Contributing Zone Plan

Shadow Canyon Phase 7

Prepared for: Harris Straub

Prepared by: Brown & Gay Engineers, Inc. TBPE Registered Firm #: 1046

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: Shadow Canyon Phase 7					**2. Regulated Entity No.:**			
3. Customer Name: 278 Georgetown, Inc.					**4. Customer No.:** 605003243			
5. Project Type: **(Please circle/check one)**	New		Modification		**Extension**		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	**CZP**	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	**Residential**		Non-residential			**8. Site (acres):**		38.52
9. Application Fee:	$4,000		**10. Permanent BMP(s):**			1 Batch Detention Pond, Vegetated Filter Strips		
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**			None		
13. County:	Williamson		**14. Watershed:**			San Gabriel Watershed		

Application Distribution

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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	__	__	X
Region (1 req.)	__	__	X
County(ies)	__	__	X
Groundwater Conservation District(s)	__Edwards Aquifer Authority __Barton Springs/ Edwards Aquifer __Hays Trinity __Plum Creek	__Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	__Austin __Buda __Dripping Springs __Kyle __Mountain City __San Marcos __Wimberley __Woodcreek	__Austin __Bee Cave __Pflugerville __Rollingwood __Round Rock __Sunset Valley __West Lake Hills	__Austin __Cedar Park __Florence _X_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.
Richard Rychlik Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent — Date: 9/14/20

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):

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: Richard Rychlik Jr., P.E.

Date: 9/14/20

Signature of Customer/Agent:

Regulated Entity Name: Shadow Canyon Phase 7

Project Information

1. County: Williamson
2. Stream Basin: South Fork San Gabriel
3. Groundwater Conservation District (if applicable): _____
4. Customer (Applicant):

   Contact Person: Joseph Straub
   Entity: Shadow Canyon Subdivision
   Mailing Address: 4408 Spicewood Springs Road
   City, State: Austin, Texas Zip: 78759
   Telephone: 512-231-1555 Fax: _____
   Email Address: hwstraub@hnsdevelopers.com

5. Agent/Representative (If any):

Contact Person: Richard Rychlik Jr., P.E.
Entity: BGE, Inc.
Mailing Address: 104 W Louis Henna Blvd
City, State: Austin, Texas Zip: 78728
Telephone: 512-897-0460 Fax: _____
Email Address: RRychlik@bgeinc.com

6. Project Location:

☒ The project site is located inside the city limits of Georgetown.
☐ 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.

River Terrace Dr. Georgetown TX, 78628

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: 103
☐ Residential: # of Living Unit Equivalents: _____
☐ Commercial
☐ Industrial
☐ Other: _____

13. Total project area (size of site): 38.52 Acres

Total disturbed area: 38.52 Acres

14. Estimated projected population: _____

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

Table 1 - Impervious Cover

Impervious Cover of Proposed Project	***Sq. Ft.***	***Sq. Ft./Acre***	***Acres***
Structures/Rooftops	353500	÷ 43,560 =	8.12
Parking		÷ 43,560 =	
Other paved surfaces	204732	÷ 43,560 =	4.70
Total Impervious Cover	558232	÷ 43,560 =	12.82

Total Impervious Cover 12.82 **÷ Total Acreage** 38.52 **X 100 =** 33.28**% 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 Cimarron Hills (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" = 30'.

35. 100-year floodplain boundaries:

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

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

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

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

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

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

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

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

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

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

42. ☐ Surface waters (including wetlands).

    ☒ N/A

43. ☐ Locations where stormwater discharges to surface water.

    ☒ There will be no discharges to surface water.

44. ☐ Temporary aboveground storage tank facilities.

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

45. ☐ Permanent aboveground storage tank facilities.

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

46. ☒ Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

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

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

☐ N/A

48. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____.

☐ N/A

49. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

☐ N/A

50. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.

☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.

☒ The site will not be used for low density single-family residential development.

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

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

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

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

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

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

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

    ☒ N/A

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

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

☐ N/A

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

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

    ☐ N/A

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

    ☒ N/A

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

    ☒ N/A

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

59. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

60. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development,

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

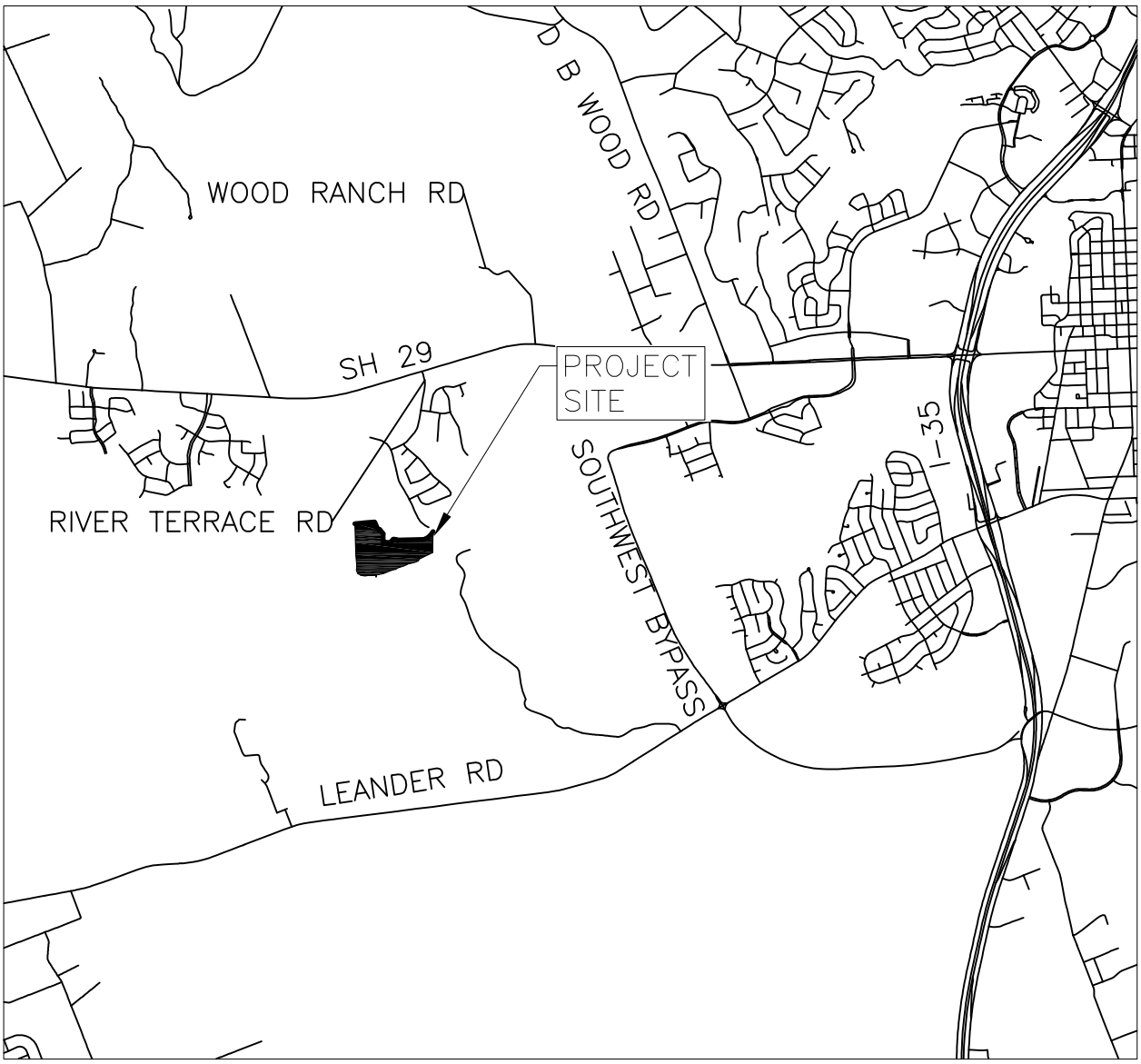
Administrative Information

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

62. ☒ Any modification of this Contributing Zone Plan may require TCEQ review and Executive Director approval prior to construction, and may require submission of a revised application, with appropriate fees.

63. ☐ The site description, controls, maintenance, and inspection requirements for the storm water pollution prevention plan (SWPPP) developed under the EPA NPDES general permits for stormwater discharges have been submitted to fulfill paragraphs 30 TAC §213.24(1-5) of the technical report. All requirements of 30 TAC §213.24(1-5) have been met by the SWPPP document.

☒ The Temporary Stormwater Section (TCEQ-0602) is included with the application.



N

N.T.S.

EXHIBIT A

Shadow Canyon Phase 7

ROAD MAP

BROWN & GAY ENGINEERS, INC.
7000 NORTH MOPAC, SUITE 330 AUSTIN, TX 78731 TBPE Registration No. F-1046
TEL: 512-879-0400 www.browngay.com

DATE: 5/20/2020

DRAWN BY: SB

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\03_Deliverables\CZP\CAD\Road Map.dwg

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

The National Map
US Topo

ROUND ROCK QUADRANGLE
TEXAS - WILLIAMSON COUNTY
7.5-MINUTE SERIES

Shadow Canyon
Phase 7

Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 14R
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery..NAIP, September 2016 - November 2016
Roads.. U.S. Census Bureau, 2015
Names..GNIS, 1979 - 2018
Hydrography...............................National Hydrography Dataset, 2002 - 2011
Contours...National Elevation Dataset, 2002 - 2004
Boundaries..............Multiple sources; see metadata file 2016 - 2017

Wetlands.................FWS National Wetlands Inventory 1982

MN
GN
3°39´
65 MILS
0°40´
12 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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

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

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

TEXAS
QUADRANGLE LOCATION

ADJOINING QUADRANGLES
1 Leander NE
2 Georgetown
3 Weir
4 Leander
5 Hutto
6 Jollyville
7 Pflugerville West
8 Pflugerville East

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

ROUND ROCK, TX
2019

NSN. 7643016398009
NGA REF NO. USGSX24K71453

Attachment C – Project Narrative

Shadow Canyon Phase 7 is platted as a 19.18 acres development located southwest of the intersection of Whisper Creek Dr. and Ridge Runner Dr. in Williamson County, Texas. The proposed development project will convert the tract into the seventh phase of development for the overall Shadow Canyon tract. The total limits of construction for the site is 38.52 acres, and there will be 12.82 acres of impervious cover constructed with this phase between streets, sidewalks, and building construction. There is currently no existing impervious cover on the site.

Vegetated filter strip 1 will treat 6.79 acres with no existing impervious cover. In the final condition, the basin will contain 3.05 acres of impervious cover. The resultant L_m for this basin is 2,821 lbs. The VFS will operate at an F of 1.00 and will have an L_r of 2,925 lbs. Vegetated filter strip 2 will treat a basin of 1.82 acres and will have 0.64 acres of impervious cover in the final condition. The VFS will operate at an F of 1.00, which results in an L_m of 592 lbs and an L_r of 620 lbs.

Pond A, a batch detention pond, receives a total drainage basin of 15.89 acres. There is no existing impervious cover, and a total of 8.13 acres of impervious cover constructed within the basin. The required pond volume is 83,981 cf and the pond is designed to be 100,777 cf. The resultant L_m from design is 7,519 lbs with the pond providing a L_R 8,313 lbs with a F of 1.00.

There is an additional 1 lbs of treatment provided with this phase to account for runoff that will be untreated in Phase 8.

For a broken-down analysis of drainage for the site, please refer to Table C-1 following this narrative.

Shadow Canyon Phase 7 is located within the Edward's Aquifer Contributing Zone. Portions of the site are located within the FEMA 100-yr Floodplain in accordance with Flood Insurance Rate Map (FIRM) Panel No. 48491C0480F, effective date September 26, 2008.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Shadow Canyon Phase 7
Final Condition
Date Prepared: 8/26/2020

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: $L_M = 27.2(A_N \times P)$
Equation 3.3 (Modified for City of Georgetown 85% TSS Removal): $L_M = 28.9(A_N \times P)$
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 * =	38.52	acres
Predevelopment impervious area within the limits of the plan * =		acres
Total post-development impervious area within the limits of the plan * =	12.87	acres
Total post-development impervious cover fraction * =	0.33	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	**11902**	lbs.

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

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

STATE OF TEXAS
RICHARD L RYCHLIK JR
123927
LICENSED
PROFESSIONAL ENGINEER
9/15/20

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	15.89	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	8.13	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.51**	
$L_{M\ THIS\ BASIN}$ =	**7519**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = BATCH DETENTION POND
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: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

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

A_C =	15.89	acres
A_I =	8.13	acres
A_P =	**7.76**	acres
L_R =	**8313**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 8313 lbs.

F = **1.00**

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 =	**4.00**	inches
Post Development Runoff Coefficient =	**0.36**	
On-site Water Quality Volume =	**83981**	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 =	**16796**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**100777**	cubic feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Shadow Canyon Phase 7**
Final Condition
Date Prepared: **8/26/2020**

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Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
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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 * =	**38.52**	acres
Predevelopment impervious area within the limits of the plan* =		acres
Total post-development impervious area within the limits of the plan* =	**12.87**	acres
Total post-development impervious cover fraction * =	**0.33**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**11902**	lbs.

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

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

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

Drainage Basin/Outfall Area No. =	**1**	
Total drainage basin/outfall area=	**6.79**	acres
Predevelopment impervious area within drainage basin/outfall area=	**0.00**	acres
Post-development impervious area within drainage basin/outfall area=	**3.05**	acres
Post-development impervious fraction within drainage basin/outfall area=	**0.45**	
$L_{M\ THIS\ BASIN}$ =	**2821**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**VFS1**	
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: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

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

A_C =	**6.79**	acres
A_I =	**3.05**	acres
A_P =	**3.74**	acres
L_R =	**2925**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**2925**	lbs.
F =	**1.00**	

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **Shadow Canyon Phase 7**
Final Condition
Date Prepared: **8/26/2020**

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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Equation 3.3 (Modified for City of Georgetown 85% TSS Removal): $L_M = 28.9(A_N \times P)$
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 * =	**38.52**	acres
Predevelopment impervious area within the limits of the plan* =		acres
Total post-development impervious area within the limits of the plan* =	**12.87**	acres
Total post-development impervious cover fraction * =	**0.33**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**11902**	lbs.

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

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

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

Drainage Basin/Outfall Area No. =	**1**	
Total drainage basin/outfall area=	**1.82**	acres
Predevelopment impervious area within drainage basin/outfall area=	**0.00**	acres
Post-development impervious area within drainage basin/outfall area=	**0.64**	acres
Post-development impervious fraction within drainage basin/outfall area=	**0.35**	
$L_{M\ THIS\ BASIN}$ =	**592**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**VFS2**	
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: $L_R = (\text{BMP efficiency}) \times P \times (A_I \times 34.6 + A_P \times 0.54)$

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

A_C =	**1.82**	acres
A_I =	**0.64**	acres
A_P =	**1.18**	acres
L_R =	**620**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**620**	lbs.
F =	**1.00**	

Shadow Canyon Phase 7: Table C-1							
BMP	Contributing Basins	Total (ac)	Impervious (ac.)	Required WQV (cf)	Provided WQV (cf)	Required TSS Removal (lbs)	Provided TSS Removal (lbs)
Vegitated Filter Strip 1	VFS1	6.79	3.05	-	-	2821	2925
Vegitated Filter Strip 2	VFS2	1.82	0.64	-	-	592	620
Offsite/Untreated	OS-1	1.50	1.00	-	-	925	0
	C0.0			-	-		
	C0.1			-	-		
	C1.0			-	-		
	C1.1			-	-		
	D0.0			-	-		
	D0.1			-	-		
	D1.0			-	-		
	D1.1			-	-		
Pond	A0	15.89	8.13	83,981	100,777	7,519	8,313
	A1						
	A2						
	A3.0						
	A3.1						
	A4.0						
	A4.1						
	A5						
	A6.0						
	A6.1						
	A7.0						
	A7.1						
	A8.0						
	A8.1						
	B0						
	B1						
	B2						
Total		26.00	12.82	83,981	100,777	11,857	11,858

Attachment D – Factors Affecting Surface Water Quality

Multiple factors have the potential of affecting surface water quality during construction. These include: oil, grease, gas, transmission fluids, and/or other vehicular fluids, as well as shifts in sediment that will occur during excavation and fill operations. Upon completion of construction, normal traffic on the site could be responsible for many of these same pollutants.

Attachment E – Volume and Character of Stormwater

The total drainage area accounted for is 26.00 acres. Proposed impervious cover, all of which is on-site, accounts for 12.82 acres of the total drainage area (no existing impervious cover). A majority of this phase (15.59 acres; 8.13 acres impervious) will flow into Pond A, constructed with this phase. There is a portion of this phase (6.79 acres; 3.05 acres impervious) that will flow into Vegetated Filter Strip 1. Additionally, there is a portion of this phase (1.82 acres; 0.64 acres impervious) that will flow into Vegetated Filter Strip 2. A portion of this phase (1.50 acres; 1.00 acres impervious) that will flow offsite untreated.

Drainage area map and calculations for the site are provided with this application.

For an overview of sub-drainage basins on site, please refer to the included drainage map.

Attachment F – Suitability Letter from Authorized Agent

Not applicable to this project.

Attachment G – Alternative Secondary Containment Methods

Not applicable to this project.

Attachment H – AST Containment Structure Drawings

Not applicable to this project.

Attachment I – 20% or Less Impervious Cover Waiver

Not applicable to this project.

Attachment J – BMPs for Upgradient Stormwater

The north channel will convey offsite upgradient stormwater and discharge into South Fork San Gabriel River.

Attachment K – BMPs for On-Site Stormwater

In Phase 7, on-site stormwater will be treated 1 BMPs. Majority of the TSS removal will occur by way of the batch detention pond. There will also be 2 vegetative filter strips to account for additional pollutant treatment in other areas of the project. The locations and calculations for these BMPs can be seen in the attached construction plans, with calculations also attached on the following sheets, for reference.

The impervious cover constructed in phase 7 will flow into a batch detention pond, along with 2 vegetated strips. The remaining offsite flow and will be left untreated and is accounted for in the proposed BMPs.

Attachment L – BMPs for Surface Streams

No BMPs are proposed specifically for surface streams. Proposed on-site BMPs and drainage systems are designed to maintain existing flow patterns.

Attachment M – Construction Plans

Construction plans for both temporary and permanent BMPs are attached.

CONSTRUCTION PLANS
SHADOW CANYON PHASE 7
~~5110 WHISPER CREEK DR~~
GEORGETOWN, TX,78626

AUGUST 17, 2020

OWNERSHIP INFORMATION:

OWNER: 278 GEORGETOWN, INC.
4408 SPICEWOOD SPRINGS RD
AUSTIN, TX 78759
(512) 596-6544
DPAMPE@HARRIS-STRAUB.COM

ENGINEER: BGE, INC., TBPE F-1046
101 W. LOUIS HENNA BLVD. STE #400
AUSTIN, TEXAS 78728
(512) 879-0460
RRYCHLIK@BGEINC.COM

SURVEYOR: BASELINE LAND SURVEYORS, INC.
8000 ANDERSON SQUARE R. STE #101
AUSTIN, TX, 78728
(512) 374-9722

LANDSCAPE ARCHITECT: PERSPECTIVE DESIGN STUDIO, LLC
(512) 956-0756
SOMMER@PERSPECTIVEDS.COM

WATER/ WASTEWATER PROVIDER: GEORGETOWN UTILITY SYSTEMS
300 INDUSTRIAL AVE.
GEORGETOWN, TX 78626
(512) 930-3640
GUS.GEORGETOWN.ORG

ELECTRIC PROVIDER: PEDERNALES ELECTRIC COOPERATIVE, INC.
10625 W. HWY 29
LIBERTY HILL, TEXAS 78642
512-778-5470
PEC.COOP

SITE DESCRIPTION, ZONING & PROPOSED USE:

LEGAL DESCRIPTION: A 32.85 ACRE SUBDIVISION LOCATED IN THE ISAAC DONAGAN SURVEY ABSTRACT NUMBER 178 CITY OF GEORGETOWN, WILLIAMSON COUNTY, TEXAS, AS RECORDED ON ##-##-#### UNDER DOC. NO. _____, REAL PROPERTY RECORDS OF WILLIAMSON COUNTY, TEXAS.

TOTAL ACREAGE: 32.85 AC

IMPERVIOUS COVER: 11.23 AC (34.19%)

ZONING : RS (RESIDENTIAL SINGLE-FAMILY) / PUD ORD NO. 2016-46

BENCHMARK INFORMATION:

"BLS #425": $\frac{1}{2}$" REBAR WITH PLASTIC CAP STAMPED "G&R SURVEYING"; S04D28'24"W AND 18.38' FROM NORTHEAST CORNER OF THE 278.212 AC/ TRACT; APPROX. 33' SOUTH OF THE SOUTH EDGE OF THE PAVEMENT OF STATE HWY 29.
ELEVATION: 897.61

"BLS #427": $\frac{1}{2}$" REBAR WITH PLASTIC CAP STAMPED "RPLS 5784"; APPROX. 965' WEST FROM NORTHEAST CORNER OF THE 278.12 AC. TRACT; APPROX 15' SOUTH OF THE SOUTH EDGE OF PAVEMENT OF STATE HWY 29.
ELEVATION: 906.88

BEARINGS ARE BASED ON TEXAS STATE PLANE COORDINATES, CENTRAL ZONE, NAVD 83 WITH A COMBINED SCALE FACTOR OF 0.99986524 AND ELEVATION DATUM IS NAVD 88, AS PROCESSED BY NGS ONLINE POSITIONING USER SERVICE (OPUS).

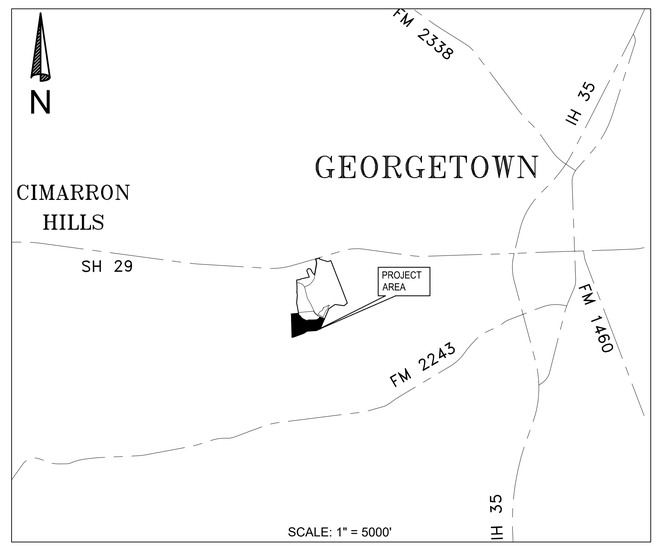
FLOODPLAIN INFORMATION:

A PORTION OF THIS PROJECT IS LOCATED IN THE 1% ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FEMA FIRM MAP NUMBER 48491C0480E, DATED DECEMBER 20, 2019.

ADDITIONAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER, AND SUCCESSORS TO THE CURRENT PROPERTY OWNER, TO ENSURE THE SUBJECT PROPERTY AND ANY IMPROVEMENTS ARE MAINTAINED IN CONFORMANCE WITH THIS SITE DEVELOPMENT PLAN.
2. THIS DEVELOPMENT SHALL COMPLY WITH ALL STANDARDS OF THE UNIFIED DEVELOPMENT CODE (UDC), THE CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND SPECIFICATIONS MANUAL, THE DEVELOPMENT MANUAL AND ALL OTHER APPLICABLE CITY STANDARDS.
3. THIS SITE DEVELOPMENT PLAN SHALL MEET THE UDC STORMWATER REQUIREMENTS.
4. ALL SIGNAGE REQUIRES A SEPARATE APPLICATION AND APPROVAL FROM THE INSPECTION SERVICES DEPARTMENT. NO SIGNAGE IS APPROVED WITH THE SITE DEVELOPMENT PLAN.
5. SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH THE UDC.
6. DRIVEWAYS WILL REQUIRE APPROVAL BY THE DEVELOPMENT ENGINEER OF THE CITY OF GEORGETOWN.
7. OUTDOOR LIGHTING SHALL COMPLY WITH SECTION 7.04 OF THE UDC.
8. SCREENING OF MECHANICAL EQUIPMENT, DUMPSTERS AND PARKING SHALL COMPLY WITH CHAPTER 8 OF THE UDC. THE SCREENING IS SHOWN ON THE LANDSCAPE AND ARCHITECTURAL PLANS, AS APPLICABLE.
9. THE COMPANION LANDSCAPE PLAN HAS BEEN DESIGNED AND PLANT MATERIALS SHALL BE INSTALLED TO MEET ALL REQUIREMENTS OF THE UDC.
10. ALL MAINTENANCE OF REQUIRED LANDSCAPE SHALL COMPLY WITH THE MAINTENANCE STANDARDS OF CHAPTER 8 OF THE UDC.
11. A SEPARATE IRRIGATION PLAN SHALL BE REQUIRED AT THE TIME OF BUILDING PERMIT APPLICATION.
12. FIRE FLOW REQUIREMENTS OF 1500 PER MINUTE ARE BEING MET BY THIS PLAN.
13. ANY HERITAGE TREE NOTED ON THIS SITE DEVELOPMENT PLAN IS SUBJECT, IN PERPETUITY, TO THE MAINTENANCE, CARE, PRUNING AND REMOVAL REQUIREMENTS OF THE UNIFIED DEVELOPMENT CODE.
14. THE CONSTRUCTION PORTION OF THESE PLANS WERE PREPARED, SEALED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE, BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR CONSTRUCTION OF THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS AND CODES.
15. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
16. A GEOLOGIC ASSESSMENT, IN ACCORDANCE WITH THE CITY OF GEORGETOWN WATER QUALITY REGULATIONS, WAS COMPLETE ON OCTOBER 30, 2015. ANY SPRINGS AND STREAMS AS IDENTIFIED IN THE GEOLOGIC ASSESSMENT ARE SHOWN HEREIN.
17. THIS PROPERTY IS SUBJECT TO THE WATER QUALITY REGULATIONS OF THE CITY OF GEORGETOWN.
18. TRAFFIC IMPACT ANALYSIS (TIA) REQUIREMENTS HAVE BEEN MET.

VICINITY MAP



*THIS IS FOR REVIEW PURPOSES ONLY

Sheet List Table

Sheet Number	Sheet Title
1	COVER SHEET
2	GENERAL NOTES (1 OF 2)
3	GENERAL NOTES (2 OF 2)
4	PLAT (1 OF 2)
5	PLAT (2 OF 2)
6	EXISTING CONDITIONS (1 OF 2)
7	EXISTING CONDITIONS (2 OF 2)
8	EROSION CONTROL PLAN (1 OF 2)
9	EROSION CONTROL PLAN (2 OF 2)
10	SIGNAGE, STRIPING, AND LIGHTING PLAN
11	GRADING PLAN
12	RIVERS EDGE DRIVE STA. 1+00 - 9+50
13	RIVERS EDGE DRIVE STA. 9+50 - 17+50
14	RIVERS EDGE DRIVE STA. 17+50 - END
15	SHADOW WATER LANE 1+66.81 - END
16	TEKOA DRIVE STA. 1+00 - END
17	BRUIN PAW DRIVE STA. 1+00 - END
19	OVERALL WATER DISTRIBUTION PLAN
20	WASTEWATER PLAN OVERALL (1 OF 2)
21	WASTEWATER PLAN OVERALL (2 OF 2)
22	WWL A STA. 1+00 - 9+00
23	WWL A STA. 9+00 - END
24	WWL B STA. 1+00 - END
25	WWL C STA. 1+00 - END
26	WWL D STA. 1+00 - END
27	WWL E STA. 1+00 - END
28	OVERALL STORM PLAN
29	SSL A STA. 1+00 - 8+00
30	SSL A STA. 8+00 TO 16+00
31	SSL A STA. 16+00 - END
32	SSL B STA. 1+00 TO END
33	SSL C STA. 1+00 TO END
34	SSL D STA. 1+00 - END
35	STORM LATERALS (1 OF 2)
36	STORM LATERALS (2 OF 2)
37	VEGETATED FILTER STRIP
38	BATCH DETENTION POND
39	BATCH DETENTION POND DETAILS
40	DRAINAGE AREA MAP
41	DRAINAGE CALCS
42	WATER DETAILS (1 OF 2)
43	WATER DETAILS (2 OF 2)
44	WASTEWATER DETAILS (1 OF 3)
45	WASTEWATER DETAILS (2 OF 3)
46	WASTEWATER DETAILS (3 OF 3)
47	EROSION CONTROL DETAILS (1 OF 2)
48	EROSION CONTROL DETAILS (2 OF 2)
49	DRAINAGE DETAILS (1 OF 2)
50	DRAINAGE DETAILS (2 OF 2)
51	STREET DETAILS (1 OF 2)
52	STREET DETAILS (2 OF 2)

RECORDED PLAT DOC. NO. _____

AS APPROVED BY THE PLANNING AND ZONING COMMISSION ON _____

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

811 Know what's below. Call before you dig.

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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

BGE

BGE, Inc.
101 W Louis Henna Blvd Suite 400
Austin, TX 78728
Tel: 512-879-0400 ● www.bgeinc.com
TBPE Registration No. F-1046

SUBMITTED BY

I, RICHARD L. RYCHLIK JR., P.E., DO HEREBY CERTIFY THAT THE PUBLIC WORKS AND DRAINAGE IMPROVEMENTS DESCRIBED HEREIN HAVE BEEN DESIGNED IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORM WATER DRAINAGE POLICY ADOPTED BY THE CITY OF ROUND ROCK, TEXAS.

SEAL & SIGNATURE OF PROFESSIONAL ENGINEER — DATE: 9/16/20

RICHARD L. RYCHLIK JR., P.E.
BGE, INC. TBPE NO. F-1046
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TEXAS 78728
(512) 879-0400 (MAIN)

STATE OF TEXAS — RICHARD L. RYCHLIK JR. — 123927 — LICENSED PROFESSIONAL ENGINEER

2020-XX-CON

CITY OF GEORGETOWN - GENERAL NOTES - 2012

1. THESE CONSTRUCTION PLANS WERE PREPARED, SEALED, SIGNED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR CONSTRUCTION OF THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS AND CODES.
2. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
3. THE SITE CONSTRUCTION PLANS SHALL MEET ALL REQUIREMENTS OF THE APPROVED SITE PLAN.
4. WASTEWATER MAINS AND SERVICE LINES SHALL BE SDR 26 PVC.
5. WASTEWATER MAINS SHALL BE INSTALLED WITHOUT HORIZONTAL OR VERTICAL BENDS.
6. MAXIMUM DISTANCE BETWEEN WASTEWATER MANHOLES IS 500 FEET.
7. WASTEWATER MAINS SHALL BE LOW PRESSURE AIR TESTED AND MANDREL TESTED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.
8. WASTEWATER MANHOLES SHALL BE VACUUM TESTED AND COATED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.
9. WASTEWATER MAINS SHALL BE CAMERA TESTED BY THE CONTRACTOR AND SUBMITTED TO THE CITY ON DVD FORMAT PRIOR TO PAVING THE STREETS.
10. PRIVATE WATER SYSTEM FIRE LINES SHALL BE TESTED BY THE CONTRACTOR TO 200 PSI FOR 2 HOURS.
11. PRIVATE WATER SYSTEM FIRE LINES SHALL BE DUCTILE IRON PIPING FROM THE WATER MAIN TO THE BUILDING SPRINKLER SYSTEM, AND 200 PSI C900 PVC FOR ALL OTHERS.
12. PUBLIC WATER SYSTEM MAINS SHALL BE 150 PSI C900 PVC AND TESTED BY THE CONTRACTOR AT 150 PSI FOR 2 HOURS.
13. ALL BENDS AND CHANGES IN DIRECTION ON WATER MAINS SHALL BE RESTRAINED AND THRUST BLOCKED.
14. LONG FIRE HYDRANT LEADS SHALL BE RESTRAINED.
15. ALL WATER LINES ARE TO BE BACTERIA TESTED BY THE CONTRACTOR ACCORDING TO THE CITY STANDARDS AND SPECIFICATIONS.
16. WATER AND SEWER MAIN CROSSINGS SHALL MEET ALL REQUIREMENTS OF THE TCEQ AND THE CITY.
17. FLEXIBLE BASE MATERIAL FOR PUBLIC STREETS SHALL BE TXDOT TYPE A GRADE 1.
18. HOT MIX ASPHALTIC CONCRETE PAVEMENT SHALL BE TYPE D UNLESS OTHERWISE SPECIFIED AND SHALL BE A MINIMUM OF 2 INCHES THICK ON PUBLIC STREETS AND ROADWAYS.
19. ALL SIDEWALK RAMPS ARE TO BE INSTALLED WITH THE PUBLIC INFRASTRUCTURE.
20. A MAINTENANCE BOND IS REQUIRED TO BE SUBMITTED TO THE CITY PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS. THIS BOND SHALL BE ESTABLISHED FOR 2 YEARS IN THE AMOUNT OF 10% OF THE COST OF THE PUBLIC IMPROVEMENTS AND SHALL FOLLOW THE CITY FORMAT.
21. RECORD DRAWINGS OF THE PUBLIC IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER PRIOR TO ACCEPTANCE OF THE PROJECT. THESE DRAWINGS SHALL BE ON MYLAR OR ON TIFF OR PDF DISK (300DPI). IF A DISK IS SUBMITTED, A BOND SET SHALL BE INCLUDED WITH THE DISK.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS ARE APPROPRIATE.
4. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
5. THE CONTRACTOR SHALL GIVE THE CITY OFGEORGETOWN AND WILLIAMSON COUNTY 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE (512) 930-3575 (PLANNING DEPARTMENT).
6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.
7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OFGEORGETOWN, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.
8. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF GEORGETOWN ACCURATE "AS-BUILT" DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "AS-BUILT" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
9. THE GEORGETOWN CITY COUNCIL SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.
10. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER.
11. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.
12. AVAILABLE BENCHMARKS (CITY OF GEORGETOWN DATUM) THAT MAY BE UTILIZED FOR THE CONSTRUCTION OF THIS PROJECT ARE DESCRIBED AS FOLLOWS:

BENCHMARK 1 (TBM 41-63-7)
RAILROAD SPIKE SET IN A POWER POLE WITH TRANSFORMER ON NORTH LINE OF SUBJECT TRACT, APPROXIMATELY 285 FEET WEST OF THE NORTHEAST CORNER OF SUBJECT TRACT, AS SHOWN HEREON.
ELEV: 826.52 NAVD 88 (GEOID 12B)

BENCHMARK 2 (TBM 41-64-14)
COTTON SPINDLE SET IN A POWER POLE WITH GUY ON WEST RIGHT-OF-WAY LINE OF ROCKRIDE LINE, APPROXIMATELY 22 FEET NORTH OF THE SOUTHEAST CORNER OF SUBJECT TRACT, AS SHOWN HEREON.
ELEV: 819.83 NAVD 88 (GEOID 12B)

WASTEWATER NOTES:

1. PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE GREEN IN COLOR, PVC (AWWA C-900, MIN. CLASS 150), OR DUCTILE IRON (AWWA C-100, MIN. CLASS 200). GREEN PIGMENTED PIPE IS REQUIRED FOR THE (C-900) FORCE MAIN. PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241 OR D3034, MIN SDR-26), PIPE MATERIAL FOR DUCTILE IRON SECTIONS SHALL BE (AWWA C-100, MIN. CLASS 200).
2. UNLESS OTHERWISE ACCEPTED BY THE CITY ENGINEER, DEPTH OF COVER FOR ALL LINES OUT OF THE PAVEMENT SHALL BE 42" MIN., AND DEPTH OF COVER FOR ALL LINES UNDER PAVEMENT SHALL BE A MIN. OF 30" BELOW SUBGRADE.
3. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR AT 778-5449 TO COORDINATE UTILITY TIE-INS AND NOTIFY HIM AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING LINES.
4. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF THE PAVEMENT SHALL HAVE BOLTED COVERS WITH RIM ELEVATIONS 6" MINIMUM ABOVE FINISHED GRADE. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE ALLOWED.
5. THE CONTRACTOR SHALL COORDINATE TESTING WITH THE CITY OF INSPECTOR AND PROVIDE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.
6. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
7. ALL WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:

WASTEWATER SERVICE	"S" ON TOP OF CURB
VALVE	"V" ON TOP OF CURB

TOOLS FOR MARKING THE CURB SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF MARKING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN AREAS WITHOUT CURBS. SUCH MEANS OF MARKING SHALL BE AS SPECIFIED BY THE ENGINEER AND ACCEPTED BY THE CITY OF LIBERTY HILL.

8. SAND, AS DESCRIBED IN SPECIFICATION ITEM 510 PIPE, SHALL NOT BE USED AS BEDDING FOR WASTEWATER LINES. ACCEPTABLE BEDDING MATERIALS ARE PIPE BEDDING STONE, PEA GRAVEL AND IN LIEU OF SAND, A NATURALLY OCCURRING OR MANUFACTURED STONE MATERIAL CONFORMING TO ASTM C33 FOR STONE QUALITY AND MEETING THE FOLLOWING GRADATION SPECIFICATION:

SIEVE SIZE	PERCENT RETAINED BY WEIGHT
½"	0
⅜"	0-2
#4	40-85
#10	95-100

9. THE CONTRACTOR IS HEREBY NOTIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING UTILITY LINES MAY HAVE TO OCCUR AT OFF-PEAK HOURS. SUCH HOURS ARE USUALLY OUTSIDE NORMAL WORKING HOURS AND POSSIBLY BETWEEN 12 A.M. AND 6 A.M.
10. ALL WASTEWATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REGULATIONS, 30 TAC CHAPTER 213 AND 317, AS APPLICABLE. WHENEVER TCEQ AND CITY OF ROUND ROCK SPECIFICATIONS CONFLICT, THE MORE STRINGENT SHALL APPLY.

TRAFFIC MARKING NOTES:

1. ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF GEORGETOWN EROSION AND SEDIMENTATION CONTROL ORDINANCE.
2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.
3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY OF GEORGETOWN FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.
4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.
5. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.

SEQUENCE OF CONSTRUCTION:

1. CALL DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION, DEVELOPMENT ENGINEER, CONSTRUCTION INSPECTION, AND THE ENVIRONMENTAL SERVICES DEPARTMENT 48 HOURS PRIOR TO BEGINNING ANY WORK. CALL THE ONE CALL CENTER FOR UTILITY LOCATIONS AND OBTAIN PERMIT FOR ANY WORK WITHIN CITY OF GEORGETOWN OR WILLIAMSON COUNTY R.O.W. TREE PROTECTION WILL BE INSTALLED.

2. INSTALL TEMPORARY EROSION CONTROL MEASURES AND STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH LOCATIONS AND DETAILS SHOWN ON THE PLANS. PRIOR TO CLEARING AND GRUBBING, NOTIFY CITY OF GEORGETOWN INSPECTORS WHEN EROSION CONTROLS ARE INSTALLED.

3. HOLD ENVIRONMENTAL PRE-CONSTRUCTION CONFERENCE ON SITE WITH THE CONTRACTOR, DESIGN ENGINEER, OWNER'S REPRESENTATIVE, AND THE CITY'S ENVIRONMENTAL INSPECTOR (UTILITY DEPARTMENT DEVELOPMENT ENGINEER, (512) 930-3582, REQUIRES 72 HOURS ADVANCE NOTICE) AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND PRIOR TO BEGINNING ANY WORK.

4. BEGIN CONSTRUCTION OF PROJECT AS FOLLOWS:
   A. ROUGH CUT/GRADE STREETS, CHANNELS, AND DRAINAGE FACILITIES TO ENSURE NO MAJOR DEVIATIONS TO PROPOSED DRAINAGE PATTERNS OCCUR DURING CONSTRUCTION.
   B. INSTALL ALL UTILITIES.
   C. INSTALL ALL CROSSINGS (DRY AND WET) WITHIN STREET RIGHT-OF-WAYS.
   D. PREPARE SUBGRADE.
   E. CONSTRUCT STREET BASE.
   F. INSTALL CURB AND GUTTER.
   G. COMPLETE ALL ROUGH GRADING AND UNDERGROUND UTILITIES IN STREET RIGHTS-OF-WAY.
   H. LAY FINAL BASE COURSE.
   I. LAY ASPHALT/
   J. COMPLETE ALL NECESSARY FINAL GRADING AND DRESS UP OF AREAS DISTURBED DURING CONSTRUCTION.
   K. REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROL DEVICES.

5. HOLD POST-CONSTRUCTION CONFERENCE ON SITE WITH THE CONTRACTOR, DESIGN ENGINEER, OWNER'S REPRESENTATIVE, AND THE CITY'S ENVIRONMENTAL INSPECTOR.

6. PROJECT ENGINEER TO PROVIDE ENVIRONMENTAL INSPECTOR WITH CONCURRENCE LETTER AND SCHEDULING OF FINAL INSPECTIONS PRIOR TO THE REMOVAL OF EROSION CONTROLS.

7. AFTER ACCEPTANCE OF REVEGETATION BY THE OWNER AND THE CITY'S ENVIRONMENTAL INSPECTOR, REMOVE TEMPORARY SEDIMENTATION AND EROSION CONTROLS.

8. COMPLETE PERMANENT EROSION CONTROLS, SITE RESTORATION, AND ANY NECESSARY FINAL DRESS UP OF AREAS DISTURBED DURING REMOVAL OF EROSION CONTROLS.

9. FINAL INSPECTIONS BY CITY WITH CONTRACTOR AND ENGINEER.

STREET AND DRAINAGE NOTES:

1. ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY INSPECTOR AND HE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING. TELEPHONE (512) 930-2550 (INSPECTIONS).

2. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.

3. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.

4. STREET RIGHTS-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY WILLIAMSON COUNTY ENGINEERING.

5. BARRICADES BUILT TO CITY OF ROUND ROCK STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.

6. ALL R.C.P. SHALL BE MINIMUM CLASS III.

7. THE SUBGRADE MATERIAL FOR THE STREETS SHOWN HEREIN WAS TESTED BY TERRADYNE ENGINEERING, INC. ON OCTOBER 11, 2019 AND THE PAVING SECTIONS DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF GEORGETOWN DESIGN CRITERIA. SEE TABLES NO. 7 AND 8 IN THE SOIL REPORT FOR RECOMMENDED PAVEMENT SECTIONS.

Table No. 7
Local Streets
Design ESALs: 20,000 (Clay Subgrade)

Flexible Pavement Section	Thickness in Inches		
	Alt 1	Alt 2	Alt 3
Hot Mix Asphaltic Concrete	2.0	2.0	2.0
Aggregate Base	8.0	8.0	8.0
Lime Stabilized Subgrade	--	8.0	--
Cement Stabilized Subgrade	8.0	--	--
Geogrid*	--	--	Yes

**A layer of geogrid equivalent to Tensar TX-130 or TX-5 should be placed between the subgrade and base course.*

Table No.8
Neighborhood Collector Streets
Design ESALs: 290,000 (Clay Subgrade)

Flexible Pavement Section	Thickness in Inches		
	Alt 1	Alt 2	Alt 3
Hot Mix Asphaltic Concrete	2.0	2.0	2.0
Aggregate Base	17.0	17.0	15.0
Lime Stabilized Subgrade	--	8.0	--
Cement Stabilized Subgrade	8.0	--	--
Geogrid*	--	--	Yes

**A layer of geogrid equivalent to Tensar TX-130 or TX-5 should be placed between the subgrade and base course*

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

GENERAL NOTES (1 OF 2)

STATE OF TEXAS
RICHARD L RYCHLIK JR
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET 2 OF 55

CON-2020-XXX

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY CONTRIBUTING ZONE PLAN GENERAL CONSTRUCTION NOTES:

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST INCLUDE:

   –THE NAME OF THE APPROVED PROJECT
   –THE ACTIVITY START DATE; AND
   –THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ON–SITE.

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

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

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

6. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASINS DESIGN CAPACITY.

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

8. ALL EXCAVATED MATERIAL THAT WILL BE STORED ON–SITE MUST HAVE PROPER E&S CONTROLS.

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

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

11. THE HOLDER OF ANY APPROVED CONTRIBUTING ZONE PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
    A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;
    B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;
    C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; OR
    D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED IN A CONTRIBUTING ZONE PLAN AS UNDEVELOPED.

Austin Regional Office	San Antonio Regional Office
12100 Park 35 Circle, Building A Austin, Texas 78753–1808 Phone (512) 339–2929 Fax (512) 339–3795	14250 Judson Road San Antonio, Texas 78233–4480 Phone (210) 490–3096 Fax (210) 545–4329

Know what's **below.**
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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

GENERAL NOTES (2 OF 2)

STATE OF TEXAS
RICHARD L. RYCHLIK, JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET
3 OF 55

CON-2020-XXX

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REVIEWED BY:

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RIVERVIEW PHASE 7 GEORGETOWN, TEXAS

PLAT (1 OF 2)

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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

PLAT (2 OF 2)

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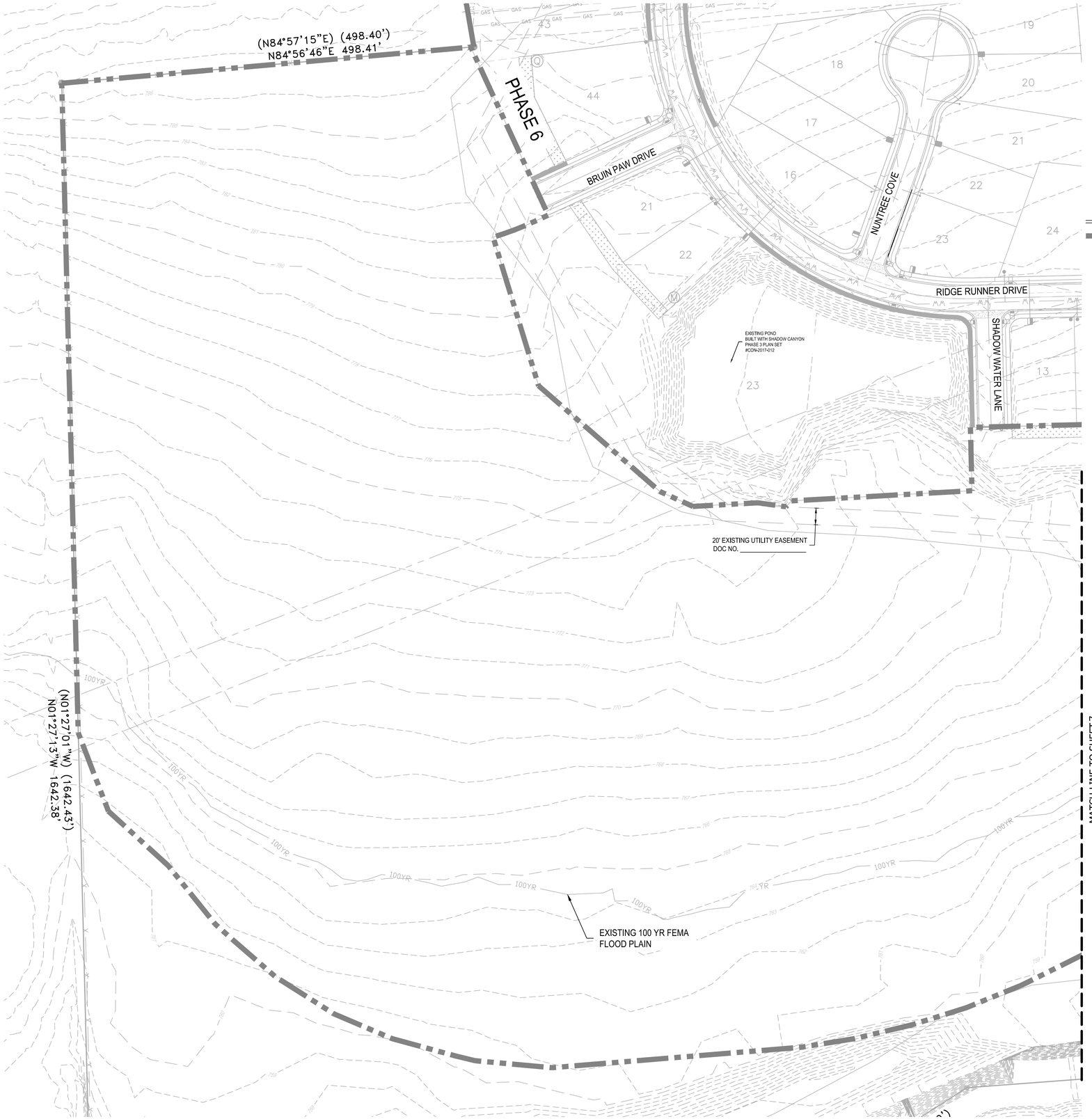

N

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

LEGEND

	PHASE BOUNDARY
28	LOT NUMBER
	EXISTING MINOR
	EXISTING MAJOR

Know what's **below.**
Call before you dig.

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

EXISTING CONDITIONS (1 OF 2)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

SHEET
6 OF 55

CON-2020-XXX

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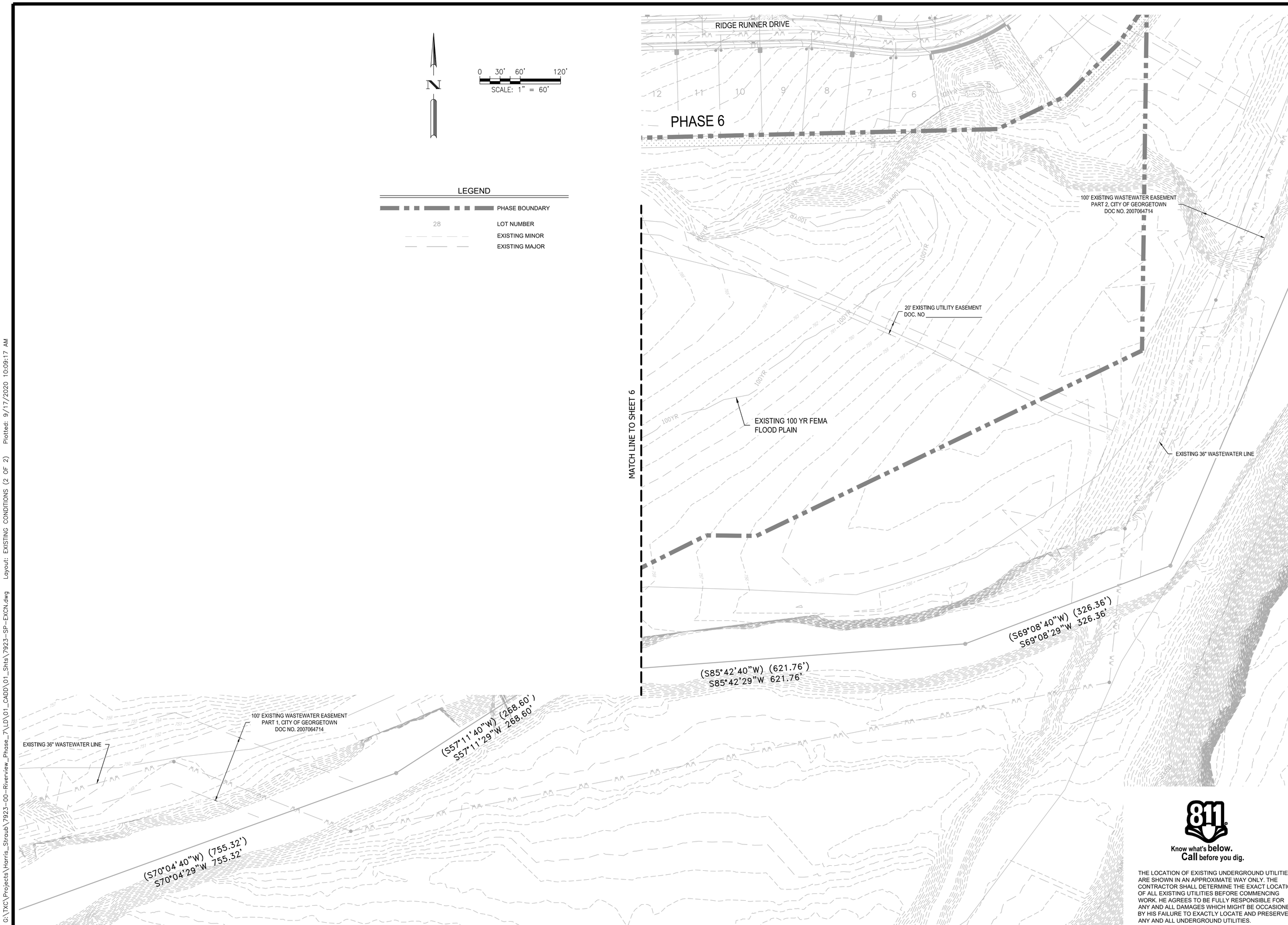

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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

EXISTING CONDITIONS (2 OF 2)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/17/20

SHEET
7 OF 55

CON-2020-XXX

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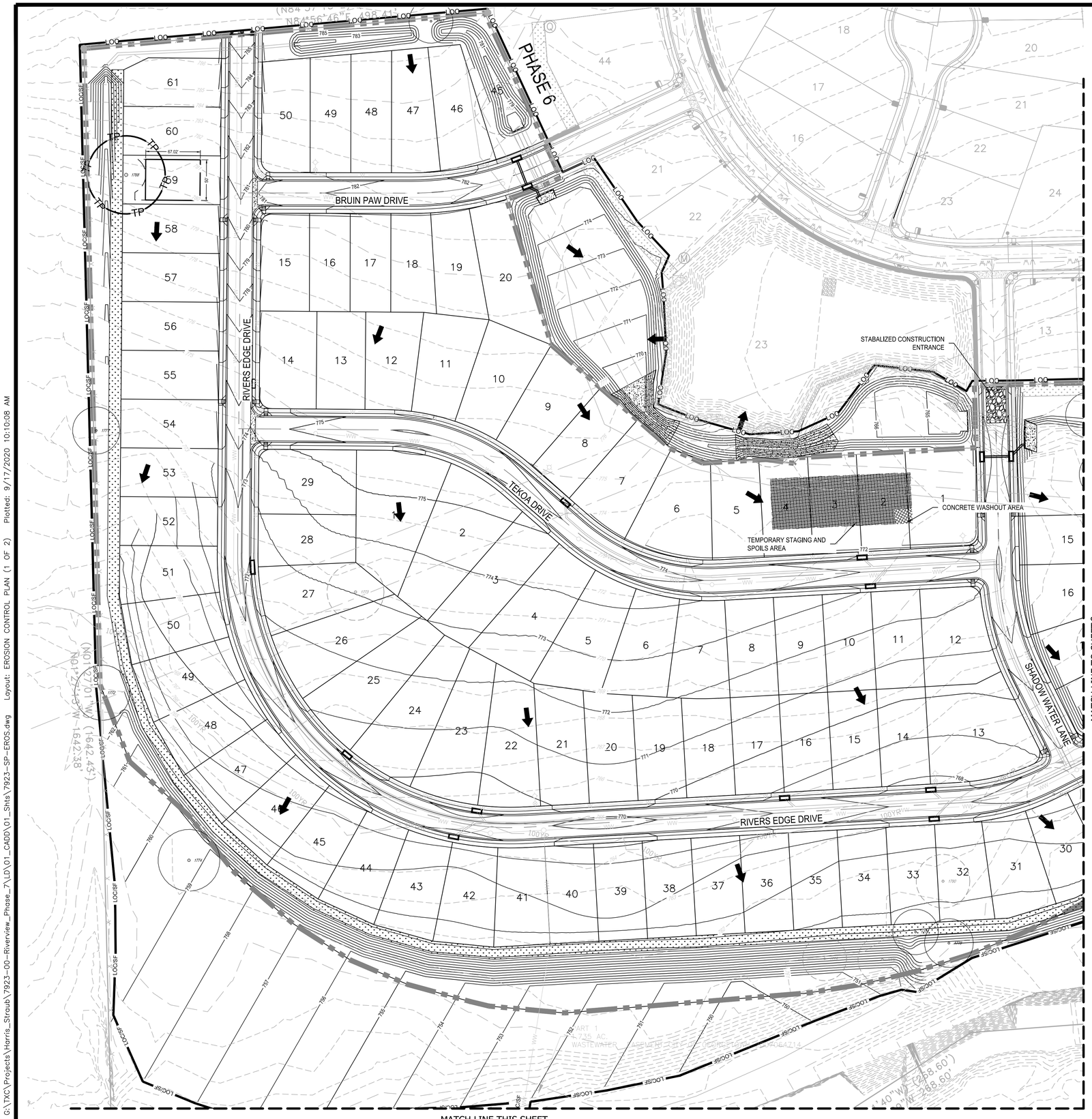

TREE MITIGATION LIST				
TAG NO.	CLASSIFICATION	DESCRIPTION	REMOVED	IN REMOVED
1767	HERITAGE TREE	LIVE OAK 27	NO	-
1768	HERITAGE TREE	LIVE OAK 22 20 15 12 5	NO	-
1770	HERITAGE TREE	LIVE OAK 22 20	YES	32
1771	HERITAGE TREE	LIVE OAK 23 11	NO	-
1772	HERITAGE TREE	ELM 16 15 11 10	NO	-
1773	HERITAGE TREE	PECAN 15 15 14 11	YES	35
1774	HERITAGE TREE	PECAN 38	NO	-
1775	HERITAGE TREE	SPANISH OAK 27	YES	27
1776	HERITAGE TREE	SPANISH OAK 18 17 7	YES	30
1777	HERITAGE TREE	PECAN 19 18	NO	-
1778	HERITAGE TREE	SPANISH OAK 30	NO	-
1779	HERITAGE TREE	PECAN 19 16 12	YES	33
1780	HERITAGE TREE	ELM 16 15 10 8	YES	33
1781	HERITAGE TREE	LIVE OAK 18 16 9	YES	31
1782	HERITAGE TREE	ELM 36 8	YES	40
1783	HERITAGE TREE	LIVE OAK 18 15 7	NO	-
1784	HERITAGE TREE	LIVE OAK 14 14 11	YES	27
1785	HERITAGE TREE	SPANISH OAK 14 11 9 7	NO	-
1786	HERITAGE TREE	LIVE OAK 20 15 - DISTRESSED	NO	-
		TOTAL INCHES REMOVED		261

MITIGATION RATIO PER UDC SEC 8.02.040 C1 -
3:1 INCH BASIS FOR TOTAL DIAMETER INCHES OF HERITAGE TREES REMOVED
TOTAL DIAMETER = 5' OF REMOVAL

N

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

LEGEND

- PHASE BOUNDARY
- LOC — LIMITS OF CONSTRUCTION
- LOC/SF — LIMITS OF CONSTRUCTION WITH SILT FENCE
- SF — SILT FENCE
- MS — MULCH SOCK
- DIVERSION DIKE
- INLET PROTECTION
- ROCK BERM
- DIRECTION OF FLOW
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT AREA
- SPOILS PILE
- XXX — TREE TO REMAIN
- XXX — TREE TO BE REMOVED
- XXX — EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- XXX — NEW/DEVELOPED MAJOR CONTOURS
- NEW/DEVELOPED MINOR CONTOURS
- TREE WELL & TREE PROTECTION
- UTILITY EASEMENT

NOTES:

1. J HOOKS REQUIRED FOR THE SILT FENCE IN AREA WHERE FLOW IS CONCURRENT WITH FENCE PLACEMENT. SILT FENCES ARE TO BE INSTALLED PARALLEL TO CONTOUR LINES TO INTERCEPT SHEET FLOW ONLY. THEY ARE NOT INTENDED TO INTERCEPT CONCENTRATED FLOWS OR SET PERPENDICULAR TO CONTOURS.
2. THERE ARE NO PROTECTED TREES ON THIS SITE.

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AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS
EROSION CONTROL PLAN (1 OF 2)

STATE OF TEXAS
RICHARD L RYCHLIK JR
123927
LICENSED PROFESSIONAL ENGINEER
9/17/20

SHEET 8 OF 55

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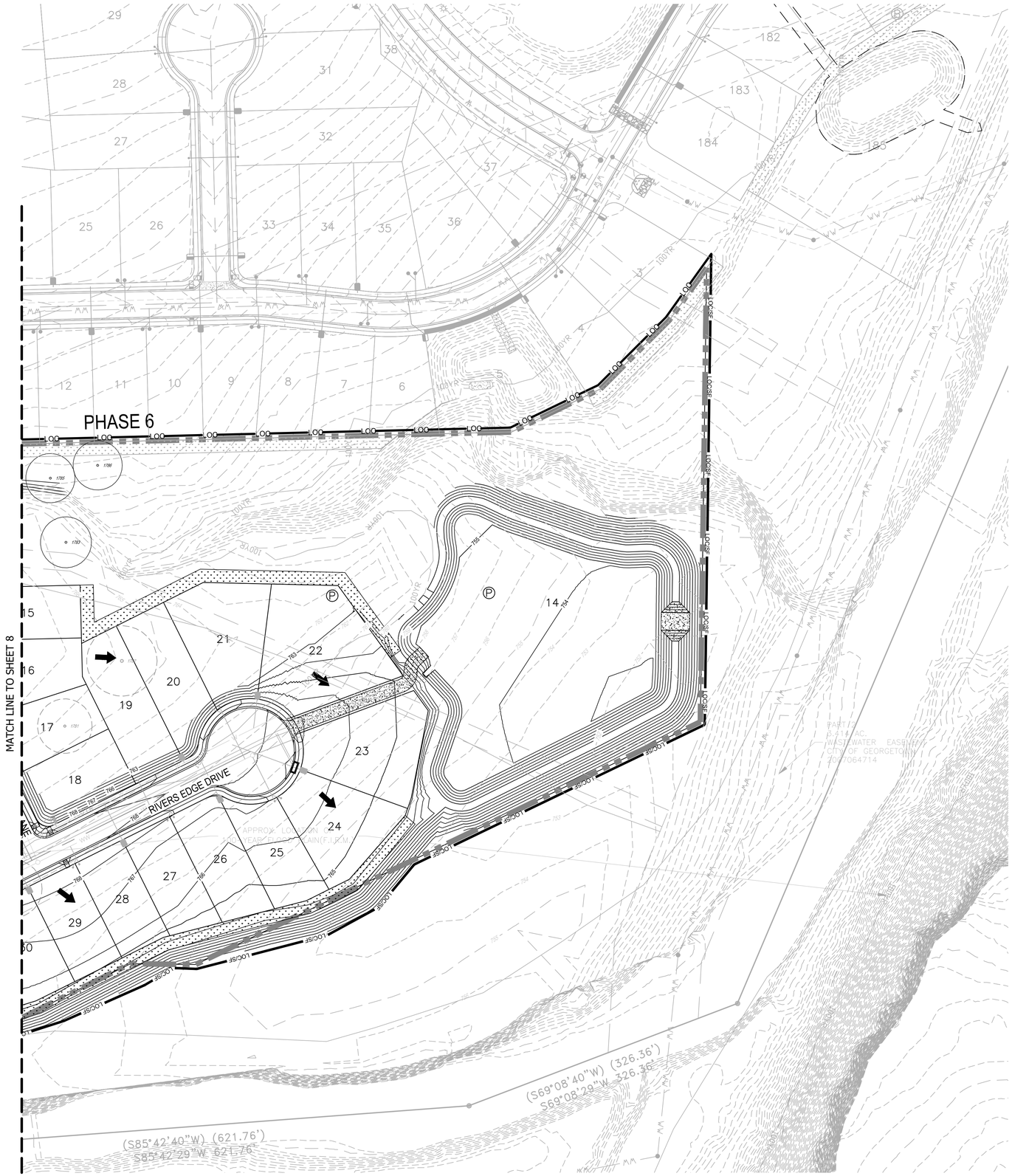

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0 30' 60' 120'

SCALE: 1" = 60'

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1773	HERITAGE TREE	PECAN 15 15 14 11	YES	35
1774	HERITAGE TREE	PECAN 38	NO	-
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1777	HERITAGE TREE	PECAN 19 18	NO	-
1778	HERITAGE TREE	SPANISH OAK 30	NO	-
1779	HERITAGE TREE	PECAN 19 16 12	YES	33
1780	HERITAGE TREE	ELM 16 15 10 8	YES	33
1781	HERITAGE TREE	LIVE OAK 18 16 9	YES	31
1782	HERITAGE TREE	ELM 36 8	YES	40
1783	HERITAGE TREE	LIVE OAK 18 15 7	NO	-
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DRAWN BY:

BGE
BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

EROSION CONTROL PLAN (2 OF 2)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/17/20

SHEET 9 OF 55

CON-2020-XXX

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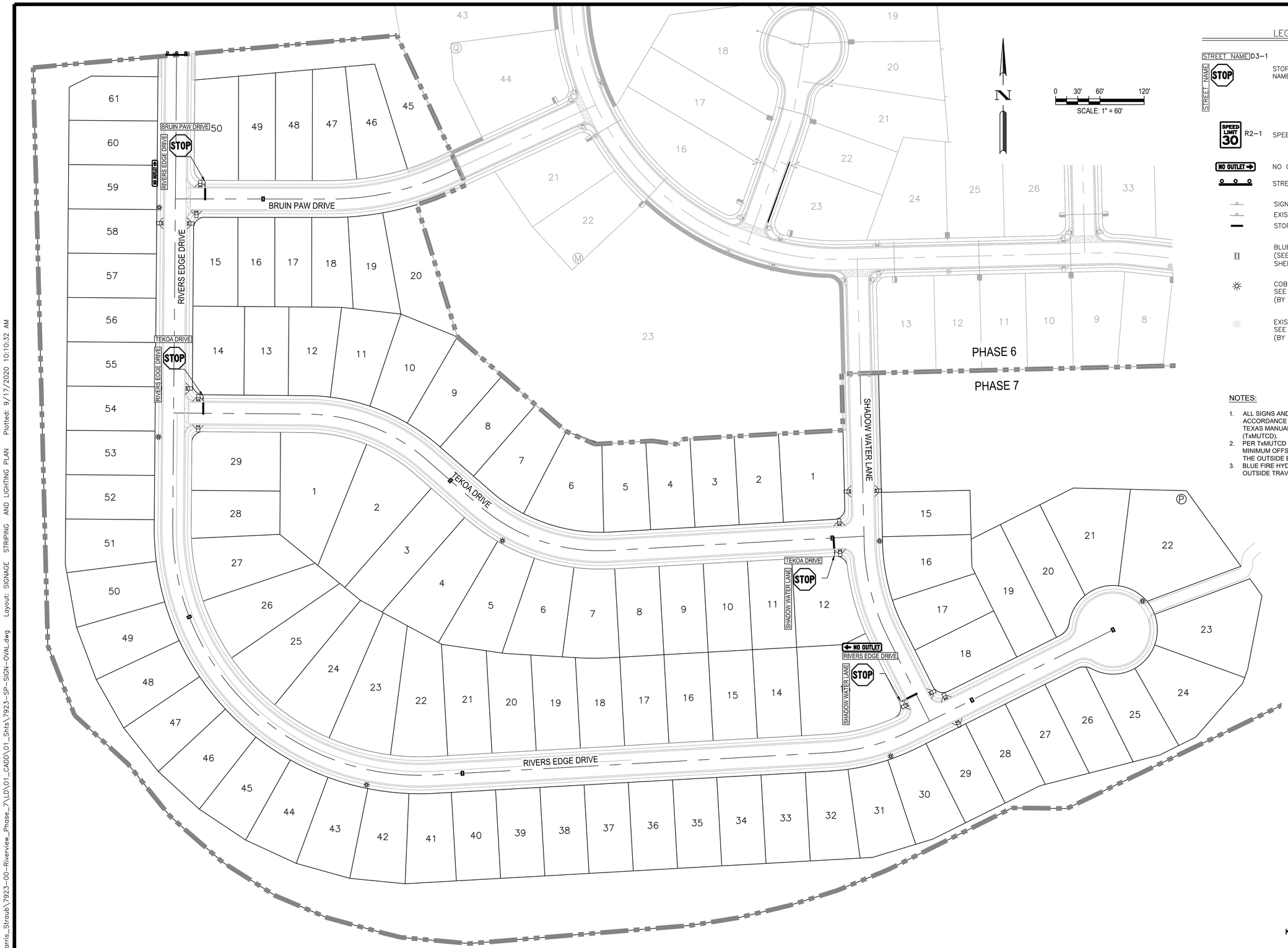

LEGEND

STREET NAME D3-1 — STOP SIGN W/ STREET NAME SIGNS

SPEED LIMIT 30 R2-1 — SPEED LIMIT SIGN

NO OUTLET — NO OUTLET

STREET END BARRICADE

SIGN

EXISTING SIGN

STOP BAR

BLUE FIRE HYDRANT DELINEATOR (SEE NOTE 6 ON DETAIL W10, SHEET 46)

COBRA HEAD STREET LIGHT SEE DETAIL ON SHEET 56 (BY GEORGETOWN UTILITY SYSTEMS)

EXISTING COBRA HEAD STREET LIGHT SEE DETAIL ON SHEET 56 (BY GEORGETOWN UTILITY SYSTEMS)

NOTES:

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC DEVICES (TxMUTCD).
2. PER TxMUTCD REQUIREMENTS, THERE MUST BE A 2' MINIMUM OFFSET BETWEEN THE FACE OF CURB AND THE OUTSIDE EDGE OF SIGNS.
3. BLUE FIRE HYDRANT DELINEATORS TO BE PLACED IN OUTSIDE TRAVEL LANE, 3' FROM LIP OF GUTTER.

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TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

SIGNAGE, STRIPING, AND LIGHTING PLAN

STATE OF TEXAS — RICHARD L RYCHLIK JR — 123927 — LICENSED PROFESSIONAL ENGINEER — 9/16/20

SHEET 10 OF 55

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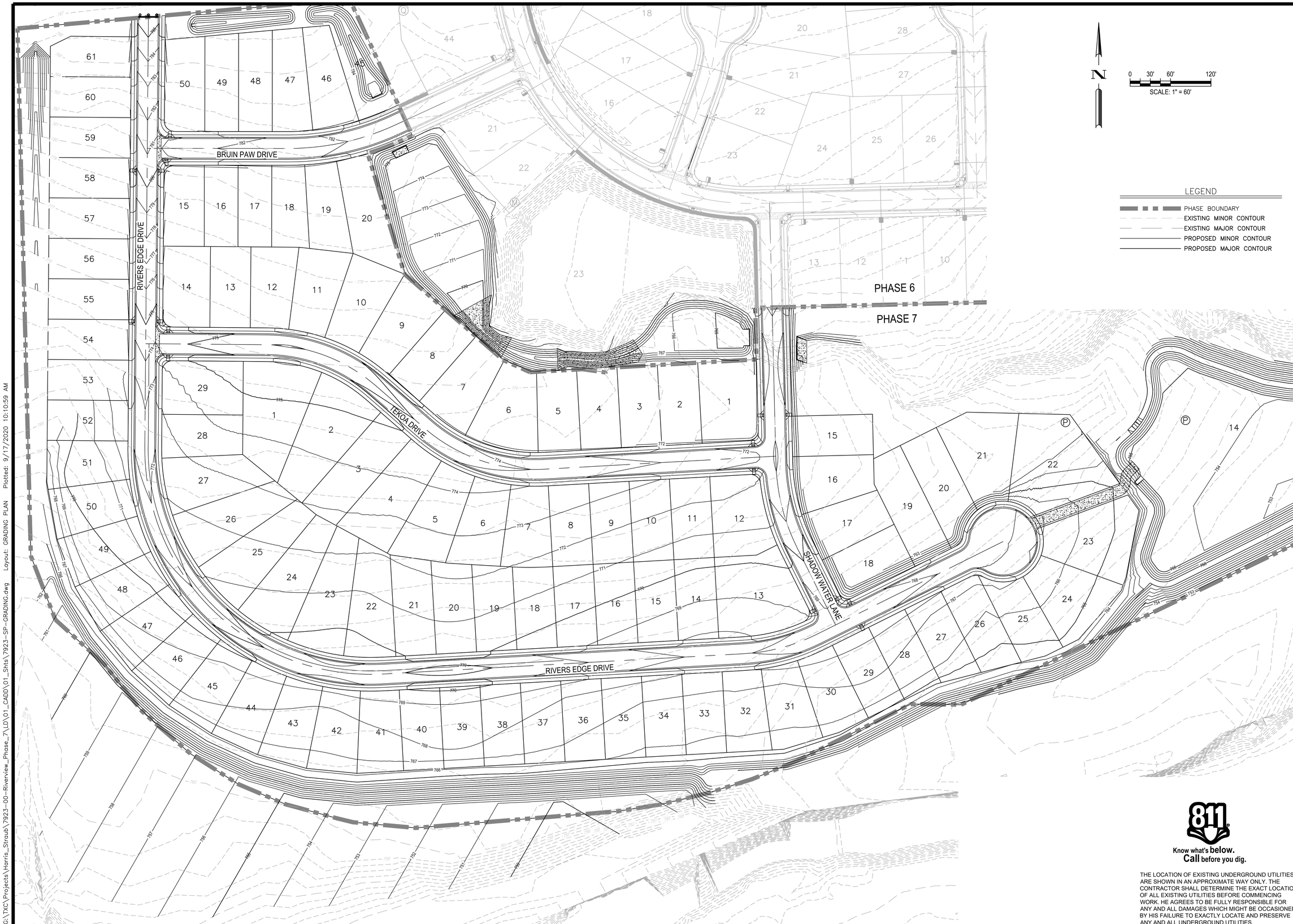

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TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

GRADING PLAN

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/17/20

SHEET
11 OF 55

CON-2020-XXX

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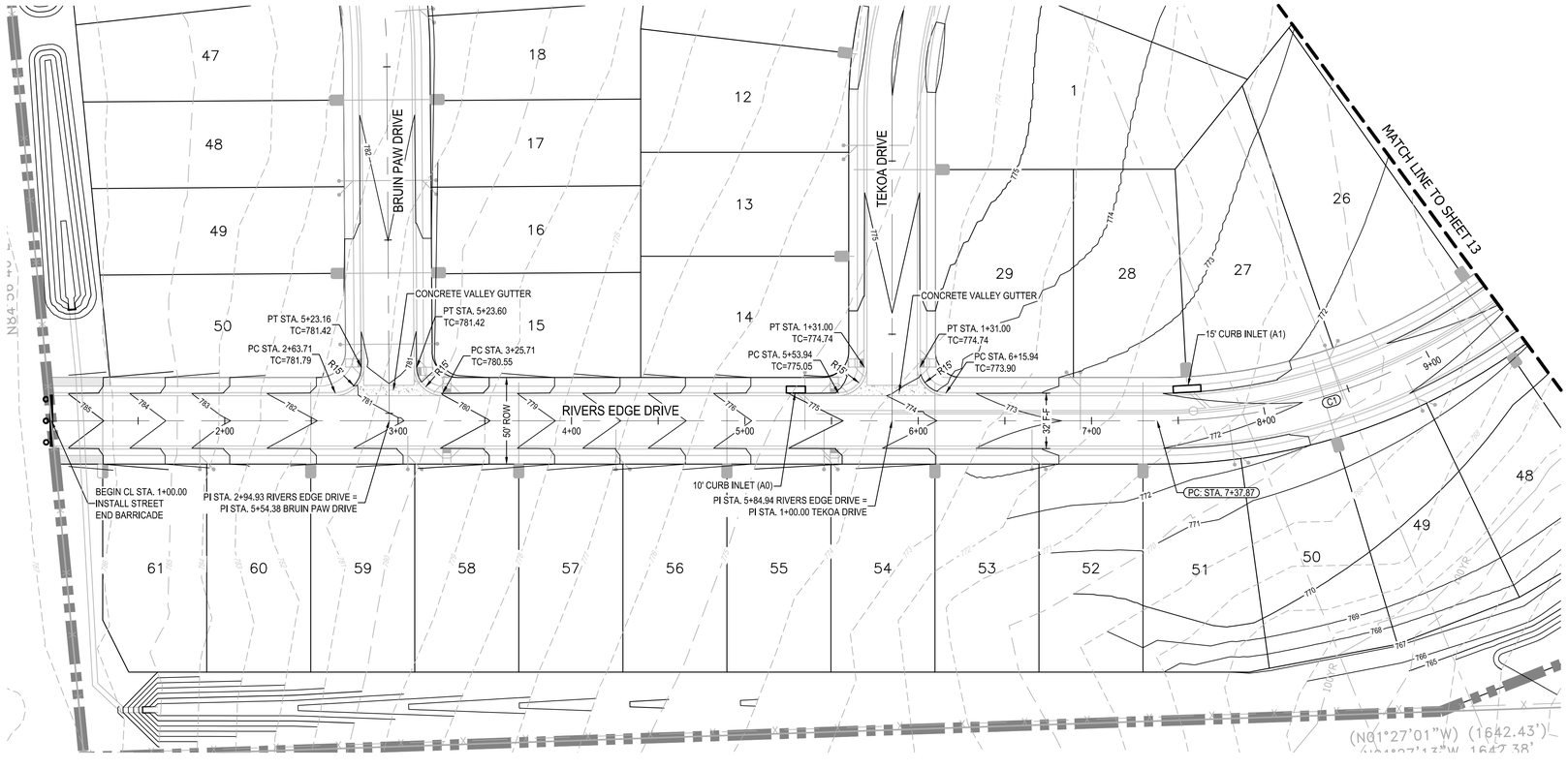

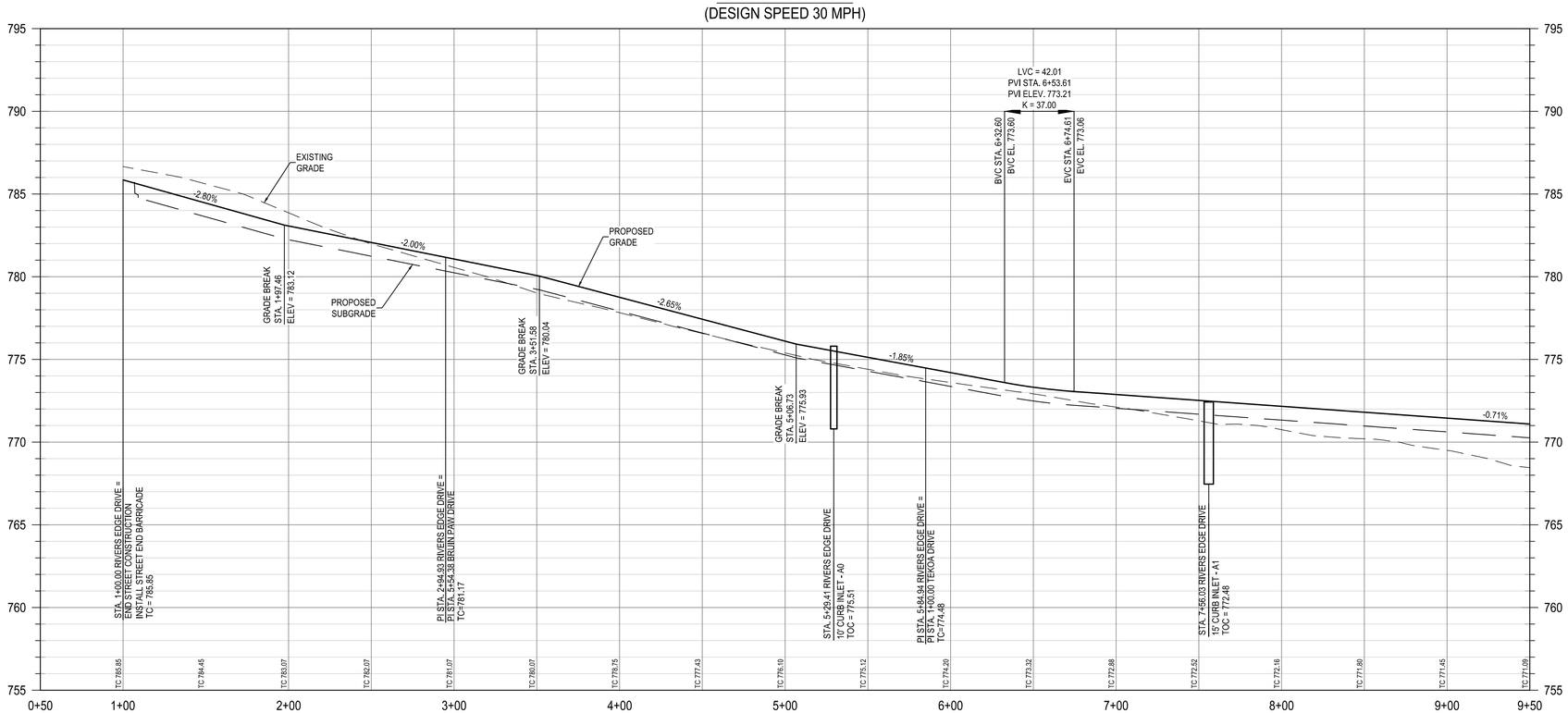

SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- 28 LOT NUMBER
- CURB AND GUTTER
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY BUILDER
- CURB RAMP
- CONCRETE VALLEY GUTTER

NOTES:

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3. SIDEWALKS ADJACENT TO PUBLIC SPACES AND HIKE AND BIKE TRAILS ARE TO BE CONSTRUCTED WITH THESE SUBDIVISION IMPROVEMENTS AS NOTED BY SHADING.
4. TYPE 1 RAMPS ARE TO BE CONSTRUCTED WITH THESE SUBDIVISION IMPROVEMENTS AT INTERSECTIONS AS SHOWN.
5. ALL DIMENSIONS ARE FACE OF CURB UNLESS OTHERS NOTED.

PROFILE LEGEND

- TOP OF CURB
- SUBGRADE
- EXISTING GRADE
- CURB INLET

Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C1	93°42'14"	335.00'	547.87'	S46° 22' 28.13"E	488.82'

Know what's **below.**
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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

RIVERS EDGE DRIVE STA. 1+00 - 9+50

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET 12 OF 55

CON-2020-XXX

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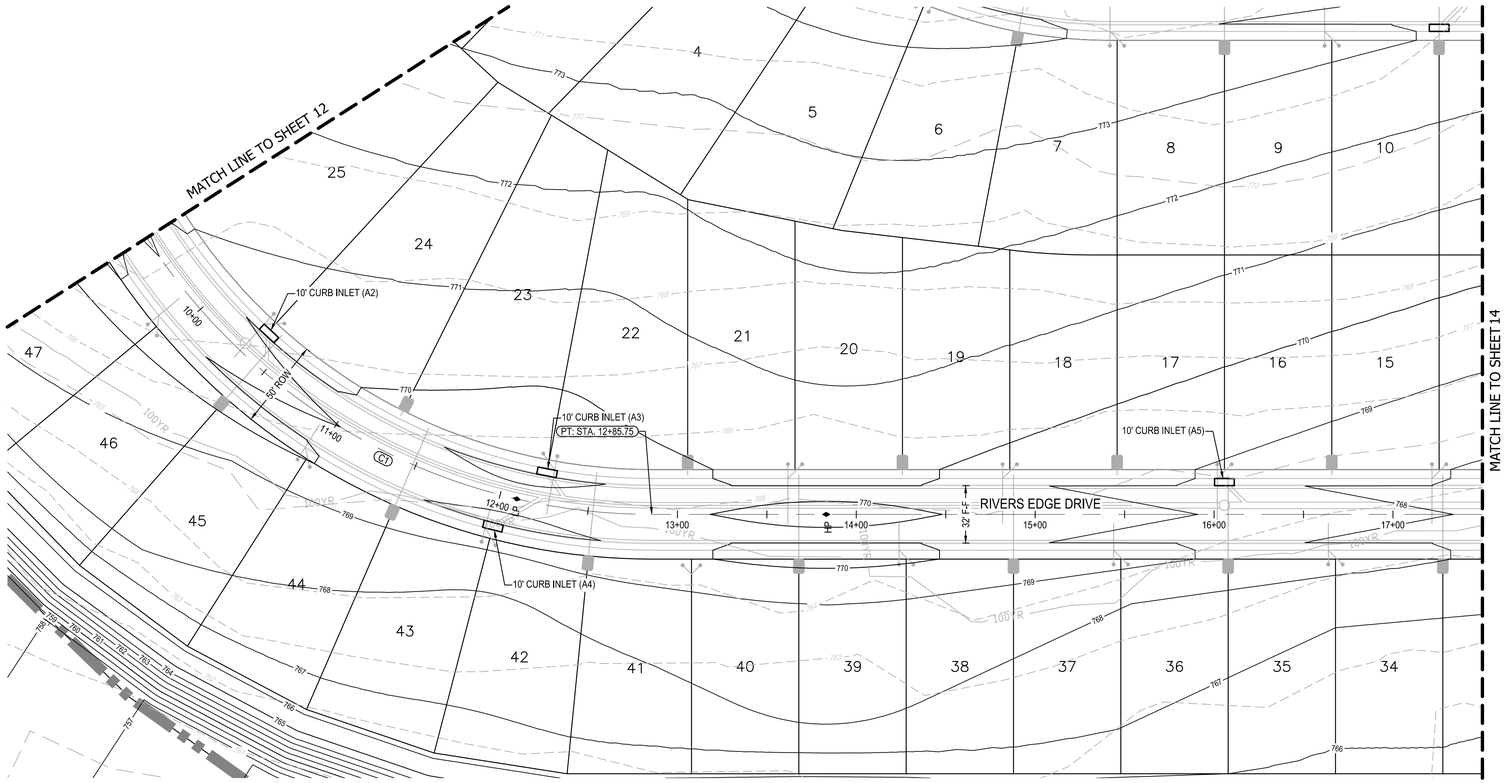
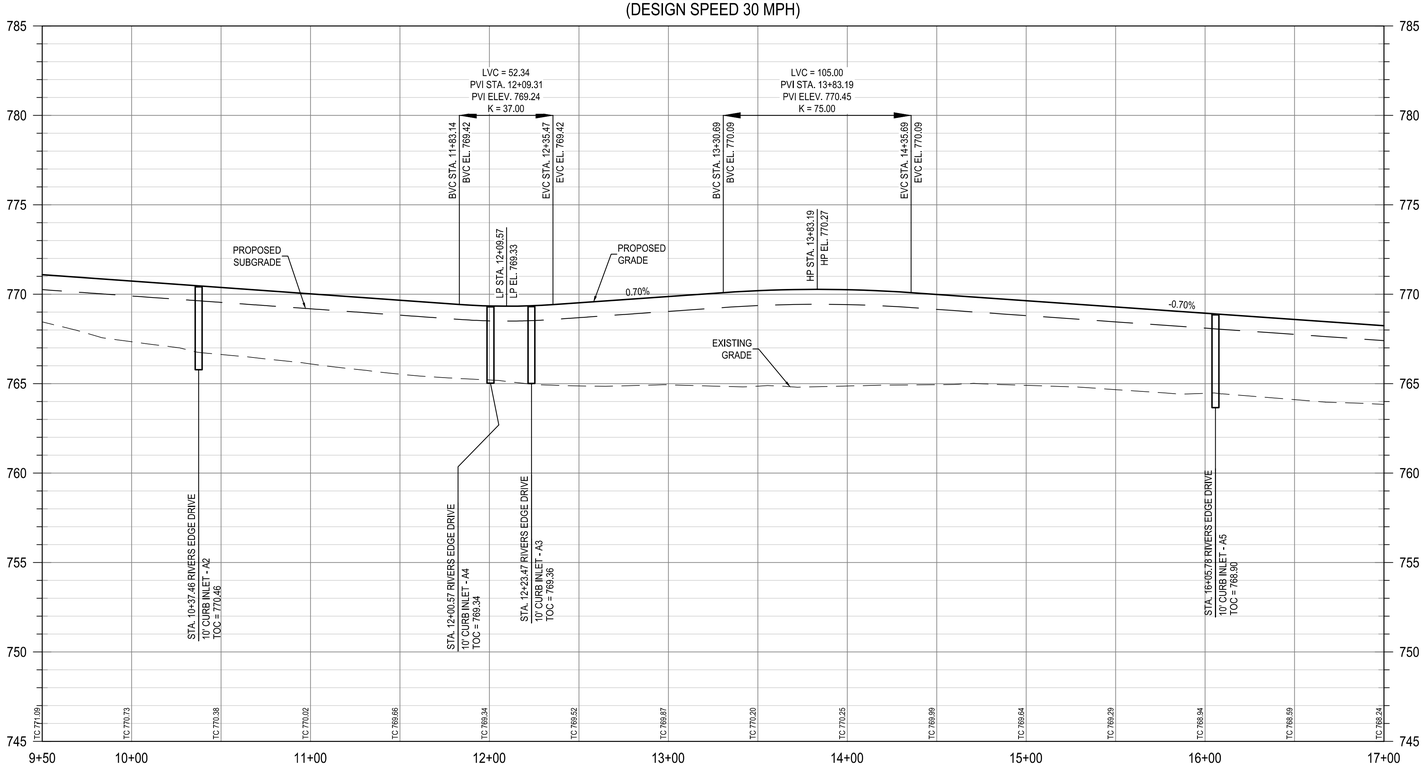


RIVERS EDGE DRIVE
(DESIGN SPEED 30 MPH)



N

0 20' 40' 80'
SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- 28 LOT NUMBER
- CURB AND GUTTER
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

RIVERS EDGE DRIVE STA. 9+50 - 17+50

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET
13 OF 55

CON-2020-XXX

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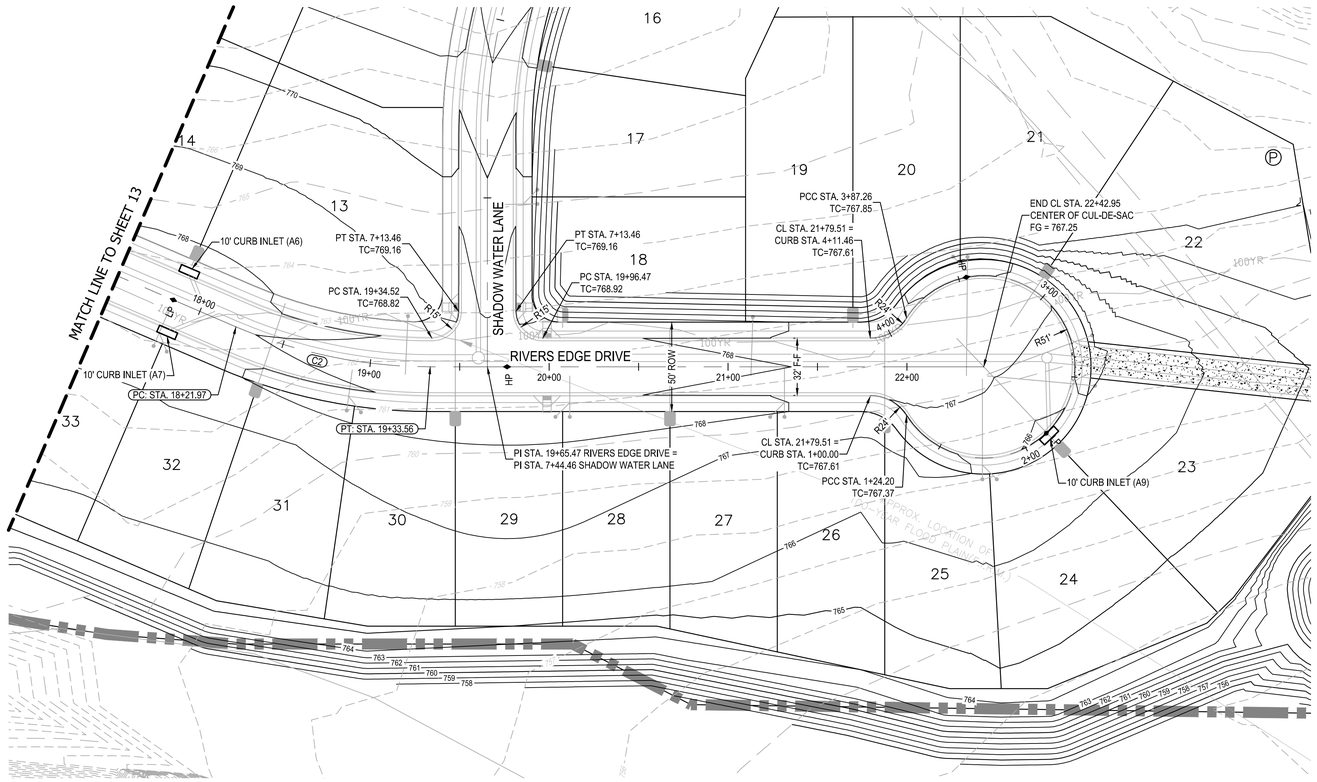

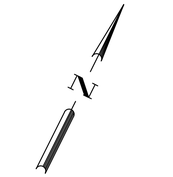

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- PHASE BOUNDARY
- 28 LOT NUMBER
- CURB AND GUTTER
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
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- CURB RAMP
- CONCRETE VALLEY GUTTER

Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C2	23°15'01"	275.00'	111.59'	N75° 08' 54.65"E	110.83'

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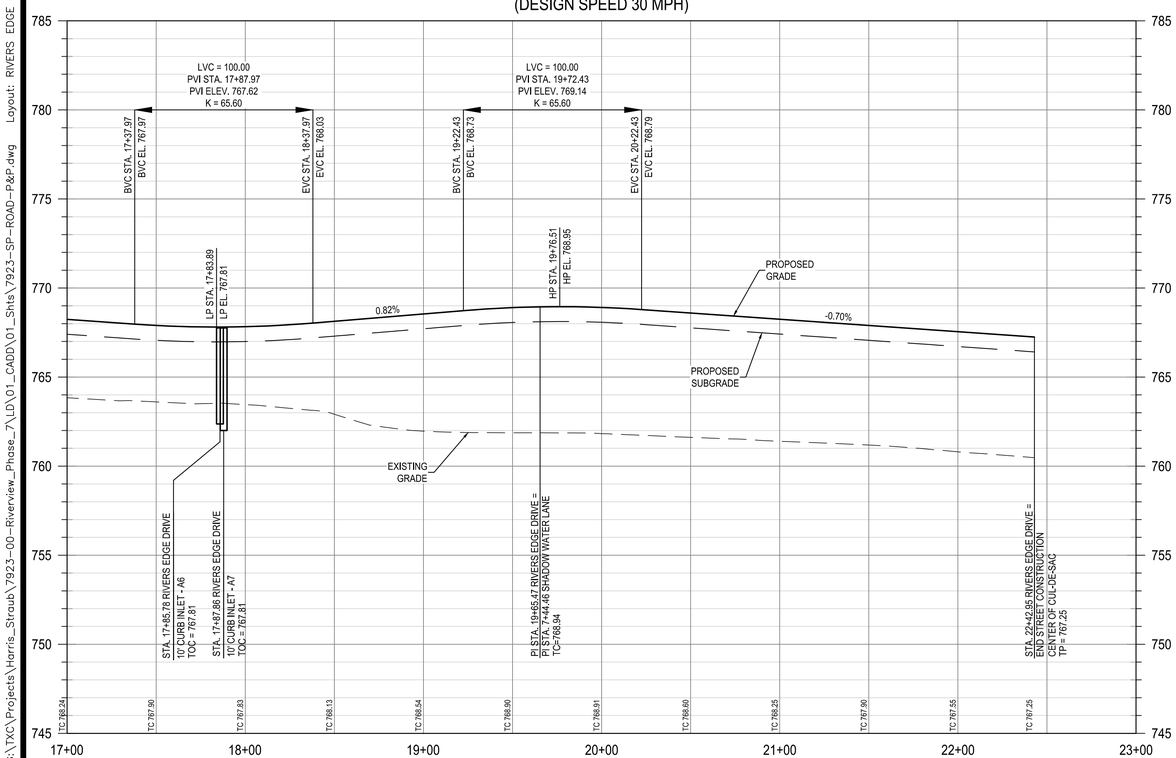
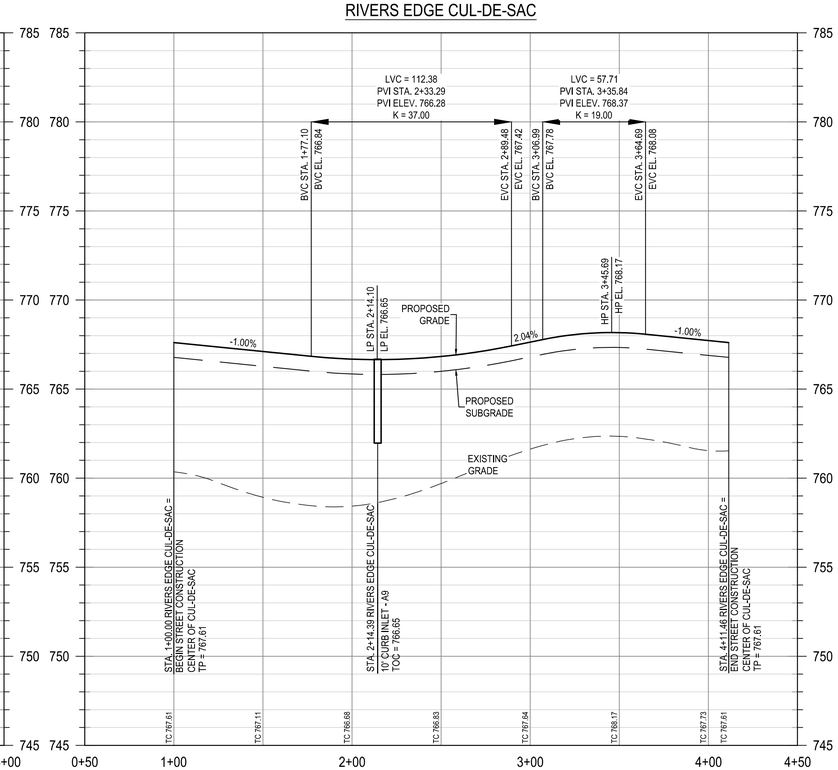
4. TYPE 1 RAMPS ARE TO BE CONSTRUCTED WITH THESE SUBDIVISION IMPROVEMENTS AT INTERSECTIONS AS SHOWN.
5. ALL DIMENSIONS ARE FACE OF CURB UNLESS OTHERS NOTED.

RIVERS EDGE DRIVE
(DESIGN SPEED 30 MPH)



RIVERS EDGE CUL-DE-SAC



PROFILE LEGEND

- TOP OF CURB
- SUBGRADE
- EXISTING GRADE
- CURB INLET

Know what's **below.**
Call before you dig.

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

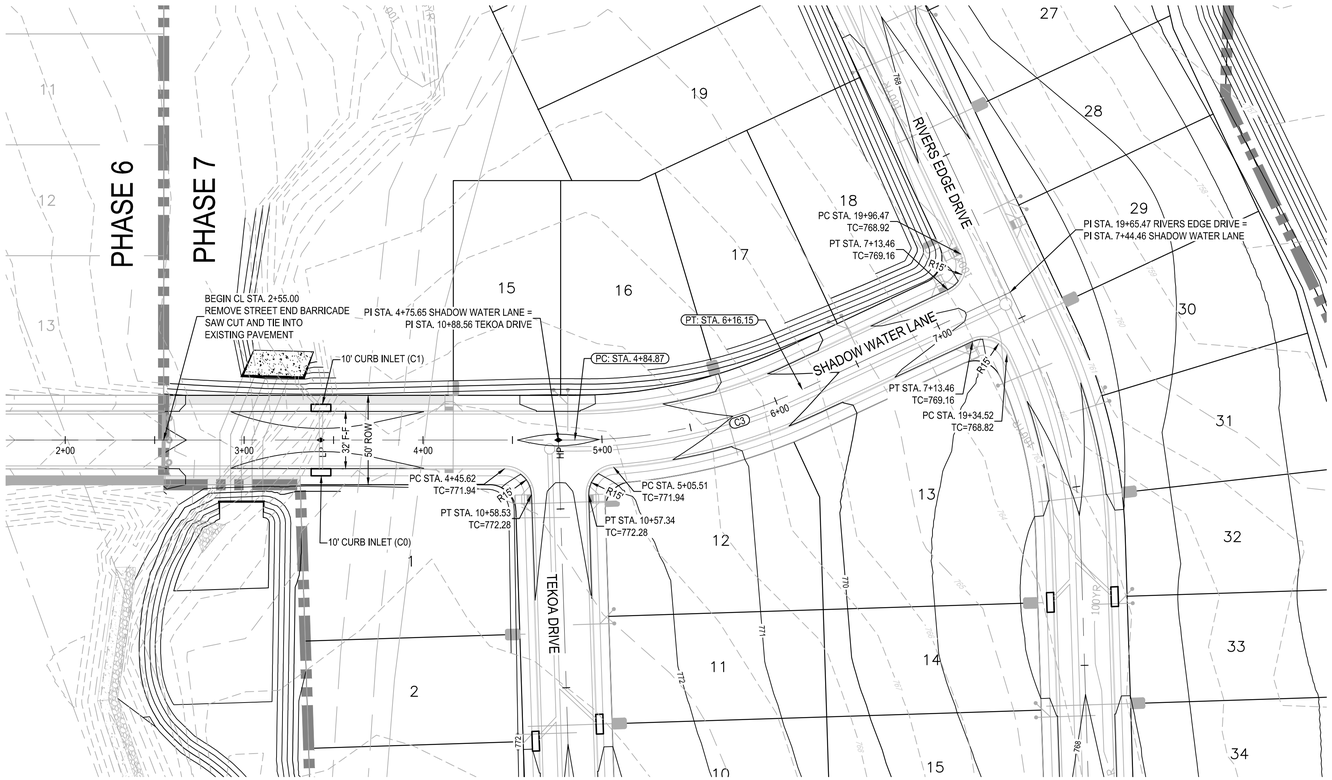
RIVERS EDGE DRIVE STA. 17+50 - END

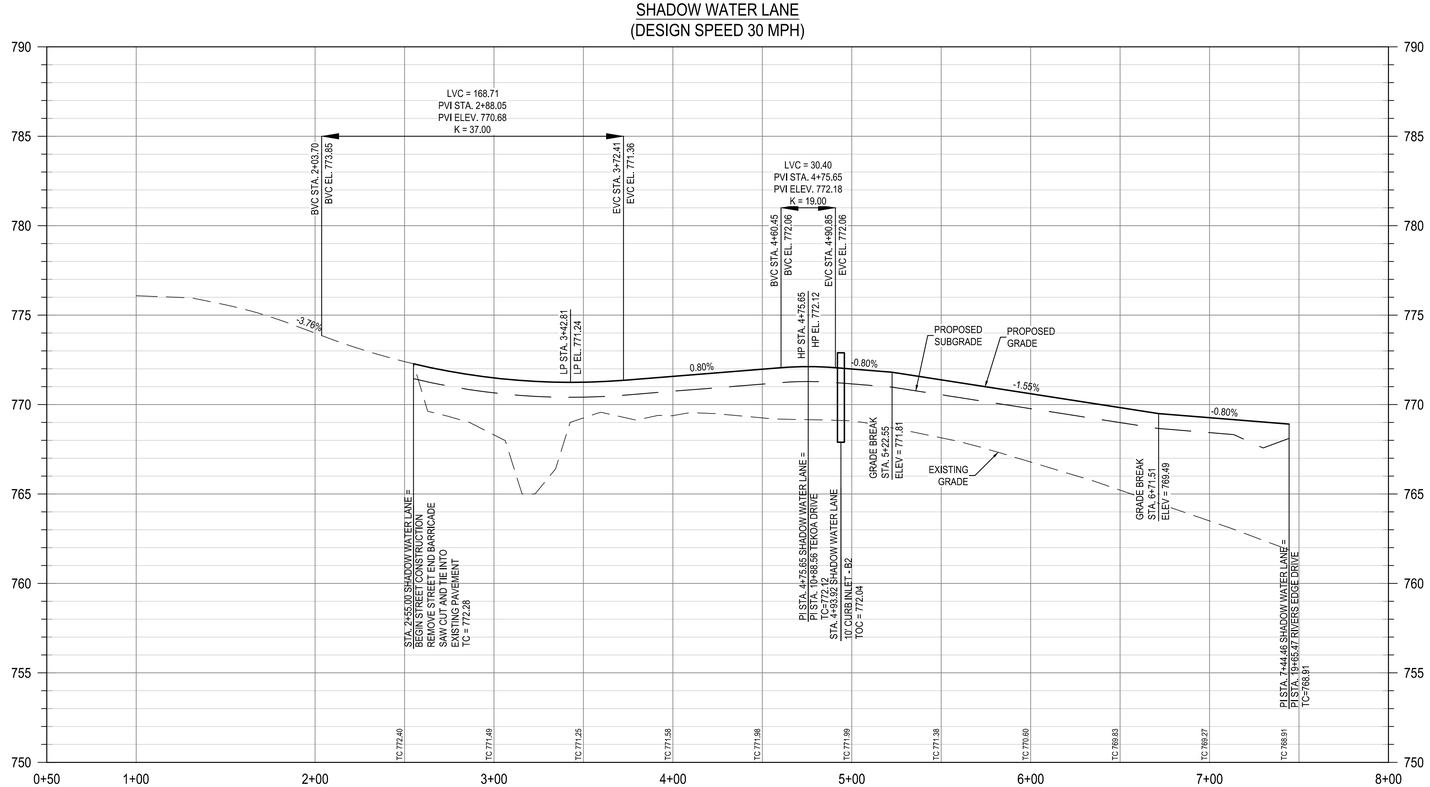
STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

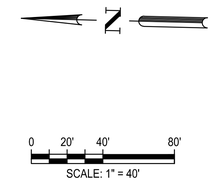
SHEET
14 OF 55

CON-2020-XXX

G:\TXCI\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-ROAD-P&P.dwg Layout: RIVERS EDGE DRIVE STA. 17+50 - END Plotted: 9/17/2020 10:12:33 AM







LEGEND

- PHASE BOUNDARY
- 28 LOT NUMBER
- CURB AND GUTTER
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY BUILDER
- CURB RAMP
- CONCRETE VALLEY GUTTER

NOTES:

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PROFILE LEGEND

- TOP OF CURB
- SUBGRADE
- EXISTING GRADE
- CURB INLET

Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C3	25°04'21"	300.00'	131.28'	S13° 56' 25.25"E	130.23'

811
Know what's **below.**
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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE
BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

SHADOW WATER LANE 1+66.81 - END

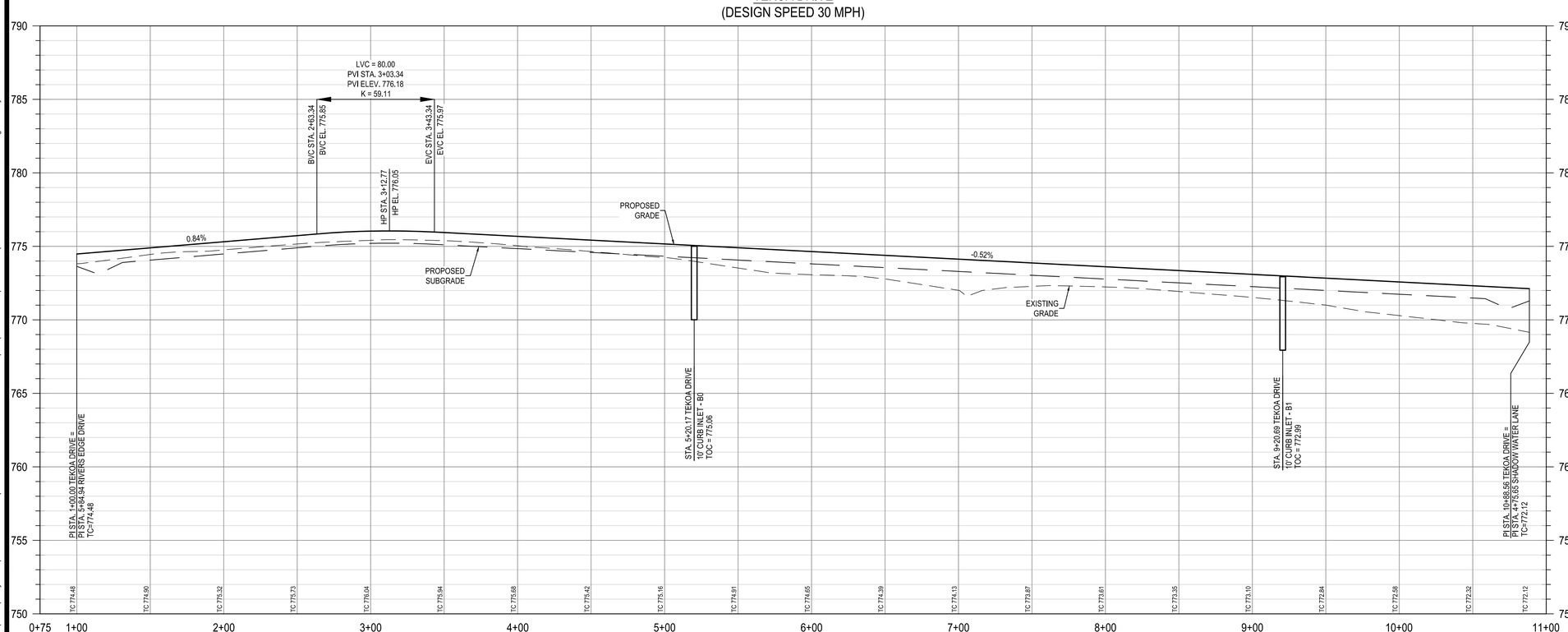
STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET
15 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-ROAD-P&P.dwg Layout: SHADOW WATER LANE 1+66.81 - END Plotted: 9/17/2020 10:12:45 AM

Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C4	40°35'45"	250.00'	177.13'	S69° 13' 28.93"E	173.45'
C5	44°17'58"	250.00'	193.29'	S71° 04' 35.83"E	188.51'



N

0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- 28 LOT NUMBER
- CURB AND GUTTER
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY BUILDER
- CURB RAMP
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DESIGNED BY:

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DRAWN BY:

BGE, Inc.
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

TEKOA DRIVE STA. 1+00 - END

STATE OF TEXAS
RICHARD L RYCHLIK JR
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET 16 OF 55

CON-2020-XXX

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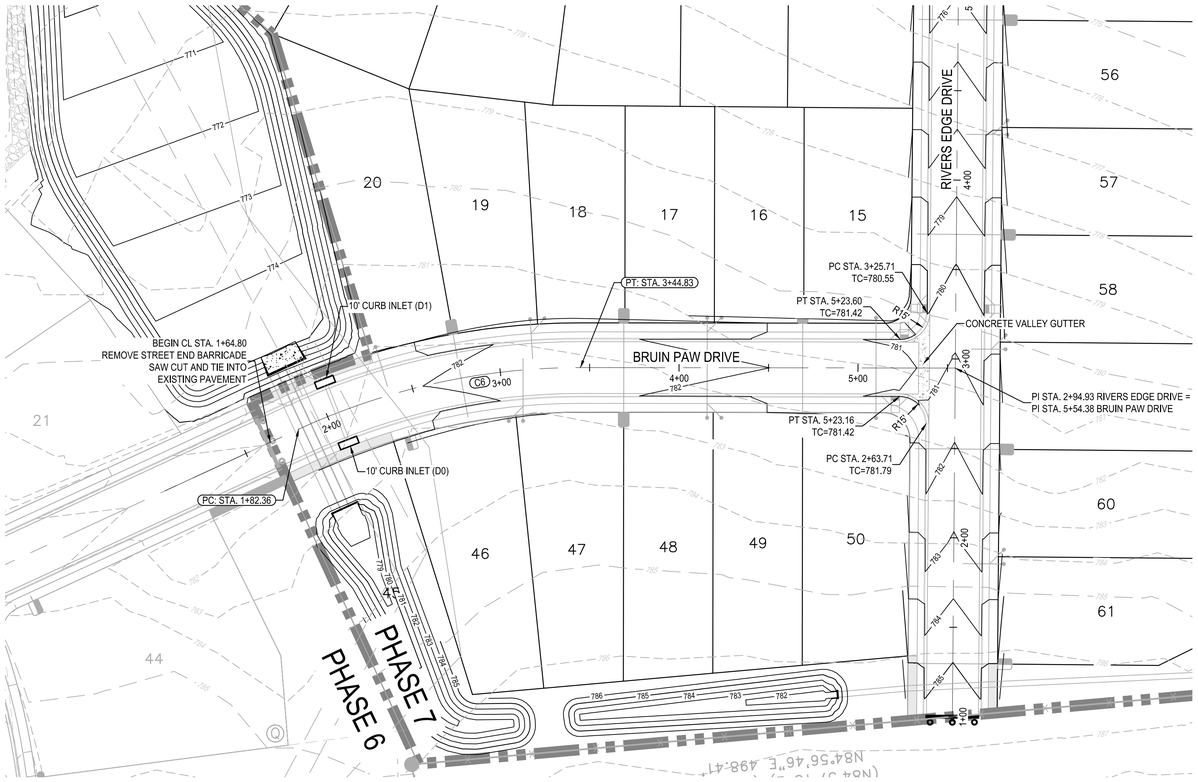

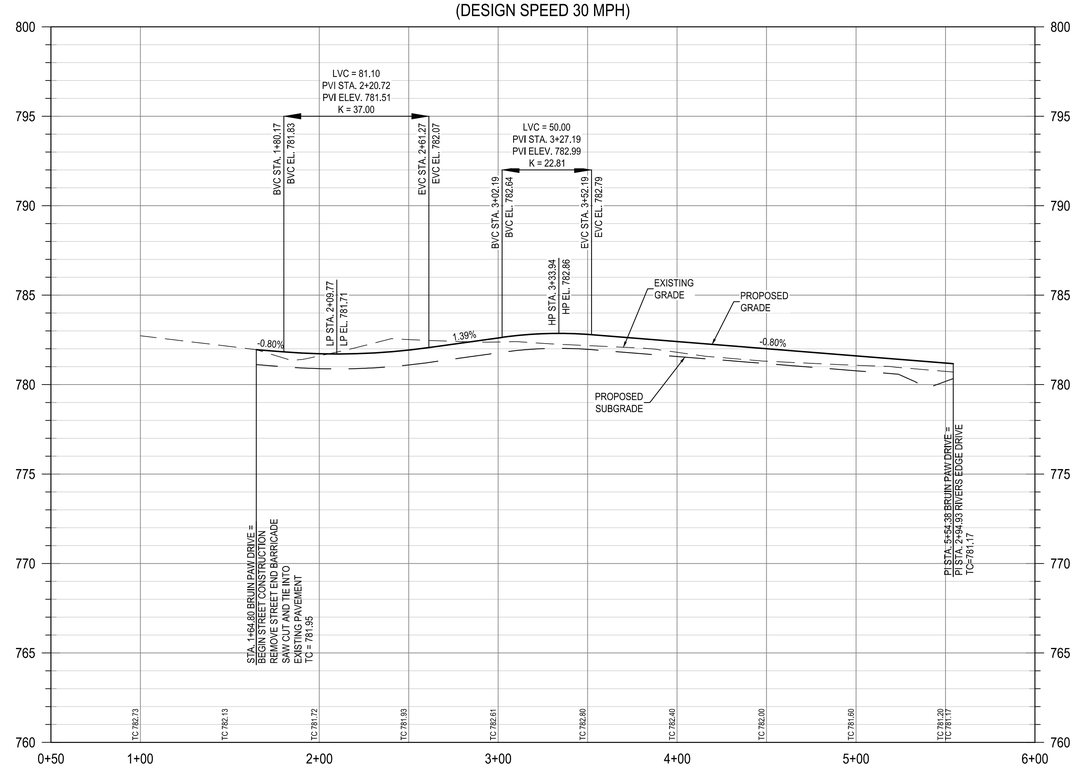

N

0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- 28 LOT NUMBER
- CURB AND GUTTER
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
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PROFILE LEGEND

- TOP OF CURB
- SUBGRADE
- EXISTING GRADE
- CURB INLET

Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C6	24°49'27"	375.00'	162.47'	S77° 39' 23.79"W	161.21'

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TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

BRUIN PAW DRIVE STA. 1+00 - END

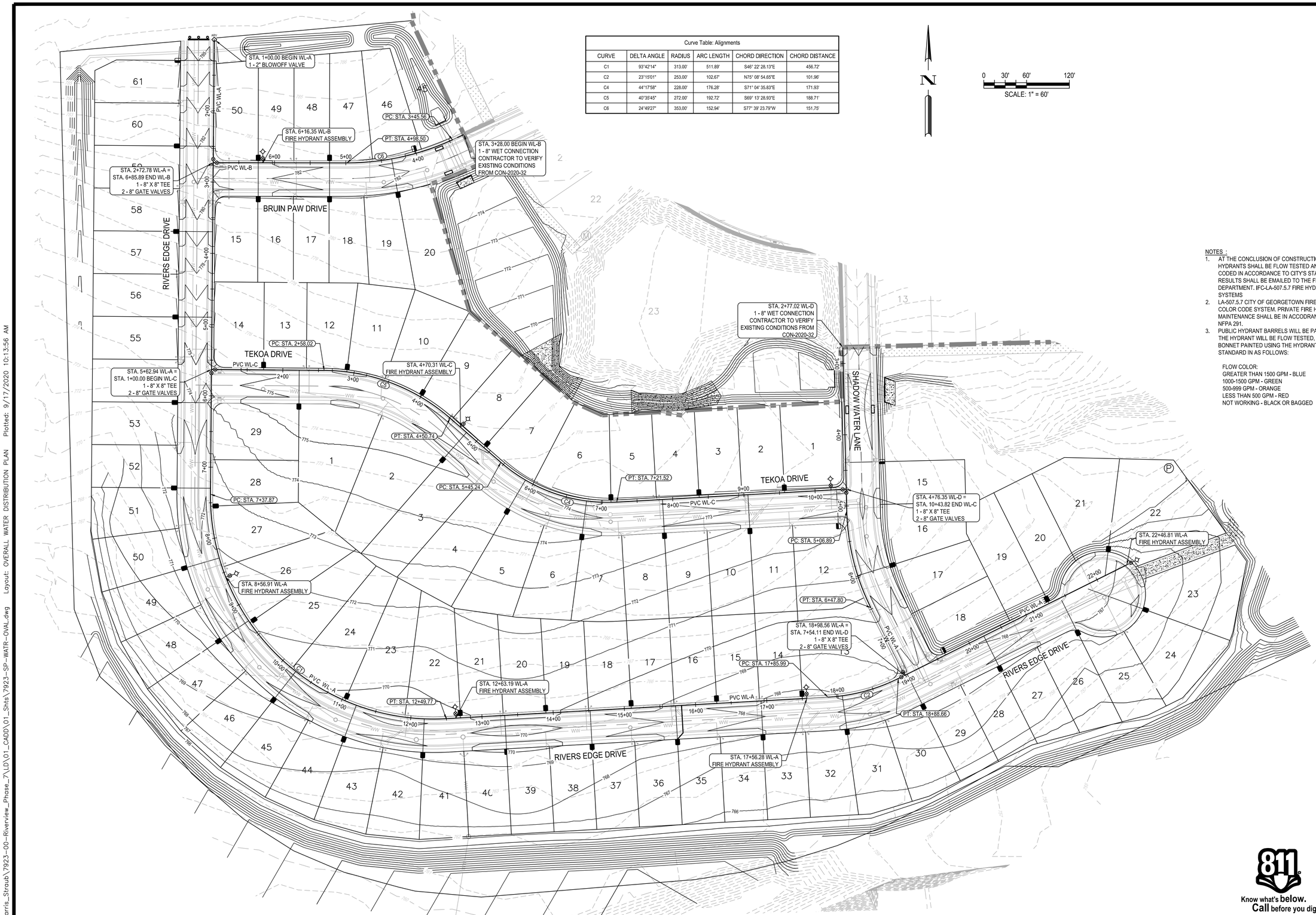
STATE OF TEXAS
RICHARD L RYCHLIK JR
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

SHEET
17 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-ROAD-P&P.dwg Layout: BRUIN PAW DRIVE STA. 1+00 - END Plotted: 9/17/2020 10:13:09 AM

Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C1	93°42'14"	313.00'	511.89'	S46° 22' 28.13"E	456.72'
C2	23°15'01"	253.00'	102.67'	N75° 08' 54.65"E	101.96'
C4	44°17'58"	228.00'	176.28'	S71° 04' 35.83"E	171.93'
C5	40°35'45"	272.00'	192.72'	S69° 13' 28.93"E	188.71'
C6	24°49'27"	353.00'	152.94'	S77° 39' 23.79"W	151.75'



NOTES :

1. AT THE CONCLUSION OF CONSTRUCTION FIRE HYDRANTS SHALL BE FLOW TESTED AND COLOR CODED IN ACCORDANCE TO CITY'S STANDARDS, AND RESULTS SHALL BE EMAILED TO THE FIRE DEPARTMENT. IFC-LA-507.5.7 FIRE HYDRANT SYSTEMS
2. LA-507.5.7 CITY OF GEORGETOWN FIRE HYDRANT COLOR CODE SYSTEM. PRIVATE FIRE HYDRANT MAINTENANCE SHALL BE IN ACCODRANCE WITH NFPA 291.
3. PUBLIC HYDRANT BARRELS WILL BE PAINTED SILVER, THE HYDRANT WILL BE FLOW TESTED, AND THE BONNET PAINTED USING THE HYDRANT FLOW STANDARD IN AS FOLLOWS:

FLOW COLOR:
GREATER THAN 1500 GPM - BLUE
1000-1500 GPM - GREEN
500-999 GPM - ORANGE
LESS THAN 500 GPM - RED
NOT WORKING - BLACK OR BAGGED

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DRAWN BY:

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101 W LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

OVERALL WATER DISTRIBUTION PLAN

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

SHEET
18 OF 55

CON-2020-XXX

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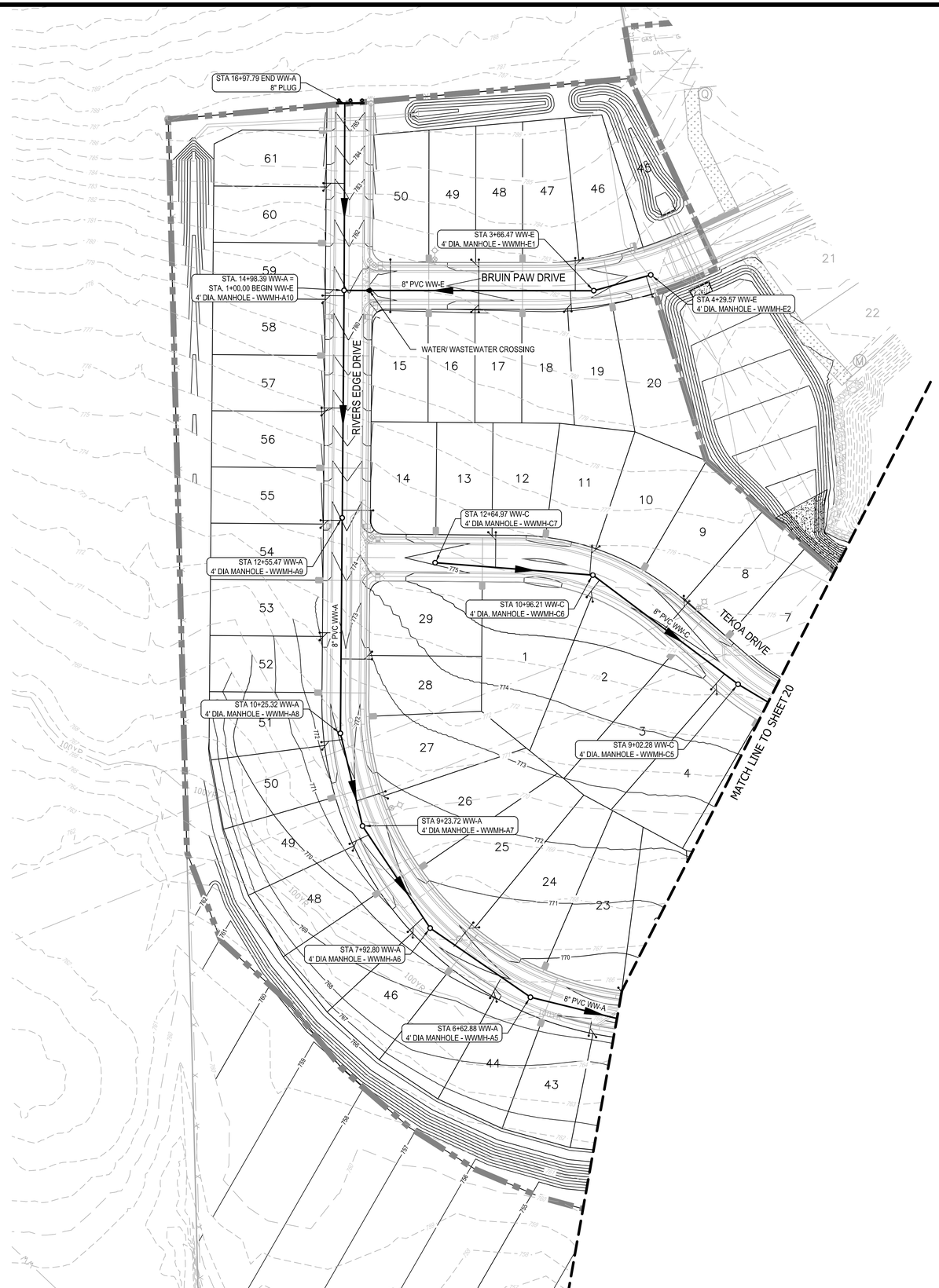

N

0 30' 60' 120'

SCALE: 1" = 60'

LEGEND

- PHASE BOUNDARY
- PLAT BOUNDARY
- SANITARY SEWER
- PROPOSED NEW MANHOLE
- DIRECTION OF FLOW
- PROPOSED SINGLE W.W. SERVICE CONN.
- PROPOSED DOUBLE W.W. SERVICE CONN.
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE
- UTILITY CROSSING

* ALL WASTEWATER SYMBOLS ARE NOT TO SCALE, AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES. REFER TO DETAILS SHOWN IN THIS PLAN SET.

NOTE:

1. MANHOLES LOCATED OUTSIDE OF PAVEMENT SHALL HAVE BOLTED AND GASKETED COVERS WITH RIM ELEVATIONS 6" MIN. ABOVE FINISHED GRADE.
2. CONTRACTOR SHALL FIELD LOCATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ANY PROPOSED UTILITY CONNECTION PRIOR TO CONSTRUCTION. NO CONNECTION OR MODIFICATION TO AN EXISTING UTILITY SHALL BE MADE WITHOUT THE PRESENCE OF A CITY OF GEORGETOWN REPRESENTATIVE.
3. FRANCHISE UTILITY NOTE: UTILITIES SUCH AS GAS, ELECTRIC, TELEPHONE, CABLE, ETC. MAY SHARE THE WASTEWATER SERVICE LINE TRENCH PROVIDED SUCH UTILITIES ARE OFFSET A MINIMUM OF 5' FROM THE WASTEWATER SERVICE LINE.
4. CONTRACTOR TO PLUG INFLUENT SIDE OF MANHOLE WHEN CORING INTO EXISTING MANHOLES. PUMP AROUNDS WILL NOT BE REQUIRED.
5. ALL CURVATURE SHALL BE ACCOMPLISHED BY THE MANUAL BENDING OF THE PIPE LENGTHS IN THE TRENCH. MECHANICAL MEANS WILL NOT BE ALLOWED TO ACCOMPLISH DESIGN RADII. NO DEFLECTION OF JOINTS WILL BE ALLOWED.

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BGE

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101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

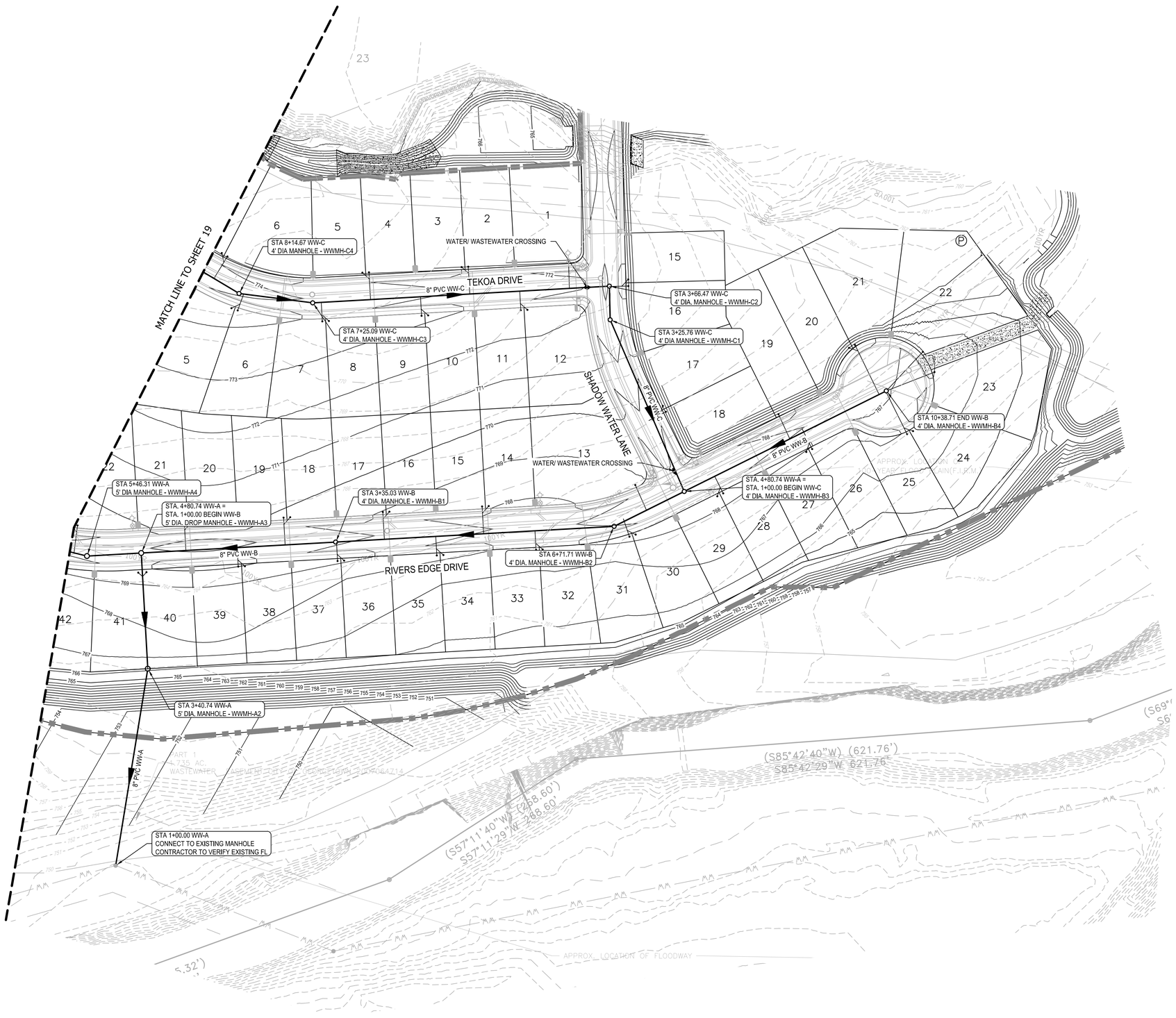
WASTEWATER PLAN OVERALL (1 OF 2)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET 19 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-SSWR-OVAL.dwg Layout: WASTEWATER PLAN OVERALL (1 OF 2) Plotted: 9/17/2020 10:14:43 AM



N

0 30' 60' 120'

SCALE: 1" = 60'

LEGEND

- PHASE BOUNDARY
- PLAT BOUNDARY
- SANITARY SEWER
- PROPOSED NEW MANHOLE
- DIRECTION OF FLOW
- PROPOSED SINGLE W.W. SERVICE CONN.
- PROPOSED DOUBLE W.W. SERVICE CONN.
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE
- UTILITY CROSSING

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REVIEWED BY:

DRAWN BY:

BGE

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

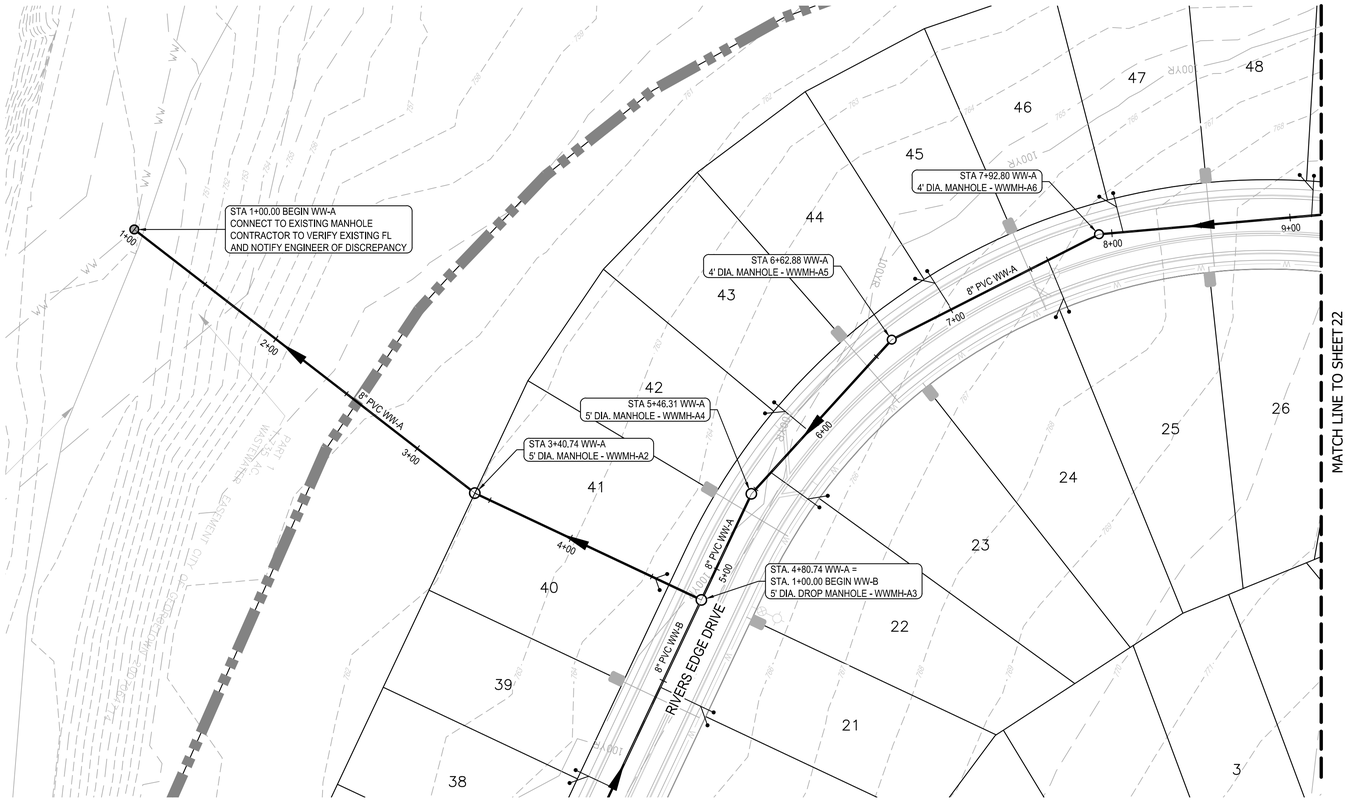
WASTEWATER PLAN OVERALL (2 OF 2)

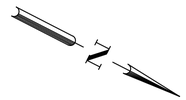
STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/17/20

SHEET
20 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-SSWR-OVAL.dwg Layout: WASTEWATER PLAN OVERALL (2 OF 2) Plotted: 9/17/2020 10:14:51 AM





0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- PLAT BOUNDARY
- SANITARY SEWER
- PROPOSED NEW MANHOLE
- DIRECTION OF FLOW
- PROPOSED SINGLE W.W. SERVICE CONN.
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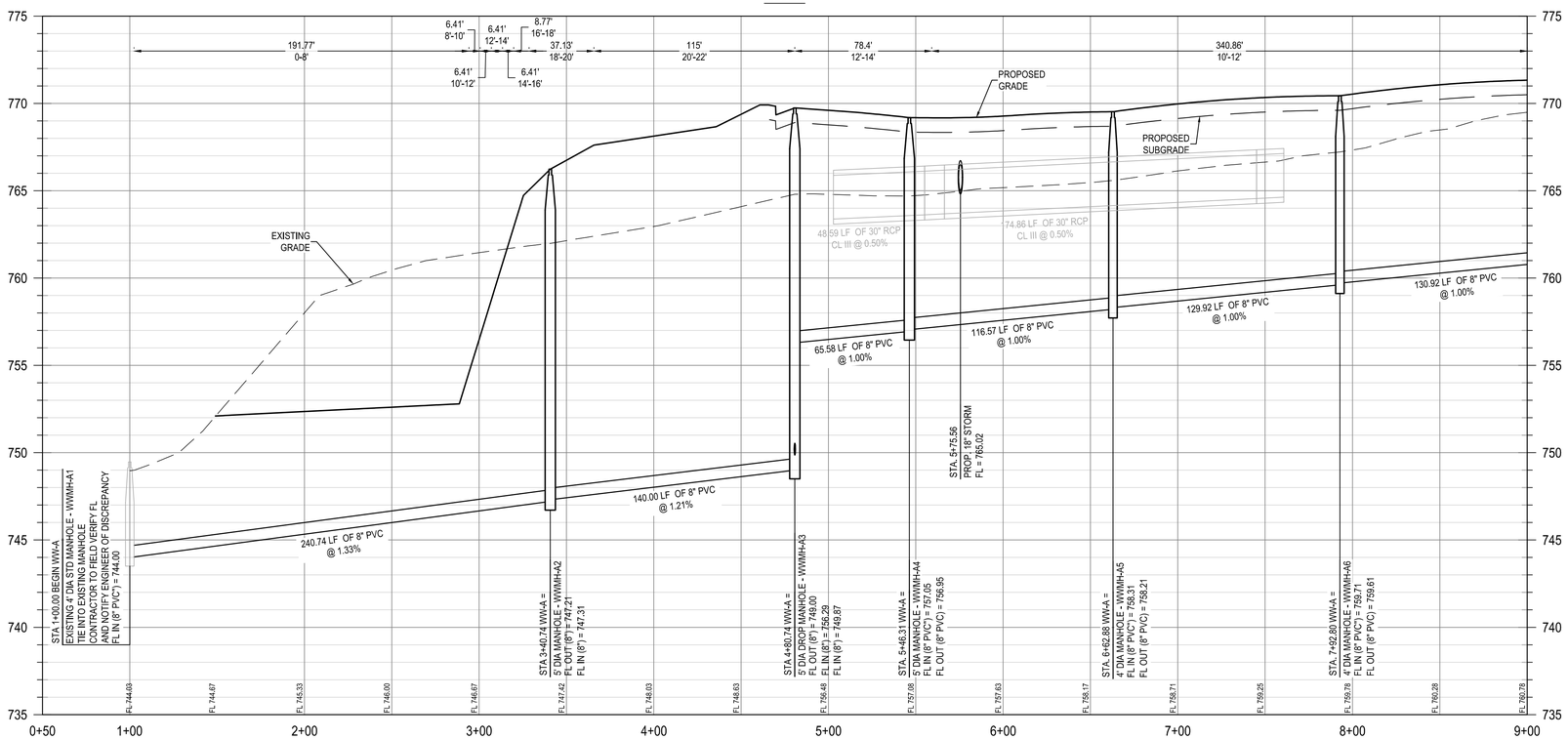

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

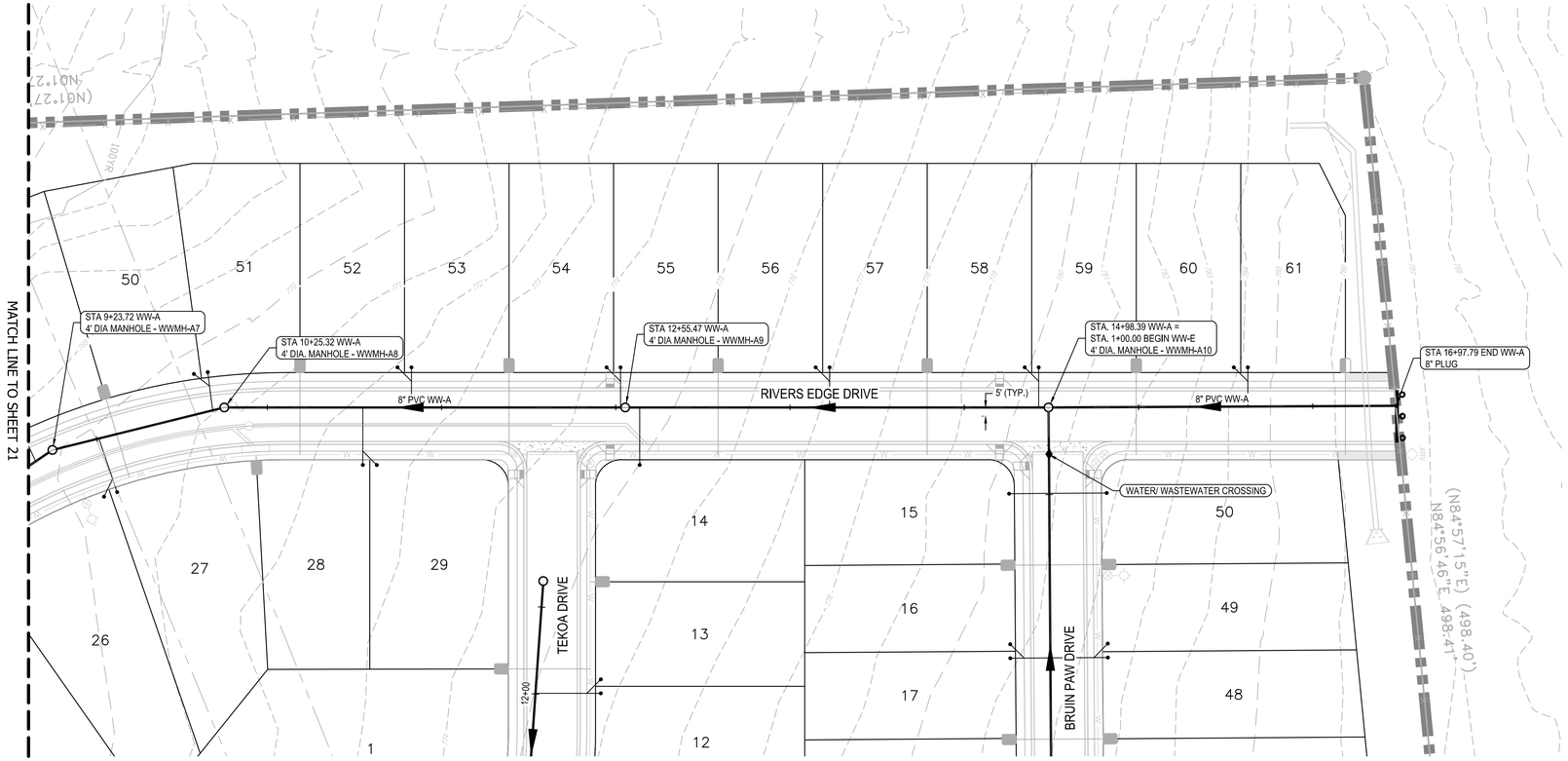
WWL A STA. 1+00 - 9+00

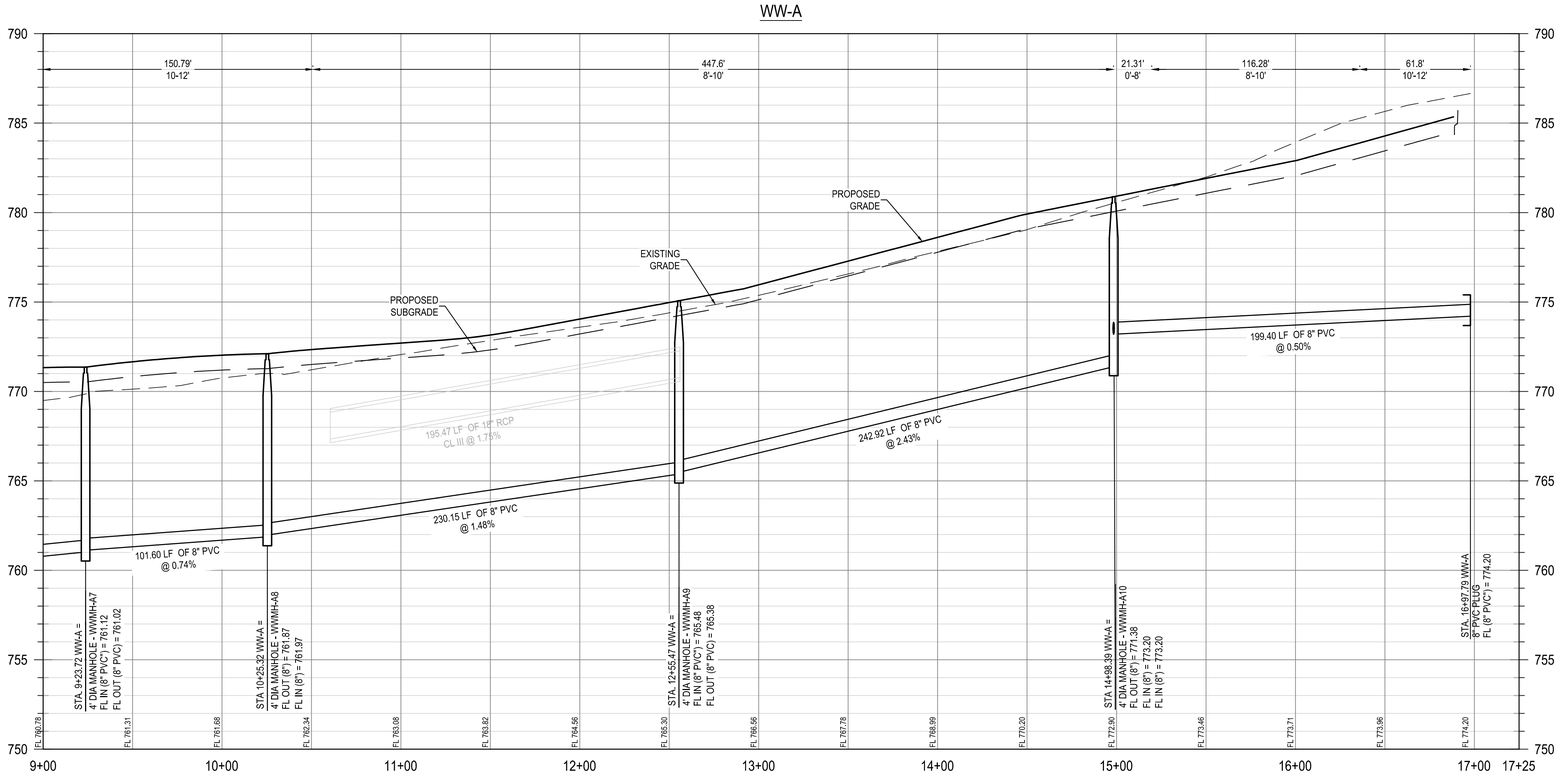
STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/17/20

SHEET
21 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-SSWR-P&P.dwg Layout: WWL A STA. 1+00 - 9+00 Plotted: 9/17/2020 10:15:49 AM





SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- PLAT BOUNDARY
- SANITARY SEWER
- PROPOSED NEW MANHOLE
- DIRECTION OF FLOW
- PROPOSED SINGLE W.W. SERVICE CONN.
- PROPOSED DOUBLE W.W. SERVICE CONN.
- SINGLE WATER SERVICE
- DOUBLE WATER SERVICE
- UTILITY CROSSING

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TEL: 512-879-0400 • www.bgeinc.com
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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

WWL A STA. 9+00 - END

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET 22 OF 55

CON-2020-XXX

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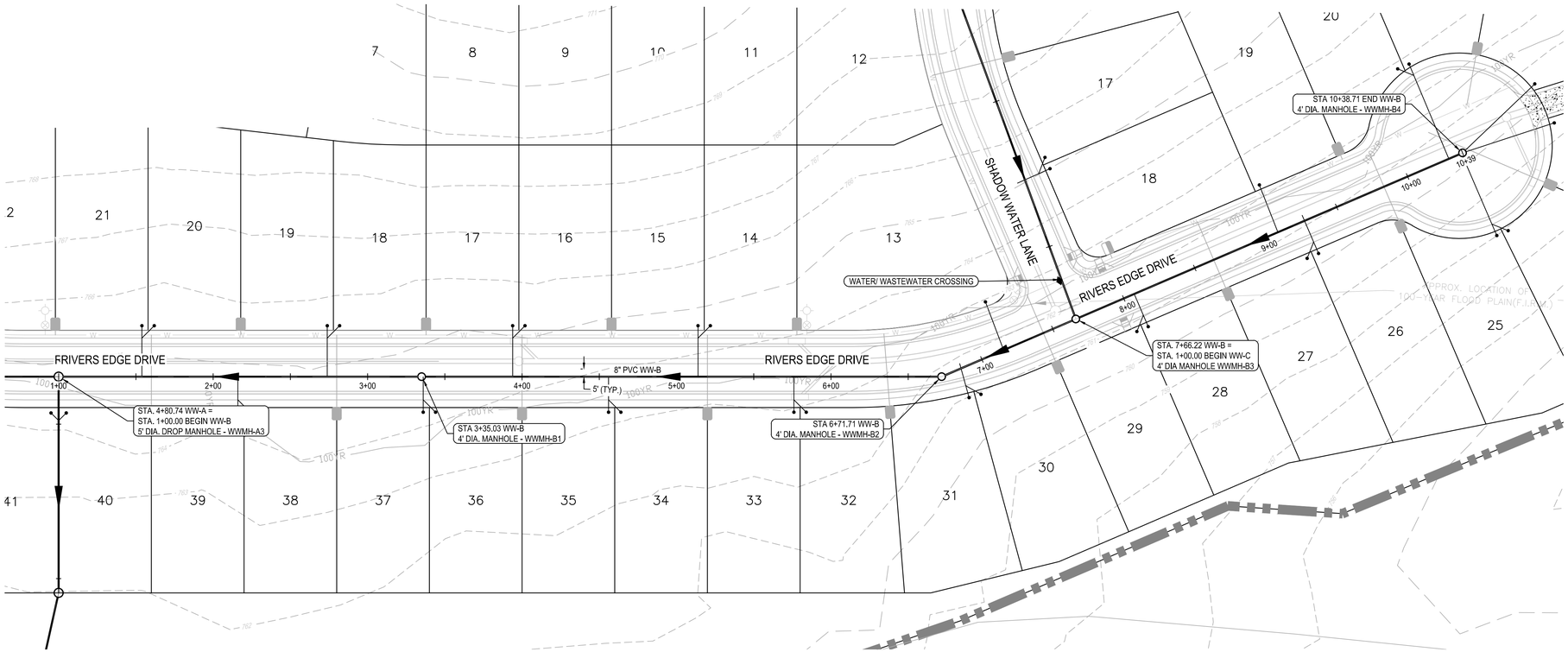

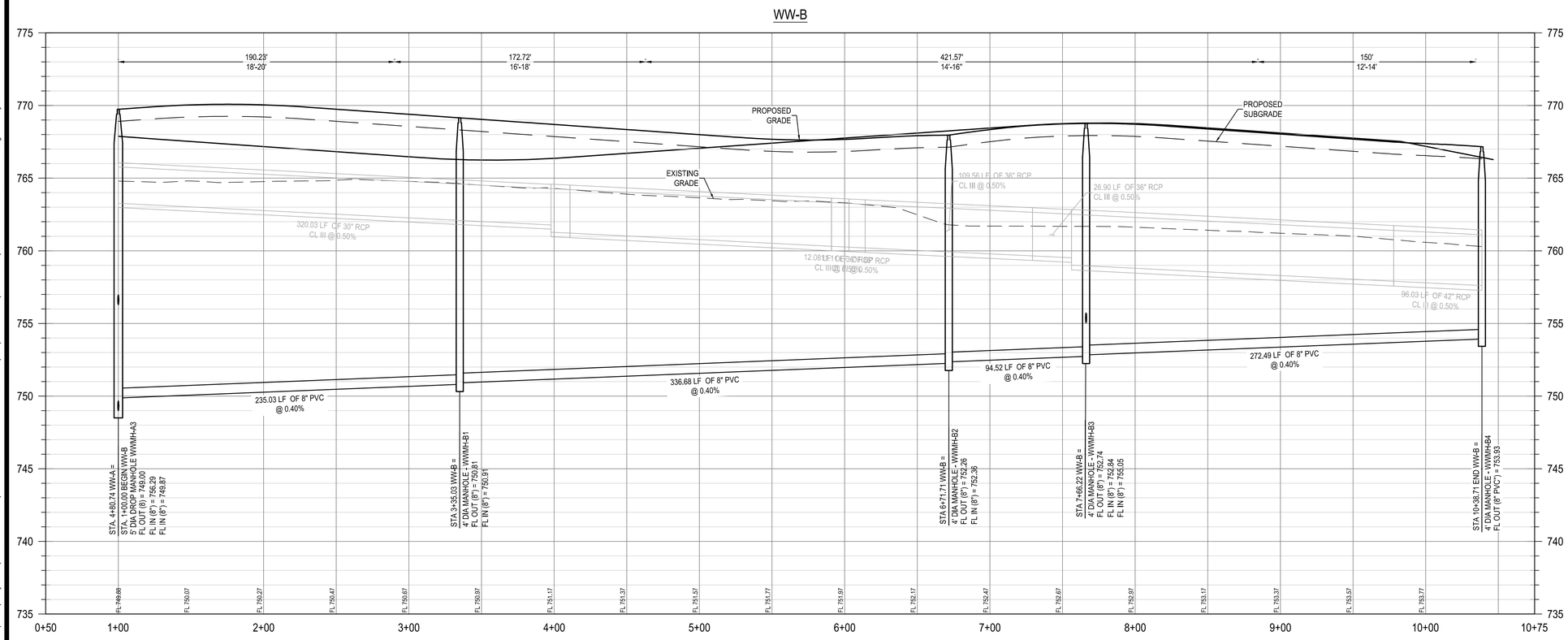

N

0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- PLAT BOUNDARY
- SANITARY SEWER
- PROPOSED NEW MANHOLE
- DIRECTION OF FLOW
- PROPOSED SINGLE W.W. SERVICE CONN.
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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

WWL B STA. 1+00 - END

STATE OF TEXAS
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9/16/20

SHEET 23 OF 55

CON-2020-XXX

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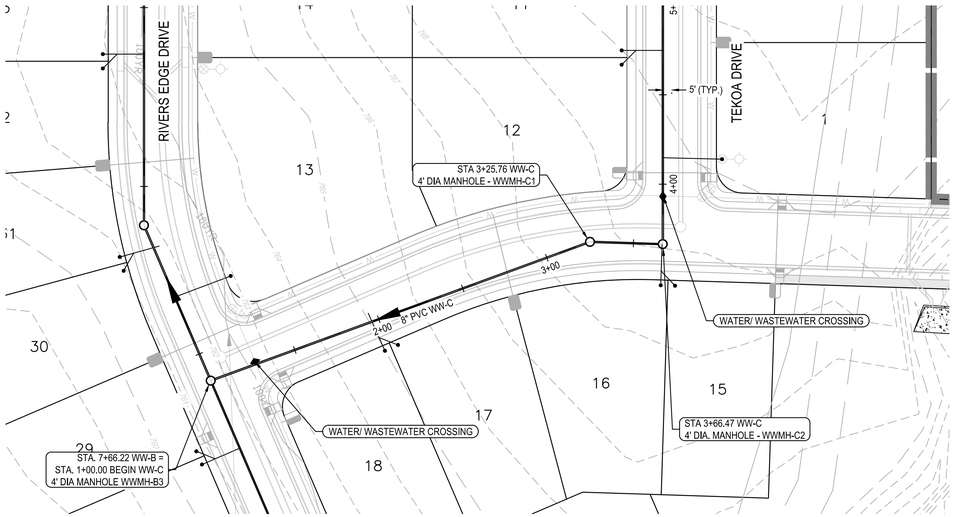

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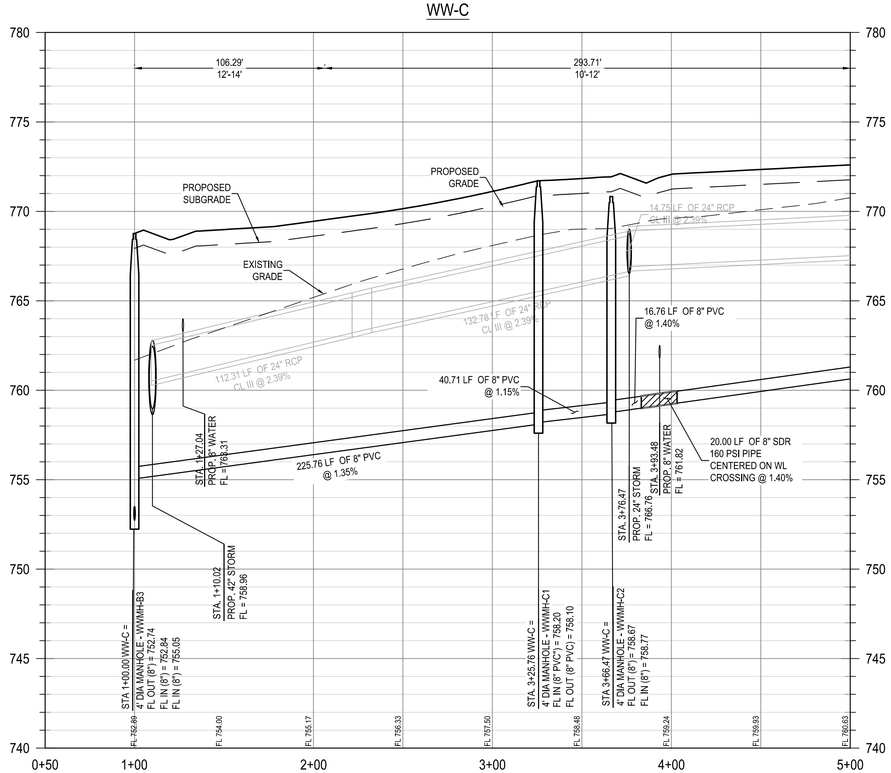

0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- PLAT BOUNDARY
- SANITARY SEWER
- PROPOSED NEW MANHOLE
- DIRECTION OF FLOW
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AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

WWL C STA. 1+00 TO 5+00

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/17/20

SHEET
24 OF 55

CON-2020-XXX

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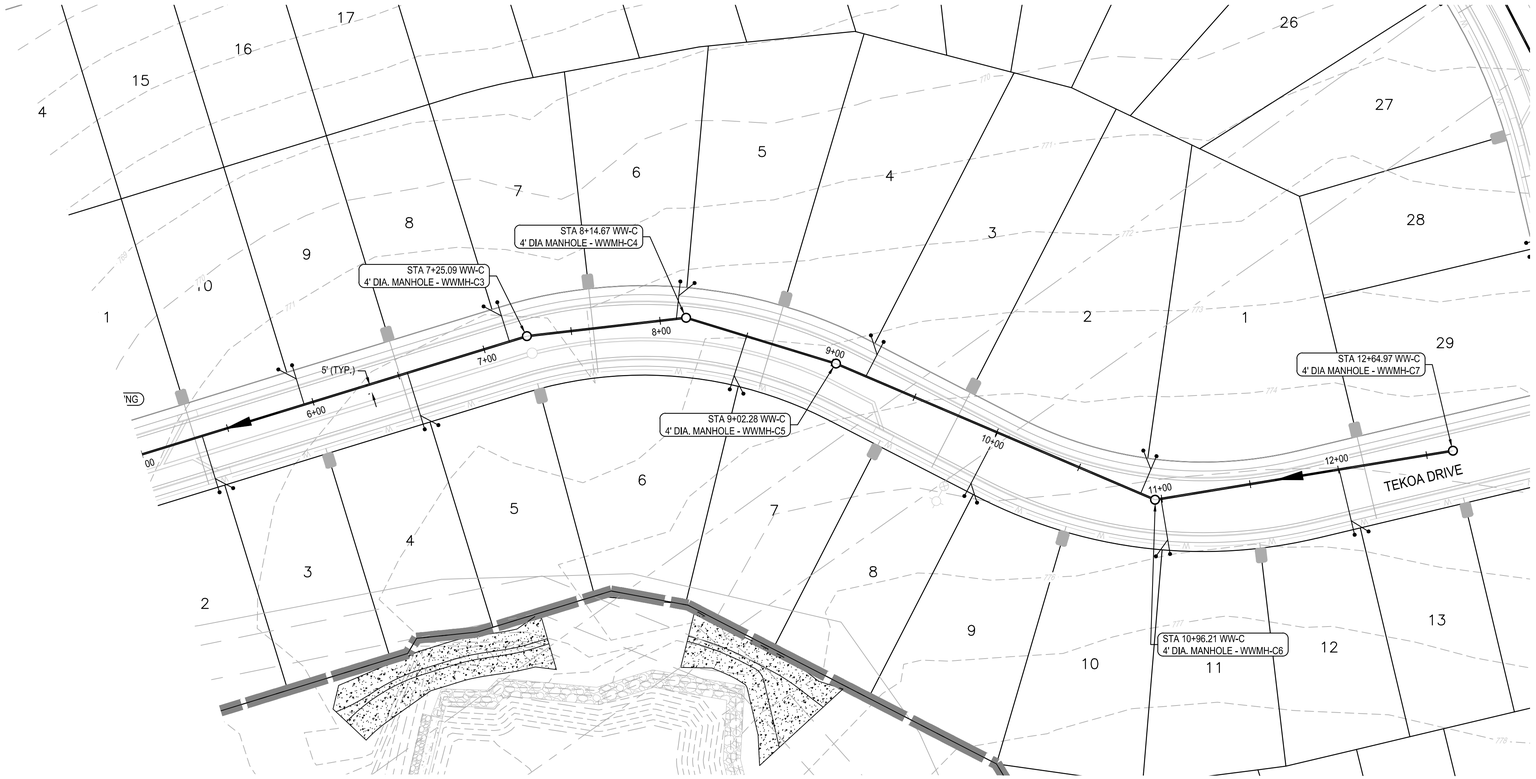

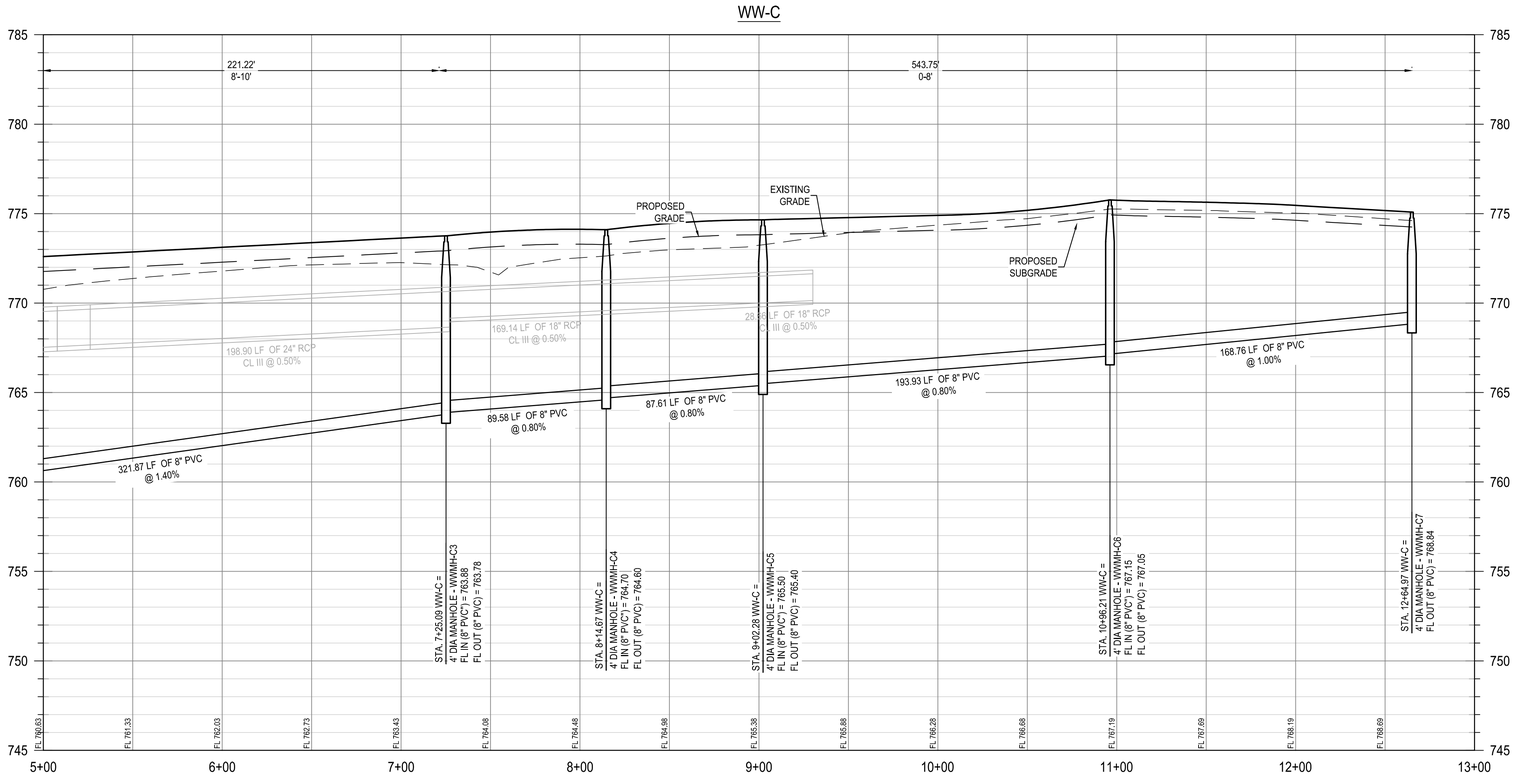

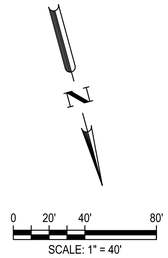

LEGEND

- PHASE BOUNDARY
- PLAT BOUNDARY
- SANITARY SEWER
- PROPOSED NEW MANHOLE
- DIRECTION OF FLOW
- PROPOSED SINGLE W.W. SERVICE CONN.
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BGE
BGE, Inc.
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

WWL C STA. 5+00 - END

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET 25 OF 55

CON-2020-XXX

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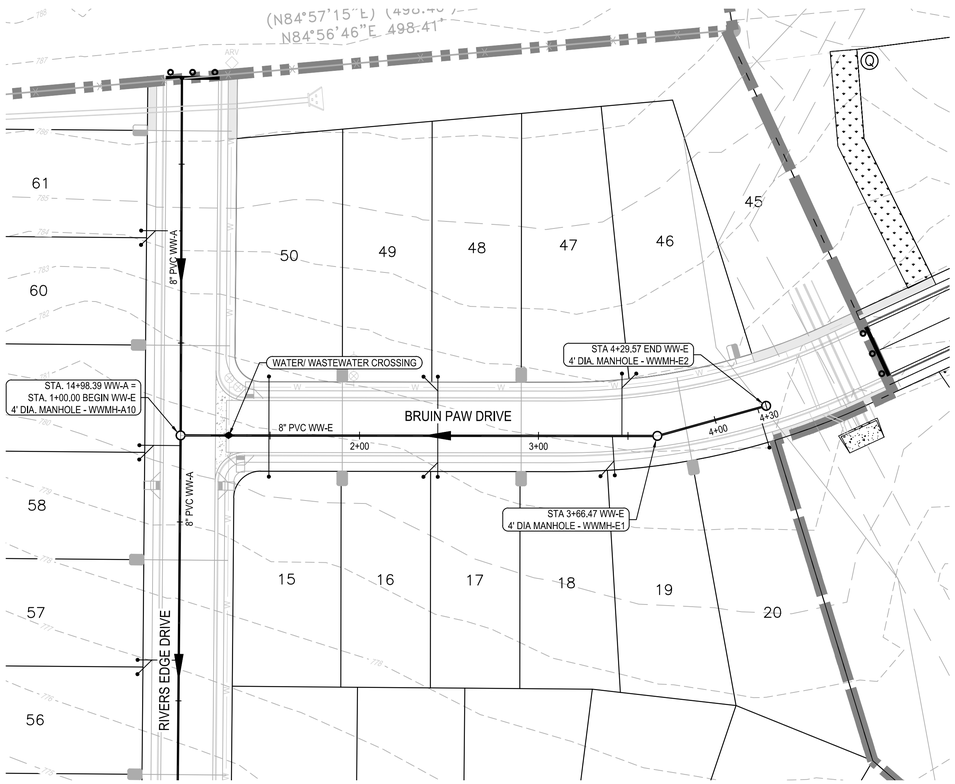

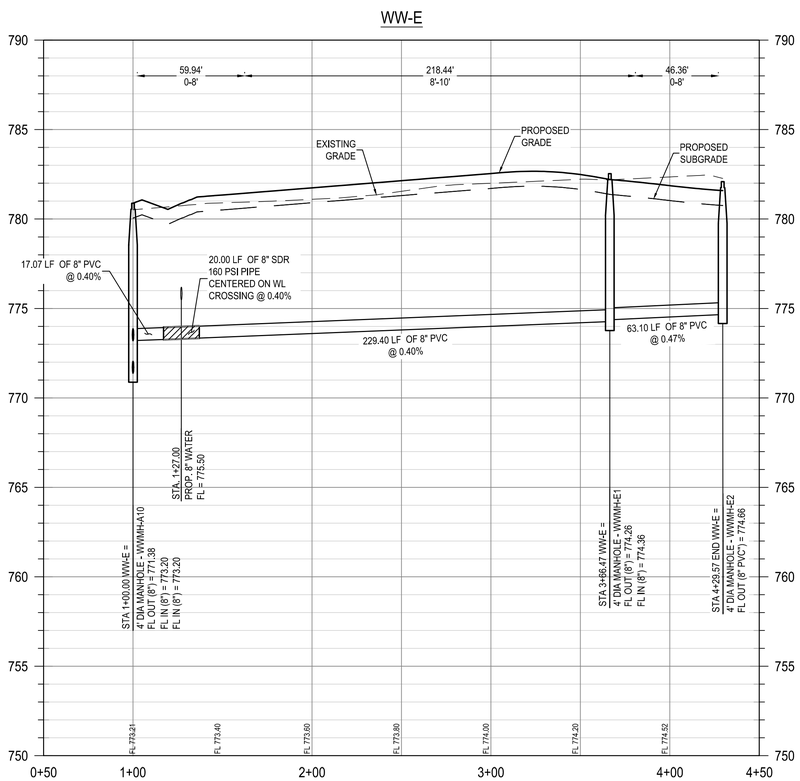

N

0 20' 40' 80'

SCALE: 1" = 40'

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- SANITARY SEWER
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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

WWL E STA. 1+00 - END

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET 26 OF 55

CON-2020-XXX

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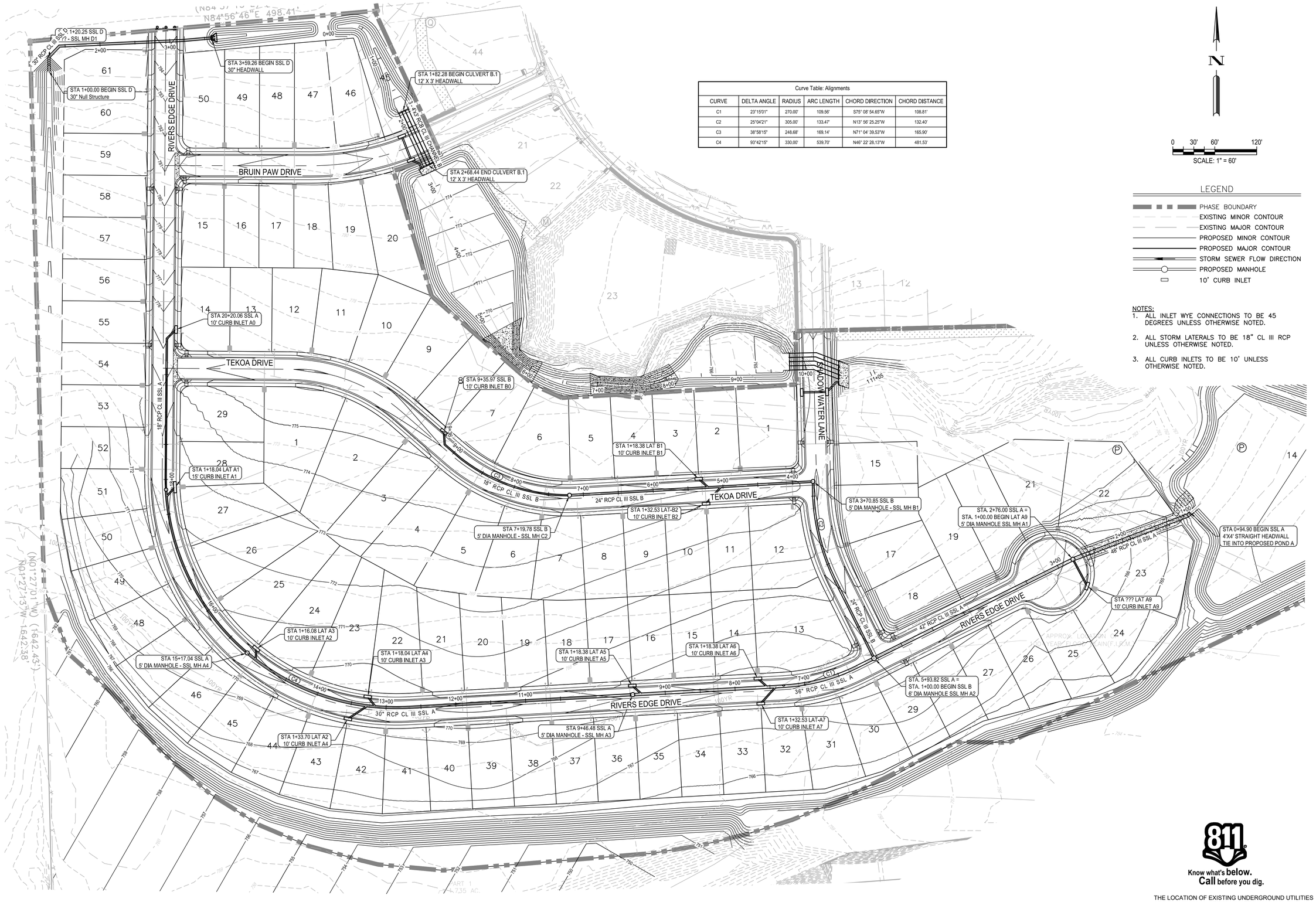

Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C1	23°15'01"	270.00'	109.56'	S75° 08' 54.65"W	108.81'
C2	25°04'21"	305.00'	133.47'	N13° 56' 25.25"W	132.40'
C3	38°58'15"	248.68'	169.14'	N71° 04' 39.53"W	165.90'
C4	93°42'15"	330.00'	539.70'	N46° 22' 28.13"W	481.53'

N

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

LEGEND

- PHASE BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- 10' CURB INLET

NOTES:

1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.
2. ALL STORM LATERALS TO BE 18" CL III RCP UNLESS OTHERWISE NOTED.
3. ALL CURB INLETS TO BE 10' UNLESS OTHERWISE NOTED.

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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

OVERALL STORM PLAN

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/17/20

SHEET
27 OF 55

CON-2020-XXX

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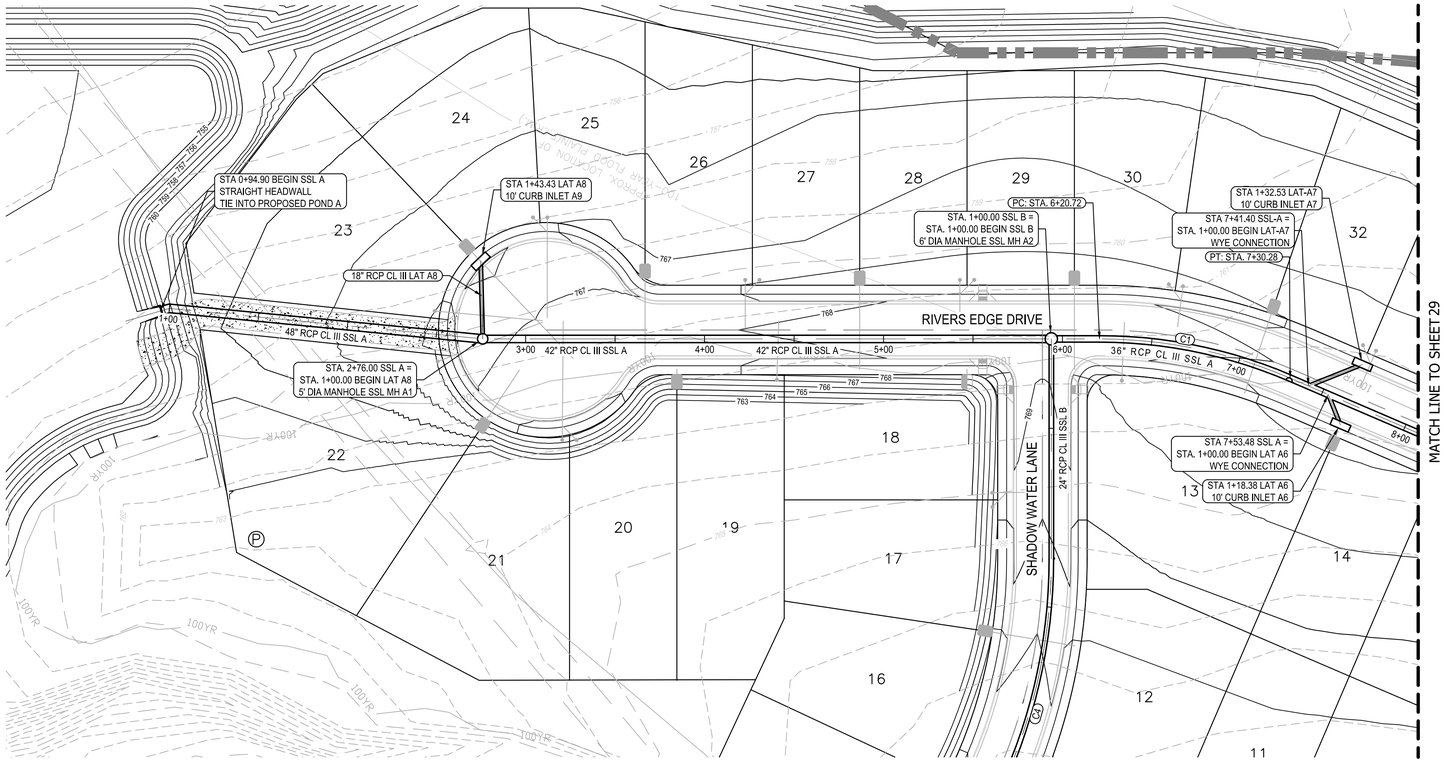

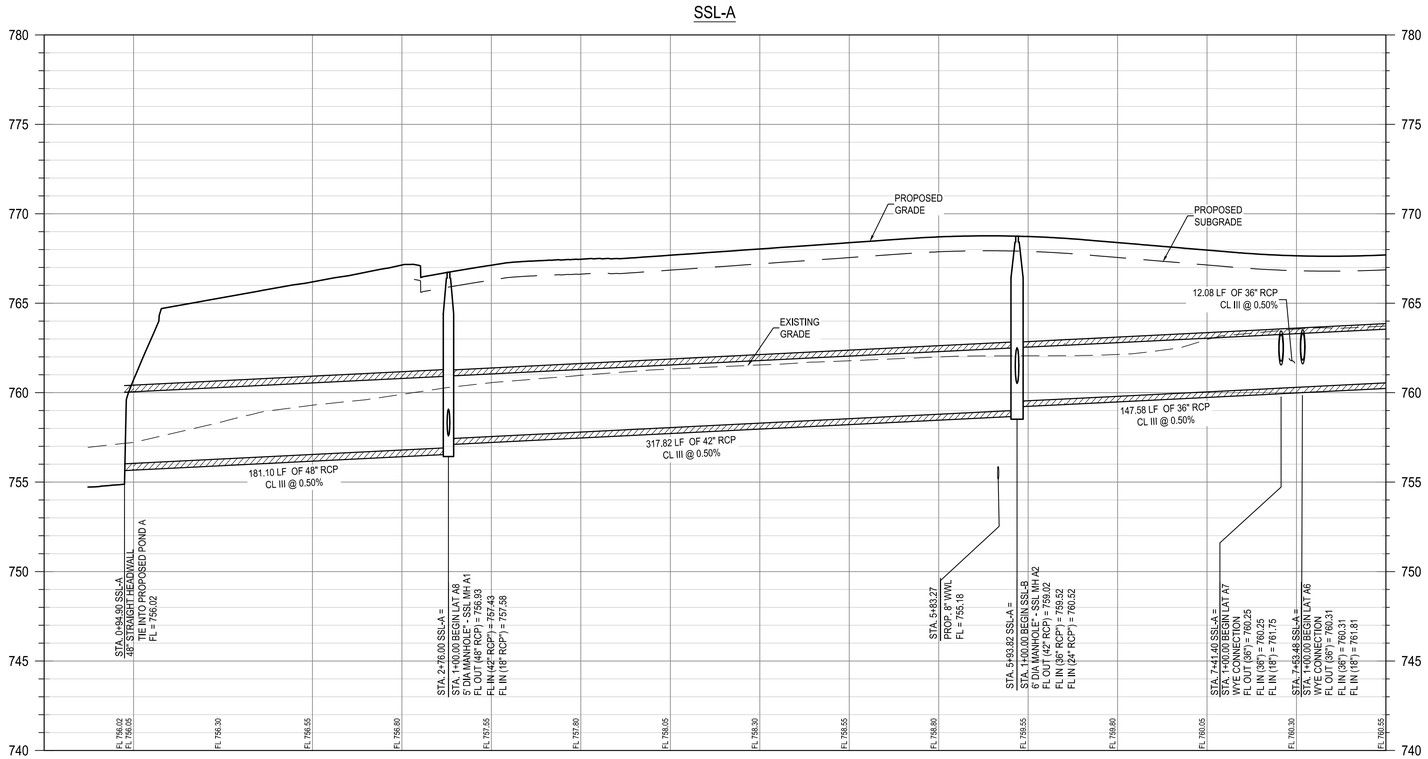

LEGEND

- PHASE BOUNDARY
- EXISTING MINOR CONTOUR
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- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- 10' CURB INLET

NOTES:

1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.
2. ALL STORM LATERALS TO BE 18" CL III RCP UNLESS OTHERWISE NOTED.
3. ALL CURB INLETS TO BE 10' UNLESS OTHERWISE NOTED.

Curve Table: Alignments

CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C1	23°15'01"	270.00'	109.56'	S75° 08' 54.65"W	108.81'

Know what's **below.**
Call before you dig.

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

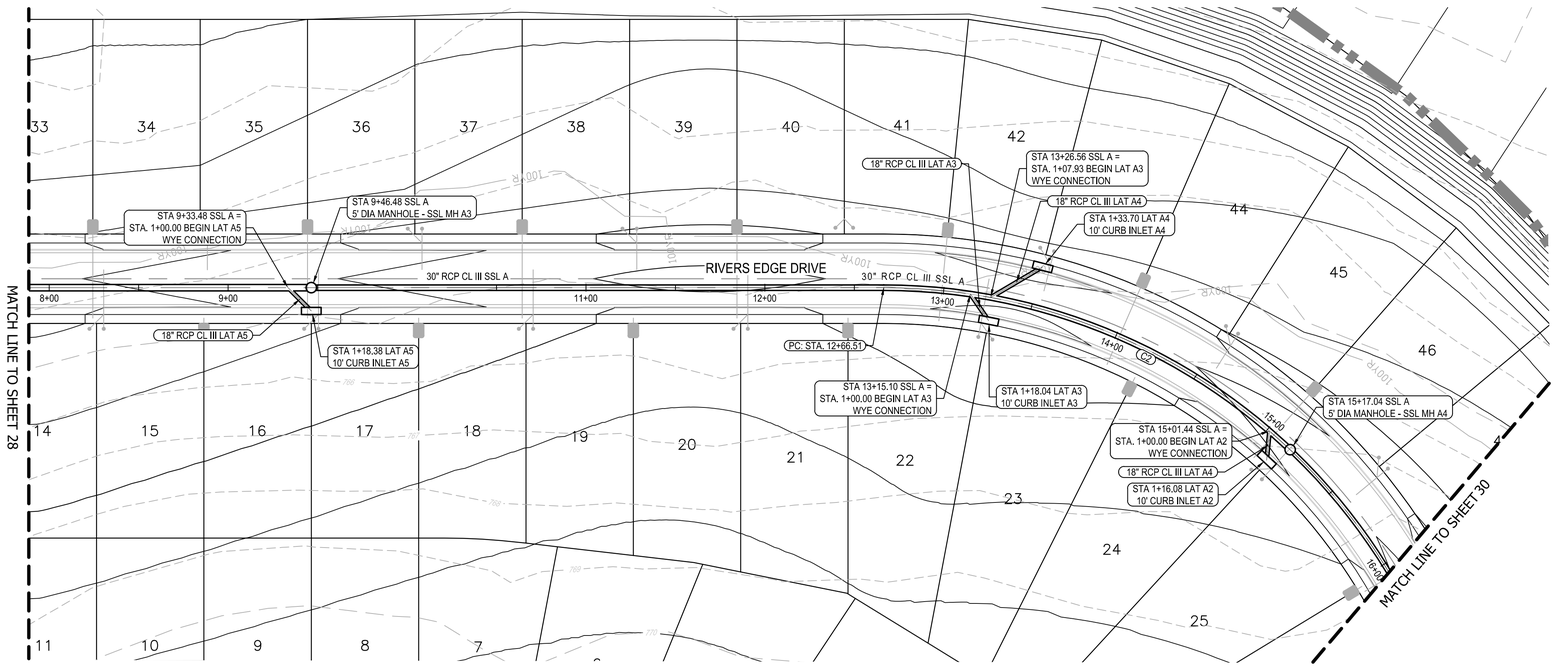
SSL A STA. 1+00 - 8+00

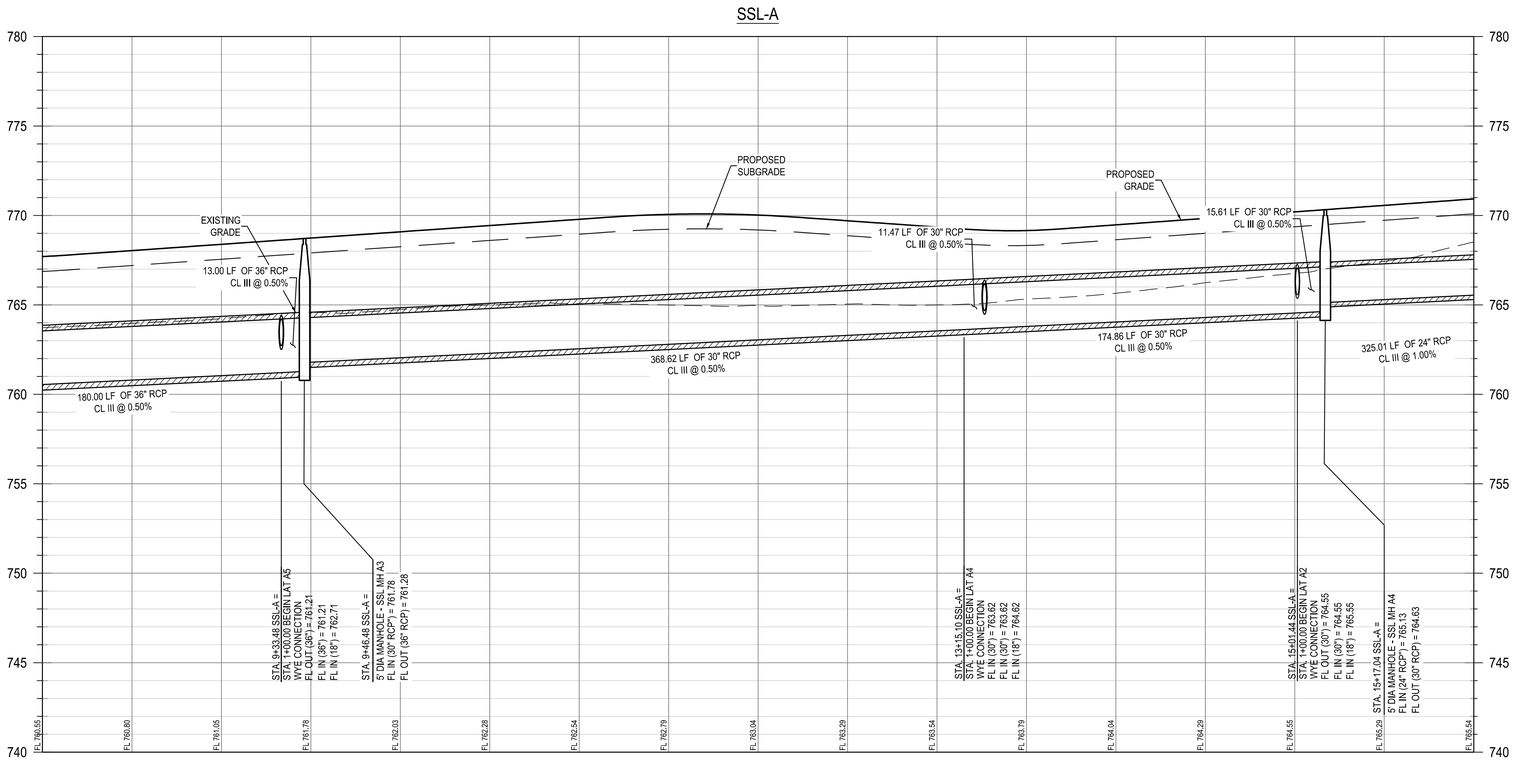
STATE OF TEXAS
RICHARD L RYCHLIK JR
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET
28 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-STORM-P&P.dwg Layout: SSL A STA. 1+00 - 8+00 Plotted: 9/17/2020 10:17:54 AM





N

0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- 10' CURB INLET

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3. ALL CURB INLETS TO BE 10' UNLESS OTHERWISE NOTED.

Curve Table: Alignments

CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C2	93°42'15"	330.00'	539.70'	N46° 22' 28.13"W	481.53'

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DESIGNED BY:

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DRAWN BY:

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101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

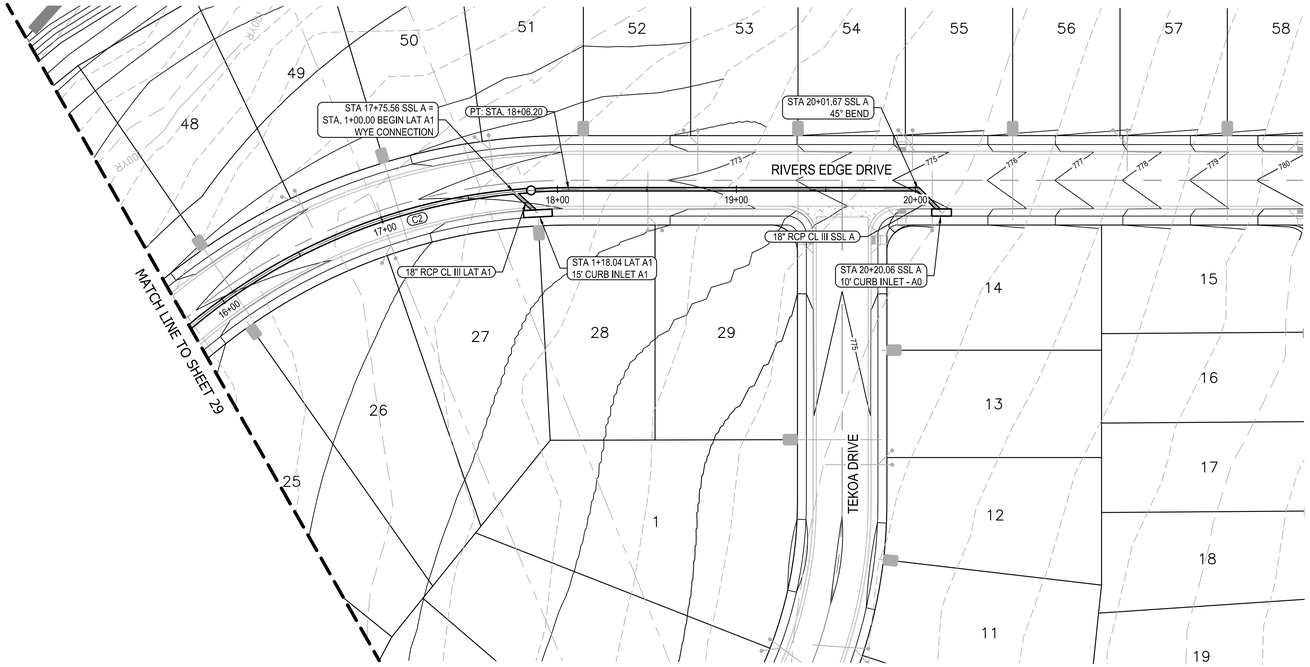
SSL A STA. 8+00 TO 16+00

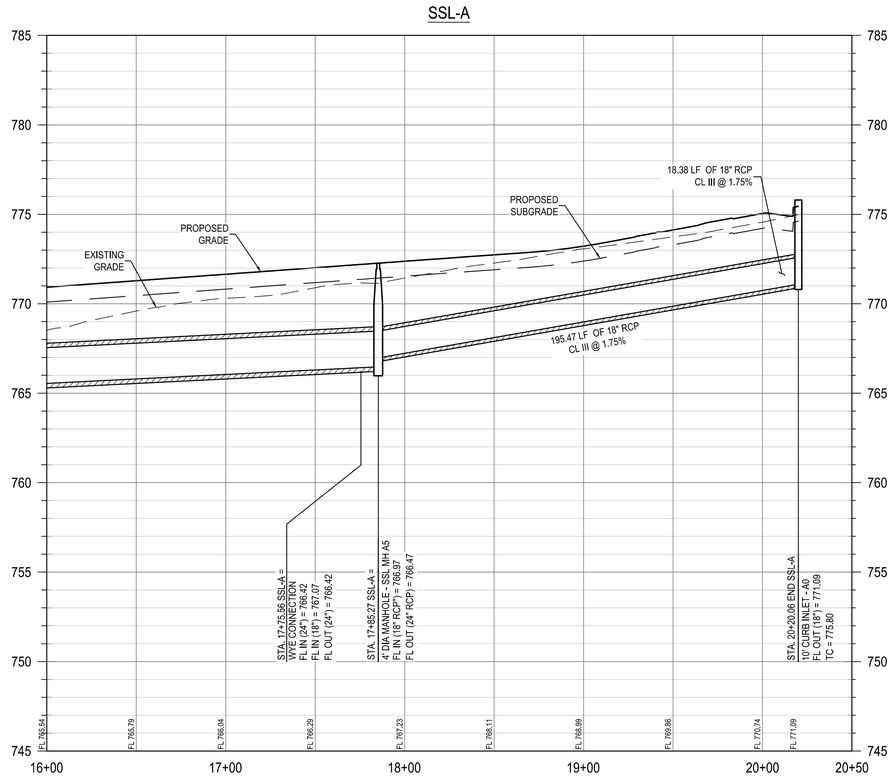
STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/17/20

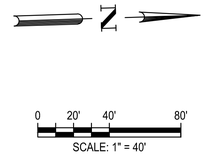
SHEET 29 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-STORM-P&P.dwg Layout: SSL A STA. 8+00 TO 16+00 Plotted: 9/17/2020 10:18:03 AM







LEGEND

- PHASE BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- 10' CURB INLET

NOTES:

1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.
2. ALL STORM LATERALS TO BE 18" CL III RCP UNLESS OTHERWISE NOTED.
3. ALL CURB INLETS TO BE 10' UNLESS OTHERWISE NOTED.

Curve Table: Alignments

CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C2	93°42'15"	330.00'	539.70'	N46° 22' 28.13"W	481.53'

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE, Inc.
101 W LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

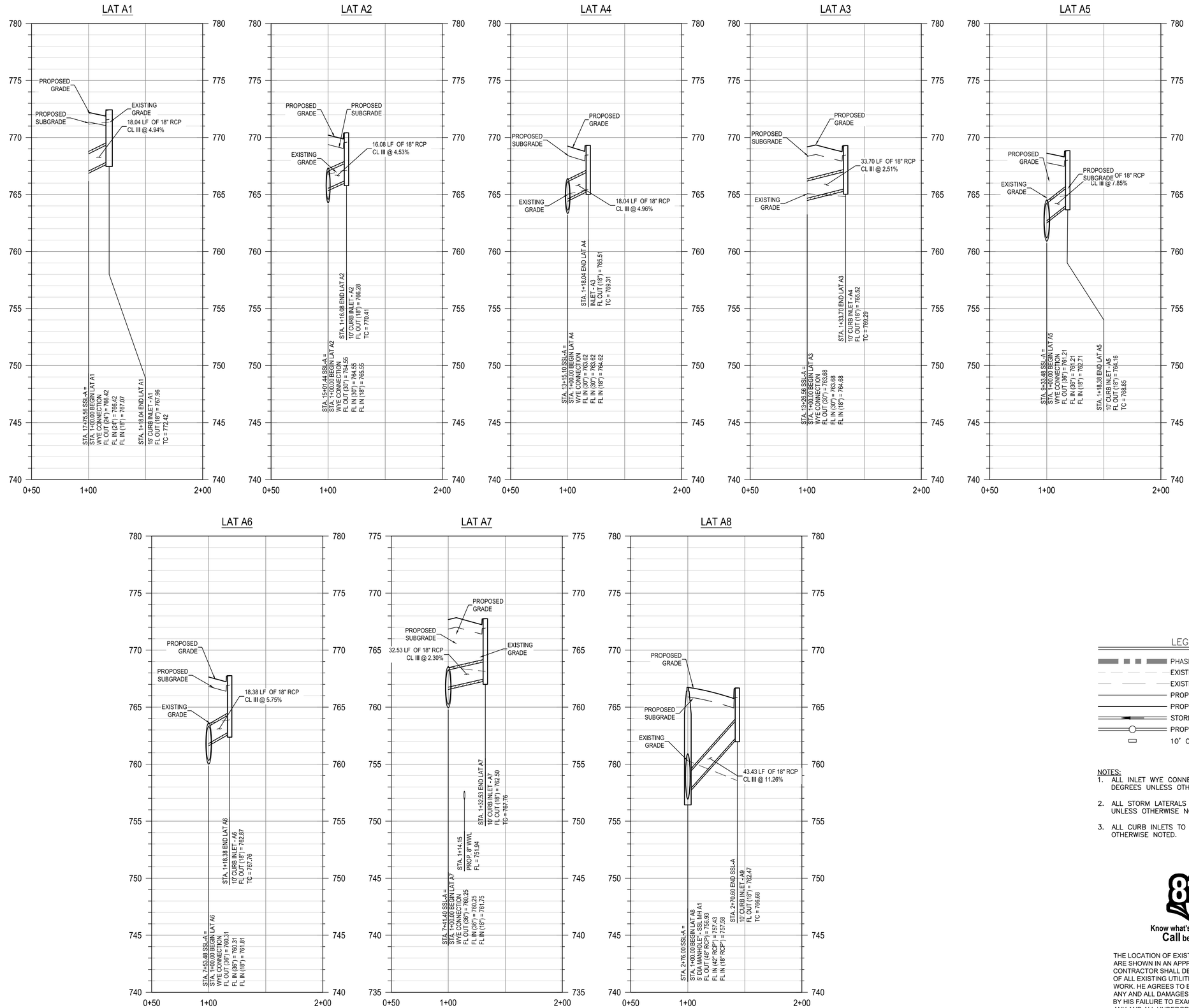
SSL A STA. 16+00 - END

STATE OF TEXAS
RICHARD L. RYCHLIK III
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET
30 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-STORM-P&P.dwg Layout: SSL A STA. 16+00 - END Plotted: 9/17/2020 10:18:12 AM



LEGEND

- PHASE BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- 10' CURB INLET

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DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL - 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

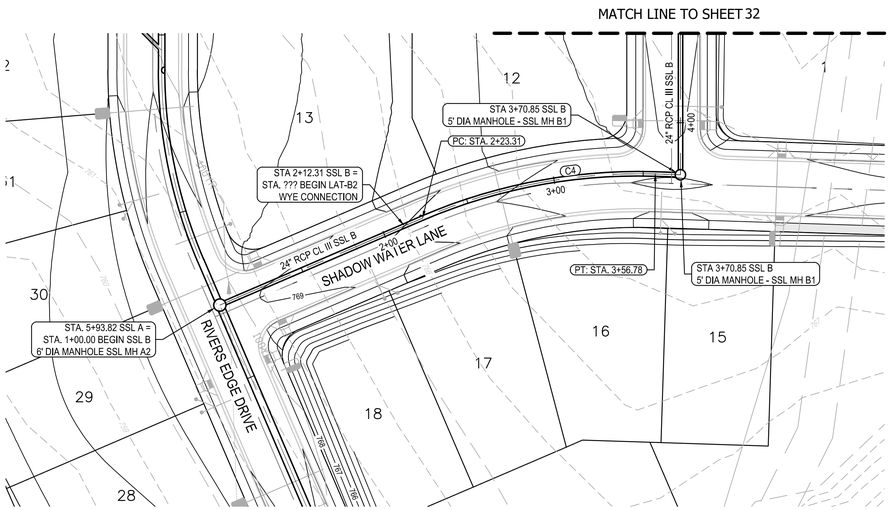
SSL A - LAT A1-91 STA. 1+00 TO END

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

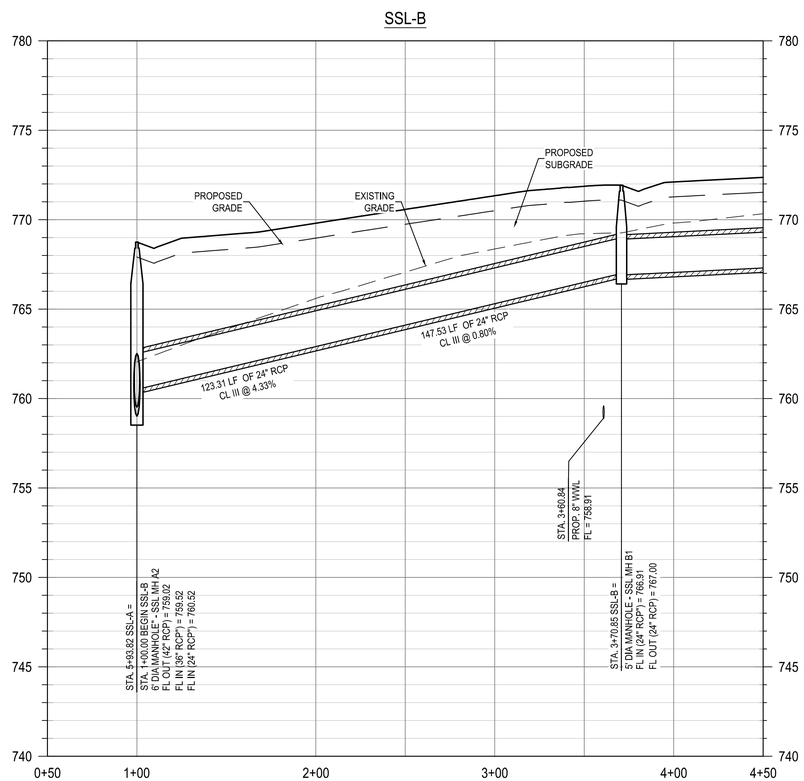
SHEET 34 OF 55

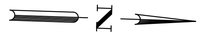
CON-2020-XXX

G:\TXC\Projects\Harris_Stroud\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-STORM-P&P.dwg Layout: SSL A - LAT A1-91 STA. 1+00 TO END Plotted: 9/17/2020 10:18:34 AM



Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C4	25°04'21"	305.00'	133.47'	N13° 56' 25.25"W	132.40'





0 20' 40' 80'
SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- 10' CURB INLET

NOTES:

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

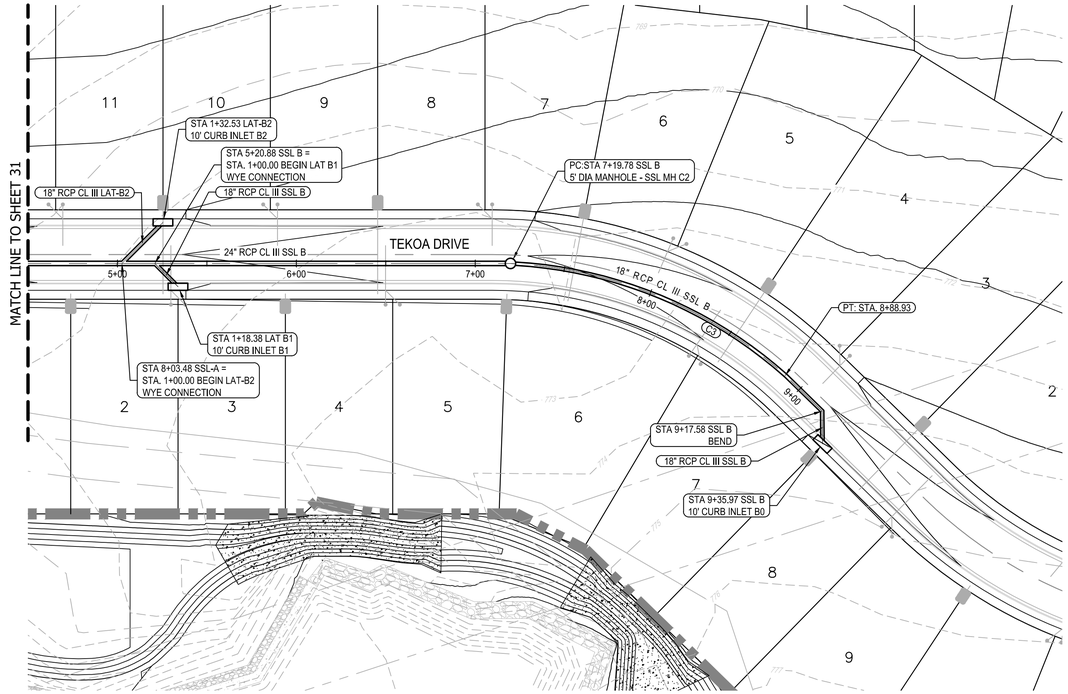
SSL B STA. 1+00 TO 4+50

STATE OF TEXAS
RICHARD L RYCHLIK JR
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

SHEET
31 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-STORM-P&P.dwg Layout: SSL B STA. 1+00 TO 4+50 Plotted: 9/17/2020 10:18:41 AM



Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C3	44°18'06"	220.00'	170.11'	N71° 04' 39.53"W	165.90'

N

0 20' 40' 80'
SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
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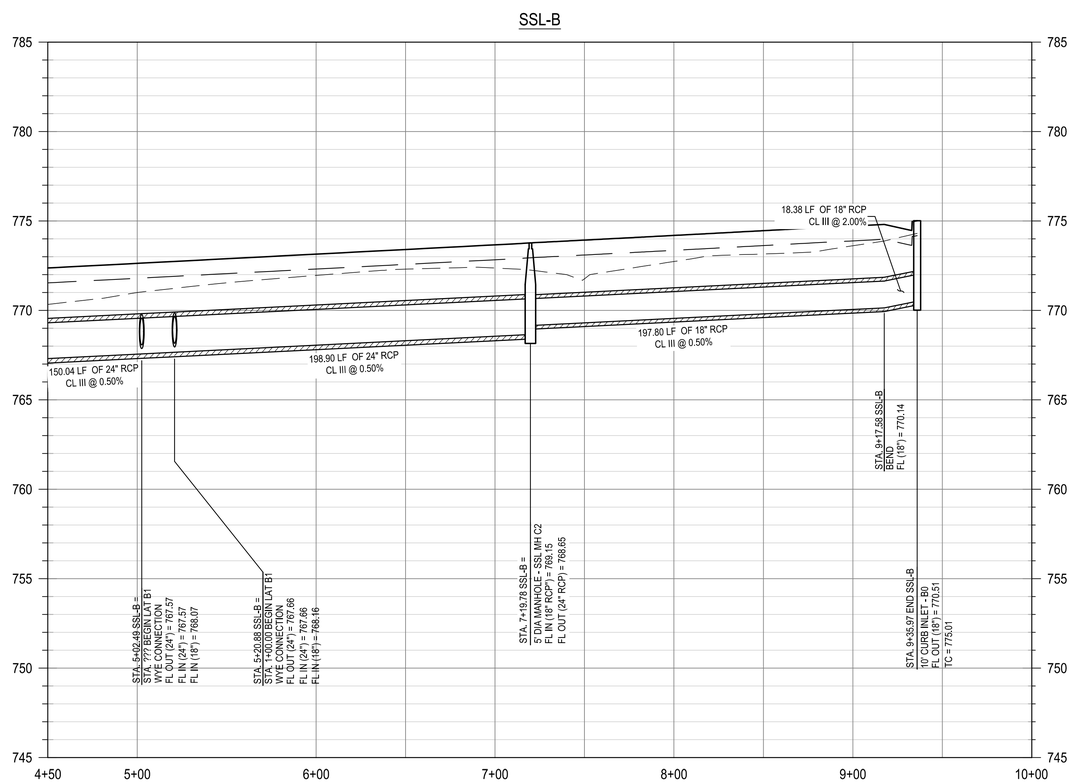

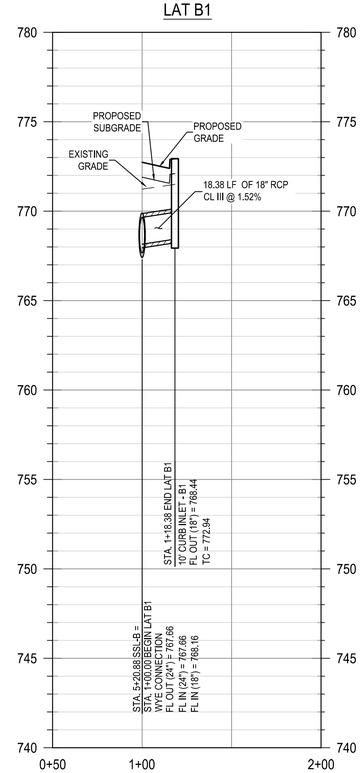

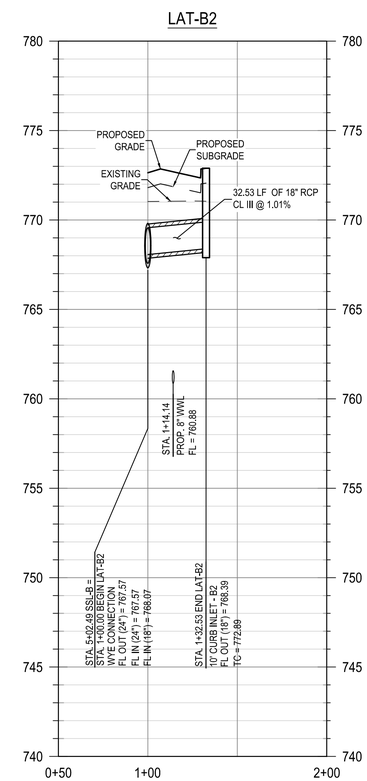

811
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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE
BGE, Inc.
101 W LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

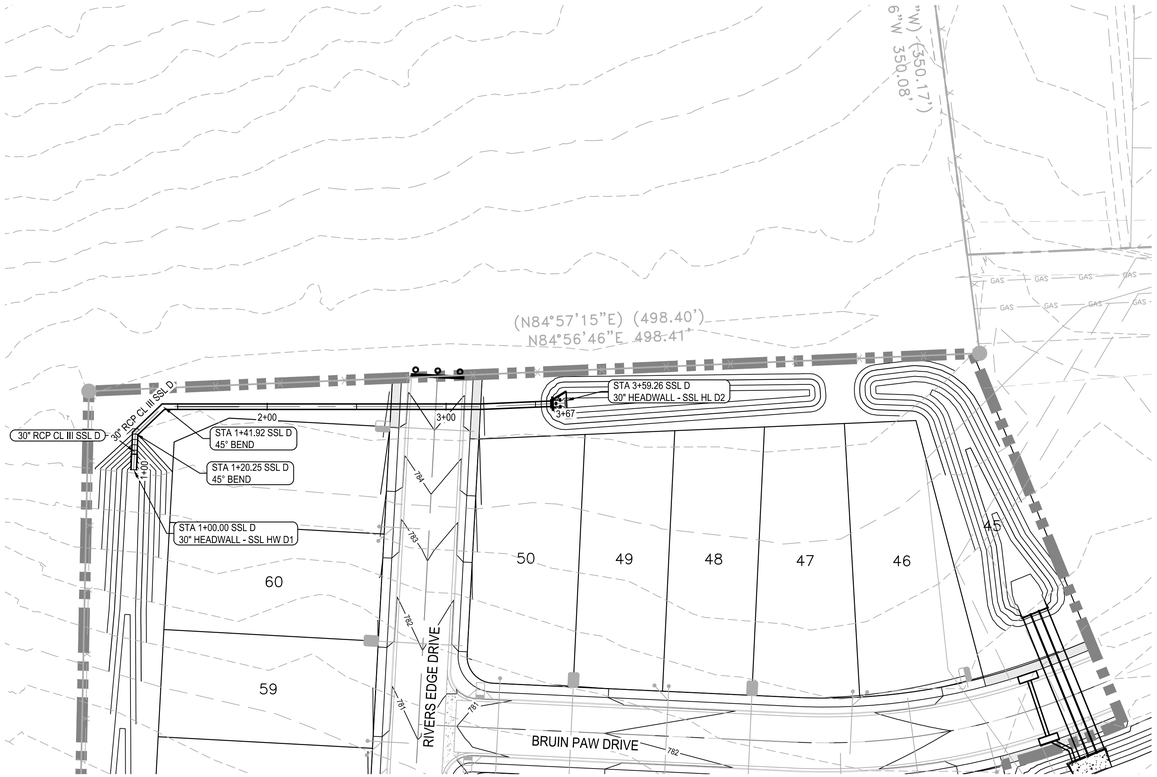
SSL B STA. 4+50 TO END

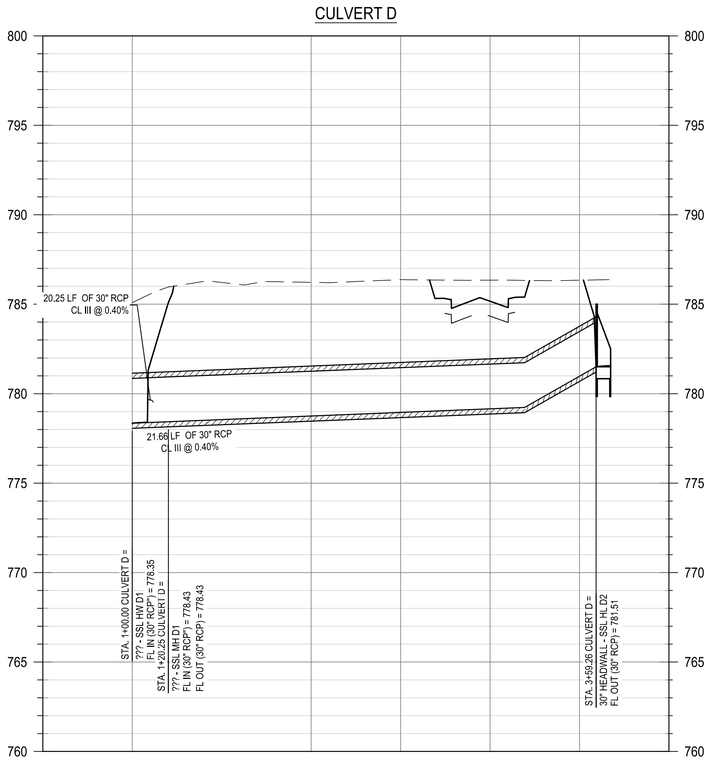
STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/18/20

SHEET
32 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-STORM-P&P.dwg Layout: SSL B STA. 4+50 TO END Plotted: 9/17/2020 10:18:51 AM





N

0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PHASE BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- PROPOSED MANHOLE
- 10' CURB INLET

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AUSTIN, TX 78728
TEL. 512-379-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

SSL D STA. 1+00 - END

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/17/20

SHEET
33 OF 55

CON-2020-XXX

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N

0 20' 40' 80'
SCALE: 1" = 40'

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

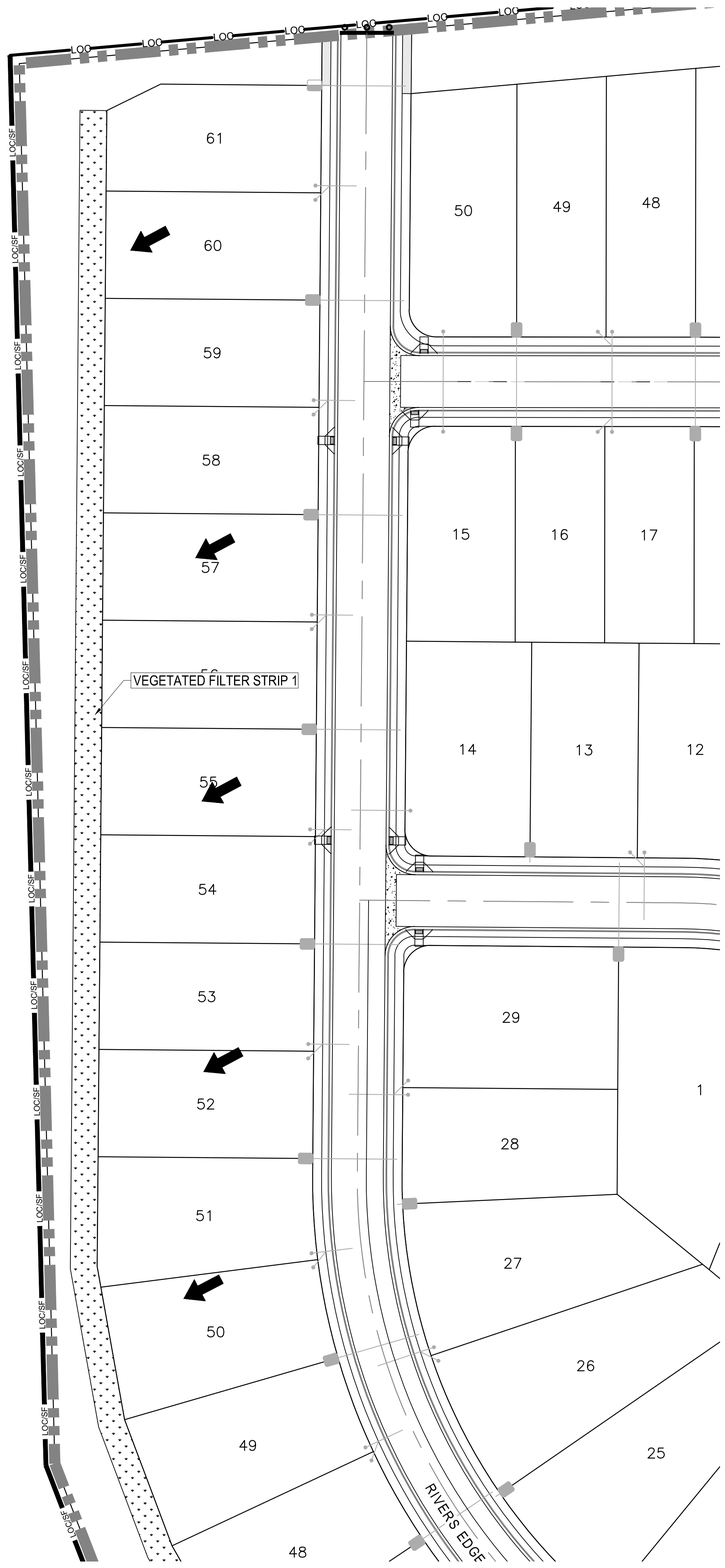
VEGETATED FILTER STRIP (1 OF 3)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET
36 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-VEG-STRIP.dwg Layout: VEGETATED FILTER STRIP (1 OF 3) Plotted: 9/17/2020 10:19:23 AM



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

Drainage Basin/Outfall Area No. =	**1**	
Total drainage basin/outfall area =	**6.79**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**3.05**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.45**	
$L_{M\ THIS\ BASIN}$ =	**2821**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**VFS1**	
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 =	**6.79**	acres
A_I =	**3.05**	acres
A_P =	**3.74**	acres
L_R =	**2925**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**2925**	lbs.
F =	**1.00**	

N

0 20' 40' 80'
SCALE: 1" = 40'

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REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

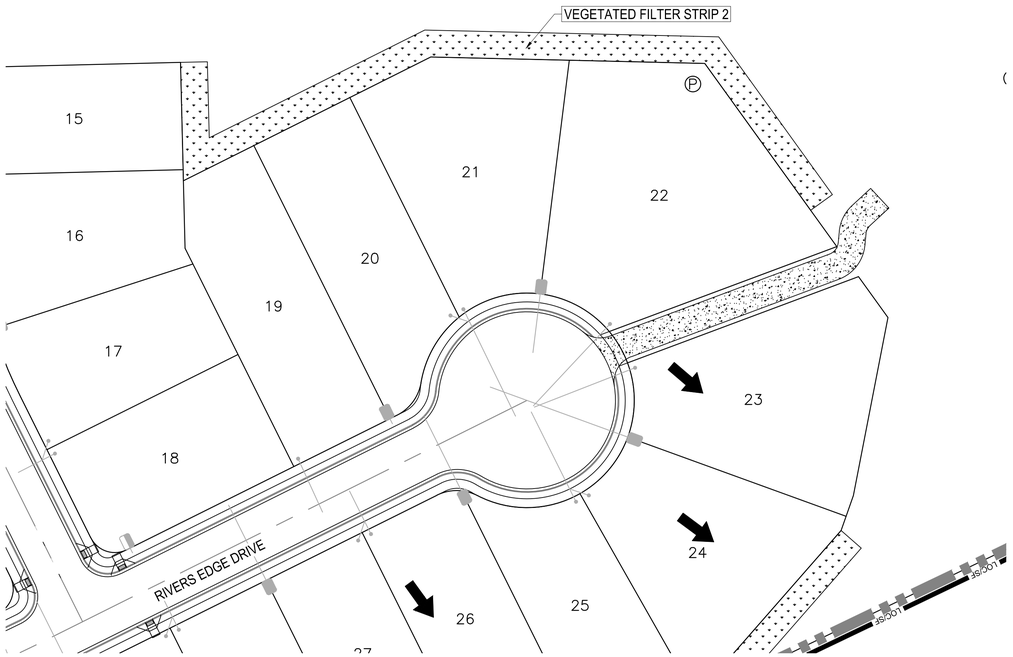
VEGETATED FILTER STRIP (2 OF 3)

STATE OF TEXAS
RICHARD L RYCHLIK JR
123927
LICENSED
PROFESSIONAL ENGINEER
9/17/20

SHEET
37 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-VEG-STRIP.dwg Layout: VEGETATED FILTER STRIP (2 OF 3) Plotted: 9/17/2020 10:19:25 AM



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

Drainage Basin/Outfall Area No. =	**1**	
Total drainage basin/outfall area =	**1.82**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.64**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.35**	
$L_{M\ THS\ BASIN}$ =	**592**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**VFS2**	
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 =	**1.82**	acres
A_I =	**0.64**	acres
A_P =	**1.18**	acres
L_R =	**620**	lbs

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

Desired $L_{M\ THS\ BASIN}$ =	**620**	lbs.
F =	**1.00**	

N

0 20' 40' 80'

SCALE: 1" = 40'

Know what's **below.**
Call before you dig.

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

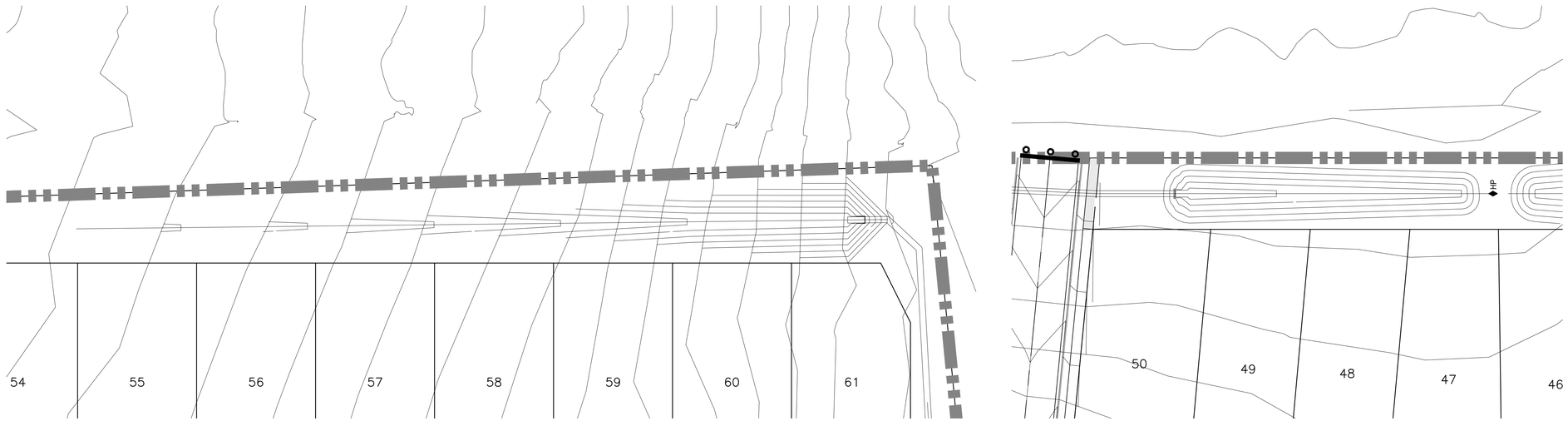
VEGETATED FILTER STRIP (3 OF 3)

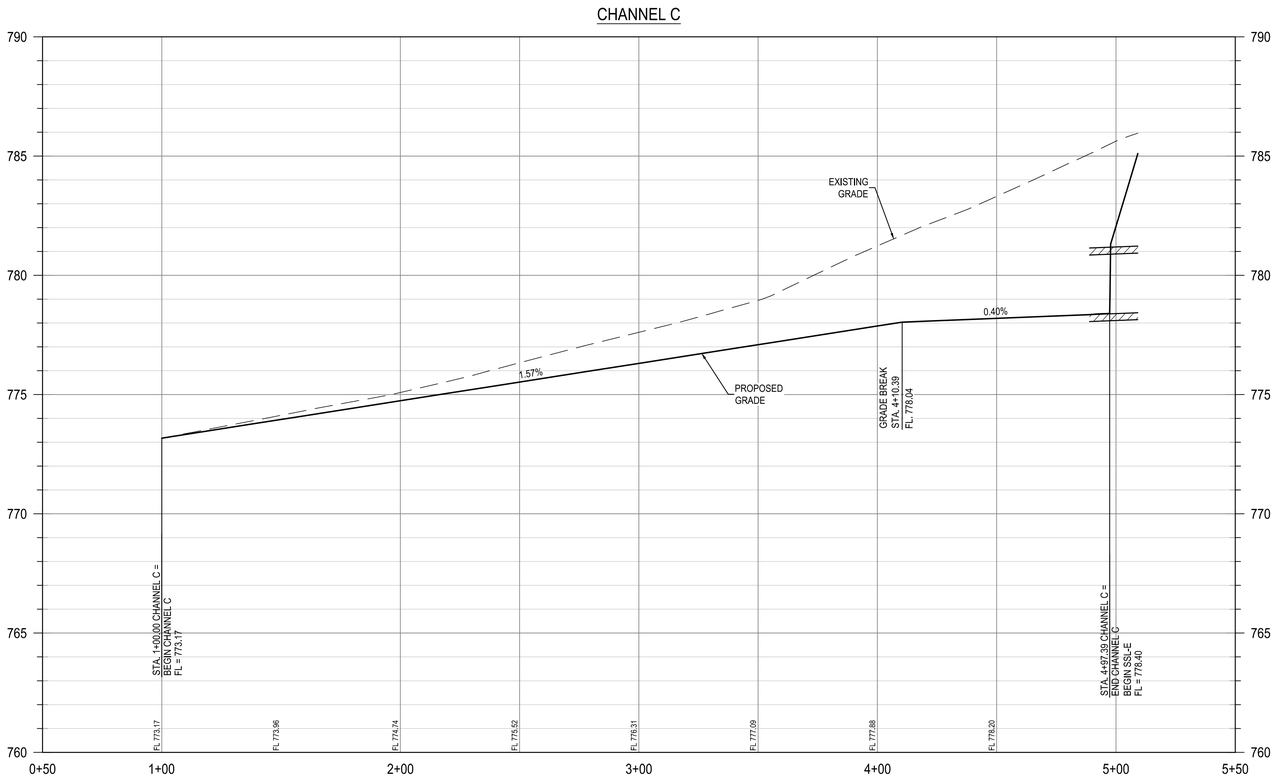
STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

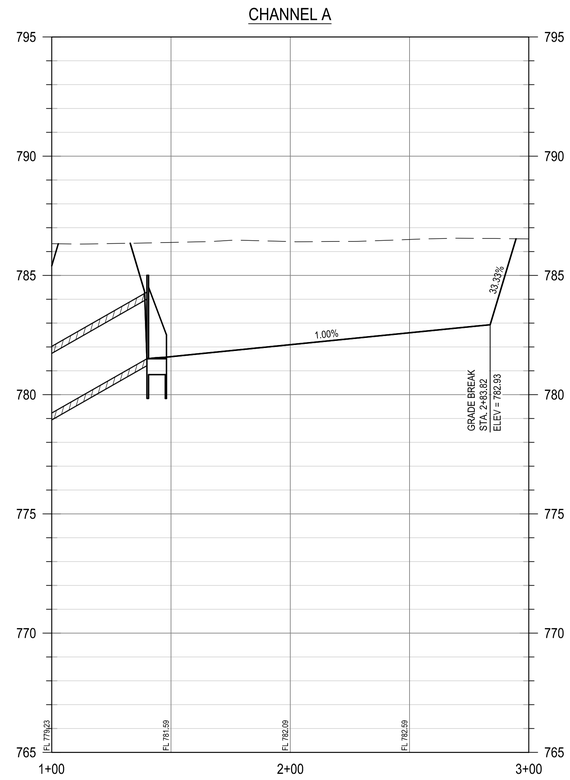
SHEET
38 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Stroub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-VEG-STRIP.dwg Layout: VEGETATED FILTER STRIP (3 OF 3) Plotted: 9/17/2020 10:19:26 AM







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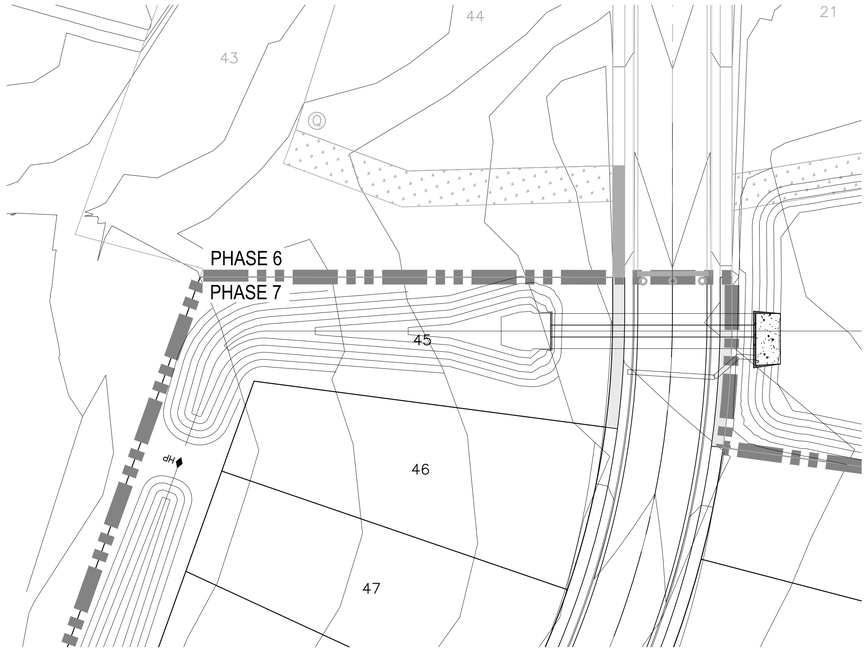
RIVERVIEW PHASE 7
GEORGETOWN, TEXAS
CHANNEL A & CHANNEL C STA. 1+00 TO END

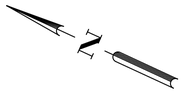
STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

SHEET
39 OF 55

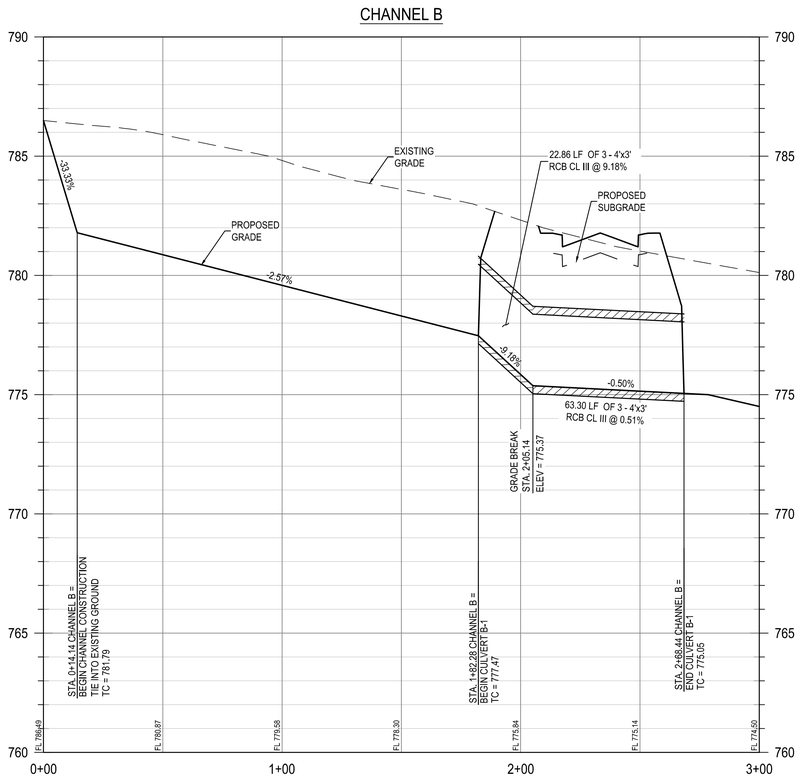
CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-CHAN.dwg Layout: CHANNEL A & CHANNEL C STA. 1+00 TO END Plotted: 9/17/2020 10:20:25 AM





0 15' 30' 60'
SCALE: 1" = 30'



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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

CHANNEL B STA. 0+00 TO 2+00

STATE OF TEXAS
RICHARD L. RYCHLIK III
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

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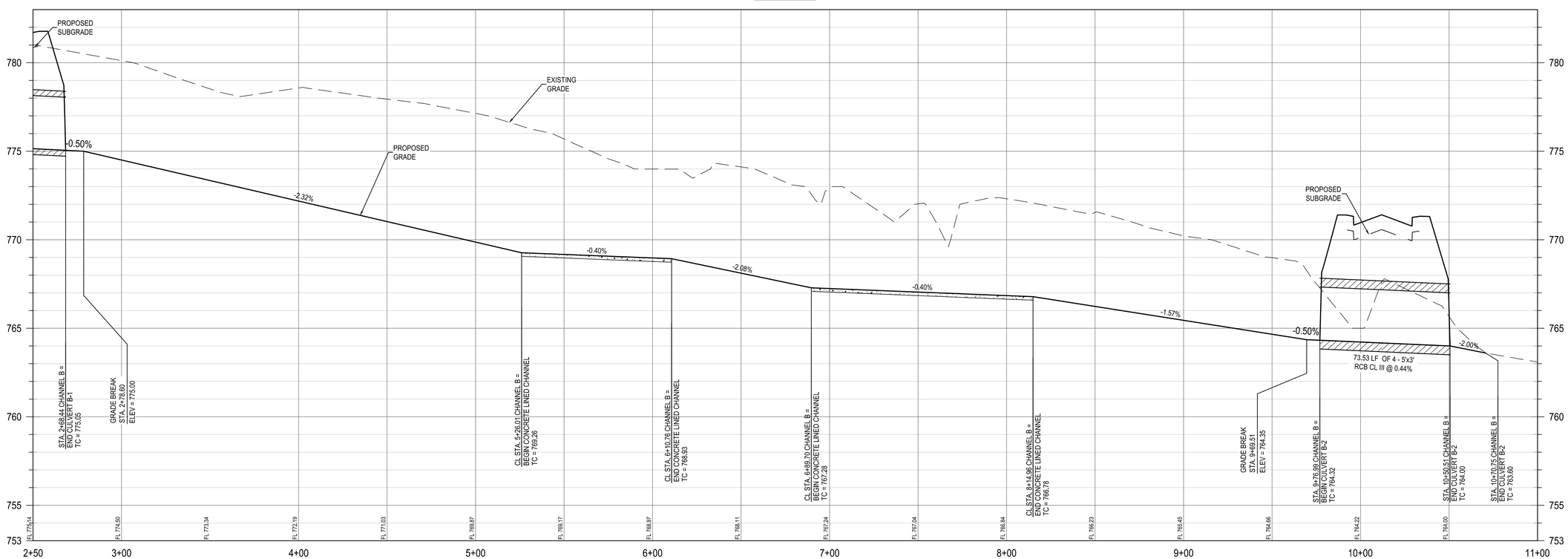
CHANNEL B



REV	DESCRIPTION	DATE	APR
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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

CHANNEL B STA. 2+00 TO 10+00

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET
41 OF 55

CON-2020-XXX

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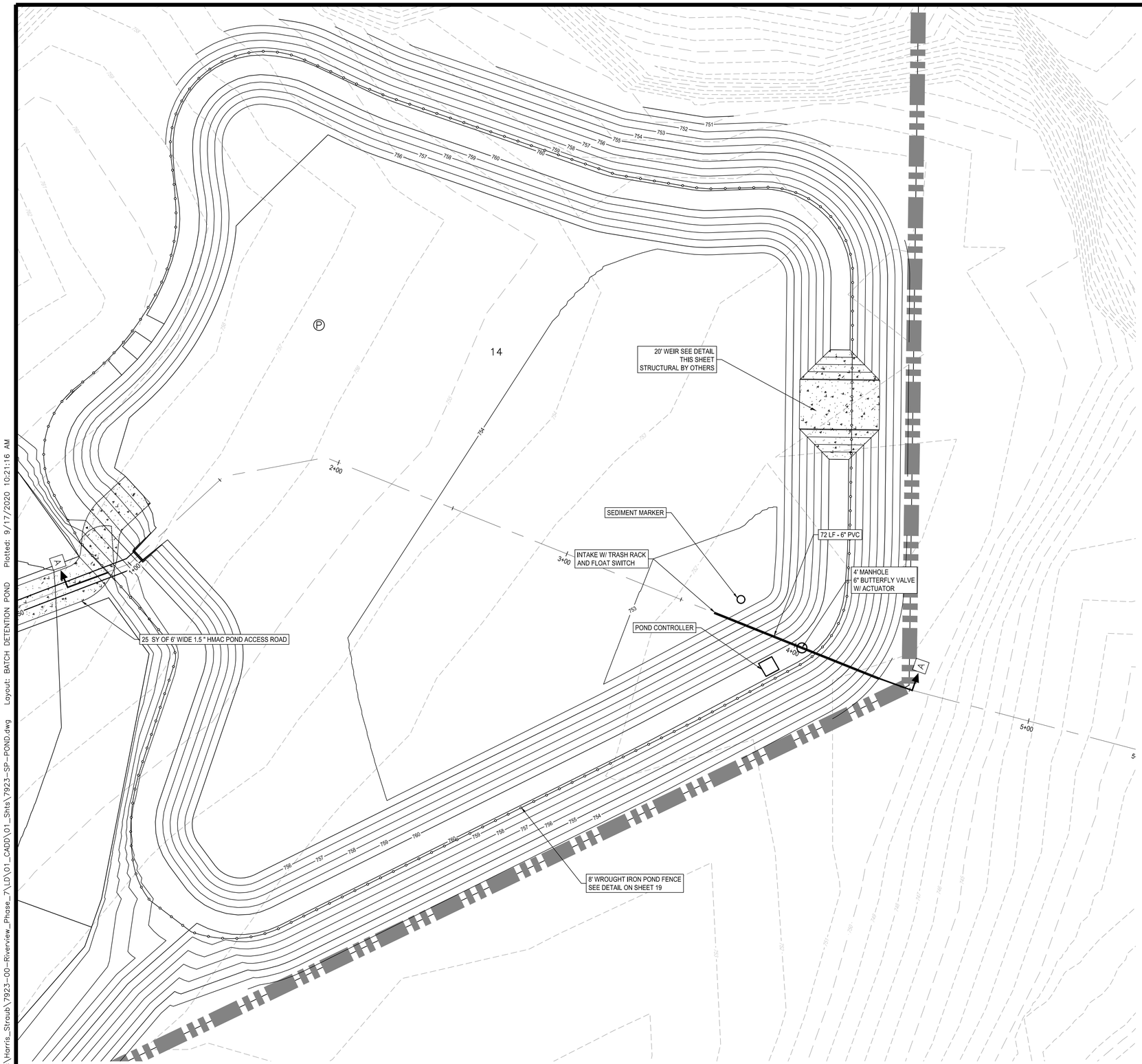
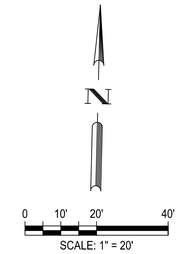
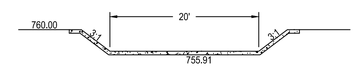
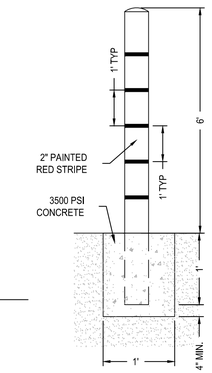


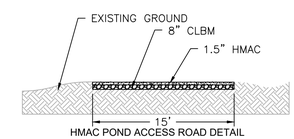




WEIR DETAIL
NOT TO SCALE



SEDIMENT MARKER DETAIL



HMAC POND ACCESS ROAD DETAIL

NOTES:

1. FLOAT SWITCH TO BE INSTALLED ON 4" CONCRETE PAD.
2. SYSTEM SHALL BE 12 VDC WITH SOLAR CHARGED 12 VDC BATTERY. ALTERNATE ELECTRICAL DESIGN MAY BE ALSO UTILIZED IN LIEU OF SOLAR POWER WITH ENGINEERS APPROVAL.
3. ACTUATOR SHALL BE ELECTRONIC QUARTER-TURN WITH MANUAL OVERRIDE AND POSITION INDICATOR.
4. CONTROLLER SHALL BE SET TO OPEN VALVE 12 HOURS AFTER INITIAL RAINFALL DETECTION. VALVE TO REMAIN OPEN UNTIL 2 HRS FOLLOWING BASIN EMPTY SIGNALS.
5. CONTROLLER SHALL BE IN LOCKED ENCLOSURE WITH EXTERNAL INDICATOR.
6. CONTROLLER SHALL HAVE TEST SEQUENCE, ON/OFF/RESET SWITCH AND THE PROGRAMMING SHALL BE FIELD UPLOADABLE.
7. ALL WIRING SHALL BE INSTALLED IN CONDUIT AND BURIED. CONTACT ENGINEER FOR ADDITIONAL CONTROLLER SCHEMATICS.
8. CONTRACTOR SHALL TEST AND VERIFY POND IS FUNCTIONING AS DESIGNED PRIOR TO ACCEPTANCE. CONTRACTOR SHALL SUBMIT LIST OF CONTROL PANEL COMPONENTS AND OPERATIONS MANUAL TO ENGINEER.

811
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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

BATCH DETENTION POND

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

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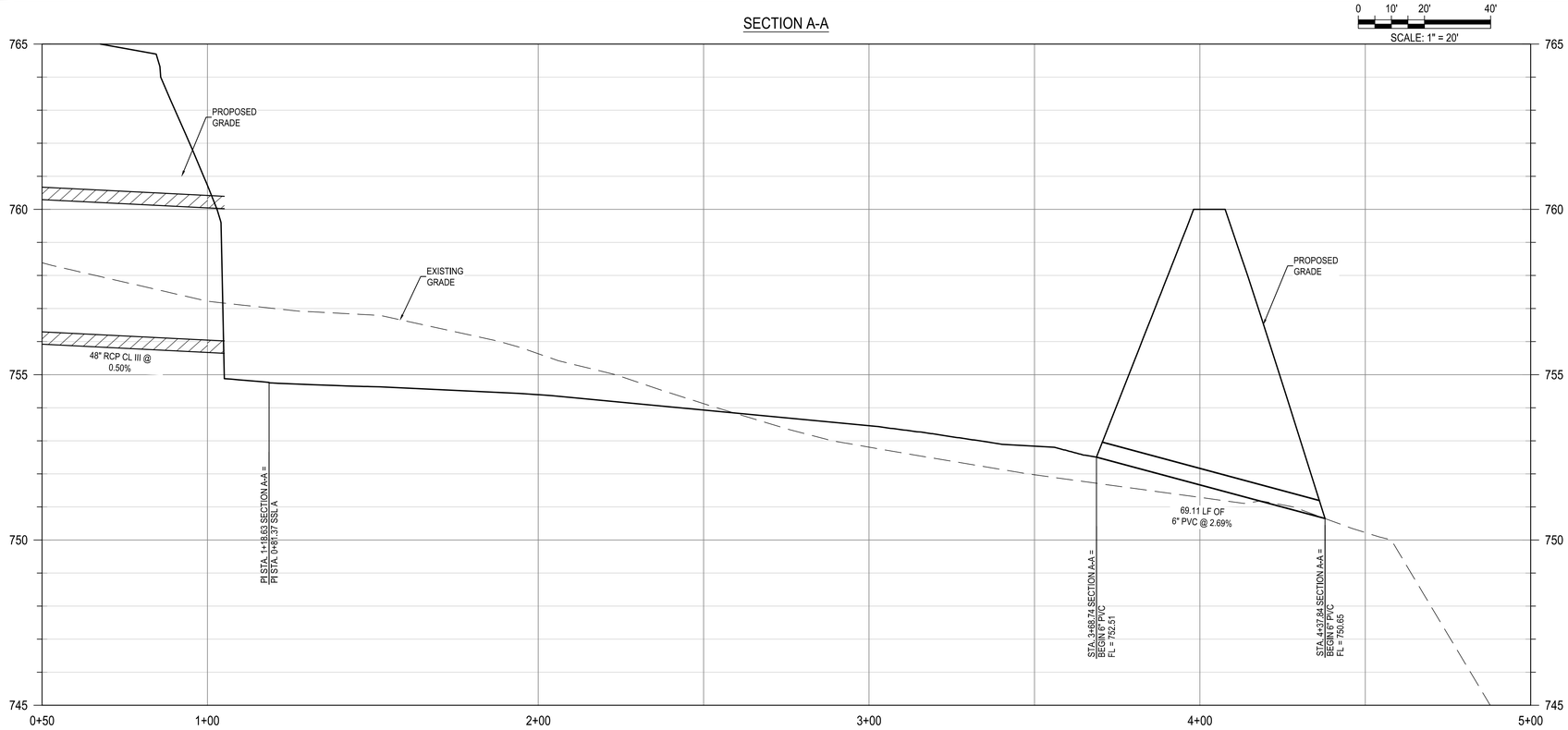
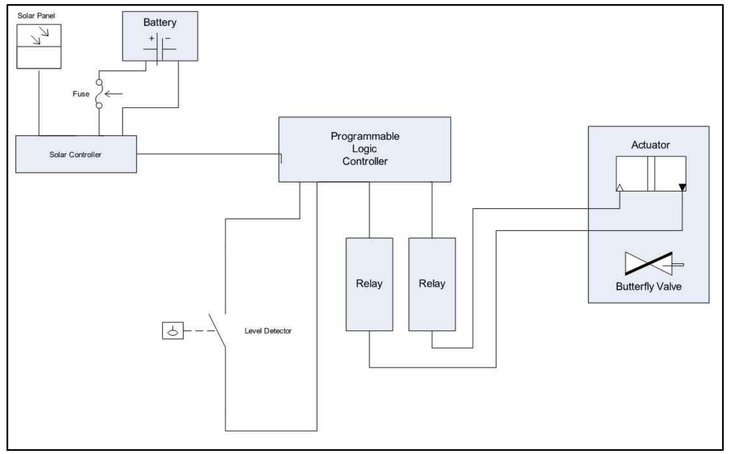
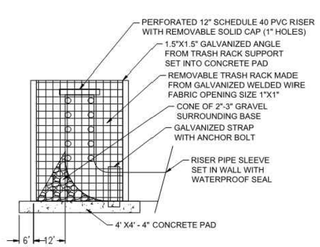
SECTION A-A



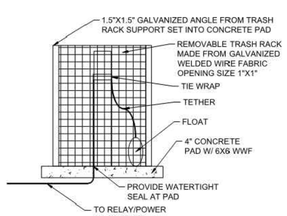


CONTROLLER CIRCUIT DIAGRAM



TRASH RACK/RISER PIPE DETAIL

NTS



FLOAT SWITCH DETAIL

NTS

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

Drainage Basin/Outfall Area No. =	**1**	POND
Total drainage basin/outfall area =	**15.89**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**8.13**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.51**	
$L_{M\ THIS\ BASIN}$ =	**7519**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**BATCH DETENTION POND**	
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 =	**15.89**	acres
A_I =	**8.13**	acres
A_P =	**7.76**	acres
L_R =	**8313**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	**8313**	lbs.
F =	**1.00**	

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 =	**4.00**	inches
Post Development Runoff Coefficient =	**0.36**	
On-site Water Quality Volume =	**83981**	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 =	**16796**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**100777**	cubic feet

Stage (ft msl) (Elevation)	Pond Depth (ft)	Cumulative Pond Depth (ft)	Area (sf)	Volume (cf)	Cumulative Volume (cf)
753.00	0.00	0.00	2248.00	0	0
754.00	1.00	1.00	24467.00	11,377	11,377
755.00	1.00	2.00	54151.00	38,339	49,716
755.91	0.91	2.91	57861.02	51,068	100,784
756.00	1.00	3.00	58219.00	56,173	105,889
757.00	1.00	4.00	61243.00	59,725	165,614
758.00	1.00	5.00	64321.00	62,776	228,389
759.00	1.00	6.00	67454.00	65,881	294,271
760.00	1.00	7.00	70671.00	69,056	363,327

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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

BATCH DETENTION POND DETAILS

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/18/20

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RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

DRAINAGE AREA MAP

STATE OF TEXAS
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123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

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CON-2020-XXX

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Drainage Area	Total Area (Ac)	Total Area (sf)	STREET: Street Width (ft)	Sidewalk Width (ft)	Sidewalk Area (sf)	% of Street	Street Length (lf)	Area Street (sf)	Street & Sidewalk (sf)	Street & Sidewal (Ac)	Area Street (%)	IMPERVIOUS: Num Homes in Area	Area Imper. (sf)	Area Imper. (Ac)	Area Imper. (%)	GRASS: Area Grass (sf)	Area Grass (Ac)	Area Grass (%)	Composite 10 Yr "C"	Composite 25 Yr "C"	Composite 100 Yr "C"
A-1A	1.04	45,302	32	5	665	50%	133	2,128	2,793	0.06	4.7%	3	10,500	0.24	23.2%	32,674	0.75	72.1%	0.47	0.49	0.53
A-1B	0.21	9,148	32	5	1315	50%	263	4,208	5,523	0.13	46.0%	0	0	0.00	0.0%	4,940	0.11	54.0%	0.59	0.60	0.63
A2	1.07	46,609	32	5	950	50%	190	3,040	3,990	0.09	6.5%	4	14,000	0.32	30.0%	29,569	0.68	63.4%	0.53	0.55	0.58
A3	1.22	53,143	32	5	3255	50%	651	10,416	13,671	0.31	19.6%	4	14,000	0.32	26.3%	28,727	0.66	54.1%	0.59	0.61	0.64
A-4A	1.49	64,904	32	5	1200	50%	240	3,840	5,040	0.12	5.9%	7	24,500	0.56	37.7%	36,564	0.84	56.3%	0.58	0.60	0.63
A-4B	1.10	47,916	32	5	900	50%	180	2,880	3,780	0.09	6.0%	6	21,000	0.48	43.8%	24,036	0.55	50.2%	0.62	0.64	0.66
A5	1.40	60,984	32	5	1345	50%	269	4,304	5,649	0.13	7.1%	5	17,500	0.40	28.7%	39,180	0.90	64.2%	0.53	0.54	0.58
A6	1.50	65,340	32	5	1408	50%	282	4,506	5,914	0.14	6.9%	5	17,500	0.40	26.8%	43,334	0.99	66.3%	0.51	0.53	0.56
A7	0.65	28,314	32	5	4200	50%	840	13,440	17,640	0.40	47.5%	1	3,500	0.08	12.4%	11,374	0.26	40.2%	0.68	0.70	0.72
A8	1.77	77,101	32	5	3738.11	50%	748	11,962	15,700	0.36	15.5%	8	28,000	0.64	36.3%	37,139	0.85	48.2%	0.63	0.65	0.67
A9	0.90	39,204	32	5	3490	50%	698	11,168	14,658	0.34	28.5%	3	10,500	0.24	26.8%	17,536	0.40	44.7%	0.66	0.67	0.69
A-10A	0.36	15,682	32	5	3030	50%	606	9,696	12,726	0.29	61.8%	0	0	0.00	0.0%	5,986	0.14	38.2%	0.69	0.71	0.72
A-10B	0.25	10,890	32	5	2170	50%	434	6,944	9,114	0.21	63.8%	0	0	0.00	0.0%	3,946	0.09	36.2%	0.71	0.72	0.74
B1	0.52	22,651	32	5	4605	50%	921	14,736	19,341	0.44	65.1%	0	0	0.00	0.0%	7,915	0.18	34.9%	0.72	0.73	0.74
C2	1.34	58,370	32	5	2260	50%	452	7,232	9,492	0.22	12.4%	6	21,000	0.48	36.0%	30,138	0.69	51.6%	0.61	0.63	0.65
C3	1.22	53,143	32	5	750	50%	150	2,400	3,150	0.07	4.5%	6	21,000	0.48	39.5%	29,743	0.68	56.0%	0.58	0.60	0.63
OS-1A	0.47	20,473	32	5	840	50%	168	2,688	3,528	0.08	13.1%	2	7,000	0.16	34.2%	10,785	0.25	52.7%	0.60	0.62	0.65
OS-1B	0.13	5,663	32	5	1130	50%	226	3,616	4,746	0.11	63.9%	0	0	0.00	0.0%	2,047	0.05	36.1%	0.71	0.72	0.74
OS-2A	0.10	4,356	32	5	840	50%	168	2,688	3,528	0.08	61.7%	0	0	0.00	0.0%	1,668	0.04	38.3%	0.69	0.70	0.72
OS-2B	0.13	5,663	32	5	1130	50%	226	3,616	4,746	0.11	63.9%	0	0	0.00	0.0%	2,047	0.05	36.1%	0.71	0.72	0.74
OS-3A	0.59	25,700	32	5	1548.75	50%	310	4,956	6,505	0.15	19.3%	2	7,000	0.16	27.2%	13,744	0.32	53.5%	0.60	0.61	0.64
OS-3B	0.13	5,663	32	5	1115	50%	223	3,568	4,683	0.11	63.0%	0	0	0.00	0.0%	2,095	0.05	37.0%	0.70	0.71	0.73
OS-4A	0.08	3,485	32	5	660	50%	132	2,112	2,772	0.06	60.6%	0	0	0.00	0.0%	1,373	0.03	39.4%	0.69	0.70	0.72
OS-4B	0.13	5,663	32	5	1114.5	50%	223	3,566	4,681	0.11	63.0%	0	0	0.00	0.0%	2,096	0.05	37.0%	0.70	0.71	0.73
OS-5	2.23	97,139	32	5	0	50%	0	0	0	0.00	0.0%	13	45,500	1.04	46.8%	51,639	1.19	53.2%	0.60	0.62	0.65
OS-6	4.56	198,634	32	5	0	50%	0	0	0	0.00	0.0%	25	87,500	2.01	44.1%	111,134	2.55	55.9%	0.58	0.60	0.63

Basin From	Basin To	Area (Ac)	Area (sf)	Sheet Flow L (ft)	n	S (%)	T_c (min)	Shallow Conc. Flow L (ft)	n	S (%)	T_c (min)	T_c (min)	25-year C	25-year I (in/hr)	25-year Q (cfs)	100-year C	100-year I (in/hr)	100-year Q (cfs)
A-1A	SUMP INLET	1.04	45,302	100	0.24	2.20%	3.85	270	0.04	1.00%	2.57	6.42	0.49	9.37	4.81	0.53	11.34	6.24
A-1B	SUMP INLET	0.21	9,148	15	0.24	1.50%	0.70	315	0.04	1.00%	3.00	5.00	0.60	9.84	1.25	0.63	11.88	1.58
A2	GRADE INLET	1.07	46,609	100	0.24	2.50%	3.61	325	0.04	0.70%	3.70	7.31	0.55	9.11	5.36	0.58	11.04	6.87
A3	GRADE INLET	1.22	53,143	15	0.24	1.50%	0.70	495	0.04	0.70%	5.63	6.33	0.61	9.40	6.99	0.64	11.38	8.83
A-4A	SUMP INLET	1.49	64,904	100	0.24	2.10%	3.94	450	0.04	0.70%	5.12	9.07	0.60	8.63	7.68	0.63	10.48	9.77
A-4B	SUMP INLET	1.10	47,916	100	0.24	2.20%	3.85	325	0.04	0.70%	3.70	7.55	0.64	9.04	6.34	0.66	10.96	7.99
A5	GRADE INLET	1.40	60,984	100	0.24	1.80%	4.26	555	0.04	0.80%	5.91	10.17	0.54	8.36	6.37	0.58	10.17	8.21
A6	GRADE INLET	1.50	65,340	100	0.24	1.80%	4.26	435	0.04	0.80%	4.63	8.89	0.53	8.67	6.91	0.56	10.54	8.92
A7	GRADE INLET	0.65	28,314	54	0.24	0.20%	6.90	830	0.04	0.80%	8.84	15.74	0.70	7.23	3.27	0.72	8.85	4.12
A8	GRADE INLET	1.77	77,101	100	0.24	2.50%	3.61	496	0.04	0.80%	5.28	8.90	0.65	8.67	9.96	0.67	10.54	12.55
A9	GRADE INLET	0.90	39,204	100	0.24	2.40%	3.69	375	0.04	1.85%	2.63	6.31	0.67	9.41	5.66	0.69	11.38	7.08
A-10A	SUMP INLET	0.36	15,682	15	0.24	1.50%	0.70	620	0.04	0.70%	7.06	7.76	0.71	8.98	2.28	0.72	10.89	2.84
A-10B	SUMP INLET	0.25	10,890	15	0.24	1.50%	0.70	440	0.04	0.70%	5.01	5.71	0.72	9.60	1.72	0.74	11.61	2.14
B1	GRADE INLET	0.52	22,651	15	0.24	1.50%	0.70	895	0.04	0.80%	9.53	10.23	0.73	8.34	3.15	0.74	10.15	3.93
C2	GRADE INLET	1.34	58,370	100	0.24	1.50%	4.67	475	0.04	0.50%	6.40	11.06	0.63	8.15	6.84	0.65	9.93	8.68
C3	GRADE INLET	1.22	53,143	100	0.24	2.40%	3.69	350	0.04	0.80%	3.73	7.42	0.60	9.08	6.64	0.63	11.00	8.43
OS-1A	SUMP INLET	0.47	20,473	100	0.24	2.30%	3.77	220	0.04	1.39%	1.78	5.55	0.62	9.65	2.81	0.65	11.67	3.54
OS-1B	SUMP INLET	0.13	5,663	15	0.24	1.50%	0.70	225	0.04	0.80%	2.40	5.00	0.72	9.84	0.92	0.74	11.88	1.14
OS-2A	SUMP INLET	0.10	4,356	15	0.24	1.50%	0.70	170	0.04	1.39%	1.37	5.00	0.70	9.84	0.69	0.72	11.88	0.86
OS-2B	SUMP INLET	0.13	5,663	15	0.24	1.50%	0.70	230	0.04	0.80%	2.45	5.00	0.72	9.84	0.92	0.74	11.88	1.14
OS-3A	SUMP INLET	0.59	25,700	100	0.24	0.30%	10.43	310	0.04	1.14%	2.77	13.20	0.61	7.70	2.79	0.64	9.40	3.55
OS-3B	SUMP INLET	0.13	5,663	15	0.24	1.50%	0.70	225	0.04	5.15%	0.94	5.00	0.71	9.84	0.91	0.73	11.88	1.13
OS-4A	SUMP INLET	0.08	3,485	15	0.24	1.50%	0.70	135	0.04	1.14%	1.20	5.00	0.70	9.84	0.55	0.72	11.88	0.68
OS-4B	SUMP INLET	0.13	5,663	15	0.24	1.50%	0.70	225	0.04	5.15%	0.94	5.00	0.71	9.84	0.91	0.73	11.88	1.13
OS-5	VFS	2.23	97,139	AREA WILL DRAIN TO VFS														
OS-6	VFS	4.56	198,634	AREA WILL DRAIN TO VFS														

Inlet	Area	C 25	C 100
SUMP INLET	45,302	0.49	0.53
SUMP INLET	9,148	0.60	0.63
GRADE INLET	46,609	0.55	0.58
GRADE INLET	53,143	0.61	0.64
SUMP INLET	64,904	0.60	0.63
SUMP INLET	47,916	0.64	0.66
GRADE INLET	60,984	0.54	0.58
GRADE INLET	65,340	0.53	0.56
GRADE INLET	28,314	0.70	0.72
GRADE INLET	77,101	0.65	0.67
GRADE INLET	39,204	0.67	0.69
SUMP INLET	15,682	0.71	0.72
SUMP INLET	10,890	0.72	0.74
GRADE INLET	22,651	0.73	0.74
GRADE INLET	58,370	0.63	0.65
GRADE INLET	53,143	0.60	0.63
SUMP INLET	20,473	0.62	0.65
SUMP INLET	5,663	0.72	0.74
SUMP INLET	4,356	0.70	0.72
SUMP INLET	5,663	0.72	0.74
SUMP INLET	25,700	0.61	0.64
SUMP INLET	5,663	0.71	0.73
SUMP INLET	3,485	0.70	0.72
SUMP INLET	5,663	0.71	0.73

Know what's **below.**
Call before you dig.

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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL- 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

DRAINAGE CALCS (1 OF 2)

STATE OF TEXAS
RICHARD L RYCHLIK JR
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

CON-2020-XXX

G:\TXC\Projects\Harris_Stroub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-DRAINAGE MAP.DWG Layout: DRAINAGE CALCS (1 OF 2) Plotted: 9/17/2020 10:21:54 AM

STREET / INLET CAPACITIES
25-YEAR

		STREET CAPACITY					INLET ON GRADE								SUMP INLET				
Drainage Area	Inlet	$Q_{(pass)}$ (cfs)	$Q_{(25)}$ (cfs)	Street Width (ft)	Slope (ft/ft)	a (ft)	Y_o (ft)	Ponded Width (ft)	Q_a/L_a (ft)	Needed (ft)	Length (ft)	L/L_{need} '*=>Qpass	a/Y_o	Possible Q (cfs)	$Q_{(pass)}$ (cfs)	Clogging Factor	$Q_{(100)}$ (cfs)	h (ft)	L Needed (ft)	Length (ft)
A-1A	SUMP INLET	0.00	4.81	32	0.0100	0.417	0.412	8.355								10%	6.06	0.829	2.94	10
A-1B	SUMP INLET	0.00	1.25	32	0.0100	0.417	0.264	4.626								10%	6.06	0.681	3.95	10
A2	GRADE INLET	0.00	5.36	32	0.0070	0.417	0.453	9.771	0.917	5.85	10	1.00	0.922	9.169	0.00					
A3	GRADE INLET	0.00	6.99	32	0.0070	0.417	0.494	11.651	0.963	7.25	10	1.00	0.844	9.633	0.00					
A-4A	SUMP INLET	0.00	7.68	32	0.0070	0.417	0.509	12.616								10%	14.02	0.926	5.76	10
A-4B	SUMP INLET	0.00	6.34	32	0.0070	0.417	0.478	10.861								10%	14.02	0.895	6.07	10
A5	GRADE INLET	0.00	6.37	32	0.0080	0.417	0.469	10.427	0.935	6.81	10	1.00	0.890	9.348	0.00					
A6	GRADE INLET	0.00	6.91	32	0.0080	0.417	0.481	11.003	0.949	7.28	10	1.00	0.866	9.490	0.00					
A7	GRADE INLET	0.00	3.27	32	0.0080	0.417	0.376	7.310	0.833	3.92	10	1.00	1.109	8.335	0.00					
A8	GRADE INLET	0.00	9.96	32	0.0080	0.417	0.543	16.491	1.019	9.77	10	1.00	0.768	10.195	0.00					
A9	GRADE INLET	0.00	5.66	32	0.0185	0.417	0.393	7.780	0.851	6.65	10	1.00	1.062	8.513	0.00					
A-10A	SUMP INLET	0.00	2.28	32	0.0070	0.417	0.341	6.401								10%	4.01	0.758	2.22	10
A-10B	SUMP INLET	0.00	1.72	32	0.0070	0.417	0.311	5.674								10%	4.01	0.728	2.36	10
B1	GRADE INLET	0.00	3.15	32	0.0080	0.417	0.371	7.186	0.829	3.80	10	1.00	1.123	8.286	0.00					
C2	GRADE INLET	0.00	6.84	32	0.0050	0.417	0.519	13.336	0.991	6.90	10	1.00	0.804	9.912	0.00					
C3	GRADE INLET	0.00	6.64	32	0.0080	0.417	0.475	10.714	0.942	7.05	10	1.00	0.878	9.421	0.00					
OS-1A	SUMP INLET	0.00	2.81	32	0.0139	0.417	0.327	6.039								10%	3.73	0.744	2.13	10
OS-1B	SUMP INLET	0.00	0.92	32	0.0080	0.417	0.247	4.284								10%	3.73	0.664	2.53	10
OS-2A	SUMP INLET	0.00	0.69	32	0.0139	0.417	0.206	3.461								10%	1.61	0.623	1.20	10
OS-2B	SUMP INLET	0.00	0.92	32	0.0080	0.417	0.247	4.284								10%	1.61	0.664	1.09	10
OS-3A	SUMP INLET	0.00	2.79	32	0.0114	0.417	0.336	6.278								10%	3.70	0.753	2.07	10
OS-3B	SUMP INLET	0.00	0.91	32	0.0515	0.417	0.181	3.004								10%	3.70	0.598	2.93	10
OS-4A	SUMP INLET	0.00	0.55	32	0.0114	0.417	0.197	3.292								10%	1.46	0.614	1.11	10
OS-4B	SUMP INLET	0.00	0.91	32	0.0515	0.417	0.181	3.004								10%	1.46	0.598	1.16	10

STREET / INLET CAPACITIES
100-YEAR

		STREET CAPACITY					INLET ON GRADE								SUMP INLET				
Drainage Area	Inlet	$Q_{(pass)}$ (cfs)	$Q_{(100)}$ (cfs)	Street Width (ft)	Slope (ft/ft)	a (ft)	Y_o (ft)	Ponded Width (ft)	Q_a/L_a (ft)	Needed (ft)	Length (ft)	L/L_{need} '*=>Qpass	a/Y_o	Possible Q (cfs)	$Q_{(pass)}$ (cfs)	Clogging Factor	$Q_{(100)}$ (cfs)	h (ft)	L Needed (ft)	Length (ft)
A-1A	SUMP INLET	0.00	6.24	32	0.0100	0.417	0.449	9.625								10%	7.82	0.866	3.56	10
A-1B	SUMP INLET	0.00	1.58	32	0.0100	0.417	0.285	5.078								10%	7.82	0.702	4.88	10
A2	GRADE INLET	0.00	6.87	32	0.0070	0.417	0.491	11.501	0.960	7.16	10	1.00	0.849	9.601	0.00					
A3	GRADE INLET	0.00	8.83	32	0.0070	0.417	0.534	16.014	1.009	8.76	10	1.00	0.781	10.085	0.00					
A-4A	SUMP INLET	0.00	9.77	32	0.0070	0.417	0.552	16.915								10%	17.76	0.969	6.83	10
A-4B	SUMP INLET	0.00	7.99	32	0.0070	0.417	0.516	13.137								10%	17.76	0.933	7.22	10
A5	GRADE INLET	0.00	8.21	32	0.0080	0.417	0.510	12.621	0.981	8.37	10	1.00	0.818	9.810	0.00					
A6	GRADE INLET	0.00	8.92	32	0.0080	0.417	0.524	13.839	0.997	8.94	10	1.00	0.796	9.970	0.00					
A7	GRADE INLET	0.00	4.12	32	0.0080	0.417	0.406	8.175	0.866	4.76	10	1.00	1.028	8.656	0.00					
A8	GRADE INLET	0.00	12.55	32	0.0080	0.417	0.586	18.643	1.070	11.73	15	1.00	0.711	16.044	0.00					
A9	GRADE INLET	0.00	7.08	32	0.0185	0.417	0.423	8.711	0.884	8.01	10	1.00	0.987	8.840	0.00					
A-10A	SUMP INLET	0.00	2.84	32	0.0070	0.417	0.367	7.065								10%	4.98	0.784	2.63	10
A-10B	SUMP INLET	0.00	2.14	32	0.0070	0.417	0.334	6.219								10%	4.98	0.751	2.80	10
B1	GRADE INLET	0.00	3.93	32	0.0080	0.417	0.399	7.984	0.859	4.57	10	1.00	1.044	8.587	0.00					
C2	GRADE INLET	0.00	8.68	32	0.0050	0.417	0.561	17.377	1.040	8.35	10	1.00	0.743	10.400	0.00					
C3	GRADE INLET	0.00	8.43	32	0.0080	0.417	0.514	12.950	0.986	8.55	10	1.00	0.811	9.860	0.00					
OS-1A	SUMP INLET	0.00	3.54	32	0.0139	0.417	0.352	6.683								10%	4.68	0.769	2.54	10
OS-1B	SUMP INLET	0.00	1.14	32	0.0080	0.417	0.265	4.660								10%	4.68	0.682	3.04	10
OS-2A	SUMP INLET	0.00	0.86	32	0.0139	0.417	0.221	3.754								10%	2.00	0.638	1.44	10
OS-2B	SUMP INLET	0.00	1.14	32	0.0080	0.417	0.265	4.660								10%	2.00	0.682	1.30	10
OS-3A	SUMP INLET	0.00	3.55	32	0.0114	0.417	0.364	6.996								10%	4.68	0.781	2.48	10
OS-3B	SUMP INLET	0.00	1.13	32	0.0515	0.417	0.195	3.252								10%	4.68	0.612	3.59	10
OS-4A	SUMP INLET	0.00	0.68	32	0.0114	0.417	0.211	3.570								10%	1.81	0.628	1.33	10
OS-4B	SUMP INLET	0.00	1.13	32	0.0515	0.417	0.195	3.252								10%	1.81	0.612	1.39	10

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

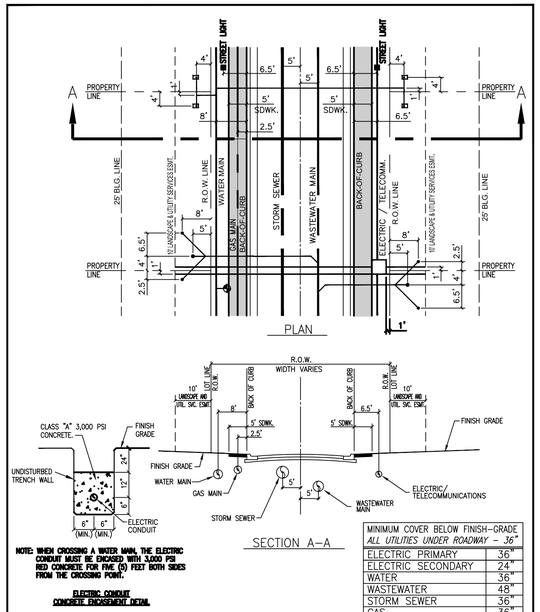
BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

DRAINAGE CALCS (2 OF 2)

STATE OF TEXAS
RICHARD L RYCHLIK JR
123927
LICENSED
PROFESSIONAL ENGINEER
9/17/20

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-DRAINAGE MAP.DWG Layout: DRAINAGE CALCS (2 OF 2) Plotted: 9/17/2020 10:21:56 AM



NOTE: WHEN CROSSING A WATER MAIN, THE ELECTRIC CONDUIT MUST BE ENCASED WITH 3,000 PSI RED CONCRETE FOR FIVE (5) FEET BOTH SIDES FROM THE CROSSING POINT.

ELECTRIC CONDUIT CONCRETE ENCASEMENT DETAIL

MINIMUM COVER BELOW FINISH–GRADE ALL UTILITIES UNDER ROADWAY – 36"	
ELECTRIC PRIMARY	36"
ELECTRIC SECONDARY	24"
WATER	36"
WASTEWATER	48"
STORM SEWER	36"
GAS	36"
TELECOMMUNICATIONS	36"

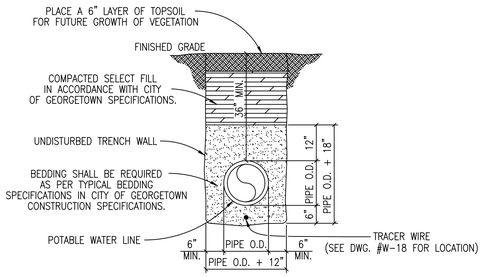
CLASSIFICATION	ROW	B–B	PVMT.
LOCAL STREET	50'	28'	24'
RESIDENTIAL STREET	65'	37'	33'
MAJOR COLLECTOR	73'	45'	41'

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
UTILITY ASSIGNMENTS FOR LOCAL STREETS, RESIDENTIAL COLLECTORS AND MAJOR COLLECTORS

DRAWING NAME: W01A
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB



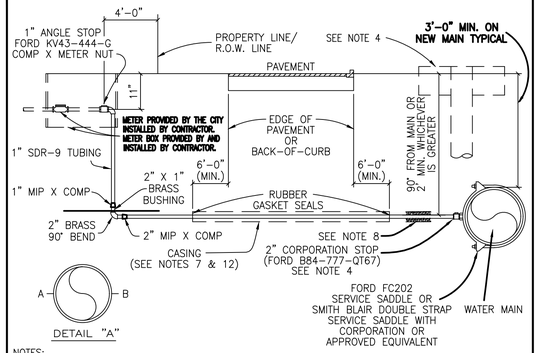
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'–0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'–0" + PIPE O.D.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER NON–PAVED AREAS

DRAWING NAME: W02
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB



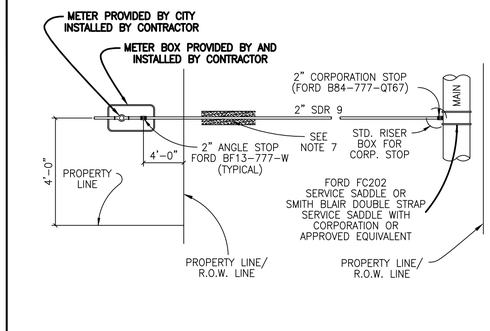
NOTES:
1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET AND AT THE CENTERLINE AS SHOWN ON DETAIL "A".
2. WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE.
3. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR–9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
4. ROTATE THE CORPORATION STOP SO THAT THE OPERATING NUT IS ACTUATED FROM THE VERTICAL POSITION RATHER THAN THE HORIZONTAL. SEE STD. RISER FOR CORP. STOP DETAIL, (DWG # W08).
5. SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO CORPORATION STOP WITH NO FITTINGS IN BETWEEN.
6. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.
7. CASING REQUIRED FOR ALL PAVEMENT CROSSINGS. 4" SDR–26 REQUIRED FOR OPEN–CUT. STEEL CASING PIPE REQUIRED FOR JACK AND BORE. LIMITS OF CASING SHOULD EXTEND SIX FEET BEYOND THE EDGE OF PAVEMENT OR BACK–OF–CURB.
8. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. METER BOX TO BE CAPABLE OF HOUSING ITRON AUTOMATIC METER READING DEVICE. USE DFW–PLASTICS, INC. PART NO. 1200.SBAMR OR APPROVED EQUAL.
11. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY. SEE DETAIL W23.
12. CASING SHALL EXTEND OUT TO WITHIN 4' INSIDE OF THE R.O.W. LINE, ON BOTH SIDES.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 01/23/2013

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL WATER SERVICE–ELEVATION

DRAWING NAME: W03
SCALE: NTS DATE: 1/2013
DRAWN BY: – APPROVED BY: MH



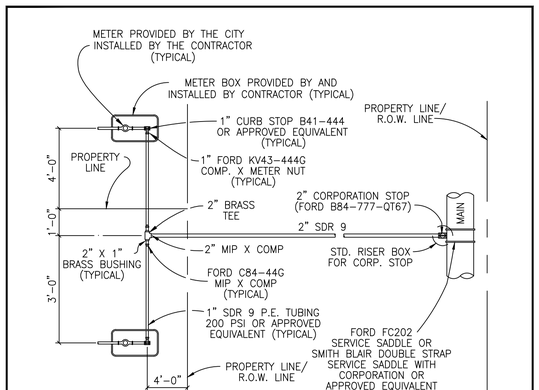
NOTES:
1. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR–9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
2. ANGLE STOP SHALL BE 1" MINIMUM.
3. 1" ANGLE STOPS WITH 3/4" VALVES SHALL NOT BE PERMITTED.
4. MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN 4 METERS PER SERVICE AND SERVICE LINES LARGER THAN 2" IN DIAMETER SHALL BE HANDLED ON AN INDIVIDUAL BASIS.
5. ANGLE STOPS 1 1/2" AND 2" IN SIZE SHALL BE PROVIDED WITH BOTH A LOCKING CAP AND METER FLANGE.
6. ANGLE STOPS SHALL BE INSTALLED 8" BELOW FINISHED GRADE AND MARKED WITH A 2" X 2" X 48" TREATED WOOD STAKE, PAINTED BLUE.
7. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
8. CASING REQUIREMENTS FOR SERVICE LINES CROSSING ROADWAYS SEE DETAIL W–03 NOTE #7.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 01/23/2013

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SINGLE WATER SERVICE PLAN

DRAWING NAME: W04
SCALE: NTS DATE: 1/2013
DRAWN BY: – APPROVED BY: MH



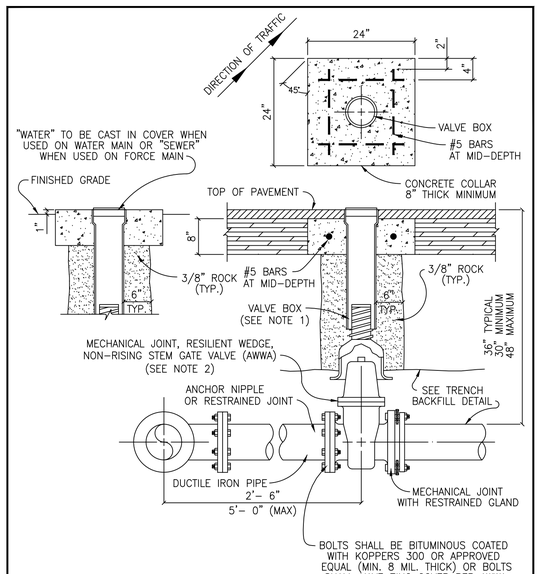
NOTES:
1. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR–9. CLASS 200, SDR TUBING SHALL HAVE STAINLESS STEEL STIFFENERS.
2. ANGLE STOP SHALL BE 1" MINIMUM.
3. 1" ANGLE STOPS WITH 3/4" VALVES SHALL NOT BE PERMITTED.
4. MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN 4 METERS PER SERVICE AND SERVICE LINES LARGER THAN 2" IN DIAMETER SHALL BE HANDLED ON AN INDIVIDUAL BASIS.
5. ANGLE STOPS 1 1/2" AND 2" IN SIZE SHALL BE PROVIDED WITH BOTH A LOCKING CAP AND METER FLANGE.
6. ANGLE STOPS SHALL BE INSTALLED 8" BELOW FINISHED GRADE AND MARKED WITH A 2" X 2" X 48" TREATED WOOD STAKE, PAINTED BLUE.
7. BEDDING MATERIAL AS PER CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS.
8. CASING REQUIREMENTS FOR SERVICE LINES CROSSING ROADWAYS SEE DETAIL W–03 NOTE #7.
9. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.
10. ALL SERVICE LINES SHALL BE PLACED 90° PERPENDICULAR TO THE ROADWAY.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 01/23/2013

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
DOUBLE WATER SERVICE PLAN

DRAWING NAME: W05
SCALE: NTS DATE: 1/2013
DRAWN BY: – APPROVED BY: MH



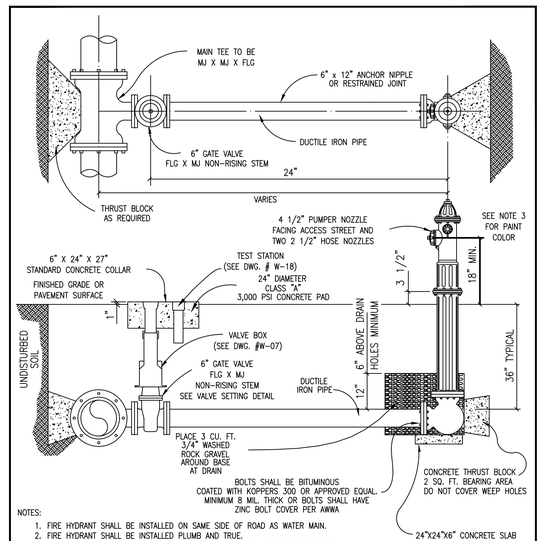
NOTES:
1. VALVE BOX SHALL BE 5 1/4" CAST IRON ADJUSTABLE HAVING AN ADJUSTABLE RANGE OF + OR – 6 INCHES FROM INSTALLED FINISH GRADE.
2. ACCEPTABLE GATE VALVES ARE:
   A. AMERICAN FLOW CONTROL – SERIES 2500
   B. MUELLER – 2360 SERIES
   C. CLOW

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL VALVE SETTING

DRAWING NAME: W07
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB



NOTES:
1. FIRE HYDRANT SHALL BE INSTALLED ON SAME SIDE OF ROAD AS WATER MAIN.
2. FIRE HYDRANT SHALL BE INSTALLED PLUMB AND TRUE.
3. ALL FIRE HYDRANT EXTERIORS SHALL BE FACTORY PRIMED AND PAINTED SILVER
4. HEEL AND THRUST BLOCKS TO REST IN UNDISTURBED SOIL.
5. THE ONLY FIRE HYDRANTS ACCEPTABLE ARE:
   A. KENNEDY – K81
   B. AMERICAN DARLING – B84B
   C. CLOW MEDALLION
6. DOUBLE BLUE REFLECTOR "HYE–LITES" BRAND, MANUFACTURED BY PAVEMENT MARKERS INC. TO BE INSTALLED AT CENTERLINE OF STREET PERPENDICULAR TO HYDRANT.
7. ALL METALLIC PIPES AND FITTINGS SHALL BE WRAPPED WITH 8 MILL. POLYETHELENE FILM.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL FIRE HYDRANT INSTALLATION

DRAWING NAME: W10
SCALE: NTS DATE: 1/2003
DRAWN BY: MRS APPROVED BY: TRB

Know what's **below.**
Call before you dig.

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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

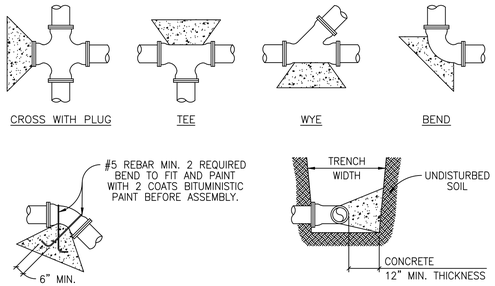
WATER DETAILS (1 OF 2)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET
46 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-DETS.dwg Layout: WATER DETAILS (1 OF 2) Plotted: 9/17/2020 10:22:10 AM



ALL THRUST BLOCKS SHALL BE FORMED. LAID FORMS SHALL BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO THE POURING OF CONCRETE AND SHALL ALSO BE INSPECTED BY THE CITY OF GEORGETOWN PRIOR TO COVERING. TYPICAL LOCATIONS WHICH REQUIRE CONCRETE REACTION (THRUST) BLOCKS, FOR PRESSURE MAINS FOUR INCHES (4") AND GREATER. CONCRETE SHALL HAVE 2,500 P.S.I. MINIMUM STRENGTH AT TWENTY EIGHT (28) DAYS AND BEAR AGAINST UNDISTURBED STABLE SOILS. AREA OF CONTACT SHALL BE GOVERNED BY PIPE SIZE, MAXIMUM PRESSURE IN PIPE, AND BEARING CAPACITY OF SOIL. PROTECT FITTINGS, BOLTS, ETC. BY COVERING WITH VISQUEEN OR OTHER ACCEPTABLE MATERIAL. CONCRETE SHALL BE A MINIMUM OF TWELVE INCHES (12") THICK.

PIPE SIZE	THRUST BLOCK AREA REQUIRED	PIPE SIZE	THRUST BLOCK AREA REQUIRED	REMARKS
4"	2.0 SQ. FT.	18"	30.0 SQ. FT.	VALUES ARE FOR 90° BENDS, BASED ON 2000 P.S.F. SAFE BEARING LOAD AND PIPE PRESSURE OF 150 P.S.I. PLUS 33% SAFETY FACTOR FOR OTHER SOILS AND PRESSURES, THE AREA REQUIRED IS IN DIRECT PROPORTION.
6"	4.0 SQ. FT.	20"	37.0 SQ. FT.	
8"	6.6 SQ. FT.	24"	53.0 SQ. FT.	
10"	10.0 SQ. FT.	27"	80.0 SQ. FT.	
12"	14.0 SQ. FT.	30"	98.0 SQ. FT.	
14"	18.0 SQ. FT.	36"	127.0 SQ. FT.	
16"	24.0 SQ. FT.			

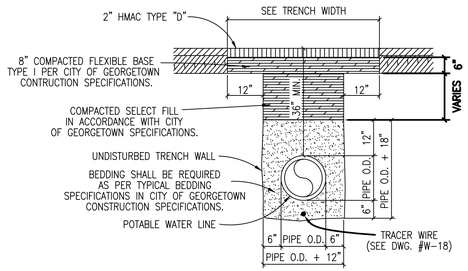
* THE ENGINEER OF RECORD SHALL CALCULATE THE SIZE OF THE DEADMAN REQUIRED AS WELL AS ANY INSTALLATION WHICH IS NOT COVERED BY THE ABOVE.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL THRUST BLOCKS FOR WATER AND FORCE MAIN

DRAWING NAME: W11 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

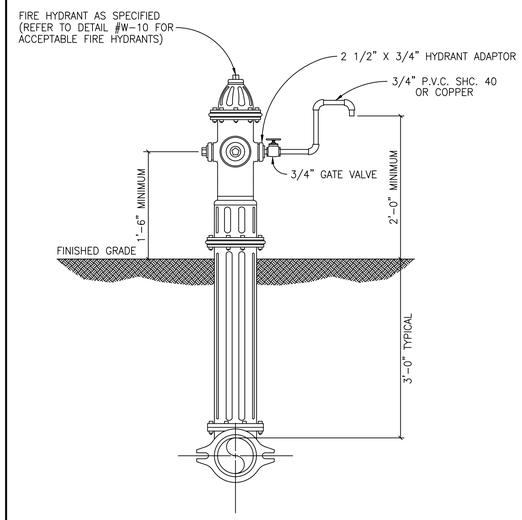
NOTES:
1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE.
2. BASE MATERIAL SHALL BE IN LIFTS NOT TO EXCEED 6" AND EACH LIFT THOROUGHLY ROLLED OR TAMPED TO SPECIFIED MAXIMUM DENSITY.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE.
5. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
6. **CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).**

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT AND PAVEMENT REPLACEMENT DETAIL UNDER EXISTING ROADWAY

DRAWING NAME: W17 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

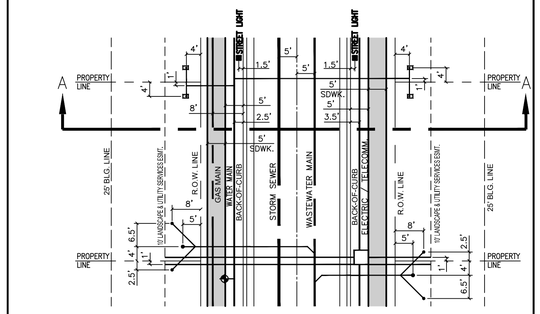


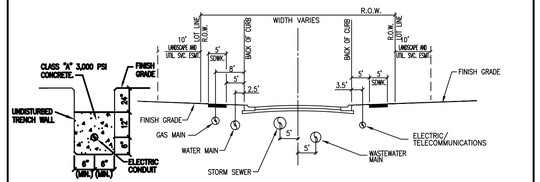
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
FIRE HYDRANT SAMPLING POINT

DRAWING NAME: W19 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB





NOTE: WHEN CROSSING A WATER MAIN, THE ELECTRIC CONDUIT MUST BE ENCASED WITH 3,000 PSI RED CONCRETE FOR FIVE (5) FEET BOTH SIDES FROM THE CROSSING POINT.

ELECTRIC CONDUIT CONCRETE ENCASEMENT DETAIL

CLASSIFICATION	ROW	B-B	PVMT.
MINOR ARTERIAL	VARIES	80'	76'
MAJOR ARTERIAL	VARIES	110'	106'

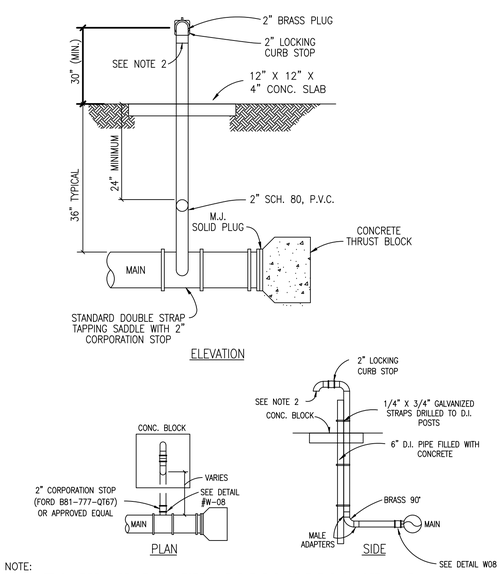
MINIMUM COVER BELOW FINISH-GRADE *ALL UTILITIES UNDER ROADWAY – 36"*	
ELECTRIC PRIMARY	36"
ELECTRIC SECONDARY	24"
WATER	36"
WASTEWATER	48"
STORM SEWER	36"
GAS	36"
TELECOMMUNICATIONS	36"

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
UTILITY ASSIGNMENTS FOR MINOR ARTERIAL AND MAJOR ARTERIAL ROADWAYS

DRAWING NAME: W01B | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



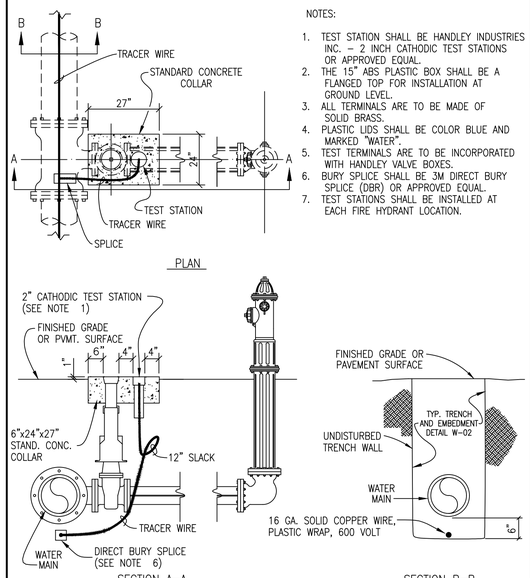
NOTE:
1. ATTACH FIRE HYDRANT CONNECTION AT THE END OF THE BLOW OFF VALVE.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD BLOW-OFF

DRAWING NAME: W09 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



NOTES:
1. TEST STATION SHALL BE HANDLEY INDUSTRIES INC. – 2 INCH CATHODIC TEST STATIONS OR APPROVED EQUAL.
2. THE 15" ABS PLASTIC BOX SHALL BE A FLANGED TOP FOR INSTALLATION AT GROUND LEVEL.
3. ALL TERMINALS ARE TO BE MADE OF SOLID BRASS.
4. PLASTIC LIDS SHALL BE COLOR BLUE AND MARKED "WATER".
5. TEST TERMINALS ARE TO BE INCORPORATED WITH HANDLEY VALVE BOXES.
6. BURY SPLICE SHALL BE 3M DIRECT BURY SPLICE (DBR) OR APPROVED EQUAL.
7. TEST STATIONS SHALL BE INSTALLED AT EACH FIRE HYDRANT LOCATION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRACER WIRE INSTALLATION AND TEST STATION LOCATION

DRAWING NAME: W18 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

Know what's **below.**
Call before you dig.

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

WATER DETAILS (2 OF 2)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET
47 OF 55

CON-2020-XXX

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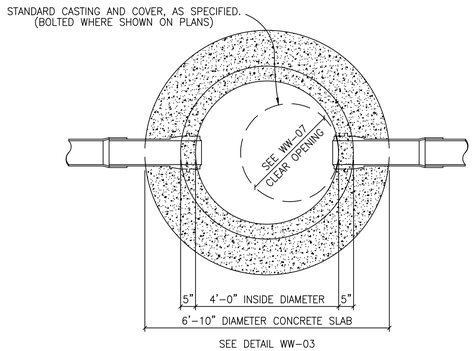


MANHOLE PLAN

CITY OF GEORGETOWN NOTES:

MANHOLE DETAILS SHALL REFLECT THE CITY'S MINIMUM SPECIFICATIONS, AS STATED BELOW:

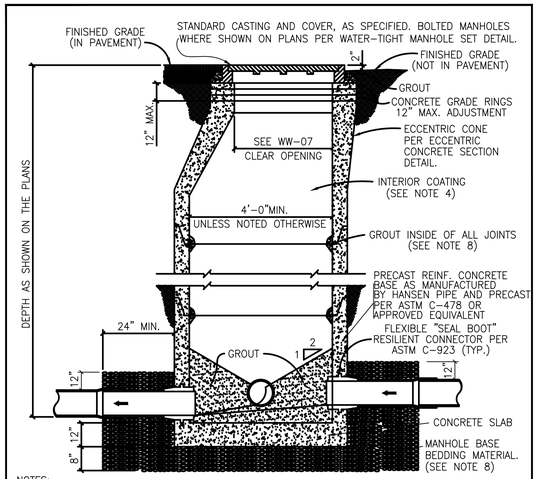
A. ALL MANHOLES SHALL BE 48" I.D., R.C.P., CLASS III, WITH RUBBER PROFILE GASKET – SINGLE OFF-SET JOINT CONFORMING TO ASTM C478, C433 AND C76.
B. ALL MANHOLES SHALL HAVE FRAME AND COVER, AS MANUFACTURED BY EAST JORDAN IRON WORKS (AS PER DETAIL # WW-07) OR APPROVED EQUIVALENT.
C. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON FRAME AND COVER.
D. ALL MANHOLES SHALL HAVE AN ECCENTRIC CONE.
E. MANHOLES MAY HAVE A FLAT LID, IF APPROVED BY CITY OF GEORGETOWN, BEING 12" THICK WITH A MINIMUM 30" OPENING, AS MANUFACTURED BY HANSEN PIPE AND PRECAST OR APPROVED EQUAL M.F.G. CONFORMING TO ASTM C478, 5000 P.S.I. CONCRETE, TRAFFIC BEARING AND WITH PROFILE GASKET – SINGLE OFF-SET JOINT CONFORMING TO ASTM C443.
F. INVERTS AND FLEXIBLE SEAL BOOTS, PER ASTM C-923, SHALL BE CAST INTO BASE SECTION.
G. MINIMUM DROP BETWEEN INVERTS SHALL BE ONE-TENTH OF A FOOT (0.1').
H. GRADE RINGS WITH AN I.D. TO MATCH FRAMES CLEAR OPENING WITH A MAXIMUM ADJUSTMENT OF 12" ARE ALLOWED.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD MANHOLE – PLAN

DRAWING NAME: WW02
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

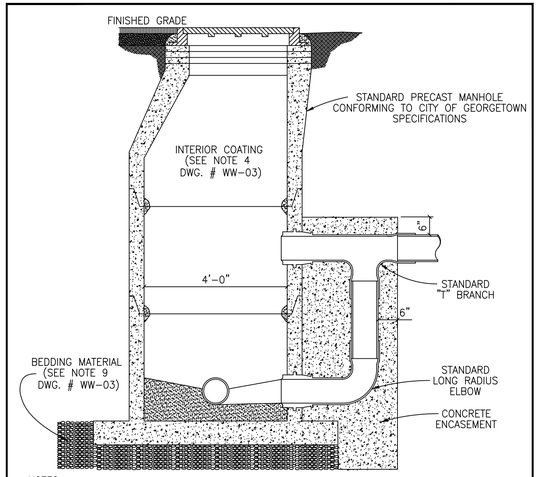
1. MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET – SINGLE OFF-SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
4. AN 80 MIL. COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH WASTEWATER MANHOLE AND UNDERSIDE OF FLAT TOPS.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETTED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
6. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
7. MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS-20 TRAFFIC LOADS.
8. GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
9. MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL:
   SIEVE SIZE 2", PERCENT (%) RETAINED 0
   SIEVE SIZE 1 1/2", % RETAINED 0-10
   SIEVE SIZE 1", % RETAINED 45-80
   SIEVE SIZE 3/4", % RETAINED 85-100
   SIEVE SIZE 3/8", % RETAINED 95-100

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD MANHOLE – SECTION

DRAWING NAME: WW03
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. CONCRETE ENCASEMENT FOR DROP CONNECTION TO BE POURED INTEGRALLY WITH BOTH MANHOLE SLAB AND WALL.
2. DROP CONNECTIONS SHALL BE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED TWO FEET (2') OR MORE ABOVE THE MAIN INVERT CHANNEL.
3. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
4. WHEN P.V.C. IS USED IN SANITARY SEWER LINES, SOLVENT TYPE JOINT P.V.C. FITTINGS MAY BE UTILIZED IN THE DROP ASSEMBLY ONLY.
5. MINIMUM PIPE SIZE FOR DROP IS EIGHT INCHES (8").
6. SEE STANDARD MANHOLE DETAIL (DWG. # WW-03) FOR ADDITIONAL REQUIREMENTS.

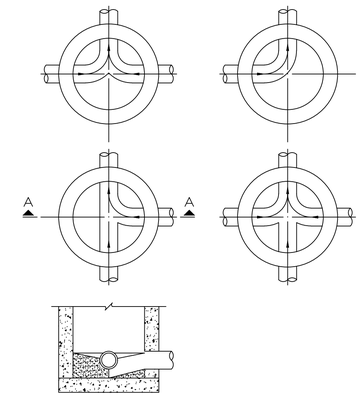
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
DROP CONNECTION–PRECAST MANHOLE TYPE "A"

DRAWING NAME: WW04
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

FLOW PATTERNS FOR INVERT CHANNELS



SECTION "A–A"

NOTES:

1. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
2. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOW.
3. CHANNELS FOR FUTURE CONSTRUCTIONS (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND, AND COVERED WITH 1" OF MORTAR.
4. SLOPE MANHOLE ITSELF WITH A 1:2 SLOPE FROM MANHOLE WALL TO CHANNEL.
5. INVERT SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR 4" DEEP.

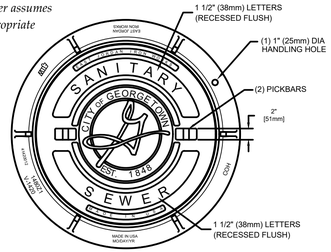
The Architect/Engineer assumes responsibility for appropriate use of this standard.

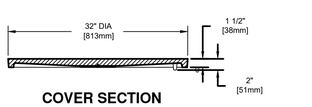
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
FLOW PATTERNS FOR INVERT CHANNELS

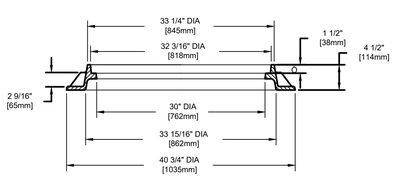
DRAWING NAME: WW06
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.





COVER SECTION



FRAME SECTION

NOTES:

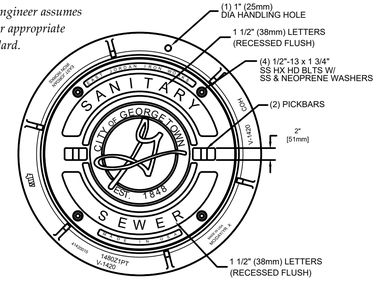
1. STANDARD WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V-1420/1480Z1, COVER TO BE STAMPED WITH "SANITARY SEWER".
2. STANDARD WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148390.
4. FOR BOLTED WASTEWATER MANHOLE SET REFER TO DETAIL WW07A.

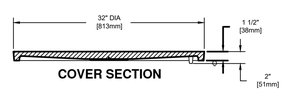
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD WASTEWATER MANHOLE SET

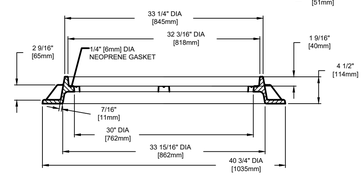
DRAWING NAME: WW07
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.





COVER SECTION



FRAME SECTION

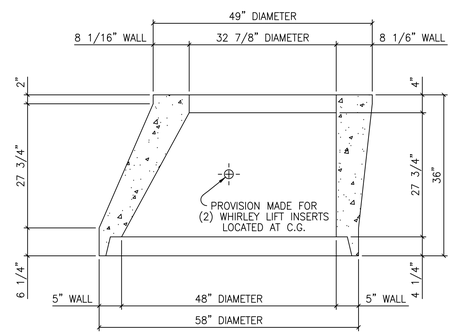
NOTES:

1. BOLTED WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480APT V-1420/1480Z1PT, COVER TO BE STAMPED WITH "SANITARY SEWER".
2. BOLTED WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 00148392 41420015.
4. FOR STANDARD WASTEWATER MANHOLE SET REFER TO DETAIL WW07.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
BOLTED WASTEWATER MANHOLE SET

DRAWING NAME: WW07A
SCALE: NTS | DATE: 1/2006
DRAWN BY: MRS | APPROVED BY: TRB



The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
48"X5" TO 33"X8"X36" TALL ECCENTRIC CONCRETE SECTION

DRAWING NAME: WW08
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

811 Know what's **below.** **Call** before you dig.

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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

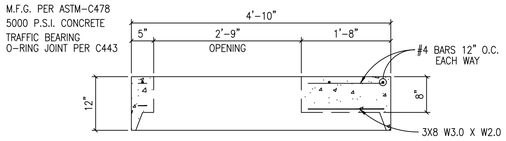
WASTEWATER DETAILS (1 OF 3)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

SHEET
48 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-DETS.dwg Layout: WASTEWATER DETAILS (1 OF 3) Plotted: 9/17/2020 10:22:19 AM



NOTES:

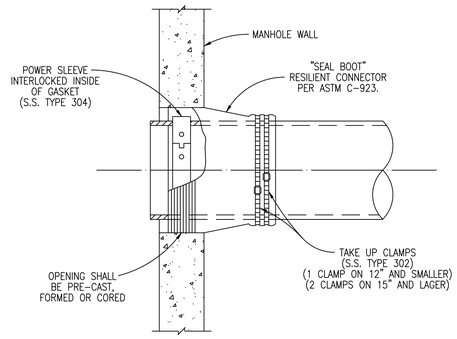
1. AVAILABLE WITH CAST IRON RING AND COVER CAST IN PLACE.
2. **PERMITTED ONLY WITH WRITTEN APPROVAL FROM GEORGETOWN UTILITY SYSTEMS, CITY OF GEORGETOWN**

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
48" MANHOLE FLAT LID

DRAWING NAME: WW09 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

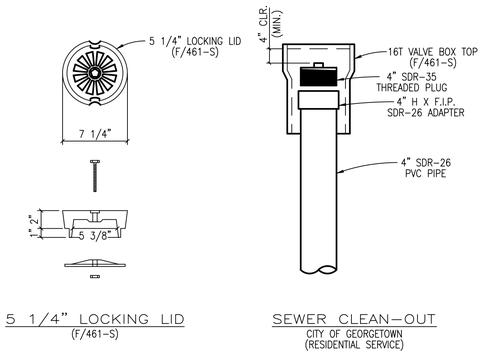


The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
FLEXIBLE "SEAL BOOT" CONNECTOR

DRAWING NAME: WW10 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

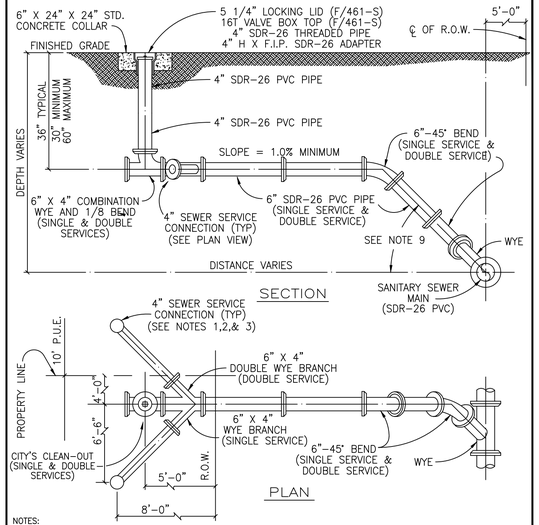


The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEWER CLEAN-OUT DETAIL

DRAWING NAME: WW12 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

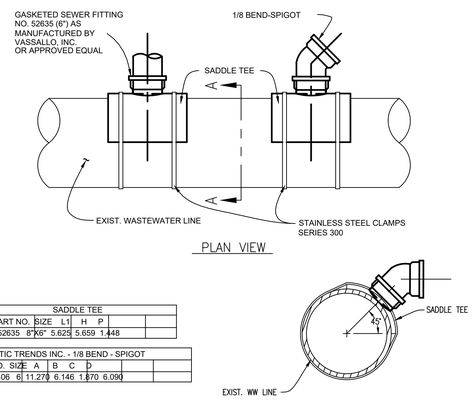
1. SERVICE CONNECTION RISERS SHALL TERMINATE 8' INSIDE THE PROPETY LINE.
2. THE END OF EACH SERVICE CONNECTION RISER SHALL BE EXTENDED 12" ABOVE FINISH GRADE.
3. EACH SERVICE CONNECTION SHALL BE PLUGGED WATER-TIGHT WITH AN APPROVED CAP OR PLUG.
4. FOR P.V.C. INSTALLATIONS, CONNECT TO EXISTING "BELL END" AND CONNECT OPPSITE END WITH P.V.C. TO P.V.C. KNOCK ON SLEEVE.
5. SOLIDLY TAMP BACKFILL AT LEAST ONE FOOT (1'-0") ABOVE TOP OF PIPE. SERVICES UNDER PAVED AREAS SHALL BE BACKFILLED TO THE SAME SPECIFICATIONS AS SHOWN ON PAVEMENT REPLACEMENT DETAIL.
6. CONTRACTOR SHALL MARK ON A CLEAN SET OF PLANS THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE TO EACH SERVICE LATERAL AND GIVE TO ENGINEER FOR RECORD DRAWING PURPOSES.
7. ANY DEVIATION FROM THESE METHODS MUST BE APPROVED BY THE CITY OF GEORGETOWN ENGINEERING DEPARTMENT.
8. SERVICE LINE MATERIAL SHALL BE P.V.C., SDR-26.
9. SEWER SERVICE SLOPE TO BE 45° OFF CENTERLINE OF MAIN.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SEWER SERVICE CONNECTIONS

DRAWING NAME: WW13 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



SADDLE TEE						
PART NO.	SIZE	L1	H	P		
52635	8"X6"	5.625	5.659	1.448		

PLASTIC TRENDS INC. - 1/8 BEND - SPIGOT						
PART NO.	SIZE	A	B	C	D	
G 406	6	11.270	6.146	1.870	6.090	

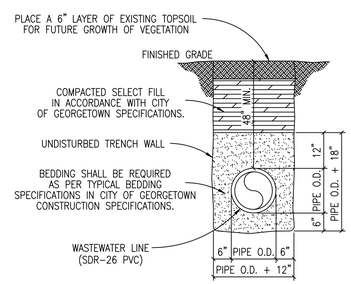
NOTES: 1. FLEXIBLE SADDLE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
2. SADDLE TEE SHALL BE ORIENTATED 45° TO MAIN. (SEE SEWER SERVICE CONNECTIONS DETAIL - DWG # WW-13)
3. EXCAVATE AROUND EXISTING 8-INCH PIPE, EXPOSING SUFFICIENT ROOM FOR S.S. CLAMPS.
4. THOROUGHLY CLEAN AND DRY THE MATING SURFACE WITH RAG OR PAPER TOWEL MAKE SURE THEY ARE FREE OF DUST AND MOISTURE.
5. MARK THE SIZE OF THE HOLE TO BE CUT USING THE GASKET SKIRT OR THE SADDLE ITSELF AS THE TEMPLATE.
6. SAW OUT THE SECTION OF THE PIPE WHERE THE SADDLE WILL BE LOCATED, WITH A SABER OR KEY HOLE SAW.
7. TEST TO MAKE SURE SADDLE FITS HOLE PROPERLY.
8. SERVICE PIPE SHALL NOT EXTEND MORE THAN ONE-HALF INCH INTO THE MAIN.
9. PLACE GASKET SKIRT AND SADDLE OVER OPENING AND TIGHTEN BAND CLAMPS EVENLY UNTIL SADDLE IS FIRMLY ATTACHED TO THE PIPE. APPLY PRESSURE ON THE SADDLE AGAINST THE PIPE WHILE TIGHTENING THE CLAMPS AS INDICATED ABOVE. DO NOT OVER TIGHTEN, DO NOT STRIP THREAD.
10. REPLACE THE BEDDING AND BACKFILL IN ACCORDANCE WITH THE TRENCH EMBEDMENT DETAIL.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
GASKETED SEWER FITTING FOR SEWER SERVICE CONNECTIONS TO EXISTING MAINS

DRAWING NAME: WW13A | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



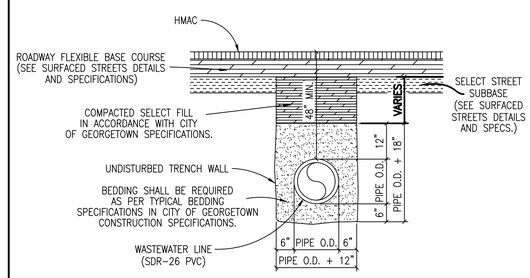
TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS

DRAWING NAME: WW16 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

NOTES:

1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY

DRAWING NAME: WW18 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

811 Know what's **below.** **Call** before you dig.

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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

WASTEWATER DETAILS (2 OF 3)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET
49 OF 55

CON-2020-XXX

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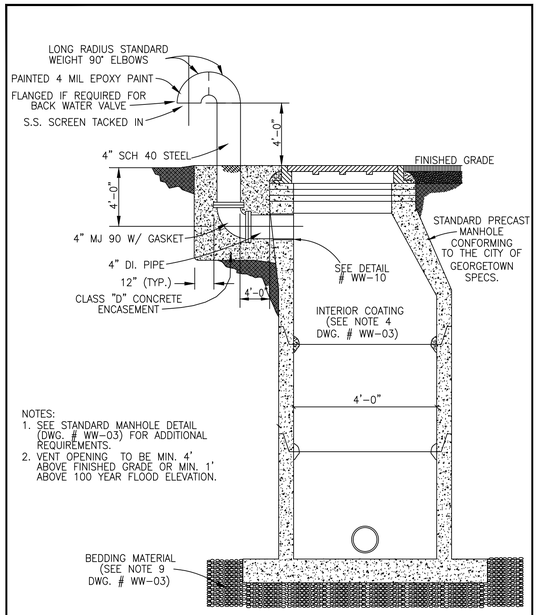


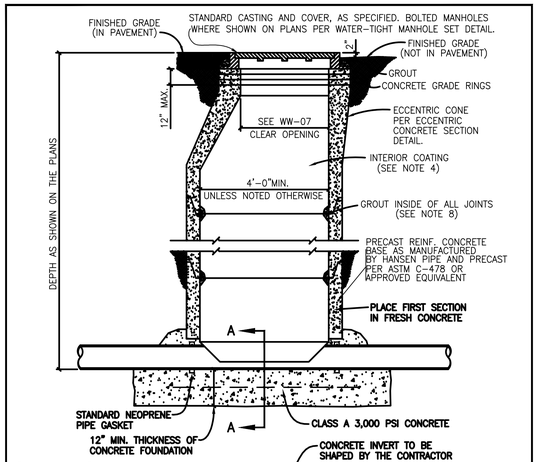
NOTES:
1. SEE STANDARD MANHOLE DETAIL (DWG. # WW-03) FOR ADDITIONAL REQUIREMENTS.
2. VENT OPENING TO BE MIN. 4' ABOVE FINISHED GRADE OR MIN. 1' ABOVE 100 YEAR FLOOD ELEVATION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL MANHOLE WITH VENT

DRAWING NAME: WW19
SCALE: NTS | DATE: 11/2003
DRAWN BY: MRS | APPROVED BY: TRB



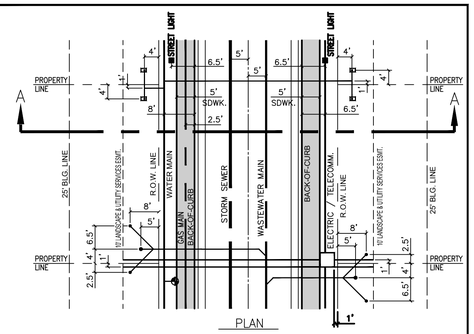
NOTES:
1. MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET – SINGLE OFF-SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
4. AN 80 MIL. COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH WASTEWATER MANHOLE AND UNDERSIDE OF FLAT TOPS.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETTED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
6. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
7. MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS-20 TRAFFIC LOADS.
8. GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
9. MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL:
   SIEVE SIZE 2", PERCENT (%) RETAINED 0 — SIEVE SIZE 1 1/2", % RETAINED 0–10
   SIEVE SIZE 1", % RETAINED 45–80 — SIEVE SIZE 3/4", % RETAINED 85–100
   SIEVE SIZE 3/8", % RETAINED 95–100
10. ALL PVC PIPE SHALL BE REMOVED FROM INVERT.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

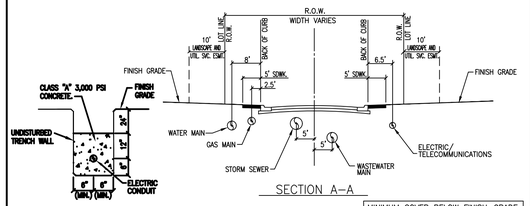
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
PRECAST MANHOLE ON CAST-IN-PLACE FOUNDATION

DRAWING NAME: WW20
SCALE: NTS | DATE: 1/2006
DRAWN BY: MRS | APPROVED BY: TRB



PLAN



SECTION A–A

NOTE: WHEN CROSSING A WATER MAIN, THE ELECTRIC CONDUIT MUST BE ENCASED WITH 3,000 PSI RED CONCRETE FOR FIVE (5) FEET BOTH SIDES FROM THE CROSSING POINT.

ELECTRIC CONDUIT CONCRETE ENCASEMENT DETAIL

CLASSIFICATION	ROW	B–B	PVMT.
LOCAL STREET	50'	28'	24'
RESIDENTIAL STREET	65'	37'	33'
MAJOR COLLECTOR	73'	45'	41'

MINIMUM COVER BELOW FINISH-GRADE *ALL UTILITIES UNDER ROADWAY – 36"*	
ELECTRIC PRIMARY	36"
ELECTRIC SECONDARY	24"
WATER	36"
WASTEWATER	48"
STORM SEWER	36"
GAS	36"
TELECOMMUNICATIONS	36"

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
UTILITY ASSIGNMENTS FOR LOCAL STREETS, RESIDENTIAL COLLECTORS AND MAJOR COLLECTORS

DRAWING NAME: WW01A
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

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AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

WASTEWATER DETAILS (3 OF 3)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED
PROFESSIONAL ENGINEER
9/16/20

SHEET 50 OF 55

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-DETS.dwg Layout: WASTEWATER DETAILS (3 OF 3) Plotted: 9/17/2020 10:22:24 AM

GUIDELINES FOR DESIGN AND INSTALLATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS

TYPE OF STRUCTURE	REACH LENGTH	MAXIMUM DRAINAGE AREA	SLOPE
SILT FENCE	N/A	2 ACRES	0 – 10%
	200 FEET	2 ACRES	10 – 20%
	100 FEET	1 ACRE	20 – 30%
	50 FEET	1/2 ACRE	> 30%
TRIANGLE FILTER DIKE	100 FEET	1/2 ACRE	< 30% SLOPE
	50 FEET	1/4 ACRE	> 30% SLOPE
ROCK BERM *, **	500 FEET	< 5 ACRES	0 – 10%

* FOR ROCK BERM DESIGN WHERE PARAMETERS ARE OTHER THAN STATED, DRAINAGE AREA CALCULATIONS AND ROCK BERM DESIGN MUST BE SUBMITTED FOR REVIEW.

** HIGH SERVICE ROCK BERMS MAY BE REQUIRED IN AREAS OF ENVIRONMENTAL SIGNIFICANCE AS DETERMINED BY THE CITY OF GEORGETOWN.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TEMPORARY EROSION AND SEDIMENTATION CONTROL GUIDELINES

DRAWING NAME: EC01 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

NOTE: THIS SECTION IS INTENDED TO ASSIST THOSE PERSONS PREPARING WATER POLLUTION ABATEMENT PLANS (WPAP) OR STORM WATER POLLUTION PREVENTION PLANS (SW3P) THAT COMPLY WITH FEDERAL, STATE AND/OR LOCAL STORM WATER REGULATIONS.

1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. ALL PROJECTS WITHIN THE RECHARGE ZONE OF THE EDWARD'S AQUIFER SHALL SUBMIT A BEST MANAGEMENT PRACTICES AND WATER POLLUTION AND ABATEMENT PLAN TO THE TNRCC FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
4. ALL PLANTING SHALL BE DONE BETWEEN MAY 1 AND SEPTEMBER 15 EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING. IF PLANTING IS AUTHORIZED TO BE DONE OUTSIDE THE DATES SPECIFIED, THE SEED SHALL BE PLANTED WITH THE ADDITION OF WINTER FESCUE (KENTUCKY 31) AT A RATE OF 100lb/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED. ALL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE "A" RECENT CROP, RECLEANED AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEED SHALL BE FURNISHED IN SEALED, STANDARD CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS.
5. ALL DISTURBED AREAS TO BE RESTORED AS NOTED IN THE WATER POLLUTION ABATEMENT PLAN.
6. THE PLANTED AREA TO BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF FOUR (4) INCHES. THE IRRIGATION TO OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO MONTHS TO INSURE GERMINATION AND ESTABLISHMENT OF THE GRASS . RAINFALL OCCURRENCES OF 1/2 INCH OR GREATER TO POSTPONE THE WATERING SCHEDULE ONE WEEK.
7. RESTORATION TO BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1-1/2 INCHES HIGH WITH 95***% COVERAGE,*** PROVIDED NO BARE SPOTS LARGER THAN 25 SQUARE FEET EXIST.
8. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL TO BE PLACED IN ALL AREAS DISTURBED BY CONSTRUCTION.
9. THE CONTRACTOR TO HYDROMULCH OR SOD (AS SHOWN ON PLANS) ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION.
10. EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIPLINE.
11. TO AVOID SOIL COMPACTION, CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIPLINE AREAS.
12. WHERE A FENCE IS CLOSER THAN FOUR (4) FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT (8) FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE FENCING.
13. TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
14. ANY ROOT EXPOSED BY CONSTRUCTION ACTIVITY TO BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
15. CONTRACTOR TO PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES").
16. THE CONTRACTOR IS TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/4 INCH TO VERIFY THAT THEY HAVE NOT BEEN SIGNIFICANTLY DISTURBED. ANY ACCUMULATED SEDIMENT AFTER A SIGNIFICANT RAINFALL TO BE REMOVED AND PLACED IN THE OWNER DESIGNATED SPOIL DISPOSAL SITE. THE CONTRACTOR TO CONDUCT PERIODIC INSPECTIONS OF ALL EROSION/SEDIMENTATION CONTROLS AND TO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
17. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR FEET (2'-4') BEHIND THE AREA IN QUESTION.
18. NO ABOVE AND/OR BELOW GROUND TEMPORARY FUEL STORAGE FACILITIES TO BE STORED ON THE PROJECT SITE.
19. IF EROSION AND SEDIMENTATION CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER'S REPRESENTATIVE AND THE CONTRACTOR TO EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEMS FOR DAMAGE PRIOR TO CONSTRUCTION; ANY DAMAGE TO PREEXISTING EROSION AND SEDIMENTATION CONTROLS NOTED TO BE REPAIRED AT OWNERS EXPENSE.
20. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

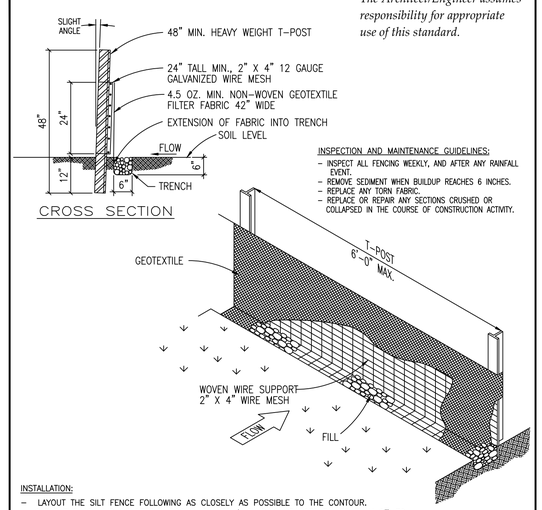
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES

DRAWING NAME: EC01A | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.



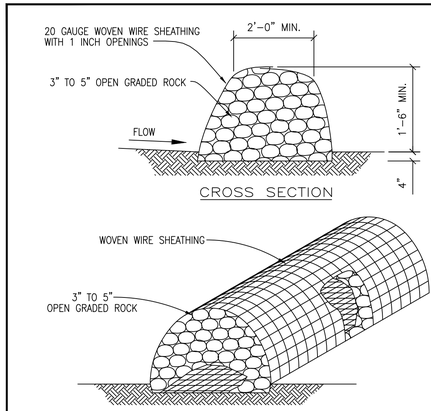
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
- REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
- REPLACE ANY TORN FABRIC.
- REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY.

INSTALLATION:
- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- DRIVE THE HEAVY DUTY T-POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW.
- ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE T-POST WITH 11 1/2 GAUGE GALVANIZED T-POST CLIPS. THE TOP OF THE WIRE TO BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND TIED AT LEAST 6 TIMES WITH HOG RINGS.
- THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1".
- ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").
- GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
- SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SILT FENCE DETAIL

DRAWING NAME: EC02 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



INSTALLATION:
- LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCIRCLE THE FINISHED SIZE OF THE BERM.
- PLACE THE ROCK ALONG THE CENTER OF THE WIRE TO THE DESIGNATED HEIGHT.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE.
- SECURE WITH TIE WIRE.
- THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROX. 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
- THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
- REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

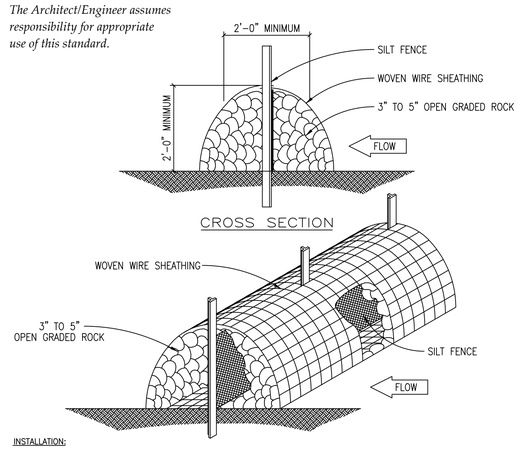
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
ROCK BERM DETAIL

DRAWING NAME: EC03 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.



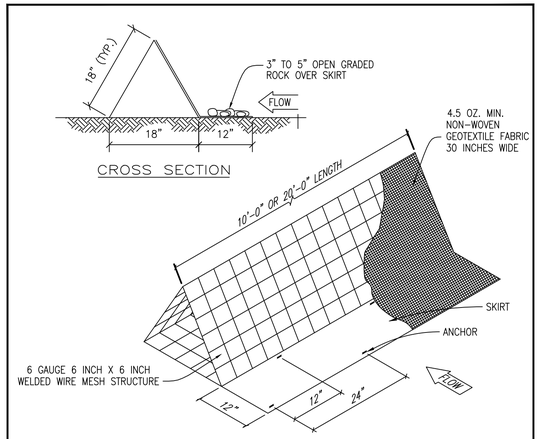
INSTALLATION:
- LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCIRCLE THE FINISHED SIZE OF THE BERM.
- INSTALL THE SILT FENCE ALONG THE CENTER OF THE PROPOSED BERM PLACEMENT. INSTALLATION SHOULD BE AS DESCRIBED IN DRAWING NO. EC-02 "SILT FENCE DETAIL".
- PLACE THE ROCK ALONG THE CENTER OF THE WIRE AND ON BOTH SIDES OF THE SILT FENCE TO THE DESIGNATED HEIGHT.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE.
- SECURE WITH TIE WIRE.
- THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE CONTRACTOR. FOR THE INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE ON ROCK BERM.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
- REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- THE BERM SHOULD BE REPLACES WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
HIGH SERVICE ROCK BERM DETAIL

DRAWING NAME: EC04 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



INSTALLATION:
- LAYOUT THE FILTER DIKE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE THE FILTER DIKE SECTIONS ONE AT A TIME, WITH THE SKIRT ON THE UPHILL SIDE TOWARDS THE DIRECTION OF FLOW, ANCHORING EACH SECTION TO THE GROUND BEFORE THE NEXT SECTION IS PLACED.
- ANCHORS SHOULD BE PLACED ON 2'-0" CENTERS ALTERNATING FROM FRONT TO BACK SO THAT THERE IS ACTUALLY ONLY 1'-0" IN BETWEEN ANCHORS.
- SECURELY FASTEN THE SKIRT FROM ONE SECTION OF FILTER DIKE TO THE NEXT.
- FILTER DIKES MUST MAINTAIN CONTINUOUS CONTACT WITH THE GROUND.
- AFTER THE SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHOULD BE REMOVED. SILT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

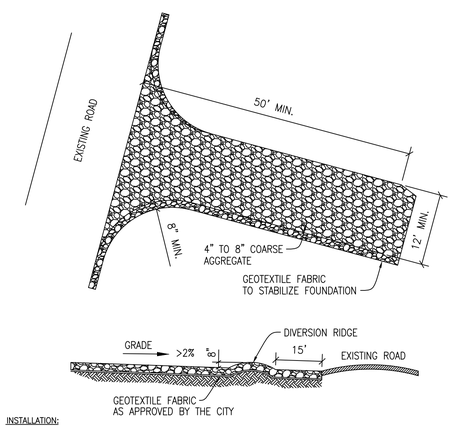
INSPECTION AND MAINTENANCE GUIDELINES:
- INSPECTION SHOULD BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- INSPECT AND REALIGN BERMS AS NEEDED TO PREVENT GAPS BETWEEN THE SECTIONS.
- ACCUMULATED SILT SHOULD BE REMOVED AFTER EACH RAINFALL EVENT, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TRIANGULAR FILTER DIKE

DRAWING NAME: EC05 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



INSTALLATION:
- CLEAR THE AREA OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- GRADE THE AREA FOR THE ENTRANCE TO FLOW BACK ON TO THE CONSTRUCTION SITE. RUNOFF FROM THE STABILIZED CONSTRUCTION
- PLACE GEOTEXTILE FABRIC AS APPROVED BY THE CITY.
- PLACE ROCK AS APPROVED BY THE CITY.

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

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STABILIZED CONSTRUCTION ENTRANCE

DRAWING NAME: EC06 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

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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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DESCRIPTION	DATE	APR
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DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

EROSION CONTROL DETAILS (1 OF 2)

STATE OF TEXAS
RICHARD L. RYCHLIK JR
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

SHEET 51 OF 55

CON-2020-XXX

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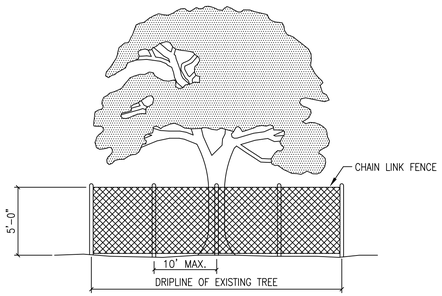


NOTES:

1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES; WILL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY.
   C. WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
3. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   B. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN SIX FEET (6'-0") TO BUILDING.

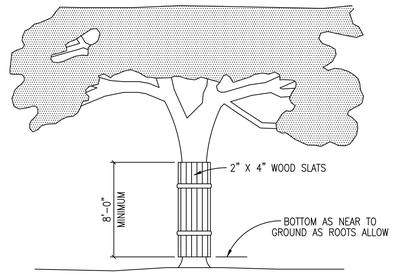
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TREE PROTECTION – CHAIN LINK FENCE

DRAWING NAME: EC09
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. WHERE ANY EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN FOUR FEET (4'-0") TO A TREE TRUNK; PROTECT THE TRUNK WITH STRAPPED-ON-PLANKING TO A HEIGHT OF EIGHT FEET (8'-0"), OR TO THE LIMITS OF LOWER BRANCHING IN ADDITION TO THE REDUCED FENCING PROVIDED.
2. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO (2) DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE, AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
3. PRIOR EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINE. MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
4. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
5. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
6. NO LANDSCAPE TOPSOIL DRESSING GREATER THE FOUR INCHES (4") SHALL BE PERMITTED WITHIN THE DRIPLINE OF A TREE. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
7. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TREE PROTECTION – WOOD SLATS

DRAWING NAME: EC10
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

Know what's **below.**
Call before you dig.

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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DESCRIPTION	DATE	APR
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DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

EROSION CONTROL DETAILS (2 OF 2)

STATE OF TEXAS — RICHARD L. RYCHLIK JR. — 123927 — LICENSED PROFESSIONAL ENGINEER — 9/16/20

SHEET 52 OF 55

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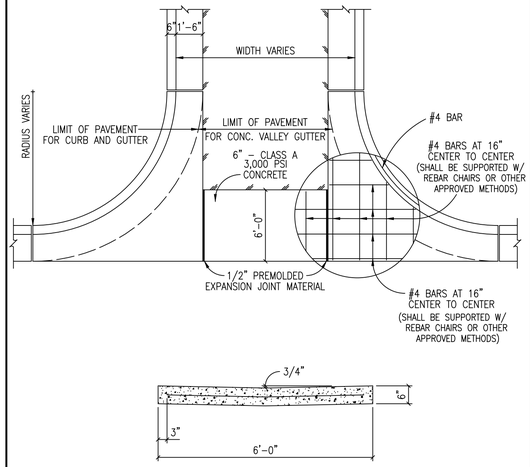
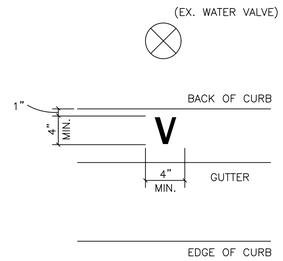


The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CONCRETE VALLEY GUTTER DETAIL

REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: SD03
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



PLAN VIEW
(TYPICAL)

NOTES:

1. ALL WATER SERVICE, WASTE WATER SERVICE AND VALVE LOCATIONS SHALL BE APPROXIMATLEY MARKED AS FOLLOWS:

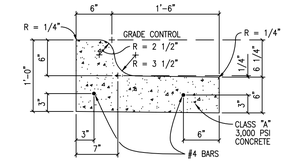
WATER SERVICE	"W"	TOP OF CURB
WASTE WATER SERVICE	"S"	TOP OF CURB
VALVE	"V"	TOP OF CURB

2. LETTERS SHALL HAVE A 1/2" MAX. WIDTH.

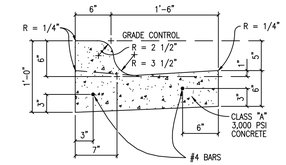
The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CURB STAMP DETAIL

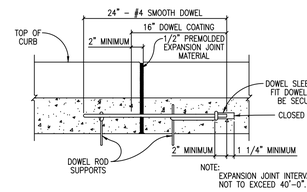
REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: SD05
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



SPILL CURB



CATCH AND LAYDOWN CURB



CURB DOWEL DETAIL

NOTES:

1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP-RAP.
5. TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL OCCUR OVER A 20 FOOT LENGTH AS APPROVED BY THE ENGINEER OR THE CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. THE FOLLOWING SCHEME OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF PLACEMENT AND LOCATION SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
   A. ALL CURB AND CURB AND GUTTER (REINFORCED) SHALL HAVE TWO #4 LONGITUDINAL REINFORCING BARS.
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED METHODS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THAT REBAR IS PROPERLY GUIDED INTO THE CURB SECTION.

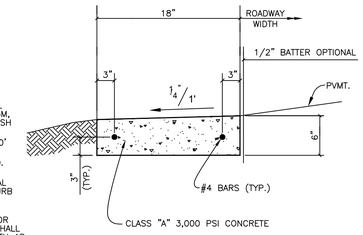
The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CURB AND GUTTER DETAILS

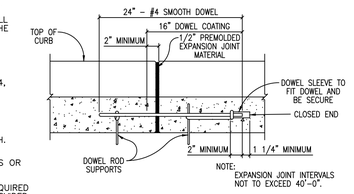
REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: SD06
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

NOTES:

1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS ADJACENT TO SIDEWALK OR RIP-RAP.
5. TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL OCCUR OVER A 20 FOOT LENGTH AS APPROVED BY THE ENGINEER OR TH CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. ONE OF THE FOLLOWING SCHEMES OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF PLACEMENT AND LOCATION SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
   A. CURB AND GUTTER (REINFORCED) SHALL HAVE LONGITUDINAL REINFORCING BARS AS FOLLOWS: THREE #4,
   B. ALL TYPES OF CURB (REINFORCED) SHALL HAVE #4 BAR FOR LONGITUDINAL REINFORCEMENT.
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED METHODS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THAT REBAR IS PROPERLY GUIDED INTO THE CURB SECTION.



RIBBON CURB

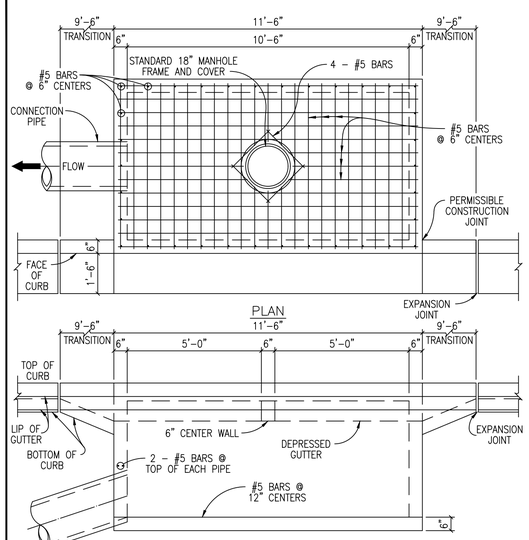


CURB DOWEL DETAIL

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
RIBBON CURB DETAILS

REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: SD08
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



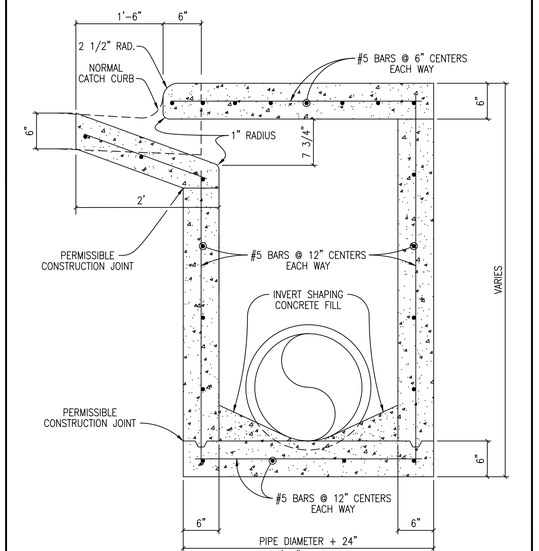
NOTES:

1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI CONCRETE.
2. STORM SEWER PIPE MATERIAL TO BE R.C.P. (CLASS III) UNLESS OTHERWISE APPROVED BY THE CITY OF GEORGETOWN.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CURB INLET DETAIL

REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: SD09
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

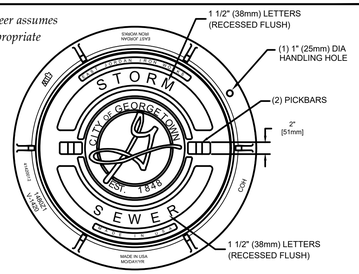
1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI CONCRETE.
2. STORM SEWER PIPE MATERIAL TO BE R.C.P. (CLASS III) UNLESS OTHERWISE APPROVED BY THE CITY OF GEORGETOWN.

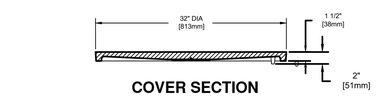
The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CURB DRAIN INLET TYPICAL SECTION

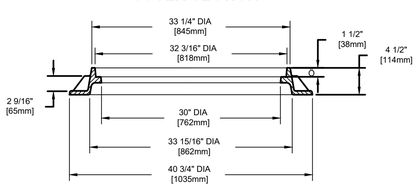
REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: SD10
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.





COVER SECTION



FRAME SECTION

NOTES:

1. STANDARD STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V-1420\1480Z1, COVER TO BE STAMPED WITH "STORM SEWER".
2. STANDARD STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 00148391.
4. FOR BOLTED STORM SEWER MANHOLE SET REFER TO DETAIL SD11A.

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD STORM SEWER MANHOLE SET

REVISION NOTE: ADOPTED 6/21/2006
DRAWING NAME: SD11
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

Know what's **below.**
Call before you dig.

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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DESCRIPTION	DATE	APR
◁			
◁			
◁			
◁			
◁			

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

DRAINAGE DETAILS (1 OF 2)

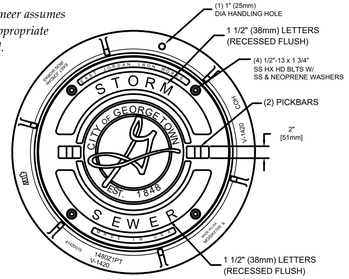
STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

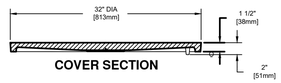
SHEET
53 OF 55

CON-2020-XXX

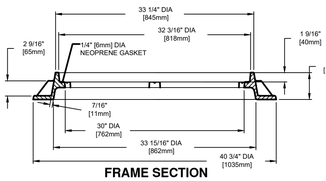
G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-DETS.dwg Layout: DRAINAGE DETAILS (1 OF 2) Plotted: 9/17/2020 10:22:37 AM

The Architect/Engineer assumes responsibility for appropriate use of this standard.





COVER SECTION



FRAME SECTION

NOTES:

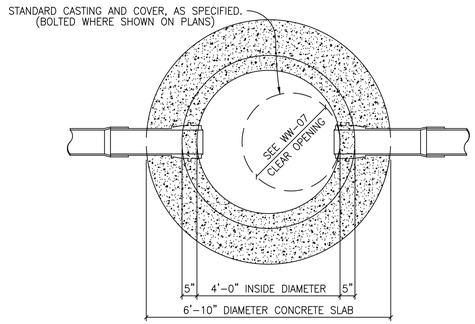
1. BOLTED STORM SEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480APT V-1420\1480Z1PT. COVER TO BE STAMPED WITH "STORM SEWER"
2. BOLTED STORM SEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 00148393 41420015.
4. FOR STANDARD STORM SEWER MANHOLE SET REFER TO DETAIL SD11.

REVISION NOTE: ADOPTED 6/21/2006

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
BOLTED STORM SEWER MANHOLE SET

DRAWING NAME: SD11A | SCALE: NTS | DATE: 1/2006 | DRAWN BY: MRS | APPROVED BY: TRB



MANHOLE PLAN

CITY OF GEORGETOWN NOTES:

MANHOLE DETAILS SHALL REFLECT THE CITY'S MINIMUM SPECIFICATIONS, AS STATED BELOW:

A. ALL MANHOLES SHALL BE 48" I.D., R.C.P., CLASS III, WITH RUBBER O-RING GASKET JOINTS CONFORMING TO ASTM C478, C433 AND C76.
B. ALL MANHOLES SHALL HAVE FRAME AND COVER, AS MANUFACTURED BY EAST JORDAN IRON WORKS (AS PER DETAIL # WW-07) OR APPROVED EQUIVALENT.
C. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON FRAME AND COVER.
D. ALL MANHOLES SHALL HAVE AN ECCENTRIC CONE.
E. MANHOLES MAY HAVE A FLAT LID, IF APPROVED BY CITY OF GEORGETOWN, BEING 12" THICK WITH A MINIMUM 30" OPENING, AS MANUFACTURED BY CALVERT CONCRETE OR APPROVED EQUAL M.F.G. CONFORMING TO ASTM C478, 5000 P.S.I. CONCRETE, TRAFFIC BEARING, AND O-RING JOINT CONFORMING TO ASTM C443.
F. INVERTS AND FLEXIBLE SEAL BOOTS, PER ASTM C-923, SHALL BE CAST INTO BASE SECTION.
G. MINIMUM DROP BETWEEN INVERTS SHALL BE ONE-TENTH OF A FOOT (0.1').
H. GRADE RINGS WITH AN I.D. TO MATCH FRAMES CLEAR OPENING WITH A MAXIMUM OF FIVE (5) GRADE RINGS ARE ALLOWED.

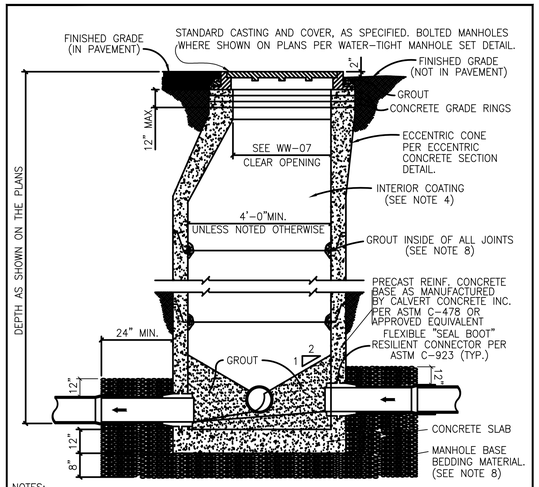
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD STORM SEWER MANHOLE PLAN

DRAWING NAME: SD12 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET – SINGLE OFF-SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
4. AN 80 MIL COAT OF RAVEN LINING SYSTEMS, RAVEN 405 ULTRA HIGH BUILD EPOXY COATING, OR SPRAY WALL EPOXY COATING, OR APPROVED EQUAL, TO BE APPLIED TO ENTIRE INTERIOR OF EACH STORM SEWER MANHOLE AND UNDERSIDE OF FLAT TOPS.
5. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETTED WHEN MANHOLES ARE LOCATED OUT FROM PAVEMENT.
6. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE. REFERENCE MANHOLE VENT DETAIL.
7. MANHOLES ARE TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR HS-20 TRAFFIC LOADS.
8. GROUT SHALL MEET THE REQUIREMENTS AS STATED BY THE COATING MANUFACTURER.
8. MANHOLE BASE BEDDING MATERIAL SPECS. FOR 3/4" WASHED GRAVEL:
   SIEVE SIZE 2", PERCENT (%) RETAINED 0
   SIEVE SIZE 1 1/2", % RETAINED 0-10
   SIEVE SIZE 1", % RETAINED 45-80
   SIEVE SIZE 3/4", % RETAINED 85-100
   SIEVE SIZE 3/8", % RETAINED 95-100

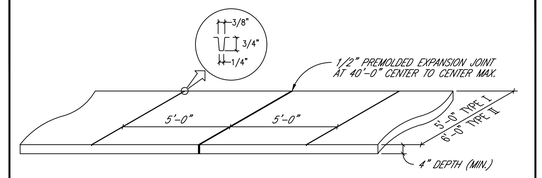
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

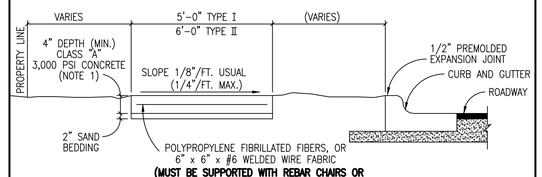
GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD STORM SEWER MANHOLE – SECTION

DRAWING NAME: SD13 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



TYPE I – AS REQUIRED FOR SINGLE FAMILY, DUPLEXES AND TOWNHOUSES, TRIPLEXES AND QUADRAPLEXES.
TYPE II – AS REQUIRED FOR MULTI-FAMILY, OTHER NON-RESIDENTIAL USES AND PARKING LOTS/STRUCTURES.
ALL THOROUGHFARES (COLLECTOR AND ABOVE) REQUIRE TYPE II.



NOTES:

1. **STANDARD LOCATION OF SIDEWALK SHALL BE IN CONFORMANCE WITH THE UDC.**
2. **SIDEWALK SHALL CONFORM TO CURRENT TDLR/TAS STANDARDS.**
3. **ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND ENGINEER OF RECORD.**
4. **ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT SHALL BE APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND BY THE CITY ENGINEER.**
5. **SLIP DOWEL SHALL BE INSTALLED AT EVERY LONGITUDINAL EXPANSION JOINT (UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER DURING ENGINEERING PLAN REVIEW PRIOR TO FINAL DESIGN).**

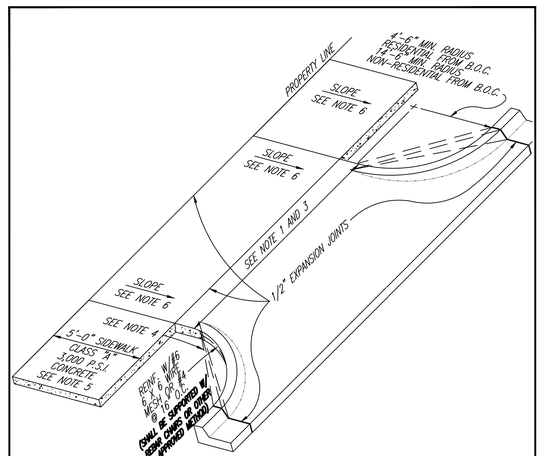
The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006 TRB

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SIDEWALK SECTION AND JOINT DETAIL

DRAWING NAME: SD14 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB



NOTES:

1. MAXIMUM WIDTH OF APPROACH SHALL BE 24'-0" FOR RESIDENTIAL, 30'-0" FOR NON-RESIDENTIAL UNDIVIDED AND 45'-0" FOR NON-RESIDENTIAL DIVIDED.
2. DRIVEWAY PERMITS SHALL BE ACQUIRED FROM CITY INSPECTION OFFICE.
3. MINIMUM WIDTH OF APPROACH SHALL BE 10'-0" FOR RESIDENTIAL AND 15'-0" FOR NON-RESIDENTIAL.
4. LINEAR "RADIUS" AT CORNERS, PERMITTED FOR "SINGLE FAMILY" OR "TWO FAMILY" RESIDENTIAL DRIVEWAY APPROACH.
5. SIDEWALK LOCATION SHALL BE APPROVED BY CITY ENGINEER PRIOR TO FINAL DESIGN.
6. SLOPE 1/8" PER FOOT USUAL, SHALL NOT EXCEED 2.0%.
7. DRIVEWAY APPROACH THICKNESS SHALL BE A MIN. OF 6".

The Architect/Engineer assumes responsibility for appropriate use of this standard.

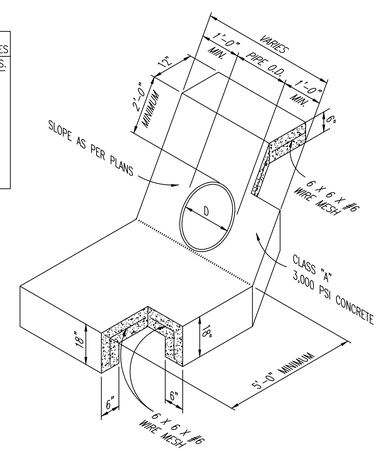
REVISION NOTE: ADOPTED 6/21/2006 TRB

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
CONCRETE DRIVEWAY APPROACH TYPICAL

DRAWING NAME: SD15 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

MINIMUM RIP-RAP QUANTITIES	
PIPE	SQ. YDS.
18"	6.2
24"	6.9
27"	7.8
30"	9.5
36"	10.4
42"	12.0
48"	14.3
54"	16.4



NOTES:

1. WHEN HEADWALLS AND WINGWALLS ARE REQUIRED, THEY SHALL CONFORM TO THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARDS, OR AS DIRECTED BY THE CITY.
2. ENERGY DISSIPATERS SHALL BE REQUIRED IF PIPE VELOCITY IS GREATER THAN 5.0 F.P.S. OR AS DIRECTED BY THE CITY OF GEORGETOWN.
3. **SUPPORT REINFORCING WIRE MESH REQUIRED AS SUPPORT FOR APPROACH SLAB AND SHALL BE SUPPORTED BY REBAR CHAIRS OR OTHER APPROVED METHODS.**

The Architect/Engineer assumes responsibility for appropriate use of this standard.

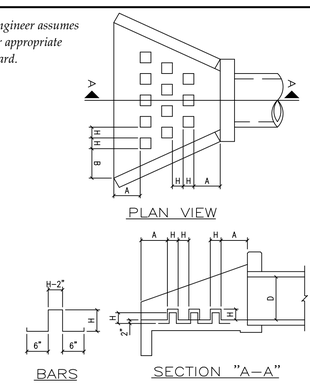
REVISION NOTE: ADOPTED 6/21/2006

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL CONCRETE RIP-RAP AT PIPE

DRAWING NAME: SD19 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.



NOTES:

1. USE CLASS "A" CONCRETE, 3,000 PSI AT 28 DAYS, UNLESS NOTED.
2. REINFORCING STEEL – ASTM A615, GRADE 40, UNLESS NOTED.
3. LAP REINFORCING 30 BAR DIAMETERS MIN. AT SPLICES, UNLESS NOTED.
4. CHAMFER EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED.
5. PLACE REINFORCING WITH THE CENTER OF THE OUTSIDE BARS 2 INCHES FROM THE SURFACE OF THE CONCRETE.

TABLE OF DIMENSIONS FOR ENERGY DISSIPATOR DETAIL

D PIPE DIAMETER (INCHES)	NUMBER OF ROWS OF DISSIPATORS	NUMBER OF DISSIPATORS IN FRONT ROW	H (INCHES)	A (INCHES)	B (INCHES)
12	1	3	4	4	9.1875
18	2	4	4 1/2	9 1/2	15.5625
24	2	5	6	14 3/4	16 1/2
30	3	6	7 1/2	12 1/2	14 3/8
36	3	6	9	16 1/4	18 5/16
42	3	6	10 1/2	20	22 1/4
48	3	6	12	23 3/4	26 1/4
54	3	6	13 1/2	27 1/2	27 3/4
60	3	6	15	31 1/4	31 5/8

REVISION NOTE: ADOPTED 6/21/2006

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
ENERGY DISSIPATER DETAIL

DRAWING NAME: SD20 | SCALE: NTS | DATE: 1/2003 | DRAWN BY: MRS | APPROVED BY: TRB

811 Know what's **below.** **Call** before you dig.

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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

DRAINAGE DETAILS (2 OF 2)

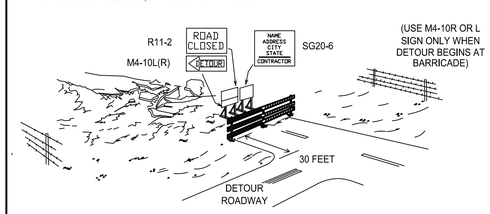
STATE OF TEXAS — RICHARD L. RYCHLIK JR. — 123927 — LICENSED PROFESSIONAL ENGINEER — 9/16/20

SHEET 54 OF 55

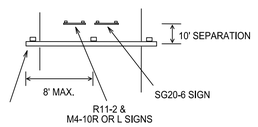
CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-DETS.dwg Layout: DRAINAGE DETAILS (2 OF 2) Plotted: 9/17/2020 10:22:41 AM

EACH ROADWAY OF DIVIDED HIGHWAY SHALL BE BARRICADED, IN THE SAME MANNER.



PERSPECTIVE VIEW



PLAN VIEW

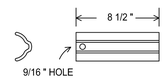
1). R11-2 AND M4-10 SIGNS SHOULD BE MOUNTED ON INDEPENDENT SUPPORTS AT 7' MOUNTING HEIGHT IN CENTER OF ROADWAY.
2). ADVANCE SIGNING, INCLYDE CONSTRUCTION WARNING, SIGNS AND DETOUR SIGNING SHALL BE AS SPECIFIED ELSEWHERE IN THE PLANS.
3). THE THREE RAILS ON TYPE III BARRICADES SHALL BE REFLECTIVE ORANGE AND REFLECTIVE WHITE STRIPES ON ONE SIDE FACING ONE-WAY TRAFFIC AND BOTH SIDES FOR TWO-WAY TRAFFIC.
4). BARRICADE STRIPING SHOULD SLANT DOWNWARD IN THE DIRECTON OF DETOUR.
5). ALL SIGNS TO BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).

The Architect/Engineer assumes responsibility for appropriate use of this standard.

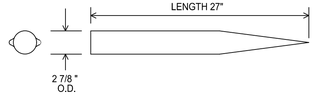
REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPE III CONSTRUCTION BARRICADE

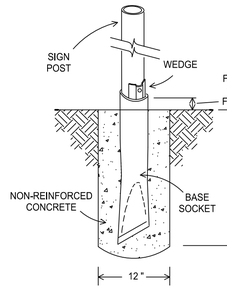
DRAWING NAME: SD22
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



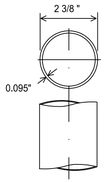
WEDGE



BASE SOCKET



TYPICAL ASSEMBLY



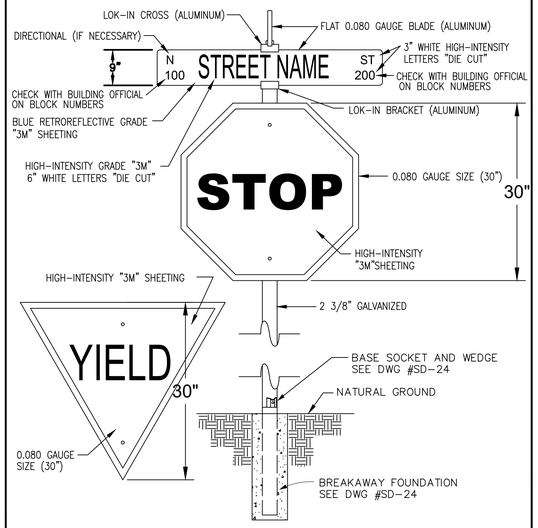
SIGN POST

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
POZ-LOC (BREAKAWAY FOUNDATION)

DRAWING NAME: SD24
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:
1. 7-FOOT MIN. HEIGHT FROM GROUND TO BOTTOM OF SIGN.
2. ALL SIGNS TO BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
3. ALL SIGNAGE SHEETINGS SHALL BE HIGH-INTENSITY "3M" SHEETING.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: REVISED 1/14/2014 WBD
REVISION NOTE: ADOPTED 6/21/2006 TRB

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
STANDARD STREET SIGN DETAIL

DRAWING NAME: SD25
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS/AP | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.

NOTES:

1. COMMERCIAL SIDEWALKS WIDTHS - 6'
   RESIDENTIAL SIDEWALKS WIDTHS - 5'
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. FLATTER SLOPES THAT WILL STILL DRAIN PROPERLY ARE ENCOURAGED.
3. ALL CONCRETE SURFACES SHALL RECEIVE A LIGHT BROOM FINISH UNLESS NOTED OTHERWISE IN THE PLANS.
4. FOR PURPOSES OF WARNING, THE CURB RAMPS SHALL HAVE A LIGHT REFLECTIVE VALUE AND TEXTURE THAT SIGNIFICANTLY CONTRASTS WITH THAT OF ADJOINING PEDESTRIAN ROUTES.
5. TEXTURES MAY CONSIST OF PAVERS WITH TRUNCATED DOMED SURFACES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED.
6. COLOR CONTRAST, FOR EXAMPLE, MAY BE ACCOMPLISHED WITH COLORED CONCRETE PAVERS THAT HAVE TRUNCATED DOMES WHICH WOULD PROVIDE A CONTRAST WITH TYPICALLY LIGHT COLORED CONCRETE.
7. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, VISIBILITY AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) PREPARED AND ADMINISTERED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).
8. RAISED MEDIANS SEPARATE OPPOSING DIRECTIONS OF TRAFFIC AND PROVIDE A REFUGE AREA FOR PEDESTRIANS IF THEY ARE UNABLE TO CROSS THE ENTIRE ROADWAY IN THE ALLOTTED SIGNAL PHASE. MEDIAN CROSSING SHALL BE A MINIMUM OF 5' WIDE. MEDIANS SHIOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR TROUGH THEM.
9. ALL SIDEWALK PLANS AND DETAILS SHALL BE SUBMITTED AND APPROVED BY "REGISTERED ACCESSIBILITY SPECIALIST" (RAS).
10. ANY PART OF THE ACCESSIBLE ROUTE WITH A SLOPE GRATER THAN 1:20 (5%) SHALL BE CONSIDERED A RAMP. IF A RAMP HAS A RISE GREATER THAN 6 INCHES OR A HORIZONTAL PROJECTION GREATER THAN 72 INCHES, THEN IT SHALL MEET THE REQUIREMENTS OF A RAMP PER TAS 405.THE ONLY EXCEPTION IS AT CURB RAMPS. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. CURB RAMPS SHALL BE PROVIDED WHERE EVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
11. TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SHALL BE PLACED SO NOT TO OBSTRUCT THE ACCESSIBLE ROUTE OR ACT PROTRUDING OBJECTS.
12. ALL SIDEWALKS SHALL BE DOWELED INTO EXISTING SIDEWALKS, DRIVEWALKS, DRIVEWAYS, INLET BOXES, RETAINING WALLS, ETC.
13. ALL SIDEWALK CROSS-SLOPES SHALL NOT EXCEED 1:50, UNLESS A VARIANCE IS PROVIDED BY TDLR.

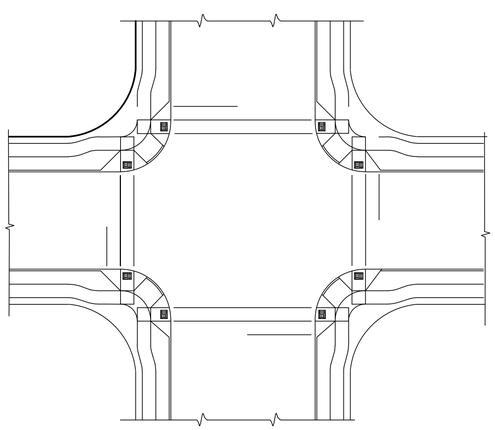
(PENETRATES) A CURB.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006 TRB

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
PEDESTRIAN RAMPS GENERAL NOTES

DRAWING NAME: SD28
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



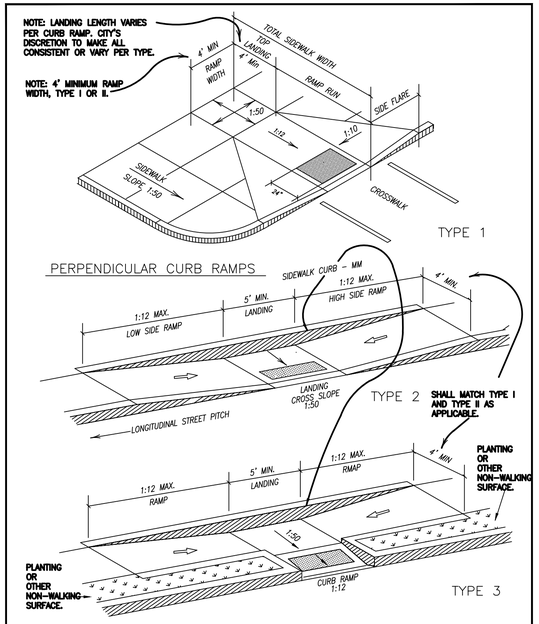
NOTE: ALL RAMPS SHALL BE CONTAINED WITHIN THE RESPECTIVE CURB RETURN RADIUS.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006 TRB

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
TYPICAL INTERSECTON LAYOUT

DRAWING NAME: SD29
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



The Architect/Engineer assumes responsibility for appropriate use of this standard.

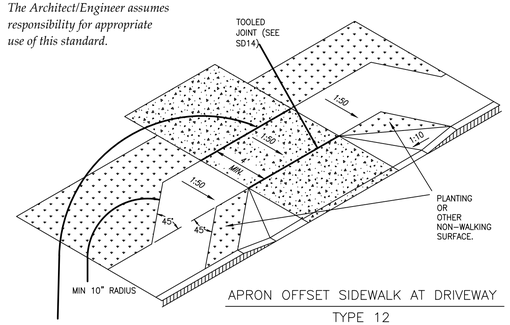
PARALLEL CURB RAMPS

REVISION NOTE: ADOPTED 6/21/2006 TRB

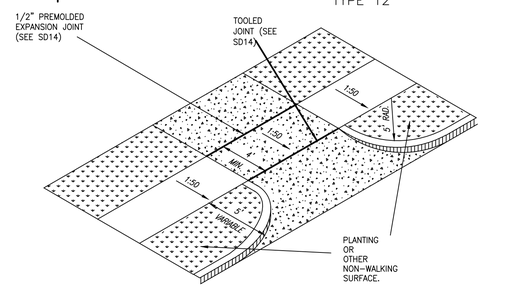
CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
SIDEWALK RAMP DETAILS TYPE 1-3

DRAWING NAME: SD31
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.



APRON OFFSET SIDEWALK AT DRIVEWAY
TYPE 12



SETBACK SIDEWALK AT DRIVEWAY
TYPE 13

REVISION NOTE: ADOPTED 6/21/2006 TRB

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS
DRIVEWAY APRONS TYPES 12 & 13

DRAWING NAME: SD35
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

811 Know what's below. Call before you dig.

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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

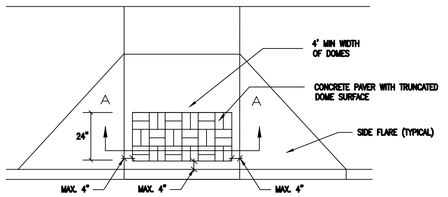
STREET DETAILS (1 OF 2)

STATE OF TEXAS
RICHARD L. RYCHLIK JR.
123927
LICENSED PROFESSIONAL ENGINEER
9/16/20

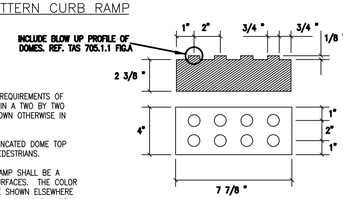
SHEET 55 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-DETS.dwg Layout: STREET DETAILS (1 OF 2) Plotted: 9/17/2020 10:22:44 AM



TRUNCATED DOME PATTERN CURB RAMP



CONCRETE PAVER WITH TRUNCATED DOME SURFACE

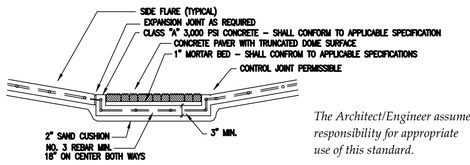
GENERAL NOTES

CONCRETE PAVER UNITS SHALL MEET ALL REQUIREMENTS OF ASTM C-936, C-33, AND SHALL BE LAID IN A TWO BY TWO UNIT BASKET WEAVE PATTERN, UNLESS SHOWN OTHERWISE IN THE PLANS.

CONCRETE PAVER UNIT SHALL HAVE A TRUNCATED DOME TOP SURFACE FOR DETECTABLE WARNING TO PEDESTRIANS.

CONCRETE PAVER UNIT COLOR FOR THE RAMP SHALL BE A CONTRASTING COLOR TO THE ADJACENT SURFACES. THE COLOR OF THE CONCRETE PAVER UNITS SHALL BE SHOWN ELSEWHERE IN THE PLANS. (ADJACENT SURFACES INCLUDE SIDE FLARES).

CONCRETE PAVER UNITS SHALL BE SAW CUT ONLY AND ANY CUT UNIT SHALL BE NOT LESS THAN 25 PERCENT OF A FULL UNIT.



SECTION A–A

The Architect/Engineer assumes responsibility for appropriate use of this standard.

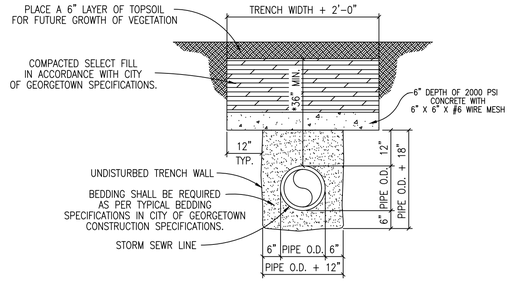
REVISION NOTE: REVISED 7/7/2015 WBD
REVISION NOTE: REVISED 3/14/2014 WBD
ADOPTED 6/21/2006 TRB

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

CURB RAMP TEXTURES TYPE A

DRAWING NAME: SD37
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS/AJP | APPROVED BY: TRB



TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

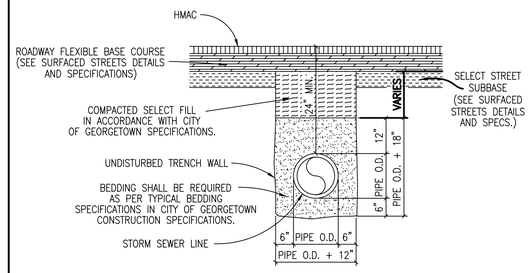
REVISION NOTE: ADOPTED 6/21/2006

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

CONCRETE TRANCH CAP DETAIL FOR STORM SEWER

DRAWING NAME: SD39
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:
1. DENSITY TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE CITY OF GEORGETOWN CONSTRUCTION SPECIFICATIONS AND STANDARDS.
2. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE BACKFILL MATERIAL (SEE C9 FLOWABLE BACKFILL FOR THE SPECIFICATION).

TRENCH WIDTHS
*PIPE LESS THAN 20" DIAMETER
1'-0" + PIPE O.D.
*20" DIAMETER PIPE AND LARGER
2'-0" + PIPE O.D.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

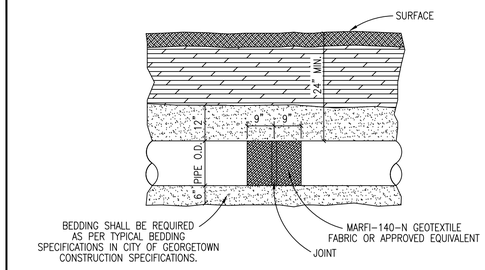
REVISION NOTE: ADOPTED 6/21/2006

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

TRENCH AND EMBEDMENT DETAIL UNDER PROPOSED ROADWAY FOR STORM SEWER

DRAWING NAME: SD41
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES
1. PIPE SHALL BE REINFORCED CONCRETE PIPE CLASS III UNLESS THE DEPTH OF PIPE REQUIRES A STRONGER CLASS.
2. ALL FITTINGS AND WYES SHALL BE MANUFACTURED AND NOT CONSTRUCTED ON THE PROJECT WITHOUT PRIOR APPROVAL FROM THE CITY.
3. ALL JOINTS SHALL BE WRAPPED WITH MARF1-140-N GEOTEXTILE FABRIC OR APPROVED EQUIVALENT. EACH JOINT SHALL BE WRAPPED WITH 18" WIDE FABRIC CENTERED ON THE JOINT.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

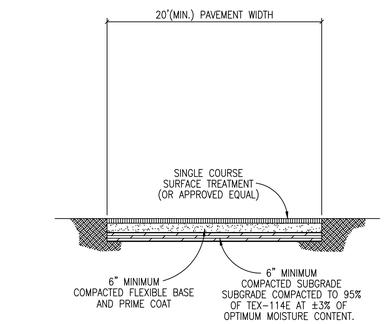
REVISION NOTE: ADOPTED 6/21/2006

GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

TRENCH AND EMBEDMENT DETAIL (PROFILE) FOR STORM SEWER

DRAWING NAME: SD42
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



NOTES:
1. EVERY BUILDING CONSTRUCTED SHALL BE ACCESSIBLE TO EMERGENCY APPARATUS BY WAY OF TEMPORARY ALL WEATHER DRIVING SURFACES.
2. A TEMPORARY ALL WEATHER DRIVING SURFACE SHALL EXTEND TO WITHIN 150' OF ALL EXTERIOR PORTIONS OF BUILDINGS
3. TEMPORARY ALL WEATHER DRIVING SURFACES SHALL BE CONSTRUCTED AS SHOWN ON CONSTRUCTION PLANS AND IN ACCORDANCE WITH ITEM 316 SURFACE TREATMENTS OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES.
4. TEMPORARY ALL WEATHER DRIVING SURFACES SHALL BE CAPABLE OF SUPPORTING A DESIGN WHEEL LOAD OF 16,000 LB. (H-20 LOADING) IN ORDER TO SUPPORT A GROSS VEHICLE WEIGHT OF 80,000 LB. IF SUBGRADE CONDITIONS CHANGE OR ARE VERY UNSTABLE, AN ADDITIONAL GEOTECHNICAL AND/OR ENGINEERING DESIGN MAY REQUIRE A GREATER CROSS SECTION.
5. CONTRACTOR OR DEVELOPER SHALL MAINTAIN TEMPORARY ALL WEATHER DRIVING SURFACE THROUGHOUT CONSTRUCTION.
6. APPLICABLE SIGNAGE SHALL BE INSTALLED BY THE CONTRACTOR TO DISALLOW PARKING (NO PARKING – FIRE LANE).
7. TEMPORARY ALL WEATHER DRIVING SURFACES SHALL BE INSTALLED PRIOR TO THE ERECTION OF ANY STRUCTURAL FRAMING ABOVE THE FOUNDATION SLAB. CONTACT FIRE SERVICES FOR THE COORDINATION OF TEMPORARY ALL WEATHER DRIVING SURFACES FOR CONSTRUCTION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

REVISION NOTE: ADOPTED 6/21/2006

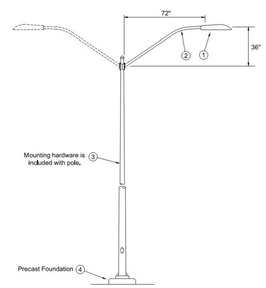
GEORGETOWN TEXAS — Georgetown Utility Systems — Our Community Owned Utility

CITY OF GEORGETOWN
CONSTRUCTION STANDARDS AND DETAILS

TEMPORARY ALL WEATHER DRIVING SURFACE

DRAWING NAME: SD43
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

Cobra Head Luminaire — **213 - 105** 02 - 18



Item	Description	TSN/Ref	CU
1	LED, Luminaire, Cobra Head, 0-55 W, Type **III**, 120-277 V	902644	LEDCH055
1	LED, Luminaire, Cobra Head, 56-100 W, Type **III**, 120-277 V	902645	LEDCH100
1	LED, Luminaire, Cobra Head, 101-140 W, Type **III**, 120-277 V	902646	LEDCH140
1	LED, Luminaire, Cobra Head, 141-180 W, Type **III**, 120-277 V	902647	LEDCH180
1	LED, Luminaire, Cobra Head, 181-256 W, Type **III**, 120-277 V	902648	LEDCH256
1	High Pressure Sodium Luminaire		
2	Bracket, Galvanized Steel		
3	Round Pole, Galvanized Steel, Anchor Base		
4	Precast Foundation		
5	Grounding	213-020	
6	Fusing	213-025	

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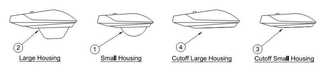
Page 1 of 4

Cobra Head Luminaire High Pressure Sodium — **213 - 105** 02 - 18



Notes:
A. Adjust voltage tap on 120/240 V ballasts as needed to the correct supply voltage.
B. Luminaires with 120/240 V ballasts are supplied with photocontrol receptacles. When photocontrol is not needed, a shorting cap (TSN 306698) shall be installed in receptacle.
C. Lamps and photocontrols are not supplied with luminaires.
D. Luminaire refractors are usually made of acrylic material for 150 W, and glass for 200 W and higher.

Item	Qty	Description	TSN/Ref	CU
1		High Pressure, Sodium Luminaire 100 W, Type **II**, 120 V	303142	LC100H21
1		High Pressure, Sodium Luminaire 100 W, Type **III**, 120 V	313547	LC100H31
1		High Pressure, Sodium Luminaire 100 W, Type **II**, 240 V	306678	LC100H22
1		High Pressure, Sodium Luminaire 150 W, Type **II**, 120/240 V	303141	LC150H21/LC150H22
1		High Pressure, Sodium Luminaire 150 W, Type **II**, 480 V	303144	LC150H24
1		High Pres. Sodium Luminaire 200 W, Type **III**, 120x240 V	303135	LC200H31/LC200H32
1		High Pres. Sodium Luminaire 200 W, Type **III**, 480 V	312536	LC200H34
2		High Pres. Sodium Luminaire 250 W, Type **III**, 120x240 V	306687	LC250H31/LC250H32
2		High Pres. Sodium Luminaire 250 W, Type **III**, 480 V	303152	LC250H34
2		High Pres. Sodium Luminaire 400 W, Type **III**, 120X240 V	303139	LC400H31
2		High Pres. Sodium Luminaire 400 W, Type **III**, 480 V	303128	LC400H34
3		High Pres. Sodium Luminaire 100 W, Cutoff, 120 V	328978	LC10H3C1
3		High Pres. Sodium Luminaire 150 W, Cutoff, 480 V	328998	LC15H3C4
3		High Pres. Sodium Luminaire 200 W, Cutoff, 120x240 V	329001	LC20H3C1/LC20H3C2
3		High Pres. Sodium Luminaire 200 W, Cutoff, 480 V	328999	LC20H3C4
4		High Pres. Sodium Luminaire 250 W, Cutoff, 120x240 V	329002	LC25H3C1/LC25H3C2
4		High Pres. Sodium Luminaire 250 W, Cutoff, 480 V	329013	LC25H3C4
4		High Pres. Sodium Luminaire 400 W, Cutoff, 120x240 V	329014	LC40H3C2
4		High Pres. Sodium Luminaire 400 W, Cutoff, 480 V	329015	LC40H3C4

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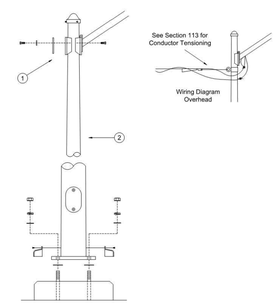
Page 2 of 4

Cobra Head Luminaire Poles and Hardware — **213 - 105** 02 - 18



Notes:
A. All mounting hardware is included with each pole CU.
B. Mounting hardware should only be ordered as needed.

Item	Description	TSN/Ref	CU
1	Bracket, 6' Galvanized Steel	314277	SLB65P
2	Round Pole, 25' Galvanized Steel, Anchor Base with Mounting Hardware	313831	SLPR25
2	Round Pole, 30' Galvanized Steel, Anchor Base with Mounting Hardware	320501	SLPR30
2	Round Pole, 40' Galvanized Steel, Anchor Base with Mounting Hardware	317817	SLPR40

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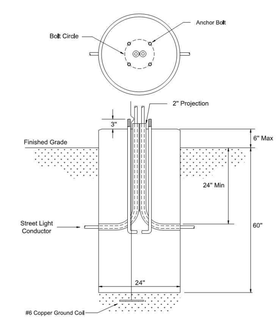
Page 3 of 4

Cobra Head Luminaire Foundations — **213 - 105** 02 - 18



Item	Qty	Description	TSN/Ref	CU
1		Precast Foundation, 10 1/2" Bolt Circle, 1" Anchor Bolts, (30" Round Pole)	398699	SLFP25
1		Precast Foundation, 14" Bolt Circle, 1 1/4" Anchor Bolts, (40' Round Pole)	398700	SLFP40

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Page 4 of 4

811 Know what's **below.** **Call** before you dig.

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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE, Inc.
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

STREET DETAILS (2 OF 2)

STATE OF TEXAS — RICHARD L. RYCHLIK JR — 123927 — LICENSED PROFESSIONAL ENGINEER — 9/16/20

SHEET 56 OF 55

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\LD\01_CADD\01_Shts\7923-SP-DETS.dwg Layout: STREET DETAILS (2 OF 2) Plotted: 9/17/2020 10:22:46 AM

Attachment N – Inspection, Maintenance, Repair, and Retrofit Plan

Batch Detention Pond:

Inspections should occur at least twice a year. If possible these inspections should be conducted during wet weather to determine if the pond is meeting target detention times. Inspections should check for clogging of the primary outfall mechanism, as well as erosion problems in the upper stage pilot channel, all flow paths, and any erodible areas inside and downstream of the basin. If any slumping or erosion is discovered, immediate regrading or revegetation should be performed to correct the problems. Structural faults discovered during inspection should be identified and repaired immediately. Faults to check for include cracked concrete, sealing of voids, and removal of vegetation from cracks and joints. All inlet/outlet and riser pipes will eventually deteriorate and require replacement.

The basin, basin side-slopes, and embankment of the basin must be mowed to prevent woody growth and control weeds. A mulching mower should be used, or the grass clippings should be caught and removed. Mowing should take place at least twice a year, or more frequently if vegetation exceeds 18 inches in height. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. At the time of mowing, litter and debris should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed. Additionally at this time, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.).

With each inspection, any damage to structural elements of the basin (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. An example of this type of repair can include patching of cracked concrete, sealing of voids, removal of vegetation from cracks

and joints. The various inlet/outlet structures in a basin will eventually deteriorate and must be replaced.

Sediment shall be removed from the basin at least every 5 years, when sediment depth exceeds 6 inches, when the sediment interferes with the level sensor or when the basin does not drain within 48 hours. Care should be taken not to compromise the basin lining during maintenance.

The Logic Controller should be inspected as part of the twice yearly investigations. Verify that the external indicators (active, cycle in progress) 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 in 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 and wiring should be inspected for signs of corrosion, damage from insects, water leaks, or other damage. At the end of the inspection, the controller should be reset.

Vegetated Filter Strips:

Inspection of the VFS for erosion and damage to vegetation should occur at least twice per year; additional inspection periods, however, should occur after heavy rainfall. The BMPs should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. If areas are found that have bare spots or that need restoration, those areas should be replanted to meet the TCEQ requirements.

Inspections for debris and litter removal should be performed twice per year, at the minimum. Routine periodic checks are preferred. The filter strips should be kept free of obstructions and debris to allow for proper usage and minimal blockage. Additionally, monitoring to ensure channels and preferential flow paths have not developed should be conducted during routine inspection.

Grass areas in and around basins must be mowed at least four times a year to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas. When mowing is performed, a mulching mower should be used, or grass clippings should be caught and removed. Regular mowing should also include weed control practices; herbicide usage, however, should be kept to a minimum.

*All inspection and maintenance records must be kept at the office of the operator for the previous three years.

An amended copy of this document will be provided to the TCEQ within thirty (30) days of any changes in the following information.

Responsible Party:	Joseph Straub – 278 Georgetown, Inc. A Texas Corporation.
Mailing Address:	4408 Spicewood Springs Road
City, State, Zip:	Austin, Texas 78759
Telephone:	(512) 596-6544

(Signature of Responsible Party)

Agent/Engineer:	Richard Rychlik Jr, P.E. – Brown & Gay Engineers, Inc.
Mailing Address:	7000 North Mopac, Suite 330
City, state, Zip:	Austin, Texas 78731
Telephone:	(512) 879-0460

(Signature of Agent/Engineer)

Attachment O – Pilot-Scale Field Testing Plan

Not applicable to this project.

Attachment P – Measures for Minimizing Surface Stream Contamination

The site will be stabilized using silt fence. All of the stabilization will be installed prior to construction and will be removed after construction has been completed. These methods will minimize any increases in erosion caused by construction. Additionally, the proposed permanent BMPs will treat any stormwater passing through the site prior to that stormwater's returning to existing drainage patterns and eventually flowing to surface streams. The stormwater management pond serves as a detention basin, so there will be no increase to flow off-site.

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: Richard Rychlik Jr. P.E.

Date: 9/14/20

Signature of Customer/Agent:

Regulated Entity Name: Shadow Canyon Phase 7

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: _____

   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: South Fork San Gabriel River

Temporary Best Management Practices (TBMPs)

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

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

- ☒ A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.
- ☒ A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.
- ☒ A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.
- ☒ A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

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

   - ☐ **Attachment E - Request to Temporarily Seal a Feature**. A request to temporarily seal a feature is attached. The request includes justification as to why no reasonable and practicable alternative exists for each feature.
   - ☒ There will be no temporary sealing of naturally-occurring sensitive features on the site.

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

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

    - ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.
    - ☒ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.
    - ☐ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.
    - ☐ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

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

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

☐ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

Attachment A – Spill Response Action

No spills of hydrocarbons or hazardous substances are expected. However, in the event that such an incidence does occur, the contractor should carefully follow the following TCEQ guidelines:

Cleanup:

1. Clean up leaks and spill immediately.
2. Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If he spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
3. Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly.

Minor Spills:

1. Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
2. Use absorbent materials on small spills rather than hosing down or burying the spill.
3. Absorbent materials should be promptly removed and disposed of properly.
4. Follow the practice below for a minor spill:
    - Contain the spread of the spill.
    - Recover spilled materials.
    - Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills:

Semi-significant spills can still be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities. Spills should be cleaned up immediately, using the following practices:

1. Contain spread of the spill.
2. Notify the project foreman immediately.
3. If the spill occurs on paved or impermeable surfaces, clean up using “dry” methods (absorbent materials, cat litter, and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
4. If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
5. If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills:

For highly toxic materials, the Reportable Quantity (RQ) > 25 gallons. For petroleum/hydrocarbon liquids, RQ > 250 gallons (on land) or any amount which creates a "sheen" on water. Only certified Haz-Mat teams will be responsible for handling the material at the site.

For significant or hazardous spills that are in reportable quantities:

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 8 AM and 5 PM. 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 Williamson County and/or city of Liberty Hill police, fire, and potentially EMS should be contacted in order to initiate the hazardous material response team.
2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110, 191, 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 of which one copy is to be kept on-site in the report binder and one copy is to be provided to the TCEQ.
4. The services of a spill contractor or a Haz-Mat team should be obtained immediately. Construction personnel should not attempt to clean up until the appropriate and qualified staffs have arrived at the job site.
5. Other agencies which may need to be consulted include, but are not limited to, the City Police Department, County Sherriff's Office, Fire Department, etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tceq.state.tx.us/response/spills.html

Attachment B – Potential Sources of Contamination

No particular activity or process during construction of the project is anticipated to present a significant risk of being a potential source of contamination. However, during regular construction operations, several common and minor risks of contamination are anticipated. Should any unforeseen mishaps occur during construction, the contractor shall follow the guidelines set forth in "Attachment A – Spill Response Plan".

Potential sources of sediment to stormwater runoff:

- Clearing and grubbing
- Grading and excavation
- Vehicle tracking
- Topsoil stripping and stockpiling
- Landscaping

Potential pollutants and sources, other than sediment, to stormwater runoff:

- Combined Staging Area – small fueling, minor equipment maintenance, sanitary facility.
- Materials Storage Area – solvents, adhesives, paving materials, aggregates, trash, etc.
- Construction Activities – paving, concrete pouring
- Concrete washout areas

Potential on-site pollutants:

- Fertilizer
- Concrete
- Glue, adhesives
- Gasoline, diesel fuel, hydraulic fluids, antifreeze
- Sanitary toilets

Attachment C – Sequence of Major Activities

1. Temporary erosion and sedimentation controls are the to be installed as indicated on the approved subdivision construction plans and in accordance with the stormwater pollution prevention plan (SWPPP) that is required to be posted on the site. Install tree protection and initiate tree mitigation measures.

2. The environmental project manager, and/or site supervisor, and/or designated responsible party, and the general contractor will follow the storm water pollution prevention plan (SWPPP) posted on the site. Temporary erosion and sedimentation controls will be revised, if needed, to comply with city inspectors' directives, and revised construction schedule relative to the water quality plan requirements and the erosion and sedimentation plan.

3. Temporary erosion and sedimentation controls will be inspected and maintained in accordance with the storm water pollution prevention plan (SWPPP) posted on the site.

4. A sequence of major construction activities, as well as an estimated area of disturbance for each, is listed below:

    I. Clearing and grubbing – 38.52 acres
    II. Grading and excavation for roadway and lots – 5.38 acres
    III. Excavation for utilities and storm sewer system – 6 acres
    IV. Construction of utilities and storm sewer system – 6 acres
    V. Paving, striping, etc. – 1 acre
    VI. Re-vegetation – 2 acre
    VII. Landscaping – 5 acre

5. Upon completion of construction and re-vegetation, the design engineer shall submit an engineer's letter of concurrence to the City of Liberty Hill indicating that construction, including re-vegetation, 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.

6. After construction is complete and all disturbed areas have been re-vegetated per plan to at least 90 percent established, remove the temporary erosion and sedimentation controls and complete any necessary final re-vegetation resulting from removal of the controls. Conduct any maintenance and rehabilitation of the permanent BMPs.

Attachment D – Temporary Best Management Practices and Measures

Prior to the commencement of any construction activity, the contractor shall install silt fence, construction entrances, and inlet protection, per the Erosion and Sedimentation Control Plan. All temporary BMPs are to be installed per TCEQ and local requirements.

As surface water flows from and through disturbed areas, the proposed temporary BMPs will prevent pollution by filtering the increased sediment loads and other pollutant sources (listed in "Attachment B – Potential Sources of Contamination") prior to any runoff leaving the site. As shown in the attached site plan, silt fence will be utilized downstream of any grading and construction activities to remove debris and sediment from run-off in the area (activities here will primarily involve road grading and storm sewer excavation). Inlet protection will prevent sediment laden runoff from entering the storm sewer system during construction. Rock berms will be used to dissipate velocities and prevent erosion in channels where flow can concentrate, releasing runoff in sheet flow. Concrete washout basins will contain pollutants discharged when concrete trucks are washed out, and stabilized construction entrances will prevent the transport of sediment off-site.

In using the aforementioned treatment methods and maintaining natural drainage patterns downgradient of the proposed site, any flow to naturally occurring sensitive features, both known and unknown, will be maintained.

Attachment E – Request to Temporarily Seal a Feature

Not applicable to this project.

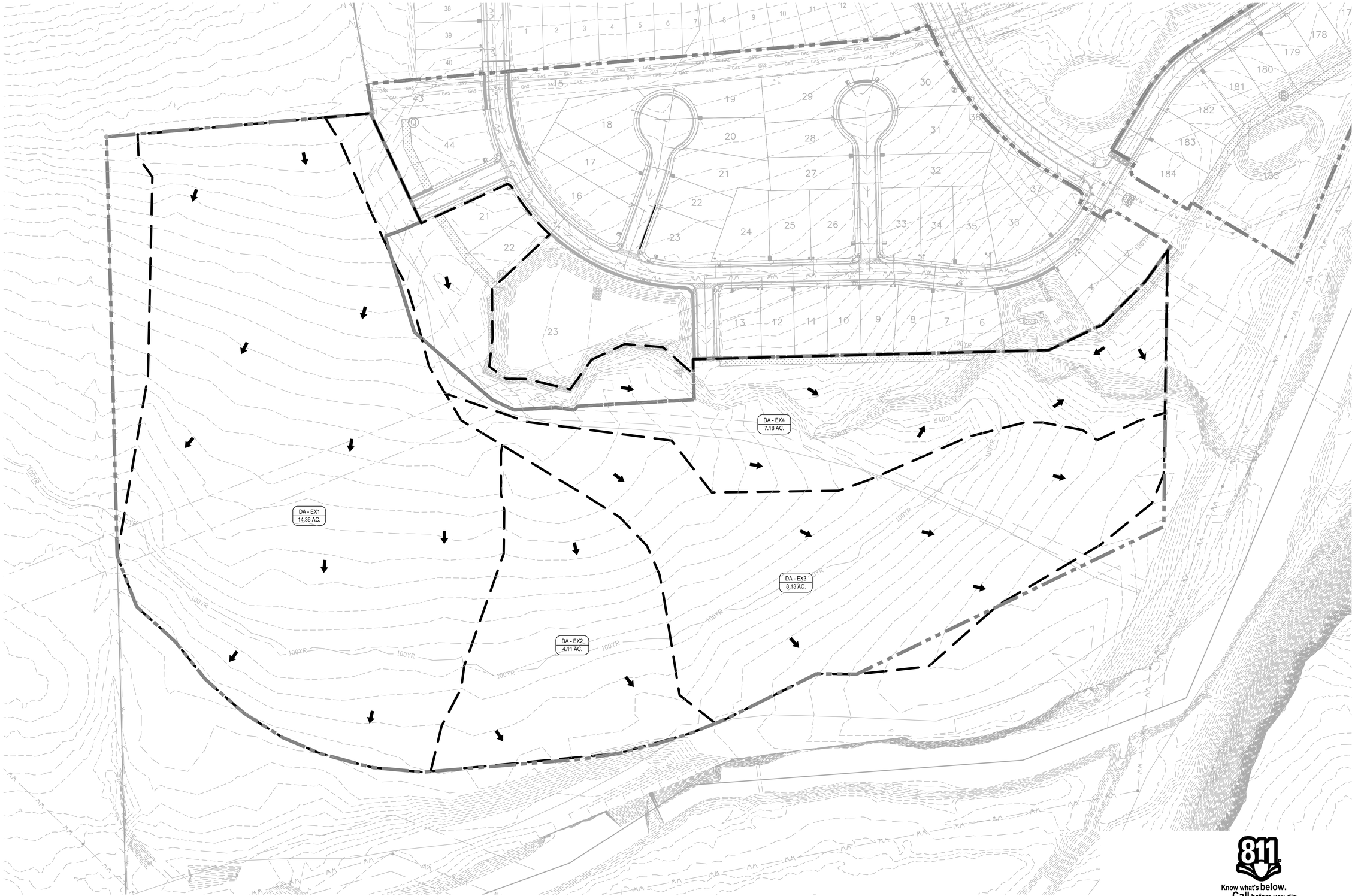
Attachment F – Structural Practices

The following temporary BMP structural practices will be employed on the site:

A. Silt Fence – Used for sediment filtration along the downslope perimeter of portions of the project, as well as to prevent runoff from storage of excavated materials during utility construction. The fence retains sediment primarily by retarding flow and promoting deposition of sediment on the uphill side of the slope. Runoff is filtered as it passes through the geotextile.

B. Inlet Protection – To be provided around all proposed storm sewer inlets during construction. Locations are indicated on attached site plan. The measures will trap and settle out sediment and debris prior to runoff entering the proposed storm sewer system.

C. Construction Entrance – Stone pads will be constructed at entrances and exits to the project to prevent off-site transport of sediment by construction vehicles. The pads are a minimum of 50’ long and 8” deep. They will be graded to prevent runoff from leaving the site.



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REV	DESCRIPTION	DATE	APR

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE, Inc.
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TEXAS 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

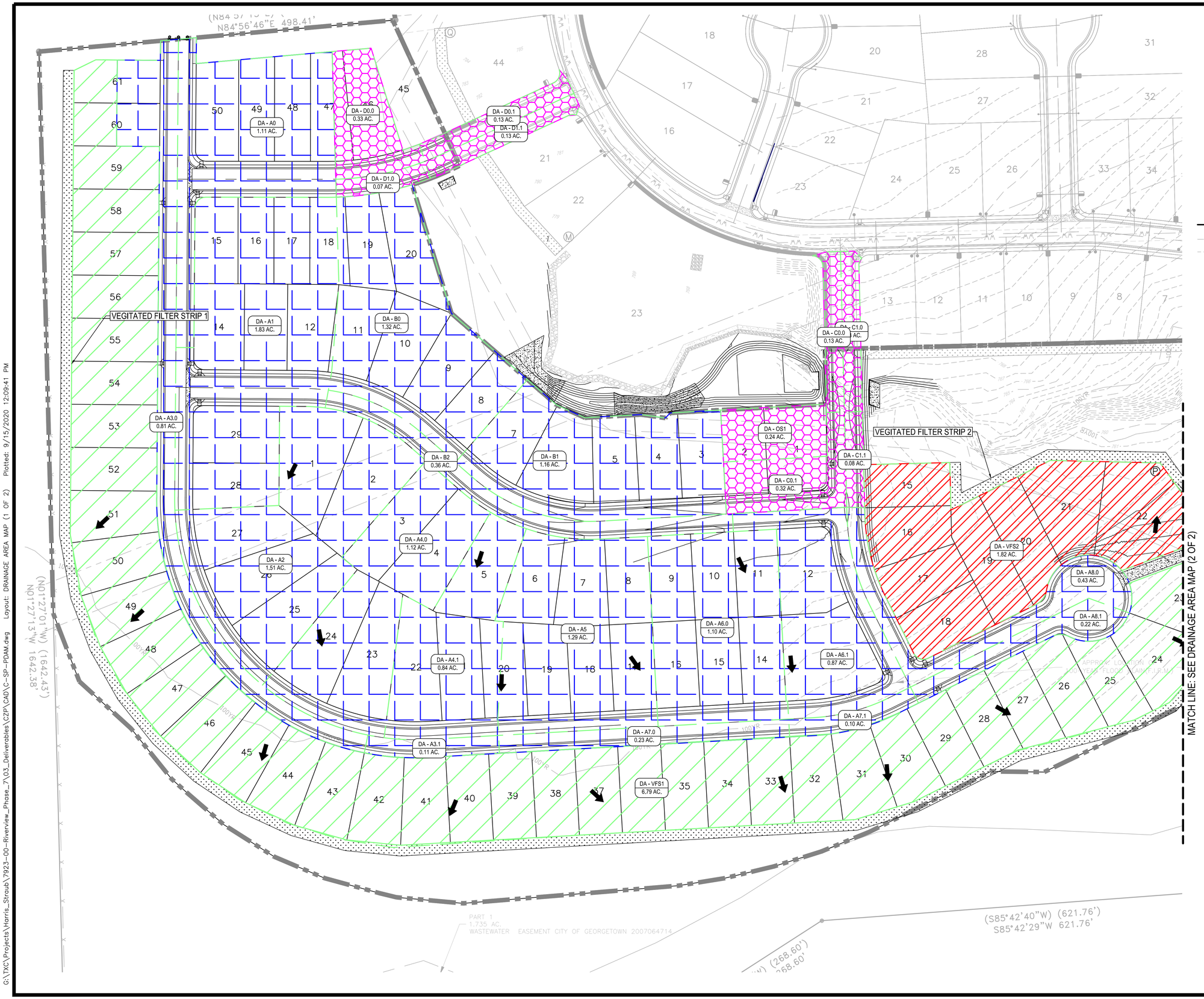
RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

EXISTING HYDROLOGY MAP

FOR REVIEW ONLY.
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF RICHARD RYCHLIK, PE #123927.
NOT TO BE USED FOR BIDDING, PERMIT, OR CONSTRUCTION.

SHEET
EXHIBIT

G:\TXC\Projects\Harris_Stroub\7923-00-Riverview_Phase_7\03_Deliverables\CZP\CAD\C-SP-HYDR-EX.dwg Layout: EXISTING HYDROLOGY MAP Plotted: 9/10/2020 5:22:58 PM



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

LEGEND

- PROPERTY BOUNDARY
- 775 EXISTING MAJOR CONTOUR
- 767 EXISTING MINOR CONTOUR
- PHASE 7 POND
- OFFSITE/UNTREATED
- VEGITATED FILTER STRIP 1
- VEGITATED FILTER STRIP 2

TOTAL AREA: 26.00 AC
IMPERVIOUS AREA: 12.82 AC

Know what's **below.**
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REV	DESCRIPTION	DATE	APR

DESIGNED BY:
REVIEWED BY:
DRAWN BY:

BGE
BGE, Inc.
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

DRAINAGE AREA MAP (1 OF 2)

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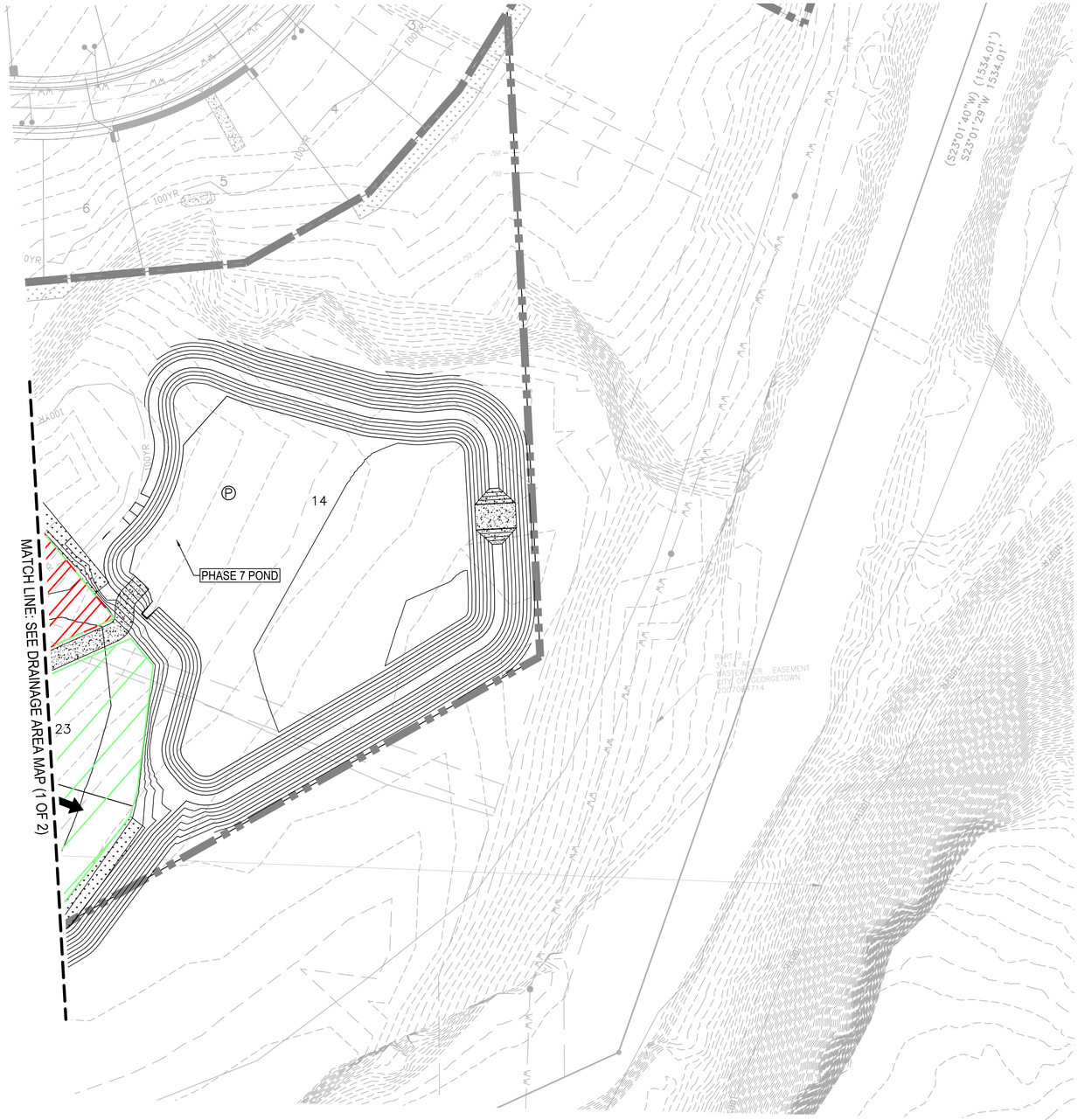
SHEET
EXHIBIT

CON-2020-XXX

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\03_Deliverables\CZP\CAD\C-SP-PDAM.dwg Layout: DRAINAGE AREA MAP (1 OF 2) Plotted: 9/15/2020 12:09:41 PM



N

0 30' 60' 120'

SCALE: 1" = 60'

LEGEND

- PROPERTY BOUNDARY
- 775 EXISTING MAJOR CONTOUR
- 767 EXISTING MINOR CONTOUR
- PHASE 7 POND
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IMPERVIOUS AREA: 12.82 AC

REV	DESCRIPTION	DATE	APR

DESIGNED BY:

REVIEWED BY:

DRAWN BY:

BGE, Inc.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TEL. 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

RIVERVIEW PHASE 7
GEORGETOWN, TEXAS

DRAINAGE AREA MAP (2 OF 2)

Know what's **below.**
Call before you dig.

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 HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

FOR REVIEW ONLY.
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF RICHARD RYCHLIK, PE #123927.
NOT TO BE USED FOR BIDDING, PERMIT, OR CONSTRUCTION.

SHEET
EXHIBIT

G:\TXC\Projects\Harris_Straub\7923-00-Riverview_Phase_7\03_Deliverables\CZP\CAD\C-SP-PDAM.dwg Layout: DRAINAGE AREA MAP (2 OF 2) Plotted: 9/15/2020 12:09:44 PM

CON-2020-XXX

Attachment G – Drainage Area Map

Existing and proposed drainage area maps are shown in Contributing Zone Plan Attachment E "Volume and Character of Stormwater".

Attachment H – Temporary Sediment Pond(s) Plans and Calculations

Not applicable to this project.

Attachment I – Inspection and Maintenance for BMPs

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.

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 SWPPP.

Inspection Schedule and Procedures:

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 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 the 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 where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

Based on the results of the inspection, the site description and the pollution prevention measures identified in the plan must be revised as soon as possible after an inspection that reveals inadequacies. The inspection and plan review process must provide for timely implementation of any changes to the plan within 7 calendar days of the inspection.

An inspection report shall be completed, which summarizes the scope of the inspection, name(s) and qualifications of personnel conducting the inspection, the date(s) of the inspection, and major observations relating to the implementation of the SWPPP. Major observations shall include, as a minimum, location of discharges of sediment or other pollutants from the site, location of BMPs that need to be maintained, location of BMPs that failed to operate as designed or proved inadequate for a particular location, and locations where BMPs are needed.

Actions taken as a result of the inspections must be described within, and retained as a part of, the SWPPP. 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 SWPPP 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 minimum requirements as follows:

A. 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 job site.

B. If weather forecast predicts possibility of rain, check entire facilities throughout site to ensure that they are in place and operable. If job site weather conditions indicate high probability of rain, make special inspection of erosion control facilities.

C. After rainfall events, review erosion control facilities as soon as site is accessible. Clean rock berms, construction entrances, and other structural facilities. Determine where additional facilities or alternative techniques are needed to control sediment leaving site.

D. After portions of site have been seeded, review these areas on regular basis in accordance with project specifications to assure proper watering until grass is established. Re-seed areas where grass is not well-established.

E. Spills are to be handled as specified by the manufacturer of the product in a timely and safe manner by qualified personnel. The site superintendent will be responsible for coordinating spill prevention and cleanup operations.

F. Concrete trucks will discharge extra concrete or wash out drum only at an approved location on site. Residual product shall be properly disposed of.

G. Inspect vehicle entrance and exits for evidence of off-site tracking and correct as needed.

H. Remove sediment from traps/ponds no later than when the design capacity has been reduced by 50%.

I. If sediment escapes the site, the contractor, where feasible and where access is available, shall collect and remove sedimentation material by appropriate non-damaging methods. Additionally, the contractor shall correct the condition causing discharges.

J. If inspections or other information sources reveal a control has been used incorrectly, or that control is performing inadequately, the contractor must replace, correct, or modify the control as soon as practical after discovery of the deficiency.

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Shadow Conyon Phase 7
Regulated Entity Location: 5110 Whisper Creek Dr Georgetown, TX, 78626
Name of Customer: 278 Georgetown, Inc. A Texas Corporation
Contact Person: Joseph Straub Phone: 512-596-6544
Customer Reference Number (if issued):CN _____
Regulated Entity Reference Number (if issued):RN _____

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	*Size*	*Fee Due*
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	38.52 Acres	$ 4,000
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: _____ Date: 9/14/20

TCEQ-0574 (Rev. 02-24-15)

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

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

I Joseph Straub,
Print Name

Owner,
Title - Owner/President/Other

of 278 Georgetown, Inc. A Texas Company,
Corporation/Partnership/Entity Name

have authorized Richard Rychlik, Jr. P.E.
Print Name of Agent/Engineer

of BGE, 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

9/15/20
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Joseph Strauß 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 15th day of September 2020.

SYLVIA WILKIE
My Notary ID # 132253746
Expires November 15, 2023

NOTARY PUBLIC

Sylvia Wilkie
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 11-15-23

TCEQ Use Only

TCEQ Core Data Form

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 605003243		RN

SECTION II: Customer Information

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

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

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

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

278 Georgetown, 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)*
0802081373	32055409539		

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:							
	4408 Spicewood Springs						
	City	Austin	State	TX	ZIP	78759	ZIP + 4

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

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

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected 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.*)

Shadow Canyon Phase 7

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	River Terrace Dr.						
	City	Georgetown	**State**	TX	**ZIP**	78628	**ZIP + 4**
24. County	Williamson						

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	River Terrace Dr.				
26. Nearest City			**State**	**Nearest ZIP Code**	
Georgetown			TX	78628	
27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	37	46.06	97	44	12.00

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.)*

Single Family Residential

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:	Richard Rychlik Jr., P.E.	**41. Title:**	Project Manager
42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 879-0460		( ) -	RRychlik@bgeinc.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:	BGE, Inc.	**Job Title:**	Project Manager
Name *(In Print)*:	Richard Rychlik Jr., P.E.	**Phone:**	(512) 879- **0460**
Signature:	Richard Rychlik	**Date:**	9/14/20

SHADOW CANYON AMENDMENT TO THE AMENDED PRELIMINARY PLAT

(PP–2016–001)

278.212 ACRES IN THE ISAAC DONAGAN SURVEY, ABSTRACT NUMBER 178 AND THE JOSEPH THOMPSON SURVEY, ABSTRACT NUMBER 608 IN WILLIAMSON COUNTY, TEXAS.

TOTAL AMOUNT OF PROPOSED PARKLAND DEDICATION

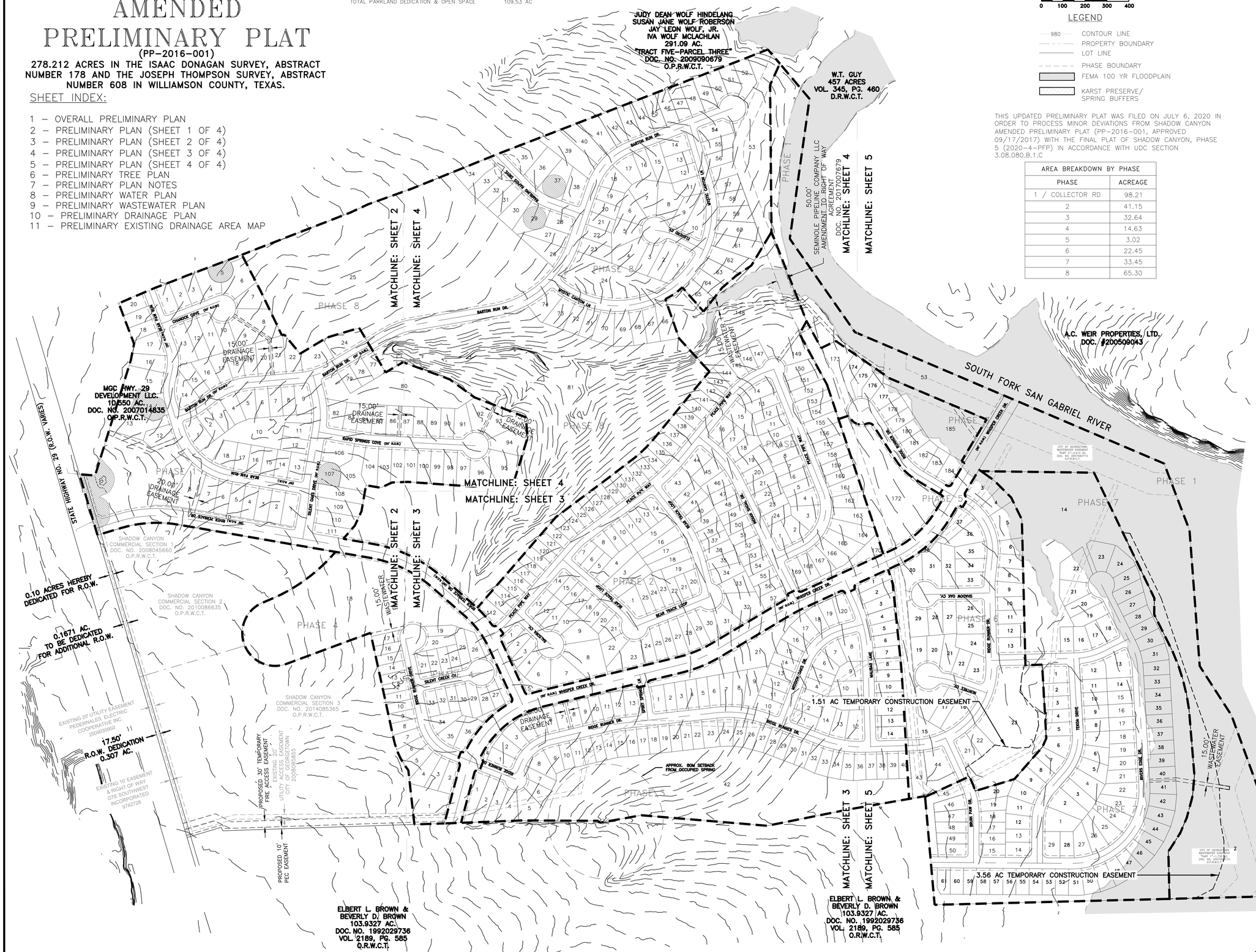
PROPOSED PARKLAND 22.00 AC
NOTE* PARKLAND–BLOCK B, LOT 53 AND BLOCK P, LOT 2.

TOTAL AMOUNT OF PROPOSED OPEN SPACE (EXCLUDING PARKLAND DEDICATION)
PROPOSED OPEN SPACE 87.53 AC

TOTAL PARKLAND DEDICATION & OPEN SPACE 109.53 AC

SHEET INDEX:

1 – OVERALL PRELIMINARY PLAN
2 – PRELIMINARY PLAN (SHEET 1 OF 4)
3 – PRELIMINARY PLAN (SHEET 2 OF 4)
4 – PRELIMINARY PLAN (SHEET 3 OF 4)
5 – PRELIMINARY PLAN (SHEET 4 OF 4)
6 – PRELIMINARY TREE PLAN
7 – PRELIMINARY PLAN NOTES
8 – PRELIMINARY WATER PLAN
9 – PRELIMINARY WASTEWATER PLAN
10 – PRELIMINARY DRAINAGE PLAN
11 – PRELIMINARY EXISTING DRAINAGE AREA MAP



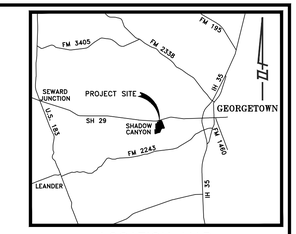
SCALE: 1"=200'
GRAPHIC SCALE IN FEET
0 100 200 300 400

LEGEND

- 980 CONTOUR LINE
- PROPERTY BOUNDARY
- LOT LINE
- PHASE BOUNDARY
- FEMA 100 YR FLOODPLAIN
- KARST PRESERVE/ SPRING BUFFERS

THIS UPDATED PRELIMINARY PLAT WAS FILED ON JULY 6, 2020 IN ORDER TO PROCESS MINOR DEVIATIONS FROM SHADOW CANYON AMENDED PRELIMINARY PLAT (PP–2016–001, APPROVED 09/17/2017) WITH THE FINAL PLAT OF SHADOW CANYON, PHASE 5 (2020–4–PFP) IN ACCORDANCE WITH UDC SECTION 3.08.080.B.1.C

AREA BREAKDOWN BY PHASE	
PHASE	ACREAGE
1 / COLLECTOR RD	98.21
2	41.15
3	32.64
4	14.63
5	3.02
6	22.45
7	33.45
8	65.30



LOCATION MAP
NOT TO SCALE

LOTS BY PHASE		
PHASE	USE	NUMBER OF LOTS
1	SINGLE FAMILY	88
	OPEN SPACE	7
	PARKLAND	2
	WATER QUALITY	1
2	SINGLE FAMILY	162
	OPEN SPACE	2
	OPEN SPACE/ WATER QUALITY	1
3	SINGLE FAMILY	100
	OPEN SPACE	4
	OPEN SPACE/ WATER QUALITY	1
4	SINGLE FAMILY	34
	OPEN SPACE	2
	OPEN SPACE/ WATER QUALITY	0
5	SINGLE FAMILY	0
	AMENITY LOT	1
	OPEN SPACE/ WATER QUALITY	0
6	SINGLE FAMILY	46
	OPEN SPACE	4
	OPEN SPACE/ WATER QUALITY	2
7	SINGLE FAMILY	101
	OPEN SPACE	1
	OPEN SPACE/ WATER QUALITY	1
8	SINGLE FAMILY	69
	OPEN SPACE	5
	OPEN SPACE/ WATER QUALITY	0

LOT TOTALS	
TOTAL SINGLE FAMILY LOTS:	600
TOTAL OPEN SPACE LOTS:	25
TOTAL OPEN SPACE/ WATER QUALITY LOTS:	6
TOTAL AMENITY LOTS:	1
TOTAL PARKLAND LOTS:	2
TOTAL LOTS:	633

LINEAR FEET OF NEW STREETS PROPOSED WITHIN THIS PRELIMINARY PLAT: 30,381 LF

SHADOW CANYON

OWNER: 278 GEORGETOWN, INC.
CONTACT: JOE STRAUB
PHONE: (512) 231–1555
FAX: (512) 231–8955

ENGINEER: BGE, INC., TBPE F–1046
CONTACT: RICHARD RYCHLIK JR., P.E.
EMAIL: RRYCHLIK@BGEINC.COM
101 W LOUIS HENNA BLVD,SUITE 400
AUSTIN, TEXAS 78728
(512) 879–0400

SURVEYOR: BASELINE LAND SURVEYORS, INC.
8333 CROSS PARK DRIVE
AUSTIN, TX 78754
PHONE:(512) 374–9722

PROJECT NO.		DESIGNED BY:	MTC
DATE:	JANUARY 2020	DRAWN BY:	MTC
SCALE:	1"=200'	CHECKED BY:	RLR

BGE, INC.
101 W Louis Henna Blvd, Suite 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

PP–2016–001

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