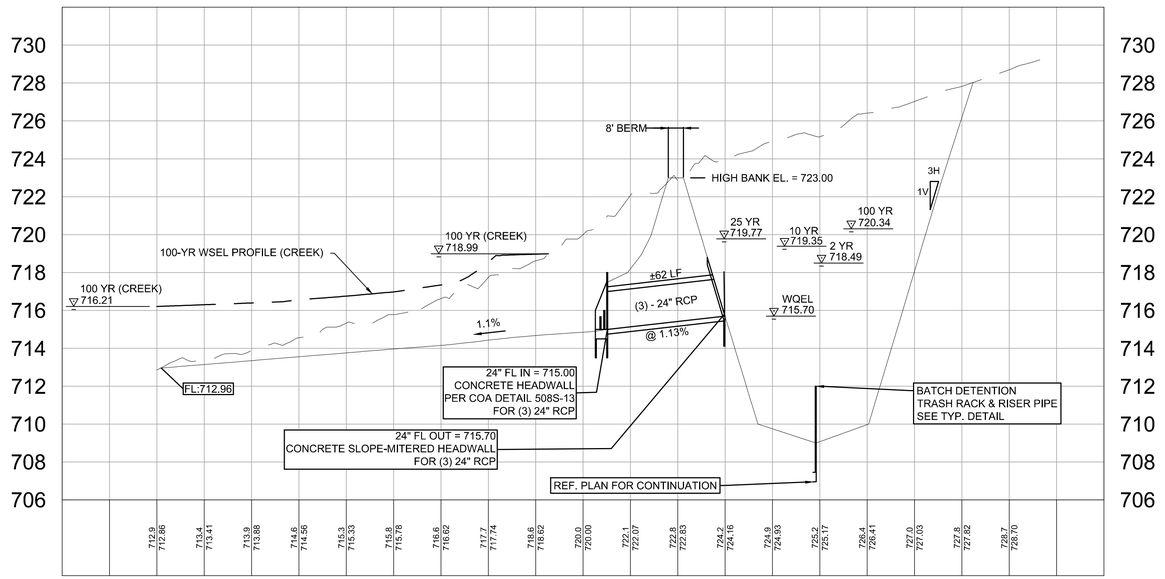
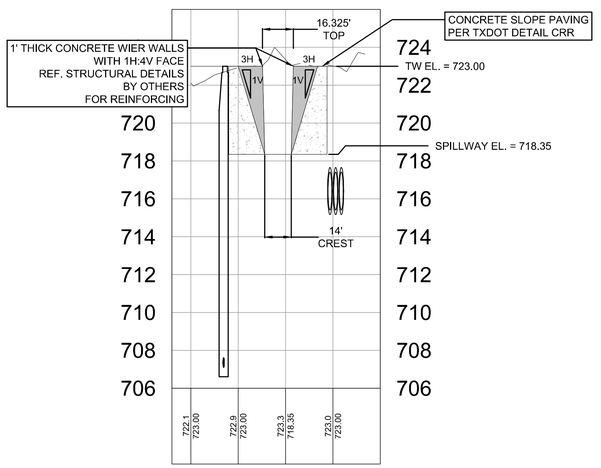
POND I SECTION A-A



POND I SECTION B-B



POND I SECTION C-C



LEGEND

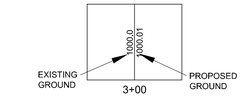
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM LINE
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP

PROFILE LEGEND

- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
- 25 YR HYDRAULIC GRADE LINE
- 100 YR HYDRAULIC GRADE LINE

PROFILE SCALE

HORIZONTAL: 1" = 40', VERTICAL: 1" = 4'



NOTE:
1. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO INSTALLATION OF UTILITIES.
2. ALL PIPE VELOCITIES ARE CONFIRMED LESS THAN 20 FPS.

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SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

POND I SECTIONS

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 20
OF 106 SHEETS

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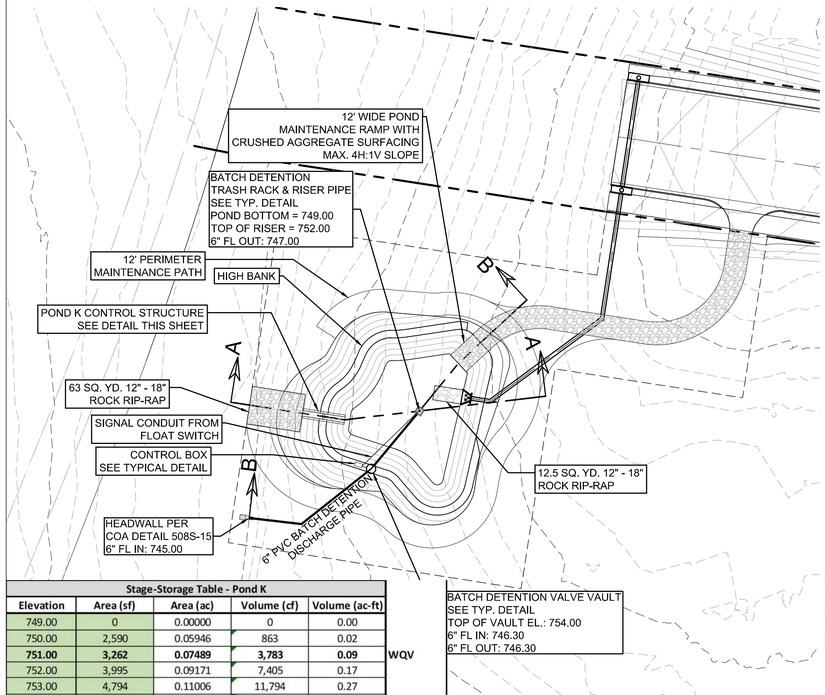
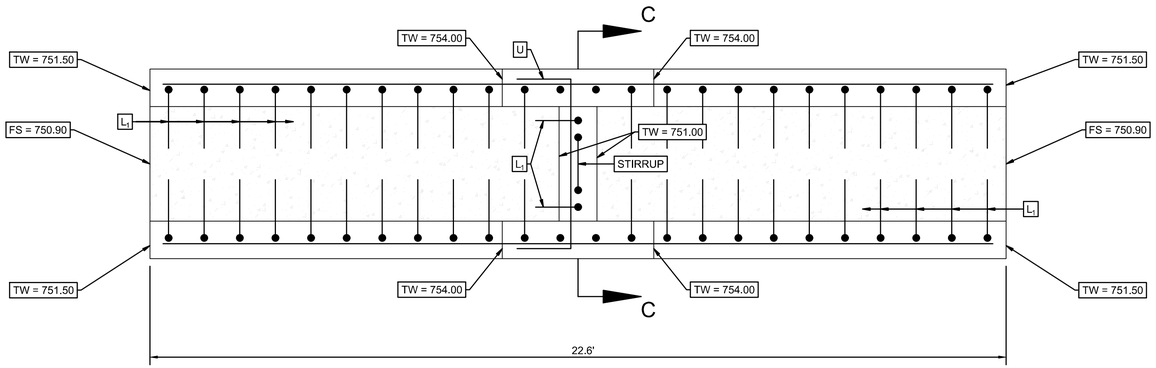
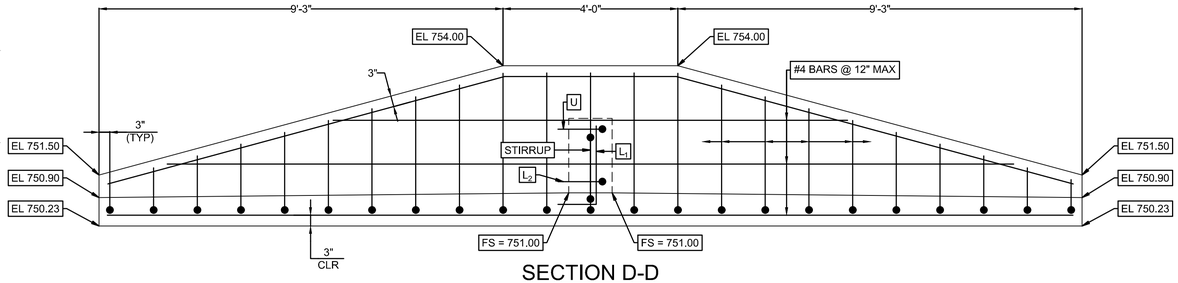


Stage-Storage Table - Pond K					
Elevation	Area (sf)	Area (ac)	Volume (cf)	Volume (ac-ft)	
749.00	0	0.00000	0	0.00	
750.00	2,590	0.05946	863	0.02	
751.00	**3,262**	**0.07489**	**3,783**	**0.09**	WQV
752.00	3,995	0.09171	7,405	0.17	
753.00	4,794	0.11006	11,794	0.27	
754.00	5,650	0.12971	17,010	0.39	



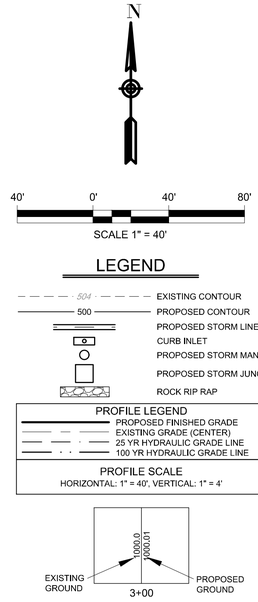
POND K CONTROL STRUCTURE (PLAN VIEW)

N.T.S.



SECTION D-D

N.T.S.



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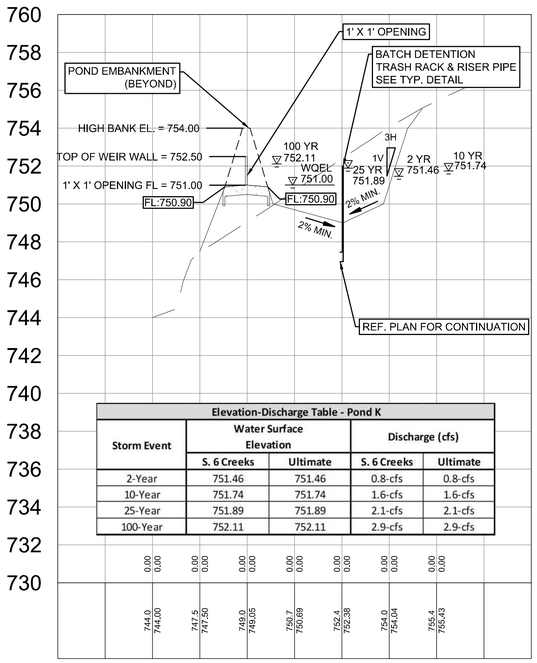
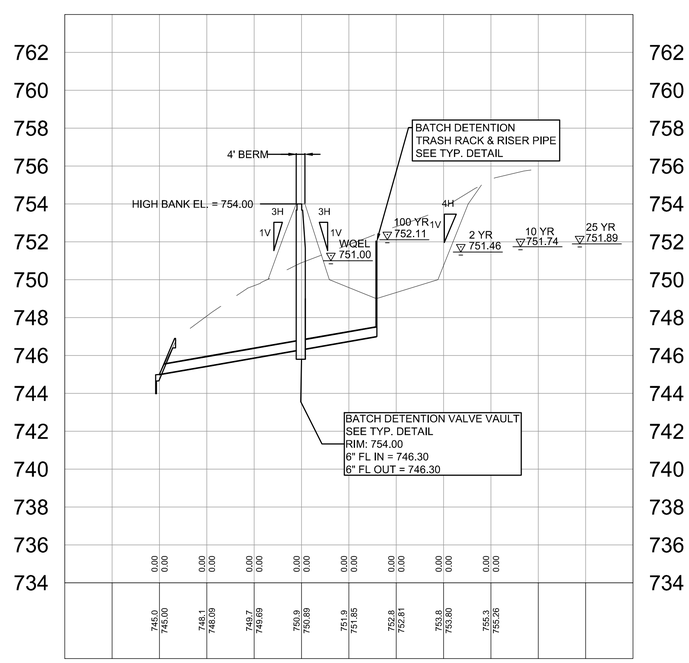
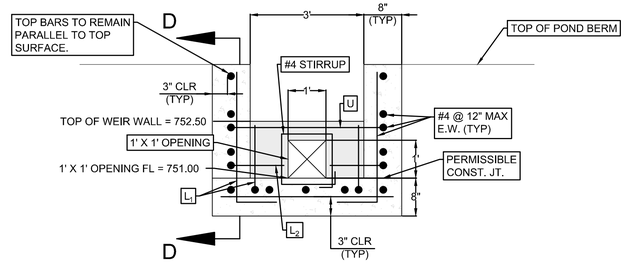
POND K SECTION A-A



Elevation-Discharge Table - Pond K				
Storm Event	Water Surface Elevation		Discharge (cfs)	
	S. 6 Creeks	Ultimate	S. 6 Creeks	Ultimate
2-Year	751.46	751.46	0.8-cfs	0.8-cfs
10-Year	751.74	751.74	1.6-cfs	1.6-cfs
25-Year	751.89	751.89	2.1-cfs	2.1-cfs
100-Year	752.11	752.11	2.9-cfs	2.9-cfs

POND K SECTION B-B

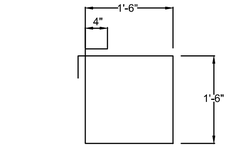




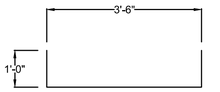
POND K CONTROL STRUCTURE (SECTION C-C)

N.T.S.

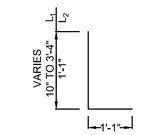
ADDITIONAL STRUCTURAL NOTES:
1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
2. ALL REINFORCING STEEL SHALL BE GRADE 60 STEEL AS PER ASTM A615. ALL LAP SPLICES FOR CONTINUOUS REINFORCING STEEL SHALL BE 30 BAR DIAMETERS UNLESS OTHERWISE SPECIFIED. ALL REINFORCING SHOWN TO BE HOOKED SHALL HAVE STANDARD HOOKS AS PER ACI315.
3. CONCRETE CONSTRUCTION SHALL CONFORM TO THE PROJECT SPECIFICATIONS AND ACI 318 BUILDING CODE FOR REINFORCED CONCRETE. WHERE THE PROJECT SPECIFICATIONS CONFLICTS WITH ACI 318, THE STRICTER SPECIFICATION SHALL GOVERN.
4. CONCRETE PLACEMENT IN HOT OR COLD WEATHER SHALL CONFORM TO THE PROVISIONS OF ACI 305R OR 306R, RESPECTIVELY.
5. PROVIDE CONTINUOUS WATER-STOPS AT ALL CONSTRUCTION JOINTS.



STIRRUP (#4)



BAR U (#4)



BARS L (#4)

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SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

POND K PLAN & SECTIONS

8/15/2023

SHEET 21
OF 106 SHEETS

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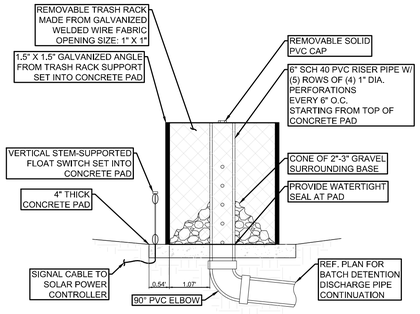
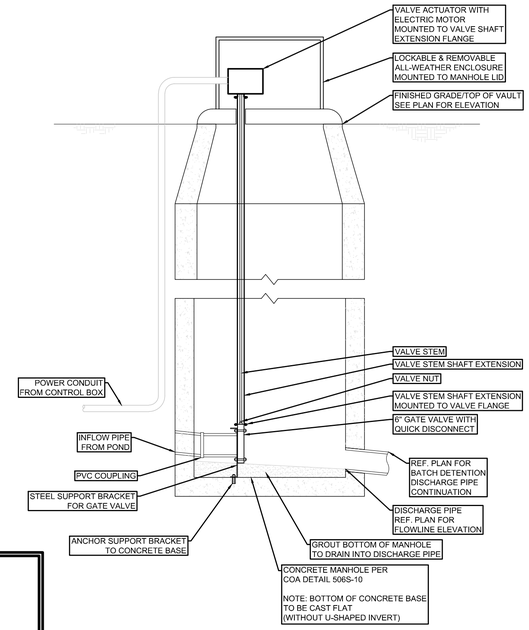


* FLOAT SWITCH TO BE STEM-MOUNTED VERTICAL LEVEL SENSOR SUCH AS GRAINGER MODEL C3975-1000 OR APPROVED EQUAL.

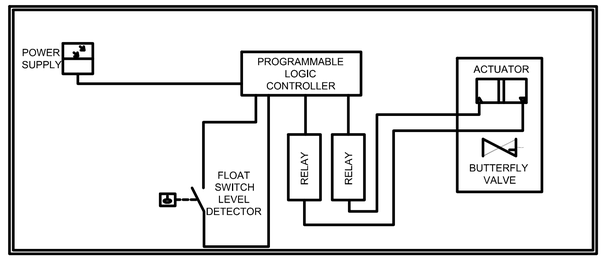
BATCH DETENTION TRASH RACK & RISER PIPE DETAIL

N.T.S.



BATCH DETENTION VALVE VAULT DETAIL

N.T.S.



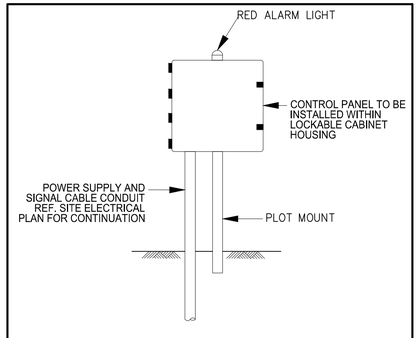
ACTUATOR VALVE POWER & CONTROLLER CIRCUIT BLOCK DIAGRAM

NOTES:

1. BATCH DETENTION POND SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RG-348 MANUAL (ADDENDUM).
2. THE BATCH DETENTION POND AND RISER PIPE / TRASH RACK WILL FUNCTION AS THE DEWATERING OUTLET AND SHALL BE BE INSTALLED AND FUNCTIONAL PRIOR TO ANY GENERAL GRADING AND UTILITY WORK.
3. SYSTEM POWER SHALL BE PROVIDED BY ON-SITE ELECTRICAL SUPPLY SYSTEM. REFER TO ELECTRICAL PLANS FOR CONDUIT AND POWER SUPPLY INFORMATION.
4. ACTUATOR SHALL BE ELECTRONIC QUARTER-TURN WITH MANUAL OVERRIDE AND POSITION INDICATOR.
5. ACTUATOR SHALL BE "AVID 12V ACTUATOR, EPI-6" OR EQUIVALENT.
6. ACTUATOR VALVE TO BE SET AT "NORMALLY OPEN" POSITION.
7. LOGIC CONTROLLER SHALL BE SET TO CLOSE VALVE IMMEDIATELY UPON RAINFALL DETECTION (I.E. FLOAT SWITCH ACTIVATION) AND OPEN VALVE 12 HOURS AFTER CLOSING. VALVE TO REMAIN OPEN UNTIL 2 HRS FOLLOWING BASIN EMPTY SIGNAL (I.E. FLOAT SWITCH RETURNED TO BASELINE).
8. LOGIC CONTROLLER SHALL HAVE TEST SEQUENCE, ON/OFF/RESET SWITCH AND THE PROGRAMMING SHALL BE FIELD UPLOADABLE.
9. ALL WIRING SHALL BE INSTALLED IN CONDUIT AND BURIED. CONTACT ENGINEER FOR ADDITIONAL CONTROLLER SCHEMATICS.
10. VALVE CONTROLS SHALL BE ENCLOSED WITHIN A POLE-MOUNTED, NEMA 3R, LOCKABLE PARTS CABINET HAVING 304 STAINLESS STEEL CONSTRUCTION. THE CABINET DOOR OPENING SHALL BE DOUBLE-FLANGED, WITH A KEYHOLE AND COVER AS AN INTEGRAL PART OF THE DOOR. THE CABINET SHALL HAVE PROVISIONS TO PROP THE DOOR OPEN AT APPROXIMATELY 90° AND 120° POSITIONS.
11. CONTRACTOR TO INSTALL LIBERTY ALARM MODEL ALM-2W OR EQUIVALENT AT CONTROLLER PANEL.
12. ATTACH ALARM RESPONSE SIGN TO CONTROLLER POLE. REFERENCE ALARM RESPONSE SIGN DETAIL THIS SHEET.
13. FENCING IS NOT PROPOSED. IF FENCING IS ADDED LATER IT SHALL BE CONSTRUCTED OF WROUGHT IRON OR BLACK, DECORATIVE TUBULAR MATERIAL.

ALARM RESPONSE SIGN

N.T.S.



CONTROL PANEL

N.T.S.

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ENGINEERING AND SURVEYING
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AUSTIN, TEXAS 78759
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TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

POND DETAILS

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 22
OF 106 SHEETS

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SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

PROPOSED INLET DRAINAGE AREA MAP

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 23
OF 106 SHEETS

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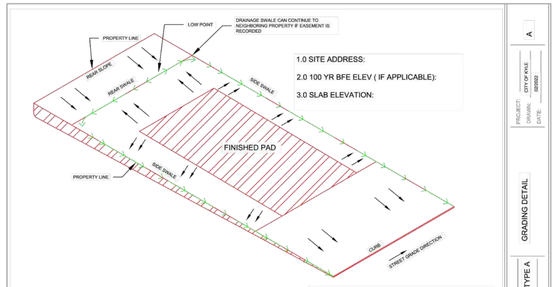


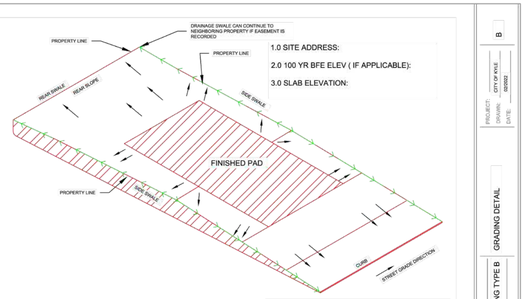
LOT GRADING TYPE A

(ALL DRAINAGE TO STREET)

NOTES :

1. DRAINAGE PRACTICES OTHER THAN SWALE MAY BE UTILIZED WITH PRIOR CITY APPROVAL.
2. MAINTENANCE RESPONSIBILITY SHOULD BE OUTLINED AND DEED RECORDED PRIOR TO PERMIT ISSUANCE.
3. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2 PERCENT AWAY FROM THE BUILDING.

A | PROJECT: CITY OF KYLE | DRAWN: | DATE: 8/2022 | GRADING DETAIL | LOT GRADING TYPE A



LOT GRADING TYPE B

(DRAINAGE BOTH TO STREET & TO REAR LOT LINE)

NOTES :

1. DRAINAGE PRACTICES OTHER THAN SWALE MAY BE UTILIZED WITH PRIOR CITY APPROVAL.
2. MAINTENANCE RESPONSIBILITY SHOULD BE OUTLINED AND DEED RECORDED PRIOR TO PERMIT ISSUANCE.
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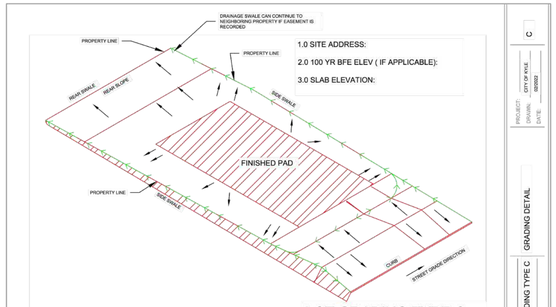
B | PROJECT: CITY OF KYLE | DRAWN: | DATE: 8/2022 | GRADING DETAIL | LOT GRADING TYPE B



LOT GRADING TYPE C

(ALL DRAINAGE TO REAR LOT LINE)

NOTES :

1. DRAINAGE PRACTICES OTHER THAN SWALE MAY BE UTILIZED WITH PRIOR CITY APPROVAL.
2. MAINTENANCE RESPONSIBILITY SHOULD BE OUTLINED AND DEED RECORDED PRIOR TO PERMIT ISSUANCE.
3. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2 PERCENT AWAY FROM THE BUILDING.

C | PROJECT: CITY OF KYLE | DRAWN: | DATE: 8/2022 | GRADING DETAIL | LOT GRADING TYPE C

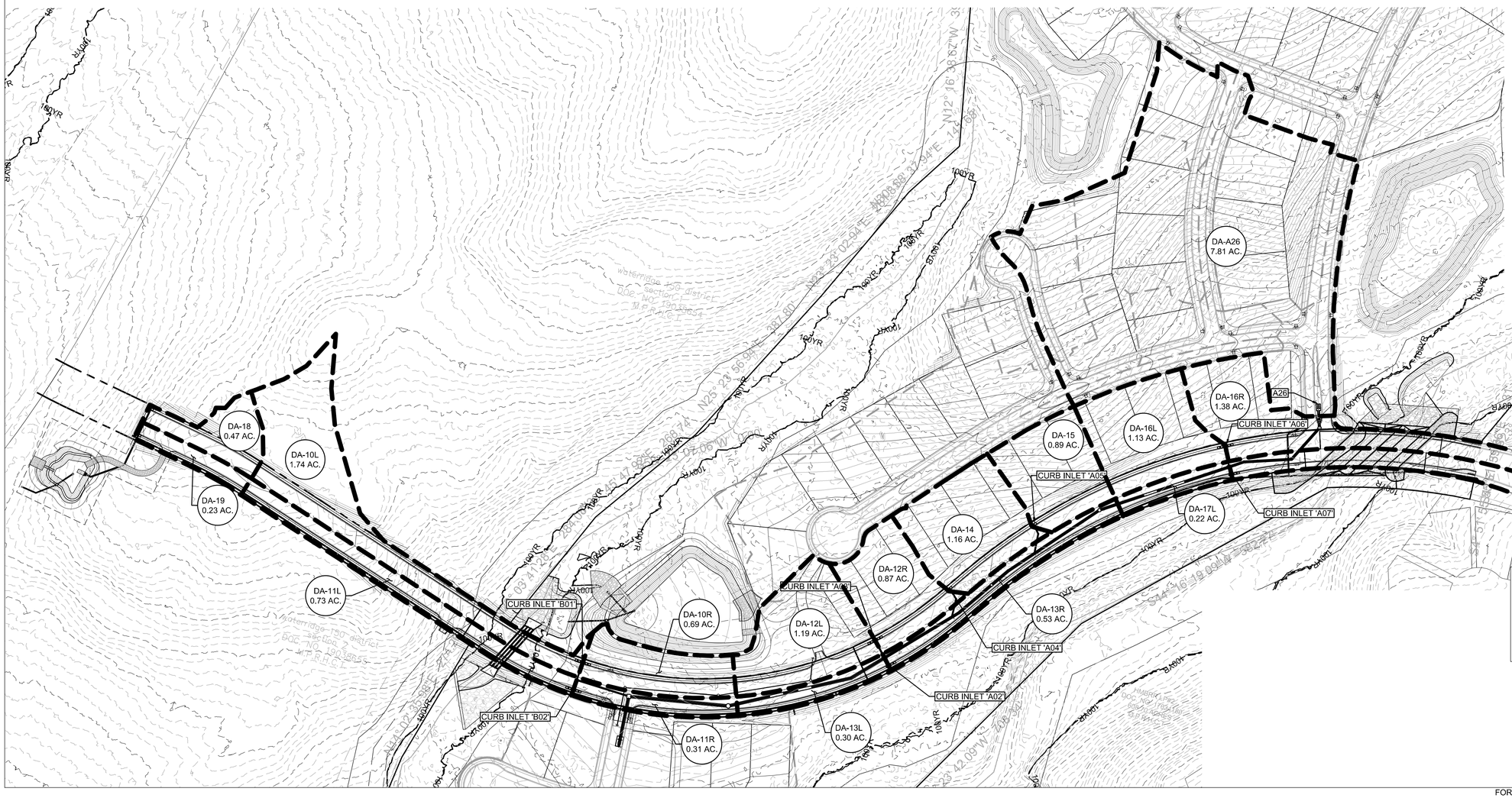
N

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY BOUNDARY
- DRAINAGE DIVIDE
- TOC FLOWPATH
- PROPOSED STORM LINE
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP
- POI _ DISCHARGE POINT
- DA # / AREA — PROPOSED DRAINAGE AREA CALLOUT

120' 0' 120' 240'

SCALE 1" = 120'



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SOUTH 6 CREEKS BLVD - PHASE 2
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ULTIMATE INLET DRAINAGE AREA MAP

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
Michael A. Kenney 8/15/2023

SHEET 24
OF 106 SHEETS

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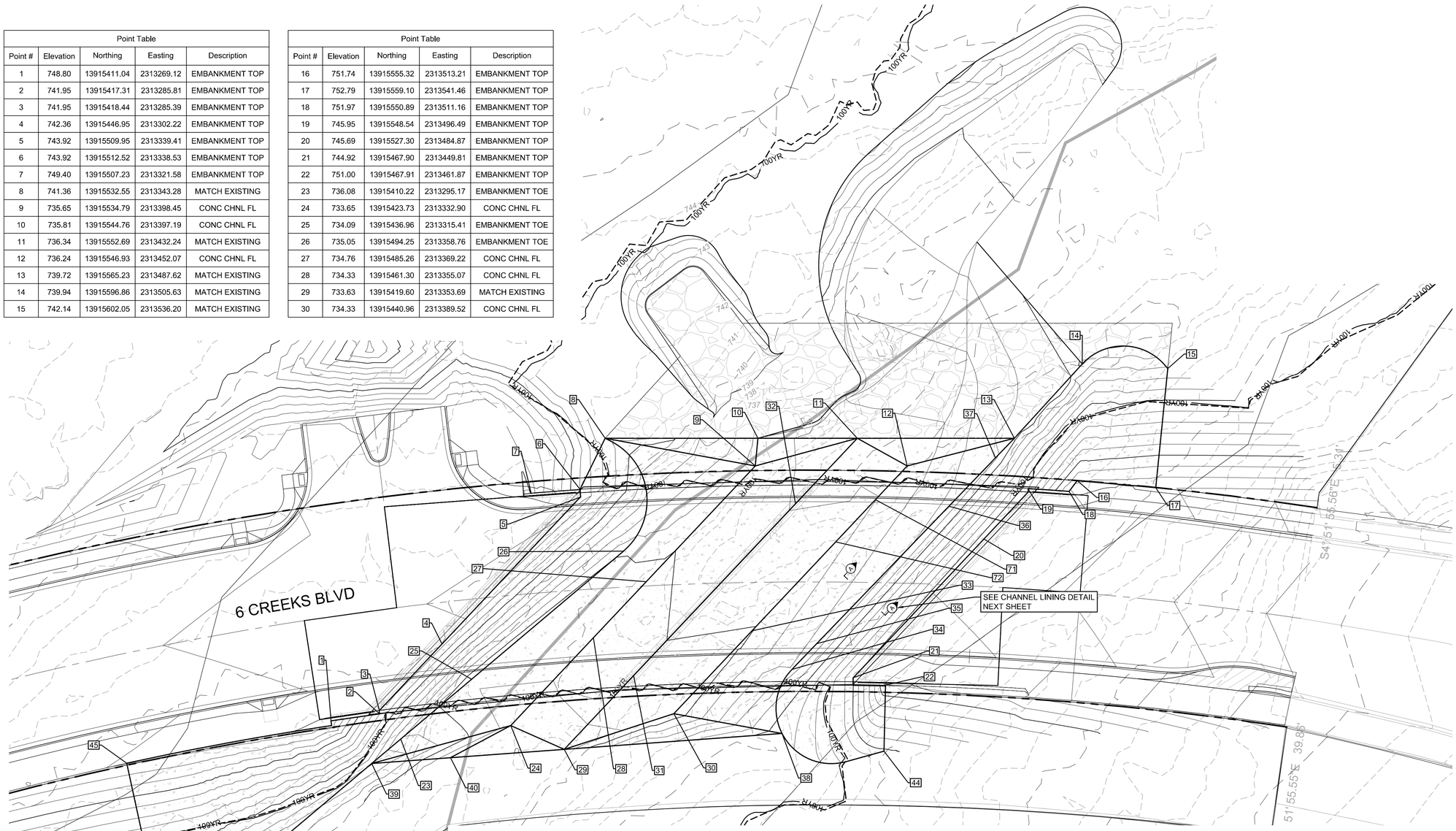
Point Table				
Point #	Elevation	Northing	Easting	Description
1	748.80	13915411.04	2313269.12	EMBANKMENT TOP
2	741.95	13915417.31	2313285.81	EMBANKMENT TOP
3	741.95	13915418.44	2313285.39	EMBANKMENT TOP
4	742.36	13915446.95	2313302.22	EMBANKMENT TOP
5	743.92	13915509.95	2313339.41	EMBANKMENT TOP
6	743.92	13915512.52	2313338.53	EMBANKMENT TOP
7	749.40	13915507.23	2313321.58	EMBANKMENT TOP
8	741.36	13915532.55	2313343.28	MATCH EXISTING
9	735.65	13915534.79	2313398.45	CONC CHNL FL
10	735.81	13915544.76	2313397.19	CONC CHNL FL
11	736.34	13915552.69	2313432.24	MATCH EXISTING
12	736.24	13915546.93	2313452.07	CONC CHNL FL
13	739.72	13915565.23	2313487.62	MATCH EXISTING
14	739.94	13915596.86	2313505.63	MATCH EXISTING
15	742.14	13915602.05	2313536.20	MATCH EXISTING

Point Table				
Point #	Elevation	Northing	Easting	Description
16	751.74	13915555.32	2313513.21	EMBANKMENT TOP
17	752.79	13915559.10	2313541.46	EMBANKMENT TOP
18	751.97	13915550.89	2313511.16	EMBANKMENT TOP
19	745.95	13915548.54	2313496.49	EMBANKMENT TOP
20	745.69	13915527.30	2313484.87	EMBANKMENT TOP
21	744.92	13915467.90	2313449.81	EMBANKMENT TOP
22	751.00	13915467.91	2313461.87	EMBANKMENT TOP
23	736.08	13915410.22	2313295.17	EMBANKMENT TOE
24	733.65	13915423.73	2313332.90	CONC CHNL FL
25	734.09	13915436.96	2313315.41	EMBANKMENT TOE
26	735.05	13915494.25	2313358.76	EMBANKMENT TOE
27	734.76	13915485.26	2313369.22	CONC CHNL FL
28	734.33	13915461.30	2313355.07	CONC CHNL FL
29	733.63	13915419.60	2313353.69	MATCH EXISTING
30	734.33	13915440.96	2313389.52	CONC CHNL FL



SEE CHANNEL LINING DETAIL NEXT SHEET

Point Table				
Point #	Elevation	Northing	Easting	Description
31	734.73	13915451.13	2313372.30	CHANNEL GRADE BREAK
32	736.05	13915524.62	2313415.68	CHANNEL GRADE BREAK
33	734.97	13915476.39	2313410.43	CONC CHNL FL
34	737.09	13915465.99	2313427.63	EMBANKMENT TOE
35	737.28	13915477.05	2313434.31	EMBANKMENT TOE
36	738.27	13915536.08	2313470.00	EMBANKMENT TOE
37	738.83	13915556.79	2313482.52	EMBANKMENT TOE
38	740.76	13915442.59	2313429.20	MATCH EXISTING
39	738.14	13915399.28	2313286.89	EMBANKMENT TOE
40	733.27	13915407.59	2313314.20	MATCH EXISTING
42	735.80	13915360.35	2313257.43	MATCH EXISTING
43	737.26	13915340.63	2313218.74	MATCH EXISTING
44	744.78	13915444.50	2313466.61	MATCH EXISTING
45	748.06	13915379.78	2313200.46	EMBANKMENT TOP
47	739.48	13915631.47	2313458.80	CHNL EXCAVATION TOE

Point Table				
Point #	Elevation	Northing	Easting	Description
48	737.12	13915566.73	2313426.42	CHNL EXCAVATION TOE
49	736.74	13915558.75	2313458.99	CONC CHNL FL
50	741.91	13915703.45	2313493.34	CONC CHNL FL
51	741.02	13915708.23	2313477.32	CHNL EXCAVATION TOE
52	739.58	13915655.03	2313431.06	CHNL EXCAVATION TOE
53	737.42	13915576.42	2313429.38	CHNL EXCAVATION TOE
54	738.95	13915617.42	2313454.84	CHNL EXCAVATION TOE
55	737.90	13915591.24	2313446.42	CHNL EXCAVATION TOE
56	737.50	13915574.65	2313435.33	CHNL EXCAVATION TOE
57	738.06	13915593.40	2313463.68	CHNL EXCAVATION TOE
58	738.74	13915611.42	2313459.60	CHNL EXCAVATION TOE
59	739.00	13915548.66	2313379.84	TOE
60	739.00	13915577.02	2313399.21	TOE
61	739.87	13915598.97	2313364.84	TOE
62	739.91	13915579.88	2313348.70	TOE

Point Table				
Point #	Elevation	Northing	Easting	Description
63	739.91	13915586.92	2313348.11	TOE
64	739.91	13915598.38	2313357.79	TOE
65	742.68	13915607.02	2313368.11	HIGH BANK
66	743.60	13915609.20	2313352.80	HIGH BANK
67	743.92	13915604.58	2313345.41	HIGH BANK
68	744.29	13915597.60	2313339.26	HIGH BANK
69	742.56	13915575.73	2313341.46	HIGH BANK
70	741.86	13915565.63	2313354.93	HIGH BANK
71	735.98	13915532.49	2313443.54	CONC CHNL FL
72	735.65	13915514.46	2313432.90	CONC CHNL FL

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FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

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Costello
ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY, BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX

TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

BRIDGE EMBANKMENT GRADING DETAIL

JOHN D. BARCELLONA
97462
8/15/2023

SHEET 31
OF 106 SHEETS
CP-23-0147

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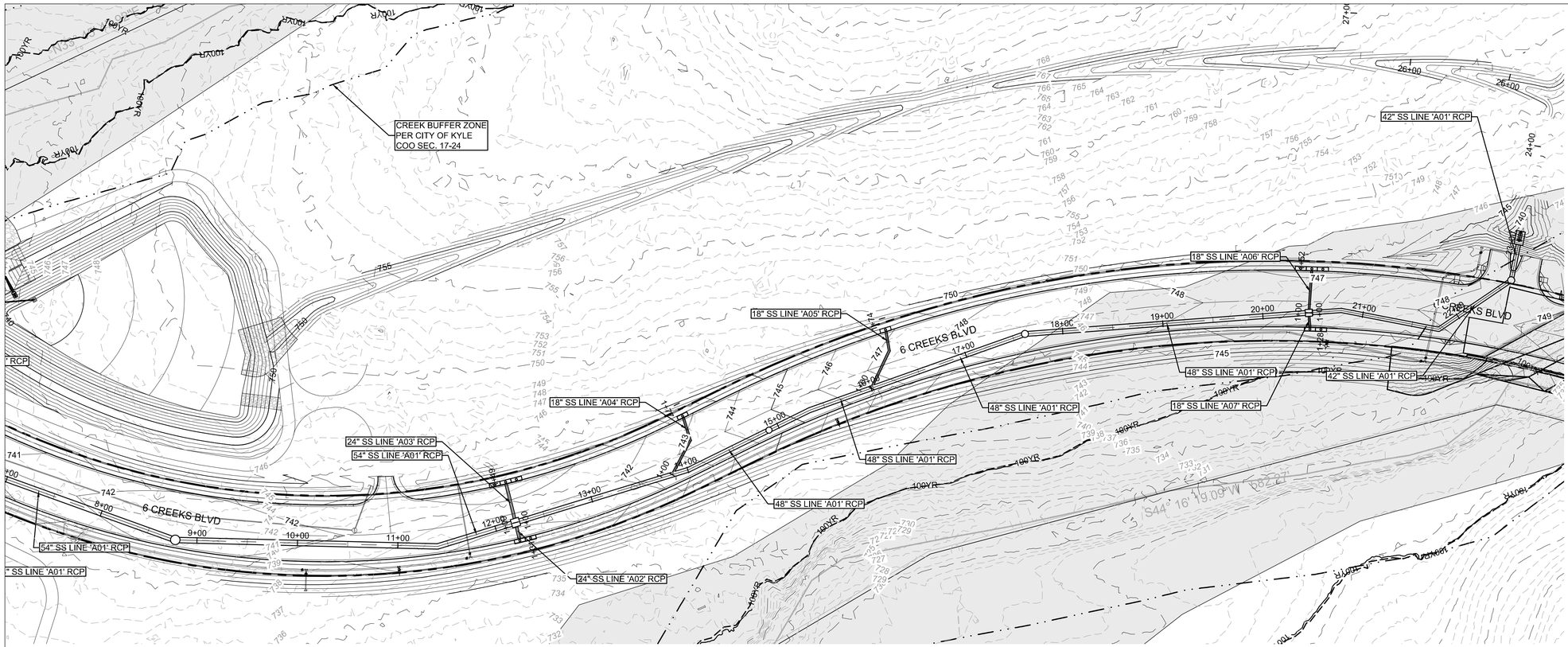
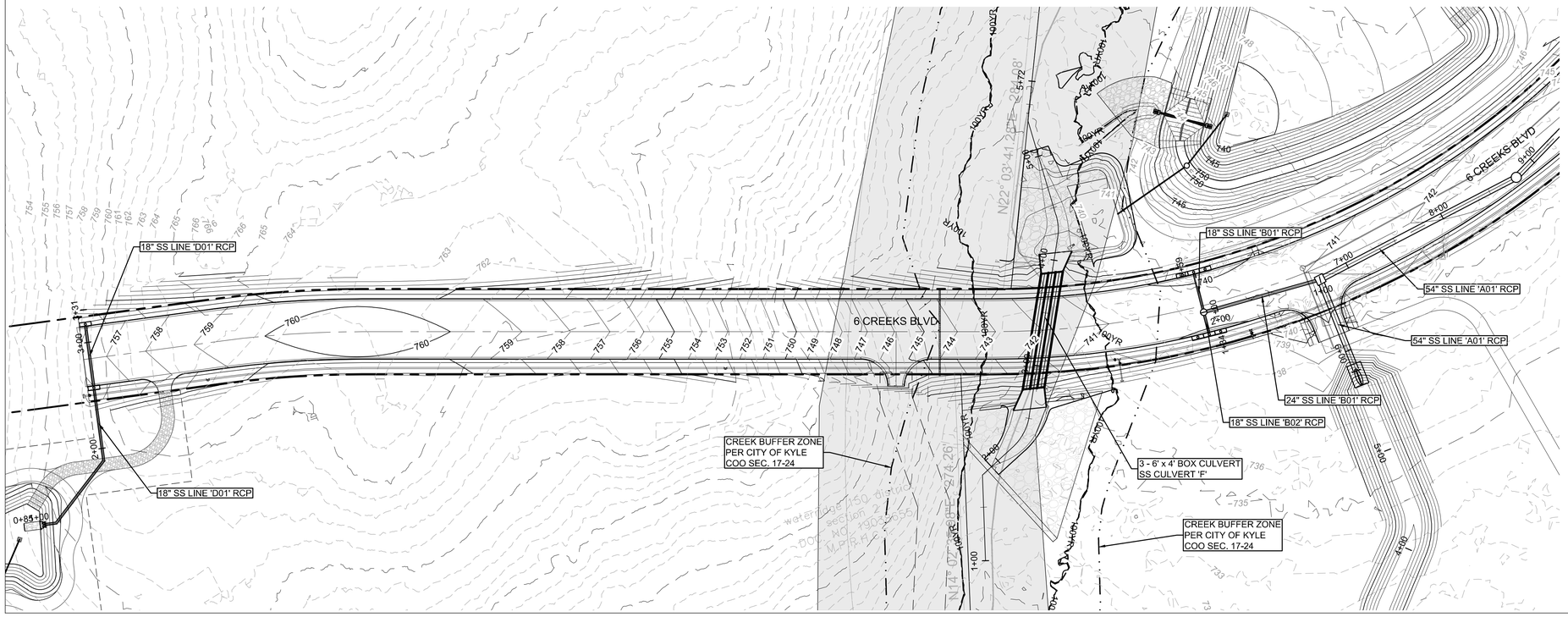
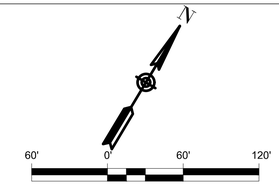






LEGEND

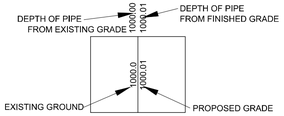
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM LINE
- FEMA ZONE A
- CALCULATED 100 YEAR FLOODPLAIN
- FULLY DEVELOPED 100 YEAR FLOODPLAIN
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP

PROFILE LEGEND

- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
- 25 YR HYDRAULIC GRADE LINE
- 100 YR HYDRAULIC GRADE LINE

PROFILE SCALE

1" = 40' HORIZ.
1" = 4' VERT.



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Costello
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9050 N. CAPITAL HWY., BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

OVERALL STORM PLAN

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 79
OF 106 SHEETS

FOR REGULATORY REVIEW ONLY - NOT FOR CONSTRUCTION

CP-23-0147

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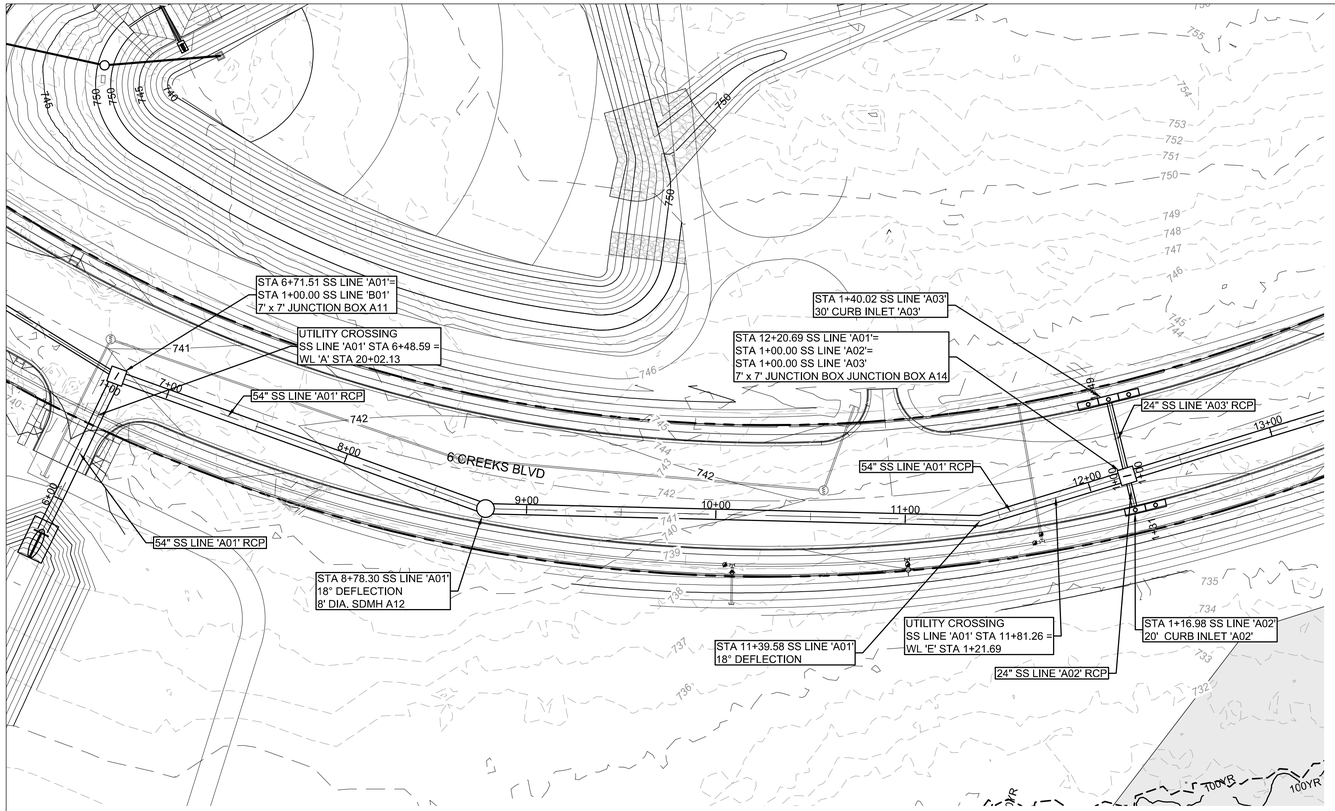

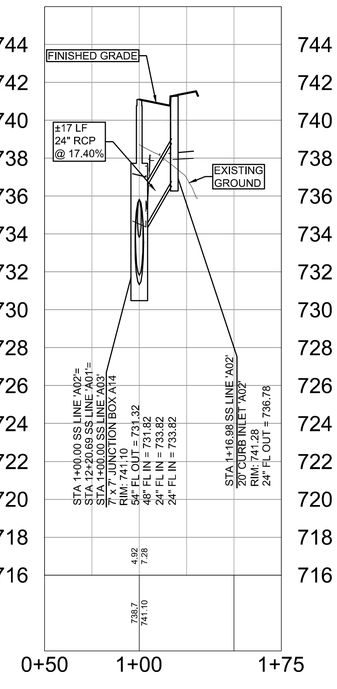

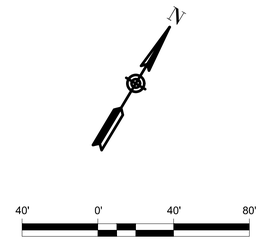

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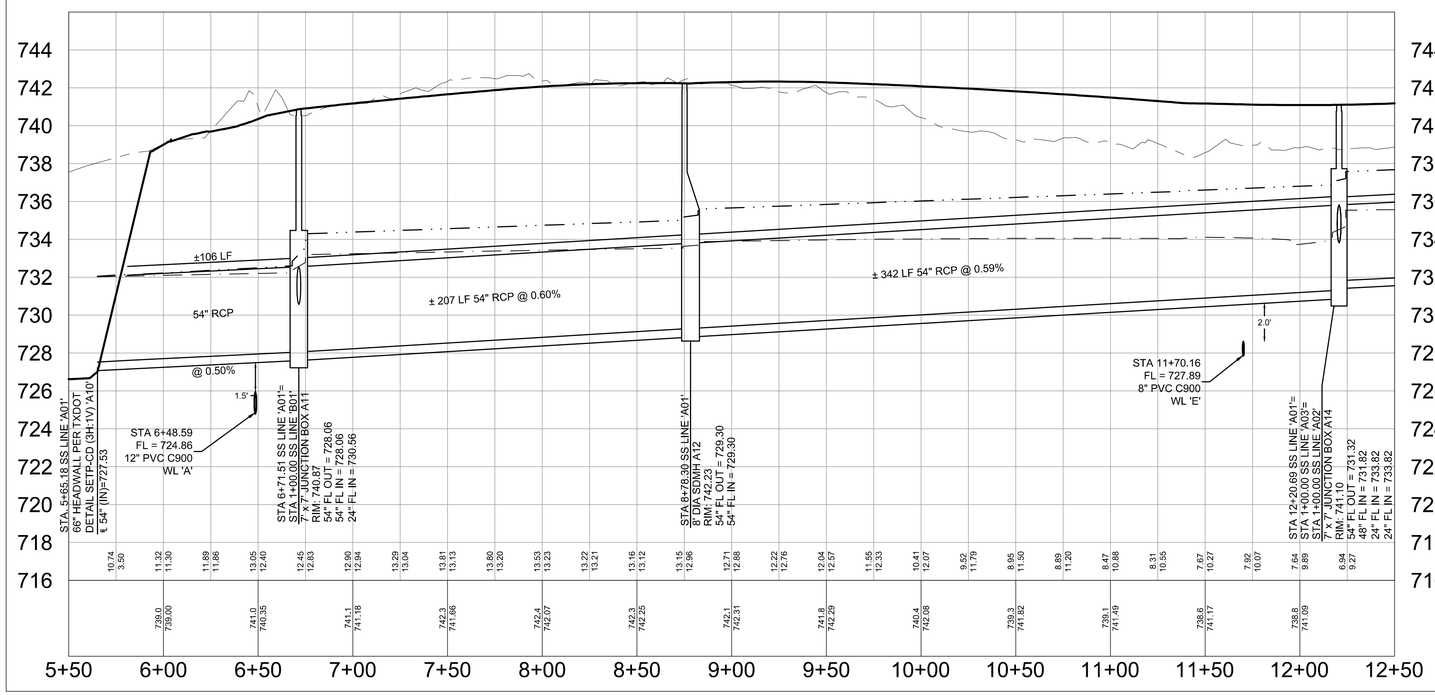
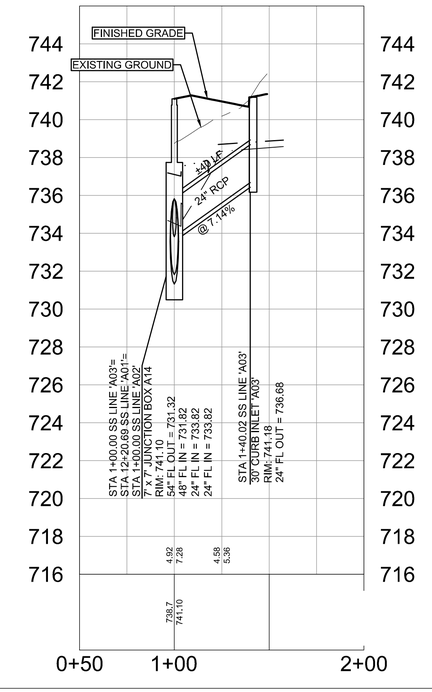
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

SS LN 'A01' PLAN & PROFILE 5+50-12+50
LATERALS A02-A03





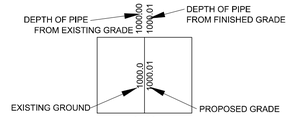
LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM LINE
- FEMA ZONE A
- CALCULATED 100 YEAR FLOODPLAIN
- FULLY DEVELOPED 100 YEAR FLOODPLAIN
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP

PROFILE LEGEND

- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
- 25 YR HYDRAULIC GRADE LINE
- 100 YR HYDRAULIC GRADE LINE

PROFILE SCALE
1" = 40' HORIZ.
1" = 4' VERT.



NOTE:
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STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET 80
OF 106 SHEETS

CP-23-0147

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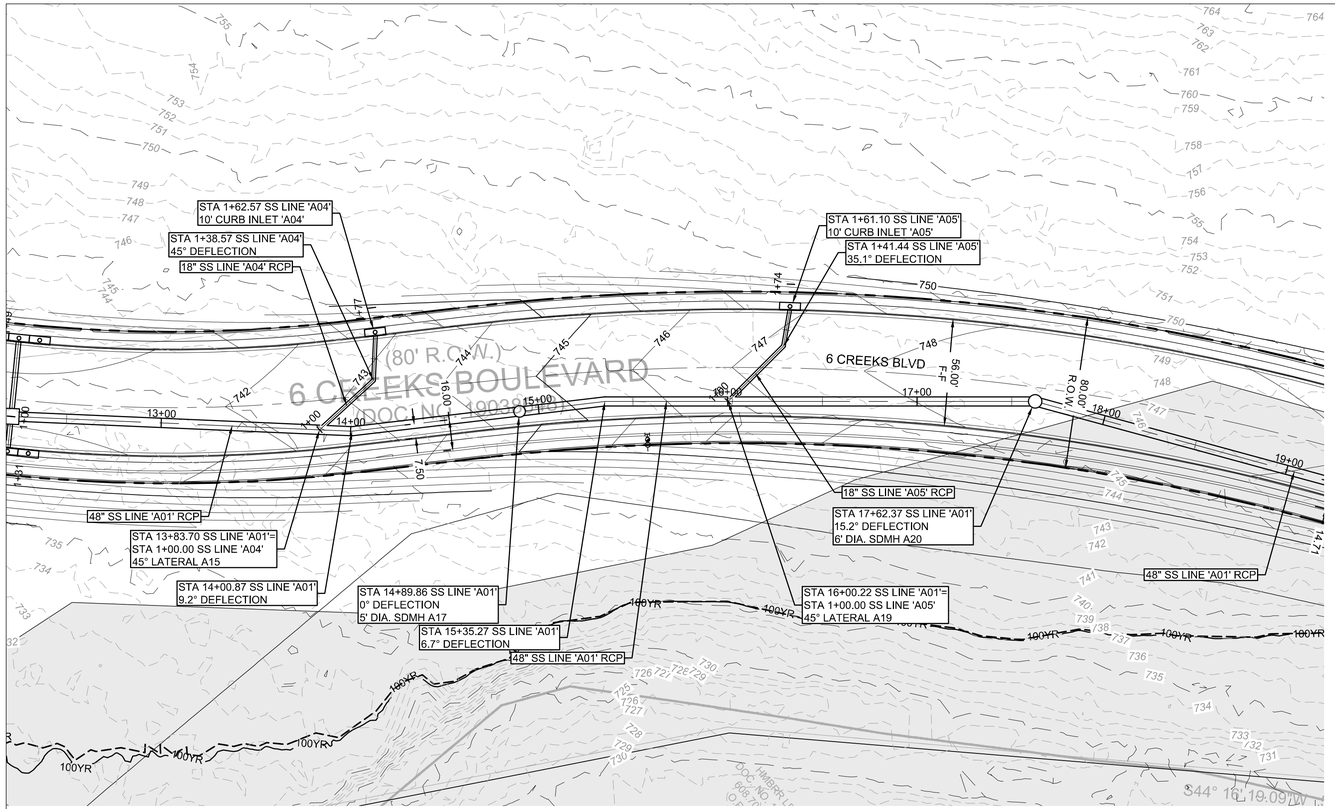

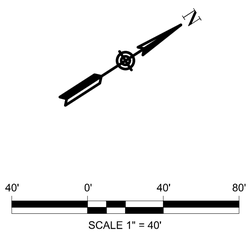

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM LINE
- FEMA ZONE A
- CALCULATED 100 YEAR FLOODPLAIN
- FULLY DEVELOPED 100 YEAR FLOODPLAIN
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PROFILE LEGEND

- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
- 25 YR HYDRAULIC GRADE LINE
- 100 YR HYDRAULIC GRADE LINE

PROFILE SCALE
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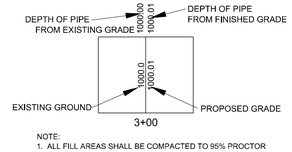

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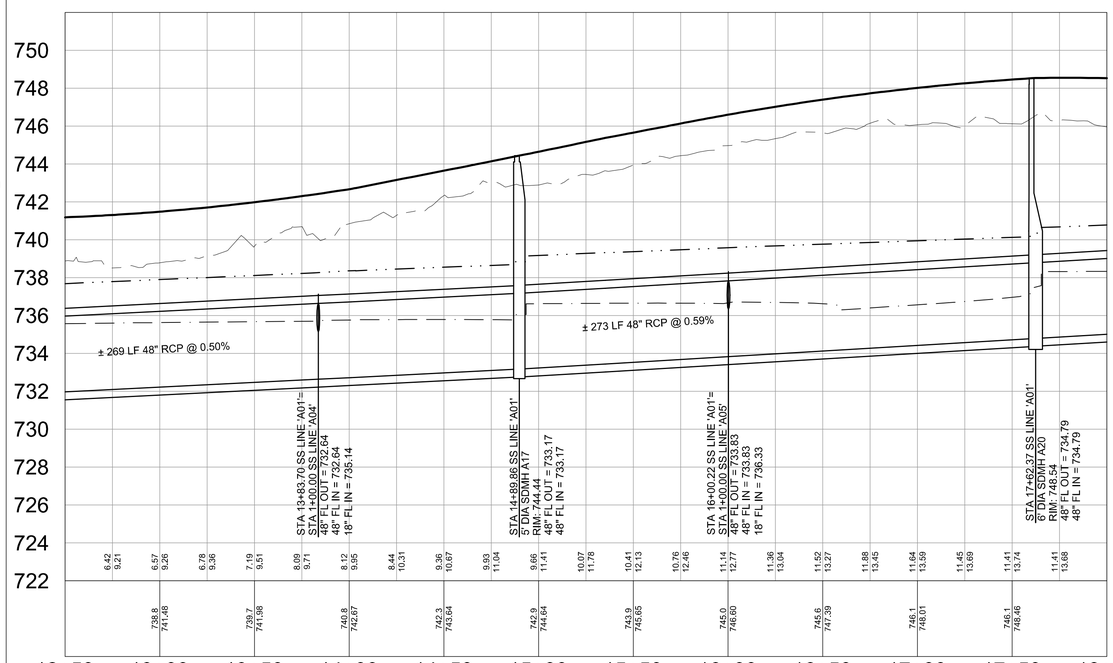
SS LINE 'A01'



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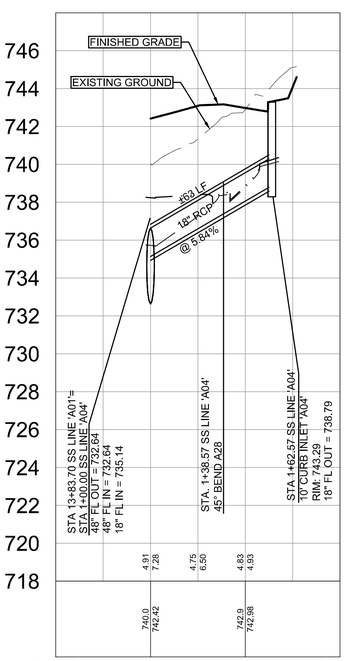
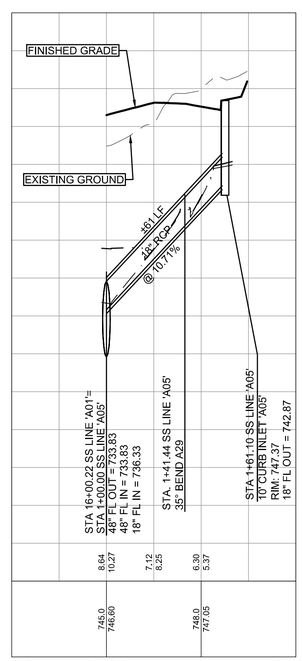


SS LINE 'A05'



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9050 N. CAPITAL HWY., BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX

TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

SS LN 'A01' PLAN & PROFILE 12+50 - 18+00 LATERALS A04-A05, C01

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 81
OF 106 SHEETS

CP-23-0147

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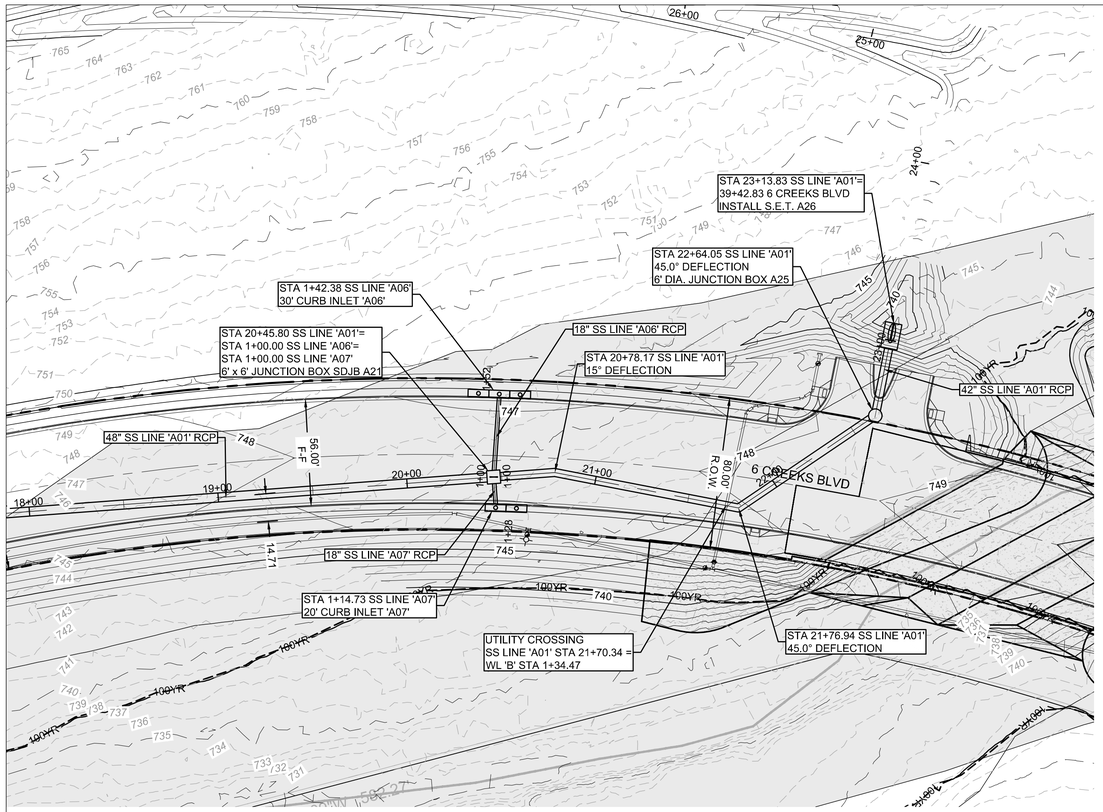

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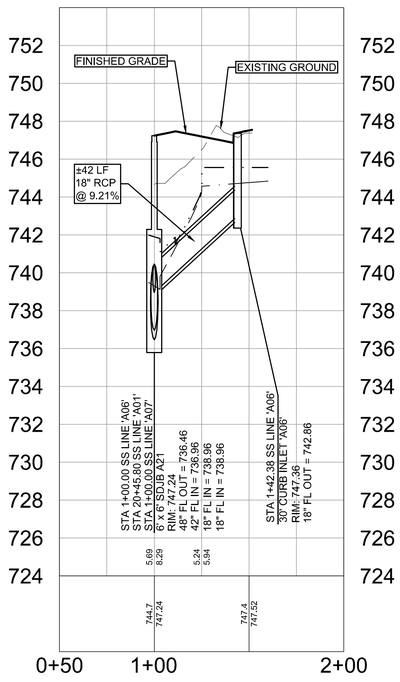

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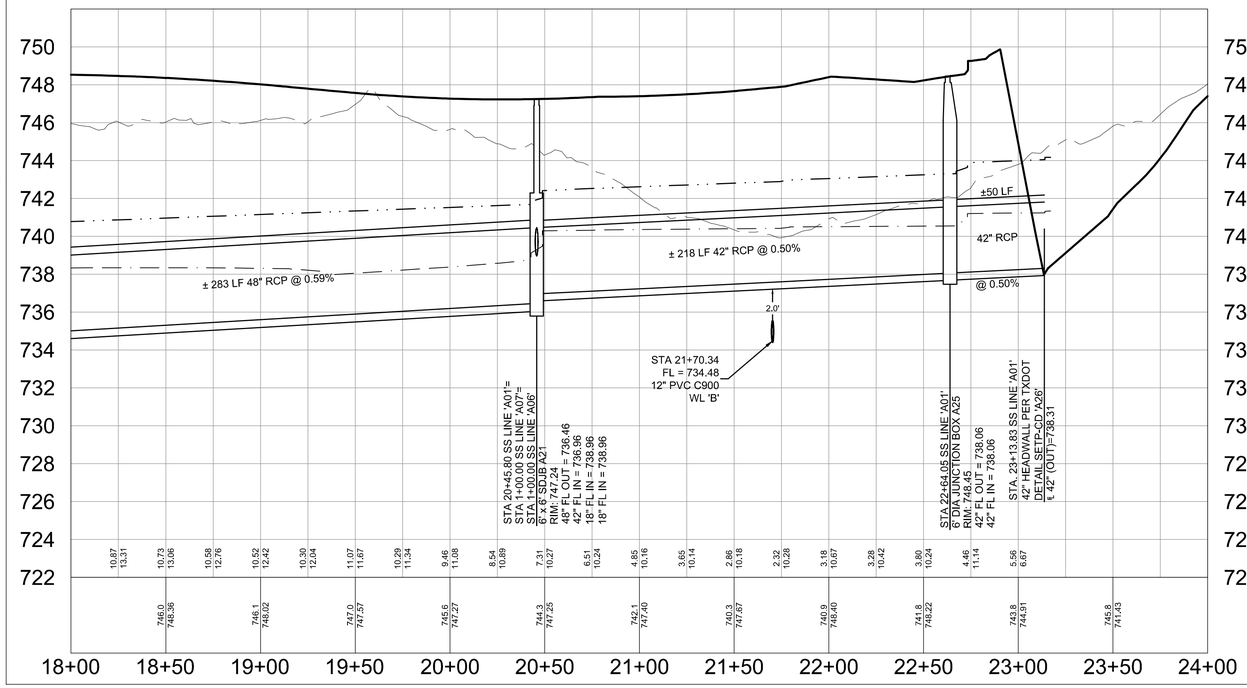
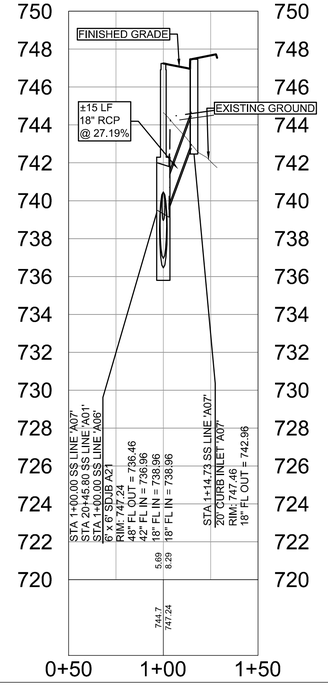
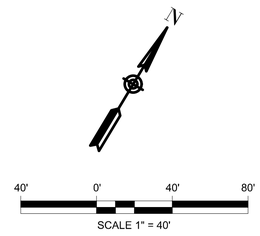


SS LINE 'A07'





LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM LINE
- FEMA ZONE A
- CALCULATED 100 YEAR FLOODPLAIN
- FULLY DEVELOPED 100 YEAR FLOODPLAIN
- CURB INLET
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PROFILE LEGEND

- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
- 25 YR HYDRAULIC GRADE LINE
- 100 YR HYDRAULIC GRADE LINE

PROFILE SCALE

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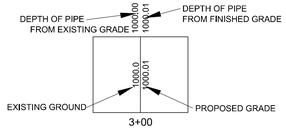

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TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

SS LN 'A01' PLAN & PROFILE 18+00 - END - LATERALS A06-A08

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

SHEET 82
OF 106 SHEETS

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CP-23-0147

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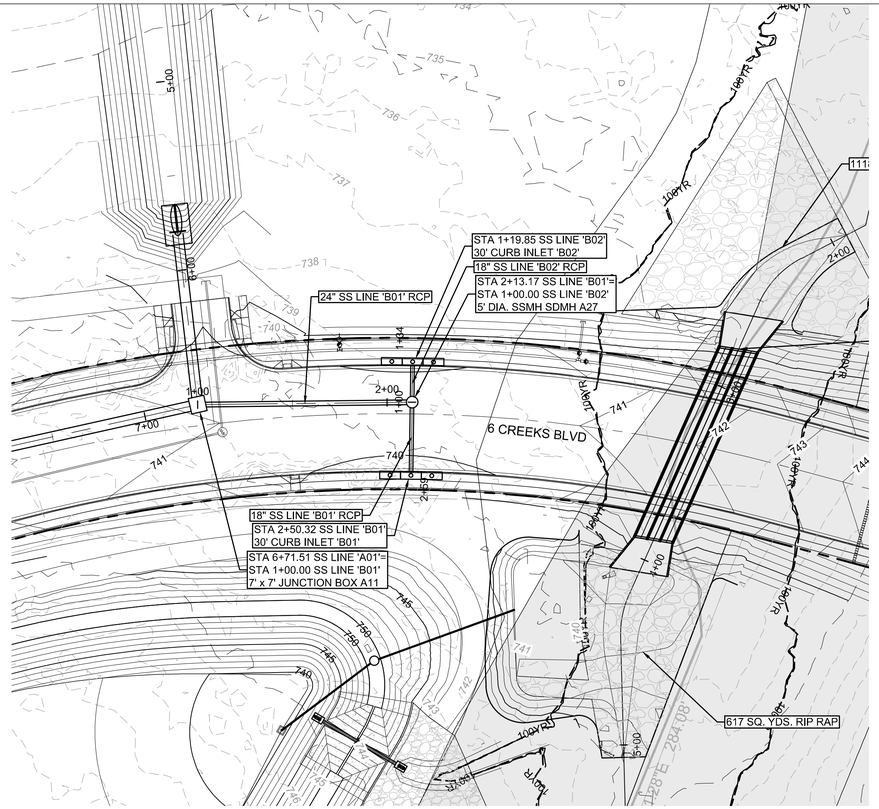
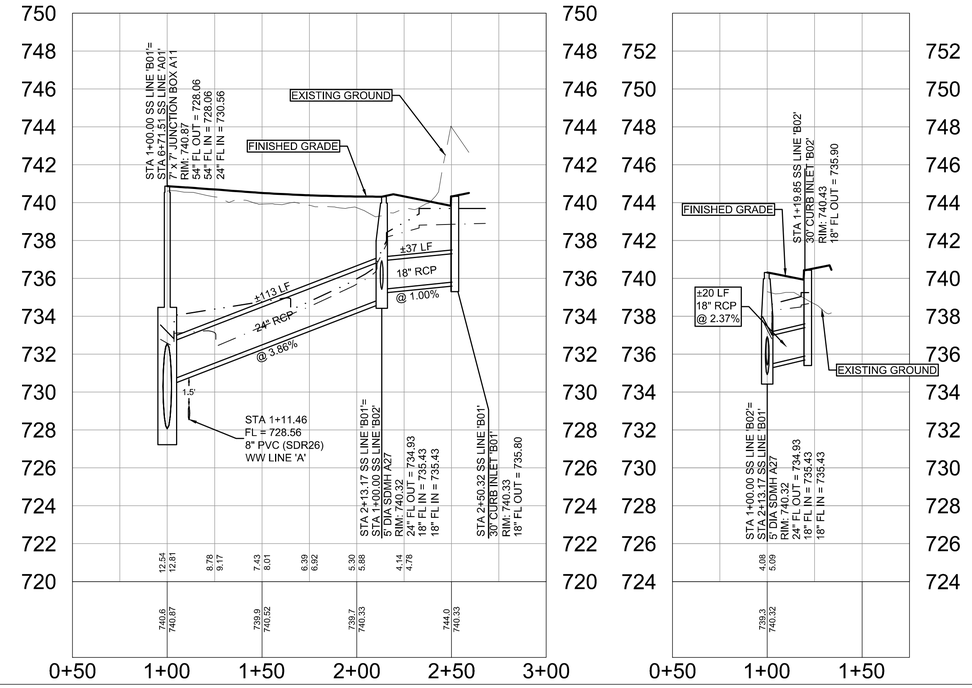
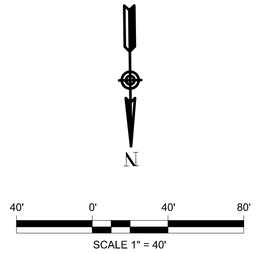






LEGEND

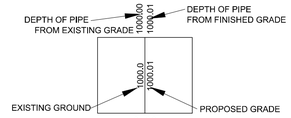
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM LINE
- FEMA ZONE A
- CALCULATED 100 YEAR FLOODPLAIN
- FULLY DEVELOPED 100 YEAR FLOODPLAIN
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP

PROFILE LEGEND

- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
- 25 YR HYDRAULIC GRADE LINE
- 100 YR HYDRAULIC GRADE LINE

PROFILE SCALE

1" = 40' HORIZ.
1" = 4' VERT.



NOTE:
1. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO INSTALLATION OF UTILITIES.
2. ALL WASTEWATER AND WATERLINE CROSSINGS SHALL COMPLY WITH THE CONSTRUCTION REQUIREMENTS DEFINED IN TABLE C.1 OF 30 TAC CHAPTER 217.53(d)(3).

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ENGINEERING AND SURVEYING
9050 N. CAPITAL HWY. BLDG 3, SUITE 390
AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

SS LN 'B01' AND 'B02' PLAN & PROFILES

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET 83
OF 106 SHEETS

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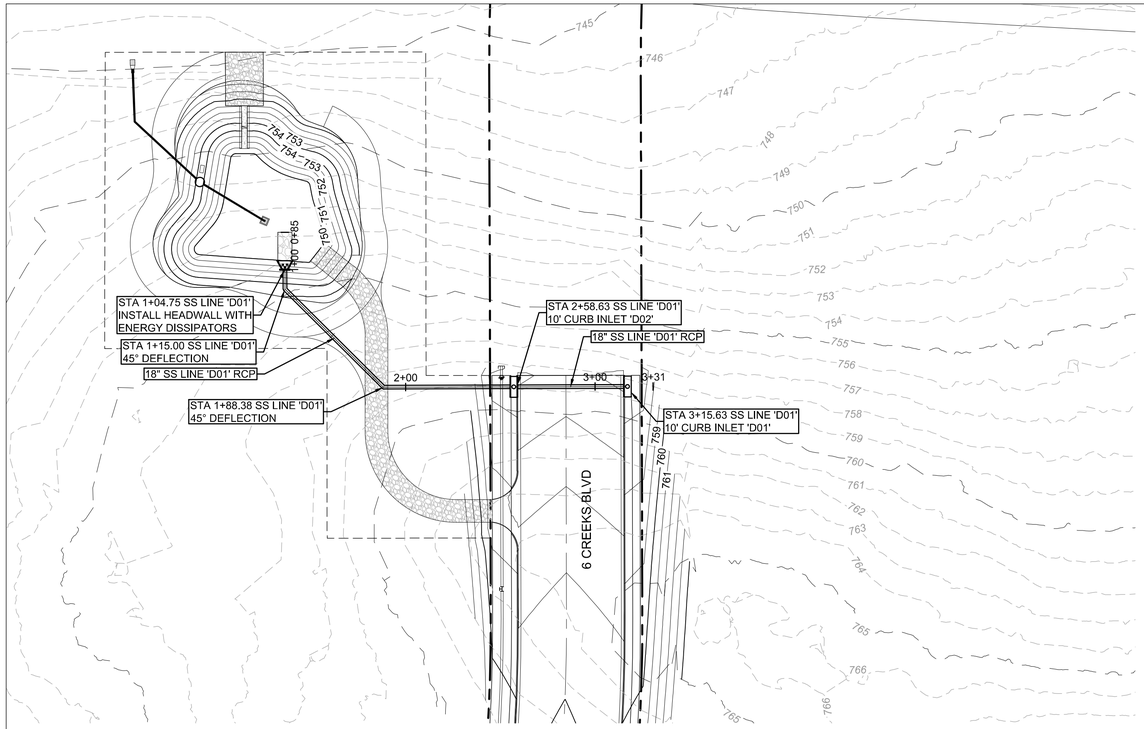
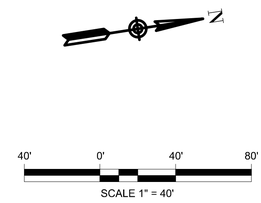
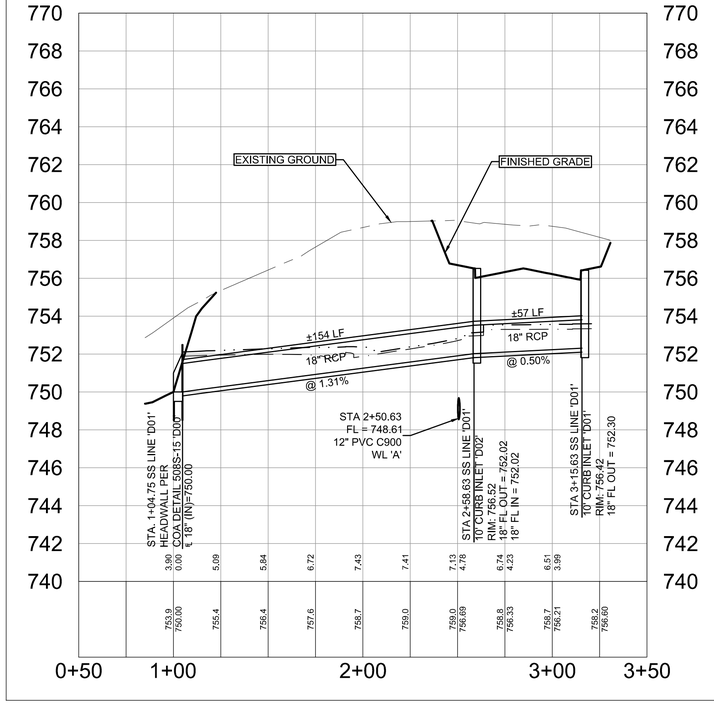




SS LINE 'D01'



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM LINE
- FEMA ZONE A
- CALCULATED 100 YEAR FLOODPLAIN
- FULLY DEVELOPED 100 YEAR FLOODPLAIN
- CURB INLET
- PROPOSED STORM MANHOLE
- PROPOSED STORM JUNCTION BOX
- ROCK RIP RAP

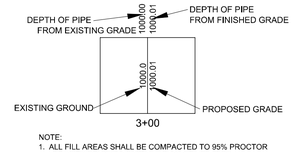
PROFILE LEGEND

- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
- 25 YR HYDRAULIC GRADE LINE
- 100 YR HYDRAULIC GRADE LINE

PROFILE SCALE

1" = 40' HORIZ.

1" = 4' VERT.



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AUSTIN, TEXAS 78759
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TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

SS LINE 'D' PLAN & PROFILE

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

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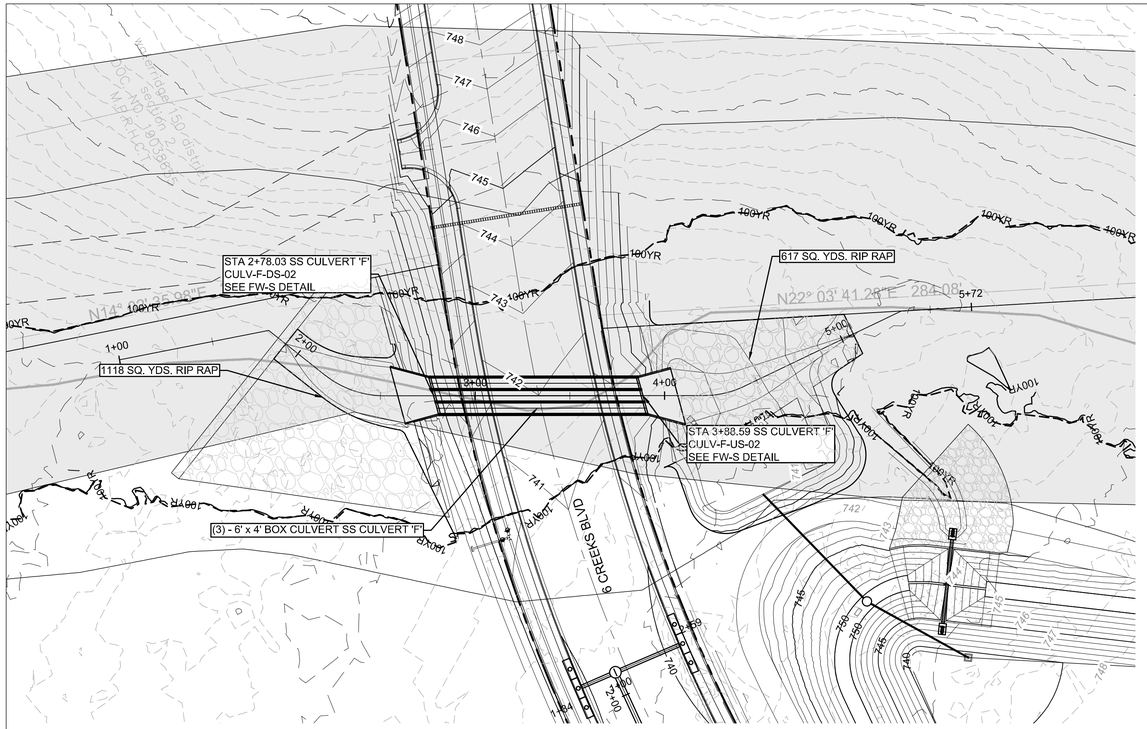
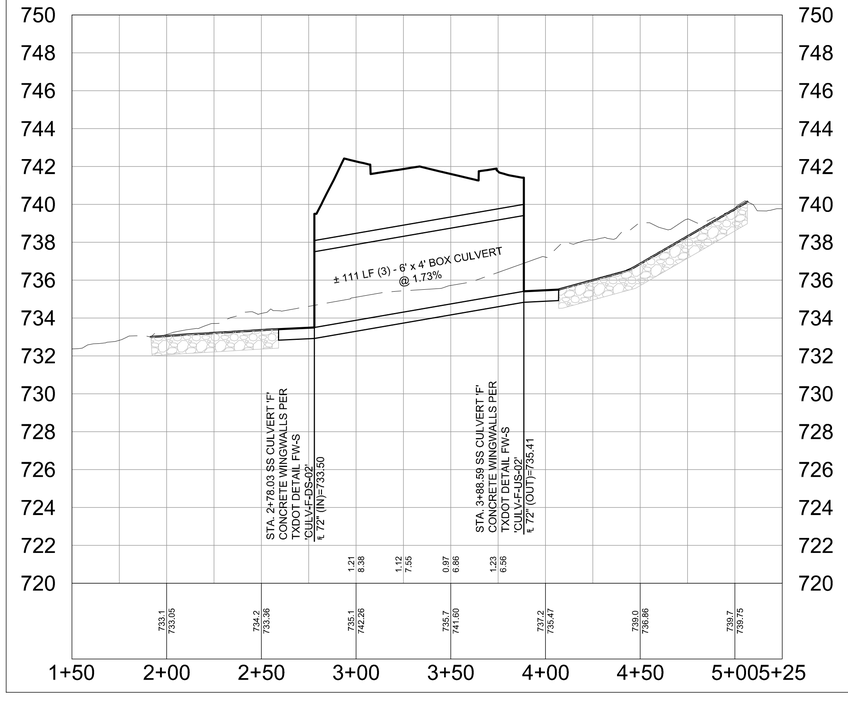


40' 0' 40' 80'

SCALE 1" = 40'

SS CULVERT 'F'



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORM LINE
- FEMA ZONE A
- CALCULATED 100 YEAR FLOODPLAIN
- FULLY DEVELOPED 100 YEAR FLOODPLAIN
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PROFILE LEGEND

- PROPOSED FINISHED GRADE
- EXISTING GRADE (CENTER)
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PROFILE SCALE

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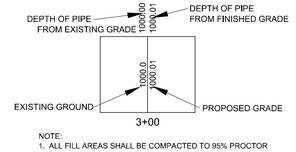

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SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

SS CULVERT 'F' PLAN & PROFILE

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

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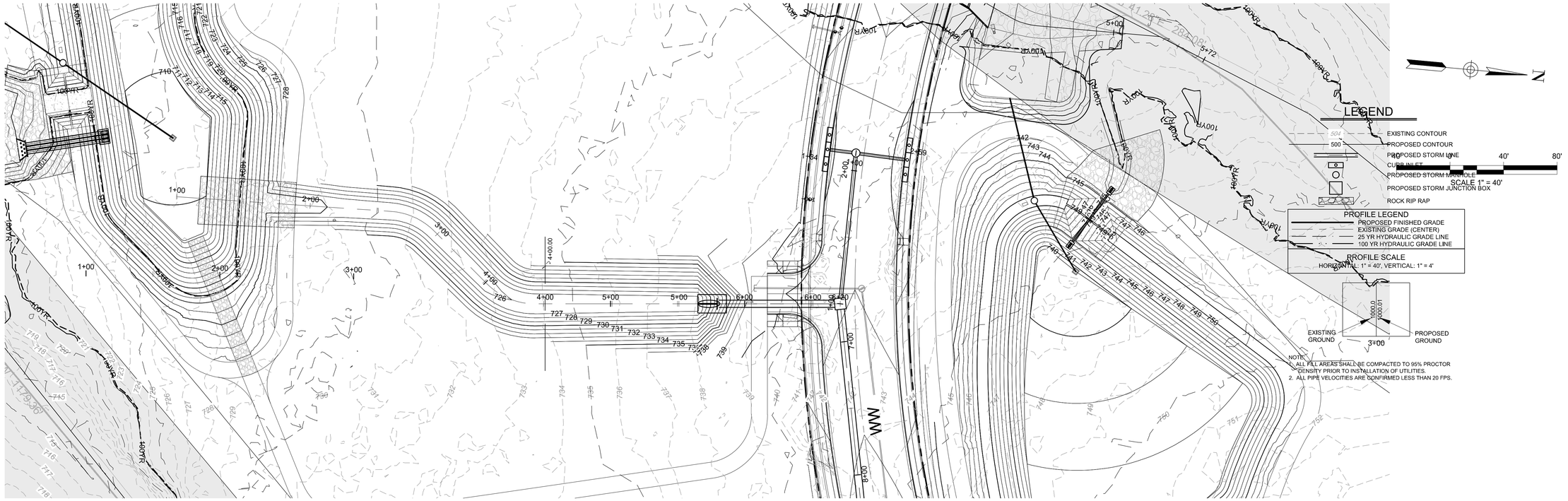
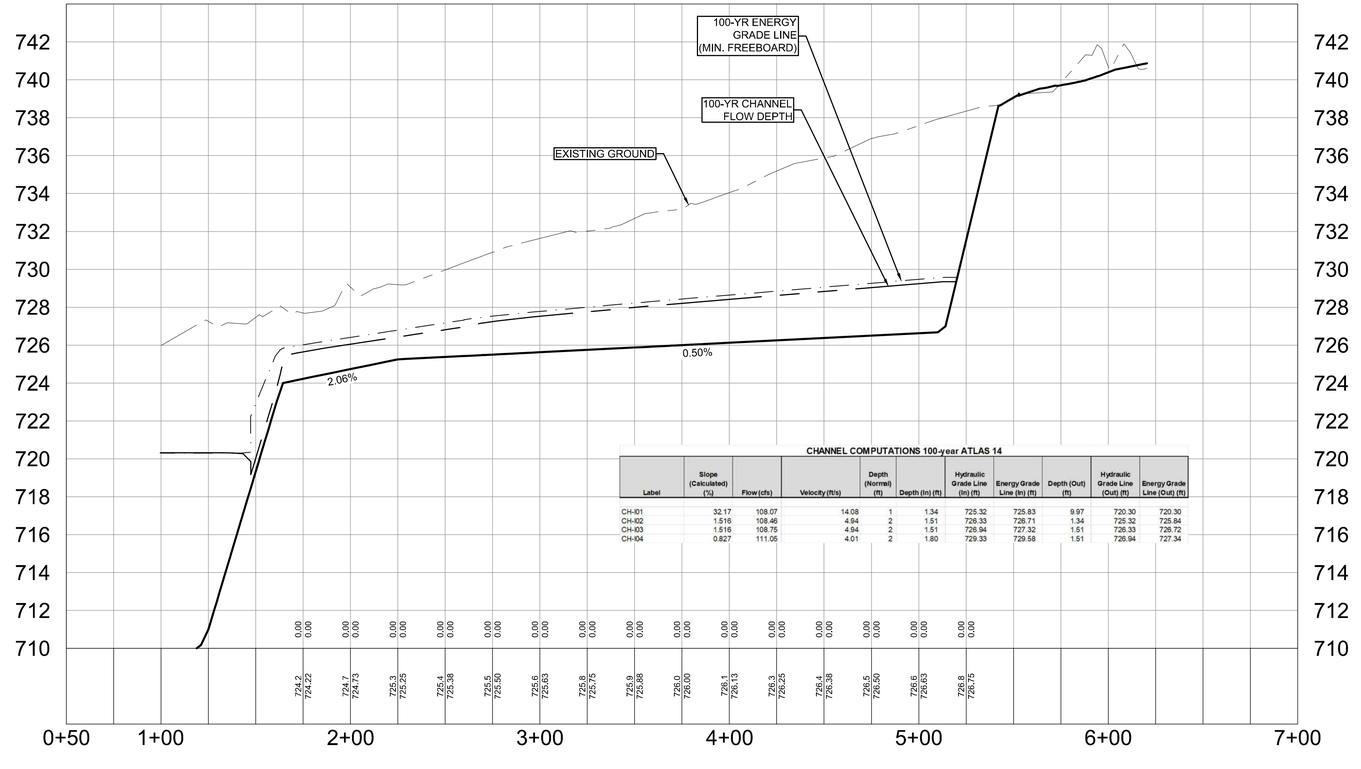
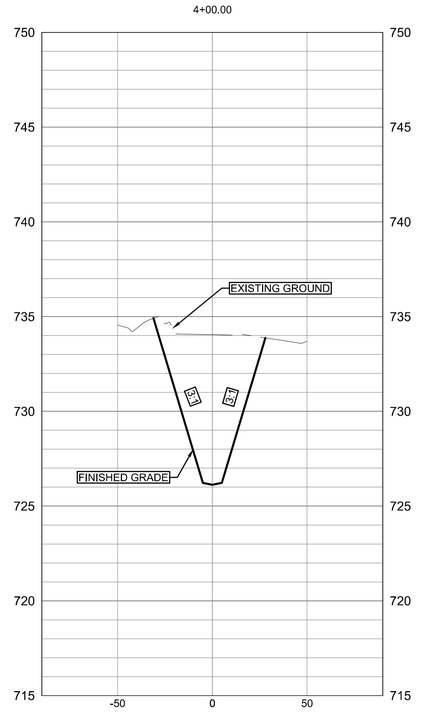


INTERIM CHANNEL I



CHANNEL COMPUTATIONS 100-year ATLAS 14

Label	Slope (Calculated) (%)	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Depth (In) (ft)	Hydraulic Grade Line (In) (ft)	Energy Grade Line (In) (ft)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Energy Grade Line (Out) (ft)
CH-I01	32.17	108.07	14.08	1	1.34	725.32	725.83	9.97	720.30	720.30
CH-I02	1.516	108.46	4.94	2	1.51	726.33	726.71	1.34	725.32	725.84
CH-I03	1.516	108.75	4.94	2	1.51	726.94	727.32	1.51	726.33	726.72
CH-I04	0.827	111.05	4.01	2	1.80	729.33	729.58	1.51	726.94	727.34



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Costello

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

INTERIM CHANNEL I

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER
8/15/2023

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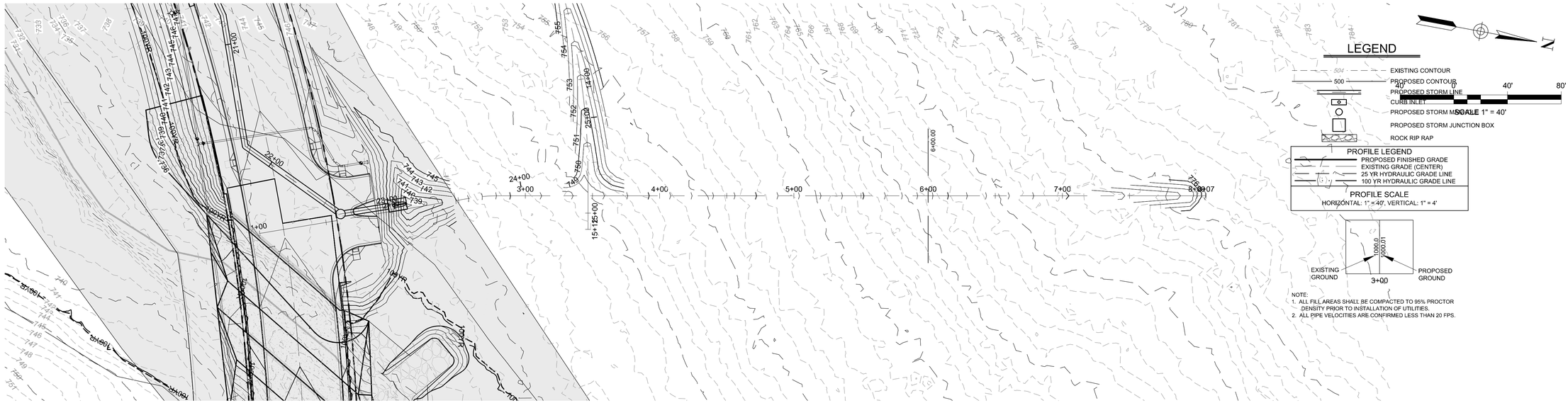
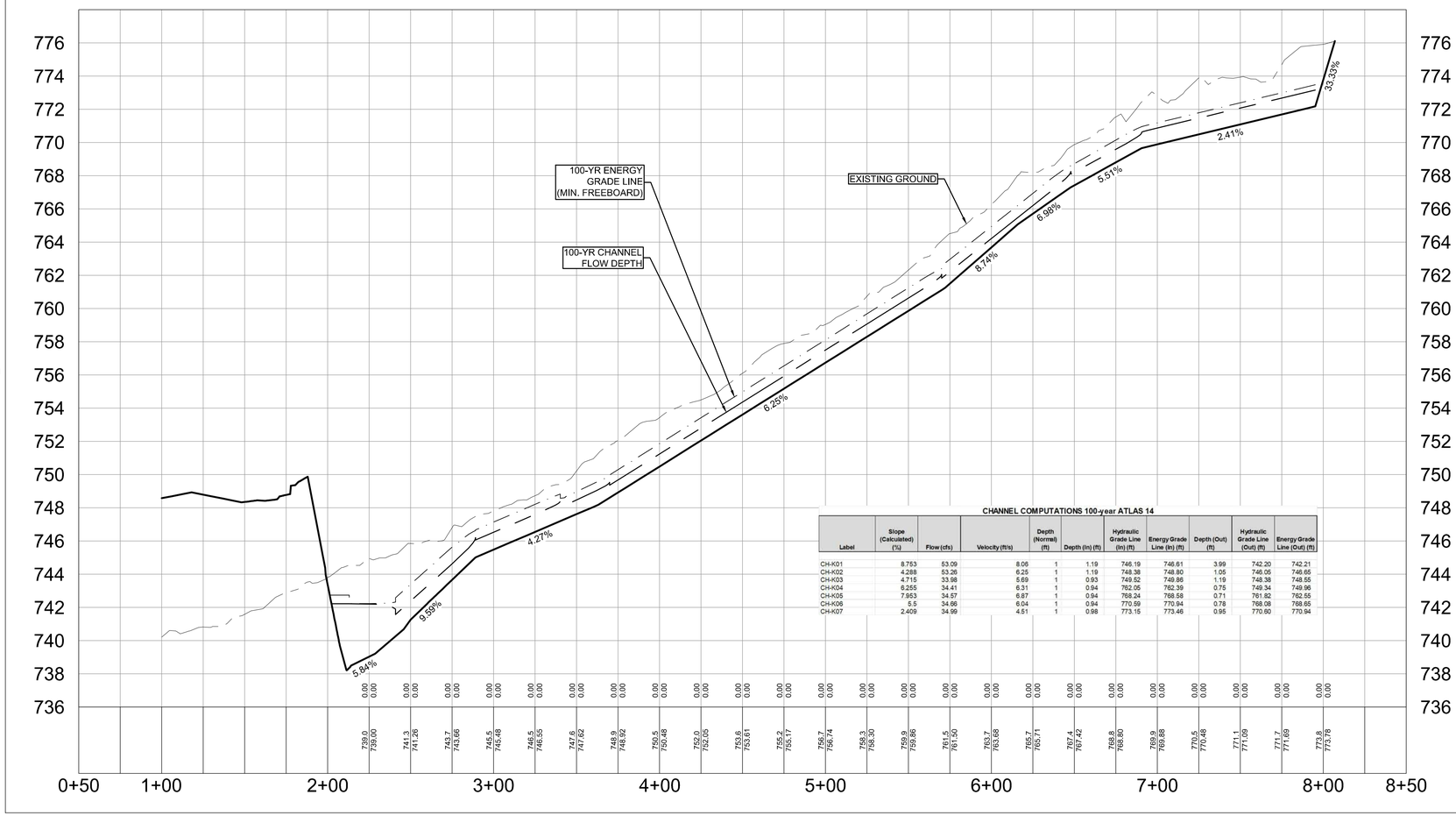


INTERIM CHANNEL OS-K



CHANNEL COMPUTATIONS 100-year ATLAS 14

Label	Slope (Calculated) (%)	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Depth (in) (ft)	Hydraulic Grade Line (in) (ft)	Energy Grade Line (in) (ft)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Energy Grade Line (Out) (ft)
CH-K01	8.753	53.09	8.06	1	1.19	746.19	746.61	3.99	742.20	742.21
CH-K02	4.288	53.26	6.25	1	1.19	748.38	748.80	1.05	746.05	746.65
CH-K03	4.715	33.98	5.69	1	0.93	749.52	749.86	1.19	748.38	748.55
CH-K04	6.255	34.41	6.31	1	0.94	762.05	762.39	0.75	749.34	749.96
CH-K05	7.953	34.57	6.87	1	0.94	768.24	768.58	0.71	761.82	762.55
CH-K06	5.5	34.66	6.04	1	0.94	770.59	770.94	0.78	768.08	768.65
CH-K07	2.409	34.99	4.51	1	0.98	773.15	773.46	0.95	770.60	770.94

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AUSTIN, TEXAS 78759
(512)646-3456 (512) 514-0315 FAX
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

INTERIM CHANNEL OS-K

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED PROFESSIONAL ENGINEER
8/15/2023

SHEET 88
OF 106 SHEETS

CP-23-0147

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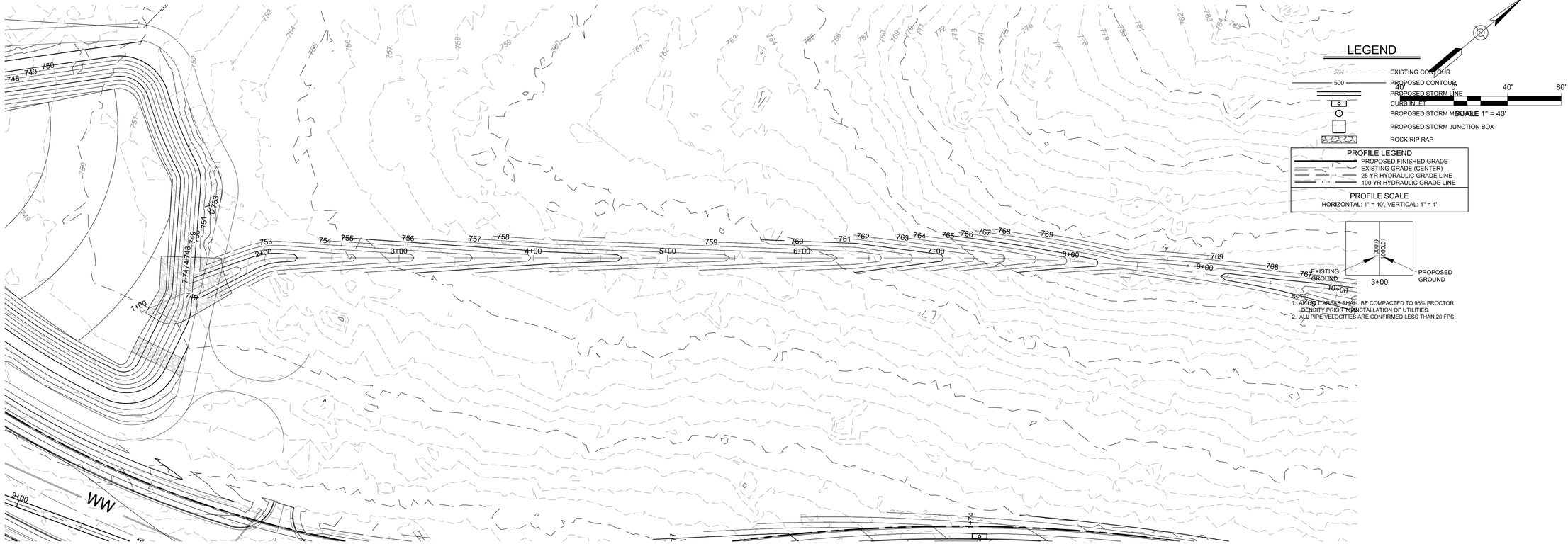
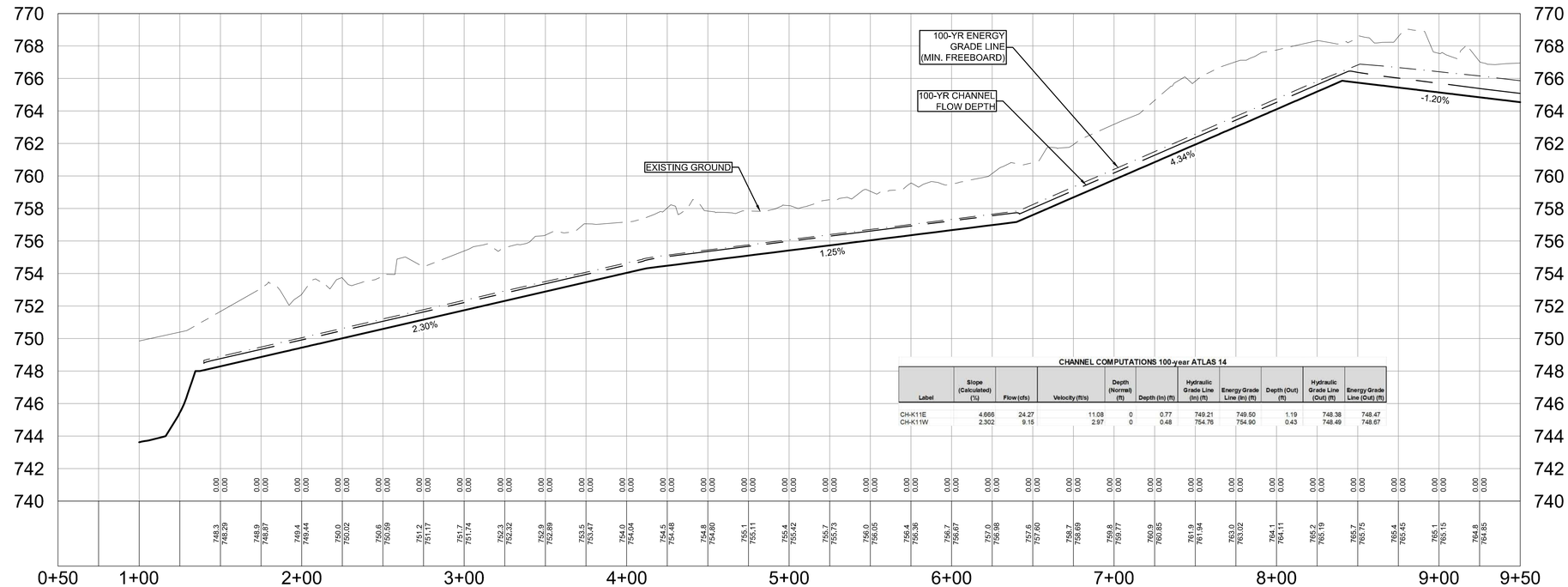


INTERIM CHANNEL OS-K1



CHANNEL COMPUTATIONS 100-year ATLAS 14

Label	Slope (Calculated) (%)	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Depth (In) (ft)	Hydraulic Grade Line (In) (ft)	Energy Grade Line (In) (ft)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Energy Grade Line (Out) (ft)
CH-K11E	4.666	24.27	11.08	0	0.77	749.21	749.50	1.19	748.38	748.47
CH-K11W	2.302	9.15	2.97	0	0.48	754.76	754.90	0.43	748.49	748.67

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INTERIM CHANNEL OS-K1

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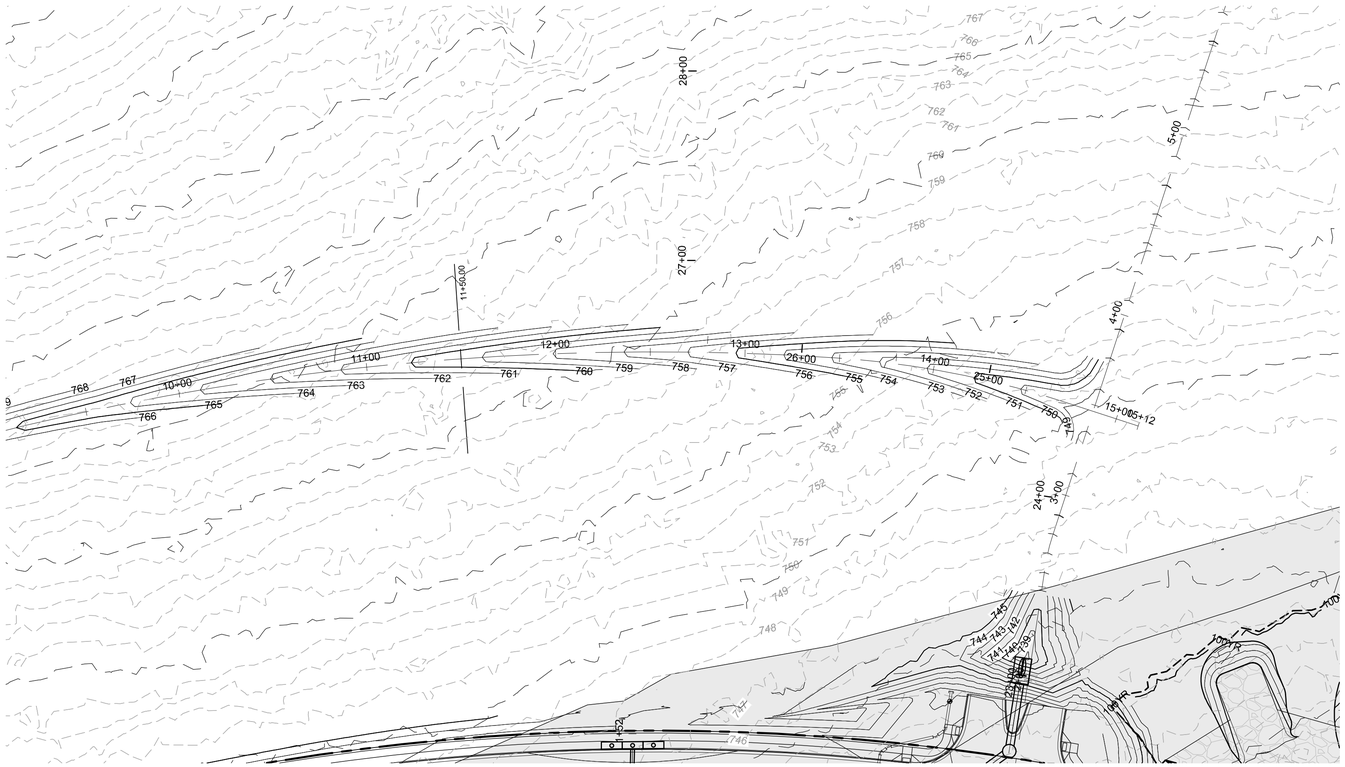

LEGEND

504	EXISTING CONTOUR
500	PROPOSED CONTOUR
═	PROPOSED STORM LINE
▭	CURB INLET
○	PR ANH
□	PROPOSED STORM JUNCTION BOX
▨	ROCK RIP RAP

PROFILE LEGEND

━	PROPOSED FINISHED GRADE
— —	EXISTING GRADE (CENTER)
— · —	25 YR HYDRAULIC GRADE LINE
— · · —	100 YR HYDRAULIC GRADE LINE

PROFILE SCALE

HORIZONTAL: 1" = 40', VERTICAL: 1" = 4'

NOTE:
1. ALL FILL AREAS SHALL BE COMPACTED TO 95% PROCTOR DENSITY PRIOR TO INSTALLATION OF UTILITIES.
2. ALL PIPE VELOCITIES ARE CONFIRMED LESS THAN 20 FPS.

INTERIM CHANNEL OS-K1

CHANNEL COMPUTATIONS 100-year ATLAS 14

Label	Slope (Calculated) (%)	Flow (cfs)	Velocity (ft/s)	Depth (Normal) (ft)	Depth (In) (ft)	Hydraulic Grade Line (In) (ft)	Energy Grade Line (In) (ft)	Depth (Out) (ft)	Hydraulic Grade Line (Out) (ft)	Energy Grade Line (Out) (ft)
CH-K12E	3.948	24.52	10.52	0	0.77	756.97	757.26	0.38	748.82	750.54
CH-K12W	1.257	9.67	2.46	1	0.58	757.75	757.85	0.48	754.76	754.91
CH-K13E	2.682	24.88	9.27	0	0.78	763.25	763.54	0.43	756.63	757.96
CH-K13W	4.338	9.98	3.79	0	0.45	765.65	765.84	0.58	757.75	757.85
CH-K14E	2.669	24.99	9.27	0	0.78	765.26	765.56	0.43	762.90	764.21
CH-K15E	1.195	25.23	7.06	1	0.78	766.64	766.94	0.54	765.02	765.79

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SOUTH 6 CREEKS BLVD - PHASE 2
KYLE, TEXAS 78640

INTERIM CHANNEL OS-K1 2

MICHAEL A. KENNEY
131885
Michael A. Kenney
9/15/2023

SHEET 90
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TCEQ Contributing Zone Plan

Attachment N - Inspection, Maintenance, Repair, and Retrofit Plan
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

The following are recommended maintenance procedures as outlined in the TCEQ's Edwards Aquifer Technical Guidance Manual:

Batch Detention Basins:

- Inspection should be made at a minimum of twice a year. At least one inspection should take place during wet weather to determine if the basin is meeting the target detention time of 12 hours with a drawdown of no more than 48 hours. The remaining inspections should occur between storm events so that manual operation of the valve and controller can be verified.
- The logic Controller should be inspected as part of the above referenced inspections. Verify that the external indicators are operating properly by turning the controller off and on, and by initiating a cycle by triggering the level sensor in the basin. The valve should be manually opened and closed using the open/close switch to verify valve operation and to assist with inspecting the valve for debris. The solar panel should be inspected and any dust or debris on the panel should be carefully removed. The controller and all other circuitry should be inspected for signs of corrosion, damage or water leaks. At the end of the inspection, the controller should be reset.
- Trash and other debris should be removed to prevent runoff to downstream waterways. Outlet structures and trash screens should be inspected for clogging and shall be cleaned out as needed during scheduled inspections. Debris and sediment shall also be removed from around the sensor and valve.
- Accumulated silt should be removed when the sediment exceeds 6 inches in depth, when the accumulated silt interferes with the level sensor or when the basin no longer drains within 48 Hours. Additionally, sediment removal should take place at least once every 5 years.
- The need for routine maintenance such as mowing, fertilizing, irrigating and weed and pest control is recommended to maintain vegetative cover. At no point should vegetation exceed 18 inches in height and shall occur at a minimum of twice a year.
- Check for damage and loss of vegetative cover. Any damaged sections should be re-seeded with a mix of erosion resistant, soil binding species.
- The basin side slopes and embankment shall be checked for signs of erosion and be repaired/reseeded as needed.

Vegetative Buffers:

- Inspection should be made weekly and after each rainfall.
- The need for routine maintenance such as mowing, fertilizing, irrigating and weed and pest control will depend on the species of plants and trees, soil types, location and climatic conditions. County agricultural extension agencies are a good source of this type of information.
- Check for damage and loss of vegetative cover. Any damaged sections should be re-seeded with a mix of erosion resistant, soil binding species.
- Trash and other debris should be removed to prevent runoff to downstream waterways.

Silt Fence:

- Inspection should be made weekly and after each rainfall.
- Sediment should be removed when buildup reaches 6 inches in depth.
- Replace any torn fabric or install a second line of fencing parallel to the torn section.
- Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
- When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

Inlet Protection Barriers:

- Inspection should be made weekly and after each rainfall.
- Sediment should be removed when buildup reaches 3 inches in depth.
- Replace or patch any torn fabric found during inspection.
- Inspect for gaps between the barrier and the curb.
- Barriers shall be removed only after the drainage area has been properly stabilized.

Final Turf Establishment:

- After construction activity, disturbed areas should be reseeded using an approved seed mix.
- Irrigation may be required during periods of dry weather, until the turf is well established.
- Additional applications of seed and/or fertilizer may be required to achieve required coverage.

Inspection Procedures and Record Keeping:

- Inspections shall be conducted by qualified representatives of the contractor acting on behalf of the owner or a designated party if hired separately by the owner. Each operator must delegate authority to the specifically described position or person performing inspections, as provided by 30 TAC 305.128, as an authorized person for signing reports and performing certain activities requested by the director or required by the TPDES general permit. This delegation of authority must be provided to the director of TCEQ in writing and a copy shall be kept along with the signed effective copy of the SW3P.
- The authorized party shall inspect all disturbed areas of the site, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site.
- Disturbed areas and areas used for storage of materials that are exposed to precipitation or within limits of the 1% annual chance (100 year) floodplain must be inspected for evidence of, or the potential for, pollutants entering runoff from the site. Erosion and sediment control measures identified in the plan must be observed to ensure that they are operating correctly. Observations can be made during wet or dry weather conditions. Where discharge locations or points are accessible, they must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. This can be done by inspecting receiving waters to see whether any signs or erosion or sediment are associated with the discharge location. Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

- An inspection report that summarizes the scope of the inspection, name(s) and qualifications of inspection personnel, the date of the inspection, and major observations relating to the implementation of the SW3P shall be provided for each inspection. Major observations shall include, at minimum: location of discharges of sediment or other pollutants from the site, locations of BMPs that need to undergo maintenance, locations of BMPs that have failed or have provided inadequate, and locations where BMPs are needed.
- Should the inspection reveal any inadequacies, the site description and the pollution prevention measures identified in the plan must be revised as soon as possible. The inspection and plan review process must provide for implementation of any changes to the plan within 7 calendar days of the inspection.
- Actions taken as a result of the inspections must be described within, and retained as part of, the SW3P. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SW3P and the TPDES general permit. The report must be signed by the authorized representative delegated by the operators in accordance with TAC 305.128.

This document was prepared by Costello Inc. on behalf of Toll Southwest LLC (Owner) in accordance with the requirements of the TCEQ Contributing Zone Plan.

Engineer Signature: John Bacallao **Date:** 9-11-2023

Owners Signature: _____ **Date:** 9/11/2023

TCEQ Contributing Zone Plan

Attachment O - Pilot Scale Field Testing Plan
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

No innovative or unrecognized BMPs are proposed in this plan.

Section not applicable to this project

TCEQ Contributing Zone Plan

Attachment P - Measures for Minimizing Surface Stream Contamination

Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

In order to minimize surface stream contamination on the Blanco River Tributary the following measures will be implemented.

1. **Silt Fence**- Installed upstream of the creek, along the edges of disturbance. Silt fence will be installed to intercept sediment before it can enter the stream while allowing water to slowly percolate through. This is a temporary measure that will be removed after the disturbed area is re-vegetated.
2. **Green Belt**- Existing trees and natural vegetation near the existing creek and tributary will be largely preserved for future park space and landscape buffers. These trees will be protected from construction activities, not only by a silt fence barrier (described previously), but also tree protection fencing to discourage disturbances under the dripline of these trees.
3. **Vegetative Filter Strips**- Along the borders of disturbed areas that run off into water ways on the project, Vegetative Filter Strips (VFS) will be planted and maintained to reduce sediments and contaminants from entering the surface water adjacent to the project site.
4. **Batch Detention / Sedimentation Basin**- Batch detention ponds for this project will be located between the development and the existing streams to intercept natural runoff from the site. Ponds will be rough cut and function as sedimentation ponds in the interim conditions during the construction phase and will be fitted with temporary dewatering skimmers prior to completion of the batch detention elements. The temporary dewatering skimmers will be removed when the batch detention comes online.

Section III

Temporary Stormwater Section (TCEQ-0602)

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.

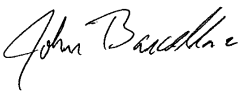
Signature

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: John Barcellona

Date: 8-25-23

Signature of Customer/Agent:



Regulated Entity Name: Clara Vista, Phase 1 & 6 Creeks Boulevard Phase 2

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: Diesel, Gasoline

   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: Blanco 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.

TCEQ Temporary Stormwater Section

Attachment A - Spill Response Actions
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

The following measures will be taken to contain any spill of hydrocarbons on the site:

1. **Emergency Measures**- As an immediate precautionary measure, isolate spill or leak area for at least 150 feet in all directions. Consider wind direction. Secure all ignition sources (flame, spark, hot work, hot metal, etc.) from area. Evaluate the direction of product travel to confirm spill areas. Do not touch or walk-through spilled material.
2. **Personal Precautions-** Due to high vapor density, flammable / toxic vapors may be present in low lying areas, dikes, pits, drains, or trenches. Vapors may accumulate in low lying areas and reach ignitable concentrations. Use of non-sparking tools and intrinsically safe equipment is recommended. Potential for flammable atmosphere should be monitored using a combustible gas indicator positioned downwind of the spill area. Use appropriate personal protective equipment to prevent eye/skin contact and absorption. Use NIOSH approved respiratory protection, if warranted, to prevent exposures above permissible limits. Contaminated clothing should not be near sources of ignition.
3. **Environmental Precautions**- Stop the spill to prevent environmental release if it can be done safely. Product is toxic to aquatic life. Take action to isolate environmental receptors including drains, storm sewers and natural water bodies. Keep on impervious surface if at all possible. Use water sparingly to prevent product from spreading. Foam and absorbents may be used to reduce / prevent airborne release. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact. Follow federal, state or local requirements for reporting environmental release where necessary.
4. **Containment & Clean-Up**- Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking absorbents, or absorbent boom, if possible. Take up with dry earth, sand or other non-combustible, inert oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container with clean, non-sparking tools for reclamation or disposal. Response and cleanup crews must be properly trained and must utilize proper protective equipment.

Reporting Requirements for Significant/Hazardous Spills:

1. Notify the TCEQ by telephone as soon as possible and within 24 hours at 512-339-2929 (Austin) or 210-490-3096 (San Antonio) between 8AM and 5PM. After hours, contact the Environmental Release Hotline at 1-800-832-8224. It is the contractor's responsibility to have all emergency phone numbers at the construction site. Additionally, in the event of a hazardous material spill, local Travis County and/or Austin police, fire, and potentially EMS personnel should be contacted in order to handle the event and form a response team.
2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 119, and 302, the contractor should notify the National Response Center at (800)-424-8802.
3. Notification should first be made by telephone and followed up with a written report. One copy of the report is to be kept onsite in the report binder and one copy provided to the TCEQ.

4. The services of a spills contractor or a hazmat team should be obtained immediately. Construction personnel should not attempt the cleanup until directed by the appropriate and qualified staff.

More information on the rules and appropriate responses to spills is available on the TCEQ website at http://www.tceq.state.tx.us/response/spills.html.

TCEQ Temporary Stormwater Section

Attachment B - Potential Sources of Contamination
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

No particular activity or process during the facility's construction is anticipated to present a significant risk for contamination or pollution. However, regular construction operations do create situations where contamination may occur. The contractor shall manage the following activities and prevent the resultant possible contamination using the guidelines set forth in Attachment D – Temporary Best Management Practices and Measures:

Potential sources of sediment to stormwater runoff:

- Grading and excavation
- Vehicle tracking
- Topsoil stripping and stockpiling
- Landscaping

Potential pollutant sources to stormwater runoff:

- Combined Staging Area – small fueling, minor equipment maintenance, sanitary facility
- Materials Storage Area – solvents, adhesives, paving materials, aggregates, trash
- Construction Activity Areas – paving, concrete pouring
- Concrete washout area

Potential onsite pollutants:

- Fertilizer
- Concrete
- Glue, Adhesives
- Gasoline, diesel fuel, hydraulic fluids, antifreeze
- Sanitary facilities

TCEQ Temporary Stormwater Section

Attachment C - Sequence of Major Activities
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

The sequence of activities for the Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2 Water, Sewer, Drainage and Paving improvements will be as follows:

1. **Perimeter SWPPP Controls & Tree Protection** - Prior to commencement of primary construction activities temporary erosion and sedimentation controls shall be installed as indicated on the approved plans and in accordance with the stormwater pollution prevention plan. Tree protection fencing shall also be installed prior to mobilization. Estimated Impact = 1.00 acre. SWPPP Controls will be revised as needed to comply with city inspector's directives and revisions as needed during the construction process.
2. **Additional Clearing for 6 Creeks Boulevard** – Additional clearing will be required for the completion of 6 creeks boulevard. As such, clearing operations will begin as soon as SWPPP controls are in place. Estimated Impact = 10.29 acres. Impacts from this activity are to be minimized by existing SWPPP Controls listed above.
3. **Detention Excavation** – Mass grading operations will begin with rough cutting the ponds. In the interim conditions these ponds will function as sedimentation basins and will include dewatering skimmers for the treatment of stormwater runoff. Estimated Impact = 7.41 acres. This installation will minimize the impacts of later phases of construction. Final Grading will be considered to be part of final utility and paving improvements.
4. **Mass Grading Operations -** Upon completion of the detention ponds, grading operations will expand to the rest of the site. Re-grading is required to meet ADA grading requirements and fall within the allowable pavement slopes. Estimated Impact = 79.20 acres. Impacts from this activity are to be minimized by existing SWPPP Controls listed above.
5. **Underground Utility Improvements –** Installation of water, sewer and drainage improvements will follow mass grading operations. Estimated Impact = 13.23 acres. Impacts from this activity are to be minimized by existing SWPPP Controls listed above.
6. **Paving Improvements -** Installation of paving improvements will follow mass grading operations. Estimated Impact = 15.66 acres. Impacts from this activity are to be minimized by existing SWPPP Controls listed above.
7. **Turf Establishment & Revegetation**- All disturbed areas shall be re-seeded within 14 days of the end of construction activity. Construction activity shall not be considered complete until re-vegetation is complete. Estimated Impact = 79.20 Acres. No additional controls are proposed for this phase, and all temporary SWPPP Controls are to be removed after re-vegetation is complete.
8. **Final Inspection** - Upon completion of the construction and site revegetation, the design engineer shall submit an engineer's letter of concurrence to the city of Kyle indicating that the construction, including revegetation, is complete and in substantial conformity with the approved plans. After receiving this letter, a final inspection will be scheduled by the appropriate city inspector.

Please see table on next page for summary of impacts and duration.

Activity	Approximate Acreage	Temporary BMPs Proposed	Estimated Duration
Perimeter SWPPP Controls	1.00	Silt Fence, Tree Protection, Vegetative filter strips	1 week
Additional Clearing	10.29	Silt Fence, Vegetative filter strips	4 weeks
Rough Detention Excavation	7.41	Sedimentation Basin	8 weeks
Mass Grading Operations	79.20	Silt Fence, Vegetative filter strips	8 weeks
Underground Utility Improvements	13.23	Silt Fence	8 weeks
Paving Improvements	15.66	Silt Fence	8 weeks

TCEQ Temporary Stormwater Section

Attachment D - Temporary Best Management Practices
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2 will utilize the following TBMP's (Temporary Best Management Practices):

1. **Tree Protection/Vegetative Buffers**- Several areas near the creek have been preserved as a buffer zone and will have tree protection installed prior to construction. By preserving these trees and the natural vegetation beneath them, we are minimizing the amount of disturbed area which could generate sediment during rain events. Preservation of these areas adjacent to the creek also helps prevent erosion by maintaining a healthy root structure and vegetative cover over the existing high bank, reducing stormwater runoff rates and minimizing the potential for erosion.
2. **Stabilized Construction Exit-** A temporary gravel construction entrance will be provided to minimize or eliminate the tracking of sediment onto adjacent public rights of way.
3. **Silt Fence-** Installed along the downstream borders of the site, below all proposed construction activity. Silt fence will be installed to intercept sediment while allowing water to slowly percolate through. This is a temporary measure that will be removed after the disturbed area is re-vegetated.
4. **Sedimentation Basins** – The sedimentation basins for this project will function for the purposes of sedimentation control and water quality. Ponds shall utilize of low flow pipe and a dewatering skimmer to slow the flow of stormwater runoff and settle out particulates before discharge. These ponds will be utilized as sedimentation basins in the interim condition for the removal of suspended solids before being converted to batch detention basins. Sizing and TSS removal calculations are included elsewhere.
5. **Inlet Protection** – Inlet protection shall be installed immediately following completion of drainage inlets, and temporary protection shall be installed around any exposed opening left unfinished during construction.
6. **Turf Establishment/Broadcast Seeding –** All disturbed areas shall be re-seeded after construction to reduce erosion and runoff from the soil.

Each of these controls is to be installed and maintained as outlined in the TCEQ's Edwards Aquifer Technical Guidance Manual.

TCEQ Temporary Stormwater Section

Attachment E - Request to Temporarily Seal a Feature
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

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

Section not applicable to this project

TCEQ Temporary Stormwater Section

Attachment F - Structural Practices
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2 will utilize the following Structural Practices to reduce pollutant runoff:

1. **Sedimentation Basin** – Development Runoff within the site will be diverted to the interim sedimentation basins for treatment. Ponds shall utilize a low flow pipe and a dewatering skimmer to slow the flow of stormwater runoff and settle out particulates before discharge. These basins will be converted to batch detention at final completion but will function as sedimentation basins during most of the construction phase. Sizing calculations are included in Attachment H.
2. **Vegetative Filter Strips** – Areas near the creek have been preserved as a buffer zone and will have tree protection installed prior to construction. By preserving these trees and the natural vegetation beneath them, we are minimizing the amount of disturbed area which could generate sediment during rain events. Preservation of these areas adjacent to the creek also helps prevent erosion by maintaining a healthy root structure and vegetative cover over the existing high bank, reducing stormwater runoff rates and minimizing the potential for erosion.

TCEQ Temporary Stormwater Section

Attachment G- Drainage Area Map
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

Please see the attached drainage area maps for Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2.

BT4-010
112.37-ac

BT4-020
9.53-ac

BT4-030
175.28-ac

BT4-040
79.83-ac

BT4-050
299.1-ac

BT4B-010
17.4-ac

BT4-060
18.36-ac

BT4A-010
172.41-ac

BT4B-020
23.96-ac

BT4B-030
16.18-ac

BT4-070
76.73-ac

BT4-080
19.31-ac

BT4-090
64.06-ac

BT4-100
126.8-ac

LowerBlancoRiverTrib6

LowerBlancoRiverTrib6A

LowerBlancoRiverTrib5

LowerBlancoRiverTrib4E

LowerBlancoRiverTrib4D

LowerBlancoRiverTrib4C

LowerBlancoRiverTrib4B

LowerBlancoRiverTrib4

LowerBlancoRiverTrib3

LowerBlancoRiverTrib3A

LowerBlancoRiverTrib4A

Legend

- Natural Site Outfall Locations
- Water Ridge Site
- Creeks

2017 LiDAR

Elevation

High : 893.526

Low : 655.938

N

0 400

Feet

1 in = 400 ft

Costello

Costello, Inc.
Engineering and Surveying
TBPE Firm Registration No. 280

WATERRIDGE TRACT

TOPOGRAPHY AND WATERSHEDS

JOB NO.: 2021223-MDP-00	DATE: JUL 2022	BY: MAK

EXHIBIT 2

Date Saved: 7/25/2022 8:42:52 PM Y:\05_LAND_DEV\02_Projects\Toll Brothers\WaterRidge\11_Drainage\GIS\Exhibits\EX 2 - WaterRidge_Topography.mxd

TCEQ Temporary Stormwater Section

Attachment H - Temporary Sediment Ponds Plans and Calculations
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1

The attached calculations detail sediment removal for the Clara Vista Phase 1, Per the TCEQ Technical Guidance Manual (TGM). The permanent BMPs, batch detention ponds will be rough cut prior to commencement of major construction activities as part of the City of Austin's standard sequence of construction. The rough-cut ponds will receive drainage which is primarily pre-treated with the proposed inlet protections and silt fencing. Dewatering skimmers are proposed to remove water from the rough-cut pond during construction. Pond volume calculations and dewatering skimmer details per CoA typical requirements.

Please find the Attached Calculations for Sediment Removal.

Clara Vista - TSS Removal Calculations (Phase 1 Condition)

Loading Calculations		
Site Area:	201.38	ac
Total Proposed IC:	30.12	ac
Load Removal Required (L_M):	27,034	lbs/yr
Load Removal Provided (L_P):	27,056	lbs/yr
Load Removal Remaining:	-21	lbs/yr

BMP Calculations	Inputs						Outputs		
	Total On-Site DA to BMP (ac)	Pre-development On-Site IC to BMP (ac)	Post-development On-Site IC to BMP (ac)	Off-Site DA to BMP (ac)	Off-Site IC to BMP (ac)	L_M (lbs/yr)	L_R (lbs/yr)	F	Volume (cf)
Pond G	25.70	0.00	10.14	0.00	0.00	9,950	10,790	0.92	68,129
Pond H	5.54	0.00	1.79	0.00	0.00	1,749	1,922	0.91	11,722
Pond I	24.36	0.00	11.26	1.14	0.00	10,844	11,917	0.91	64,665
Pond J	12.26	0.00	3.76	0.00	0.00	3,750	4,040	0.93	30,704
Pond K	0.38	0.00	0.34	0.07	0.00	326	358	0.91	2,214
VFS-F	1.17	0.00	0.44	0.00	0.00	436	436	1.00	N/A

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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

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

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

where:

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

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

County =	Hays	
Total project area included in plan * =	201.38	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	30.12	acres
Total post-development impervious cover fraction * =	0.15	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	27034	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 12

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**G**	
Total drainage basin/outfall area =	**25.70**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**10.14**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.39**	
$L_{M\ THIS\ BASIN}$ =	**9,103**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**Batch Detention**	
Removal efficiency =	**91**	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**25.70**	acres
A_I =	**10.14**	acres
A_P =	**15.56**	acres
L_R =	**10,790**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**9,950**	lbs.
F =	**0.92**	

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

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

Rainfall Depth =	**2.00**	inches
Post Development Runoff Coefficient =	**0.30**	
On-site Water Quality Volume =	**56,774**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**11,355**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**68,129**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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

Drainage Basin/Outfall Area No. =	**H**	
Total drainage basin/outfall area =	**5.54**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**1.79**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.32**	
$L_{M\ THIS\ BASIN}$ =	**1,608**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**Batch Detention**	
Removal efficiency =	**91**	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**5.54**	acres
A_I =	**1.79**	acres
A_P =	**3.75**	acres
L_R =	**1,922**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**1,749**	lbs.
F =	**0.91**	

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

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

Rainfall Depth =	**1.80**	inches
Post Development Runoff Coefficient =	**0.27**	
On-site Water Quality Volume =	**9,769**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**1,954**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**11,722**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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

Drainage Basin/Outfall Area No. =	**I**	
Total drainage basin/outfall area =	**24.36**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**11.26**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.46**	
$L_{M\ THIS\ BASIN}$ =	**10,111**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**Batch Detention**	
Removal efficiency =	**91**	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**24.36**	acres
A_I =	**11.26**	acres
A_P =	**13.10**	acres
L_R =	**11,917**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**10,844**	lbs.
F =	**0.91**	

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

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

Rainfall Depth =	**1.80**	inches
Post Development Runoff Coefficient =	**0.34**	
On-site Water Quality Volume =	**53,738**	cubic feet

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

Off-site area draining to BMP =	**1.14**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0.00**	
Off-site Runoff Coefficient =	**0.02**	
Off-site Water Quality Volume =	**149**	cubic feet
Storage for Sediment =	**10,777**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**64,665**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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

Drainage Basin/Outfall Area No. =	**J**	
Total drainage basin/outfall area =	**12.26**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**3.76**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.31**	
$L_{M\ THIS\ BASIN}$ =	**3,371**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**Batch Detention**	
Removal efficiency =	**91**	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**12.26**	acres
A_I =	**3.76**	acres
A_P =	**8.50**	acres
L_R =	**4,040**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**3,750**	lbs.
F =	**0.93**	

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

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

Rainfall Depth =	**2.20**	inches
Post Development Runoff Coefficient =	**0.26**	
On-site Water Quality Volume =	**25,586**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**5,117**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**30,704**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

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Date Prepared: **8/23/2023**

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Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**J**	
Total drainage basin/outfall area =	**0.38**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.34**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.90**	
$L_{M\ THIS\ BASIN}$ =	**309**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**Batch Detention**	
Removal efficiency =	**91**	percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**0.38**	acres
A_I =	**0.34**	acres
A_P =	**0.04**	acres
L_R =	**358**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**326**	lbs.
F =	**0.91**	

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

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

Rainfall Depth =	**1.80**	inches
Post Development Runoff Coefficient =	**0.74**	
On-site Water Quality Volume =	**1,836**	cubic feet

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

Off-site area draining to BMP =	**0.07**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0.00**	
Off-site Runoff Coefficient =	**0.02**	
Off-site Water Quality Volume =	**10**	cubic feet
Storage for Sediment =	**369**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**2,214**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Clara Vista - Phase 1 Condition**
Date Prepared: **8/23/2023**

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

Drainage Basin/Outfall Area No. =	**BP-F**	
Total drainage basin/outfall area =	**1.17**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.44**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.37**	
$L_{M\ THIS\ BASIN}$ =	**393**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Vegetated Filter Strips**
Removal efficiency = **85** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**1.17**	acres
A_I =	**0.44**	acres
A_P =	**0.73**	acres
L_R =	**436**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**436**	lbs.
F =	**1.00**	

Water Ridge Tract - TSS Removal Calculations (Six Creeks Blvd. Proposed Condition)

Loading Calculations		
Site Area:	201.38	ac
Total Proposed IC:	5.08	ac
Load Removal Required (L_M):	4,425	lbs/yr
Load Removal Provided (L_P):	4,825	lbs/yr
Load Removal Remaining:	-400	lbs/yr

BMP Calculations	Inputs						Outputs		
	Total On-Site DA to BMP (ac)	Pre-development On-Site IC to BMP (ac)	Post-development On-Site IC to BMP (ac)	Off-Site DA to BMP (ac)	Off-Site IC to BMP (ac)	L_M (lbs/yr)	L_R (lbs/yr)	F	Volume (cf)
Pond H	3.28	0.00	0.00	0.00	0.00	45	52	0.87	411
Pond I	29.64	0.00	4.72	1.14	0.00	4,478	5,147	0.87	32,279
Pond K	0.38	0.00	0.34	0.07	0.00	302	347	0.87	1,772

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Six Creeks Blvd. Phase 2
Date Prepared: 8/23/2023

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

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

where:

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

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

County =	Williamson	
Total project area included in plan * =	201.38	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	5.08	acres
Total post-development impervious cover fraction * =	0.03	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	4425	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 3

STATE OF TEXAS
MICHAEL A. KENNEY
131885
LICENSED
PROFESSIONAL ENGINEER

Michael A. Kenney

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Six Creeks Blvd. Phase 2
Date Prepared: 8/23/2023

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Characters shown in red are data entry fields.
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2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	**H**	
Total drainage basin/outfall area =	**3.28**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.00**	
$L_{M\ THIS\ BASIN}$ =	**0**	lbs.

Pond H

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**
Removal efficiency = **91** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**3.28**	acres
A_I =	**0.00**	acres
A_P =	**3.28**	acres
L_R =	**52**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**45**	lbs.
F =	**0.87**	

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

Rainfall Depth =	**1.44**	inches
Post Development Runoff Coefficient =	**0.02**	
On-site Water Quality Volume =	**343**	cubic feet

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

Off-site area draining to BMP =	**0.00**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0**	
Off-site Runoff Coefficient =	**0.00**	
Off-site Water Quality Volume =	**0**	cubic feet
Storage for Sediment =	**69**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**411**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Six Creeks Blvd. Phase 2
Date Prepared: 8/23/2023

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Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will remove the equations used in the spreadsheet.

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

Drainage Basin/Outfall Area No. =	**I**	
Total drainage basin/outfall area =	**29.64**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**4.72**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.16**	
$L_{M\ THIS\ BASIN}$ =	**4,108**	lbs.

Pond I

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**
Removal efficiency = **91** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**29.64**	acres
A_I =	**4.72**	acres
A_P =	**24.92**	acres
L_R =	**5,147**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = **4,478** lbs.

F = **0.87**

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

Rainfall Depth =	**1.44**	inches
Post Development Runoff Coefficient =	**0.17**	
On-site Water Quality Volume =	**26,780**	cubic feet

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

Off-site area draining to BMP =	**1.14**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0.00**	
Off-site Runoff Coefficient =	**0.02**	
Off-site Water Quality Volume =	**119**	cubic feet
Storage for Sediment =	**5,380**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**32,279**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Six Creeks Blvd. Phase 2
Date Prepared: 8/23/2023

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
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2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. =	**K**	
Total drainage basin/outfall area =	**0.38**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.34**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.90**	
$L_{M\ THIS\ BASIN}$ =	**299**	lbs.

Pond K

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = **Batch Detention**
Removal efficiency = **91** percent

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

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

where:

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

A_C =	**0.38**	acres
A_I =	**0.34**	acres
A_P =	**0.04**	acres
L_R =	**347**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**302**	lbs.
F =	**0.87**	

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

Rainfall Depth =	**1.44**	inches
Post Development Runoff Coefficient =	**0.74**	
On-site Water Quality Volume =	**1,468**	cubic feet

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

Off-site area draining to BMP =	**0.07**	acres
Off-site Impervious cover draining to BMP =	**0.00**	acres
Impervious fraction of off-site area =	**0.00**	
Off-site Runoff Coefficient =	**0.02**	
Off-site Water Quality Volume =	**8**	cubic feet
Storage for Sediment =	**295**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**1,772**	cubic feet

TCEQ Temporary Stormwater Section

Attachment I - Inspection and Maintenance for BMP's
Water, Sewer, Drainage and Paving to Serve
Clara Vista Phase 1 &
6 Creeks Boulevard Phase 2

Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2 utilizes a variety of BMP controls which require periodic inspection and maintenance to perform as designed. In general, all temporary erosion control features should be inspected weekly and after each rainfall. A site visit report should be created for each inspection noting all items of maintenance, repair or replacement required during each visit. Please see below for additional information on each control.

1. **Tree Protection/Vegetative Buffers**- Damaged fencing shall be replaced as needed and parking under preserved trees is to be discouraged. The need for routine maintenance such as mowing, fertilizing, irrigating and weed and pest control will depend on the species of plants and trees, soil types, location and climatic conditions.
2. **Stabilized Construction Exit-** To maintain the entrance in good working condition, occasional top dressing with additional stone may be required, and any silt or debris found in the adjacent ROW should be removed. The contractor shall keep the adjacent street clean at all times.
3. **Silt Fence-** Sediment depth in excess of 6 inches shall be removed and any ripped or torn material is to be replaced. After construction is complete, and the construction area has been re-vegetated, the silt fence shall be removed.
4. **Inlet Protection Barrier –** Sediment shall be removed when buildup reaches a depth of 3 inches, and fabric shall be inspected for tears.
5. **Sedimentation Basins –** At each inspection, the embankment, spillways and outlet should be checked for erosion damage. Trash and debris should be removed from the structure to prevent clogging, and accumulated silt should be removed after the capacity of the basin has been reduced by 25%. The basin should be routinely checked for settlement or signs of piping.
6. **Turf Establishment/Broadcast Seeding –** Seeding locations should be inspected weekly and after each rain event to locate and repair any erosion. Any areas requiring repair, or areas with less than 80% cover should repaired and re-seeded. Watering may be required for seed to start during dry weather.

The inspection and maintenance of temporary BMPs will be made according to TCEQ RG-348, Complying with the Edwards Aquifer Rules Technical Guidance on Best Management Practices, Revised July 2005.

Inspection Personnel:
Inspections shall be conducted by qualified representatives of the contractor acting on behalf of the owner or a designated party if hired separately by the owner. Each operator must delegate authority to the specifically described position or person performing inspections, as provided by 30 TAC 305.128, as an authorized person for signing reports and performing certain activities requested by the director or required by the TPDES general permit. This delegation of authority must be provided to the director of TCEQ in writing and a copy shall be kept along with the signed effective copy of the SW3P.

Inspection Schedule and Procedures:
Inspections must comply with the following:

- An inspection shall occur weekly and after any rain event.
- The authorized party shall inspect all disturbed areas of the site, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site.
- Disturbed areas and areas used for storage of materials that are exposed to precipitation or within limits of the 1% annual chance (100 year) floodplain must be inspected for evidence of, or the potential for, pollutants entering runoff from the site. Erosion and sediment control measures identified in the plan must be observed to ensure that they are operating correctly. Observations can be made during wet or dry weather conditions. Where discharge locations or points are accessible, they must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. This can be done by inspecting receiving waters to see whether any signs or erosion or sediment are associated with the discharge location. Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.
- Should the inspection reveal any inadequacies, the site description and the pollution prevention measures identified in the plan must be revised as soon as possible. The inspection and plan review process must provide for implementation of any changes to the plan within 7 calendar days of the inspection.
- An inspection report that summarizes the scope of the inspection, name(s) and qualifications of inspection personnel, the date of the inspection, and major observations relating to the implementation of the SW3P. Major observations shall include, at minimum: location of discharges of sediment or other pollutants from the site, locations of BMPs that need to undergo maintenance, locations of BMPs that have failed or have provided inadequate, and locations where BMPs are needed.
- Actions taken as a result of the inspections must be described within, and retained as part of, the SW3P. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SW3P and the TPDES general permit. The report must be signed by the authorized representative delegated by the operators in accordance with TAC 305.128.

Maintenance and Corrective Actions:
Maintenance of erosion control facilities shall consist of the following minimum requirements:

- In ongoing construction areas, inspect erosion control improvements to confirm facilities are in place and operable. Where facilities have been temporarily set aside or damaged due to construction activity, place facilities in service before leaving the job site.
- If the weather forecast predicts the possibility of rain, check all facilities throughout the site to ensure they are in place and operable. If job site weather conditions indicate high probability of rain, make special inspection of erosion control facilities.
- After rainfall events review erosion control facilities as soon as the site is accessible. Clean rock berms, berm/swales, and other structural facilities. Determine where additional facilities or alternative techniques are needed to control sediment leaving the site.
- After portions of the site have been seeded, review these areas on a regular basis (in accordance with project specifications) to ensure proper watering until grass is established. Re-seed areas where grass is not well established.
- Spills are to be handled as specified by the product manufacturer in a safe and timely manner by construction personnel. The site superintendent will be responsible for coordinating spill prevention and cleanup operations. See also Attachment A-Spill Response Actions.
- Concrete trucks will discharge extra concrete or wash out their drums only at an approved location on site. Residual product shall be properly disposed of.

- Inspect vehicle entrances and exits for evidence of off-site tracking and correct as needed.
- Remove sediment from traps/ponds as soon as the sediment load has been reduced to 50% of the design capacity.
- The contractor, where feasible and where access is available, shall collect and remove sedimentation material that escapes the site, using appropriate non-damaging methods. The contractor shall also correct the condition that allowed the sediment to escape.
- If inspections or other information sources reveal a control has been used incorrectly, or that a control is performing inadequately, the contractor must replace, correct, or modify the control as soon as is practical after discovery of the deficiency.

TCEQ Temporary Stormwater Section

Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

Water, Sewer, Drainage and Paving to Serve Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2

Clara Vista Phase 1 & 6 Creeks Boulevard shall establish Interim and Permanent Soil Stabilization in the following order:

1. **Tree Protection/Vegetative Buffers: Day 1** - Protected greenspace is to be identified and preserved prior to mobilization of heavy equipment.
2. **Turf Establishment for Siltation Ponds: Day 14** – Siltation ponds shall be constructed and seeded as soon as practical in order to minimize runoff from the site.
3. **Inlet Protection Barriers: Day 45-80** – IPB's shall be installed immediately following construction of drainage structures to prevent the transport of sediment to the ponds through the newly constructed drainage system.
4. **Final Turf Establishment: Day 30-120 -** Final seeding may occur as soon as an area has been fully graded and is no longer actively being worked by construction equipment. Seeding shall occur no later than 14 days after construction activities have ceased.

Temporary erosion and sedimentation control structures shall be maintained at all times during construction, and shall be inspected on a weekly basis and after rain events.

After the entire site is stabilized, any sediment that has accumulated will be removed and hauled off-site for disposal. Construction debris, trash, sanitary toilets, material storage, and temporary BMPs including silt fences will also be removed and any areas disturbed during the removal process will be seeded or re-seeded immediately.

See also Attachment C for sequence of major activities.

Section IV

Copy of Notice of Intent (NOI)

TCEQ Office Use Only
Permit No:
CN:
RN:

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

IMPORTANT INFORMATION

Please read and use the General Information and Instructions prior to filling out each question in the NOI form.

Use the NOI Checklist to ensure all required information is completed correctly. **Incomplete applications delay approval or result in automatic denial.**

Once processed your permit authorization can be viewed by entering the following link into your internet browser: http://www2.tceq.texas.gov/wq_dpa/index.cfm or you can contact TCEQ Stormwater Processing Center at 512-239-3700.

ePERMITS

Effective September 1, 2018, this paper form must be submitted to TCEQ with a completed electronic reporting waiver form (TCEQ-20754).

To submit an NOI electronically, enter the following web address into your internet browser and follow the instructions: https://www3.tceq.texas.gov/steers/index.cfm

APPLICATION FEE AND PAYMENT

The application fee for submitting a paper NOI is $325. The application fee for electronic submittal of a NOI through the TCEQ ePermits system (STEERS) is $225.

Payment of the application fee can be submitted by mail or through the TCEQ ePay system. The payment and the NOI must be mailed to separate addresses. To access the TCEQ ePay system enter the following web address into your internet browser: http://www.tceq.texas.gov/epay.

Provide your payment information for verification of payment:

- If payment was mailed to TCEQ, provide the following:
  - Check/Money Order Number: N/A
  - Name printed on Check: N/A
- If payment was made via ePay, provide the following:
  - ☑ Voucher Number: TBD*
  - A copy of the payment voucher is attached to this paper NOI form.

*Account created in STEERS as a placeholder for NOI.

RENEWAL (This portion of the NOI is not applicable after June 3, 2018)

Is this NOI for a renewal of an existing authorization? ☐ Yes ☑ No

If Yes, provide the authorization number here: TXR15 N/A

NOTE: If an authorization number is not provided, a new number will be assigned.

SECTION 1. OPERATOR (APPLICANT)

a) If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? CN 602840076

(Refer to Section 1.a) of the Instructions)

b) What is the Legal Name of the entity (applicant) applying for this permit? (The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal document forming the entity.)

Toll Southwest LLC dba Toll Brothers Inc

c) What is the contact information for the Operator (Responsible Authority)?

Prefix (Mr. Ms. Miss): Ms.

First and Last Name: Adrienne Donatucci Suffix:

Title: Land Development Manager Credentials:

Phone Number: 412-780-2312 Fax Number: 512-528-5036

E-mail: adonatucci@tollbrothers.com

Mailing Address: 1320 Arrow Point Drive, Ste 401

City, State, and Zip Code: Cedar Park, TX 78613

Mailing Information if outside USA:

Territory: N/A

Country Code: N/A Postal Code: N/A

d) Indicate the type of customer:

☐ Individual	☐ Federal Government
☐ Limited Partnership	☐ County Government
☐ General Partnership	☐ State Government
☐ Trust	☐ City Government
☐ Sole Proprietorship (D.B.A.)	☐ Other Government
☑ Corporation	☐ Other:
☐ Estate	

e) Is the applicant an independent operator? ☐ Yes ☑ No

(If a governmental entity, a subsidiary, or part of a larger corporation, check No.)

f) Number of Employees. Select the range applicable to your company.

☐ 0-20 ☐ 251-500

☐ 21-100 ☑ 501 or higher

☐ 101-250

g) Customer Business Tax and Filing Numbers: (**Required** for Corporations and Limited Partnerships. **Not Required** for Individuals, Government, or Sole Proprietors.)

State Franchise Tax ID Number: 32050842304

Federal Tax ID: 47-2582910

Texas Secretary of State Charter (filing) Number: 0801775669

DUNS Number (if known): ---

SECTION 2. APPLICATION CONTACT

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

☐ Yes, go to Section 3

☑ No, complete this section

Prefix (Mr. Ms. Miss): Mr.

First and Last Name: John Barcellona Suffix:

Title: Project Manager Credential: P.E.

Organization Name: Costello Inc

Phone Number: 512-646-3463 Fax Number: N/A

E-mail: jbarcellona@costelloinc.com

Mailing Address: 9050 N. Capital of Texas Hwy, Bldg. 3, Ste 390

Internal Routing (Mail Code, Etc.): N/A

City, State, and Zip Code: Austin, TX 78759

Mailing information if outside USA:

Territory: N/A

Country Code: N/A Postal Code: N/A

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

a) If this is an existing permitted site, what is the Regulated Entity Number (RN) issued to this site? RN N/A

(Refer to Section 3.a) of the Instructions)

b) Name of project or site (the name known by the community where it's located):
Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2

c) In your own words, briefly describe the type of construction occurring at the regulated site (residential, industrial, commercial, or other): Water, Sewer, Drainage and Paving for future residential subdivision. Includes +-900' of Clearing for 6 Creeks Boulevard.

d) County or Counties (if located in more than one): Hays

e) Latitude: 30° 0' 28.98" Longitude: 97° 54' 44.64"

f) Site Address/Location

If the site has a physical address such as 12100 Park 35 Circle, Austin, TX 78753, complete *Section A*.

If the site does not have a physical address, provide a location description in *Section B*. Example: located on the north side of FM 123, 2 miles west of the intersection of FM 123 and Highway 1.

Section A:

Street Number and Name: N/A

City, State, and Zip Code: N/A

Section B:

Location Description: 0.33 miles west of Intersection of South Six Creeks Blvd & Jackson River Lp., Kyle Texas

City (or city nearest to) where the site is located: Kyle

Zip Code where the site is located: 78640

SECTION 4. GENERAL CHARACTERISTICS

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

☐ Yes, do not submit this form. You must obtain authorization through EPA Region 6.

☑ No

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

☐ Yes. Note: The construction stormwater runoff may be under jurisdiction of the Railroad Commission of Texas and may need to obtain authorization through EPA Region 6.

☑ No

c) What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site? 1629 - Heavy Construction

d) What is the Secondary SIC Code(s), if applicable? 1794 - Excavation Work

e) What is the total number of acres to be disturbed? 79.20 Acres

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

☑ Yes

☐ No. The total number of acres disturbed, provided in e) above, must be 5 or more. If the total number of acres disturbed is less than 5, do not submit this form. See the requirements in the general permit for small construction sites.

g) What is the estimated start date of the project? November 2023

h) What is the estimated end date of the project? April 2024

i) Will concrete truck washout be performed at the site? ☐ Yes ☑ No

j) What is the name of the first water body(ies) to receive the stormwater runoff or potential runoff from the site? Blanco River

k) What is the segment number(s) of the classified water body(ies) that the discharge will eventually reach? 1813

l) Is the discharge into a Municipal Separate Storm Sewer System (MS4)?

☐ Yes ☑ No

If Yes, provide the name of the MS4 operator: N/A

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

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

☑ Yes, complete the certification below.

☐ No, go to Section 5

I certify that the copy of the TCEQ-approved Plan required by the Edwards Aquifer Rule (30 TAC Chapter 213) that is included or referenced in the Stormwater Pollution Prevention Plan will be implemented. ☑ Yes

SECTION 5. NOI CERTIFICATION

a) I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000). ☑ Yes

b) I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas. ☑ Yes

c) I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed. ☑ Yes

d) I certify that a Stormwater Pollution Prevention Plan has been developed, will be implemented prior to construction and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the Construction General Permit (TXR150000). ☑ Yes

Note: For multiple operators who prepare a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3, provided all obligations are confirmed by at least one operator.

SECTION 6. APPLICANT CERTIFICATION SIGNATURE

Operator Signatory Name: John Barcellona

Operator Signatory Title: Project Manager

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

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

Signature (use blue ink): John Barcellona Date: 8-28-23

NOTICE OF INTENT CHECKLIST (TXR150000)

Did you complete everything? Use this checklist to be sure!

Are you ready to mail your form to TCEQ? Go to the General Information Section of the Instructions for mailing addresses.

Confirm each item (or applicable item) in this form is complete. This checklist is for use by the applicant to ensure a complete application is being submitted. **Missing information may result in denial of coverage under the general permit.** (See NOI process description in the General Information and Instructions.)

APPLICATION FEE

If paying by check:

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

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

If using ePay:

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

RENEWAL

☐ If this application is for renewal of an existing authorization, the authorization number is provided.

OPERATOR INFORMATION

☑ Customer Number (CN) issued by TCEQ Central Registry

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

☑ Name and title of responsible authority signing the application.

☑ Phone number and e-mail address

☑ Mailing address is complete & verifiable with USPS. www.usps.com

☑ Type of operator (entity type). Is applicant an independent operator?

☑ Number of employees.

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

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

REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

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

☑ Site/project name and construction activity description

☑ County

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

☑ Site Address/Location. Do not use a rural route or post office box.

GENERAL CHARACTERISTICS

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

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

☑ Primary SIC Code that best describes the construction activity being conducted at the site. www.osha.gov/oshstats/sicser.html

☑ Estimated starting and ending dates of the project.

☑ Confirmation of concrete truck washout.

☑ Acres disturbed is provided and qualifies for coverage through a NOI.

☑ Common plan of development or sale.

☑ Receiving water body or water bodies.

☑ Segment number or numbers.

☑ MS4 operator.

☑ Edwards Aquifer rule.

CERTIFICATION

☑ Certification statements have been checked indicating Yes.

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

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

GENERAL INFORMATION

Where to Send the Notice of Intent (NOI):

By Regular Mail:
TCEQ
Stormwater Processing Center (MC228)
P.O. Box 13087
Austin, Texas 78711-3087

By Overnight or Express Mail:
TCEQ
Stormwater Processing Center (MC228)
12100 Park 35 Circle
Austin, TX

Application Fee:

The application fee of $325 is required to be paid at the time the NOI is submitted. Failure to submit payment at the time the application is filed will cause delays in acknowledgment or denial of coverage under the general permit. Payment of the fee may be made by check or money order, payable to TCEQ, or through EPAY (electronic payment through the web).

Mailed Payments:

Use the attached General Permit Payment Submittal Form. The application fee is submitted to a different address than the NOI. Read the General Permit Payment Submittal Form for further instructions, including the address to send the payment.

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

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

TCEQ Contact List:

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

Notice of Intent Process:

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

- **Administrative Review**: Each item on the form will be reviewed for a complete response. In addition, the operator's legal name must be verified with Texas Secretary of State as valid and active (if applicable). The address(es) on the form must be verified with the US Postal service as receiving regular mail delivery. Do not give an overnight/express mailing address.

- **Notice of Deficiency:** If an item is incomplete or not verifiable as indicated above, a notice of deficiency (NOD) will be mailed to the operator. The operator will have 30 days to respond to the NOD. The response will be reviewed for completeness.
- **Acknowledgment of Coverage:** An Acknowledgment Certificate will be mailed to the operator. This certificate acknowledges coverage under the general permit.

  or

  Denial of Coverage: If the operator fails to respond to the NOD or the response is inadequate, coverage under the general permit may be denied. If coverage is denied, the operator will be notified.

General Permit (Your Permit)

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

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

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

Change in Operator

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

TCEQ Central Registry Core Data Form

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

For existing customers and sites, you can find the Customer Number and Regulated Entity Number by entering the following web address into your internet browser: http://www15.tceq.texas.gov/crpub/ or you can contact the TCEQ Stormwater Processing Center at 512-239-3700 for assistance. On the website, you can search by your permit number, the Regulated Entity (RN) number, or the Customer Number (CN). If you do not know these numbers, you can select "Advanced Search" to search by permittee name, site address, etc.

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

INSTRUCTIONS FOR FILLING OUT THE NOI FORM

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

Section 1. OPERATOR (APPLICANT)

a) Customer Number (CN)

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

If the applicant is an existing TCEQ customer, the Customer Number is available at the following website: http://www15.tceq.texas.gov/crpub/. If the applicant is not an existing TCEQ customer, leave the space for CN blank.

b) Legal Name of Applicant

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

c) Contact Information for the Applicant (Responsible Authority)

Provide information for the person signing the application in the Certification section. This person is also referred to as the Responsible Authority.

Provide a complete mailing address for receiving mail from the TCEQ. The mailing address must be recognized by the US Postal Service. You may verify the address on the following website: https://tools.usps.com/go/ZipLookupAction!input.action.

The phone number should provide contact to the applicant.

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

d) Type of Customer (Entity Type)

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

Individual

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

Partnership

A customer that is established as a partnership as defined by the Texas Secretary of State Office (TX SOS). If the customer is a 'General Partnership' or 'Joint Venture' filed in the county (not filed with TX SOS), the legal name of each partner forming the 'General Partnership' or 'Joint Venture' must be provided. Each 'legal entity' must apply as a co-applicant.

Trust or Estate

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

Sole Proprietorship (DBA)

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

1. be under the person's name
2. have its own name (doing business as or DBA)
3. have any number of employees.

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

Corporation

A customer that meets all of these conditions:

1. is a legally incorporated entity under the laws of any state or country
2. is recognized as a corporation by the Texas Secretary of State
3. has proper operating authority to operate in Texas

The corporation's 'legal name' as filed with the Texas Secretary of State must be provided as applicant. An 'assumed' name of a corporation is not recognized as the 'legal name' of the entity.

Government

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

The customer is either an agency of one of these levels of government or the governmental body itself. The government agency's 'legal name' must be provided as the applicant. A department name or other description of the organization is not recognized as the 'legal name'.

Other

This may include a utility district, water district, tribal government, college district, council of governments, or river authority. Provide the specific type of government.

e) Independent Entity

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

f) Number of Employees

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

g) Customer Business Tax and Filing Numbers

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

State Franchise Tax ID Number

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

Federal Tax ID

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

TX SOS Charter (filing) Number

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

DUNS Number

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

Section 2. APPLICATION CONTACT

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

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

a) Regulated Entity Number (RN)

The RN is issued by TCEQ's Central Registry to sites where an activity is regulated by TCEQ. This is not a permit number, registration number, or license number. Search TCEQ's Central Registry to see if the site has an assigned RN at http://www15.tceq.texas.gov/crpub/. If this regulated entity has not been assigned an RN, leave this space blank.

If the site of your business is part of a larger business site, an RN may already be assigned for the larger site. Use the RN assigned for the larger site.

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

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

b) Name of the Project or Site

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

c) Description of Activity Regulated

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

d) County

Provide the name of the county where the site or project is located. If the site or project is located in more than one county, provide the county names as secondary.

e) Latitude and Longitude

Enter the latitude and longitude of the site in degrees, minutes, and seconds or decimal form. For help obtaining the latitude and longitude, go to: http://www.tceq.texas.gov/gis/sqmaview.html.

f) Site Address/Location

If a site has an address that includes a street number and street name, enter the complete address for the site in *Section A*. If the physical address is not recognized as a USPS delivery address, you may need to validate the address with your local police (911 service) or through an online map site used to locate a site. Please confirm this to be a complete and valid address. Do not use a rural route or post office box for a site location.

If a site does not have an address that includes a street number and street name, provide a complete written location description in *Section B*. For example: "The site is located on the north side of FM 123, 2 miles west of the intersection of FM 123 and Highway 1."

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

Section 4. GENERAL CHARACTERISTICS

a) Indian Country Lands

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

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

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

Construction activities associated with a facility related to oil, gas or geothermal resources may include the construction of a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a

carbon dioxide geologic storage facility; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel.

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

For more information about the jurisdictions of the RRC and the TCEQ, read the Memorandum of Understanding (MOU) between the RRC and TCEQ at 16 Texas Administrative Code, Part 1, Chapter 3, Rule 3.30, by entering the following link into an internet browser: http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=30 or contact the TCEQ Stormwater Team at 512-239-4671 for additional information.

c) Primary Standard Industrial Classification (SIC) Code

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

Common SIC Codes related to construction activities include:

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

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

For help with SIC Codes, enter the following link into your internet browser: http://www.osha.gov/pls/imis/sicsearch.html or you can contact the TCEQ Small Business and Local Government Assistance Section at 800-447-2827 for assistance.

d) Secondary SIC Code

Secondary SIC Code(s) may be provided. Leave this blank if not applicable. For help with SIC Codes, enter the following link into your internet browser: http://www.osha.gov/pls/imis/sicsearch.html or you can contact the TCEQ Small Business and Environmental Assistance Section at 800-447-2827 for assistance.

e) Total Number of Acres Disturbed

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

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

f) Common Plan of Development

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

For more information on what a common plan of development is, refer to the definition of "Common Plan of Development" in the Definitions section of the general permit or enter the following link into your internet browser: www.tceq.texas.gov/permitting/stormwater/common_plan_of_development_steps.html

For further information, go to the TCEQ stormwater construction webpage enter the following link into your internet browser: www.tceq.texas.gov/goto/construction and search for "Additional Guidance and Quick Links". If you have any further questions about the Common Plan of Development you can contact the TCEQ Stormwater Team at 512-239-4671 or the TCEQ Small Business and Environmental Assistance at 800-447-2827.

g) Estimated Start Date of the Project

This is the date that any construction activity or construction support activity is initiated at the site. If renewing the permit provide the original start date of when construction activity for this project began.

h) Estimated End Date of the Project

This is the date that any construction activity or construction support activity will end and final stabilization will be achieved at the site.

i) Will concrete truck washout be performed at the site?

Indicate if you expect that operators of concrete trucks will washout concrete trucks at the construction site.

j) Identify the water body(s) receiving stormwater runoff

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

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

k) Identify the segment number(s) of the classified water body(s)

Identify the classified segment number(s) receiving a discharge directly or indirectly. Enter the following link into your internet browser to find the segment number of the classified water body where stormwater will flow from the site: www.tceq.texas.gov/waterquality/monitoring/viewer.html or by contacting the TCEQ Water Quality Division at (512) 239-4671 for assistance.

You may also find the segment number in TCEQ publication GI-316 by entering the following link into your internet browser: www.tceq.texas.gov/publications/gi/gi-316 or by contacting the TCEQ Water Quality Division at (512) 239-4671 for assistance.

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

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

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

l) Discharge into MS4 – Identify the MS4 Operator

The discharge may initially be into a municipal separate storm sewer system (MS4). If the stormwater discharge is into an MS4, provide the name of the entity that operates the MS4 where the stormwater discharges. An MS4 operator is often a city, town, county, or utility district, but possibly can be another form of government. Please note that the Construction General Permit requires the Operator to supply the MS4 with a

copy of the NOI submitted to TCEQ. For assistance, you may call the technical staff at 512-239-4671.

m) Discharges to the Edwards Aquifer Recharge Zone and Certification

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

See maps on the TCEQ website to determine if the site is located within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer by entering the following link into an internet browser: www.tceq.texas.gov/field/eapp/viewer.html or by contacting the TCEQ Water Quality Division at 512-239-4671 for assistance.

If the discharge or potential discharge is within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, a site-specific authorization approved by the Executive Director under the Edwards Aquifer Protection Program (30 TAC Chapter 213) is required before construction can begin.

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

Section 5. NOI CERTIFICATION

Note: Failure to indicate Yes to all of the certification items may result in denial of coverage under the general permit.

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

Provisional coverage under the Construction General Permit (TXR150000) begins 7 days after the completed paper NOI is postmarked for delivery to the TCEQ. Electronic applications submitted through ePermits have immediate provisional coverage. You must obtain a copy and read the Construction General Permit before submitting your application. You may view and print the Construction General Permit for which you are seeking coverage at the TCEQ web site by entering the following link into an internet browser: www.tceq.texas.gov/goto/construction or you may contact the TCEQ Stormwater processing Center at 512-239-3700 for assistance.

b) Certification of Legal Name

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

c) Understanding of Notice of Termination

A permittee shall terminate coverage under the Construction General Permit through the submittal of a NOT when the operator of the facility changes, final stabilization has

been reached, the discharge becomes authorized under an individual permit, or the construction activity never began at this site.

d) Certification of Stormwater Pollution Prevention Plan

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

Section 6. APPLICANT CERTIFICATION SIGNATURE

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

If you are a corporation:

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

If you are a municipality or other government entity:

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

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

30 Texas Administrative Code

§305.44. Signatories to Applications

(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the

corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

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

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

Texas Commission on Environmental Quality
General Permit Payment Submittal Form

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

Instructions:

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

Mail this form and your check to either of the following:

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

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

Fee Code: GPA General Permit: TXR150000

1. Check or Money Order No: Click here to enter text
2. Amount of Check/Money Order: Click here to enter text
3. Date of Check or Money Order: Click here to enter text
4. Name on Check or Money Order: Click here to enter text
5. NOI Information:

   If the check is for more than one NOI, list each Project or Site (RE) Name and Physical Address exactly as provided on the NOI. **Do not submit a copy of the NOI with this form, as it could cause duplicate permit application entries!**

   If there is not enough space on the form to list all of the projects or sites the authorization will cover, then attach a list of the additional sites.

   Project/Site (RE) Name: Click here to enter text

   Project/Site (RE) Physical Address: Click here to enter text

Staple the check or money order to this form in this space.

Section V

Agent Authorization Form (TCEQ-0599)

Agent Authorization Form

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

I Brandon Cooper,
Print Name

Divisions President,
Title - Owner/President/Other

of Toll Southwest, LLC,
Corporation/Partnership/Entity Name

have authorized John Barcellona
Print Name of Agent/Engineer

of Costello Inc.
Print Name of Firm

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

I also understand that:

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

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

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

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

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

SIGNATURE PAGE:

Applicant's Signature

8/25/23
Date

THE STATE OF Texas §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Brandon Cooper 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 25 day of August, 2023.

DAVID ARLIE JOHNSON
My Notary ID # 133363563
Expires September 30, 2025

NOTARY PUBLIC

David Arlie Johnson
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 9-30-2025

Section VI

Application Fee Form (TCEQ-0574)

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2

Regulated Entity Location: West of N. Old Stagecoach Road & South of RM 150, Kyle TX 78640

Name of Customer: Toll Southwest, LLC.

Contact Person: Adrienne Donatucci Phone: 412-780-2312

Customer Reference Number (if issued):CN 602840076

Regulated Entity Reference Number (if issued):RN N/A

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	79.20 Acres	$ 6,500.00
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	Acres	$
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: John Bascelline

Date: 8-25-23

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

Section VII

Core Data Form (TCEQ-10400)

TCEQ Core Data Form

TCEQ Use Only

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 602840076		RN N/A

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	2/16/2006

☐ 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:*
Toll Southwest LLC dba Toll Brothers 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)*
0801775669	32050842304	47-2582910	

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees

☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☒ 501 and higher

13. Independently Owned and Operated?

☐ Yes ☒ No

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

☐ Owner ☒ Operator ☐ Owner & Operator

☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:	1320 Arrow Point Drive, Suite 401						
	City	Cedar Park	State	TX	ZIP	78613	ZIP + 4

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

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(412) 780-2312		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

Clara Vista Phase 1 & 6 Creeks Boulevard Phase 2

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

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	0.33 miles west of the intesection of South Six Creeks Blvd & Jackson River Lp, Kyle Texas, and part of a 201.377 acre tract of land out of the Caleb W Baker Survey.

26. Nearest City	**State**	**Nearest ZIP Code**
Kyle	TX	78640

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	0	28.98	97	54	44.64

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)

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

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

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

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

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

SECTION IV: Preparer Information

40. Name:	John Barcellona	**41. Title:**	Engineer

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 646-3463		( ) -	jbarcellona@costelloinc.com

SECTION V: Authorized Signature

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

Company:	Costello Inc	**Job Title:**	Project Manager
Name *(In Print):*	John Barcellona	**Phone:**	(512) 646- **3463**
Signature:	John Barcellona	**Date:**	8-25-23