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: Hudson Park Wastewater Treatment Plant (WWTP)						**2. Regulated Entity No.: 111827143**			
3. Customer Name: DRB Group Texas, LLC						**4. Customer No.: 606467306**			
5. Project Type: **(Please circle/check one)**	(New)		Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	(CZP)	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential		(Non-residential)			**8. Site (acres):**		2.12	
9. Application Fee:	$4,000		**10. Permanent BMP(s):**			Batch Detention Pond			
11. SCS (Linear Ft.):			**12. AST/UST (No. Tanks):**						
13. County:	WILLIAM-SON		**14. Watershed:**			North Fork San Gabriel River – Lake Georgetown			

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. Kimberly Hammond, PE TX License No. 151874
Print Name of Customer/Authorized Agent Kimberly Hammond
Signature of Customer/Authorized Agent 2/5/2026 Date

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

CONTRIBUTING ZONE PLAN
(CZP)

DRB GROUP TEXAS, LLC
HUDSON PARK WWTP
GEORGETOWN, TX
WILLIAMSON COUNTY

2/5/2026

Prepared by:

DCS
1101 S. Capital of Texas Highway, Building G-100
Austin, Texas 78746
Tel: (512) 614-6171
T.B.P.E. Firm No. F-13162

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.

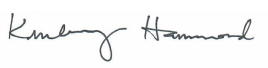
Signature

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: Kimberly Hammond

Date: 2/5/2026

Signature of Customer/Agent:



Regulated Entity Name: Hudson Park WWTP

Project Information

1. County: Williamson
2. Stream Basin: Brazos River Basin - San Gabriel
3. Groundwater Conservation District (if applicable): N/A
4. Customer (Applicant):

   Contact Person: Jason Lewis
   Entity: DRB Group Texas, LLC
   Mailing Address: 3815 S Capital of Texas Highway Suite 275
   City, State: Austin, Texas Zip: 78704
   Telephone: 972-383-4382 Fax: _____
   Email Address: jasonlewis@drbgroup.com

5. Agent/Representative (If any):

Contact Person: Kimberly Hammond
Entity: DCS Engineering, LLC
Mailing Address: 1101 S. Capital of Texas Hwy Building G-100
City, State: Austin, Tx Zip: 78746
Telephone: 512-614-6171 Fax: _____
Email Address: khammond@dcs-engineering.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.

Site is located 1,000 feet northeast of the intersection between Ronald Reagan Blvd and CO Rd 289.

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

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

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

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

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

11. Existing project site conditions are noted below:

☐ Existing commercial site
☐ Existing industrial site

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

12. The type of project is:

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

13. Total project area (size of site): 2.12 Acres

Total disturbed area: 2.12 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	7,754	÷ 43,560 =	0.178
Parking	0	÷ 43,560 =	0
Other paved surfaces	9,675	÷ 43,560 =	0.222
Total Impervious Cover	17,429	÷ 43,560 =	0.400

Total Impervious Cover 0.400 **÷ Total Acreage** 2.12 **X 100 =** 18.87**% 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 Hudson Park WWTP (name) Treatment Plant. The treatment facility is:

☐ Existing.

☒ Proposed.

☐ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

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

☒N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

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

Total x 1.5 = _____ Gallons

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

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

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

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

Table 3 - Secondary Containment

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

Total: _____ Gallons

30. Piping:

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

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

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

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

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

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

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

Site Plan Requirements

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

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

    Site Plan Scale: 1" = 10'.

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): FEMA Flood Map #48491C0275E, effective 09/26/2008.

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.

CONTRIBUTING ZONE PLAN ATTACHMENT A

ROAD MAP

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	ISV
DRAWN BY:	AH
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF KIMBERLY HAMMOND, P.E. 151874 FEBRUARY 5, 2026. NOT FOR CONSTRUCTION DCS ENGINEERING, LLC

ATTACHMENT A

ROAD MAP

DATE: FEBRUARY 2026

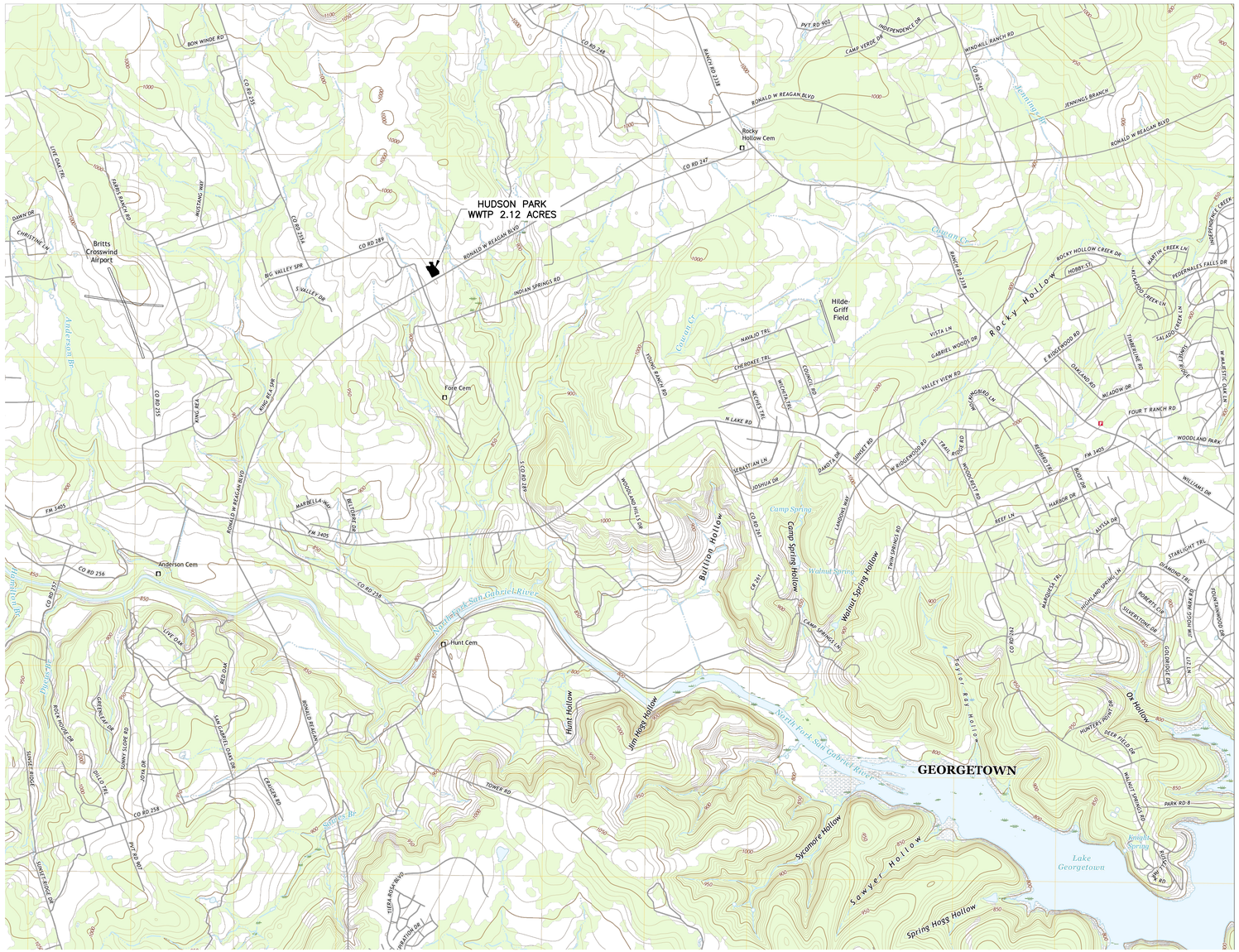
SCALE: 1" = 500'

DRAWING: FIGURE 1

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\160 - Project_Mnmgt\1.6.7 - Corres\TCEQ CZP Submittal\3 Contributing Zone Application\3.1 Attachment A Road Map\Attachment A.dwg, LAST SAVED ON: Dec 22 2025 9:02am, PLOTTED BY: AHERRERA, ON: Feb 04 2026 3:26pm, CFG:

CONTRIBUTING ZONE PLAN ATTACHMENT B

USGS MAP



0 2000 4000'

SCALE : 1" = 2000'

MAP PRODUCED FROM THE U.S. GEOLOGICAL SURVEY (USGS)
USGS QUADRANGLE: GEORGETOWN

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	ISV
DRAWN BY:	AH
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF KIMBERLY HAMMOND, P.E. 151874 FEBRUARY 5, 2026. NOT FOR CONSTRUCTION DCS ENGINEERING, LLC

ATTACHMENT B

USGS MAP
GEORGETOWN, TX

DATE: FEBRUARY 2026

SCALE: 1" = 2000'

DRAWING: FIGURE 2

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\160 - Project_Mnmgt\1.6.7 - Corres\TCEQ CZP Submittal\3 Contributing Zone Application\3.2 Attachment B USGS Quadrangle Map\Attachment B.dwg, LAST SAVED ON: Dec 22 2025 9:07am, PLOTTED BY: AHERRERA, ON: Feb 04 2026 3:29p

CONTRIBUTING ZONE PLAN ATTACHMENT C

PROJECT NARRATIVE

Project Narrative

Hudson Park proposes to construct a WWTP. The site is located 1,000 feet northeast of the intersection between Ronald Reagan Blvd and CO Rd 289. The proposed site for the WWTP is approximately 2.12 acres of undeveloped land and located entirely over the Edwards Aquifer Contributing Zone.

Regulated activities at the site will consist of clearing/grading, construction of access road, parking, a WWTP, and a batch detention pond.

The permanent BMP at the site is a batch detention pond treatment for the proposed 0.400 acres of impermeable cover.

CONTRIBUTING ZONE PLAN ATTACHMENT D

FACTORS AFFECTING SURFACE WATER QUALITY

Factor Affecting Water Quality

Sediments from disturbed areas have the potential to impact water quality. A batch detention pond is proposed to capture sediment and control the flow of stormwater. Additional factors include vehicle fluids from construction equipment.

CONTRIBUTING ZONE PLAN ATTACHMENT E

VOLUME AND CHARACTER OF STORMWATER

Volume and Character of Stormwater

The stormwater runoff from this site will include paved areas, curbs, sidewalks, and landscaped areas. The proposed impervious area is 0.400 acres. The runoff coefficient for the developed condition is 0.17 and is 0.02 before any construction per RG-348.

Temporary BMPs of silt fencing and rock berms will be used to control stormwater until the batch detention pond is complete. The calculations can be found on sheet 01C-16 of the site development plans.

CONTRIBUTING ZONE PLAN ATTACHMENT J

BMPS FOR UPGRADIENT STORMWATER

BMPs for Upgradient Stormwater

Upgradient stormwater runoff is collected in an inlet and flow underneath the site through a pipe system, the runoff is conducted into a proposed detention.

CONTRIBUTING ZONE PLAN ATTACHMENT K

BMPS FOR ON-SITE STORMWATER

BMPs for On-site Stormwater

Pollution of stormwater that originates on-site or flows off-site will be mitigated through the use of the batch detention pond, which will be constructed as shown on the water quality pond sheet. Water on-site will be overtreated to make up for the runoff from the 0.400 acres of impervious cover added.

TSS calculations can be found below and on sheet 01C-17 of the Site Development Plans.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: HUDSON PARK WWTP
Date Prepared: 7/17/2025

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

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

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

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

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

County =	**Williamson**	
Total project area included in plan * =	**2.12**	acres
Predevelopment impervious area within the limits of the plan * =	**0.00**	acres
Total post-development impervious area within the limits of the plan* =	**0.40**	acres
Total post-development impervious cover fraction * =	**0.19**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**348**	lbs.

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

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

2/5/2026

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

Drainage Basin/Outfall Area No. =	**1**	
Total drainage basin/outfall area =	**2.12**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.40**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.19**	
$L_{M\ THIS\ BASIN}$ =	**348**	lbs.

3. Indicate the proposed BMP Code for this basin.

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

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

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

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

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

A_C =	**2.12**	acres
A_I =	**0.40**	acres
A_P =	**1.72**	acres
L_R =	**430**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = **348** lbs.

F = **0.81**

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

Rainfall Depth =	**1.12**	inches
Post Development Runoff Coefficient =	**0.19**	
On-site Water Quality Volume =	**1668**	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 =	**334**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**2001**	cubic feet

2/5/2026

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

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46

Required Water Quality Volume for retention basin = **NA** cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate =	**0.1**	in/hr	**Enter determined permeability rate or assumed value of 0.1**
Irrigation area =	**NA**	square feet	
	NA	acres	

8. Extended Detention Basin System Designed as Required in RG-348 Pages 3-46 to 3-51

Required Water Quality Volume for extended detention basin = **NA** cubic feet

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9A. Full Sedimentation and Filtration System

Water Quality Volume for sedimentation basin =	**NA**	cubic feet	
Minimum filter basin area =	**NA**	square feet	
Maximum sedimentation basin area =	**NA**	square feet	**For minimum water depth of 2 feet**
Minimum sedimentation basin area =	**NA**	square feet	**For maximum water depth of 8 feet**

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	**NA**	cubic feet	
Minimum filter basin area =	**NA**	square feet	
Maximum sedimentation basin area =	**NA**	square feet	**For minimum water depth of 2 feet**
Minimum sedimentation basin area =	**NA**	square feet	**For maximum water depth of 8 feet**

10. Bioretention System Designed as Required in RG-348 Pages 3-63 to 3-65

Required Water Quality Volume for Bioretention Basin = **NA** cubic feet

11. Wet Basins Designed as Required in RG-348 Pages 3-66 to 3-71

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

12. Constructed Wetlands Designed as Required in RG-348 Pages 3-71 to 3-73

Required Water Quality Volume for Constructed Wetlands = **NA** cubic feet

13. AquaLogic™ Cartridge System Designed as Required in RG-348 Pages 3-74 to 3-78

**** 2005 Technical Guidance Manual (RG-348) does not exempt the required 20% increase with maintenance contract with AquaLogic™.**

Required Sedimentation chamber capacity =	**NA**	cubic feet
Filter canisters (FCs) to treat WQV =	**NA**	cartridges
Filter basin area (RIA_F) =	**NA**	square feet

14. Stormwater Management StormFilter® by CONTECH

Required Water Quality Volume for Contech StormFilter System = **NA** cubic feet

THE SIZING REQUIREMENTS FOR THE FOLLOWING BMPs / LOAD REMOVALS ARE BASED UPON FLOW RATES - NOT CALCULATED WATER QUALITY VOLUMES

15. Grassy Swales Designed as Required in RG-348 Pages 3-51 to 3-54

Design parameters for the swale:

Drainage Area to be Treated by the Swale = A =	N/A	acres
Impervious Cover in Drainage Area =	N/A	acres
Rainfall Intensity = i =	1.1	in/hr
Swale Slope =	N/A	ft/ft
Side Slope (z) =	N/A	
Design Water Depth = y =	N/A	ft
Weighted Runoff Coefficient = C =	#VALUE!	
A_{CS} = cross-sectional area of flow in Swale =	#VALUE!	sf
P_W = Wetted Perimeter =	#VALUE!	feet
R_H = hydraulic radius of flow cross-section = A_{CS}/P_W =	#VALUE!	feet
n = Manning's roughness coefficient =	0.2	

15A. Using the Method Described in the RG-348

Manning's Equation: $Q = \frac{1.49}{n} A_{CS} R_H^{2/3} S^{0.5}$

$b = \frac{0.134 \times Q}{y^{1.67} S^{0.5}} - zy$ = #VALUE! feet

Q = CiA = #VALUE! cfs

To calculate the flow velocity in the swale:

V (Velocity of Flow in the swale) = Q/A_{CS} = #VALUE! ft/sec

To calculate the resulting swale length:

L = Minimum Swale Length = V (ft/sec) * 300 (sec) = #VALUE! feet

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters must be modified and the solver rerun.

15B. Alternative Method using Excel Solver

Design Q = CiA = #VALUE! cfs

Manning's Equation Q = #VALUE! cfs Error 1 = #VALUE!

Swale Width= 6.00 ft

Instructions are provided to the right (green comments).

Flow Velocity #VALUE! ft/s

Minimum Length = #VALUE! ft

Instructions are provided to the right (blue comments).

Design Width = N/A ft

Design Discharge = #VALUE! cfs Error 2 = #VALUE!

Design Depth = 0.33 ft

Flow Velocity = #VALUE! cfs

Minimum Length = #VALUE! ft

If any of the resulting values do not meet the design requirement set forth in RG-348, the design parameters may be modified and the solver rerun.
If any of the resulting values still do not meet the design requirement set forth in RG-348, widening the swale bottom value may not be possible.

16. Vegetated Filter Strips Designed as Required in RG-348 Pages 3-55 to 3-57

There are no calculations required for determining the load or size of vegetative filter strips.
The 80% removal is provided when the contributing drainage area does not exceed 72 feet (direction of flow) and the sheet flow leaving the impervious cover is directed across 15 feet of engineered filter strips with maximum slope of 20% or across 50 feet of natural vegetation with a maximum slope of 10%. There can be a break in grade as long as no slope exceeds 20%.

If vegetative filter strips are proposed for an interim permanent BMP, they may be sized as described on Page 3-56 of RG-348.

17. Wet Vaults Designed as Required in RG-348 Pages 3-30 to 3-32 & 3-79

Required Load Removal Based upon Equation 3.3 = **NA** lbs

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED
PROFESSIONAL ENGINEER

2/5/2026

To solve for bottom width of the trapezoidal swale (b) using the Excel solver:
Excel can simultaneously solve the "Design Q" (C217) vs "Manning's Q" (C219) by varying the "Swale Width" (C220).
The required "Swale Width" occurs when the "Design Q" = "Manning's Q"

First, highlight Cell F219 (Error 1 value). The equation showing in the fx screen for Cell F219 should be "= C217-C219"
Then click on "Tools" and "Solver". The "Solver Parameters" screen pops up.
The value in the "Set Target cell" should be F219 "Error 1 ="
The value in the "By Changing Cells" should be C220 "Swale Width"
Click on solve.

The resulting "Swale Width" must be less than 10 feet to meet the requirements of the TGM.
If the resulting "Swale Width" exceeds 10 feet then the design parameters must be revised and the solver run again.

If there is not the option for "Solver" under "Tools"
Click on "Tools" and "Add Ins" and then check "Solver Add-in"
Then proceed as instructed above.

If you would like to increase the bottom width of the trapezoidal swale (b):
Excel can simultaneously solve the "Design Q" (C217) vs "Design Discharge" (C232) by varying the "Design Depth" (C233).
The required "Design Depth" for a 10-foot bottom width occurs when the "Design Q" (C217) = the "Design Discharge" (C232).

First set the desired bottom width in Cell C231.
Highlight Cell F232. The equation showing in the fx screen for Cell F232 should be "= C217-C232"

Click on "Tools" and "Solver". The "Solver Parameters" screen pops up.
The value in the "Set Target cell" should be F232 "Error 2"
The value in the "By Changing Cells" should be C233 "Design Depth"
Click on solve.

The resulting "Design Depth" must be equal to or less than 0.33 feet to meet the requirements of the TGM.
If the resulting "Design Depth" exceeds 0.33 feet then the design parameters must be revised and the solver run again.
First set the desired bottom width in Cell C231.
Highlight Cell F232. The equation showing in the fx screen for Cell F232 should be "= C217-C232"
Click on "Tools" and "Solver". The "Solver Parameters" screen pops up.
The value in the "Set Target cell" should be F232 "Error 2"
The value in the "By Changing Cells" should be C233 "Design Depth"
Click on solve.

The resulting "Design Depth" must be equal to or less than 0.33 feet to meet the requirements of the TGM.
If the resulting "Design Depth" exceeds 0.33 feet then the design parameters must be revised and the solver run again.

First calculate the load removal at 1.1 in/hour

RG-348 Page 3-30 Equation 3.4: Q = CiA

C = runoff coefficient for the drainage area = 0.11 **C = Runoff Coefficient = 0.546 (IC)^2 + 0.328 (IC) + 0.03**
i = design rainfall intensity = 1.1 in/hour
A = drainage area in acres = N/A acres

Q = flow rate in cubic feet per second = #VALUE! cubic feet/sec

RG-348 Page 3-31 Equation 3.5: V_{OR} = Q/A

Q = Runoff rate calculated above = #VALUE! cubic feet/sec
A = Water surface area in the wet vault = N/A square feet

V_{OR} = Overflow Rate = #VALUE! feet/sec

Percent TSS Removal from Figure 3-1 (RG-348 Page 3-31) = N/A percent

Load removed by Wet Vault = #VALUE! lbs

If a bypass occurs at a rainfall intensity of less than 1.1 in/hours
Calculate the efficiency reduction for the actual rainfall intensity rate

Actual Rainfall Intensity at which Wet Vault bypass Occurs = N/A in/hour

Fraction of rainfall treated from Figure 3-2 RG-348 Page 3-32 = N/A percent
Efficiency Reduction for Actual Rainfall Intensity = #VALUE! percent

Resultant TSS Load removed by Wet Vault = #VALUE! lbs

18. Permeable Concrete Designed as Required in RG-348 Pages 3-79 to 3-83

PERMEABLE CONCRETE MAY ONLY BE USED ON THE CONTRIBUTING ZONE

19. BMPs Installed in a Series Designed as Required in RG-348 Pages 3-32

Michael E. Barrett, Ph.D.. P.E. recommended that the coefficient for E_2 be changed from 0.5 to 0.65 on May 3, 2006

E_{TOT} = [1 - ((1 - E_1) X (1 - 0.65E_2) x (1 - 0.25E_3))] X 100 = #VALUE! percent NET EFFICIENCY OF THE BMPs IN THE SERIES

EFFICIENCY OF FIRST BMP IN THE SERIES = E_1 = N/A percent

EFFICIENCY OF THE SECOND BMP IN THE SERIES = E_2 = N/A percent

EFFICIENCY OF THE THIRD BMP IN THE SERIES = E_3 = N/A percent

THEREFORE, THE NET LOAD REMOVAL WOULD BE:
(A_I AND A_P VALUES ARE FROM SECTION 3 ABOVE)

L_R = E_{TOT} X P X (A_I X 34.6 X A_P X0.54) = #VALUE! lbs

20. Stormceptor Designed as Required in RG-348 Pg. 11, Addendum

Required TSS Removal in BMP Drainage Area= **NA** lbs
Impervious Cover Overtreatment= N/A ac
TSS Removal for Uncaptured Area = #VALUE! lbs

BMP Sizing

Effective Area = NA EA
Calculated Model Size(s) = #N/A
Actual Model Size (if multiple values provided in Calculated
Model Size or if you are choosing a larger model size) = 0 Model Size

Surface Area = #N/A ft^2
Overflow Rate = #VALUE! V_{or}
Rounded Overflow Rate = #VALUE! V_{or}
BMP Efficiency % = #VALUE! %
L_R Value = #VALUE! lbs

TSS Load Credit = #VALUE! lbs

Is Sufficient Treatment Available? (TSS Credit $\geq$ TSS Uncapt.) #VALUE!

TSS Treatment by BMP (LM + TSS Uncapt.) = #VALUE!

21. Vortech — Designed as Required in RG-348 — Pg. 19, Addendum

Required TSS Removal in BMP Drainage Area=	**NA**	lbs
Impervious Cover Overtreatment=	N/A	ac
TSS Removal for Uncaptured Area =	#VALUE!	lbs
BMP Sizing		
Effective Area =	NA	EA
Calculated Model Size(s) =	#N/A	
Actual Model Size (if choosing larger model size) =	0	Pick Model Size
Surface Area =	#N/A	ft^2
Overflow Rate =	#VALUE!	V_{or}
Rounded Overflow Rate =	#VALUE!	V_{or}
BMP Efficiency % =	#VALUE!	%
L_R Value =	#VALUE!	lbs
TSS Load Credit =	#VALUE!	lbs
Is Sufficient Treatment Available? (TSS Credit ≥ TSS Uncapt.)	#VALUE!	
TSS Treatment by BMP (LM + TSS Uncapt.) =	#VALUE!	

22. Batch Detention Basin — Designed as Required in RG-348 — Pg. 28, Addendum

Required Water Quality Volume for batch detention basin =	**2001**	cubic feet

23. BaySeparator — Designed as Required in RG-348 — Pg. 35, Addendum

Required TSS Removal in BMP Drainage Area=	**NA**	lbs
Impervious Cover Overtreatment=	N/A	ac
TSS Removal for Uncaptured Area =	#VALUE!	lbs
BMP Sizing		
Effective Area =	NA	EA
Calculated Model Size(s) =	#N/A	
Actual Model Size (if multiple values provided in Calculated Model Size or if you are choosing a larger model size) =	0	Model Size
Surface Area =	#N/A	ft^2
Overflow Rate =	#VALUE!	V_{or}
Rounded Overflow Rate =	#VALUE!	V_{or}
BMP Efficiency % =	#VALUE!	%
L_R Value =	#VALUE!	lbs
TSS Load Credit =	#VALUE!	lbs
Is Sufficient Treatment Available? (TSS Credit ≥ TSS Uncapt.)	#VALUE!	
TSS Treatment by BMP (LM + TSS Uncapt.) =	#VALUE!	

CONTRIBUTING ZONE PLAN ATTACHMENT L

BMPS FOR SURFACE STREAM

BMPs for Surface Streams

Stormwater runoff from the site will be directed to a batch detention pond. Treatment from this pond will limit the potential for surface streams to be contaminated.

CONTRIBUTING ZONE PLAN ATTACHMENT M

CONSTRUCTION PLANS

CONTRACT DRAWINGS FOR

BRIGHTLAND HOMES

HUDSON PARK - 0.120 MGD
WASTEWATER TREATMENT PLANT - PHASE 1

FEBRUARY 2026

UTILITY CONTACTS

ELECTRIC
PEDERNALES ELECTRIC
201 S. AVENUE F
JOHNSON CITY, TX 78636
(830) 868-5158

GAS
ATMOS ENERGY
3110 IH35
ROUND ROCK, TX 78681
CHRIS CHERRY (512-925-8651)

WATER/WASTEWATER
CITY OF GEORGETOWN
300-1 INDUSTRIAL AVE.
GEORGETOWN, TX 78626
(512) 930-3640

TRANSPORTATION
WILLIAMSON COUNTY
3151 SE INNER LOOP
GEORGETOWN, TX 78626
(512) 943-3330

PHONE/CABLE/INTERNET
BRIGHTSPEED/CENTURYLINK
1214 DOGWOOD BLVD.
KILLEEN, TX 76543
(254) 690-9370

PHONE/CABLE/INTERNET
FIBERLIGHT
7500 DALLAS PKWY, SUITE 450
PLANO, TX 75024
CARLOS CASTAÑEDA (469-759-3366)

PHONE/CABLE/INTERNET
AT&T
DUSTIN PILAT (512-750-4809)

PHONE/CABLE/INTERNET
SPECTRUM
12012 N MOPAC EXPRESSWAY
AUSTIN, TX 78758
(512) 682-8577

UTILITY LOCATING SERVICES ONE CALL
1-800-344-8377

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED
PROFESSIONAL ENGINEER

2/5/26

SUBMITTED FOR APPROVAL BY:

KIMBERLY HAMMOND, P.E. — DATE
DCS ENGINEERING, LLC

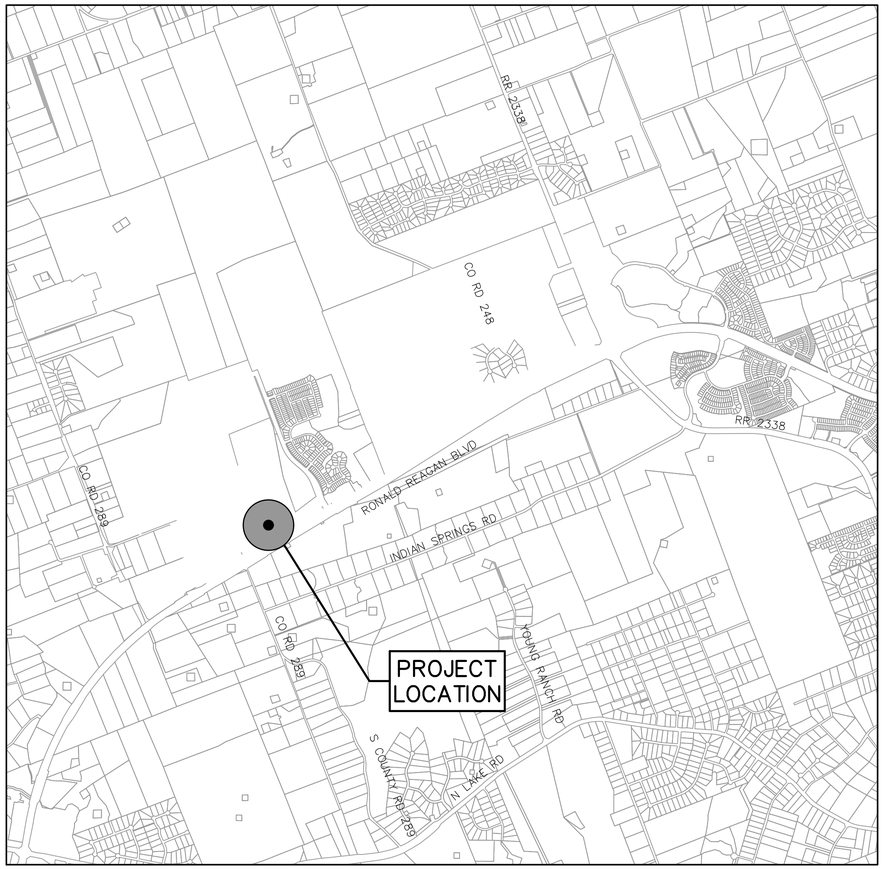
REV. NO.	DATE	DESCRIPTION	PROJECT MANAGER:	KAH
			DESIGNED BY:	DCS
			CHECKED BY:	DCS
			DRAWN BY:	RM/AH
			DCS PROJECT NO:	20101595

1101 S. Capital of Texas Highway,
Building G-100
Austin, Texas 78746
Phone (512) 614-6171 Fax (512) 284-8021
T.B.P.E. FIRM NO. F-13162

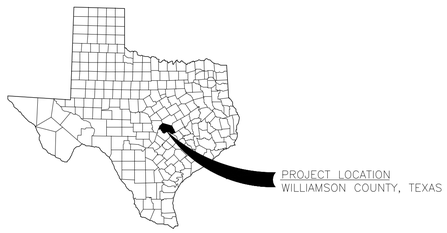
WILLIAMSON COUNTY CERTIFICATE
OF COMPLIANCE PERMIT NUMBER

CONSTRUCTION SITE ADDRESS

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\000-01.dwg, LAST SAVED ON: Feb 04 2026 6:12pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 8:09am, CFG:



SITE LOCATION
N.T.S.



PROJECT LOCATION
WILLIAMSON COUNTY, TEXAS

DRAWING INDEX

SERIES 000 – GENERAL

00G–01 COVER SHEET
00G–02 PROJECT LOCATION MAP AND DRAWING INDEX
00G–03 ABBREVIATIONS
00G–04 LEGENDS AND SYMBOLOGY
00G–05 GENERAL NOTES
00C–01 CIVIL – POLLUTION PREVENTION DETAILS
00C–02 CIVIL – DETAIL SHEET NO. 1
00C–03 CIVIL – DETAIL SHEET NO. 2
00C–04 CIVIL – DETAIL SHEET NO. 3
00C–05 CIVIL – DETAIL SHEET NO. 4
00C–06 CIVIL – DETAIL SHEET NO. 5
00C–07 CIVIL – DETAIL SHEET NO. 6
00C–08 CIVIL – TXDOT CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW PIPE CULVERTS
00P–01 PROCESS – FLOW DIAGRAM AND HYDRAULIC PROFILE
00E–01 ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS
00E–02 ELECTRICAL – ONE–LINE DIAGRAM
00E–03 ELECTRICAL – ONE–LINE DIAGRAM
00E–04 ELECTRICAL – SCHEDULES SHEET NO. 1
00E–05 ELECTRICAL – SCHEDULES SHEET NO. 2
00E–06 ELECTRICAL – SCHEDULES SHEET NO. 3
00E–07 ELECTRICAL – DETAILS SHEET NO. 1
00E–08 ELECTRICAL – DETAILS SHEET NO. 2
00E–09 ELECTRICAL – DETAILS SHEET NO. 3
00E–10 ELECTRICAL – DETAILS SHEET NO. 4
00E–11 ELECTRICAL – DETAILS SHEET NO. 5
00E–12 ELECTRICAL – DETAILS SHEET NO. 6
00E–13 ELECTRICAL – INFLUENT LIFT STATION PUMP CONTROL PANEL DETAILS SHEET NO. 1
00E–14 ELECTRICAL – INFLUENT LIFT STATION PUMP CONTROL PANEL DETAILS SHEET NO. 2
00E–15 ELECTRICAL – EFFLUENT LIFT STATION PUMP CONTROL PANEL DETAILS SHEET NO. 1
00E–16 ELECTRICAL – EFFLUENT LIFT STATION PUMP CONTROL PANEL DETAILS SHEET NO. 2

SERIES 100 – SITE IMPROVEMENTS

01X–01 CIVIL – EXISTING CONDITIONS AND DEMOLITION PLAN
01C–01 CIVIL – PROPOSED SITE AND EROSION CONTROL PLAN
01C–02 CIVIL – SITE AND YARD PIPING INDEX MAP
01C–03 CIVIL – HORIZONTAL CONTROL, PAVING, AND GRADING PLAN – AREA NO. 1
01C–04 CIVIL – HORIZONTAL CONTROL, PAVING, AND GRADING PLAN – AREA NO. 2
01C–05 CIVIL – HORIZONTAL CONTROL, PAVING, AND GRADING PLAN – AREA NO. 3
01C–06 CIVIL – HORIZONTAL CONTROL, PAVING, AND GRADING PLAN – AREA NO. 4
01C–07 CIVIL – HORIZONTAL CONTROL, PAVING, AND GRADING PLAN – AREA NO. 5
01C–08 CIVIL – HORIZONTAL CONTROL, PAVING, AND GRADING PLAN – AREA NO. 6
01C–09 CIVIL – YARD PIPING PLAN – AREA NO. 1
01C–10 CIVIL – YARD PIPING PLAN – AREA NO. 2
01C–11 CIVIL – YARD PIPING PLAN – AREA NO. 3
01C–12 CIVIL – YARD PIPING PLAN – AREA NO. 4
01C–13 CIVIL – YARD PIPING PLAN – AREA NO. 5
01C–14 CIVIL – YARD PIPING PLAN – AREA NO. 6
01C–15 CIVIL – WATER QUALITY POND PLAN
01C–16 CIVIL – WATER QUALITY POND SECTIONS AND CALCS
01C–17 CIVIL – WATER QUALITY DETAILS
01E–01 ELECTRICAL – OVERALL SITE PLAN

SERIES 200 – WASTEWATER TREATMENT PLANT

02P–01 PROCESS – WASTEWATER TREATMENT BASIN PLAN
02P–02 PROCESS – WASTEWATER TREATMENT BASIN SECTIONS
02P–03 PROCESS – TERTIARY FILTER PLAN AND SECTIONS
02P–04 PROCESS – WASTEWATER TREATMENT PLAN DETAILS – SHEET NO. 1
02P–05 PROCESS – WASTEWATER TREATMENT PLAN DETAILS – SHEET NO. 2
02P–06 PROCESS – WASTEWATER TREATMENT PLAN DETAILS – SHEET NO. 3
02P–07 PROCESS – BLOWER PAD PLAN AND SECTION
02P–08 PROCESS – HEADWORKS PLAN, ELEVATION AND DETAILS
02P–09 PROCESS – ALUM PUMP BUILDING AND STORAGE TANK
02P–10 PROCESS – CHEMICAL STORAGE BUILDING AND DETAILS
02P–11 PROCESS – EMERGENCY GENERATOR PLAN AND ELEVATION
02S–01 STRUCTURAL – EMERGENCY GENERATOR PLAN AND SECTION
02E–01 ELECTRICAL – EQUIPMENT RACK SITE PLAN
02E–02 ELECTRICAL – ENLARGED SITE PLAN SHEET NO. 1
02E–03 ELECTRICAL – ENLARGED SITE PLAN SHEET NO. 2
02E–04 ELECTRICAL – NPW AND CHLORINE BUILDING

SERIES 300 – INFLUENT AND EFFLUENT LIFT STATION

03P–01 PROCESS – INFLUENT PLAN AND ELEVATION
03P–02 PROCESS – EFFLUENT PLAN AND ELEVATION
03P–03 PROCESS – INFLUENT PUMP CURVES AND OPERATION TABLE
03P–04 PROCESS – EFFLUENT PUMP CURVES AND OPERATION TABLE
03P–05 PROCESS – LIFT STATION DETAILS
03S–01 STRUCTURAL – INFLUENT PLAN AND ELEVATION
03S–02 STRUCTURAL – EFFLUENT PLAN AND ELEVATION
03S–03 STRUCTURAL – LIFT STATION DETAILS – SHEET NO. 1
03S–04 STRUCTURAL – LIFT STATION DETAILS – SHEET NO. 2
03E–01 ELECTRICAL – INFLUENT AND EFFLUENT SITE PLAN

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

PROJECT LOCATION MAP AND DRAWING INDEX

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 00G-02

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00G-02.dwg, LAST SAVED ON: Feb 04 2026 1:13pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:41pm, CFG:

A/C	AIR CONDITIONING
A/E	ARCHITECT/ENGINEER
A	ARCHITECTURAL (DWG DISCIPLINE), AMP
AB	ANCHOR BOLT
ABC	AGGREGATE BASE COURSE
ABAN	ABANDON
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
ACP	ACOUSTIC CEILING PANEL, ASPHALTIC CONCRETE PAVEMENT
ACST	ACOUSTIC
AD	ADDENDUM, AREA DRAIN
ADDL	ADDITIONAL
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AF	AMP FRAME, AMP FUSE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AGGR	AGGREGATE
AI	AREA INLET
AIC	AMPS INTERRUPTING CAPACITY
ALIG	ALIGNMENT
ALUM	ALUMINUM
ALT	ALTERNATE, ALTITUDE
AM	ACOUSTICAL MATERIAL
AMB	AMBIENT
ANC	ANCHOR
AP	ACCESS PANEL
APRX	APPROXIMATE
APVD	APPROVED
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AT	AMP TRIP
ATC	ACOUSTICAL TILE CEILING
ATM	ATMOSPHERE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
AWG	AMERICAN WIRE GAGE
AWT	ACOUSTICAL WALL TILE
B/B	BACK TO BACK
BAL	BALANCE
BBD	BULLETIN BOARD
BC	BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE
BD	BOARD
BE	BOTH ENDS, BELL END
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET
BITUM	BITUMINOUS
BKG	BACKING
BL	BASE LINE
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOC	BACK OF CURB
BOD	BOTTOM OF DUCT
BOG	BOTTOM OF GRILLE
BOL	BOTTOM OF LOUVER
BOP	BOTTOM OF PIPE
BOR	BOTTOM OF REGISTER
BOT	BOTTOM
BOU	BOTTOM OF UNIT
BP	BASE PLATE
BRG	BEARING
BRGP	BEARING PLATE
BRKT	BRACKET
BS	BOTH SIDES
BTU	BRITISH THERMAL UNIT
BTW	BETWEEN
BTWLD	BUTT WELD
BU	BELL UP, BUILT UP
BUR	BUILT-UP ROOFING
BV	BALL VALVE
BW	BOTH WAYS, BACKWASH (SLUDGE)
BWP	BACKWASH PIPE
BYP	BYPASS
C TO C	CENTER TO CENTER
C&G	CURB & GUTTER
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT, CIVIL (DRAWING DISCIPLINE)
CAB	CABINET
CAP	CAPACITY
CAT	CATALOG
CAV	CAVITY
CB	CATCH BASIN
CCB	CONCRETE BLOCK
CCW	COUNTER CLOCKWISE
CDF	CONTROLLED DENSITY FILL
CE	CONCRETE EDGE, CLARIFIED EFFLUENT
CER	CERAMIC
CF	CUBIC FEET (FOOT)
CFL	COUNTER FLASHING
CHFR	CHAMFER
CHBD	CHALKBOARD
CHD	CHORD
CHH	COMMUNICATION HANDHOLE
CI	CURB INLET
CIP	CLEAN IN PLACE, CAST-IN-PLACE
CIPB	CONCRETE INTERLOCKING PAVER BALLAST
CIRC	CIRCULATION, CIRCULAR
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CL	CENTERLINE, CLASS, CLOSE
CLG	CEILING
CLJ	CONTROL JOINT
CLKG	CAULKING
CLR	CLEAR

CMH	COMMUNICATION MANHOLE
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT, CONCRETE OPENING
COL	COLUMN
COM	COMMON
COMB	COMBINATION
COMM	COMMUNICATION
COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE
CONC	CONCENTRIC, CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COOR	COORDINATE
CORR	CORROSIVE, CORRUGATED
CP	CHECKER PLATE, CONTROL POINT
CPLG	COUPLING
CPVC	POLYVINYL CHLORIDE
CRL	CORROSION RESISTANT LINING
CS	CHLORINE SOLUTION
CSC	COMPRESSION SLEEVE COUPLING
CSK	COUNTERSINK
CSS	CLINIC SERVICE SINK
CT	CERAMIC TILE
CTR	CENTER
CTRL	CONTROL
CVAC	CHLORINE VACUUM
CVT	CULVERT
CU	COPPER, CUBIC
CW	CLOCKWISE
CY	CUBIC YARD
d	PENNY (NAIL MEASURE)
D	DEEP, DIFFUSER
DB	DUCT BANK, DECIBEL, DRY BULB
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DIRECT CURRENT
DE	DECANT
DEG	DEGREE
DEG C	DEGREE CENTIGRADE
DEG F	DEGREE FAHRENHEIT
DEMO	DEMOLITION
DEP	DEPRESSED
DEPT	DEPARTMENT
DET	DETAIL
DH	DISCHARGE HEADER
DI	DROP INLET, DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL, DIAGRAM
DIFF	DIFFERENTIAL, DIFFERENCE
DIM	DIMENSION
DISCH	DISCHARGE
DIST	DISTANCE, DISTRIBUTION
DIV	DIVISION
DL	DEAD LOAD
DMJ	DOUBLE MECHANICAL JOINT
DMPF	DAMP PROOFING
DN	DOWN
DO	DISSOLVED OXYGEN, DITTO
DP	DEPTH
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DR	DRAIN
DS	DOWN SPOUT
DT	DOUBLE TEE, DRIP TRAP ASSEMBLY
DUP	DUPLICATE
DWG	DRAWING
DWL	DOWEL
DWR	DRAWER
E	EAST, ELECTRICAL (DWG DISCIPLINE)
EA	EACH, EXHAUST AIR
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
ED	EQUIPMENT DRAIN
EDB	ELECTRICAL DUCT BANK
EE	EACH END
EF	EACH FACE
EFF	EFFLUENT, EFFICIENCY
EHH	ELECTRICAL HANDHOLE
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELBOW, ELEVATION
ELEC	ELECTRICAL
EMBD	EMBEDDED
EMER	EMERGENCY
EMH	ELECTRICAL MANHOLE
ENCL	ENCLOSURE
ENGR	ENGINEER
ENTR	ENTRANCE
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ES	EACH SIDE, EQUAL SPACE, EMERGENCY SHOWER
ESEW	EMERGENCY SHOWER AND EYE WASH
EST	ESTIMATE
EW	EACH WAY, EMERGENCY EYE/FACE WASH
EWC	ELECTRIC WATER COOLER
EWEF	EACH WAY, EACH FACE
EWTB	EACH WAY, TOP AND BOTTOM
EXC	EXCAVATION
EXH	EXHAUST
EXST	EXISTING
EXP	EXPANSION, EXPOSED
EXT	EXTERIOR, EXTERNAL, EXTENSION

F&B	FACE & BYPASS
F TO F	FACE TO FACE
FAB	FABRICATE
FB	FLOOR BEAM
FBD	FIBERBOARD
FBG	FIBERGLASS
FBM	BOARD FOOT MEASURE
FBO	FURNISHED BY OWNER
FC	FLUSHING CONNECTION, FERRIC CHLORIDE
FCA	FLANGED COUPLING ADAPTER
FD	FLOOR DRAIN
FDC	FLEXIBLE DUCT CONNECTION
FDTN	FOUNDATION
FDR	FEEDER
FE	FLANGED END, FILTERED EFFLUENT
FEC	FIRE EXTINGUISHER CABINET
FES	FLARED END SECTION
FEXT	FIRE EXTINGUISHER
FF	FAR FACE, FACTORY FINISH, FLAT FACE
FG	FINISHED GRADE
FIG	FIGURE
FH	FIRE HYDRANT
FIN	FINISH
FJT	FLUSH JOINT
FL	FLOW, FLOW LINE
FLEX	FLEXIBLE
FLG	FLANGE
FLOR	FLUORESCENT
FLR	FLOOR
FLS	FLASHING, FLUSH
FO	FINISHED OPENING
FM	FORCE MAIN
FN	FENCE
FOB	FLAT ON BOTTOM
FOC	FACE OF CONCRETE, FACE OF CURB
FOF	FACE OF FINISH
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FOT	FLAT ON TOP
FPT	FEMALE PIPE THREAD
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC
FRTM	FIRE RETARDANT TREATED MATERIAL
FS	FLOOR SINK, FAR SIDE
FT	FEET, FOOT
FTG	FOOTING, FITTING
FUR	FURRED, FURRING
FURN	FURNITURE, FURNISH
FUT	FUTURE
FV	FACE VELOCITY
FW	FIELD WELD, FIRE WALL
FWD	FORWARD
FWE	FURNISHED WITH EQUIPMENT
FXTR	FIXTURE
G	GRILLE, GROUND, GENERAL (DWG DISCIPLINE)
GA	GAGE (METAL THICKNESS)
GAL	GALLON
GALV	GALVANIZED
GB	GRAB BAR, GRADE BREAK
GC	GROOVED COUPLING
GD	GUARD
GEN	GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFMU	GROUND FACE MASONRY UNIT
GG	GUTTER GRADE
GJ	GROOVED JOINT
GL	GLASS
GLB	GLASS BLOCK
GND	GROUND
GP	GUY POLE
GR	GRADE
GRTG	GRATING
GSB	GYPSUM SHEATHING BOARD
GT	GREASE TRAP
GVL	GRAVEL
GWB	GYPSUM WALLBOARD
GYP	GYPSUM HARDBOARD
H	HIGH
HB	HOSE BIB
HBD	HARDBOARD
HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE
HC	HORIZONTAL CENTERLINE
HDR	HEADER
HDW	HARDWARE
HEX	HEXAGONAL
HGR	HANGER
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HIGH POINT, HORSEPOWER
HPC	HORIZONTAL POINT OF CURVATURE
HPS	HIGH PRESSURE SODIUM
HPT	HORIZONTAL POINT OF TANGENCY
HR	HOSE REEL, HOUR
HS	HEADED STUD, HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SHAPE
HT	HEIGHT
HTG	HEATING
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HWD	HARDWOOD
HWL	HIGH WATER LEVEL
HYD	HYDRAULIC
HZ	HERTZ, CYCLES PER SECOND

I	INSTRUMENTATION (DWG DISCIPLINE)
ID	INSIDE DIAMETER, INTERIOR DIMENSION
IE	INVERT ELEVATION
IF	INSIDE FACE
IH	INTAKE HOOD
IMP	IMPACT
IN	INCH
INC	INCLUDE, INCANDESCENT
INF	INFLUENT
INSTR	INSTRUMENTATION
INSUL	INSULATION
INT	INTERIOR, INTERSECTION
INTR	INTERMEDIATE, INTERIOR
INV	INVERT
IPS	IRON PIPE SIZE
IPT	INTERNAL PIPE THREAD
IR	INSIDE RADIUS
IRR	IRRIGATION
ISO	ISOMETRIC
JB	JUNCTION BOX
JCT	JUNCTION
JF	JOINT FILLER
JST	JOIST
JT	JOINT
K	KIP
KB	KNEE BRACE
KCMIL	THOUSAND CIRCULAR MILS
KD	KNOCK DOWN
KO	KNOCK OUT
KSI	KIPS PER SQUARE INCH
L	ANGLE, LENGTH, LAVATORY
LAD	LADDER
LAM	LAMINATE
LATL	LATERAL
LB	LAG BOLT, POUND
LCTB	LIQUID CHALK AND TACK BOARD
LDG	LANDING
LDR	LEADER
LE	LIFTING EYE
LF	LINEAR FOOT
LG	LONG
LH	LEFT HAND
LIN	LINEAR
LIQ	LIQUID
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LMLU	LIQUID MARKER LECTURE UNIT
LNG	LONGITUDINAL
LOC	LOCATION
LP	LOW POINT
LPA	LOW PRESSURE AIR
LPS	LOW PRESSURE SODIUM
LR	LONG RADIUS
LT	LEFT
LTD	LIMITED
LTG	LIGHTING
LTL	LINTEL
LTNG	LIGHTNING
LV	LOW VOLTAGE
LVR	LOUVER
LW	LIGHTWEIGHT
LWC	LIGHTWEIGHT CONCRETE
LWL	LOW WATER LEVEL
M	MECHANICAL (DWG DISCIPLINE)
MA	MIXED AIR
MACH	MACHINED
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MBR	MEMBER
MC	MECHANICAL CONTRACTOR, MECHANICAL COUPLING
MCB	METAL CORNER BEAD
MCJ	MASONRY CONTROL JOINT
MDMJ	MODIFIED DOUBLE MECHANICAL JOINT
MECH	MECHANICAL
MED	MEDIUM
MFR	MANUFACTURER
MH	MANHOLE, METAL HALIDE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
ML	MIXED LIQUOR
MLO	MAIN LUGS ONLY
MMB	MEMBRANE
MO	MASONRY OPENING
MOD	MODULAR, MODIFY
MON	MONUMENT
MPT	MALE PIPE THREAD
MRGWB	MOISTURE RESISTANT GYPSUM WALLBOARD
MS	MOP SINK
MSL	MEAN SEA LEVEL
MT	MOUNT
MU	MASONRY UNIT
MULL	MULLION
MV	MEDIUM VOLTAGE
MW	MONITORING WELL
N	NORTH, NEUTRAL
NA	NOT APPLICABLE
NAT	NATURAL
NC	NORMALLY CLOSED
NEG	NEGATIVE
NF	NEAR FACE, NON-FUSED

NFV	NOT FIELD VERIFIED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NPS	NOMINAL PIPE SIZE
NPW	NON-POTABLE WATER
NPT	NATIONAL PIPE THREAD
NS	NEAR SIDE
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
O TO O	OUT-TO-OUT
OA	OUTSIDE AIR, OVERALL
OC	ON CENTER
OCPD	OVER CURRENT PROTECTION DEVICE
OD	OUTSIDE DIAMETER
OED	OPEN END DUCT
OF	OUTSIDE FACE, OFFICE FURNISHING
OG	ORIGINAL GROUND
OH	OVERHEAD
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
OR	OUTSIDE RADIUS
ORD	OVERFLOW ROOF DRAIN
ORIG	ORIGINAL
OUT	OUTFALL
OVFL	OVERFLOW
OVHG	OVERHANG
OZ	OUNCE
P	PAINT, PROCESS (DWG DISCIPLINE)
PA	PUBLIC ADDRESS
PAR	PARALLEL, PARAPET
PB	PANIC BAR, PULL BOX
PBD	PARTICLE BOARD
PC	POINT OF CURVE, PIECE, PRECAST
PCC	POINT OF COMPOUND CURVATURE
PCF	POUNDS PER CUBIC FOOT
PCT	PERCENT
PE	PLAIN END
PED	PEDESTAL
PEN	PENETRATION
PERF	PERFORATED
PERM	PERMANENT
PERP	PERPENDICULAR
PF	POWER FACTOR
PFMU	PREFACED MASONRY UNIT
PFS	POLYMER FEED SOLUTION
PH	PHASE
PI	POINT OF INTERSECTION
PKG	PACKAGE
PL	PLATE, PROPERTY LINE
PLAS	PLASTER
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PNEU	PNEUMATIC
POL	POLISH
POS	POSITIVE, POSITION
PP	POLYPROPYLENE, POWER POLE
PRC	POINT OF REVERSE CURVATURE
PREF	PREFINISHED
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PREP	PREPARE
PRES	PRESSURE
PRI	PRIMARY
PROP	PROPERTY
PROT	PROTECTION
PS	PIPE SUPPORT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PST	PRESTRESSED
PT	POINT, POINT OF TANGENCY
PTN	PARTITION
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PW	POTABLE WATER
PWD	PLYWOOD
PWJ	PLYWOOD WEB JOIST
PZ	PIEZOMETER
Q	RATE OF FLOW
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
QUAL	QUALITY
R&R	REMOVE AND REPLACE
R&S	REMOVE AND SALVAGE
R	RADIUS, REGISTER, RISER
RA	RETURN AIR
RAS	RETURN ACTIVATED SLUDGE
RB	RESILIENT BASE, ROCK BERM
RCPT	RECEPTACLE
RD	ROOF DRAIN
REC	RECESS
RECD	RECEIVED
RECT	RECTANGULAR
RED	REDUCER
REF	REFERENCE
REINF	REINFORCING
REM	REMOVE
REQD	REQUIRED
RESIL	RESILIENT
RET	RETAINING, RETURN
REV	REVISION, REVERSE
RF	RESILIENT FLOORING

RFG	ROOFING
RFL	REFLECTED, REFLECTOR
RGH	ROUGH
RGS	RIGID GALVANIZED STEEL
RGS-PVC	PVC COATED RGS
RH	RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY
RL	REQUIRED LAP
RLFA	RELIEF AIR
RND	ROUND
RNG	RUNNING
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RS	RAW SEWAGE
RSG	ROUND SLIDE GATE
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RVT	RESILIENT VINYL TILE
RW	RECLAIMED WATER LINE
RWL	RE-USE WATER LINE
RY	READY
S	SOUTH, SINK, STRUCTURAL (DWG)
SA	SUPPLY AIR
SAMU	SOUND ABSORBING MASONRY UNIT
SAN	SANITARY
SB	SPLASH BLOCK, SODIUM BISULFITE
SC	SOLID CORE, SCUM
SCH	SCHEDULE
SCHEM	SCHEMATIC
SCN	SCREEN
SE	STEEL/ALUMINUM EDGE
SEC	SECONDARY, SECONDS
SECT	SECTION
SEP	SEPARATE
SF	SQUARE FOOT
SG	SHEET GLASS, SEALANT GROOVE SLIDE GATE (SQUARE/RECTANGULAR)
SH	SHOWER, SUCTION HEADER
SHT	SHEET
SHTG	SHEATHING
SIL	SILENCE
SIM	SIMILAR
SL	SLUDGE LINE
SLTD	SLOTTED
SLV	SLEEVE
SMLS	SEAMLESS
SN	SUPERNATENT
SOG	SLAB ON GRADE
SP	SOUNDPROOF, STANDPIPE
SPA	SPACING
SPEC	SPECIFICATION
SPLY	SUPPLY
SPST	SINGLE POLE SINGLE THROW
SPT	SET POINT
SQ	SQUARE
SR	SHORT RADIUS
SS	SERVICE SINK
SST	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL	STEEL
STOR	STORAGE
STR	STRUCTURAL, STRAIGHT
SUB	SUBSTITUTE
SUC	SUCTION
SUSP	SUSPENDED
SWD	SIDEWATER DEPTH
SY	SQUARE YARD
SYM	SYMBOL
SYMM	SYMMETRICAL
SYN	SYNTHETIC
SYS	SYSTEM
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T	TILE, TREAD
TA	TOILET ACCESSORY, TEMPERED AIR
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TEF	TROWELED EPOXY FLOORING
TEMP	TEMPORARY, TEMPERATURE
THD	THREAD
THK	THICK
THRESH	THRESHOLD
THRU	THROUGH
TKBD	TACK BOARD
TOB	TOP OF BOLT, TOP OF BANK, TOP OF BEAM
TOC	TOP OF CURB, TOP OF CONCRETE
TOD	TOP OF DUCT
TOF	TOP OF FOOTING
TOG	TOP OF GRATING
TOL	TOLERANCE, TOP OF LEDGER
TOM	TOP OF MASONRY
TOP	TOP OF PLATE
TOPO	TOPOGRAPHY
TOS	TOP OF SLAB, TOP OF STEEL
TW	TOP OF WALL
TP	TOILET PARTITION, TELEPHONE POLE, TOE PLATE, TRAP PRIMER
TPD	TOILET PAPER DISPENSER
TPG	TOPPING
TR	TRANSOM
TRANS	TRANSITION
TRD	TRENCH DRAIN
TS	THICKENED SLUDGE
TYP	TYPICAL

U	URINAL
UG	UNDERGROUND
ULT	ULTIMATE
UNFN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
V	VENT, VELOCITY, VOLT
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARNISH, VARIABLE, VOLT AMPERES REACTIVE
VB	VAPOR BARRIER, VINYL BASE, VALVE BOX
VC	VERTICAL CURVE
VCT	VINYL COMPOSITION TILE, VERTICAL CENTERLINE
VEL	VELOCITY
VENT	VENTILATION
VERT	VERTICAL
VG	VERTICAL GRAIN
VIF	VERIFY IN FIELD
VIN	VINYL
VS	VERSES, VAPOR SEAL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W/	WITH
W/O	WITHOUT
W	WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM, POTABLE WATER LINE
WAS	WASTE ACTIVATED SLUDGE
WB	WOOD BASE
WC	WATER CLOSET, WATER COLUMN
WD	WOOD, WIDTH
WF	WIDE FLANGE, WASH FOUNTAIN
WG	WIRE GLASS, WATER GAGE, WEIR GATE
WH	WALL HYDRANT, WEEP HOLE
WI	WROUGHT IRON
WL	WATER LEVEL, POTABLE WATERLINE
WLD	WELDED
WM	WIRE MESH
WP	WATERPROOF, WORKING POINT, WASTE PIPE
WTHP	WEATHERPROOF
WS	WATERSTOP, WATER SURFACE
WSCT	WAINSCOT
WT	WEIGHT, WATER TIGHT
WW	SANITARY SEWER
WWF	WELDED WIRE FABRIC
XP	EXPLOSION PROOF
XS	EXTRA STRONG
XXS	DOUBLE EXTRA STRONG
XSECT	CROSS SECTION
YH	YARD HYDRANT
YS	YIELD STRENGTH

GENERAL NOTES:

1. THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
2. LISTING OF ABBREVIATIONS DOES NOT IMPLY ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
3. ABBREVIATIONS SHOWN ON THIS DRAWING INCLUDE VARIATIONS OF THE WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION; "INC" MAY MEAN INCLUDED OR INCLUDING; "REINF" MAY MEAN EITHER REINFORCE OR REINFORCING.
4. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH DRAWING FOR USAGE.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

ABBREVIATIONS

DATE: FEBRUARY 2026

SCALE:

DRAWING: 00G-03

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00G-03.dwg, LAST SAVED ON: Aug 21 2025 12:34pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:41pm, CFG:

SITE PLAN SYMBOLOGY

EMBANKMENT SLOPE

50.5 — CONTOUR

VEGETATION

CO — CLEAN OUT

MH — MANHOLE

MW — MONITORING WELL

PZ — PIEZOMETER

CB — STORM DRAIN CATCH BASIN

UV — UTILITY VAULT

PP — POWER POLE

TP — TELEPHONE POLE

FH — FIRE HYDRANT

YH–X — YARD HYDRANT

X 75.5 — EXISTING SPOT ELEVATION

75.8 — FINISHED SPOT ELEVATION

HORIZONTAL CP–X, CONTROL POINT

BENCHMARK

TH–"X" — IDENTIFICATION AND APPROXIMATE LOCATION OF SOIL TEST HOLE

DOWNGUY

NOTES:

1. UTILITIES THAT ARE SUSPENDED ABOVE GRADE ARE DESIGNATED BY THE PREFIX "OH".

T — TELEPHONE LINE

E — ELECTRIC LINE

F — FIBER OPTIC

C — COMMUNICATION

HANDRAIL

PIPELINE

LARGE PIPELINE

PIPELINE BENEATH CONCRETE OR STRUCTURE

RAILROAD

DRAINAGE FLOW

NATURAL WATERWAY

X — X — CHAIN LINK FENCE

X — X — FIELD FENCE

PROPERTY LINE

CENTERLINE

RB — ROCK BERM

SF — SILT FENCE

PIPING SYMBOLOGY

NOTES:

1. VALVE TYPES FOR VALVES 4" AND LARGER ARE INDICATED BY SYMBOLOGY SHOWN BELOW. VALVES 3–1/2" AND SMALLER MAY BE SHOWN WITH GATE VALVE SYMBOL

   REGARDLESS OF VALVE TYPE – REFER TO SPECIFICATIONS FOR REQUIREMENTS.

2. SYMBOLOGY SHOWN IS FOR SINGLE LINE PIPING. DOUBLE LINE PIPING SYMBOLS ARE SIMILAR.

VALVES

GATE VALVE

GLOBE VALVE

BALL VALVE

CHECK VALVE

DOUBLE DISK CHECK VALVE

BALL CHECK VALVE

BUTTERFLY VALVE

DIAPHRAGM VALVE

PINCH VALVE

KNIFE GATE VALVE

OR — PRESSURE RELIEF VALVE

PLUG VALVE

NEEDLE VALVE

PRESSURE REDUCING VALVE

X — AIR RELIEF / VACUUM VALVE
A = AIR RELIEF
V = VACUUM

PRESSURE REGULATING VALVE

THREE WAY BALL VALVE

THREE WAY PLUG VALVE

MISCELLANEOUS

VARIABLE AREA METER

ROTAMETER

UNION

WYE–STRAINER
LINE SIZE CHANGE (CONCENTRIC REDUCER)

FLEXIBLE HOSE OR TUBING

FLEXIBLE PIPING CONNECTION

LINE SIZE CHANGE (CONCENTRIC REDUCER)

LINE SIZE CHANGE (ECCENTRIC REDUCER)

LINE TURNING DOWN

LINE TURNING UP

BLIND FLANGE

PIPE JOINT (SEE SPECS FOR REQUIREMENTS)

SLEEVE TYPE COUPLING

FLANGED COUPLING ADAPTER (FCA)

FLEXIBLE CONNECTION

HARNESSED MECHANICAL COUPLING

MISCELLANEOUS (CONTINUED)

PRESSURE GAGE (W/COCK)

TRAP

QUICK DISCONNECT
CAM & GROOVE COUPLING

CAP or PLUG

CO — INTERIOR CLEANOUT

HB–X — HOSE VALVE, HOSE BIBB OR FLUSHING CONNECTION

HR–X — HOSE RACK

FD–X — FLOOR DRAIN

X = TYPE DESIGNATED IN SPECIFICATIONS

PIPE IN SECTION

BU — BELL UP (PLAN)

BU — BELL UP (SECTION OR SCHEMATIC)

D — DRAIN (SECTION OR SCHEMATIC)

ATA — AIR TOOL ASSEMBLY

AVS — AUTOMATIC VALVE STATION

PRS — PRESSURE REDUCING STATION

PLUMBING PIPING:

VT — VENT (VT)

POTABLE WATER, COLD (PWC)

POTABLE WATER, HOT (PWH)

VALVE SCHEDULE				
MARK	TYPE	CONNECTION	OPERATOR OR TYPE	REMARKS
ARV–1	AIR RELEASE VALVE	THREADED	FLOAT ACTUATOR	EXPOSED/TOP @ HP ON LINE APPLICATION: WATER
ARV–2	AIR RELEASE VALVE	THREADED	FLOAT ACTUATOR	EXPOSED/TOP @ HP ON LINE APPLICATION: WATER
BFV–1	BUTTERFLY VALVE	FLANGED	LEVER	RESILIENTLY SEATED WITH INFINITE LEVER LOCK OPERATOR
BFV–2	BUTTERFLY VALVE	FLANGED	GEARED HAND WHEEL	RESILIENTLY SEATED
BFV–3	BUTTERFLY VALVE	FLANGED	LEVER	METAL SEATED WITH INFINITE LEVER LOCK OPERATOR
CV–1	CHECK VALVE	FLANGED	SWING DISC	OUTSIDE LEVER AND WEIGHT
CV–2	CHECK VALVE	FLANGED	SWING DISC	OIL CUSHIONED WITH DUAL OUTSIDE LEVER AND WEIGHT
CV–3	CHECK VALVE	FLANGED	GLOBE STYLE	SILENT CLOSURE (FOR WATER SERVICE)
CV–4	CHECK VALVE	FLANGED	TWIN DISC	RATED FOR AIR SERVICE 10 PSIG, 250°F
FV–1	FLAP VALVE	FLANGED	N/A	EXPOSED/END OF PIPE BEFORE OPEN DRAINAGE OR BASIN
GV–1	GATE VALVE	FLANGED	HAND WHEEL (NRS)	AWWA–RESILIENTLY SEATED, ABOVEGROUND
GV–2	GATE VALVE	PUSH ON	AWWA SQ NUT	AWWA–RESILIENTLY SEATED, BURIED WITH STEM AND BONNET; LENGTH AS REQUIRED.
MV–1	MUD VALVE	FLANGED SIZE AS SHOWN	AWWA SQ NUT	PROVIDE MUD VALVE WITH BRONZE TAPERED SEATS; PROVIDE STEMS AND SUPPORTS AS REQUIRED FOR PROPER VALVE ACTUATION WITH A STD 3 FT TEE HANDLE
PV–1	PLUG VALVE	FLANGED	LEVER	– –
PV–2	PLUG VALVE	PUSH ON	GEARED AWWA SQ. NUT	BURIED WITH STEM BONNET; LENGTH AS REQUIRED
PV–3	PLUG VALVE	FLANGED	GEARED HAND WHEEL	ABOVEGROUND
PV–4	PLUG VALVE	FLANGED	CHAIN WHEEL	CHAIN LENGTH AS REQUIRED
PV–5	PLUG VALVE	FLANGED	ELECTRIC MOTOR OPERATOR	MOTOR OPERATOR WITH HAND SWITCH FOR REMOTE OPEN/CLOSE COMMAND AND LOCAL OPEN/CLOSE COMMAND

MATERIALS IN PLAN/SECTION

DEMOLITION

CONCRETE

MASONRY (CMU)

BRICK (SECTION)

ASPHALT

GRANULAR FILL

SAND

EARTH

METAL (SECTION)

GRATING (PLAN)

CHECKERED PLATE

BRICK (PLAN)

RIGID INSULATION

BATT INSULATION

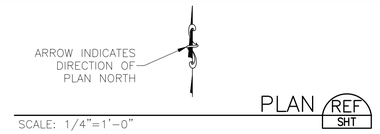
WOOD – CONTINUOUS

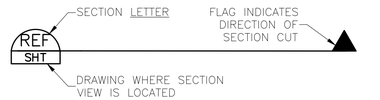
WOOD – NON CONTINUOUS

PLYWOOD

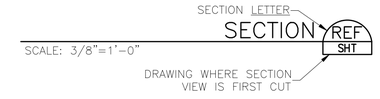
GYPSUM BOARD

GENERAL SYMBOLOGY

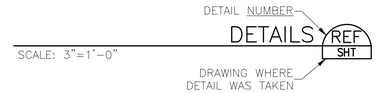


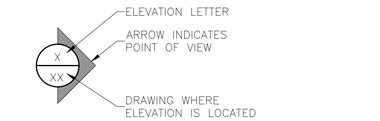


SECTION CUT MARKER

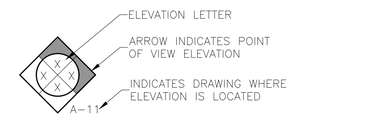


DETAIL MARKER

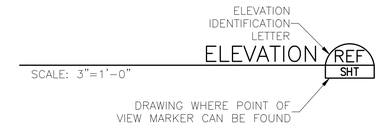


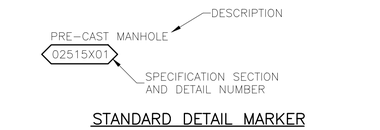


SINGLE ELEVATION OR PHOTO MARKER

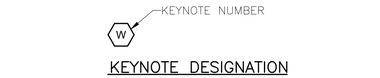


MULTIPLE ELEVATION OR PHOTO MARKER





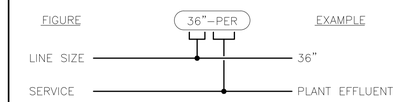
STANDARD DETAIL MARKER



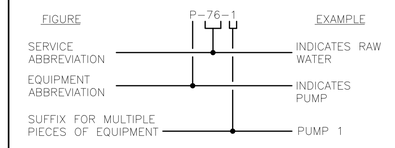
KEYNOTE DESIGNATION

IDENTIFICATION SYMBOLOGY

PIPING:



EQUIPMENT TAG NUMBERS:



–A, –B, –C ALTERNATING OPERATION

–1, –2, –3 OPERATING IN PARALLEL

–S, –T STANDBY DEVICE, NOT NORMALLY OPERATING

ARCHITECTURAL:

XX–XX — ROOM NUMBER

XXXX — DOOR NUMBER

X — COLUMN GRID LINE

X — WALL TYPE

X — WINDOW TYPE

L / XX — LOUVER

GENERAL NOTES:

1. THIS IS A STANDARD DRAWING SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
2. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DEEMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH DRAWING FOR USAGE.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

LEGEND AND SYMBOLOGY

DATE: FEBRUARY 2026

SCALE:

DRAWING: 00G–04

FILENAME: Z:\Projects 1551–1599\20101595 – BH – Hudson Park WWTP Final Design\500 – Final_Design\5.1 – Drawings\Sheet Files\WWTP set\00G–04.dwg, LAST SAVED ON: Sep 02 2025 2:23pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:42pm, CFG:

GENERAL CONSTRUCTION NOTES

1. PRIOR TO BEGINNING CONSTRUCTION, THE OWNER OR HIS REPRESENTATIVE SHALL CONVENE A PRE-CONSTRUCTION CONFERENCE BETWEEN OWNER, DESIGN ENGINEER, CONTRACTOR(S), COUNTY ENGINEER (IF APPLICABLE), TEXAS DEPARTMENT OF TRANSPORTATION (IF APPROPRIATE), ALL UTILITY SERVICE PROVIDERS, AND ANY OTHER AFFECTED PARTIES. OWNER SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE PROPOSED MEETING TIME.
2. THE CONTRACTOR SHALL GIVE ENGINEER AT LEAST 48 HOURS NOTICE PRIOR TO BEGINNING EACH PHASE OF CONSTRUCTION.
3. ANY EXISTING PAVEMENT, CURBS, SIDEWALKS OR OTHER PUBLIC INFRASTRUCTURE DAMAGED OR REMOVED WILL BE BY THE CONTRACTOR AT HIS EXPENSE BEFORE ACCEPTANCE OF THE PROJECT.
4. IF BLASTING IS PROPOSED BY THE CONTRACTOR, A BLASTING PERMIT SHALL BE SECURED PRIOR TO COMMENCEMENT OF ANY BLASTING.
5. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND AVOIDING ALL EXISTING UTILITIES BY CALLING THE 'ONE CALL' LOCATOR SERVICE AT (800) 344-8377 (DIG-TESS) OR (800) 545-6005 (TEXAS ONE CALL) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
6. GEOTECHNICAL INVESTIGATION WAS COMPLETED BY MLA GEOTECHNICAL, DATED JANUARY 2025.
7. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE EXISTING PUBLIC OR PRIVATE UTILITY LINES, INCLUDING BUT NOT LIMITED TO WATERLINES, WASTEWATER COLLECTION SYSTEMS AND STORM SEWERS, DURING CONSTRUCTION. ALL DAMAGES SHALL BE REPAIRED. NO SEPARATE PAY.
8. THESE PLANS, PREPARED BY DCS ENGINEERING, LLC, DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THESE PLANS. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY THE HOUSE BILLS 652 AND 665 ENACTED BY THE TEXAS LEGISLATURE REGULAR SESSION AND CURRENT OSHA STANDARDS FOR TRENCH SAFETY. DESIGN OF TRENCH SAFETY SYSTEMS, SEALED BY A LICENSED PROFESSIONAL ENGINEER, SHALL BE SUBMITTED BY THE CONTRACTOR PRIOR TO EXECUTION OF A CONTRACT FOR THIS WORK.
9. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TEXAS MUTCD MOST RECENT EDITION AS REVISED) DURING CONSTRUCTION.
10. CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC IN EACH DIRECTION DURING WORKING HOURS OR PROVIDE DETOURS AROUND CONSTRUCTION SITE, AND USE UNIFORMED POLICE TO CONTROL TRAFFIC WHEN REQUIRED BY OWNER.
11. CONTRACTOR SHALL COVER OPEN EXCAVATIONS IN PUBLIC STREETS WITH ANCHORED STEEL PLATES DURING NONWORKING HOURS.
12. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS.
13. EXISTING PAVEMENTS, CURBS, SIDEWALKS, AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO COUNTY STANDARDS. NO SEPARATE PAY.
14. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB, SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK.
15. ALIGNMENT, CENTERLINE CURVE DATA AND STATIONING TO BE VERIFIED BY ON-THE-GROUND SURVEY FROM PROJECT CONTROL POINTS AND ELEVATIONS OF ALL CONNECTIONS TO EXISTING FACILITIES TO BE CONFIRMED PRIOR TO WORK START. NO SEPARATE PAY. CONTRACTOR TO NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
16. CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES OR RAILROADS AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK.
17. CONTRACTOR SHALL ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK. REQUIRED PERMITS THAT CAN BE ISSUED TO CONTRACTOR WILL BE OBTAINED AT HIS EXPENSE.
18. CONTRACTOR SHALL REMOVE ALL MUD, DIRT AND DEBRIS DEPOSITED OR DROPPED ON EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY DAILY.
19. ANY REFERENCE TO CODES OR SPECIFICATIONS SHALL BE WITH RESPECT TO CURRENT EDITIONS OF THE SAME.
20. INTERRUPTION OF WASTEWATER FLOWS THROUGH EXISTING PUMPING FACILITIES IS NOT PERMITTED WITHOUT PRIOR WRITTEN APPROVAL OF OWNER. SUBMIT FOR APPROVAL CONSTRUCTION PLAN WHICH DETAILS SCHEDULE AND TECHNIQUES TO BE USED PRIOR TO ANY CONNECTIONS TO EXISTING PIPES OR STRUCTURES. PARTIAL INTERRUPTION OF FLOWS TO BE SCHEDULED DURING LOW FLOW PERIODS FOR AS SHORT A DURATION AS PRACTICAL. MAKE PROVISIONS FOR ACCOMMODATING PEAK FLOWS WHICH MAY OCCUR DURING CONSTRUCTION OPERATIONS. OWNER AND OPERATOR TO BE NOTIFIED WHEN ANY INTERRUPTIONS ARE TO BE MADE.
21. PRIOR TO CONSTRUCTION, CONTRACTOR TO UNCOVER AND VERIFY THE DEPTHS AND HORIZONTAL LOCATION OF EXISTING LINES AND UTILITIES TO BE EXTENDED, CONNECTED TO, OR CROSSED (BY THIS PROJECT).
22. PLANT COORDINATES SHOWN FOR PROPOSED STRUCTURE LOCATIONS ARE REFERENCED TO OUTSIDE FACE OF EXTERIOR WALL OR TO CENTERLINE OF STRUCTURE, UNLESS OTHERWISE NOTED ON PLANS.
23. THE FINISHED GRADE ELEVATIONS SHOWN ARE INTENDED TO PROVIDE DRAINAGE AWAY FROM THE PROPOSED STRUCTURES. MINOR FIELD CHANGES MAY BE NECESSARY TO PROVIDE ADEQUATE DRAINAGE. GRADE UNIFORMLY BETWEEN ELEVATIONS SHOWN TO PROVIDE DRAINAGE.
24. ADJUST MANHOLE COVERS, VALVE BOXES, ELECTRICAL MANHOLE, ETC. TO MATCH PROPOSED FINISHED GRADE. (NO SEPARATE PAY.)
25. EXISTING YARD PIPE LOCATIONS SHOWN ARE APPROXIMATE. FIELD VERIFY LOCATION OF EXISTING PIPE. ARRANGE NEW PIPING AS NECESSARY TO AVOID INTERFERENCE AND PROVIDE CLEARANCE NOTED. ALL CHANGES IN PIPING SHOWN TO BE DOCUMENTED ON REQUIRED REVISED DRAWINGS.
26. MAINTAIN MINIMUM CLEARANCE OF 3 FEET FROM EDGE OF STRUCTURES TO CLOSEST EDGE OF PIPELINE ADJACENT AND PARALLEL TO EDGE OF STRUCTURE UNLESS OTHERWISE NOTED ON PLANS.
27. PROVIDE BURIED VALVES WITH NUT OPERATORS, EXTENSION STEMS, AND VALVE BOXES WITH COVER, UNLESS OTHERWISE LISTED.
28. UNLESS OTHERWISE NOTED, ABOVE GROUND FITTINGS AND FIRST UNDERGROUND CONNECTION TO BE FLANGED.
29. CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES, PLANT APPURTENANCES OR PLANT EQUIPMENT, PROVIDE SUFFICIENT LEAD TIME FOR PLANT OPERATOR WHERE IT BECOMES NECESSARY TO ACTUATE OR DE-ACTUATE VALVES, PLANT APPURTENANCES OR PLANT EQUIPMENT.
30. NON-POTABLE WATERLINES SHOULD BE IDENTIFIED WITH PROPER COLOR CODING. LINES SHALL BE PAINTED WHITE AND BE STENCILED "NONPOTABLE WATER".
31. MANHOLE FRAMES, COVERS AND WATER VALVES WILL BE RAISED TO FINISHED GRADE AT THE OWNER'S EXPENSE BY A QUALIFIED CONTRACTOR. ALL UTILITY ADJUSTMENTS IN THE ROADWAY SHALL BE COMPLETED PRIOR TO FINAL PAVING CONSTRUCTION.
32. CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET, AS A MINIMUM, THE REQUIREMENTS OF OSHA SAFETY AND HEALTH REGULATION, PART 1926, SUBPART P AS PUBLISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 209, DATED OCTOBER 31, 1989.
33. THE CONTRACTOR SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE CONTRACTOR SHALL FURNISH OWNER ACCURATE RECORD DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE RECORD DRAWINGS SHALL MEET WITH THE SATISFACTION OF OWNER PRIOR TO FINAL ACCEPTANCE.
34. CONTRACTOR AND MANUFACTURERS ARE RESPONSIBLE FOR MEASURING EXISTING STRUCTURES PRIOR TO SUBMITTING ON; OR FABRICATING PROPOSED EQUIPMENT FOR INSTALLATION TO ASSURE THEMSELVES THAT AS-BUILT CONDITIONS HAVE BEEN ACCOMMODATED FOR. NO SEPARATE PAY.
35. ALL UNSATISFACTORY AND/OR WASTE MATERIALS INCLUDING VEGETATION, ROOTS, CONCRETE, AND DEBRIS SHALL BE HAULED OFF SITE AND DISPOSED OF BY THE CONTRACTOR. INCLUDE COST OF THIS WORK, INCLUDING HAUL, IN OTHER ITEMS OF THIS PROJECT.
36. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL STRIP THE VEGETATION IN ALL AREAS WHERE EXCAVATION IS TO BE PERFORMED. WHERE EXCAVATED MATERIAL IS TO BE PLACED, OR IN ANY LOCATION WHERE CONSTRUCTION MACHINES OR TRUCKS ARE TO BE OPERATING. ALL AREAS PROPOSED TO BE DISTURBED IN ANY FASHION ARE TO BE STRIPPED. STRIPPING IS DEFINED AS THE REMOVAL OF ALL GRASS AND THE ORGANIC ZONE.
37. ALL CONTRACTOR VEHICLES, INCLUDING EMPLOYEE'S VEHICLES, SHALL PARK WITHIN THE PROJECT SITE TO MINIMIZE TRAFFIC ON THE PUBLIC STREETS ADJACENT TO THE WORK SITE ENTRANCE. CONTRACTOR WILL PROVIDE SUFFICIENT PARKING AREAS TO ACCOMMODATE HIS VEHICLES. ANY AREAS DISTURBED OR DESTROYED BY VEHICULAR PARKING WILL BE REPAIRED TO ORIGINAL CONDITION PRIOR TO COMPLETION OF THE PROJECT. NO SEPARATE PAYMENT WILL BE MADE FOR THIS ITEM.
38. IF SITE CONDITIONS ARE MUDDY, THE CONTRACTOR SHALL MAINTAIN A VEHICLE WASH DOWN AREA OF SUFFICIENT SIZE AND IN A LOCATION TO FACILITATE CLEANING ALL CONSTRUCTION VEHICLES PRIOR TO LEAVING THE WORK SITE. CONTRACTOR SHALL PROVIDE THE NECESSARY EQUIPMENT, INCLUDING WATER AND DRAINAGE, TO WASH VEHICLES. VEHICLE WASH DOWN AREA WILL BE PROVIDED DURING RAINY OR MUDDY CONDITIONS FOR THE DURATION OF THE CONTRACT. ALL WASH DOWN WATER FROM SUCH AN OPERATION SHALL NOT ENTER THE STORM SEWER SYSTEM WITHOUT SUCH ENTRANCE LOCATION BEING PROTECTED BY AN APPROPRIATE SILT PROTECTION DEVICE. CONTRACTOR SHALL, ON A DAILY BASIS, CLEAN ALL STREETS IN THE VICINITY OF THE WORK SITE ENTRANCE TO ENSURE THAT NO DIRT FROM THE PROJECT ACCUMULATES IN THE EXISTING STREETS. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK. A PENALTY WILL BE ASSESSED IN ACCORDANCE WITH THE CONTRACT FOR EACH DAY STREETS ARE LEFT UNCLEANED. ALL WORK ASSOCIATED WITH THIS NOTE SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS WORK ITEMS.
39. THE CONTRACTOR SHALL PROVIDE A WATERTIGHT JOB BOARD NEAR THE SITE ENTRANCE FOR POSTING NOTICE OF INTENT INFORMATION AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ALSO PROVIDE THE REQUIRED SANITATION FACILITIES. ALL SUCH AFOREMENTIONED ITEMS MUST BE PROVIDED PRIOR TO BEGINNING WORK. FAILURE TO PROVIDE THE AFOREMENTIONED ITEMS WILL RESULT IN THE WITHHOLDING OF PAYMENTS. ALL SUCH ITEMS MUST BE REMOVED UPON PROJECT COMPLETION. (NO SEPARATE PAY)
40. ALL FILL AREAS SHALL BE PROOF ROLLED AND BE PLACED IN MAXIMUM 8-INCH LIFTS AND COMPACTED TO 95 PERCENT OF STANDARD PROCTOR DENSITY. ASTM D698. ALL SPOIL SHALL BE HAULED, SPREAD AND COMPACTED AS DIRECTED BY THE ENGINEER.
41. ALL UTILITY TRENCHES TO BE BACKFILLED TO NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AND WITHIN 2 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D698).
42. THIS PROJECT IS SUBJECT TO THE AMERICAN IRON AND STEEL (AIS) REQUIREMENTS OF SECTION 608 OF THE FEDERAL WATER POLLUTION CONTROL ACT. ALL IRON AND STEEL PRODUCTS FOR CONSTRUCTION, ALTERATION, MAINTENANCE, OR REPAIRS INCORPORATED IN THESE PLANS MUST BE PRODUCED IN THE UNITED STATES.
43. PER THE CATEGORICAL EXCLUSION ISSUED ON MAY 18, 2017, CONDITIONS PERTAINING TO THIS PROJECT APPLY. THESE INCLUDE: STANDARD EMERGENCY CONDITIONS FOR THE DISCOVERY OF CULTURAL RESOURCES; AND STANDARD EMERGENCY CONDITIONS FOR THE DISCOVERY OF THREATENED AND ENDANGERED SPECIES.

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL SLOPES SHALL BE SODDED OR SEEDED WITH THE APPROPRIATE GRASS, GRASS MIXTURES, OR GROUND COVER SUITABLE TO THE AREA AND SEASON TO WHICH THEY ARE APPLIED.
2. SILT FENCES, ROCK BERMS 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 OWNER FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE OWNER, THEY ARE WARRANTED.
3. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER.
4. 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. CONTRACTOR TO PREPARE AND MAINTAIN A SWPPP THROUGH DURATION OF PROJECT, PER TEXAS POLLUTION DISCHARGE ELIMINATION SYSTEM (TPDES) REQUIREMENTS.
6. THE 25' VEGETATIVE BUFFER STRIP IS TO REMAIN UNDISTURBED.

WATER AND WASTEWATER NOTES

1. ALL VALVES SHALL BE LOCATED OPPOSITE THE TANGENT POINT ON CURB RETURNS OF THE STREET CURB RADIUS, PER THE OWNER STANDARDS, UNLESS OTHERWISE NOTED.
2. DEPTH OF COVER FOR ALL LINES SHALL BE A MINIMUM OF 36" UNLESS OTHERWISE NOTED.
3. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON (AWWA C-100, MIN. CLASS 50) AND LOCATED AS SHOWN ON THE PLANS.
4. ALL CAST IRON AND DUCTILE IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE.
5. MINIMUM CLEARANCE BETWEEN POTABLE WATERLINES AND SEWER LINES IS 9 FEET MEASURED BETWEEN OUTSIDE OF PIPE DIAMETERS, OR APPROPRIATE MEASURES ARE THEN TAKEN TO MEET REQUIREMENTS OF TCEQ REGULATIONS.
6. THE CONTRACTOR SHALL CONTACT THE OWNER AT LEAST 48 HOURS PRIOR TO CONNECTING TO EXISTING WATERLINES.
7. LINE FLUSHING OR ANY ACTIVITY USING LARGE QUANTITIES OF WATER MUST BE SCHEDULED WITH THE OWNER.
8. THE CONTRACTOR AT HIS EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC DESIGN OF ALL WATERLINES CONSTRUCTED AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. QUALITY AND PRESSURE TESTING SHALL BE MONITORED BY THE ENGINEER OR HIS REPRESENTATIVE.
9. THE CONTRACTOR SHALL PROVIDE THE ENGINEER OR HIS REPRESENTATIVE NO LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING OR PRESSURE TESTING.
10. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE OWNER.
11. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
12. ALL MATERIAL TESTS, INCLUDING SOIL DENSITY TESTS AND RELATED SOIL ANALYSIS, SHALL BE ACCOMPLISHED BY AN INDEPENDENT LABORATORY FUNDED BY THE OWNER IN ACCORDANCE WITH THE SPECIFICATIONS. ONLY PASSING TESTS SHALL BE PAID FOR BY THE OWNER. ADDITIONAL TESTS, RE-TESTS, OR TESTS REQUIRED FOR THE CONTRACTOR WILL BE AT CONTRACTOR'S EXPENSE.
13. DEFLECTION TEST: DEFLECTION TEST SHALL BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIGID PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST THIRTY (30) DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5%. THE DEFLECTION TEST IS TO BE RUN USING A BALL OR MANDREL. IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.

TRAFFIC MARKING AND CONTROL NOTES

1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
2. ALL PAVEMENTS MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND, THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.
3. PROVIDE FLAGGERS TO DIRECT TRAFFIC AROUND WORK AREA DURING PERIODS WHEN WORK IS UNDERWAY AND/OR TRENCHES ARE OPEN. BACKFILL TRENCHES AND/OR PROVIDE TEMPORARY FENCES (OUTSIDE OF PAVEMENT) OR STEEL TRAFFIC PLATES (WITHIN PAVEMENT) DURING PERIODS WHEN WORK IS NOT UNDERWAY. PROVIDE ACCESS AT ALL TIMES TO FACILITIES ADJACENT TO THE WORK EXCEPT WHEN ACTUALLY TRENCHING OR INSTALLING PIPE ACROSS DRIVEWAYS.
4. IF TRAFFIC WILL BE IMPACTED, THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN THAT IS SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS.

OVERHEAD ELECTRIC

1. OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL ONCOR AT 1-888-313-4747.
2. CONTRACTOR SHALL COORDINATE WITH ENGINEER AND OWNER TO ROUTE POWER TO SITE. NO SEPARATE PAY.

DISCHARGE PERMIT NOTES

1. WWTP TPDES PERMIT NO. WQ0016425001.

SURVEY NOTES

1. ALL COORDINATES BASED ON THE TEXAS STATE PLANE, CENTRAL ZONE.
2. ALL BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, GRID NORTH, CENTRAL ZONE (4203), NAD83, ALL HORIZONTAL VALUES ARE GRID DISTANCES. ALL VERTICAL DATA IS HELD TO NAVD88 GEOID 18.

CONTROL POINT	NORTHING (GRID)	EASTING (GRID)	ELEVATION	DESCRIPTION
2	10236834.109	3082083.767	943.015	5/8" IRON ROD SET W/ CAP STAMPED "LJA SURVEY"
3	10236498.582	3082218.666	938.775	5/8" IRON ROD SET W/ CAP STAMPED "LJA SURVEY"

3. CONTRACTOR TO BE RESPONSIBLE FOR ALL CONTROL AND CONSTRUCTION STAKING SUPERVISED BY A LICENSED SURVEYOR IN THE STATE OF TEXAS. SURVEYOR MUST CARRY ERROR AND OMISSIONS INSURANCE. INCLUDE THE COST FOR THIS WORK IN OTHER ITEMS.
4. SURVEY WAS PERFORMED BY LJA ENGINEERING IN MARCH 2025.

WILLIAMSON COUNTY NOTES:

1. CONTRACTOR SHALL PERFORM ALL APPLICABLE TASKS FOR THIS PROJECT WHICH ARE LISTED UNDER THESE WILLIAMSON COUNTY NOTES AND PAY ALL ASSOCIATED FEES.
2. CONTRACTOR SHALL NOTIFY THE WILLIAMSON COUNTY UNIFIED ROAD SYSTEM AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION AT (512)930-3330.
3. ALL WORK IN THE RIGHT-OF-WAY WILL BE DONE BETWEEN THE HOURS OF 8:30 A.M. AND 4:30 P.M. ON MONDAY THROUGH FRIDAY ONLY.
4. CUTS WILL BE OPENED FOR ONE-HALF THE ROADWAY ONLY, WITH FLAGMEN ON BOTH SIDES OF THE WORK AREA, ALLOWING ONE-WAY TRAFFIC THROUGH. THIS TYPE OF OPERATION WILL BE HELD TO A MINIMUM AND ALL ADVANCE WARNING SIGNS AND BARRICADES SHALL BE AS SPECIFIED IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THESE CUTS WILL ALSO BE FILLED AND ENTIRE ROADWAY OPENED AT NIGHT AND ON WEEKENDS.
5. ROADSIDE WORK IN DITCHES ALONGSIDE THE TRENCHED SURFACE MAY BE LEFT OPENED AT NIGHT, ONLY IF THEY CAN BE BARRICADED SOLIDLY BETWEEN OPEN DITCH AND TRAVELED ROADWAY LEAVING A MINIMUM 6' OF ROAD SHOULDER BETWEEN THE PAVEMENT EDGE AND THE BARRICADES. THE BARRICADES MUST BE REFLECTIVE AND LIGHTED WITH WARNING LIGHTS AND CONFORM TO THE REQUIREMENTS OF THE T.M.U.T.C.D. FOR NIGHTTIME USE.
6. ANY CONSTRUCTION AREA TO BE MAINTAINED FROM DUSK TO DAWN SHALL HAVE TYPE B HIGH INTENSITY STEADY BURN WARNING LIGHTS TO DELINEATE THE TRAVELED WAY THROUGH AND AROUND OBSTRUCTIONS IN A CONSTRUCTION OR MAINTENANCE AREA. ALL WARNING LIGHTS SHALL BE INSTALLED TO A MINIMUM MOUNTING HEIGHT OF 36" TO THE BOTTOM OF THE LENS.
7. CONSTRUCTION WORK AND ROAD REPAIR ON COUNTY RIGHT-OF-WAY WILL BE DONE TO WILLIAMSON COUNTY STANDARDS/SPECIFICATIONS AND TO THE APPROVAL OF THE WILLIAMSON COUNTY UNIFIED ROAD SYSTEM.
8. CONTRACTOR SHALL NOTIFY THE WILLIAMSON COUNTY UNIFIED ROAD SYSTEM AND OBTAIN APPROVAL PRIOR TO ANY CHANGES IF REQUIRED DUE TO SOIL CONDITIONS OR OTHER PROBLEMS.
9. A PERFORMANCE BOND IN THE AMOUNT OF $500 MINIMUM, EXECUTED BY A SURETY COMPANY OR SURETY COMPANIES AUTHORIZED TO EXECUTE SURETY BONDS UNDER AND IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS. EXACT AMOUNT OF THE BOND IS TO BE DETERMINED BY WILLIAMSON COUNTY DEPENDING ON THE EXTENT OF THE PROJECT.
10. CONTRACTOR SHALL FILE A "CONTRACTOR' S LIABILITY AGREEMENT" PRIOR TO ISSUANCE OF PERMIT (ATTACHED IN SPECIFICATION BOOK).
11. FRANCHISED UTILITIES (CITY OF AUSTIN, SOUTHERN UNION GAS, SOUTHWESTERN BELL, ETC.) ARE NOT REQUIRED TO PROVIDE A BOND OR PAY A PERMIT FEE IF THEY DO THE WORK WITH THEIR OWN WORK FORCES. CONTRACTORS WILL PAY A FEE OF $120.00.
12. THIS SITE PROPOSES 0.393 ACRES OR 18.5% OF IMPERVIOUS COVER OVER THE ENTIRE 2.12 ACRE LOT.
13. THIS SITE IS CONSIDERED DETENTION EXEMPT PER WILLIAMSON COUNTY FLOOD DAMAGE PREVENTION ORDER, ARTICLE 5, SECTION 6 C, WHICH STATES THAT A COMMERCIAL, INDUSTRIAL OR MULTI-FAMILY DEVELOPMENT MAY BE CONSIDERED EXEMPT FROM PROVIDING ON-SITE STORMWATER DETENTION IF THE PROPOSED DEVELOPMENT WILL HAVE LESS THAN 20% OF IMPERVIOUS COVER PER LOT.

TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT WILL BE PROVIDED BY THE CONTRACTOR.
2. IN ACCORDANCE WITH THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4-FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET ON DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE. THE TRENCHED AREA SHALL BE BARRICADED AND THE CONTRACTOR NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED AND COPIES SUBMITTED TO THE CITY. THE CONTRACTOR SHALL PROVIDE A TRENCH SAFETY PLAN PRIOR TO BEGINNING CONSTRUCTION.
4. CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET, AS A MINIMUM, THE REQUIREMENTS OF OSHA SAFETY AND HEALTH REGULATION, PART 1926, SUBPART P AS PUBLISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 209, DATED OCTOBER 31, 1989

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS · KIMBERLY HAMMOND · 151874 · LICENSED PROFESSIONAL ENGINEER

2/5/26

GENERAL

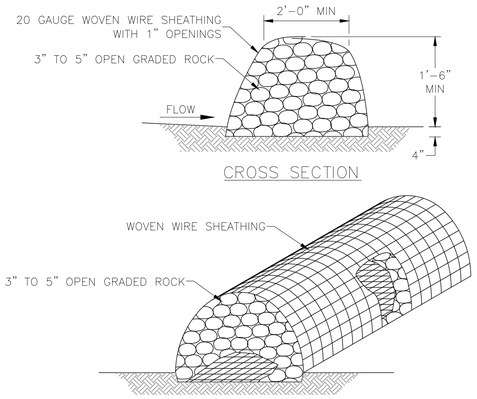
GENERAL NOTES

DATE: FEBRUARY 2026

SCALE: AS NOTED

DRAWING: 00G-05

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00G-05.dwg, LAST SAVED ON: Feb 04 2026 1:13pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:26pm, CFG:



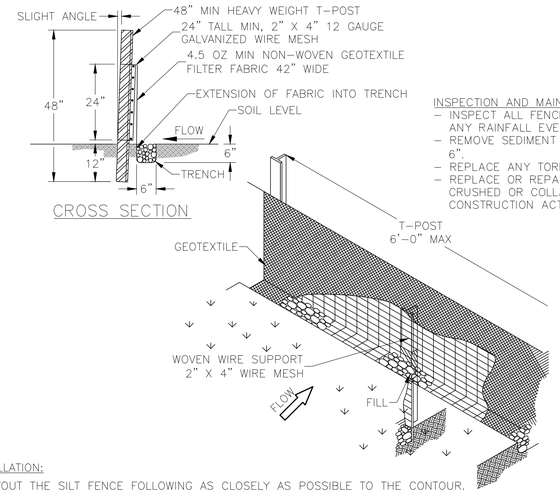
INSTALLATION:

- 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 ITS SHAPE.
- SECURE WITH TIE WIRE.
- THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHALL BE BURIED IN A TRENCH APPROX 4" DEEP TO PREVENT FAILURE OF THE CONTROL.
- THE ROCK BERM SHALL BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

INSPECTION AND MAINTENANCE GUIDELINES:

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

ROCK BERM DETAIL 1
N.T.S.



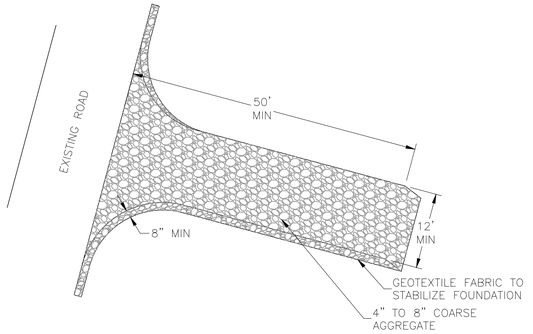
INSPECTION AND MAINTENANCE GUIDELINES:

- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
- REMOVE SEDIMENT WHEN BUILDUP REACHES 6".
- 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, PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY T-POST AT LEAST 12" 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 SHALL 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 SHALL 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.

SILT FENCE DETAIL 2
N.T.S.



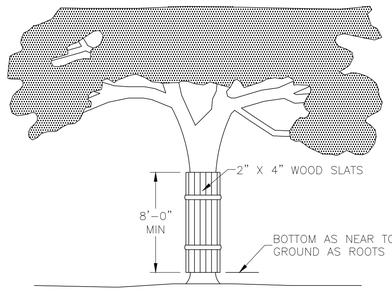
INSTALLATION:

- 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.
- PLACE GEOTEXTILE FABRIC AS APPROVED BY THE ENGINEER.
- PLACE ROCK AS APPROVED BY THE ENGINEER.

INSPECTIONS AND MAINTENANCE GUIDELINES:

- THE ENTRANCE SHALL 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 SHALL BE REMOVED IMMEDIATELY BY CONTRACTOR.
- WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

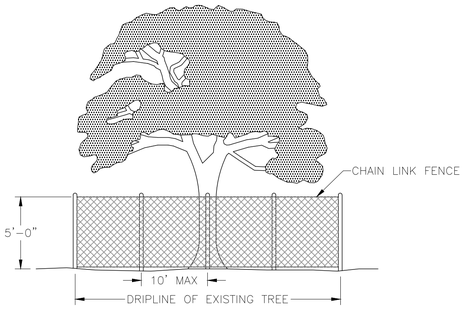
STABILIZED CONSTRUCTION ENTRANCE 3
N.T.S.



NOTES:

1. WHERE ANY EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4' TO A TREE TRUNK; PROTECT THE TRUNK WITH STRAPPED-ON-PLANKING TO A HEIGHT OF 8', 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 TO 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 SHALL BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHALL 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 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.

TREE PROTECTION – WOOD SLATS 4
N.T.S.



NOTES:

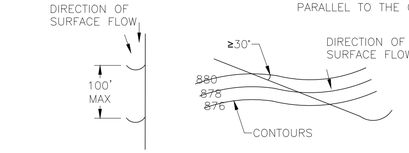
1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES; SHALL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND SHALL BE MAINTAINED THROUGHOUT 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 6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE ENGINEER.
   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 6' TO BUILDING.

TREE PROTECTION – CHAIN LINK 5
N.T.S.

NOTES:

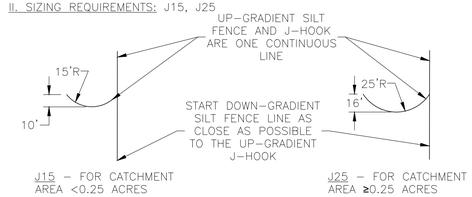
J-HOOKS SHALL BE USED WHEN THE SILT FENCE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO THE CONTOURS.

I. SPACING REQUIREMENTS



PLAN-VIEW

II. SIZING REQUIREMENTS: J15, J25



J-HOOK PLACEMENT DETAILS 6
N.T.S.

REV. NO.	DATE	DESCRIPTION	PROJECT MANAGER:	DCS
			DESIGNED BY:	KM
			CHECKED BY:	RM
			DRAWN BY:	RM
			DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

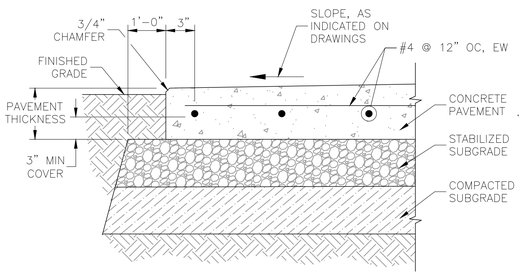
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

CIVIL - POLLUTION PREVENTION DETAILS

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 00C-01

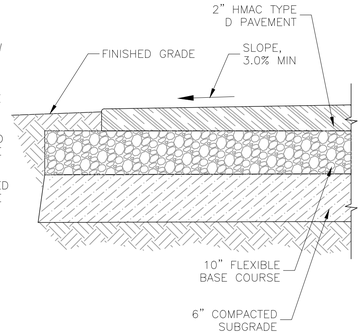
FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00C-01.dwg, LAST SAVED ON: Oct 08 2025 2:42pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:37pm, CFG:



NOTES:

1. SEE NOTES ON THIS DRAWING.

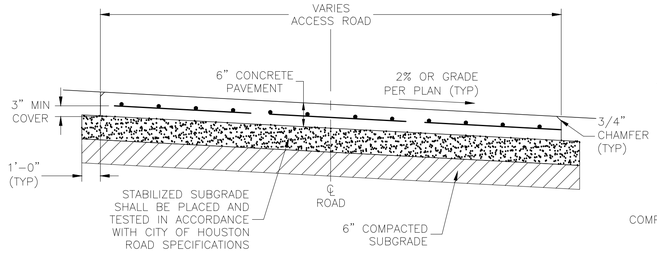
CONCRETE PAVEMENT DETAIL 1
N.T.S.



NOTES:

1. SEE NOTES ON THIS DRAWING.

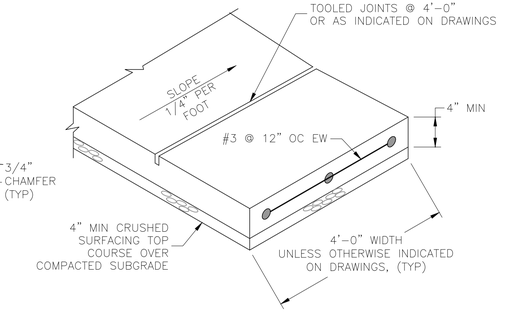
ASPHALT PAVEMENT DETAIL 2
N.T.S.



NOTES:

1. SEE NOTES ON THIS DRAWING.

CONCRETE PAVEMENT 3
N.T.S.



NOTES:

1. PROVIDE 1/2" PREMOLDED JOINT FILLER (FULL DEPTH) ALL AROUND ALL UTILITY POLES, METER BOXES, BUILDING FOUNDATIONS, ETC.
2. PROVIDE EXPANSION JOINTS AT 30' MAX SPACING, TYPICAL.
3. WHEN SIDES ARE ADJACENT TO BUILDINGS OR EQUIPMENT FOUNDATIONS, SLOPE SIDE WALK AWAY FROM FOUNDATIONS.

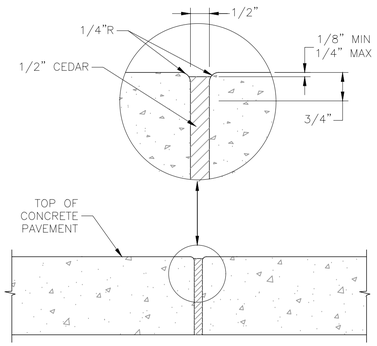
CONCRETE SIDEWALK DETAIL 4
N.T.S.

PAVING AND SURFACING NOTES:

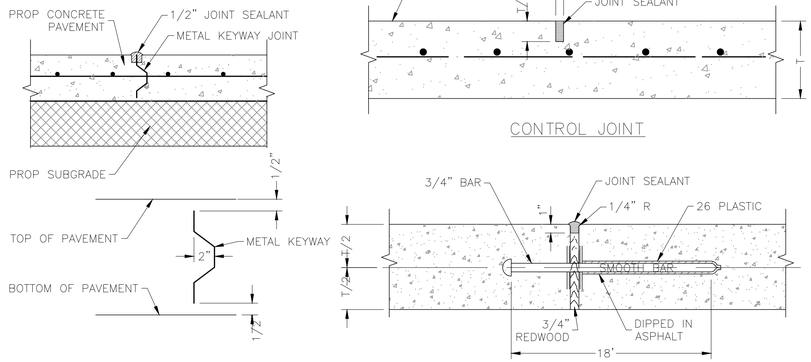
1. WHERE PROPOSED PAVEMENT IS TO MATCH EXISTING PAVEMENT, EXISTING RE-BARS OR DOWELS PROJECTING FROM PAVEMENT TO BE CLEANED AND TIED INTO PROPOSED PAVEMENT. IF NO RE-BARS OR DOWELS EXIST, CONSTRUCT WITH 6" X 6" UNDERCUT OF EXISTING PAVEMENT. DOWEL INTO EXIST PAVEMENT AT 12" OC AND EPOXY GROUT #4 REBAR AT MID POINT OF EXIST CONCRETE PAVEMENT.
2. CONCRETE PAVEMENT: CONCRETE PAVING MATERIALS, PLACEMENT, AND TESTING SHALL CONFORM TO SPECIFICATION 02502.
3. CONTROL OR CONSTRUCTION JOINTS SHALL BE INSTALLED AT A MAXIMUM SPACING OF 15 FEET OR AS SHOWN ON THE DRAWINGS.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED AT ALL FIXED OBJECTS TO THE FULL DEPTH OF PAVEMENT. EXPANSION JOINTS SHALL BE INSTALLED AT A MAXIMUM SPACING OF 60 FEET.
5. MEDIUM DUTY CONCRETE PAVEMENT SHALL BE 6" THICK WITH A MIN 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI ON A 8" STABILIZED SUBGRADE AND 6" COMPACTED SUBGRADE. #4 BAR REINFORCING STEEL AT 24" OCBW TO CONFORM TO ASTM A-615, GRADE 60. PROVIDE MIN 10 INCH LAPS.
6. PAVEMENT CROWN: CROWN IN PAVED ROADWAYS SHALL BE PARABOLIC.
7. USE PLASTIC CHAIRS TO SUPPORT REINFORCEMENT AT 24-INCH SPACING EACH WAY.
8. SUBGRADE TO BE STABILIZED 1 FOOT BACK OF PROPOSED EDGE OF PAVEMENT.
9. ALL SUBGRADE TO BE STABILIZED WITH A MINIMUM OF 4% LIME AND 8% FLYASH AS CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO SUBGRADE PREPARATION; BY DRY UNIT WEIGHT AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY. LIME-FLY ASH STABILIZATION SHALL BE PER TXDOT SPECIFICATION ITEM 265.
10. FILL SHALL BE PLACED IN MAXIMUM 8" LOOSE LIFTS AND COMPACTED TO 95% OF OPTIMUM DENSITY AS DETERMINED USING TESTING METHOD ASTM D698 AT A MOISTURE CONTENT WITHIN TWO PERCENTAGE POINTS OF OPTIMUM.
11. COMPACTED SUBGRADE: SCARIFY AND COMPACT THE SUBGRADE BELOW CONCRETE PAVEMENT, H.M.A.C. PAVEMENT, BASE SURFACING, AND SIDEWALK AREAS TO THE DEPTH SHOWN. COMPACT TO 95% BUT NOT MORE THAN 97% OF TEX-113-E MAXIMUM DRY DENSITY AT -1% OR +2% OF OPTIMUM MOISTURE CONTENT.

CONCRETE DRIVEWAY NOTES FOR PAVEMENT WITHIN COUNTY ROW:

1. PAVING, LOCATED WITHIN R.O.W., SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL OF THE HARRIS COUNTY PRECINCT NO. 4 REQUIREMENTS AND ANY AMENDMENTS THERETO.
2. FOLLOW THE GUIDELINES SET FORTH IN THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES WHERE APPLICABLE.



CONCRETE SIDEWALK EXPANSION JOINT DETAIL 5
N.T.S.



NOTES:

1. SEE NOTES ON THIS DRAWING.

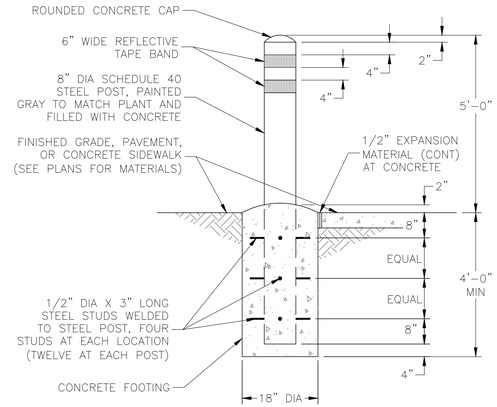
CONTROL JOINT

CONSTRUCTION JOINT

STEEL TO MEET A.S.T.M. STANDARD SPECIFICATION FOR CONCRETE REINFORCING BARS. UNITS TO BE SPACED ON 22" CENTERS.

STANDARD DOWEL TYPE EXPANSION JOINT

PAVING JOINTS 6
N.T.S.



NOTES:

1. BOLLARDS SHALL BE LOCATED 1'-3" AWAY FROM CORNER OF BUILDING OR ADJACENT STRUCTURE TO ℄ OF BOLLARD AND 1'-3" FROM FACE OF BUILDING, PAVEMENT, OR SIDEWALK TO ℄ OF BOLLARD UNLESS OTHERWISE NOTED.

PIPE BOLLARD IN CONCRETE 5
N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

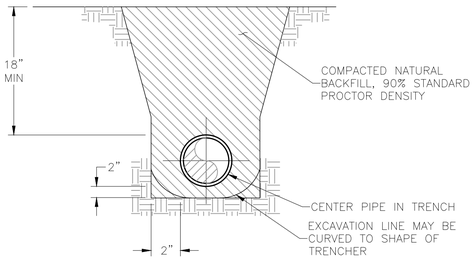
CIVIL - DETAIL SHEET NO. 1

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 00C-02

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00C-02.dwg, LAST SAVED ON: Oct 08 2025 2:42pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:38pm, CFG:

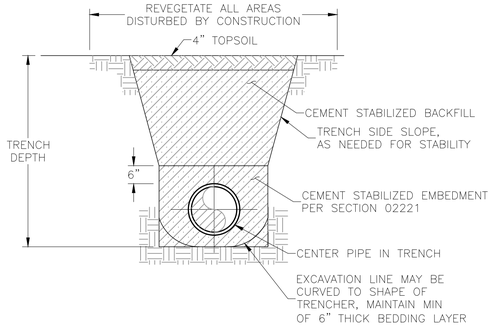
NOTES:

1. ALL PVC PIPING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.



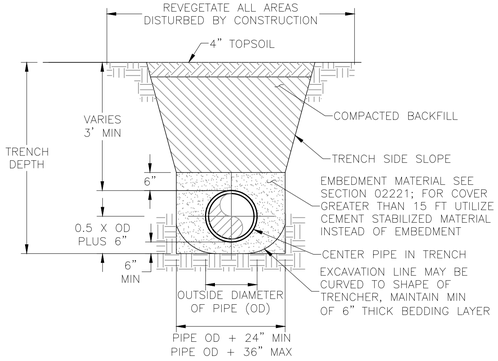
SMALL DIAMETER PIPE (<3") PIPE EMBEDMENT DETAIL 1

N.T.S.



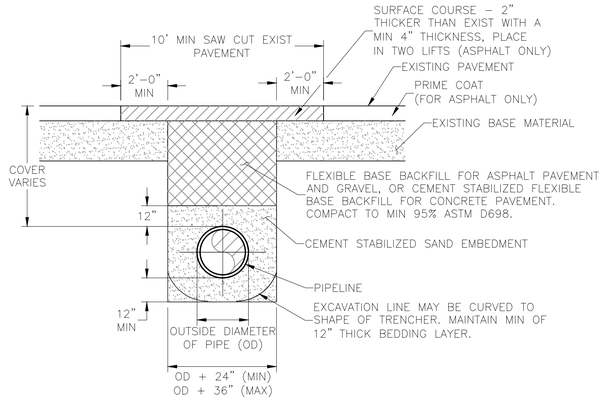
CEMENT STABILIZED BACKFILL PIPE EMBEDMENT DETAIL 2

N.T.S.



TYPICAL PIPE EMBEDMENT DETAIL 3

N.T.S

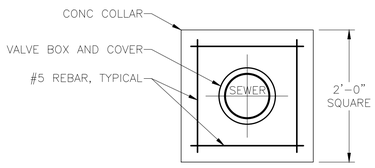


GRAVEL/ASPHALT/CONCRETE ROAD TRENCH AND REPAIR DETAIL 4

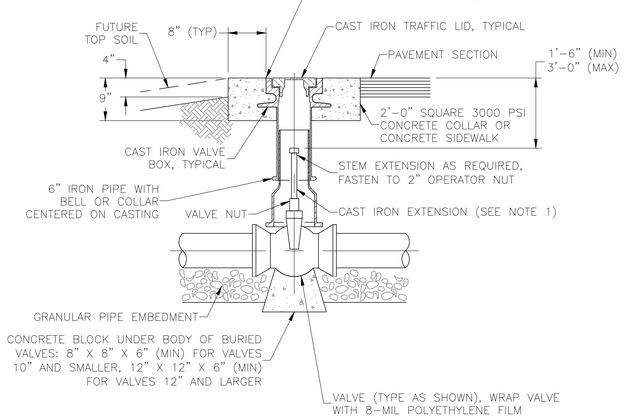
N.T.S

NOTES:

1. WELD SOCKET 2 1/2" X 2" DEEP TO 1" SCH 40 ROUND STEM EXTENSION, FITTED ON OPERATING NUT, SCH 80 FOR LENGTHS OVER 10'.

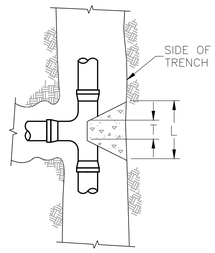


PLAN VIEW

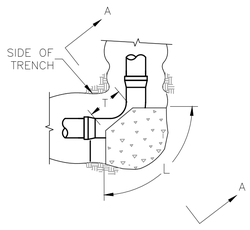


BURIED VALVE DETAIL 5

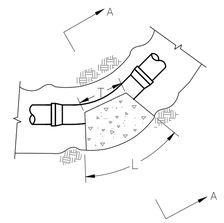
N.T.S.



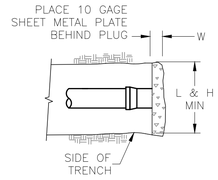
TEE



90° BEND



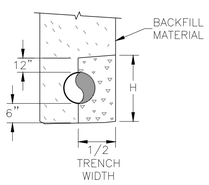
45° BEND



PLUG

NOTES:

1. DEPTH "W" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE.
2. BLOCKING MUST BE PLACED AGAINST UNDISTURBED EARTH.
3. CLASS OF CONCRETE FOR THRUST BLOCKS AND PLUGS SHALL BE LEAN CONCRETE.
4. DIMENSIONS SHOWN ARE BASED ON 3,000 LBS PER SQ FT ALLOWABLE SOIL STRESS AND 100 LBS PER SQ IN WATER PRESSURE; FOR OTHER DESIGN CONDITIONS MULTIPLY DIMENSIONS "L" AND "H" BY APPROPRIATE FACTOR FROM TABLE I.



SECTION "A-A"

TABLE I

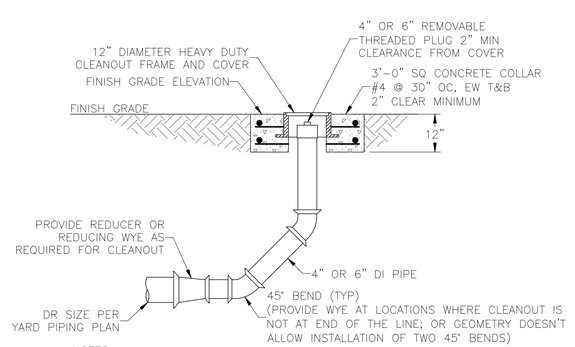
MAX WATER PRESSURE P.S.I.G.	CORRECTION FACTORS FOR ALLOWABLE SOIL SHOWN					
	1,000 LB/SF	2,000 LB/SF	3,000 LB/SF	4,000 LB/SF	5,000 LB/SF	10,000 LB/SF
75	1.50	1.06	0.87	0.75	0.67	0.48
100	1.73	1.22	1.00	0.87	0.77	0.55
150	2.12	1.50	1.22	1.06	0.95	0.67
200	2.45	1.73	1.41	1.22	1.10	0.77

THRUST BLOCK DETAIL 6

N.T.S

BLOCKING DIMENSION IN INCHES

NOMINAL PIPE SIZE	90° BEND				45° BEND				TEE				PLUG			
	W	L	H	T	W	L	H	T	W	L	H	T	W	L	H	T
2"	4	8	3	6	4	6	2	4	4	5	3	4	6	6	6	–
3"	5	10	5	8	5	9	3	7	5	9	4	7	6	9	9	–
4"	6	12	8	10	6	10	5	8	6	10	6	8	6	11	11	–
6"	8	16	12	14	8	13	8	12	8	15	9	12	6	17	17	–
8"	10	21	16	18	10	15	12	13	10	20	12	16	8	22	22	–
10"	12	27	20	20	12	20	15	16	12	24	16	18	8	28	28	–
12"	12	32	24	22	12	23	18	18	12	27	20	20	12	33	33	–
14"	12	40	28	30	12	28	20	22	12	34	22	28	12	39	39	–
16"	16	50	28	31	16	34	22	30	16	40	24	32	12	44	44	–
18"	18	58	30	36	18	40	24	36	18	44	28	34	18	50	50	–
20"	20	67	32	50	20	45	26	40	20	50	30	48	18	55	55	–
24"	24	86	56	54	24	60	28	54	24	60	36	52	24	66	66	–
30"	30	100	48	60	30	72	36	60	30	72	48	58	24	84	84	–



NOTES:

1. ALL CLEANOUTS SHALL BE DUCTILE IRON PIPE WITH RESTRAINED MECHANICAL JOINTS.
2. HEAVY DUTY CAST IRON CLEANOUT FRAME AND COVER TO BE D&L FOUNDRY MODEL H-8014 OR APPROVED EQUAL.
3. CLEANOUT ASSEMBLY TO BE EMBEDDED AND BACKFILLED WITH COMPACTED CEMENT STABILIZED SAND.

THREADED PLUG CLEANOUT DETAIL 7

N.T.S

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

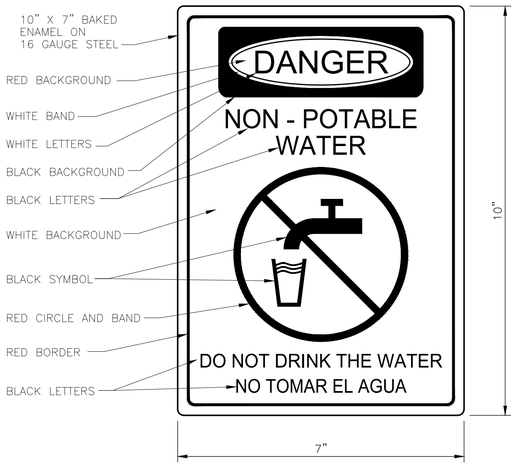
CIVIL - DETAIL SHEET NO. 2

DATE: FEBRUARY 2026

SCALE: AS NOTED

DRAWING: 00C-03

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00C-03.dwg, LAST SAVED ON: Oct 31 2025 5:10pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:38am, CFG:

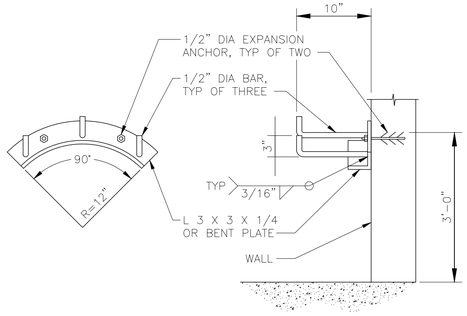


WARNING SIGN NOTE:

INSTALL ONE "DANGER" SIGN NEAR EACH EXISTING OR PROPOSED NON-POTABLE WATER HOSE BIBB OR HYDRANT, EACH PRESSURE GAUGE ASSEMBLY AND ANY OTHER NON-POTABLE WATER PIPE OUTLET.

NON-POTABLE "DANGER" SIGN PLACARD DETAIL 1

N.T.S



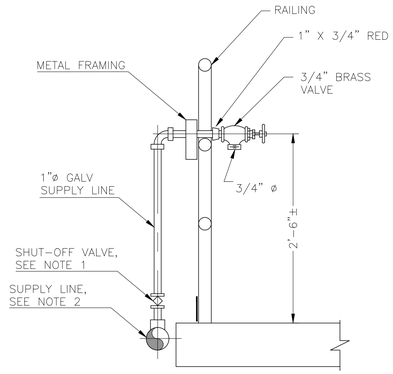
ELEVATION SECTION

NOTES:

1. FINISH AND GRIND ALL ROUGH EDGES AND HOT-DIP GALVANIZE ALL PIECES AFTER FABRICATION.
2. USE SST THREADED U-BOLT WHEN MOUNTING TO HANDRAIL.

WALL MOUNTED HOSE RACK DETAIL 2

N.T.S

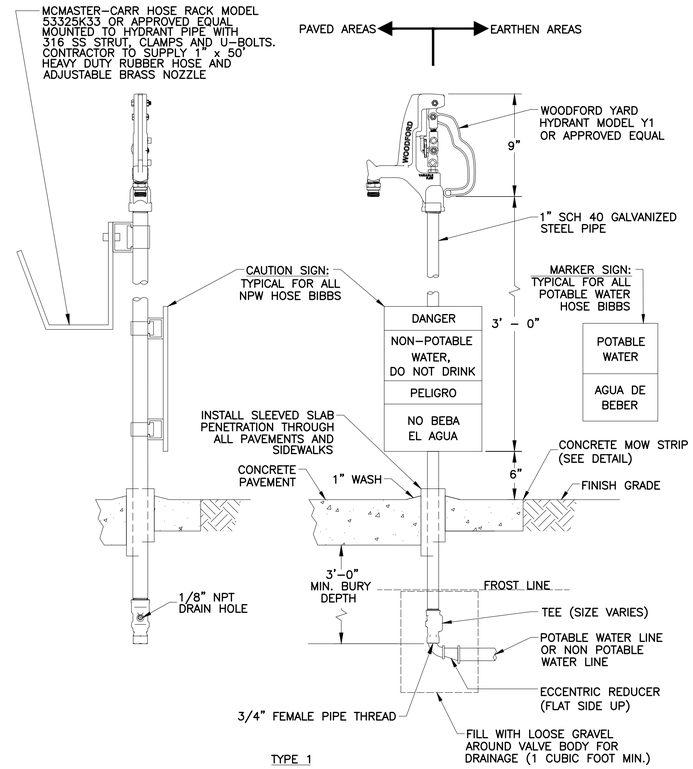


NOTES:

1. ALL HOSE BIBBS TO BE CONTROLLED BY INDIVIDUAL SHUT-OFF VALVES (BALL OR PLUG VALVES), EXCEPT WHERE INDIVIDUALLY CONTROLLED BRANCH MAIN SERVES HOSE BIBBS ONLY.
2. FOR SIZE AND LOCATION SEE DRAWINGS.
3. PROVIDE WARNING SIGN WHEN USED FOR NON-POTABLE WATER.
4. PROVIDE INSULATION PER SPECIFICATIONS.
5. PROVIDE ONE HOSE RACK WITH EACH HOSE BIBB.
6. PROVIDE 100 FT LONG (MIN) 3/4" HOSE WITH METAL TURBO NOZZLE (USA BLUEBOOK ITEM #16310 OR APPROVED EQUAL) AT EACH HOSE BIBB LOCATION.

HOSE BIBB DETAIL (HANDRAIL) 3

N.T.S



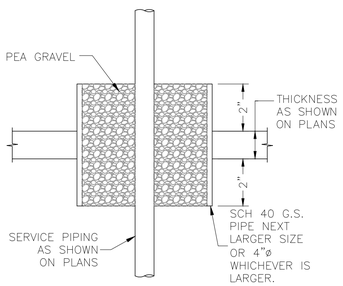
TYPE 1

HOSE BIBB INSULATION:

1. PIPE INSULATION – MOLDED HEAVY DENSITY ONE-PIECE INSULATION MADE FROM INORGANIC GLASS FIBERS BONDED WITH A THERMO-SETTING RESIN. INSULATION TO INCLUDE AN ALL SERVICE JACK (ASJ) WITH VAPOR BARRIER, A SELF SEALING LAP (SSL) FOR LONGITUDINAL JOINT, SIMILAR FACTORY-FURNISHED BUTT JOINT SEATING STRIP. MINIMUM INSULATION THICKNESS TO BE 1" FOR PIPES 2 INCHES AND SMALLER.
2. WEATHER JACKET – ALL EXTERIOR INSULATION TO BE PROTECTED BY MINIMUM 0.016-INCH-THICK ALUMINUM JACKET WITH LAMINATED VAPOR BARRIER OF POLYETHYLENE-SURLYN OR POLYETHYLENE-KRAFT PAPER THERMALLY BONDED TO THE INSIDE SURFACE. VALVE, FITTINGS AND FLANGES TO HAVE JACKETING AND MOISTURE BARRIER PROTECTION. ALL JOINTS TO BE MADE WATER TIGHT W/SEALANT.
3. SEALANT – NONSHRINKING PERMANENTLY FLEXIBLE VAPOR BARRIER SEALANT, CHILDERS CP-70 OR EQUAL.
4. STRAPPING – STAINLESS STEEL BANDS, MINIMUM 0.020 INCH THICK BY 3/4 INCHES WIDE WITH 0.034-INCH-THICK WING SEALS.
5. TERMINATION – INSULATION TO EXTEND 6 INCHES BELOW FINISH GRADE AND TERMINATE FLUSH WITH ALL WALLS AND SLABS. ALL TERMINATION POINTS TO BE COMPLETELY WATERPROOF.
6. MANUFACTURERS: INSULATION-OWENS CORNING FIBERGLAS, KNAUF FIBER GLASS, OR CERTAINTEED. EXTERIOR SERVICE WEATHER JACKET – PREMETCO OR CHILDERS PRODUCT CO.
7. PROVIDE 100 FT LONG (MIN) 3/4" HOSE AT EACH HOSE BIBB LOCATION.

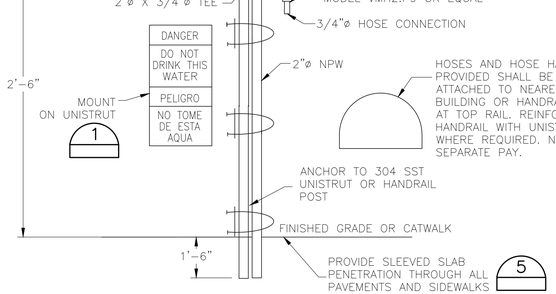
YARD HYDRANT DETAIL 4

N.T.S.



SLEEVED SLAB PENETRATION 5

N.T.S

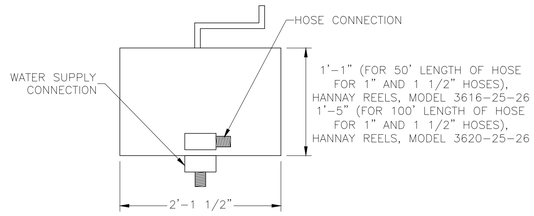


NOTES:

1. PROVIDE 1 1/2"ø "N-DURA" DOUBLE-JACKET FIRE HOSE (INNER AND OUTER JACKET MADE OF NYLON, EXTRUDED SYNTHETIC RUBBER LINING WITH BRASS MALE COUPLING ONE END AND A FEMALE SWIVEL ON THE OTHER) 100 FOOT SECTION AS MANUFACTURED BY SNAP-TITE HOSE, INC. AT EACH HOSE CONNECTION LOCATION.
2. PROVIDE 1 1/2"ø BRASS COUPLINGS, FITTINGS AND BRASS FIRE NOZZLE (RATED FOR A MINIMUM OF 60 GPM) FOR CONNECTION TO THE FIRE HOSE.
3. INSULATE HOSE BIBB AND PIPING PER SPECIFICATIONS.
4. PROVIDE 100 FT LONG (MIN) 3/4"ø HOSE WITH METAL TURBO NOZZLE (USA BLUEBOOK ITEM #16310 OR APPROVED EQUAL) AT EACH HOSE BIBB LOCATION.
5. PROVIDE TWO HOSE RACKS WITH EACH HOSE BIBB LOCATION.

HOSE BIBB DETAIL (HYDRANT WITH HOSE RACK) 6

N.T.S



NOTES:

1. HOSE REELS AS MANUFACTURED BY HANNAY REELS.
2. INSTALL MODEL FOR HOSE DIAMETER CALLED OUT AT SPECIFIED LOCATIONS.
3. PROVIDE 1 1/2"ø "N-DURA" DOUBLE-JACKET FIRE HOSE (INNER AND OUTER JACKET MADE OF NYLON, EXTRUDED SYNTHETIC RUBBER LINING WITH BRASS MALE COUPLING ONE END AND A FEMALE SWIVEL ON THE OTHER) 100 FOOT SECTION AS MANUFACTURED BY SNAP-TITE HOSE, INC. AT EACH HOSE BIBB LOCATION.
4. PROVIDE GALVANIZED STEEL PIPE SCHED 40 COUPLINGS, AND FITTINGS TO HARD PIPE THE NON-POTABLE WATERLINE TO HOSE REEL.
5. PROVIDE 1 1/2"ø BRASS COUPLINGS, FITTINGS AND BRASS FIRE NOZZLE (RATED FOR A MINIMUM OF 60 GPM) FOR CONNECTION TO THE FIRE HOSE.
6. INSULATE HOSE BIBB AND PIPING PER SPECIFICATIONS.

HOSE BIBB DETAIL (HYDRANT WITH HOSE REEL) 7

N.T.S

REV. NO.	DATE	DESCRIPTION	PROJECT MANAGER:	DCS
			DESIGNED BY:	KM
			CHECKED BY:	RM
			DRAWN BY:	RM
			DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

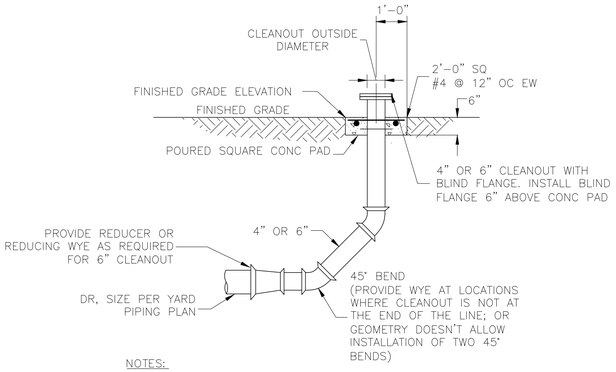
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

CIVIL - DETAIL SHEET NO. 3

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 00C-04

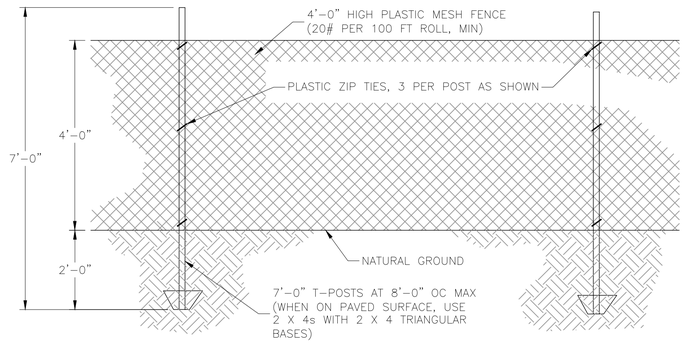
FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00C-04.dwg, LAST SAVED ON: Aug 21 2025 12:34pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:38pm, CFG:



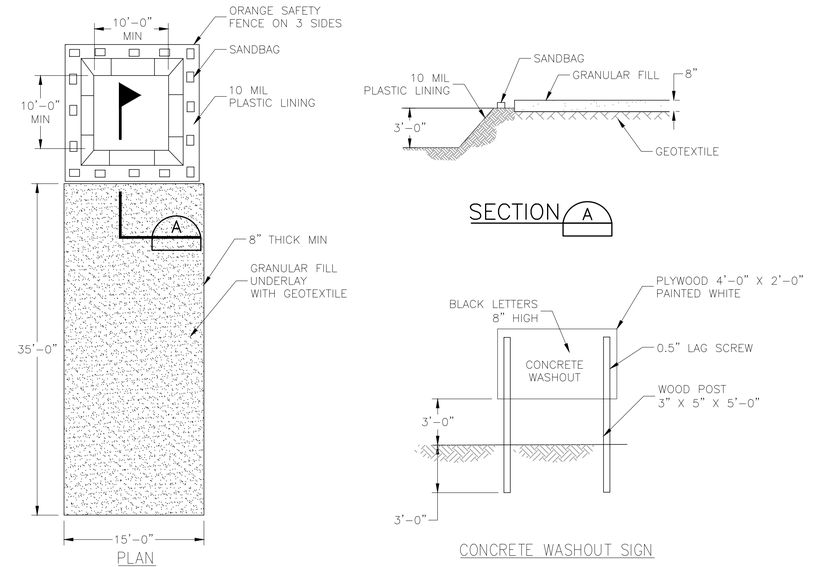
NOTES:

1. ALL CLEANOUTS SHALL BE DUCTILE IRON PIPE WITH RESTRAINED MECHANICAL JOINTS.
2. CLEANOUT ASSEMBLY TO BE EMBEDDED AND BACKFILLED WITH COMPACTED CEMENT STABILIZED SAND.

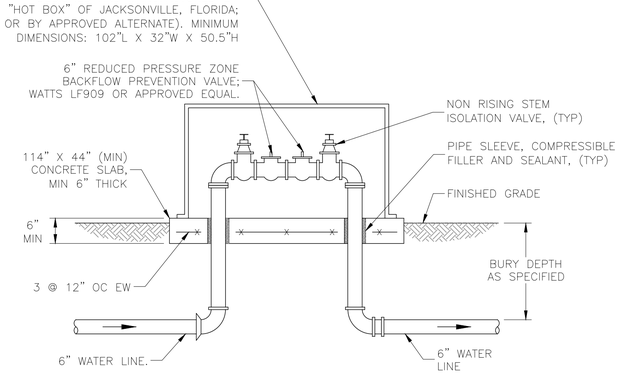
FLANGED CLEANOUT DETAIL 1
N.T.S



SAFETY FENCE 2
N.T.S.



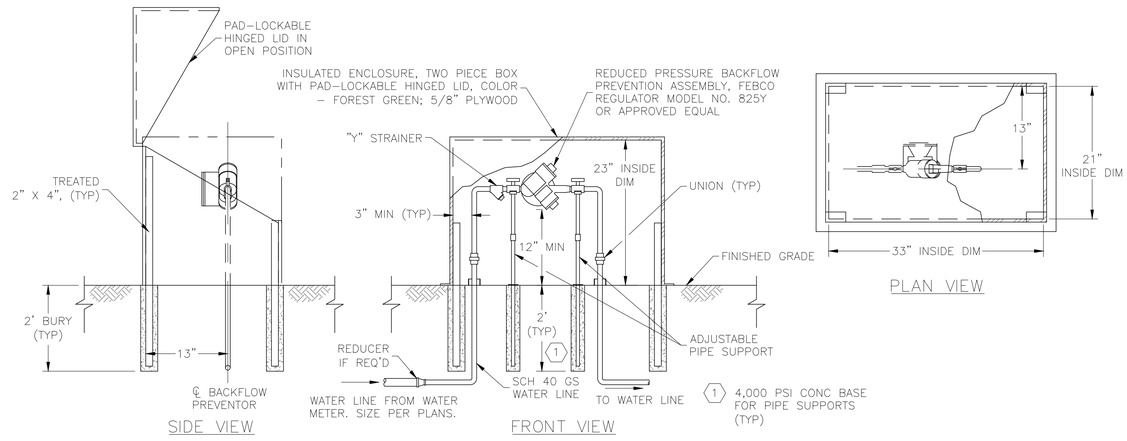
CONCRETE WASHOUT STRUCTURE 3
N.T.S.



NOTES:

1. REDUCED PRESSURE BACKFLOW PREVENTER'S DISCHARGE OPENING IS TO BE A MINIMUM OF 12 INCHES ABOVE GROUND ELEVATION OR 100 YR FLOOD ELEVATION, WHICHEVER IS GREATER.
2. ALL PROP PIPING SHALL BE DUCTILE IRON WITH CEMENT LINING CLASS 200. ALL BURIED PIPING SHALL BE POLY WRAPPED.
3. ALL JOINTS WITHIN 75 FEET UPSTREAM AND DOWNSTREAM OF THE BACKFLOW PREVENTOR AND WATER METER VAULT SHALL BE RESTRAINED.
4. ABOVE GROUND PIPING SHALL BE PAINTED PER SPECIFICATIONS.

EXTERIOR BACKFLOW PREVENTER DETAIL 4
N.T.S.



REDUCED PRESSURE BACKFLOW PREVENTOR INSTALLATION 5
N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

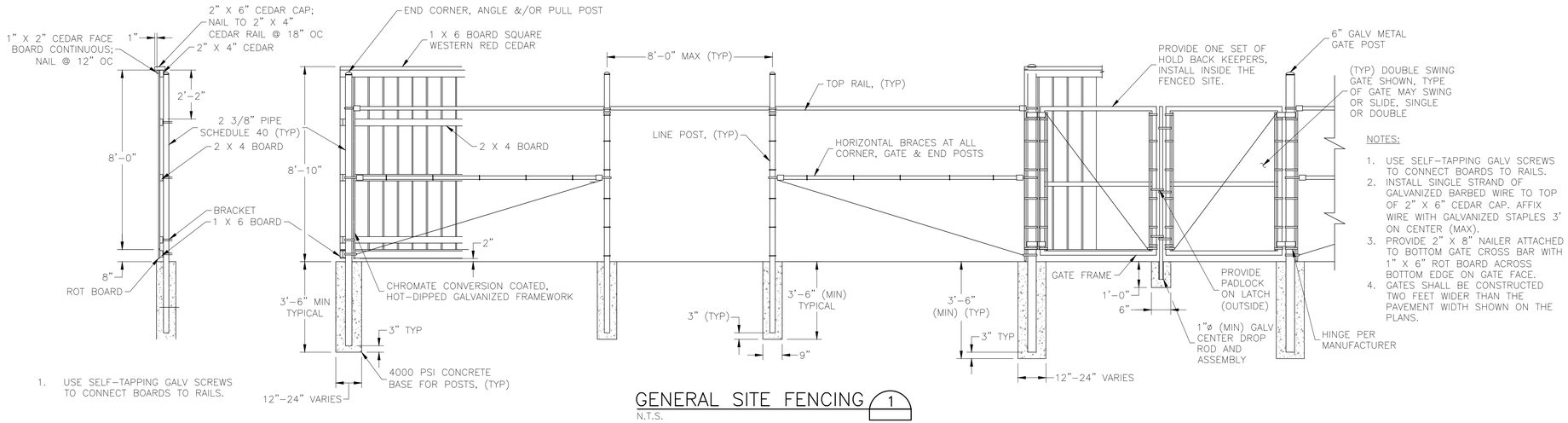
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

CIVIL - DETAIL SHEET NO. 4

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 00C-05

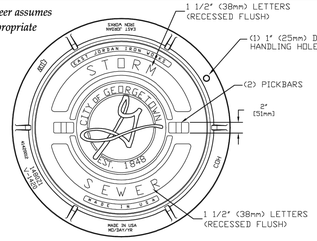
FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00C-05.dwg, LAST SAVED ON: Oct 08 2025 2:41pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:39pm, CFG:



GENERAL SITE FENCING (1)

N.T.S.

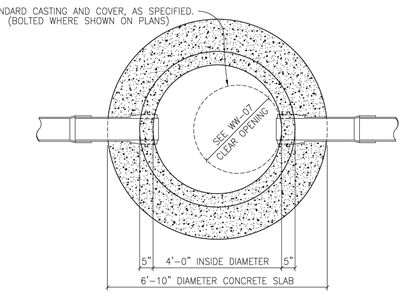
The Architect/Engineer assumes responsibility for appropriate use of this standard.



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.

REVISION NOTE: ADOPTED 6/21/2006

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
STANDARD STORM SEWER MANHOLE SET
DRAWING NAME: SD11
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB



MANHOLE PLAN

CITY OF GEORGETOWN NOTES:

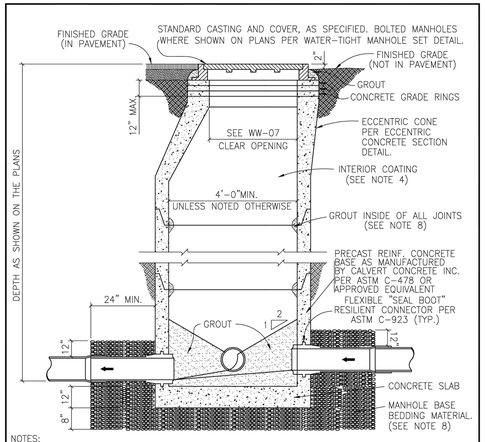
MANHOLE DETAILS SHALL REFLECT THE CITY'S MINIMUM SPECIFICATIONS, AS STATED BELOW:

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

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

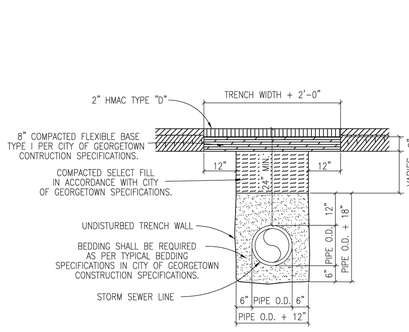


NOTES:
1. MANHOLES SHALL BE PRECAST ASTM C-478 BELL AND SPIGOT WITH PROFILE GASKET – SINGLE OFF-SET JOINTS.
2. SEE PLANS AND MANHOLE SCHEDULE, FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZE AND TYPES.
3. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
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

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



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, EMBEDMENT AND PAVEMENT REPLACEMENT DETAIL UNDER EXISTING ROADWAY FOR STORM SEWER
DRAWING NAME: SD40
SCALE: NTS | DATE: 1/2003
DRAWN BY: MRS | APPROVED BY: TRB

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

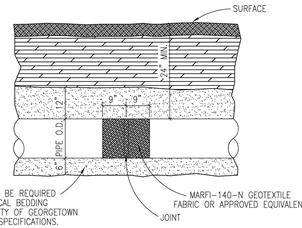
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

CIVIL - DETAIL SHEET NO. 5

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 00C-06

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00C-06.dwg, LAST SAVED ON: Oct 09 2025 11:21am, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:39pm, CFG:

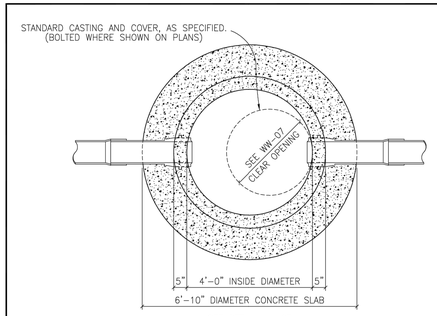


NOTES

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.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS TRENCH AND EMBEDMENT DETAIL (PROFILE) FOR STORM SEWER	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NAME: SD42 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB



SEE DETAIL WW-03

MANHOLE PLAN

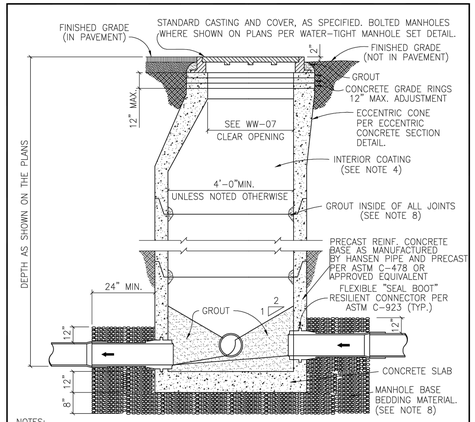
CITY OF GEORGETOWN NOTES:

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.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS STANDARD MANHOLE – PLAN	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NAME: WW02 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB



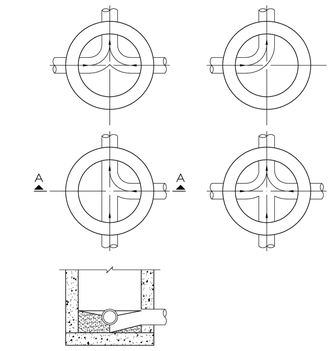
NOTES:

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 GASKETED 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.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS STANDARD MANHOLE – SECTION	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NAME: WW03 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB

FLOW PATTERNS FOR INVERT CHANNELS



SECTION "A-A"

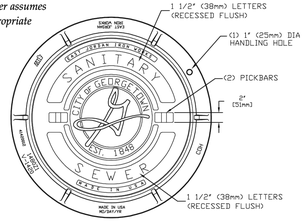
NOTES:

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.

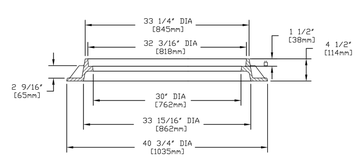
The Architect/Engineer assumes responsibility for appropriate use of this standard.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS FLOW PATTERNS FOR INVERT CHANNELS	REVISION NOTE: ADOPTED 6/21/2006 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

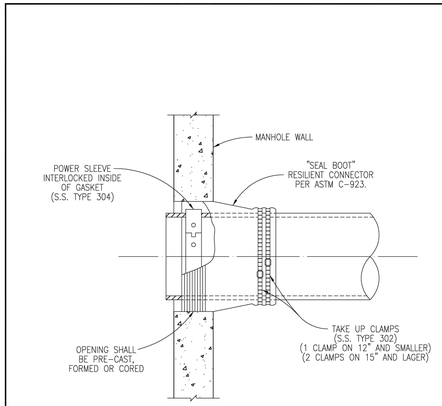


FRAME SECTION

NOTES:

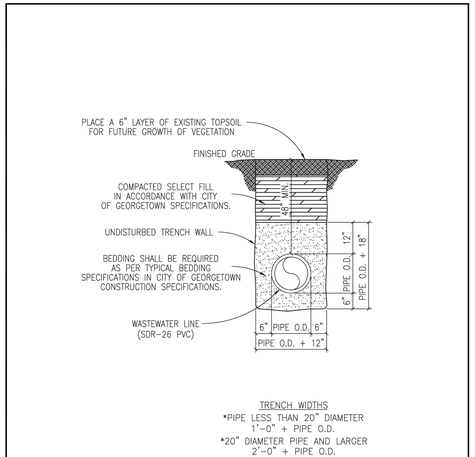
1. STANDARD WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 1480A V-1420/1480Z1, COVER TO BE STAMPED WITH "SANITARY SEWER".
2. STANDARD WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 41420012 0014B390.
4. FOR BOLTED WASTEWATER MANHOLE SET REFER TO DETAIL WW07A.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS STANDARD WASTEWATER MANHOLE SET	REVISION NOTE: ADOPTED 6/21/2006 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.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS FLEXIBLE "SEAL BOOT" CONNECTOR	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NAME: WW10 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.

	CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS TRENCH AND EMBEDMENT DETAIL UNDER NON-PAVED AREAS	REVISION NOTE: ADOPTED 6/21/2006 DRAWING NAME: WW16 SCALE: NTS DATE: 1/2003 DRAWN BY: MRS APPROVED BY: TRB

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

CIVIL - DETAIL SHEET NO. 6

DATE: FEBRUARY 2026
SCALE: N.T.S.
DRAWING: 00C-07

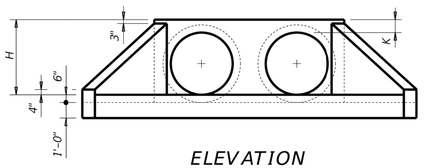
FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00C-07.dwg, LAST SAVED ON: Oct 08 2025 2:41pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:40pm, CFG:

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

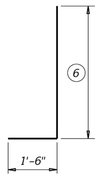
TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL (5)

Slope	Dia of Pipe (D)	Values for One Pipe: W	X	Y	L	Reinf (Lbs)	Conc (CY) (1)	Values to be Added for Each Addt'l Pipe: X and W	Reinf (Lbs)	Conc (CY) (1)
2:1	12"	4' – 7 ½"	2' – 6"	2' – 10"	3' – 3 ¼"	88	0.6	1' – 9"	20	0.2
	15"	5' – 5 ¾"	2' – 9 ½"	3' – 4"	3' – 10 ¼"	103	0.7	2' – 2"	24	0.3
	18"	6' – 4 ¼"	3' – 1"	3' – 10"	4' – 5"	124	0.9	2' – 8"	32	0.3
	21"	7' – 2 ¾"	3' – 4 ½"	4' – 4"	5' – 0"	143	1.1	3' – 1"	43	0.4
	24"	8' – 2 ½"	3' – 9 ½"	4' – 10"	5' – 7"	164	1.3	3' – 7"	50	0.5
	27"	9' – 1"	4' – 1"	5' – 4"	6' – 2"	179	1.5	3' – 11"	56	0.6
	30"	9' – 11 ½"	4' – 4 ½"	5' – 10"	6' – 8 ¾"	203	1.7	4' – 4"	65	0.8
	33"	10' – 10"	4' – 8"	6' – 4"	7' – 3 ¾"	224	2.0	4' – 8"	71	0.9
	36"	11' – 8 ¼"	4' – 11 ½"	6' – 10"	7' – 10 ¾"	249	2.2	5' – 1"	81	1.0
	42"	13' – 5 ¼"	5' – 6 ½"	7' – 10"	9' – 0 ½"	298	2.8	5' – 10"	97	1.3
	48"	15' – 9"	6' – 1 ½"	9' – 4"	10' – 9 ¼"	360	3.8	6' – 7"	117	1.7
	54"	17' – 5 ¾"	6' – 8 ½"	10' – 4"	11' – 11 ¼"	427	4.5	7' – 6"	151	2.1
	60"	19' – 2 ¾"	7' – 3 ½"	11' – 4"	13' – 1"	481	5.3	8' – 3"	174	2.5
	66"	20' – 11 ½"	7' – 10 ½"	12' – 4"	14' – 3"	544	6.2	8' – 9"	194	2.9
	72"	22' – 8 ½"	8' – 5 ½"	13' – 4"	15' – 4 ¾"	601	7.1	9' – 4"	213	3.3
3:1	12"	6' – 3"	2' – 6"	4' – 3"	4' – 11"	118	0.8	1' – 9"	22	0.2
	15"	7' – 5"	2' – 9 ½"	5' – 0"	5' – 9 ¼"	137	1.1	2' – 2"	28	0.3
	18"	8' – 6 ¾"	3' – 1"	5' – 9"	6' – 7 ¾"	170	1.3	2' – 8"	37	0.5
	21"	9' – 8 ¾"	3' – 4 ½"	6' – 6"	7' – 6"	195	1.6	3' – 1"	48	0.6
	24"	11' – 0"	3' – 9 ½"	7' – 3"	8' – 4 ½"	227	2.0	3' – 7"	58	0.7
	27"	12' – 2"	4' – 1"	8' – 0"	9' – 2 ¾"	251	2.3	3' – 11"	67	0.8
	30"	13' – 4"	4' – 4 ½"	8' – 9"	10' – 1 ¼"	293	2.7	4' – 4"	77	1.0
	33"	14' – 5 ¾"	4' – 8"	9' – 6"	10' – 11 ¾"	318	3.1	4' – 8"	84	1.2
	36"	15' – 7 ¾"	4' – 11 ½"	10' – 3"	11' – 10"	351	3.5	5' – 1"	96	1.4
	42"	17' – 11 ½"	5' – 6 ½"	11' – 9"	13' – 6 ¾"	432	4.5	5' – 10"	119	1.7
	48"	21' – 1 ¾"	6' – 1 ½"	14' – 0"	16' – 2"	537	6.1	6' – 7"	146	2.3
	54"	23' – 5 ½"	6' – 8 ½"	15' – 6"	17' – 10 ¾"	630	7.3	7' – 6"	186	2.9
	60"	25' – 9 ¼"	7' – 3 ½"	17' – 0"	19' – 7 ½"	719	8.7	8' – 3"	219	3.4
	66"	28' – 1"	7' – 10 ½"	18' – 6"	21' – 4 ¼"	811	10.1	8' – 9"	242	3.9
	72"	30' – 4 ¾"	8' – 5 ½"	20' – 0"	23' – 1 ¼"	924	11.7	9' – 4"	272	4.4
4:1	12"	7' – 10 ¾"	2' – 6"	5' – 8"	6' – 6 ½"	148	1.1	1' – 9"	24	0.3
	15"	9' – 4"	2' – 9 ½"	6' – 8"	7' – 8 ½"	181	1.5	2' – 2"	32	0.4
	18"	10' – 9 ½"	3' – 1"	7' – 8"	8' – 10 ¼"	221	1.9	2' – 8"	42	0.5
	21"	12' – 2 ¾"	3' – 4 ½"	8' – 8"	10' – 0"	260	2.3	3' – 1"	57	0.7
	24"	13' – 9 ½"	3' – 9 ½"	9' – 8"	11' – 2"	301	2.8	3' – 7"	67	0.9
	27"	15' – 3"	4' – 1"	10' – 8"	12' – 3 ¾"	334	3.3	3' – 11"	77	1.0
	30"	16' – 8 ¼"	4' – 4 ½"	11' – 8"	13' – 5 ¾"	385	3.8	4' – 4"	89	1.3
	33"	18' – 1 ¾"	4' – 8"	12' – 8"	14' – 7 ½"	425	4.5	4' – 8"	101	1.4
	36"	19' – 7"	4' – 11 ½"	13' – 8"	15' – 9 ¼"	472	5.1	5' – 1"	115	1.7
	42"	22' – 5 ¾"	5' – 6 ½"	15' – 8"	18' – 1"	583	6.5	5' – 10"	141	2.1
	48"	26' – 6 ¼"	6' – 1 ½"	18' – 8"	21' – 6 ¾"	730	8.9	6' – 7"	175	2.8
	54"	29' – 5"	6' – 8 ½"	20' – 8"	23' – 10 ¼"	875	10.7	7' – 6"	226	3.6
	60"	32' – 3 ¾"	7' – 3 ½"	22' – 8"	26' – 2"	996	12.7	8' – 3"	264	4.3
	66"	35' – 2 ½"	7' – 10 ½"	24' – 8"	28' – 5 ¾"	1,140	14.9	8' – 9"	300	4.9
	72"	38' – 1 ¼"	8' – 5 ½"	26' – 8"	30' – 9 ½"	1,297	17.3	9' – 4"	334	5.6
6:1	12"	11' – 2"	2' – 6"	8' – 6"	9' – 9 ¾"	224	1.9	1' – 9"	28	0.4
	15"	13' – 2 ¼"	2' – 9 ½"	10' – 0"	11' – 6 ½"	268	2.5	2' – 2"	37	0.5
	18"	15' – 2 ½"	3' – 1"	11' – 6"	13' – 3 ¼"	330	3.2	2' – 8"	50	0.7
	21"	17' – 2 ¾"	3' – 4 ½"	13' – 0"	15' – 0 ¼"	387	3.9	3' – 1"	69	0.9
	24"	19' – 4 ½"	3' – 9 ½"	14' – 6"	16' – 9"	453	4.8	3' – 7"	80	1.2
	27"	21' – 4 ¾"	4' – 1"	16' – 0"	18' – 5 ¾"	512	5.7	3' – 11"	96	1.4
	30"	23' – 5 ¼"	4' – 4 ½"	17' – 6"	20' – 2 ½"	593	6.7	4' – 4"	110	1.7
	33"	25' – 5 ½"	4' – 8"	19' – 0"	21' – 11 ¼"	675	7.8	4' – 8"	127	2.0
	36"	27' – 5 ¾"	4' – 11 ½"	20' – 6"	23' – 8"	735	9.0	5' – 1"	144	2.3
	42"	31' – 6 ¼"	5' – 6 ½"	23' – 6"	27' – 1 ½"	922	11.5	5' – 10"	179	3.0
	48"	37' – 3 ½"	6' – 1 ½"	28' – 0"	32' – 4"	1,191	15.9	6' – 7"	231	4.0
	54"	41' – 4 ¼"	6' – 8 ½"	31' – 0"	35' – 9 ½"	1,424	19.2	7' – 6"	300	5.0
	60"	45' – 4 ¾"	7' – 3 ½"	34' – 0"	39' – 3"	1,631	22.9	8' – 3"	353	6.0

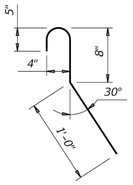
DATE:
FILE:



ELEVATION
(Showing dimensions.)



BARS V



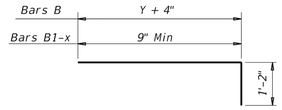
BARS CL
(Length = 2'-5")

TABLE OF REINFORCING STEEL (5)

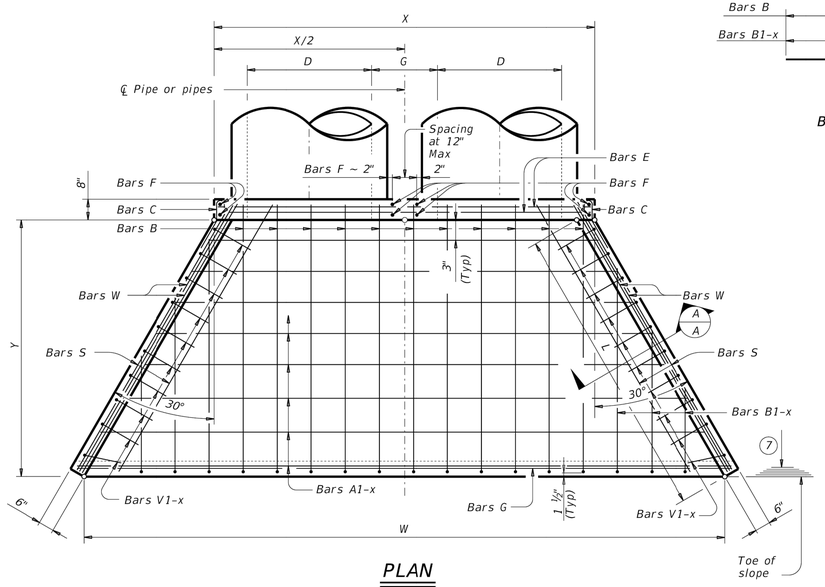
Bar	Size	Spa	No.
A	#4	1' – 0"	~
B	#3	1' – 6"	~
C	#4	1' – 0"	~
D	#3	1' – 0"	~
E	#5	~	4
F	#5	~	~
G	#3	~	2
S	#4	~	6
V	#4	1' – 0"	~
W	#5	~	4

TABLE OF CONSTANT DIMENSIONS

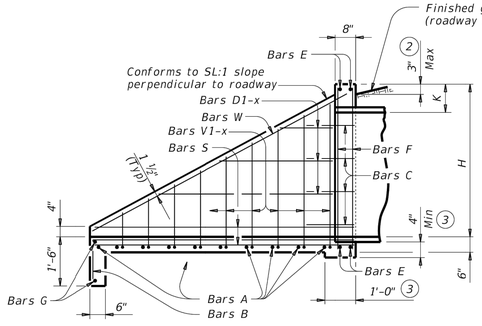
Dia of Pipe (D)	G	K (4)	H
12"	0' – 9"	1' – 0"	2' – 0"
15"	0' – 11"	1' – 0"	2' – 3"
18"	1' – 2"	1' – 0"	2' – 6"
21"	1' – 4"	1' – 0"	2' – 9"
24"	1' – 7"	1' – 0"	3' – 0"
27"	1' – 8"	1' – 0"	3' – 3"
30"	1' – 10"	1' – 0"	3' – 6"
33"	1' – 11"	1' – 0"	3' – 9"
36"	2' – 1"	1' – 0"	4' – 0"
42"	2' – 4"	1' – 0"	4' – 6"
48"	2' – 7"	1' – 3"	5' – 3"
54"	3' – 0"	1' – 3"	5' – 9"
60"	3' – 3"	1' – 3"	6' – 3"
66"	3' – 3"	1' – 3"	6' – 9"
72"	3' – 4"	1' – 3"	7' – 3"



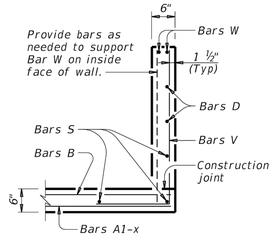
BARS B and B1-x



PLAN



TYPICAL WING ELEVATION



SECTION A-A

(1) Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.

(2) For vehicle safety, construct curbs no more than 3" above finished grade. Reduce curb heights, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(3) Provide a 1'-0" footing as shown where required to maintain 4" minimum cover for pipes.

(4) Dimensions shown are usual and maximum.

(5) Quantities shown are for one structure end only (one headwall).

(6) Min Length = 6" + 3" x $\left(\frac{12 \times H - 7}{12 \times L}\right)$

Max Length = 12 x H – 3" x $\left(\frac{12 \times H - 7}{12 \times L}\right)$ – 1"

(7) Lengths of wings based on SL:1 slope along this line.

MATERIAL NOTES:
Provide Grade 60 reinforcing steel.
Provide Class C concrete (f'c = 3,600 psi).

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
Do not mount bridge rails of any type directly to these culvert headwalls.
This standard may not be used for wall heights, H, exceeding the values shown.

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.

Texas Department of Transportation | Bridge Division Standard

CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW PIPE CULVERTS

CH-FW-0

FILE: CD-CH-FW0-20.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

FILENAME: Z:\Projects 1551-1599\20101595 – BH – Hudson Park WWTP Final Design\500 – Final_Design\S1 – Drawings\Sheet Files\WWTP set\00C-08.dwg, LAST SAVED ON: Sep 02 2025 2:23pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:40pm, CFG:

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

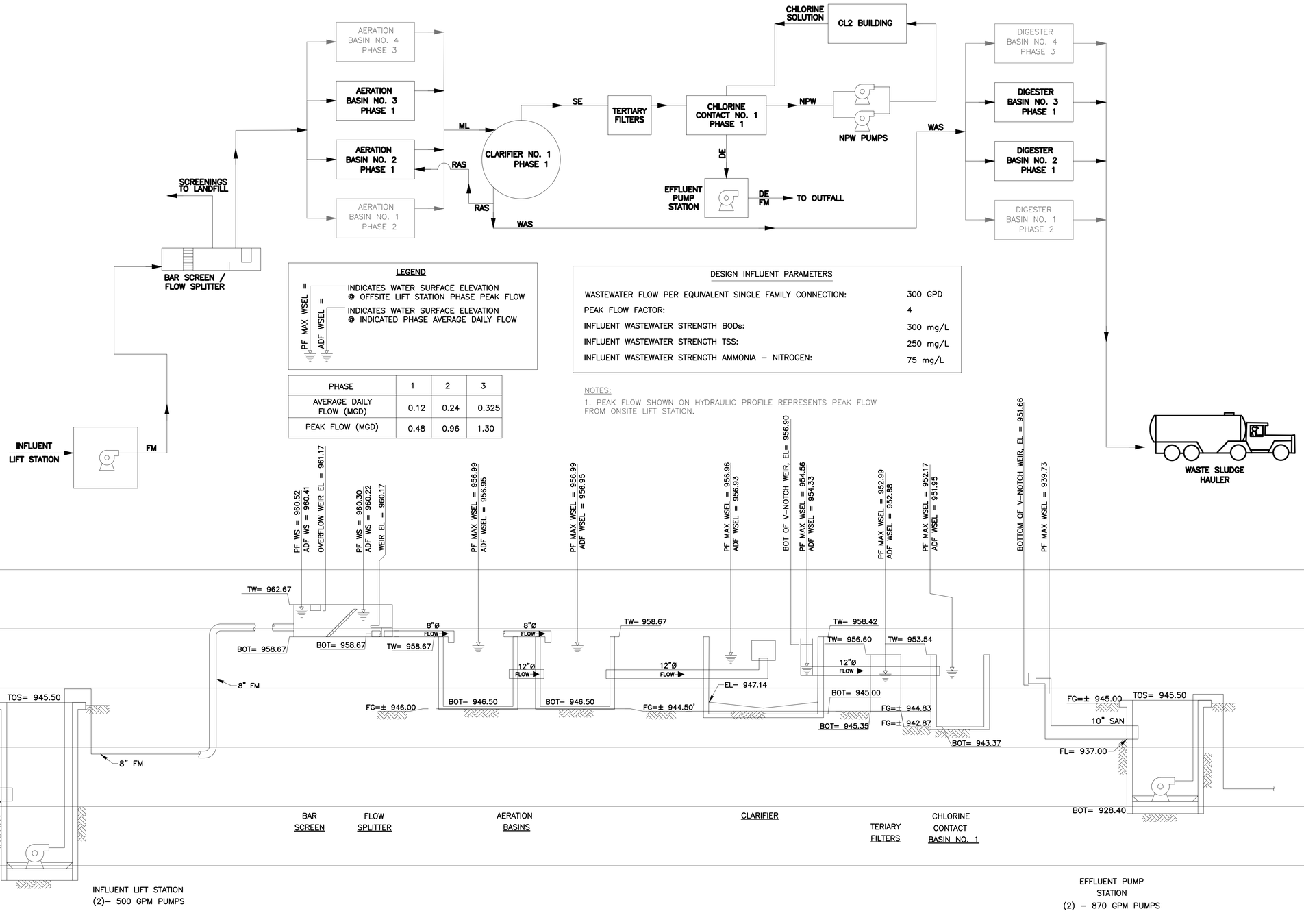
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

CIVIL - TXDOT CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW PIPE CULVERTS

DATE: FEBRUARY 2026
SCALE: N.T.S.
DRAWING: 00C-08

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\00P-01.dwg, LAST SAVED ON: Feb 04 2026 1:13pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:42pm, CFG:



LEGEND

PF MAX WSEL = INDICATES WATER SURFACE ELEVATION @ OFFSITE LIFT STATION PHASE PEAK FLOW

ADF WSEL = INDICATES WATER SURFACE ELEVATION @ INDICATED PHASE AVERAGE DAILY FLOW

PHASE	1	2	3
AVERAGE DAILY FLOW (MGD)	0.12	0.24	0.325
PEAK FLOW (MGD)	0.48	0.96	1.30

DESIGN INFLUENT PARAMETERS

WASTEWATER FLOW PER EQUIVALENT SINGLE FAMILY CONNECTION:	300 GPD
PEAK FLOW FACTOR:	4
INFLUENT WASTEWATER STRENGTH BODs:	300 mg/L
INFLUENT WASTEWATER STRENGTH TSS:	250 mg/L
INFLUENT WASTEWATER STRENGTH AMMONIA – NITROGEN:	75 mg/L

NOTES:

1. PEAK FLOW SHOWN ON HYDRAULIC PROFILE REPRESENTS PEAK FLOW FROM ONSITE LIFT STATION.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

GENERAL

PROCESS - FLOW DIAGRAM AND HYDRAULIC PROFILE

DATE: FEBRUARY 2026

SCALE: N.T.S.

DRAWING: 00P-01

LEGEND:

945' EXIST NG

945' PROPOSED CONTOURS (BY OTHERS)

REMOVE EXIST TREE

SURVEY NOTES:

1. UNDERGROUND UTILITIES SHOWN HEREIN ARE BASED ON VISIBLE SURFACE APPURTENANCES, VISIBLE 811 UTILITY LOCATE MARKS, AND PUBLIC GIS MAPS. ADDITIONAL UTILITIES MAY EXIST.
2. ALL BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, GRID NORTH, CENTRAL ZONE (4203), NAD83, ALL HORIZONTAL VALUES ARE GRID DISTANCES. ALL VERTICAL DATA IS HELD TO NAVD88 GEOID 18.

CONTROL POINT	NORTHING (GRID)	EASTING (GRID)	ELEVATION	DESCRIPTION
2	10236834.109	3082083.767	943.015	5/8" IRON ROD SET W/ CAP STAMPED "LJA SURVEY"
3	10236498.582	3082218.666	938.775	5/8" IRON ROD SET W/ CAP STAMPED "LJA SURVEY"

3. REMOVE ROOT BALLS OF TREES AND BACKFILL WITH BORROW MATERIAL.
4. ALL UNDERGROUND INFORMATION SHOWN HEREON IS TAKEN FROM EXIST SURFACE FEATURES AND/OR RECORD DRAWINGS. CONTRACTOR IS RESPONSIBLE TO CALL 811 AND LOCATE HORIZONTALLY AND VERTICALLY ANY UNDERGROUND UTILITIES PRIOR TO START CONSTRUCTION.
5. BACKFILL ALL REMOVED FENCE POSTS AND COMPACT TO 95% STANDARD PROCTOR DENSITY PER ASTM D698.
6. UPON PROJECT COMPLETION AND FINAL STABILIZATION, ALL SILT FENCE SHALL BE REMOVED AND DISPOSED OF.

KEY NOTES:

(1) CLEAR AND GRUB AS REQUIRED WITHIN LIMITS OF CONSTRUCTION. IF TREES GREATER THAN 2" CALIPER ARE ENCOUNTERED, OBTAIN APPROVAL FROM ENGINEER PRIOR TO DEMOLISHING. REFER TO EROSION CONTROL SHEET FOR LIMITS OF CONSTRUCTION.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

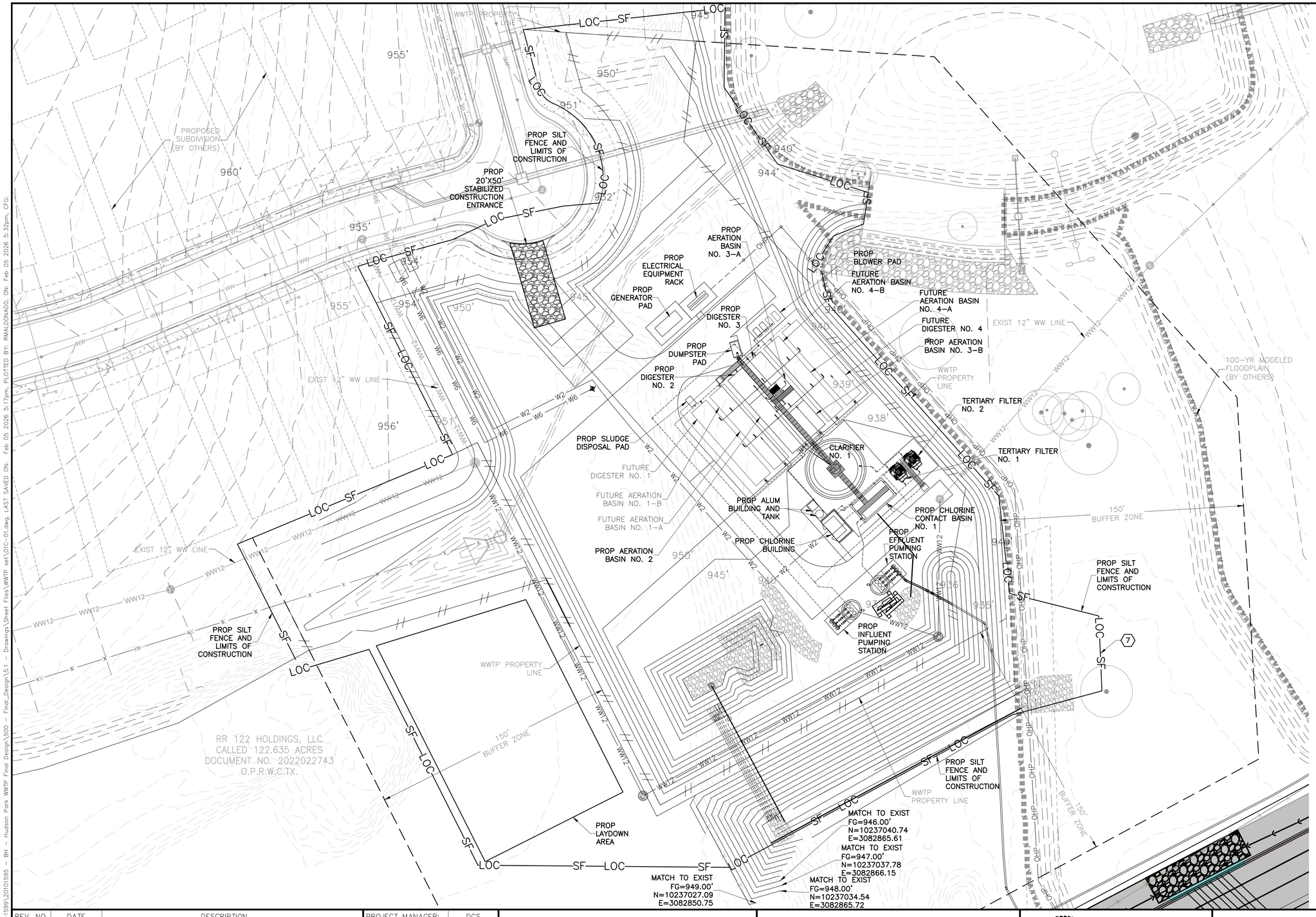
CIVIL - EXISTING SITE AND DEMOLITION PLAN

DATE: FEBRUARY 2026

SCALE: 1" = 40'

DRAWING: 01X-01

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01X-01.dwg, LAST SAVED ON: Oct 09 2025 4:09pm, PLOTTED BY: RMALDONADO, ON: Feb 10 2026 11:57am, CFG:



LEGEND:

- 945' EXIST NG
- 945' PROPOSED CONTOURS (BY OTHERS)
- 945' PROPOSED CONTOURS
- LOC—SF PROPOSED SILT FENCE AND LIMITS OF CONSTRUCTION
- STABILIZED CONSTRUCTION ENTRANCE

KEY NOTES:

1. REMOVE STABILIZED CONSTRUCTION ACCESS UPON COMPLETION OF PROJECT. RESTORE EXIST ACCESS ROAD TO EQUAL OR BETTER THAN EXIST CONDITION. REMOVE MUD TRACKED ON TO EXIST ACCESS ROAD. NO SEPARATE PAY.
2. A VEHICLE WASH-DOWN AREA MAY BE LOCATED BY THE CONTRACTOR TO FACILITATE THE PROJECT. WHILE UTILIZING THE WASH-DOWN AREA, THE CONTRACTOR SHALL PROTECT THE DRAINAGE FEATURES WHERE THE WASH-DOWN WATER IS DIRECTED AS PER PPP TEXT. THE LOCATION OF THE WASH-DOWN IS AT THE CONTRACTOR'S OPTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL FACILITIES INDICATED ON THIS PLAN.
4. THE CONTRACTOR SHALL CONSTRUCT SILT BARRIERS INDICATED ON THIS PLAN IN ADDITION TO CONFORMING WITH ALL ITEMS DISCUSSED IN THE WRITTEN STORMWATER POLLUTION PREVENTION PLAN TEXT. PLAN SHALL FOLLOW THE BEST MANAGEMENT PRACTICES.
5. UPON PROJECT COMPLETION, THE ENTIRE DISTURBED AREA SHALL BE SEEDED.
6. UPON PROJECT COMPLETION AND FINAL STABILIZATION, ALL SILT FENCE SHALL BE REMOVED AND DISPOSED OF.
7. SILT FENCE SHALL BE INSTALLED AS SHOWN IN PLANS AT END OF OUTFALL PIPE TO PREVENT SILT FROM ENTERING THE EXISTING WATERWAY.
8. CONTRACTOR SHALL COORDINATE WITH ADJACENT SUBDIVISION CONTRACTOR TO RECEIVE APPROXIMATELY 9,430 CY OF SPOIL MATERIAL RESULTING FROM EXCAVATION IN THE SUBDIVISION PROJECT AND UTILIZE IT TO ACHIEVE PROPOSED FINISHED GRADE ELEVATIONS ON THE WWTP SITE. CONTRACTOR SHALL ALSO COORDINATE WITH ADJACENT 10" FORCEMAIN CONTRACTOR TO RECEIVE APPROXIMATELY 2,542 CY OF SPOIL MATERIAL RESULTING FROM EXCAVATION IN THE 10" EFFLUENT FORCEMAIN PROJECT AND UTILIZE IT TO ACHIEVE PROPOSED FINISHED GRADE ELEVATIONS ON THE WWTP SITE.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

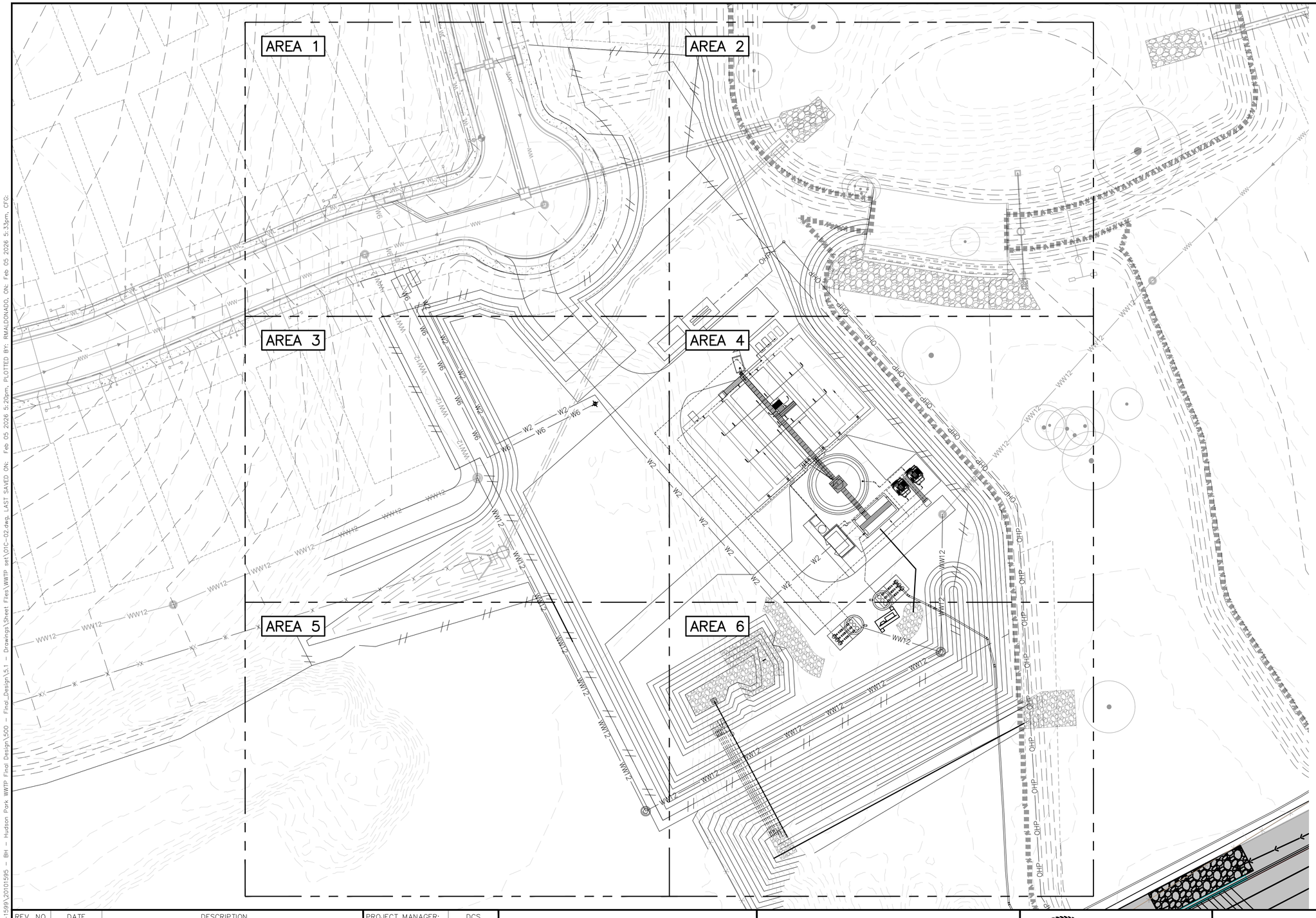
CIVIL - PROPOSED SITE AND EROSION CONTROL PLAN

DATE: FEBRUARY 2026

SCALE: 1" = 30'

DRAWING: 01C-01

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-01.dwg, LAST SAVED ON: Feb 05 2026 5:17pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:32pm, CFG:



0 30 60

SCALE : 1" = 30'

NOTES: (APPLICABLE TO 01C-01 THROUGH 01C-14)

1. CONTRACTOR SHALL REDIRECT OR SEQUENCE HIS WORK SUCH THAT OFF-SITE AND ON-SITE STORMWATER IS ROUTED AROUND PROPOSED WORK AS REQUIRED.
2. ALL UNDERGROUND INFORMATION SHOWN HERE IS TAKEN FROM EXISTING SURFACE FEATURES AND AVAILABLE RECORD DRAWINGS. ENGINEER DOES NOT REPRESENT IN ANY FORM THAT ALL UNDERGROUND INFORMATION IS SHOWN THAT EXISTS ON THE SITE. CONTRACTOR SHALL EXERCISE CAUTION WHILE EXCAVATING. NO SEPARATE PAY.
3. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SECURE HIS EQUIPMENT AND MATERIALS DURING CONSTRUCTION USING TEMPORARY SECURITY FENCING AND/OR OTHER NECESSARY MEASURES.
4. SLOPE FINISHED GRADE AWAY FROM SLABS, SIDEWALKS, AND PAVING AT 4:1 SLOPES (MAX) TO NATURAL GROUND UNLESS OTHERWISE SPECIFIED ON THE PLANS.
5. CONTRACTOR SHALL DISPOSE OF ALL CUT AND SPOIL MATERIALS ON-SITE AND USE AS FILL BY ADJUSTING FINISHED GRADES WHERE NEEDED. CONTRACTOR SHALL ABIDE BY GEOTECH REPORT RECOMMENDATIONS.
6. ALL DIMENSIONS ARE MEASURED PARALLEL OR PERPENDICULAR TO EXISTING OR PROPOSED FACILITIES.
7. CONTRACTOR SHALL ADJUST FINISHED GRADE ELEVATIONS TO ACHIEVE DRAINAGE PLAN, AS APPROVED BY ENGINEER.
8. INSTALL 4" OF TOP SOIL OBTAINED FROM ON-SITE IN AREAS TO BE GRADED DUE TO CONSTRUCTION ACTIVITIES.
9. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, CONTRACTOR SHALL JET ALL PROPOSED AND EXISTING GRAVITY DRAIN LINES; AND PERFORM A TELEVISED INSPECTION OF THE LINES. ACCESS LINES VIA EXISTING AND PROPOSED MANHOLES SHOWN ON CIVIL SHEETS. SUBMIT CD TO ENGINEER WITH SUMMARY REPORT FOR REVIEW AND APPROVAL. CONTRACTOR SHALL REMOVE HIS CONSTRUCTION DEBRIS FROM LINES AS REQUIRED. LINES SHALL BE RETELEVISED UNTIL DEMONSTRATED TO BE FREE OF CONSTRUCTION DEBRIS.
10. DEFLECT JOINTS TO ACHIEVE USE OF CALLED BEND.
11. HORIZONTAL BENDS ARE SHOWN FOR BIDDING QUANTITY PURPOSES FOR ROUTE BASED ON RECORD DRAWINGS. IF CONTRACTORS FIELD VERIFICATION REQUIRES ADJUSTMENTS TO THE QUANTITY OF HORIZONTAL BENDS THE CONTRACTOR WILL BE COMPENSATED FOR THE ADDITIONAL BENDS. ENGINEER SHALL REVIEW AND APPROVE ANY CHANGES PRIOR TO CONTRACTOR INSTALLING.
12. DO NOT EXCEED 80% OF MANUFACTURER'S MAXIMUM PIPE JOINT DEFLECTION. ALL BELOW GRADE 4"ø PIPE AND LARGER SHALL BE DUCTILE IRON PIPE, 150 PSI PRESSURE CLASS (MIN), SHALL HAVE RESTRAINED JOINTS, AND 3 FT COVER (MIN). ALL PIPE LESS THAN 4"ø SHALL BE PVC RATED AT 200 PSI; AND HAVE 1 FT COVER (MIN).
13. CONTRACTOR SHALL VERTICALLY DEFLECT PIPING WHERE REQUIRED UTILIZING ALL NECESSARY FITTINGS AND APPURTENANCES AS REQUIRED. NO SEPARATE PAY.
14. CONTRACTOR TO PROVIDE FITTINGS WHERE REQUIRED FOR VERTICAL DEFLECTIONS DUE TO SITE TOPOGRAPHY. NO SEPARATE PAY.
15. ALL EXISTING AND PROP ABOVE GRADE PROCESS PIPING CONSTRUCTED OR ON BASINS MODIFIED BY THIS PROJECT SHALL BE LABELED, PER THIS DRAWING, WITH PAINTED BLACK STENCILED LETTERING. SEE SPECIFICATIONS FOR ADDITIONAL SIGNAGE DETAILS.
16. RESTORE ALL SWALES DISTURBED BY CONSTRUCTION ACTIVITIES TO DRAIN UPON COMPLETION OF WORK.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

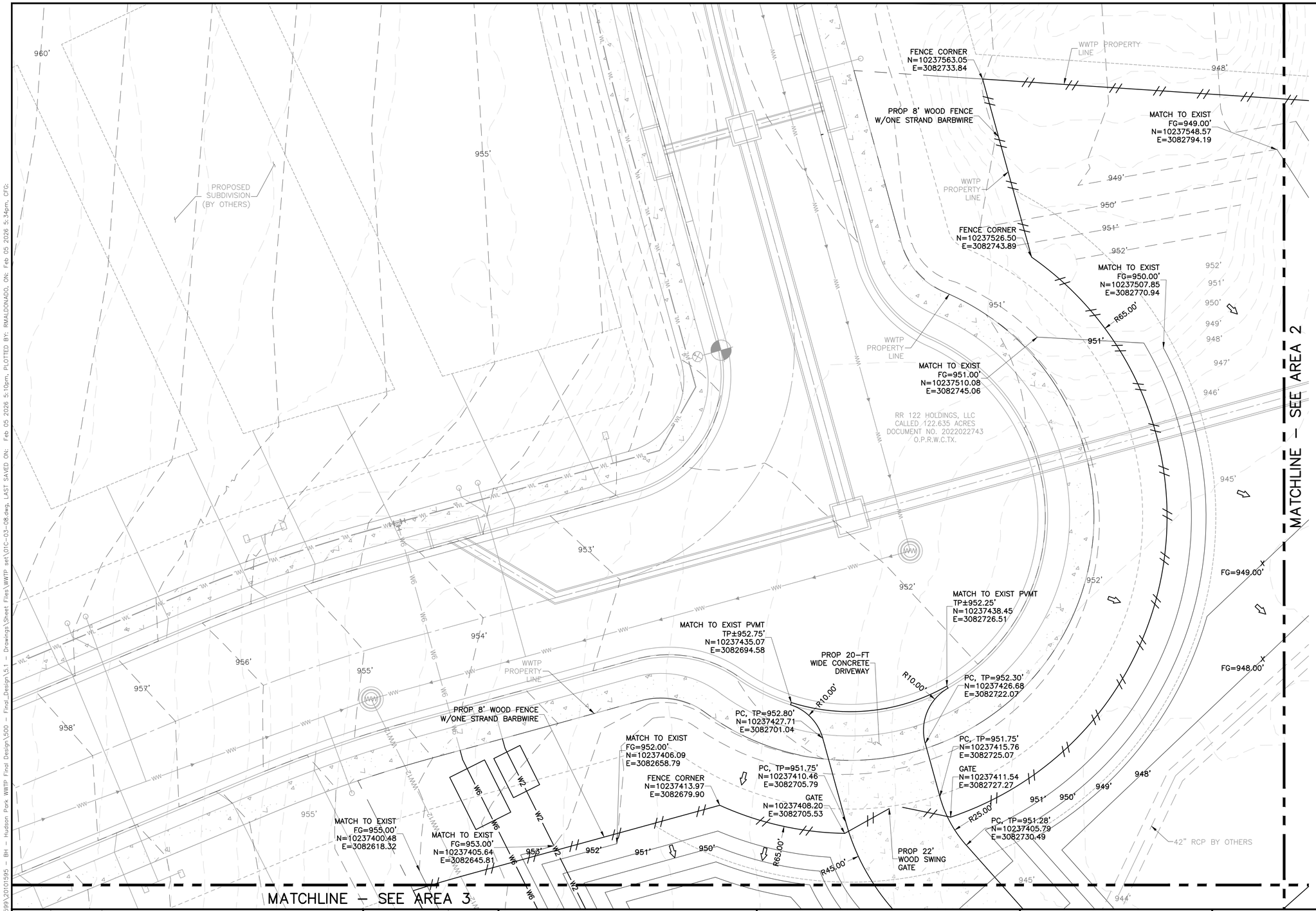
CIVIL - SITE AND YARD PIPING INDEX MAP

DATE: FEBRUARY 2026

SCALE: 1" = 30'

DRAWING: 01C-02

FILENAME: Z:\Projects 1501-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-02.dwg, LAST SAVED ON: Feb 05 2026 5:20pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:33pm, CFG:



NOTES:

1. NOTES ARE SHOWN ON 01C-02 FOR THIS DRAWING.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - HORIZONTAL CONTROL, PAVING, AND GRADING PLAN - AREA NO. 1

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-03

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\51 - Drawings\Sheet Files\WWTP set\01C-03-08.dwg, LAST SAVED ON: Feb 05 2026 5:10pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:34pm, CFG:

MATCHLINE – SEE AREA 1

MATCH TO EXIST
FG=946.00'
N=10237574.07
E=3082811.18

MATCH TO EXIST
FG=945.00'
N=10237567.58
E=3082816.01

MATCH TO EXIST
FG=947.00'
N=10237574.83
E=3082805.77

FENCE CORNER
N=10237557.76
E=3082813.85

MATCH TO EXIST
FG=948.00'
N=10237554.36
E=3082798.13

WWTP PROPERTY LINE

X
945.00'

FENCE CORNER
N=10237495.89
E=3082806.27

PROP 8' WOOD FENCE
W/ONE STRAND BARBWIRE

SERVICE POLE
(LOCATION TO BE COORDINATED WITH ELECTRICAL PROVIDER)
N=10237443.45
E=3082866.23

42" RCP (BY OTHERS)

WWTP PROPERTY LINE

FENCE CORNER
N=10237425.45
E=3082868.85

SERVICE POLE
(LOCATION TO BE COORDINATED WITH ELECTRICAL PROVIDER)
N=10237422.88
E=3082843.08

TP=947.30'
N=10237400.42
E=3082826.83

TP=947.33'
N=10237409.39
E=3082818.86

ELECTRICAL EQUIPMENT RACK PER ELECTRICAL SHEETS

TP=946.95'
N=10237415.41
E=3082849.72

TP=946.75'
N=10237400.46
E=3082863.01

MATCH TO EXIST
FG=944.00'
N=10237457.22
E=3082918.79

MATCH TO EXIST
FG=943.00'
N=10237454.23
E=3082918.31

MATCH TO EXIST
FG=942.00'
N=10237451.22
E=3082917.84

MATCH TO EXIST
FG=941.00'
N=10237448.21
E=3082917.37

RR 122 HOLDINGS, LLC
CALLED 122.635 ACRES
DOCUMENT NO. 2022022743
O.P.R.W.C.TX.

FENCE CORNER
N=10237400.44
E=3082877.16

MATCHLINE – SEE AREA 4

0 10 20
SCALE : 1" = 10'

LEGEND:

- 945' EXIST NG
- 945' PROPOSED CONTOURS (BY OTHERS)
- 945' PROPOSED CONTOURS
- PROPOSED CONCRETE PAVEMENT / SIDEWALK. REFER TO SHEET 00C–02 FOR DETAILS.
- PROPOSED ASPHALT PAVEMENT. REFER TO SHEET 00C–02 FOR DETAILS.
- CRUSHED LIMESTONE. REFER TO SHEET 02P–01, DETAIL 2
- 6"ø RIP–RAP @ 12" DEPTH WITH GEOTEXTILE UNDERLAYMENT
- GRADE TO DRAIN UNIFORMLY TO MATCH PROP FINISHED GRADE.
- X 871.4 EXISTING ELEVATION
- X 871.4 PROPOSED FINISHED GRADE ELEVATION (SLOPE BACK TO NATURAL GROUND @ 4:1 MAX)
- PROP SWALE (3:1 SIDE SLOPES MAX)

NOTES:

1. NOTES ARE SHOWN ON 01C–02 FOR THIS DRAWING.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - HORIZONTAL CONTROL, PAVING, AND GRADING PLAN - AREA NO. 2

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-04

FILENAME: Z:\Projects 1501-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-03-08.dwg, LAST SAVED ON: Feb 05 2026 5:10pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:35pm, CFG:

MATCHLINE – SEE AREA 1

FENCE CORNER
N=10237396.44
E=3082617.00

PC, TP=951.23'
N=10237392.50
E=3082715.53

R45.00'

GENERATOR PAD
PER DWGS 02P-11
AND 02S-01

TP=947.34'
N=10237381.30
E=3082782.73

PC, TP=948.30'
N=10237370.65
E=3082761.70

TP=947.30'
N=10237370.09
E=3082792.69

R25.00'

20' PROP CONCRETE DRIVEWAY

950.00'

RR 122 HOLDINGS, LLC
CALLED 122.635 ACRES
DOCUMENT NO. 2022022743
O.P.R.W.C.TX.

EXIST 12" WW LINE

FENCE CORNER
N=10237310.57
E=3082679.15

WWTP PROPERTY LINE

FENCE CORNER
N=10237303.14
E=3082663.86

42" RCP (BY OTHERS)

MATCH TO EXIST
FG=956.00'
N=10237273.84
E=3082604.40

MATCH TO EXIST
FG=956.00'
N=10237262.73
E=3082581.89

EXIST 12" WW LINE

MATCH TO EXIST
FG=955.00'
N=10237259.24
E=3082584.37

MATCH TO EXIST
FG=954.00'
N=10237247.93
E=3082583.21

MATCH TO EXIST
FG=953.00'
N=10237237.94
E=3082585.23

MATCH TO EXIST
FG=952.00'
N=10237237.97
E=3082593.11

CONCRETE HEADWALL
(BY OTHERS)
N=10237248.46
E=3082685.06

7-FT STORM MANHOLE
RIM=947.50'
FG=947.00'
(BY OTHERS)

12" WW LINE. REFER
TO YARD PIPING
SHEETS.

FENCE CORNER
N=10237226.17
E=3082721.73

MATCHLINE – SEE AREA 4

MATCHLINE – SEE AREA 5

SCALE : 1" = 10'

LEGEND:

- 945' EXIST NG
- 945' PROPOSED CONTOURS (BY OTHERS)
- 945' PROPOSED CONTOURS
- PROPOSED CONCRETE PAVEMENT / SIDEWALK. REFER TO SHEET 00C-02 FOR DETAILS.
- PROPOSED ASPHALT PAVEMENT. REFER TO SHEET 00C-02 FOR DETAILS.
- CRUSHED LIMESTONE. REFER TO SHEET 02P-01, DETAIL 2
- 6"ø RIP-RAP @ 12" DEPTH WITH GEOTEXTILE UNDERLAYMENT
- GRADE TO DRAIN UNIFORMLY TO MATCH PROP FINISHED GRADE.
- X 871.4 EXISTING ELEVATION
- X 871.4 PROPOSED FINISHED GRADE ELEVATION (SLOPE BACK TO NATURAL GROUND @ 4:1 MAX)
- PROP SWALE (3:1 SIDE SLOPES MAX)

NOTES:

1. NOTES ARE SHOWN ON 01C-02 FOR THIS DRAWING.

KEY NOTES:

(1) CONTRACTOR SHALL ADJUST EXIST MANHOLE RIM ELEVATION AS NECESSARY TO BE 6" ABOVE FINISHED GROUND.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - HORIZONTAL CONTROL, PAVING, AND GRADING PLAN - AREA NO. 3

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-05

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-03-08.dwg, LAST SAVED ON: Feb 05 2026 5:10pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:35pm, CFG:

MATCHLINE – SEE AREA 2

MATCHLINE – SEE AREA 3

MATCHLINE – SEE AREA 6

PROP 20-FT WIDE CONCRETE DRIVEWAY

TP=946.73'
N=10237381.31
E=3082844.48

DUMPSTER PAD PER DWG 02P-06
N=10237373.74
E=3082839.67

TP=946.74'
N=10237376.61
E=3082838.81

TP=946.75'
N=10237375.43
E=3082834.83

PC, TP=946.95'
N=10237368.56
E=3082797.00

TP=946.61'
N=10237363.66
E=3082842.68

TP=946.61'
N=10237358.38
E=3082836.73

PC, TP=946.75'
N=10237350.83
E=3082811.43

R10.00'

FG=946.61'
N=10237349.10
E=3082826.28

PC, TP=946.71'
N=10237345.94
E=3082805.46

N=10237348.67
E=3082833.35

R25.01'

SLUDGE DISPOSAL PAD PER DWG 02P-06
N=10237334.88
E=3082814.14

N=10237332.23
E=3082811.15

PC, TP=946.54'
N=10237317.59
E=3082808.84

TP=946.35'
N=10237299.55
E=3082824.82

TP=946.35'
N=10237286.35
E=3082809.85

CONCRETE TO ASPHALT PAVEMENT TRANSITION

20' PROP ASPHALT DRIVEWAY

TP=946.73'
N=10237395.97
E=3082860.99

TP=946.61'
N=10237387.00
E=3082868.97

FG=946.61'
N=10237373.66
E=3082853.95

TP=946.61'
N=10237372.34
E=3082852.45

BLOWER PAD PER DWG 02P-07

FG=945.30'
N=10237296.76
E=3082872.78

FG=945.30'
N=10237293.95
E=3082869.61

CLARIFIER NO. 1 PER DWG 02P-01
FG=944.50'
N=10237294.29
E=3082899.74

FG=944.50'
N=10237275.67
E=3082885.85

FF=944.50'
TP=944.42'
N=10237271.84
E=3082881.54

TP=944.40'
N=10237268.85
E=3082878.17

FG=944.50'
N=10237265.94
E=3082894.47

FG=944.50'
N=10237269.76
E=3082898.77

FF=944.50'
TP=944.42'
N=10237248.66
E=3082902.13

TP=944.42'
N=10237239.71
E=3082910.08

PC, TP=944.42'
N=10237242.47
E=3082875.58

TP=944.40'
N=10237237.17
E=3082906.32

R25.00'

PC, TP=944.43'
N=10237240.38
E=3082910.88

FG=945.30'
N=10237324.83
E=3082904.37

FG=945.30'
N=10237321.34
E=3082900.44

FG=944.95'
N=10237313.20
E=3082947.64

FG=944.83'
N=10237296.75
E=3082929.32

TERTIARY FILTERS PER DWG 02P-03
FG=944.85'

4.65'

5.02'

8.50'

FG=944.95'
N=10237296.20
E=3082962.93

TP=944.85'
N=10237287.49
E=3082963.89

N=10237278.55
E=3082935.77

TP=944.60'
8" DIP
FL=942.81'
N=10237259.32
E=3082932.19

12' PROP ASPHALT DRIVEWAY

FG=944.25'
N=10237264.53
E=3082927.57

8" DIP CULVERT
FL=942.87' (LOW POINT)
N=10237266.75
E=3082925.59

FG=944.49'
N=10237252.47
E=3082914.14

FG=944.50'
N=10237256.30
E=3082910.73

TP=944.60'
N=10237250.35
E=3082940.16

8" DIP CULVERT @0.62%

1-8" 45° BEND
FL=942.66'
N=10237242.08
E=3082947.50

TOS=945.40'
N=10237238.63
E=3082935.33

TOS=945.40'
N=10237229.79
E=3082943.45

FENCE CORNER
N=10237387.29
E=3082886.75

EXIST 12" WW LINE

RR 122 HOLDINGS, LLC
CALLED 122.635 ACRES
DOCUMENT NO. 2022022743
O.P.R.W.C.TX.

WWTP PROPERTY LINE

EXIST MANHOLE
RIM=944.81'
FG=944.81'
REFER TO YARD PIPING SHEETS FOR PIPE FLOWLINES
N=10237275.74
E=3082963.94

FENCE CORNER
N=10237282.57
E=3082979.77

100-YR MODELED FLOODPLAIN (BY OTHERS)

TP=944.85'
N=10237278.52
E=3082971.87

FENCE CORNER
N=10237228.92
E=3082970.59

0 10 20
SCALE : 1" = 10'

LEGEND:

- 945' EXIST NG
- 945' PROPOSED CONTOURS (BY OTHERS)
- 945' PROPOSED CONTOURS
- PROPOSED CONCRETE PAVEMENT / SIDEWALK. REFER TO SHEET 00C-02 FOR DETAILS.
- PROPOSED ASPHALT PAVEMENT. REFER TO SHEET 00C-02 FOR DETAILS.
- CRUSHED LIMESTONE. REFER TO SHEET 02P-01, DETAIL 2
- 6"ø RIP-RAP @ 12" DEPTH WITH GEOTEXTILE UNDERLAYMENT
- GRADE TO DRAIN UNIFORMLY TO MATCH PROP FINISHED GRADE.
- X 871.4 EXISTING ELEVATION
- X 871.4 PROPOSED FINISHED GRADE ELEVATION (SLOPE BACK TO NATURAL GROUND @ 4:1 MAX)
- PROP SWALE (3:1 SIDE SLOPES MAX)

NOTES:

1. NOTES ARE SHOWN ON 01C-02 FOR THIS DRAWING.

KEY NOTES:

1. DIGESTER NO. 3 N:10237366.60 E:3082853.53
2. DIGESTER NO. 2 N:10237348.67 E:3082833.35
3. AERATION BASIN NO. 2 N:10237303.81 E:3082873.20
4. AERATION BASIN NO. 3-B N:10237321.75 E:3082893.39
5. CHLORINE BUILDING PER DWG 02P-10. FG=944.50'
6. CHLORINE CONTACT BASIN NO. 1 PER DWG 02P-01. FG=942.87' CHLORINE CONTACT BASIN IS A LOW POINT WITHIN CRUSHED LIMESTONE PAD. MAINTAIN 1-FT MINIMUM FLAT PERIMETER AT FINISHED GROUND ELEVATION AROUND CHLORINE CONTACT BASIN. CONTRACTOR SHALL SLOPE CRUSHED LIMESTONE FROM CHLORINE CONTACT BASIN FINISHED GROUND TO PROPOSED ADJACENT FINISHED GRADES @ 2:1 MAX SLOPE.
7. 8" DUCTILE IRON PIPE FLOWLINE SHALL MATCH AND EXTEND TO CHLORINE CONTACT BASIN FINISHED GROUND ELEVATION (LOW POINT) TO DRAIN STORM WATER AROUND EQUIPMENT.
8. MAINTAIN 1-FT MINIMUM FLAT PERIMETER AT FINISHED GROUND ELEVATION AROUND PROPOSED EQUIPMENT. CONTRACTOR SHALL SLOPE CRUSHED LIMESTONE FROM EQUIPMENT FINISHED GROUND TO PROPOSED ADJACENT FINISHED GRADES @ 2:1 MAX SLOPE.
9. SIDEWALK SHALL BE CONSTRUCTED WITH 1.5% CROSS SLOPE.
10. CONTRACTOR SHALL ADJUST MANHOLE RIM ELEVATION IF NECESSARY TO MATCH PROPOSED GRADE OF ASPHALT PAVEMENT.
11. CENTER OF EFFLUENT PUMPING STATION WET WELL. TOS=945.50' N:10237222.77 E:3082926.93
11. 4"T CONCRETE PAD. SEE DETAIL X ON DRAWING XX-XX FOR METAL STAIR LANDING PAD.
12. ALUM BUILDING AND TANK PER DWG 02P-09.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - HORIZONTAL CONTROL, PAVING, AND GRADING PLAN - AREA NO. 4

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-06

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-03-08.dwg, LAST SAVED ON: Feb 05 2026 5:10pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:36pm, CFG:

MATCHLINE – SEE AREA 3

FENCE CORNER
N=10237212.02
E=3082560.86

FENCE CORNER
N=10237182.69
E=3082575.66

GATE
N=10237188.10
E=3082593.84

PROP 22'
WOOD SWING
GATE

GATE
N=10237194.38
E=3082614.93

956'
955'
954'
953'
952'
951'
950'
949'

RR 122 HOLDINGS, LLC
CALLED 122.635 ACRES
DOCUMENT NO. 2022022743
O.P.R.W.C.TX.

WWTP
PROPERTY
LINE

12" WW LINE. REFER
TO YARD PIPING
SHEETS.

PROP 4–FT MANHOLE
RIM=950.50'
FG=950.00'
REFER TO YARD PIPING
SHEETS FOR PIPE FLOWLINES
N=10237093.06
E=3082781.19

FENCE CORNER
N=10237087.39
E=3082791.75

947'
948'
949'
950'
951'
952'

X
951.00'

SWALE
@1.27%
SLOPE

4.50'

BEGIN SWALE
FL=943.40'
N=10237182.12
E=3082779.86

MATCHLINE – SEE AREA 6

0 10 20
SCALE : 1" = 10'

LEGEND:

- 945' EXIST NG
- 945' PROPOSED CONTOURS (BY OTHERS)
- 945' PROPOSED CONTOURS
- PROPOSED CONCRETE PAVEMENT / SIDEWALK. REFER TO SHEET 00C–02 FOR DETAILS.
- PROPOSED ASPHALT PAVEMENT. REFER TO SHEET 00C–02 FOR DETAILS.
- CRUSHED LIMESTONE. REFER TO SHEET 02P–01, DETAIL 2
- 6"ø RIP–RAP @ 12" DEPTH WITH GEOTEXTILE UNDERLAYMENT
- GRADE TO DRAIN UNIFORMLY TO MATCH PROP FINISHED GRADE.
- X 871.4 EXISTING ELEVATION
- X 871.4 PROPOSED FINISHED GRADE ELEVATION (SLOPE BACK TO NATURAL GROUND @ 4:1 MAX)
- PROP SWALE (3:1 SIDE SLOPES MAX)

NOTES:

1. NOTES ARE SHOWN ON 01C–02 FOR THIS DRAWING.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS
HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER
TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED
PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - HORIZONTAL CONTROL,
PAVING, AND GRADING PLAN -
AREA NO. 5

DATE:
FEBRUARY 2026

SCALE:
1" = 10'

DRAWING:
01C-07

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-03-08.dwg, LAST SAVED ON: Feb 05 2026 5:10pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:37pm, CFG:

MATCHLINE – SEE AREA 4

MATCHLINE – SEE AREA 5

PC, SWALE
FL=942.49'
N=10237218.96
E=3082843.08

SWALE @1.27% SLOPE

DETENTION POND
N=10237214.31
E=3082854.96

R15.00'

4.50'

6.00'

END SWALE
FL=941.90'
N=10237195.20
E=3082859.13

DETENTION POND
N=10237186.40
E=3082871.80

PC, SWALE
FL=942.18'
N=10237213.75
E=3082863.47

N=10237209.54
E=3082871.27

SWALE
FL=942.00'
N=10237202.07
E=3082870.52

PROP ASPHALT DRIVEWAY

TP=944.15'
N=10237201.53
E=3082885.21

938'

N=10237200.04
E=3082878.75

PC, SWALE
FL=942.07'
N=10237189.98
E=3082877.82

N=10237186.75
E=3082891.45

R20.00'

N=10237175.13
E=3082888.46

BEGIN SWALE
8" DIP
FL=942.50'
N=10237215.65
E=3082945.94

N=10237207.55
E=3082938.40

TOS=945.40'
N=10237192.01
E=3082900.86

PC, SWALE
FL=942.41'
N=10237202.35
E=3082938.41

N=10237197.16
E=3082941.41

PC, SWALE
FL=942.48'
N=10237214.45
E=3082945.87

R15.00'

PC, SWALE
FL=942.22'
N=10237183.00
E=3082904.95

SWALE @0.50% SLOPE

WW12

949' 947' 945' 943' 941'
950' 948' 946' 944' 942'

934' 935' 936' 937' 938' 939' 940'

OHP

FENCE CORNER
N=10237185.26
E=3082973.23
MATCH TO EXIST
FG=938.00'
N=10237160.29
E=3083013.31

MATCH TO EXIST
FG=937.00'
N=10237158.56
E=3083016.42

PROP CHANNEL
H=2'
FL=936.00 '
N=10237155.18
E=3083019.63

N=10237167.78
E=3083044.91

MATCH TO EXIST
FG=940.00'
N=10237163.75
E=3083007.09

N=10237145.74
E=3083046.24

MATCH TO EXIST
FG=939.00'
N=10237162.02
E=3083010.20

N=10237143.79
E=3083014.30

DETENTION POND
N=10237164.23
E=3082873.14

WWTP PROPERTY LINE

12" WW LINE. REFER TO YARD PIPING SHEETS.

MATCH TO EXIST
FG=943.00'
N=10237085.63
E=3082843.27

MATCH TO EXIST
FG=942.00'
N=10237084.57
E=3082847.61

MATCH TO EXIST
FG=941.00'
N=10237083.69
E=3082852.31

MATCH TO EXIST
FG=940.00'
N=10237083.06
E=3082857.46

SLOPE (TYP) 3:1

PROP 4-FT MANHOLE
RIM=949.00'
FG=948.50'
REFER TO YARD PIPING SHEETS FOR PIPE FLOWLINES
N=10237191.03
E=3082962.86

10" FM (BY OTHERS)

MATCH TO EXIST
FG=944.00'
N=10237086.73
E=3082838.99

DETENTION POND
N=10237127.07
E=3082804.24

STORMDRAIN OUTFALL PROTECTION PIPE PER DTL 508S-16 SHT 01C-16
14"⌀ DIP FL=939.00'
N=10237077.30
E=3082859.42

STORMDRAIN OUTFALL PROTECTION PIPE PER DTL 508S-16 SHT 01C-16
6"⌀ PVC FL=937.50'
N=10237077.09
E=3082868.51

STORMDRAIN OUTFALL PROTECTION PIPE PER DTL 508S-16 SHT 01C-16
21"⌀ RCP FL=938.00'
N=10237076.90
E=3082864.99

PROP CHANNEL
H=2'
FL=937.00'
N=10237070.86
E=3082863.27

MATCH TO EXIST
FG=940.00'
N=10237062.17
E=3082875.41

MATCH TO EXIST
FG=941.00'
N=10237058.85
E=3082874.69

MATCH TO EXIST
FG=942.00'
N=10237055.22
E=3082872.86

MATCH TO EXIST
FG=943.00'
N=10237051.26
E=3082869.83

MATCH TO EXIST
FG=944.00'
N=10237047.22
E=3082866.53

20'

10.86'

MATCH TO EXIST
FG=938.00'
N=10237067.28
E=3082885.12

MATCH TO EXIST
FG=939.00'
N=10237066.39
E=3082879.39

STORMDRAIN OUTFALL PROTECTION PIPE PER DTL 508S-16 SHT 01C-16
14"⌀ DIP FL=939.00'
N=10237078.33
E=3082861.33

MATCH TO EXIST
FG=945.00'
N=10237043.72
E=3082865.14

REFER TO SHEET 01C-01 FOR PROP CONTOURS MATCH TO EXIST LOCATION

RR 122 HOLDINGS, LLC
CALLED 122.635 ACRES
DOCUMENT NO. 2022022743
O.P.R.W.C.TX.

15' 3'

SCALE : 1" = 10'

LEGEND:

- 945' EXIST NG
- 945' PROPOSED CONTOURS (BY OTHERS)
- 945' PROPOSED CONTOURS
- PROPOSED CONCRETE PAVEMENT / SIDEWALK. REFER TO SHEET 00C-02 FOR DETAILS.
- PROPOSED ASPHALT PAVEMENT. REFER TO SHEET 00C-02 FOR DETAILS.
- CRUSHED LIMESTONE. REFER TO SHEET 02P-01, DETAIL 2
- 6"⌀ RIP-RAP @ 12" DEPTH WITH GEOTEXTILE UNDERLAYMENT
- GRADE TO DRAIN UNIFORMLY TO MATCH PROP FINISHED GRADE.
- X 871.4 EXISTING ELEVATION
- X 871.4 PROPOSED FINISHED GRADE ELEVATION (SLOPE BACK TO NATURAL GROUND @ 4:1 MAX)
- PROP SWALE (3:1 SIDE SLOPES MAX)

NOTES:

1. NOTES ARE SHOWN ON 01C-02 FOR THIS DRAWING.

KEY NOTES:

1. CENTER OF INFLUENT PUMPING STATION WET WELL.
   TOS=945.50'
   N:10237207.72
   E:3082909.54
2. TOS=945.50'
   N:10237200.99
   E:3082892.90

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

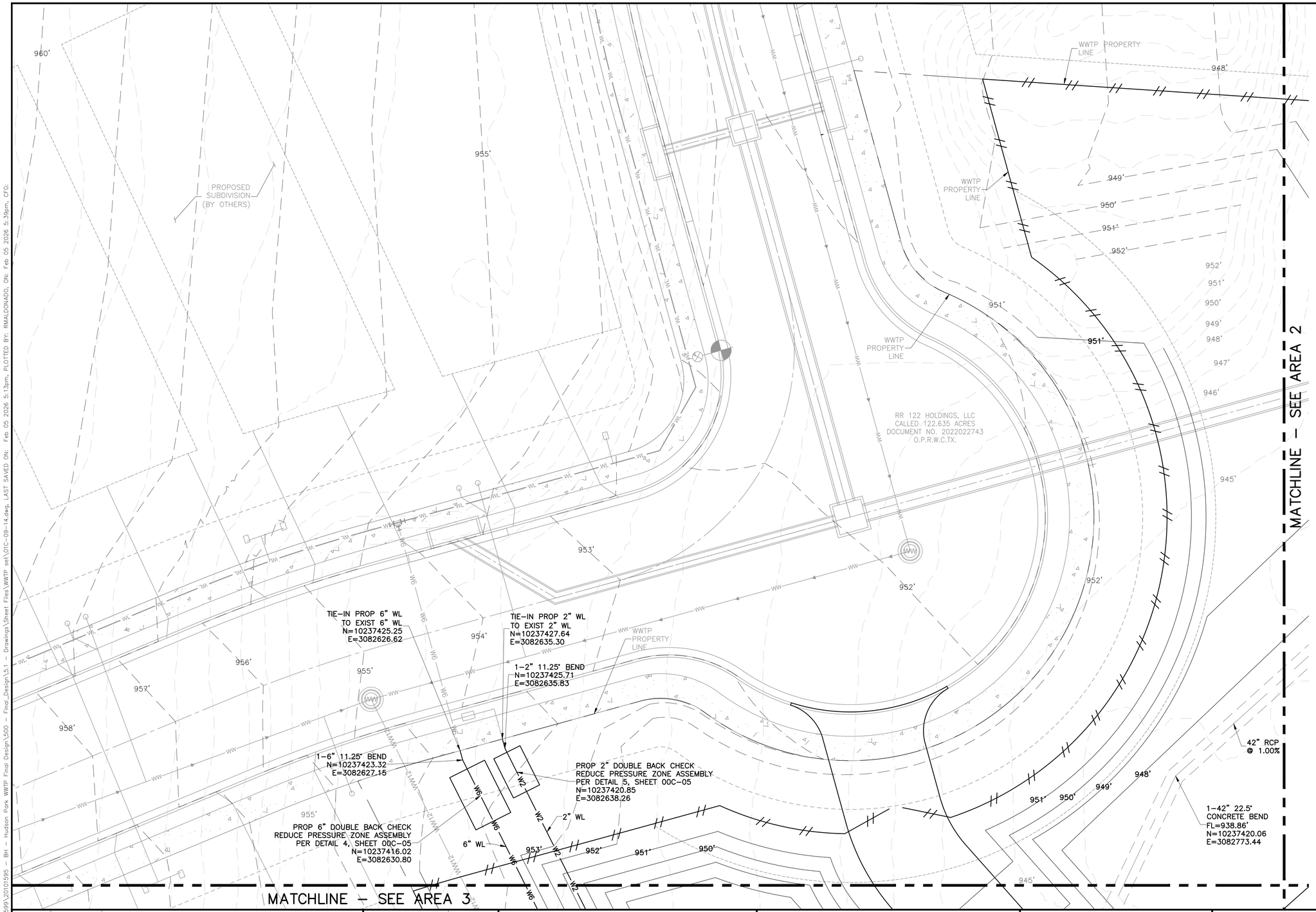
SITE IMPROVEMENTS

CIVIL - HORIZONTAL CONTROL, PAVING, AND GRADING PLAN - AREA NO. 6

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-08

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-03-08.dwg, LAST SAVED ON: Feb 05 2026 5:10pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:37pm, CFG:

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-09-14.dwg, LAST SAVED ON: Feb 05 2026 5:13pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:39pm, CFG:



0 10 20

SCALE : 1" = 10'

LEGEND:

945' EXIST NG

945' PROPOSED CONTOURS (BY OTHERS)

945' PROPOSED CONTOURS

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

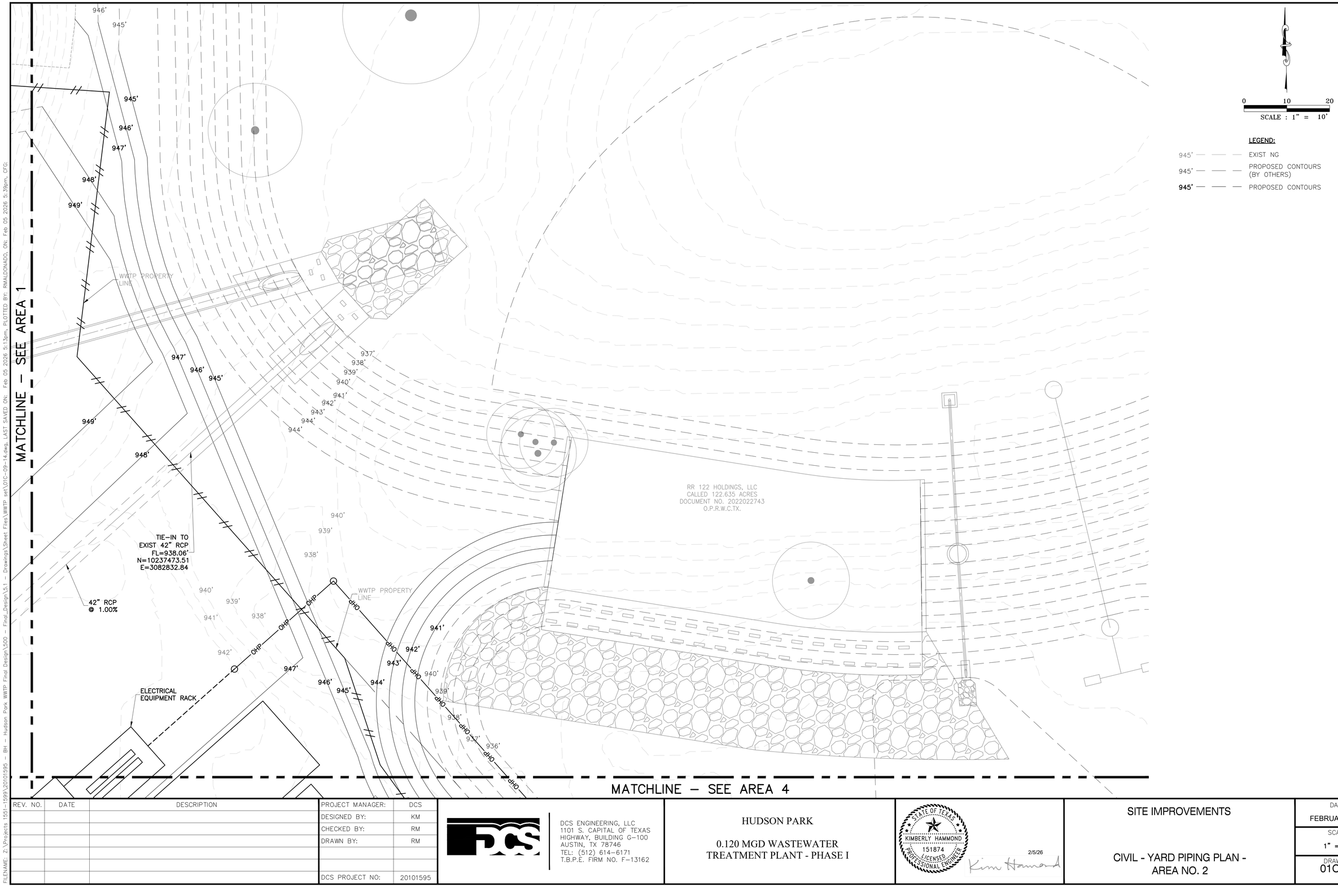
SITE IMPROVEMENTS

CIVIL - YARD PIPING PLAN - AREA NO. 1

DATE: FEBRUARY 2026

SCALE: 1" = 10'

DRAWING: 01C-09



REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - YARD PIPING PLAN - AREA NO. 2

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-10

FILENAME: Z:\Projects 1501-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-09-14.dwg, LAST SAVED ON: Feb 05 2026 5:13pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:39pm, CFG:

MATCHLINE – SEE AREA 1

MATCHLINE – SEE AREA 4

MATCHLINE – SEE AREA 5

2" WL

6" WL

EXIST 12" WW LINE

RR 122 HOLDINGS, LLC
CALLED 122.635 ACRES
DOCUMENT NO. 2022022743
O.P.R.W.C.TX.

WWTP PROPERTY LINE

1–6" 90° BEND
N=10237310.48
E=3082683.71

EXIST MANHOLE
12" FL=935.85'(W)
12" FL=934.35 (S)
N=10237298.09
E=3082677.75

CONCRETE HEADWALL
(BY OTHERS)
N=10237248.46
E=3082685.06

EXIST 12" WW LINE

1–2" 90° BEND
N=10237318.91
E=3082689.36

1–2" 90° BEND
1–2" 11.25° BEND
N=10237349.27
E=3082749.93

1 – 8" 90° BEND
℄=941.50'
N=10237325.63
E=3082786.67

8" FM
℄=941.50'

PROP FH
N=10237343.74
E=3082750.06

42" RCP
(BY OTHERS)

GENERATOR PAD

R25.00'

UTILITY CROSSING
12" WW FL=933.83'
42" RCP FL=940.60'
CLEARANCE ±5.44'
N=10237259.94
E=3082697.00

7–FT STORM MANHOLE
(BY OTHERS)
N=10237252.33
E=3082693.37

PROP 12" WW
LINE @ 1.22%

0 10 20
SCALE : 1" = 10'

LEGEND:

945' EXIST NG

945' PROPOSED CONTOURS (BY OTHERS)

945' PROPOSED CONTOURS

KEY NOTES:

(1) ADJUST PROP WL ELEVATION AS NEEDED. MAINTAIN 2–FT VERTICAL CLEARANCE FROM STORM SEWER AND 3.5–FT COVER MIN.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED
PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - YARD PIPING PLAN - AREA NO. 3

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-11

FILENAME: Z:\Projects 1551-1599\20101595 – BH – Hudson Park WWTP Final Design\500 – Final_Design\5.1 – Drawings\Sheet Files\WWTP set\01C–09–14.dwg, LAST SAVED ON: Feb 05 2026 5:13pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:40pm, CFG:

MATCHLINE – SEE AREA 2

MATCHLINE – SEE AREA 3

MATCHLINE – SEE AREA 6

BLOWER PAD

1 – 12" 90° BEND
℄=953.58'
N=10237370.19
E=3082852.35

1 – 12" 90° BEND
℄=953.58'
N=10237373.54
E=3082849.37

1 – 8" 90° BEND
℄=941.50'
N=10237371.36
E=3082837.33

ELECTRICAL EQUIPMENT RACK

GENERATOR PAD

DUMPSTER PAD

12" PA
℄=953.58'

8" FM
℄=941.50'

FUTURE DIGESTER NO. 4

FUTURE AERATION BASIN NO. 4–B

FUTURE AERATION BASIN NO. 4–A

1 – 8"X4" TEE
W/ PLUG
FL=939.77'
N=10237346.07
E=3082827.71

DIGESTER NO. 3

DIGESTER NO. 2

SLUDGE DISPOSAL PAD

8" DR @ 0.40% SLOPE

FUTURE AERATION BASIN NO. 1–B

1 – 8"X4" TEE
W/ PLUG
FL=939.71'
N=10237336.10
E=3082816.50

AERATION BASIN NO. 2

AERATION BASIN NO. 3–A

AERATION BASIN NO. 3–B

1 – 8"X4" TEE
FL=939.69'
N=10237333.06
E=3082813.09

FUTURE AERATION BASIN NO. 1–A

FUTURE DIGESTER NO. 1

1 – 8" 90° BEND
FL=939.62'
N=10237321.82
E=3082800.44

1 – 12"X12" TEE
℄=955.00'
N=10237315.54
E=3082890.92

1 – 8"X4" TEE
FL=939.63'
N=10237315.10
E=3082892.31

1 – 12"X12" TEE
N=10237295.66
E=3082928.80

1 – 12" 45° BEND
N=10237295.68
E=3082922.12

1 – 12"X12" TEE
℄=955.00'
N=10237305.55
E=3082879.68

1 – 8"X4" TEE
FL=939.56'
N=10237303.76
E=3082879.56

12" ML
℄=955.00'

8" DR @ 0.40% SLOPE

8" DR @ 0.40% SLOPE

8" FM
℄=941.50'

2" WL

1 – 8"X8" TEE
FL=939.36'
N=10237272.45
E=3082844.31

1 – 2" 90° BEND
N=10237223.84
E=3082858.81

CLARIFIER NO. 1

1 – 12" 90° BEND
N=10237292.33
E=3082925.10

1 – 8"X4" TEE
W/ PLUG
FL=939.51'
N=10237295.86
E=3082870.66

1 – 8"X4" TEE
W/ PLUG
FL=939.44'
N=10237284.92
E=3082858.35

1" ALUM

1" CLS

2" NPW SH

ALUM BUILDING AND TANK

2" NPW

CHLORINE BUILDING

1 – 8"X6" TEE
FL=939.10'
N=10237224.54
E=3082886.86

12" DE @ 0.20%

12" DE
FL=937.00'
N=10237225.74
E=3082924.19

EFFLUENT PUMPING STATION

1–10" 11.25° BEND
℄=938.33'
N=10237225.72
E=3082942.80

10" EFF FM

6" DR @ 0.50% SLOPE

CHLORINE CONTACT BASIN NO. 1

UTILITY CROSSING
8" DIP FL=942.54'
10" FM ℄=938.33'
CLEARANCE ±3.79'
N=10237224.03
E=3082946.44

12" SE

4" DR

1 – 12"X12" TEE
N=10237284.32
E=3082943.18

12" FE

1 – 6"X4" TEE
FL=939.48'
N=10237274.77
E=3082943.41

1 – 12" 90° BEND
N=10237278.85
E=3082937.07

1 – 12" 90° BEND
N=10237286.81
E=3082930.00

1 – 12" 90° BEND
N=10237304.67
E=3082938.80

TERTIARY FILTER NO. 2

1 – 12" 90° BEND
N=10237292.03
E=3082951.79

CO
6" X 4" TEE
FL=939.55'
N=10237283.71
E=3082953.47

TERTIARY FILTER NO. 1

RR 122 HOLDINGS, LLC
CALLED 122.635 ACRES
DOCUMENT NO. 2022022743
O.P.R.W.C.TX.

WWTP PROPERTY LINE

EXIST 12" WW LINE

EXIST MANHOLE
12" FL=929.29'(NE)
12" FL=929.19' (S)
N=10237275.74
E=3082963.94

100-YR MODELED FLOODPLAIN (BY OTHERS)

WWTP PROPERTY LINE

941' 942' 943' 944' 945' 946'

940' 939' 938' 937' 936'

941' 942' 943' 944' 945' 946' 947' 948' 949' 950'

940' 939' 938' 937' 936' 935' 934'

SCALE : 1" = 10'

LEGEND:

945' EXIST NG

945' PROPOSED CONTOURS (BY OTHERS)

945' PROPOSED CONTOURS

KEY NOTES:

1. 1–8"X4" TEE
FL=939.82'
N:10237355.33
E:3082838.16

2. 1–8"X4" TEE
FL=939.88'
N:10237365.29
E:3082849.37

3. 1 – 12"X12" TEE W/ BLIND FLANGE
℄=955.00'
N:10237296.30
E:.3082869.27

4. 1 – 12"X12" TEE W/ BLIND FLANGE
℄=955.00'
N:10237286.32
E:3082858.03

5. INSTALL 12" SETTLED EFFLUENT (SE) 3.5 FEET BELOW FINISHED GROUND.

6. INSTALL 12" FINAL EFFLUENT (FE) 3.5 FEET BELOW FINISHED GROUND.

7. 1 – 6"X4" TEE
FL=939.43'
N:10237267.73
E:3082935.48

8. 1 – 4" 90° BEND
FL=939.58'
N:10237290.50
E:3082929.43

9. 1 – 4" 90° BEND
FL=939.66'
N:10237299.48
E:3082939.45

10. 1 – 12" 45° BEND
FL=937.03'
N:10237234.94
E:3082916.03

11. 1 – 12" 22.5° BEND
FL=937.06'
N:10237248.73
E:3082916.84

12. 1 – 12" 45° BEND
1 – 12" 22.5° BEND
FL=937.09'
N:10237260.97
E:3082912.60

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - YARD PIPING PLAN - AREA NO. 4

DATE: FEBRUARY 2026

SCALE: 1" = 10'

DRAWING: 01C-12

FILENAME: Z:\Projects 1551–1599\20101595 – BH – Hudson Park WWTP Final Design\500 – Final_Design\5.1 – Drawings\Sheet Files\WWTP set\01C–09–14.dwg, LAST SAVED ON: Feb 05 2026 5:13pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:40pm, CFG:

MATCHLINE – SEE AREA 3

MATCHLINE – SEE AREA 6

956'
955'
954'
953'
952'
951'
950'
949'
952'
951'
950'
951'
947'
948'
949'
950'

WWTP PROPERTY LINE

RR 122 HOLDINGS, LLC
CALLED 122.635 ACRES
DOCUMENT NO. 2022022743
O.P.R.W.C.TX.

12" WW LINE @ 1.22%

PROP 4–FT MANHOLE
12" FL= 931.55' (NW)
12" FL= 931.45' (NE)
N=10237093.06
E=3082781.19

12" WW LINE @ 1.22%

WW12

0 10 20
SCALE : 1" = 10'

LEGEND:

945' EXIST NG
945' PROPOSED CONTOURS (BY OTHERS)
945' PROPOSED CONTOURS

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-09-14.dwg, LAST SAVED ON: Feb 05 2026 5:13pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:41pm, CFG:

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

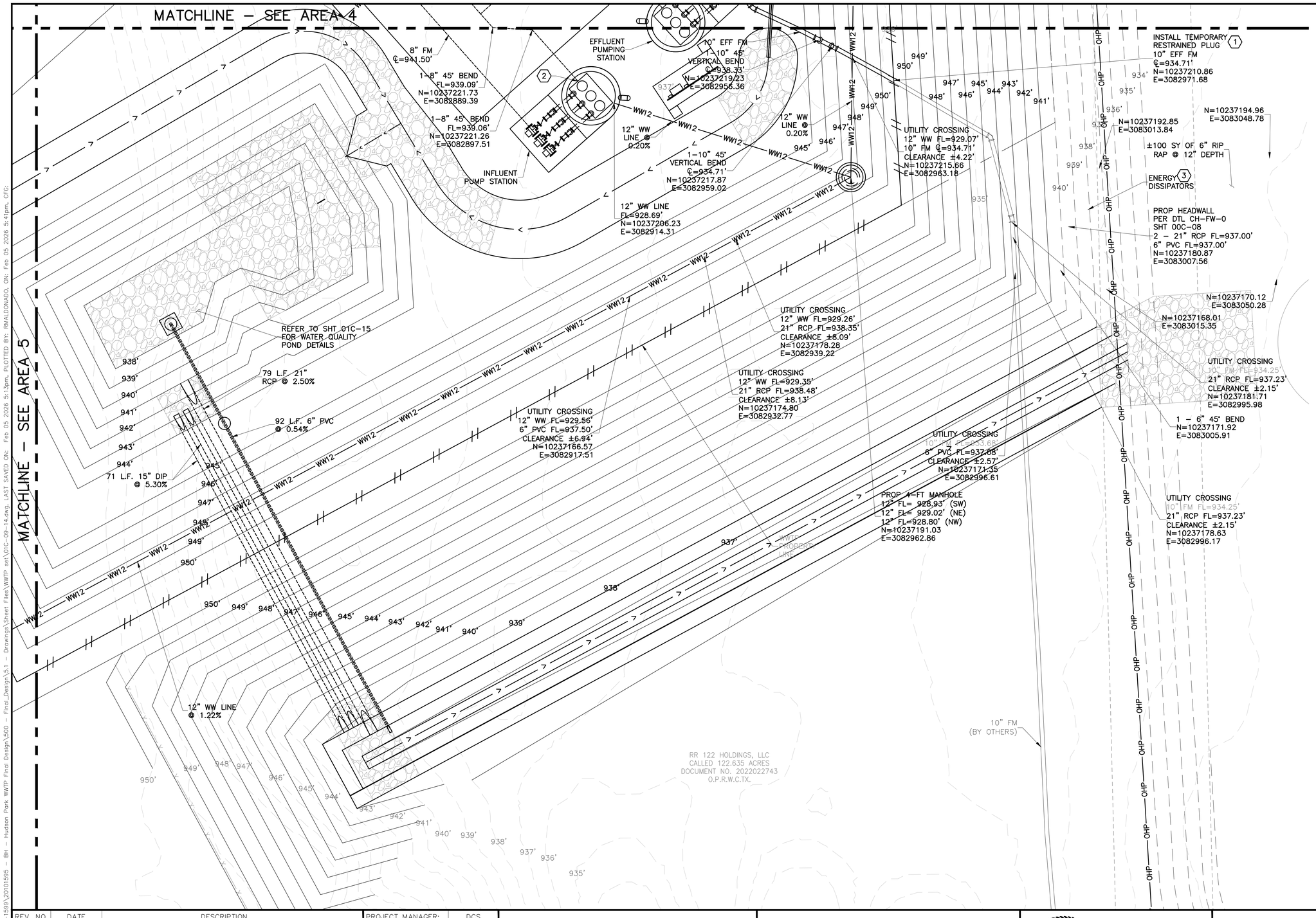
0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - YARD PIPING PLAN - AREA NO. 5

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-13



KEY NOTES:

1. WWTP CONTRACTOR SHALL INSTALL TEMPORARY RESTRAINED PLUG FOR FORCEMAIN CONTRACTOR TO TIE–IN PROPOSED 10" FORCEMAINS. CONTRACTOR SHALL COORDINATE WITH ADJACENT CONTRACTOR AS NEEDED TO COMPLETE PROPOSED WORK.
2. 8" DR
   FL=939.00'
   N:10237210.75
   E:3082906.86
3. INSTALL ENERGY DISSIPATORS CENTERED ON PIPE, DISSIPATORS SHALL BE 1'–4 1/4" FROM END OF PIPE. 9"HX9"WX9"D AT 1.5' O.C.E.W. PROVIDE (2) #4 DOWELS FOR EACH DISSIPATOR INTO THE FOUNDATION.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

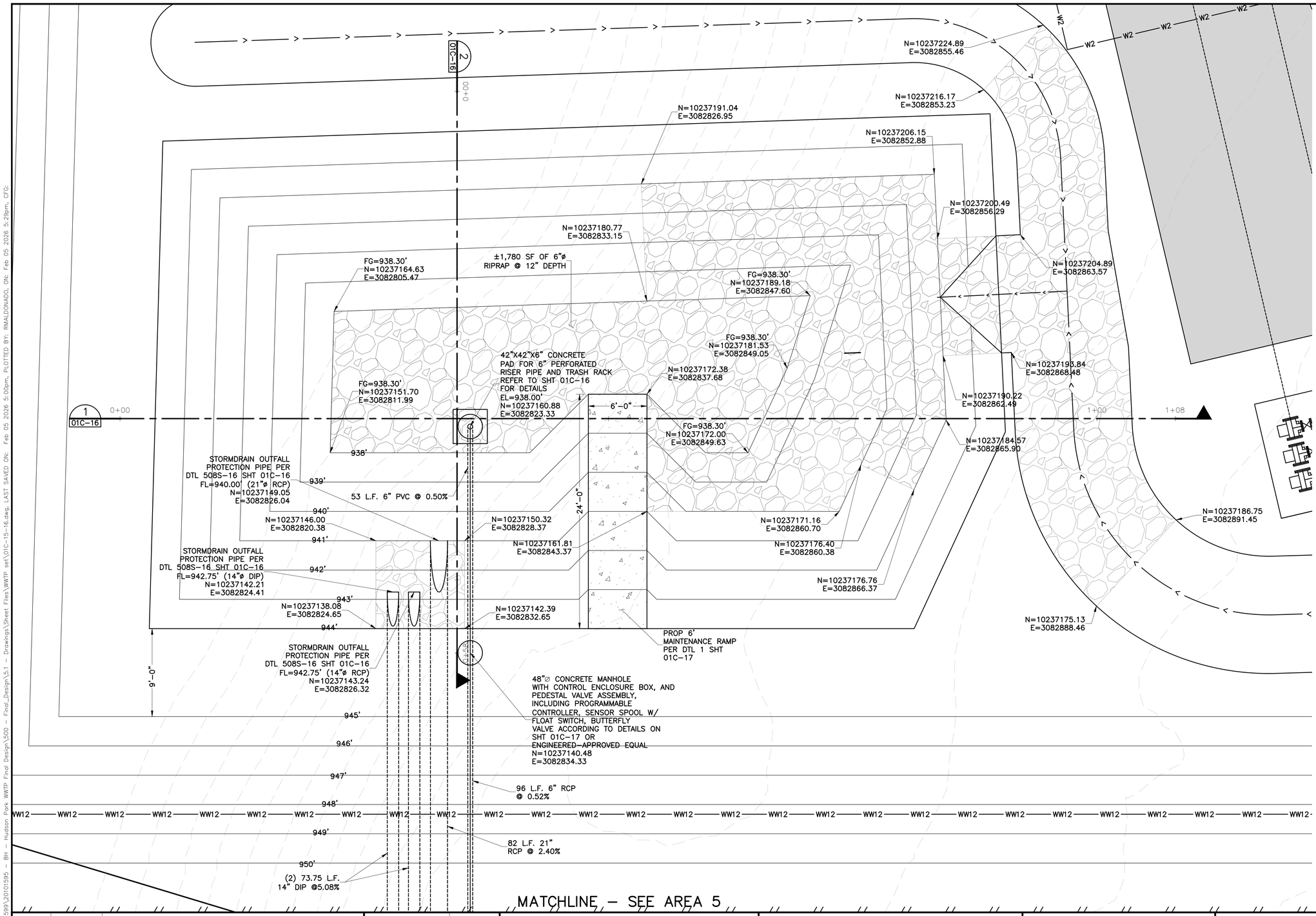
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - YARD PIPING PLAN - AREA NO. 6

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-14

FILENAME: Z:\Projects 1551–1599\20101595 – BH – Hudson Park WWTP Final Design\500 – Final_Design\5.1 – Drawings\Sheet Files\WWTP set\01C–09–14.dwg, LAST SAVED ON: Feb 05 2026 5:13pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:41pm, CFG:



MATCHLINE - SEE AREA 5

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS
HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER
TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED
PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - WATER QUALITY POND
PLAN

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-15

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-15-16.dwg, LAST SAVED ON: Feb 05 2026 5:00pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:29pm, CFG:

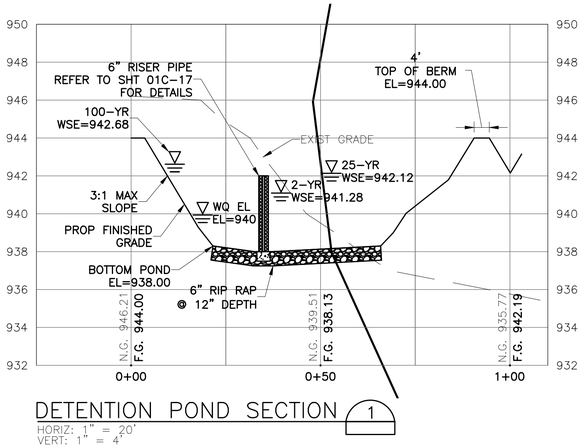
DETENTION POND STORAGE					
ELEVATION	AREA (SF)	AREA (AC)	STORAGE INCREMENTALS (CF)	STORAGE CUMULATIVE (CF)	STORAGE CUMULATIVE (AC-FT)
938	45	0.001	0	0	0
938.3	647	0.015	104	104	0.23
939	1,108	0.025	630	734	0.34
940	1,634	0.038	1,371	2,105	0.87
941	2,243	0.051	1,939	4,043	1.47
942	2,873	0.066	2,558	6,601	1.65
943	3,573	0.082	3,223	9,824	2.16
944	4,341	0.10	3,957	13,781	2.93

WQV OUTLET RATING CURVE				
WSEL	FLOWRATE (CFS)	INC. VOLUME (CF)	INC. DRAW TIME (HR)	CUM. DRAW TIME (HR)
938	0	0	0	0
939	0.83	630	0.21	0.21
940	1.27	1,371	0.30	0.51

IMPERVIOUS COVER CALCULATIONS					
ZONE	SITE AREA IN ZONE (SF)	EXISTING IMPERVIOUS (SF)	EXISTING % IMPERVIOUS IN ZONE	ULTIMATELY PROPOSED IMPERVIOUS (AC)	ULTIMATELY PROPOSED % IMPERVIOUS IN ZONE
TOTAL SITE AREA	2.12	0.00	0.00	0.40	18.87

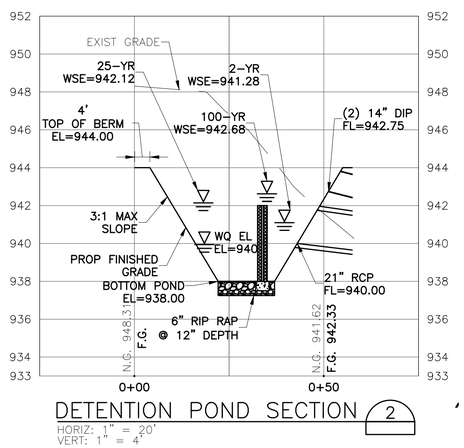
DETENTION POND ELEVATION-VOLUME-FLOW				
STORM EVENT	WSEL	VOLUME (CF)	INFLOW (CFS)	OUTFLOW (CFS)
2-YR	941.28	4,692	8.54	6.37
25-YR	942.12	6,935	20.04	16.98
100-YR	942.68	8,712	27.71	21.24

DRAINAGE EXIST CONDITIONS VS PROPOSED CONDITIONS			
EXIST CONDITIONS	AREA (SF)	PROP CONDITIONS	STORAGE INCREMENTALS (CF)
TC (MIN)	6.06	TC (MIN)	5
CN	78	CN	82.70
Q2 (CFS)	6.66	Q2 (CFS)	8.34
Q25 (CFS)	17.63	Q25 (CFS)	19.85
Q100 (CFS)	25.15	Q100 (CFS)	27.56



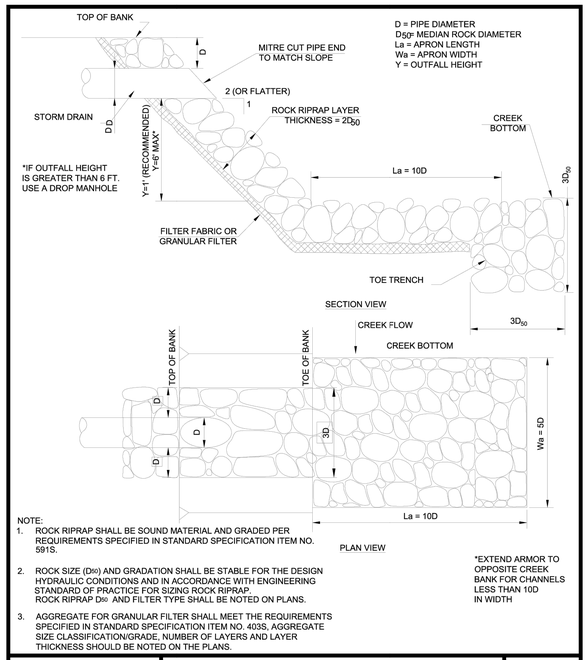
DETENTION POND SECTION 1

HORIZ: 1" = 20'
VERT: 1" = 4'



DETENTION POND SECTION 2

HORIZ: 1" = 20'
VERT: 1" = 4'



NOTE:
1. ROCK RIPRAP SHALL BE SOUND MATERIAL AND GRADED PER REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 591S.
2. ROCK SIZE (D_{50}) AND GRADATION SHALL BE STABLE FOR THE DESIGN HYDRAULIC CONDITIONS AND IN ACCORDANCE WITH ENGINEERING STANDARD OF PRACTICE FOR SIZING ROCK RIPRAP. ROCK RIPRAP D_{50} AND FILTER TYPE SHALL BE NOTED ON PLANS.
3. AGGREGATE FOR GRANULAR FILTER SHALL MEET THE REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 403S, AGGREGATE SIZE CLASSIFICATION/GRADE, NUMBER OF LAYERS AND LAYER THICKNESS SHOULD BE NOTED ON THE PLANS.

ISSUE DATE:			CITY OF PFLUGERVILLE	508S-16
REVISIONS			STORMDRAIN OUTFALL PROTECTION PIPE DISCHARGE ON SLOPE-LOW BANK	
			CONSTRUCTION STANDARDS AND DETAILS	
DATE	APPROVED	DRAWN	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	
SCALE: N.T.S.				

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - WATER QUALITY POND SECTIONS AND CALCS

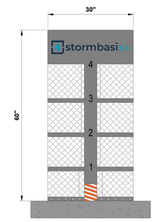
DATE: FEBRUARY 2026

SCALE: 1" = 10'

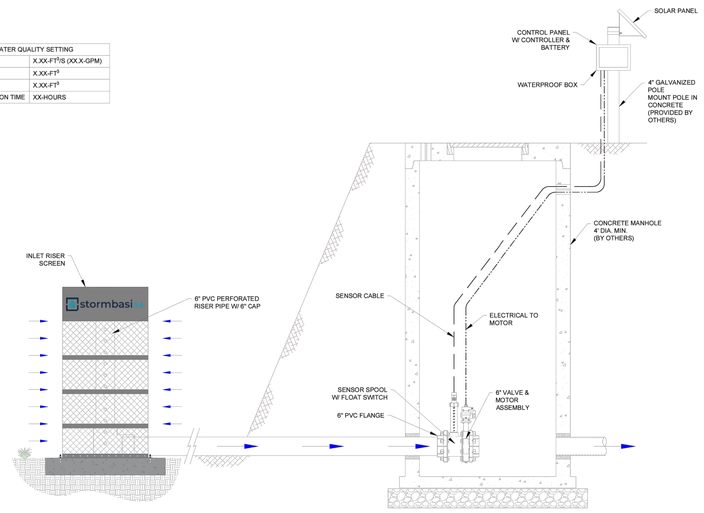
DRAWING: 01C-16

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-15-16.dwg, LAST SAVED ON: Feb 05 2026 5:00pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:30pm, CFG:

BATCH VALVE DISCHARGE AND WATER QUALITY SETTING	
ALLOWABLE DISCHARGE RATE ($Q_{ALLOWABLE}$)	X.XX-FT³/S (XX.X-GPM)
REQUIRED WATER QUALITY VOLUME	X.XX-FT³
WATER QUALITY VOLUME PROVIDED	X.XX-FT³
REQUIRED WATER QUALITY BATCH DETENTION TIME	XX-HOURS



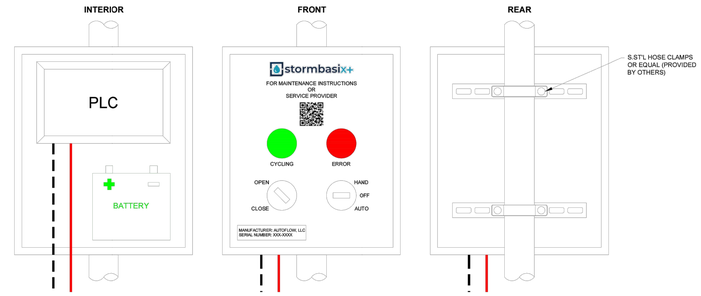
stormbasix+ INLET RISER SCREEN
SIDE VIEW
N.T.S



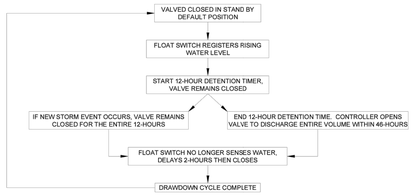
stormbasix+ BATCH DETENTION DETAIL
N.T.S

PROJECT:	MODEL:		FOR ADDITIONAL INFORMATION: CONTACT:	REVISION NO.
PROJECT NAME CITY, STATE	stormbasix+ BATCH DETENTION VALVE	FERGUSON	FERGUSON GEOSYNTHETICS & STORMWATER SOLUTIONS AUSTIN, TX ERIK GONZALES (737) 321-0865 e.gonzales@ferguson.com www.fergusonga.com	0 DATE 07/25/2025 SHEET NO. 1

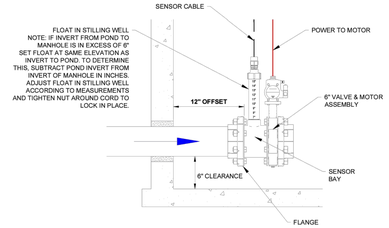
DETAIL 1 - CONTROL BOX DETAIL



DETAIL 2 - PROGRAMMABLE LOGIC FLOW CHART OPERATION FOR DETENTION AND/OR WATER QUALITY



DETAIL 3 - VALVE ASSEMBLY



PROJECT:	MODEL:		FOR ADDITIONAL INFORMATION: CONTACT:	REVISION NO.
PROJECT NAME CITY, STATE	stormbasix+ BATCH DETENTION VALVE	FERGUSON	FERGUSON GEOSYNTHETICS & STORMWATER SOLUTIONS AUSTIN, TX ERIK GONZALES (737) 321-0865 e.gonzales@ferguson.com www.fergusonga.com	0 DATE 07/25/2025 SHEET NO. 2

STORMBASIX+ SPECIFICATIONS

THE FOLLOWING SPECIFICATIONS DESCRIBE THE COMPONENTS, GENERAL FUNCTIONS, AND APPLICATIONS OF A CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS), USING THE PROGRAMMED STORMBASIX.

1. **CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS) DEVICE:** THE STORMBASIX SHALL PROVIDE FOR ACTIVE MANAGEMENT OF DETAINED STORMWATER VOLUME AND/OR ITS ALLOWABLE DISCHARGE RATE. THE STORMBASIX IS PROGRAMMABLE TO DETAIN A SPECIFIED VOLUME OF STORMWATER FOR A SPECIFIED REQUIRED PERIOD OF TIME.

   1.1 THIS STORMBASIX SHALL FUNCTION AS AN ELECTRONICALLY CONTROLLED, SOLAR POWERED STORMWATER MANAGEMENT DEVICE, PROVIDING PRECISION STORMWATER VOLUME MANAGEMENT CAPABILITIES AND REAL-TIME DATA. USING SENSORS, SOLAR POWER, AND AN ELECTRONIC ACTUATOR. THE STORMBASIX CONNECTS TO AN INTAKE RISER SCREEN INSIDE THE STORMWATER IMPOUNDMENT AREA. ASSEMBLY CAN BE CONFIGURED ABOVE GROUND OR BELOW GROUND IN A MANHOLE OR VAULT STRUCTURE.

   1.2 PRE-PROGRAMMED OUTFALL VALVE CONTROL: THE STORMBASIX CAN BE PRE-PROGRAMMED TO EXECUTE COMMANDS BASED ON STORM EVENTS, REQUIRED CONTROL VOLUMES AND ALLOWABLE DISCHARGE RATES.

   1.3 BATCH DETENTION FUNCTION FOR STORMWATER QUALITY: THE STORMBASIX MAY BE PROGRAMMED TO PROVIDE BATCH DETENTION TO ACHIEVE STORMWATER QUALITY EFFLUENT GOAL OF 80% OR MORE REMOVAL OF TOTAL SUSPENDED SOLIDS (TSS) BY HOLDING THE WATER QUALITY VOLUME (WQV) FOR A REQUIRED PERIOD OF TIME.

   1.4 SPILL CONTROL: STORMBASIX WHEN SPECIFIED FOR OIL SPILL CONTROL SHALL BE EQUIPPED WITH POLLUTANT SPECIFIC SENSORS THAT WHEN TRIGGERED AUTOMATICALLY CLOSES THE VALVE UNTIL THE COMMAND IS OVERRIDDEN.

2. **COMPONENTS**: THE STORMBASIX MAY BE IMPLEMENTED EITHER ABOVE OR BELOW GROUND, AND IS COMPRISED OF THE FOLLOWING COMPONENTS:

   2.1 HARDWARE AND CONFIGURATION:
   THE STANDARD STORMBASIX ASSEMBLY CONSISTS OF A LOWER AND UPPER COMPONENT: THE LOWER COMPONENT IS THE VALVE KIT CONSISTING OF 6"Ø PIPE SPOOL AND 6"Ø ACTUATED OUTFALL VALVE AND FLOAT SWITCH HOUSING. THIS LOWER KIT SHALL HAVE FLANGES ON EACH SIDE OF THE ASSEMBLY CONFORMING WITH AN ANSI B16.5 CLASS 150 FLANGE FOR CONNECTION OF THE OUTFALL PIPE FROM THE DETENTION SYSTEM AND TO A DOWNSTREAM DISCHARGE PIPE IF CALLED FOR ON THE PLANS. THE UPPER COMPONENT IS THE LOCKABLE WEATHERPROOF ENCLOSURE BOX WITH A SOLAR PANEL MOUNTED ON ITS TOP. THIS ENCLOSURE BOX HOUSES THE PROGRAMMABLE CONTROLLER INSIDE A NEMA-3R BOX, BATTERY, AND SOLAR CHARGE CONTROLLER.

   2.2 FOR ABOVE GROUND APPLICATIONS, THE COMPLETE "OUTLET CONFIGURATION" MAY BE BOLTED INLINE WITH EIGHT (8X) ¾"Ø BOLTS AND NUTS THAT CONFORM TO ANSI B16.5 CLASS 150 FLANGE GRADE SPECIFICATIONS TO THE OUTLET PIPE AND MAY BE SUPPORTED BY THE PIPE ALONE. NO ADDITIONAL SUPPORT IS REQUIRED BUT MAY BE PROVIDED ON REQUEST. THE DISCHARGE PIPE, IF ANY, CONNECTS WITH ONLY FOUR (4X) BOLTS TO PROPERLY FLANGE UP TO THE DISCHARGE SIDE OF THE ACTUATED VALVE.

   2.3 OTHER ELECTRONICS SPECIFICATIONS:
   - MOTOR - CONTAINS HEX WRENCH FOR MANUAL BYPASS OF ELECTRIC ACTUATOR CONTROLS
   - BATTERY - BATTERY THAT PROVIDES POWERS THE SYSTEM
   - SOLAR PANEL - PROVIDES 30-WATT CHARGING TO THE 12-VOLT BATTERY
   - SOLAR CHARGE CONTROLLER - REGULATES THE VOLTAGE AND CURRENT DELIVERED TO THE BATTERY
   - SENSORS: FLOAT SWITCH - A SENSOR SWITCH CAPABLE OF STAYING SUBMERSED IN WATER INDEFINITELY AND IS MOUNTED IN CENTER PIPE SPOOL OF THE LOWER VALVE KIT
   - OPTIONAL SENSORS: HYDROCARBON SENSOR - THIS OPTIONAL SENSOR MAY BE FITTED TO THE STORMBASIX TO PERFORM SPECIFIC FUNCTIONS BASED ON THE PRESENCE OF HYDROCARBON CONTAMINATION

3. **PRETREATMENT - RISER AND TRASH SCREENS:**
   3.1 A PERFORATED RISER WITH 1" HOLES PLACED 4" ON-CENTER CONNECTED TO THE 6"Ø OUTFALL PIPE WITHIN THE DETENTION AREA.

   3.2 A TRASH CAGE ATTACHED TO THE PERFORATED RISER WITH A COUPLING AND COTTER PIN PROVIDED WITH THE SYSTEM. THE TRASH CAGE SHALL BE COMPRISED OF STEEL BANDING AND A 1.5" X 1.5" MESH TO PREVENT FLOATABLES AND OTHER CONTAMINANTS FROM ENTERING AND CLOGGING THE PERFORATED RISER.

4. **ALERTS**: THE STORMBASIX MAY INDICATE THE FOLLOWING ALERTS:
   - LOW BATTERY
   - LOSS OF FUNCTION

6. **MAINTENANCE AND OPERATION SUBMITTAL**: AN OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED, REVIEWED AND APPROVED DURING THE CONSTRUCTION SUBMITTAL PROCESS AND SHALL INCLUDE AT A MINIMUM: GREASING AND LUBRICATION ITEMS AND CYCLE FOR THE ACTUATOR, MOTOR AND VALVE; INSPECTION AND MAINTENANCE OF THE SOLAR PANEL, GEL BATTERY, TRASH CAGE AND INTAKE RISER.

7. **SHIPPING, HANDLING AND STORAGE**: THE STORMBASIX IS SHIPPED IN A NEAR-FULLY ASSEMBLED CONFIGURATION AND SHOULD BE STORED LIKEWISE. THE SYSTEMS ARE TRANSPORTED AND STORED ON PALLETS AND MUST REMAIN SECURED VIA STRAPS OR STEEL BANDS TO SAID PALLET PRIOR TO INSTALLATION. THE SOLAR PANEL IS NOT INSTALLED AT TIMES OF TRANSPORT OR STORAGE AND SHOULD NOT BE INSTALLED UNTIL THE UNIT IS READY TO BEGIN OPERATION. THE BATTERY MAY BE STORED INSIDE THE ELECTRONICS BOX.

8. **INSTALLATION**: INSTALL THE STORMBASIX SYSTEM PER THE APPROVED PLANS, DETAIL AND DIAGRAM SHEETS. INSTALLATION IS TO BE PERFORMED BY SKILLED WORK PEOPLE WITH A SATISFACTORY RECORD OF PERFORMANCE ON EARTHWORKS, PIPE, WELDING, CHAMBER, OR POND/LANDFILL CONSTRUCTION PROJECTS.

9. **SAFETY INFORMATION AND WARNINGS**:
   - ALWAYS KEEP HANDS CLEAR OF THE VALVE AND MOTOR WHEN THE UNIT IS IN OPERATION
   - TURN THE POWER SWITCH OFF WHEN PERFORMING ANY ELECTRICAL WORK
   - DO NOT ENTER THE WATER WHEN THE DEVICE IS ACTIVELY DRAINING WATER
   - ALWAYS USE PROPER PERSONAL PROTECTION EQUIPMENT (PPE)
   - FOLLOW ALL LOCAL, STATE AND FEDERAL REGULATIONS AS IT RELATES WORKPLACE SAFETY (SUCH AS CONFINED SPACE ENTRY)

10. **PRODUCTS**: THE MANUFACTURER SHALL BE AN ESTABLISHED STORMWATER COMPANY THAT HAS AT LEAST FIVE (5) INSTALLATIONS OF C-MASS DEVICES THAT HAVE BEEN IN USE AND FUNCTIONAL FOR FIVE (5) OR MORE YEARS.

    CONTINUOUSLY MONITORED AUTOMATED STORMWATER SYSTEM (C-MASS), SHOWN ON THE PLANS AS THE STORMBASIX SHALL BE AN AUTOMATED VALVE PROVIDED BY:

    DISTRIBUTOR:
    FERGUSON WATER WORKS
    www.ferguson.com

    MANUFACTURER:
    CONVERGENT WATER TECHNOLOGIES
    800.711.5428
    www.stormbasix.com

11. **QUALITY ASSURANCE AND PERFORMANCE SPECIFICATIONS**: THE QUALITY OF ALL SYSTEM COMPONENTS AND ALL OTHER APPURTENANCES AND THEIR ASSEMBLY PROCESS SHALL BE SUBJECT TO INSPECTION UPON DELIVERY OF THE SYSTEM TO THE WORK SITE.

PROJECT:	MODEL:		FOR ADDITIONAL INFORMATION: CONTACT:	REVISION NO.
PROJECT NAME CITY, STATE	stormbasix+ BATCH DETENTION VALVE	FERGUSON	FERGUSON GEOSYNTHETICS & STORMWATER SOLUTIONS AUSTIN, TX ERIK GONZALES (737) 321-0865 e.gonzales@ferguson.com www.fergusonga.com	0 DATE 07/25/2025 SHEET NO. 3

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: **0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I**
Date Prepared: **10/7/2025**

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: $L_M = 2.2(A_N \times P)$

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

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

County =	**Williamson**	
Total project area included in plan * =	**2.12**	acres
Predevelopment impervious area within the limits of the plan * =	**0.00**	acres
Total post-development impervious area within the limits of the plan * =	**0.40**	acres
Total post-development impervious cover fraction * =	**0.19**	
P =	**32**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**348**	lbs.

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

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

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

Drainage Basin/Outfall Area No. = **1**

Total drainage basin/outfall area =	**2.12**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.40**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.19**	
$L_{M\ THIS\ BASIN}$ * =	**348**	lbs.

3. Indicate the proposed BMP Code for this basin.

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

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

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

RG-348 Page 3-33 Equation 3.7: L_M = (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_M = TSS Load removed from this catchment area by the proposed BMP

A_C =	**2.12**	acres
A_I =	**0.40**	acres
A_P =	**1.72**	acres
L_M =	**430**	lbs

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

Desired $L_{M\ THIS\ BASIN}$ * = **348** lbs.

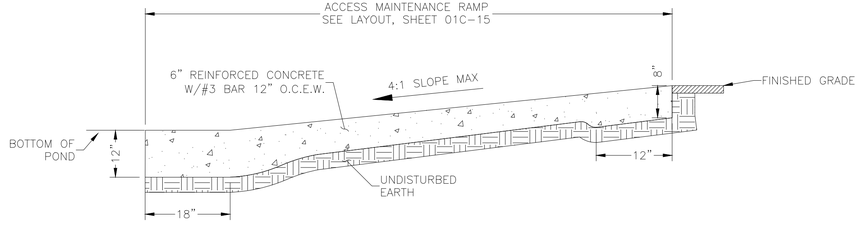
F = **0.81**

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

Rainfall Depth =	**1.12**	inches
Post Development Runoff Coefficient =	**0.19**	
On-site Water Quality Volume =	**1668**	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 =	**334**	
Total Capture Volume (required water quality volume(s) x 1.20) =	**2001**	cubic feet



MAINTENANCE RAMP SECTION 1
N.T.S.

REV. NO.	DATE	DESCRIPTION		
			PROJECT MANAGER:	DCS
			DESIGNED BY:	KM
			CHECKED BY:	RM
			DRAWN BY:	RM
			DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

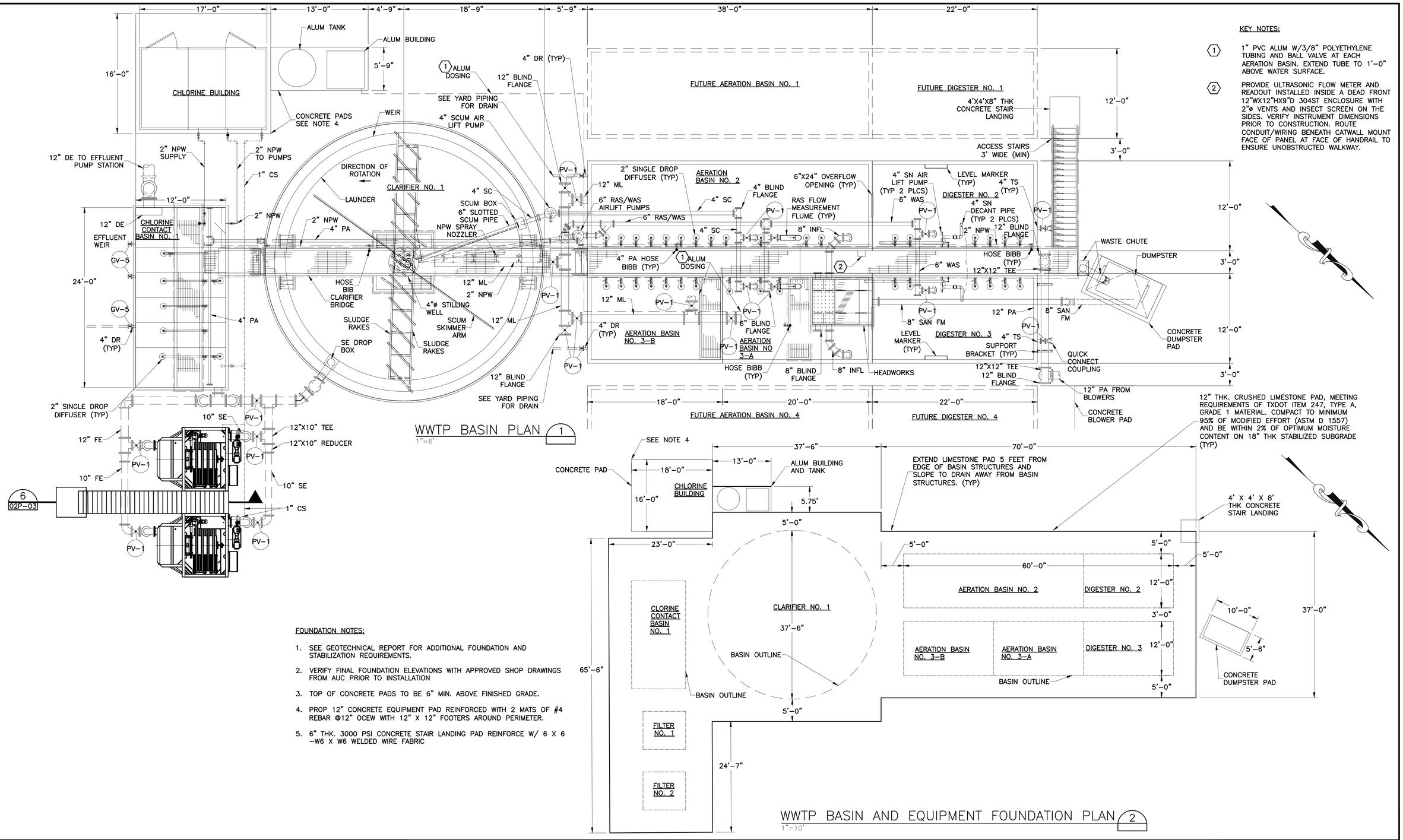
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED
PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - WATER QUALITY DETAILS

DATE: FEBRUARY 2026
SCALE: 1" = 10'
DRAWING: 01C-17

FILENAME: Z:\Projects 1501-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-15-16.dwg, LAST SAVED ON: Feb 05 2026 5:00pm, PLOTTED BY: RMALDONADO, ON: Feb 05 2026 5:30pm, CFG:



WWTP BASIN PLAN 1
1"=6'

KEY NOTES:

1. 1" PVC ALUM W/3/8" POLYETHYLENE TUBING AND BALL VALVE AT EACH AERATION BASIN. EXTEND TUBE TO 1'–0" ABOVE WATER SURFACE.
2. PROVIDE ULTRASONIC FLOW METER AND READOUT INSTALLED INSIDE A DEAD FRONT 12"WX12"HX9"D 304ST ENCLOSURE WITH 2"ø VENTS AND INSECT SCREEN ON THE SIDES. VERIFY INSTRUMENT DIMENSIONS PRIOR TO CONSTRUCTION. ROUTE CONDUIT/WIRING BENEATH CATWALL MOUNT FACE OF PANEL AT FACE OF HANDRAIL TO ENSURE UNOBSTRUCTED WALKWAY.

WWTP BASIN AND EQUIPMENT FOUNDATION PLAN 2
1"=10'

FOUNDATION NOTES:

1. SEE GEOTECHNICAL REPORT FOR ADDITIONAL FOUNDATION AND STABILIZATION REQUIREMENTS.
2. VERIFY FINAL FOUNDATION ELEVATIONS WITH APPROVED SHOP DRAWINGS FROM AUC PRIOR TO INSTALLATION
3. TOP OF CONCRETE PADS TO BE 6" MIN. ABOVE FINISHED GRADE.
4. PROP 12" CONCRETE EQUIPMENT PAD REINFORCED WITH 2 MATS OF #4 REBAR @12" OCEW WITH 12" X 12" FOOTERS AROUND PERIMETER.
5. 6" THK. 3000 PSI CONCRETE STAIR LANDING PAD REINFORCE W/ 6 X 6 –W6 X W6 WELDED WIRE FABRIC

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

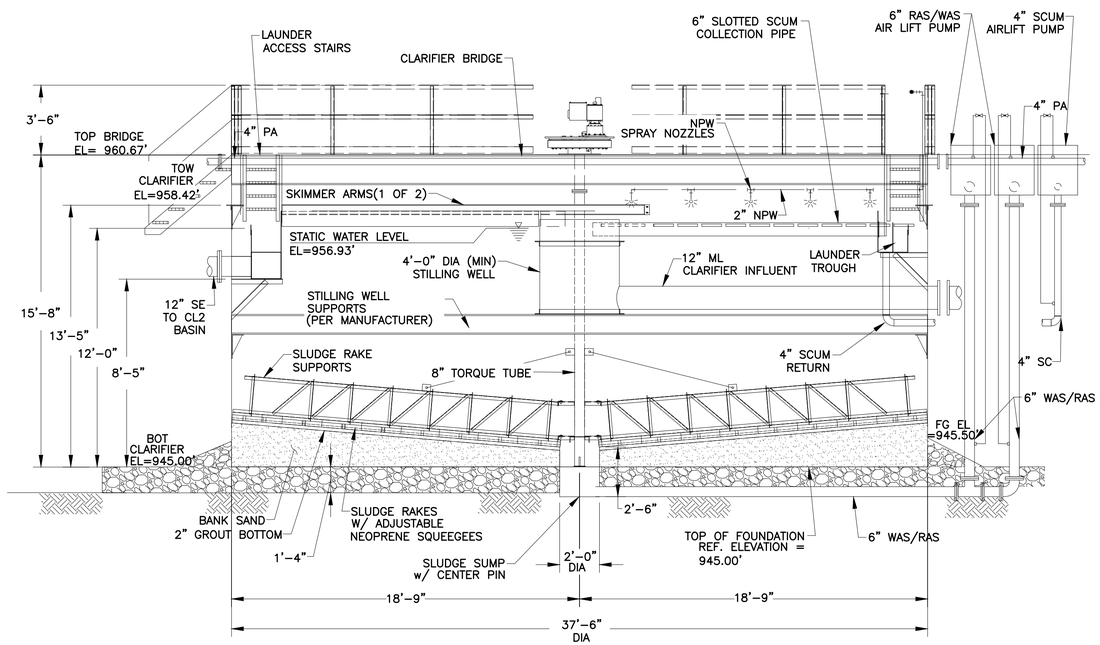
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

PROCESS - WWTP BASIN PLAN

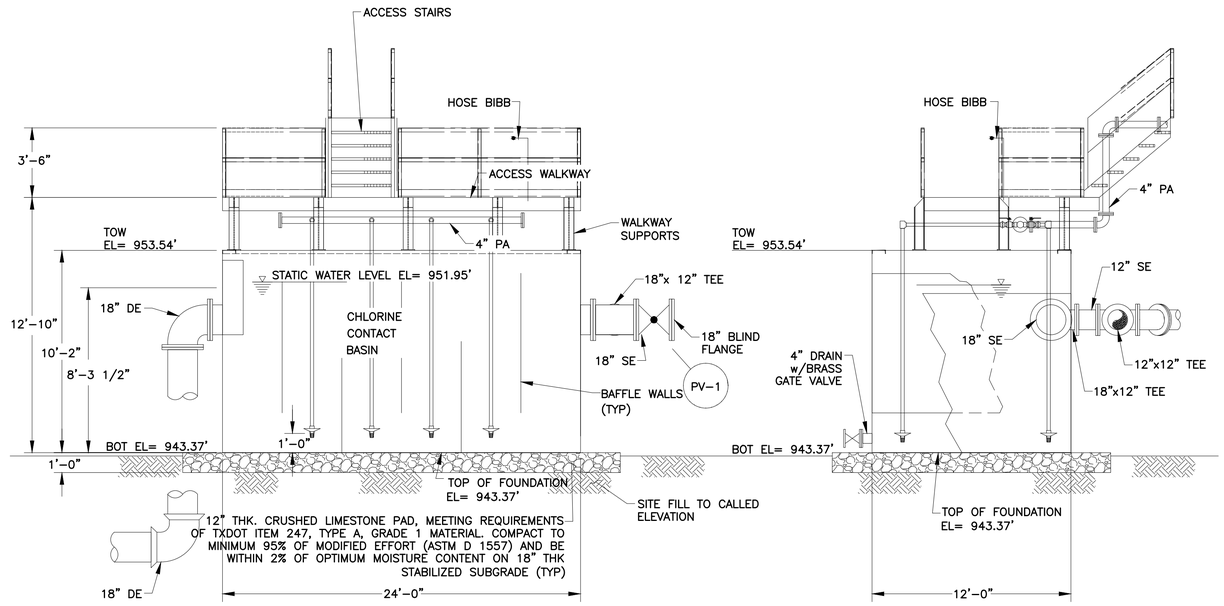
DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 02P-01

FILENAME: Z:\Projects 1551-1599\20101595 – BH – Hudson Park WWTP Final Design\500 – Final_Design\5.1 – Drawings\Sheet Files\WWTP set\02P–01.dwg, LAST SAVED ON: Feb 04 2026 1:13pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:17pm, CFG:



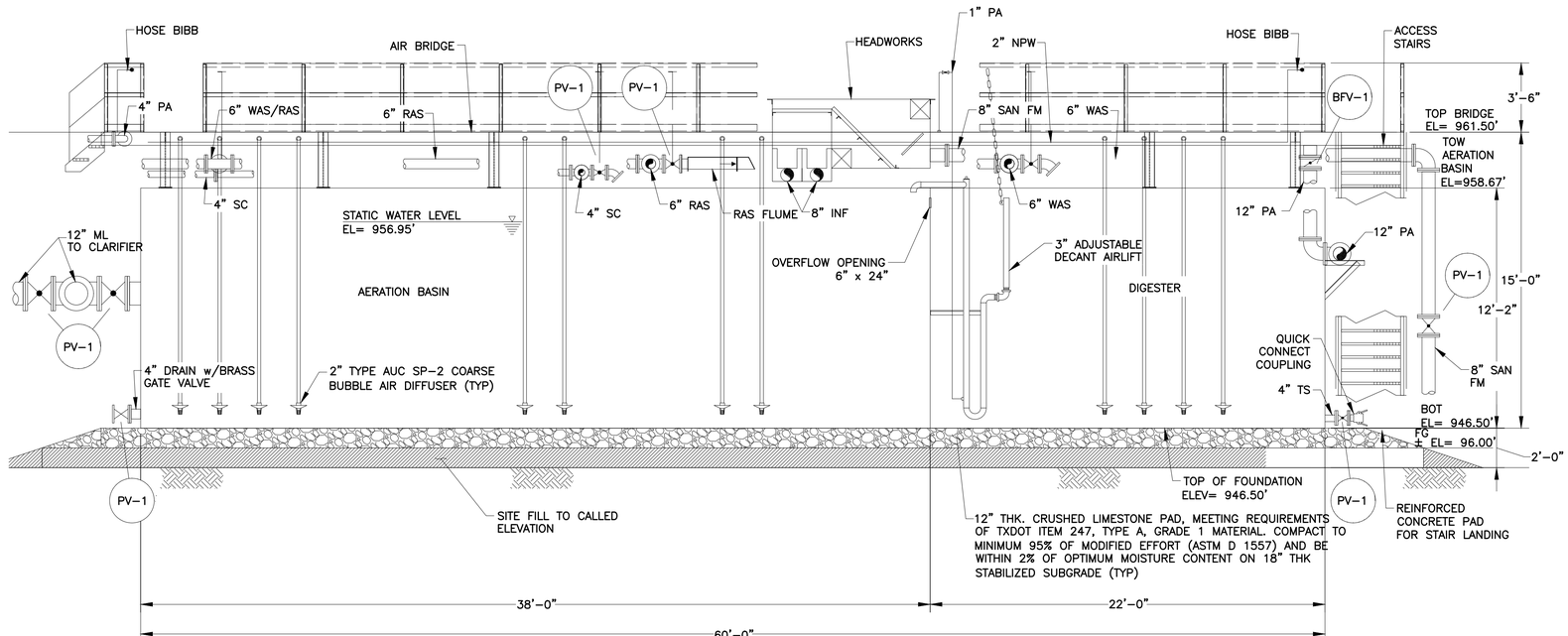
CLARIFIER NO. 1 – SECTION 1

N.T.S.



CHLORINE CONTACT BASIN NO. 1 – SECTION 2

N.T.S.



AERATION – DIGESTER BASIN NO. 2 – SECTION 3

N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

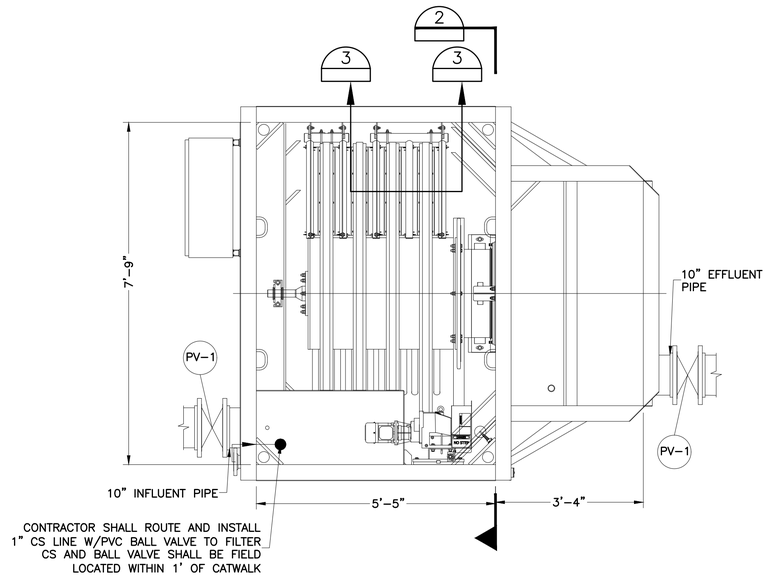
PROCESS - WWTP BASIN SECTIONS

DATE: FEBRUARY 2026

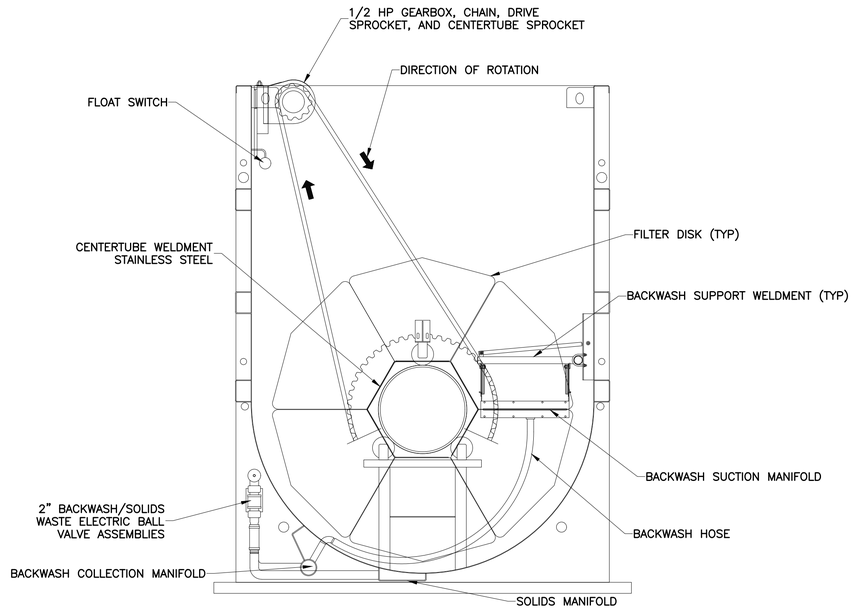
SCALE: N.T.S.

DRAWING: 02P-02

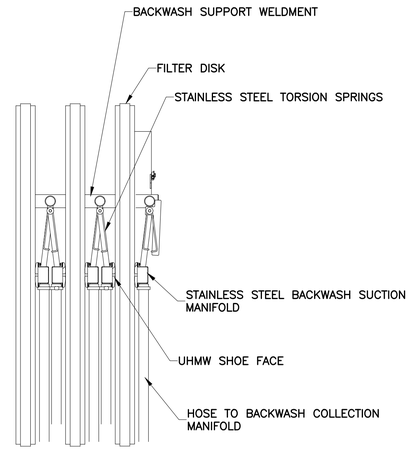
FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\02P-02.dwg, LAST SAVED ON: Dec 10 2025 5:20pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:17pm, CFG:



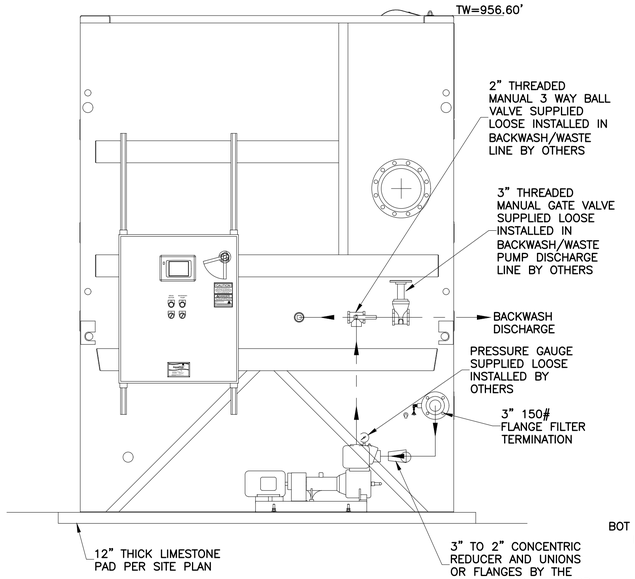
TERTIARY FILTER PLAN VIEW 1
N.T.S.



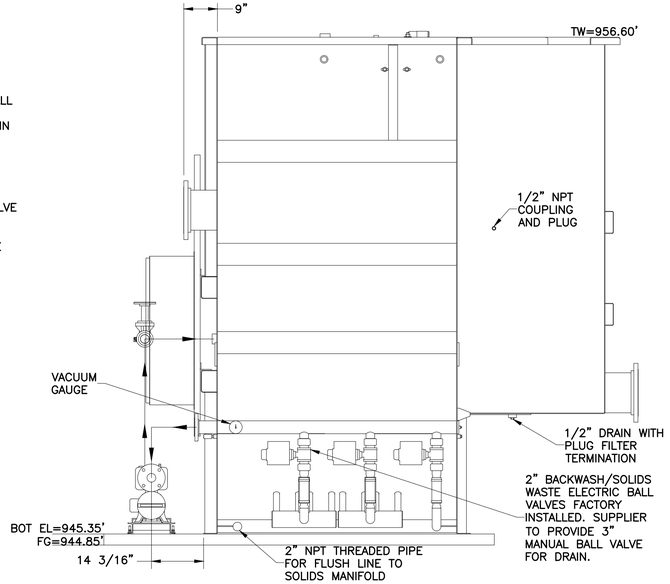
SECTION 2
N.T.S.



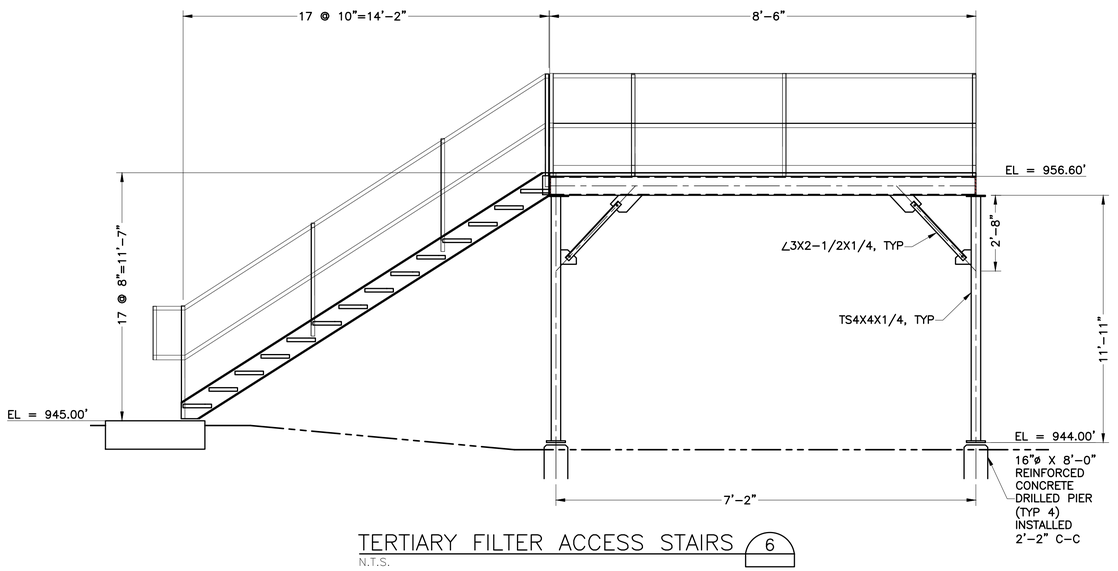
SECTION 3
N.T.S.



TERTIARY FILTER ELEVATION – NORTH SIDE 4
N.T.S.



TERTIARY FILTER ELEVATION – WEST SIDE 5
N.T.S.



TERTIARY FILTER ACCESS STAIRS 6
N.T.S.

NOTES:

1. FILTERS SHALL BE INSTALLED WITH COVERS PROVIDED BY MANUFACTURER. COVERS SHALL BE REMOVABLE OR OPERATIONAL TO ALLOW ACCESS TO ALL NECESSARY EQUIPMENT, PIPING, AND CONTROLS FOR FULL OPERATION OF FILTER UNITS.
2. INSTALLING CONTRACTOR SHALL CONNECT TERTIARY FILTERS TO WWTP DRAIN SYSTEM. NO SEPARATE PAY.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

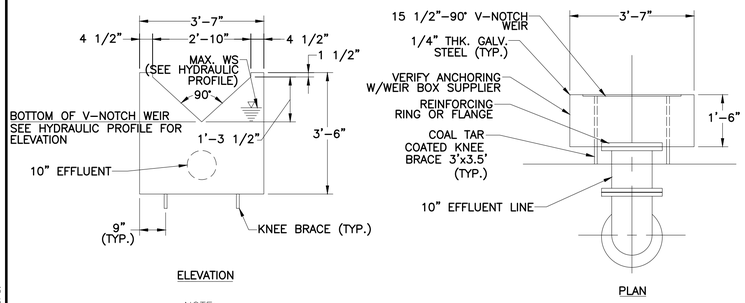
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

PROCESS - TERTIARY FILTER PLAN AND SECTIONS

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 02P-03

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\02P-03.dwg, LAST SAVED ON: Feb 04 2026 1:13pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:17pm, CFG:



ELEVATION

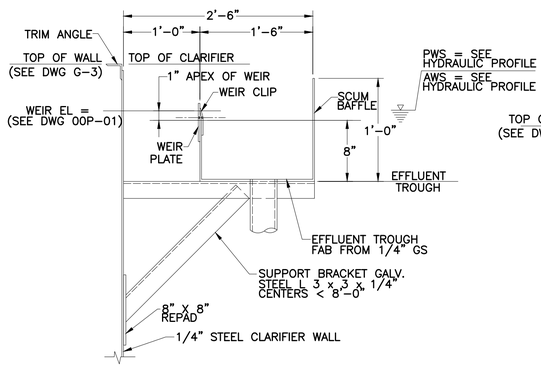
PLAN

NOTE:

1. ALL FABRICATED METAL SHALL BE 1/4" MIN. GALVANIZED STEEL. MANUFACTURER TO USE STIFFENERS AS NECESSARY, GRIND OFF ALL ROUGH EDGES.

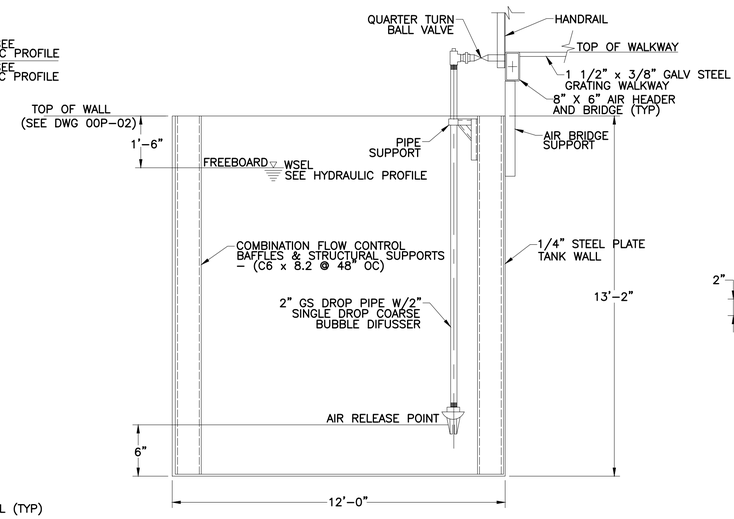
CHLORINE CONTACT BASIN EFFLUENT WEIR BOX DETAIL 1

N.T.S.



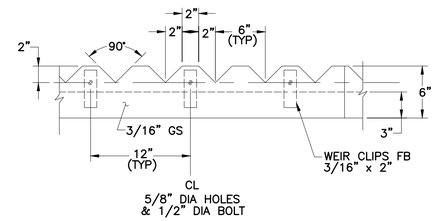
EFFLUENT TROUGH DETAIL 2

N.T.S.



AERATION BASIN SECTION 3

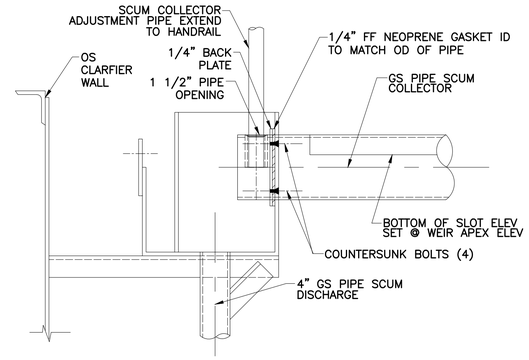
N.T.S.



90° V-NOTCH WEIR PLATE

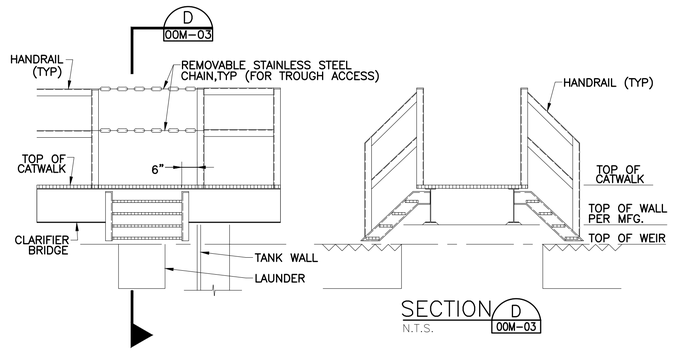
CLARIFIER WEIR PLATE DETAIL 4

N.T.S.



SCUM TROUGH PIPE DETAIL 5

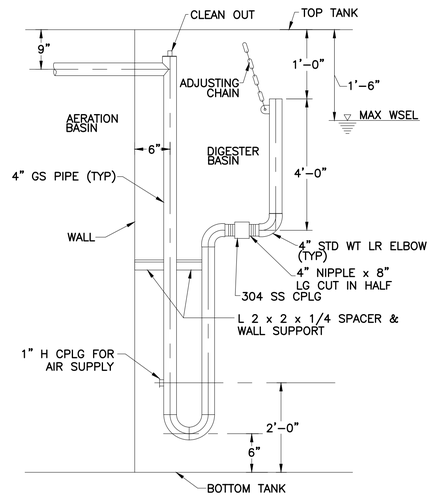
N.T.S.



NOTE: NO CONNECTION BETWEEN THE STAIRS AND LAUNDER

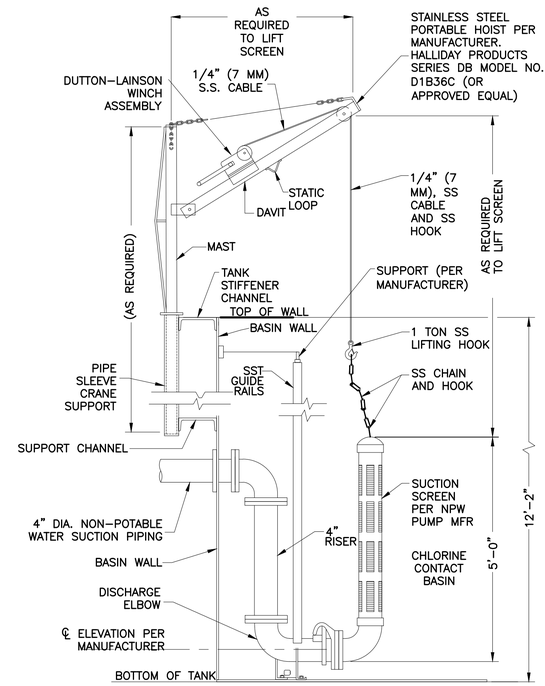
CLARIFIER TROUGH ACCESS STAIRS 6

N.T.S.



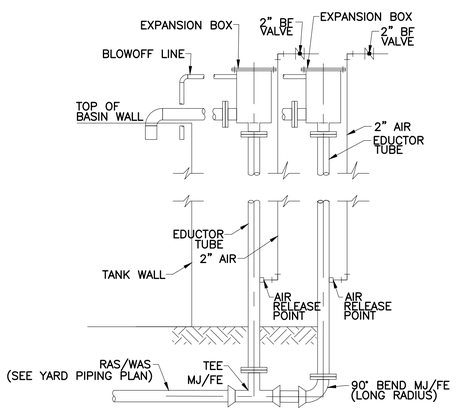
SUPERNATANT AIR LIFT PUMP DETAIL 9

N.T.S.



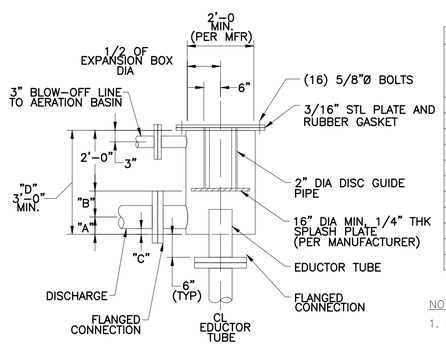
NON-POTABLE WATER SUCTION SCREEN DETAIL 10

N.T.S.



RAS, WAS AND SCUM AIRLIFT PUMP DETAIL 7

N.T.S.



AIRLIFT PUMP EXPANSION BOX DETAIL 8

N.T.S.

EDUCTOR EXPANSION BOX DIMENSIONS				
EDUCTOR TUBE SIZE (INCHES)	"A" (INCHES)	"B" (INCHES)	"C" CLEARANCE (INCHES)	"D" MINIMUM EXPANSION BOX HEIGHT (INCHES)
4	2.4740	4.5000	0.0474	36
5	3.0160	5.0000	0.5160	36
6	3.5600	5.5000	0.5600	36
8	4.6440	6.7500	0.6440	36
10	5.7300	8.0000	0.7300	38
12	6.8120	9.5000	0.8120	41
14	7.7500	10.5000	0.7500	43
16	9.0000	11.7500	1.0000	45
18	10.124	12.5000	1.1240	47
20	11.1880	13.7500	1.1880	49
24	13.3760	16.0000	1.3760	54

NOTE:

1. HOT DIP GALVANIZE AFTER FABRICATION

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

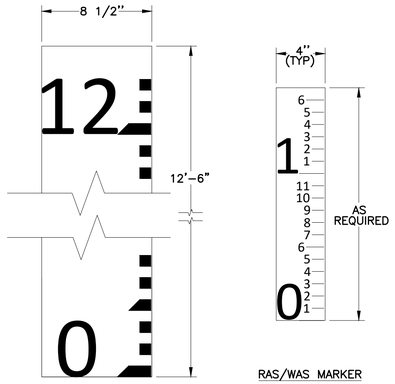
PROCESS - WASTEWATER TREATMENT PLANT - DETAILS SHEET NO. 1

DATE: FEBRUARY 2026

SCALE: N.T.S.

DRAWING: 02P-04

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\02P-04.dwg, LAST SAVED ON: Oct 07 2025 2:18pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:18am, CFG:



DIGESTER MARKER

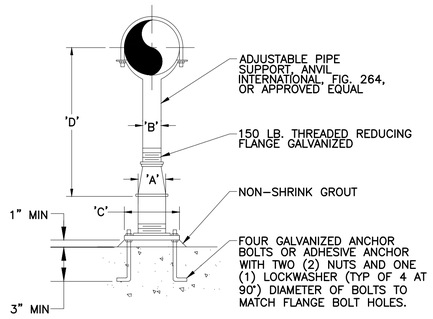
RAS/WAS MARKER

NOTES:

1. DIGESTER BASIN FRP STAFF GAUGE TO BE FULL HEIGHT OF WALL AND MOUNTED TO TANK STIFFENER CHANNELS ACROSS FROM DECANT PIPING. STAFF GAUGE TO HAVE (NOMINAL) 6 INCH HIGH NUMBERS AT FOOT INCREMENTS AND SECONDARY MARKS AT INCH INCREMENTS. PROVIDE ONE GAUGE AT EACH DIGESTER)
2. RAS AND WAS FRP STAFF GAUGE TO BE MOUNTED ON EACH MEASUREMENT DEVICE. GAUGE TO HAVE (NOMINAL) 3 INCH HIGH NUMBERS FOR FOOT INCREMENTS AND 1 INCH HIGH NUMBERS FOR INCH INCREMENTS.

LIQUID LEVEL STAFF GAUGE DETAILS 1

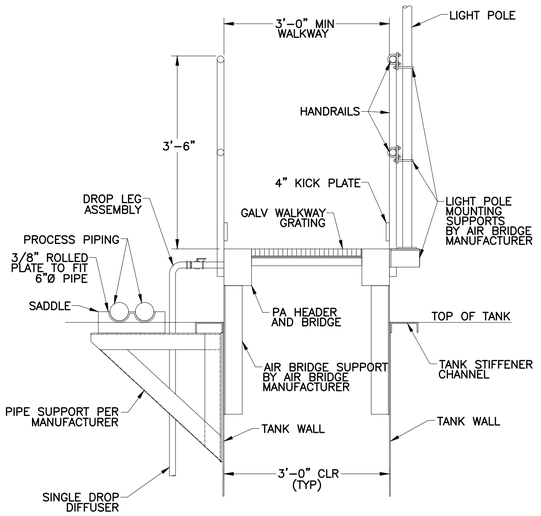
N.T.S.



ADJUSTABLE PIPE SUPPORT APPROXIMATE DIMENSIONS IN INCHES					
PIPE SIZE	'A'	'B'	'C'	'D' MIN	'D' MAX
4	3	3	8	9-1/2	14
6	3		8	10-1/4	15-1/4
8	3		8	12-1/4	16-3/4
10	6		10	13-3/4	18-1/4
12	6		10	14-5/8	19-1/8
14	6		10	15-13/16	20-5/16
16	6		10	16-13/16	21-5/16
18	6	3-1/2	10	19-1/8	23-5/8
20	12		18	20-1/8	24-5/8
24	12	4	18	23-5/16	27-13/16
30	12		18	26-7/16	30-15/16
32	12		18	27-7/16	31-15/16
36	12		18	29-7/16	33-15/16

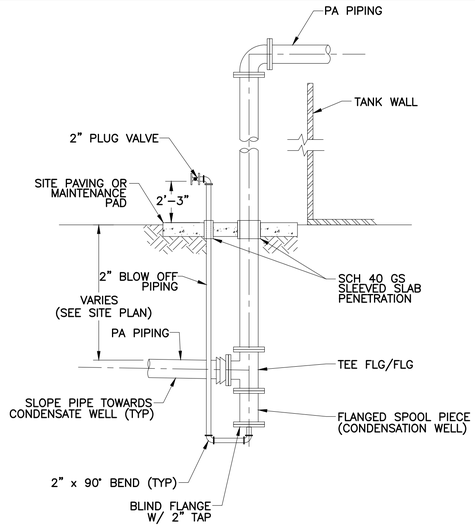
ADJUSTABLE PIPE SUPPORT WITH U-BOLT 2

N.T.S.



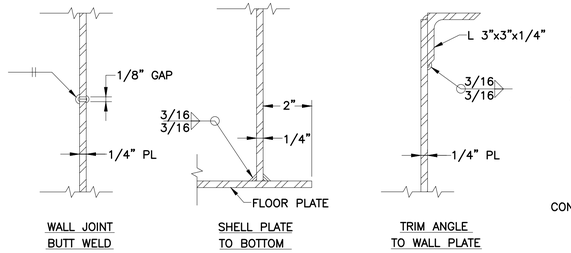
TYPICAL BASIN WALKWAY SECTION WITH PIPE SUPPORT 3

N.T.S.



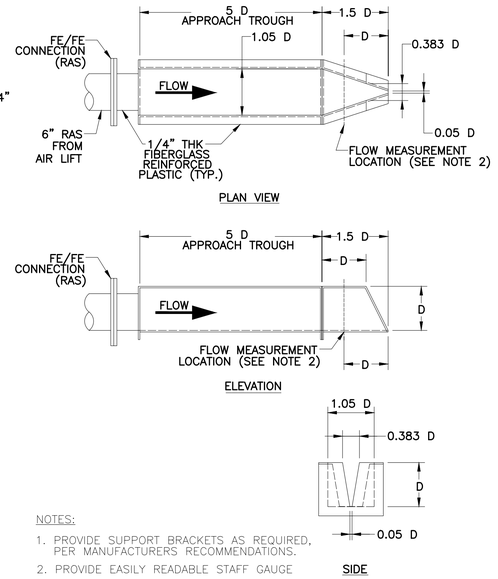
PROCESS AIR PIPING CONDENSATE BLOW-OFF DETAIL 4

N.T.S.



TYPICAL WELDING DETAILS 5

N.T.S.

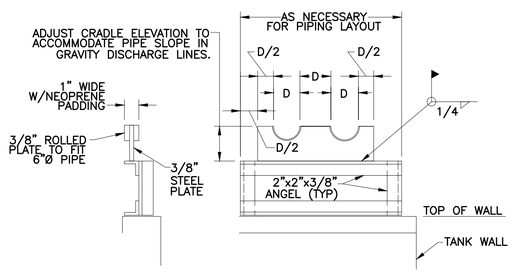


NOTES:

1. PROVIDE SUPPORT BRACKETS AS REQUIRED, PER MANUFACTURERS RECOMMENDATIONS.
2. PROVIDE EASILY READABLE STAFF GAUGE
3. D = DEPTH IN FEET

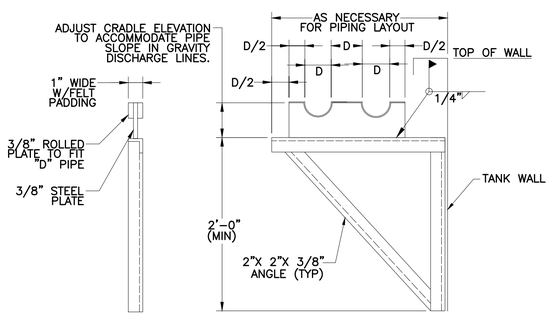
RETURN SLUDGE MEASUREMENT FLUME HS TYPE 6

N.T.S.



WAS-RAS PIPE SUPPORT FOR BASIN DISTRIBUTION 7

N.T.S.



PIPE RACK DETAIL 8

N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

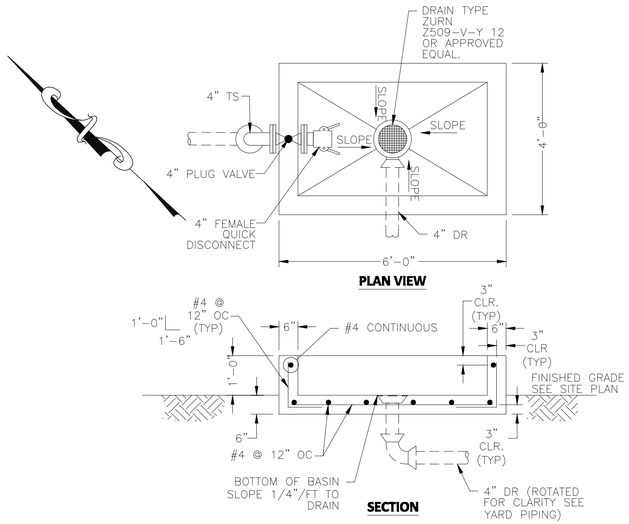
PROCESS - WASTEWATER TREATMENT PLAN - DETAILS SHEET NO. 2

DATE: FEBRUARY 2026

SCALE: N.T.S.

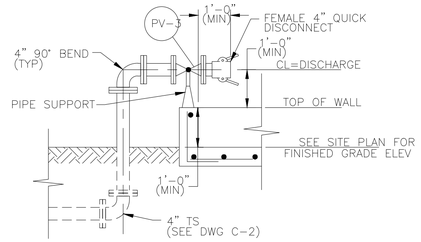
DRAWING: 02P-05

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\51 - Drawings\Sheet Files\WWTP set\02P-05.dwg, LAST SAVED ON: Oct 07 2025 2:18pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:18am, CFG:



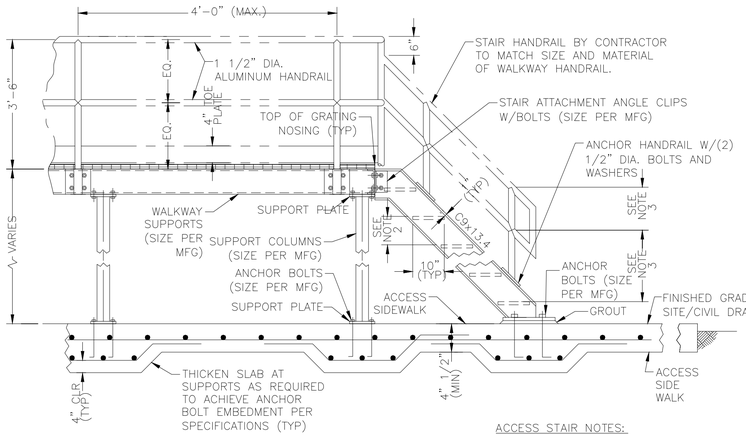
4FT X 6FT CONCRETE SLUDGE DISPOSAL PAD 1

N.T.S.



SLUDGE DISPOSAL PIPE SECTION 2

N.T.S.

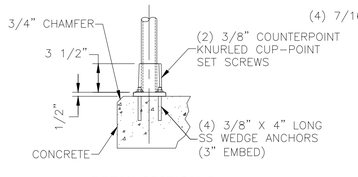


ACCESS STAIR NOTES:

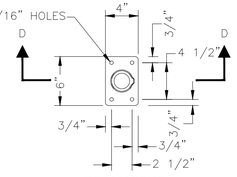
1. STAIRS SHALL BE 3' WIDE MIN UNLESS OTHERWISE NOTED.
2. NUMBER OF STAIRS WILL VARY WITH LOCATION. STAIR VERTICAL SPACING SHALL BE BETWEEN 7" AND 8" BUT WILL BE CONSISTENT.
3. DIMENSIONS TO MATCH PLATFORM HANDRAIL.
4. CONSTRUCT A MINIMUM 4' X 4' REINFORCED CONCRETE LANDING IN FRONT OF ALL ACCESS STAIRS. COORDINATE WITH ACCESS SIDEWALK.

ACCESS STAIRS AND PLATFORM DETAIL 3

N.T.S.

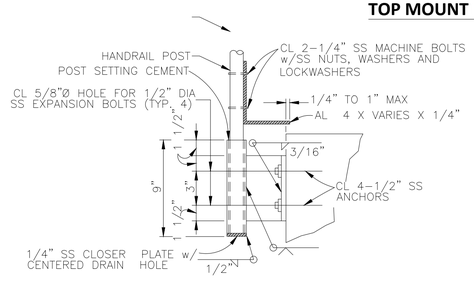


DETAIL SECTION 'D'

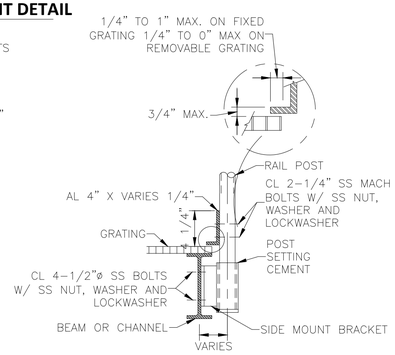


PLAN VIEW

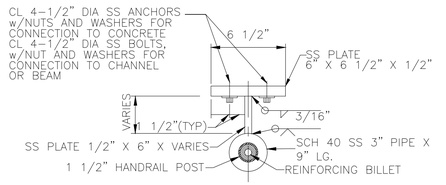
TOP MOUNT DETAIL



DETAIL SECTION 'A'



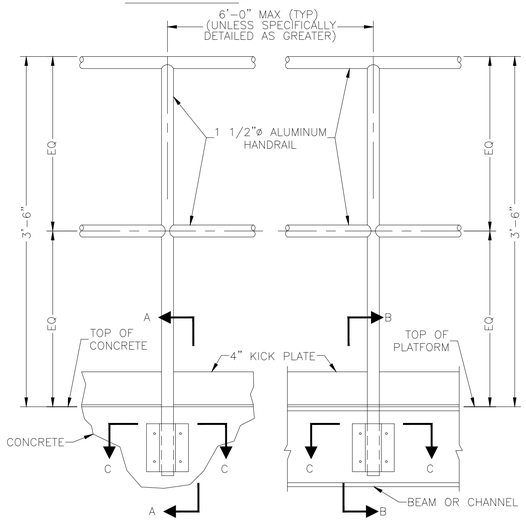
DETAIL SECTION 'B'



DETAIL SECTION 'C'

MISCELLANEOUS METALS NOTE:

1. WHERE ALUMINUM OR ALLOY SURFACES, FITTINGS OR EXTRUSIONS ARE TO BE IN CONTACT WITH DISSIMILAR METALS, GROUT, CONCRETE, MASONRY OR WOOD, COAT ALUMINUM AND/OR ALLOYS SURFACES PER SPECIFICATIONS DIVISION 9. IF DIVISION 9 IS NOT INCLUDED IN THE SPECIFICATIONS OR DOES NOT ADDRESS CORROSION PROTECTION, AFTER PREPARATION OF SURFACES, COAT WITH A HEAVY COAT, MINIMUM THICKNESS OF 10 MILS, OF BITUMINOUS PAINT, OR INSTALL AN APPROVED NON_ABSORPTIVE ISOLATION PAD TO PREVENT CONTACT.
2. HOT DIP GALVANIZE STRUCTURAL MEMBERS, ALUMINUM GRATING, HANDRAIL AND LADDERS, 316 SS FASTENERS AND HARDWARE.



ELEVATION

SIDE MOUNT DETAIL

TYPICAL HANDRAIL MOUNTING DETAILS 4

N.T.S.

REV. NO.	DATE	DESCRIPTION	PROJECT MANAGER:	DCS
			DESIGNED BY:	KM
			CHECKED BY:	RM
			DRAWN BY:	RM
			DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

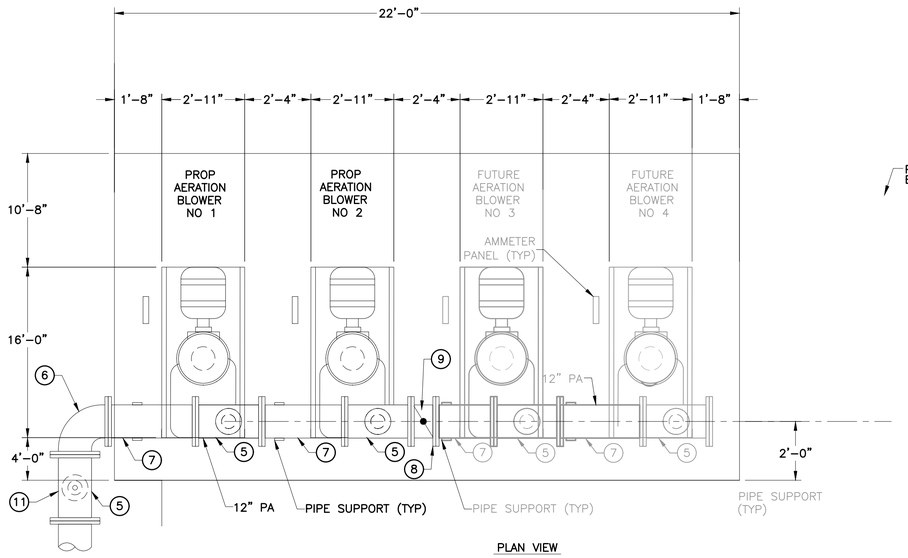
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

PROCESS - WASTEWATER TREATMENT PLANT - DETAILS SHEET NO. 3

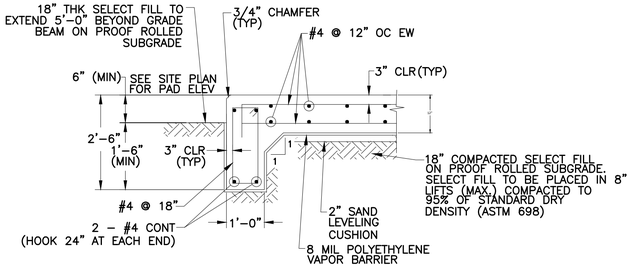
DATE: FEBRUARY 2026
SCALE: N.T.S.
DRAWING: 02P-06

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\02P-06.dwg, LAST SAVED ON: Feb 04 2026 1:12pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:19pm, CFG:

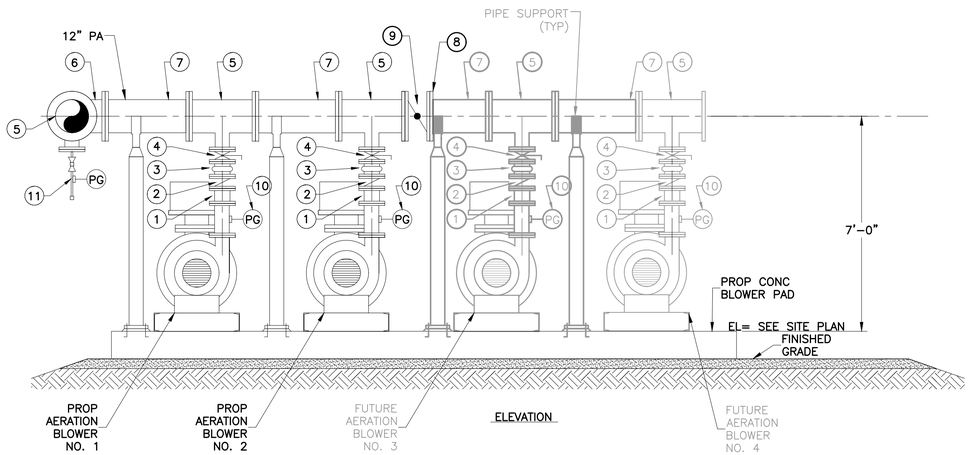


PLAN VIEW

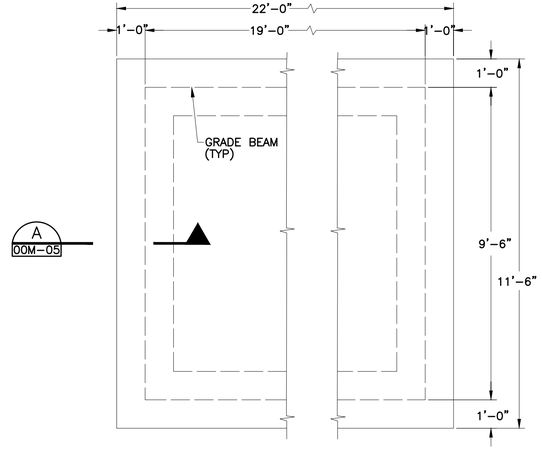
BLOWER PIPING SCHEDULE			
NO.	QTY.	SIZE	DESCRIPTION
1	3	6"	SPOOL PIECE – FLG/FLG
2	3	6"	CHECK VALVE – FLG/FLG
3	3	6"	FLEXIBLE JOINT – FLG/FLG
4	3	6"	LEVER ACTUATED BUTTERFLY VALVE – FLG/FLG
5	4	12"x 6"	TEE – FLG/FLG
6	1	12"	90° BEND – FLG/FLG
7	3	12"	SPOOL PIECE – FLG/FLG
8	1	12"	BLIND FLANGE
9	1	12"	LEVER ACTUATED BUTTERFLY VALVE – FLG/FLG
10	3	1"	PRESSURE GAUGE
11	1	1"	DRIP LEG ASSEMBLY w/PLUG VALVE, PRESSURE GAUGE AND THREADED CAP WITH DRAIN COCK
12	-	-	NOT USED
13	-	-	NOT USED
14	-	-	NOT USED
15	-	-	NOT USED



BLOWER PAD FOUNDATION FOOTING – SECTION A
N.T.S. 00M-05



PROCESS AIR BLOWER PAD 1
3/8" = 1'-0"



BLOWER PAD FOUNDATION PLAN 2
N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

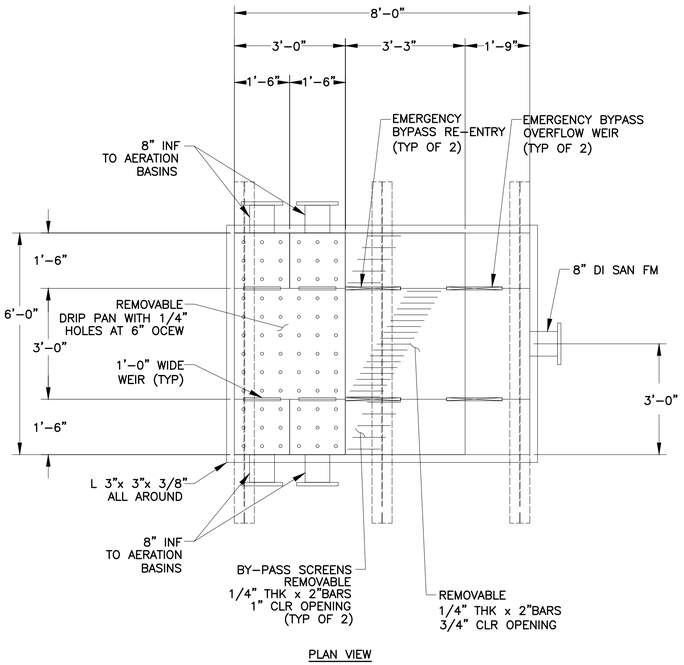
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

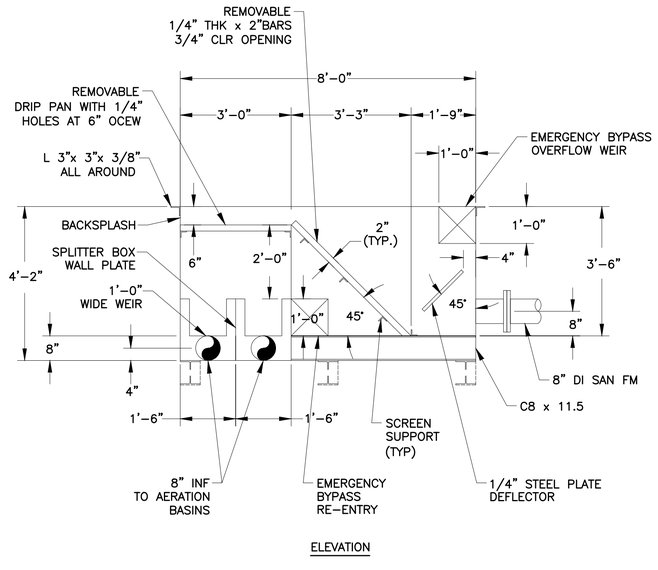
PROCESS - BLOWER PAD PLAN AND SECTION

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 02P-07

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\02P-07.dwg, LAST SAVED ON: Feb 04 2026 1:12pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:19pm, CFG:



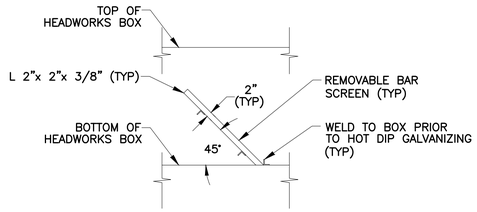
PLAN VIEW



ELEVATION

HEADWORKS – BAR SCREEN – DETAILS 1

3/8" = 1'-0"

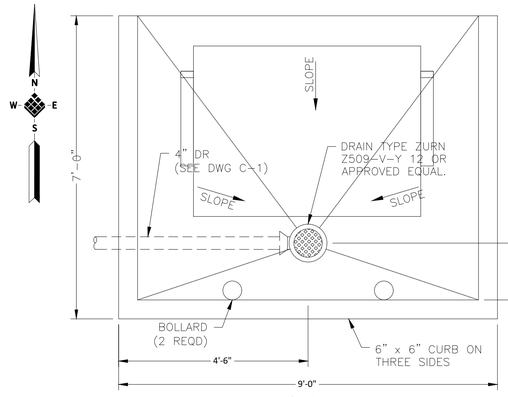


NOTES:

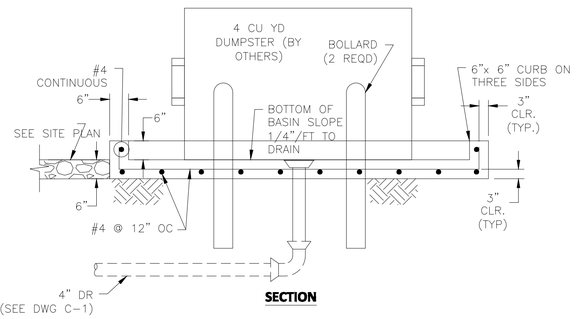
1. REMOVABLE BAR SCREENS TO BE FABRICATED FROM 1/4" THK STEEL PLATE 2" DEPTH.
2. HOT DIP GALVANIZE AFTER FABRICATION.

REMOVABLE BAR SCREEN SUPPORT DETAIL 2

N.T.S.



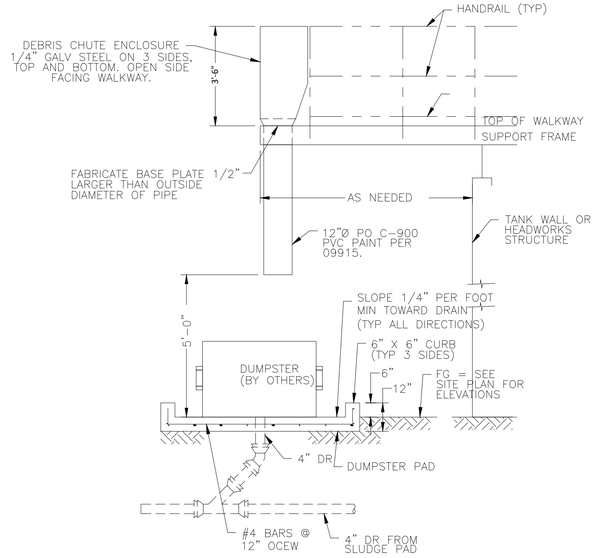
PLAN



SECTION

DUMPSTER PAD DETAILS 3

N.T.S.



DUMPSTER PAD, SUMP AND WASTE CHUTE SECTION 4

N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

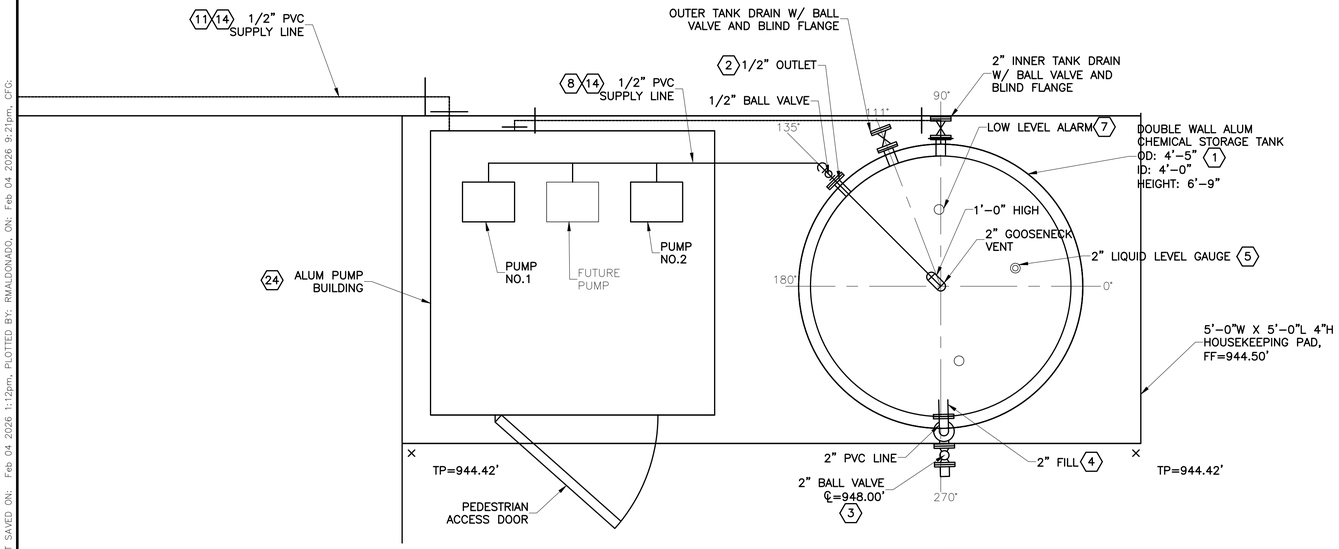
PROCESS - HEADWORKS PLAN AND EQUIPMENT PAD DETAILS

DATE: FEBRUARY 2026

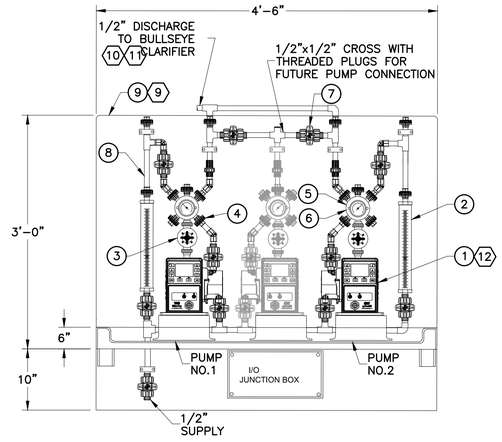
SCALE: AS NOTED

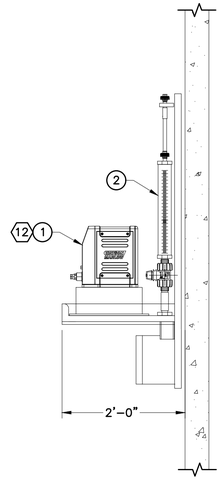
DRAWING: 02P-08

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\02P-08.dwg, LAST SAVED ON: Feb 04 2026 1:12pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:20pm, CFG:



ALUM PUMP PLAN VIEW 1
SCALE: N.T.S.





PROP PUMPS AND SKID 2
N.T.S.

KEY NOTES:

1. INSTALL SNYDER INDUSTRIES 500 GALLON ASTM HDPE DOUBLE WALL TANK MPN 5780102N45, OR ENGINEER APPROVED EQUAL. TANK MATERIAL TO BE POLYETHYLENE RESIN AND MEETS ASTM D1998 SPECIFICATIONS AND ANSI/NSF 61 APPROVED RESIN FOR POLYETHYLENE UPRIGHT STORAGE TANKS. TANK MATERIAL TO BE ABLE TO WITHSTAND A MAX TEMPERATURE OF 120 DEGREES F, HAVE A MINIMUM WALL THICKNESS OF 0.187 INCHES THROUGHOUT, AND HAVE UV INHIBITORS TO PROTECT AGAINST DIRECT SUNLIGHT IN A HOT AND HUMID OUTDOOR ENVIRONMENT. TANK MATERIAL TO HAVE A SPECIFIC GRAVITY RATING OF 1.9 OR GREATER. OUTER CONTAINMENT TANK COLOR TO BE NATURAL WHITE OR ENGINEER APPROVED EQUAL AND OUTER CONTAINMENT TANK MATERIAL TO BE ABLE TO HOLD A MINIMUM OF 115% OF THE NORMAL FILL CAPACITY OF THE INNER TANK.
2. INSTALL 1/2" DIAMETER THREADED OUTLET FITTING, SCHD 80 PVC PIPE, AND 1/2" BALL VALVE TO SUPPLY CHEMICAL FROM STORAGE TANK TO THE CHEMICAL FEED PUMPS. ROUTE PIPE ABOVE GRADE INCLUDING REQUIRED FITTINGS AND 90° ELBOWS. TRANSITION FITTING TO ALLOW SAFE SIDEWALL INSTALLATION AND LONG-TERM SEALING THROUGH BOTH WALLS OF TANK.
3. INSTALL 2" DIAMETER PVC EXTERNAL FILL PIPE WITH CLAMPS AND SUPPORTS TO KEEP LINE ATTACHED TO STORAGE TANK. EXTERNAL FILL PIPE TO INCLUDE 2" BALL VALVE AND 2" QUICK COUPLE ATTACHMENT.
4. 2" DIAMETER THREADED FITTING FOR PVC FILL LINE.
5. INSTALL 2" THREADED BULKHEAD FITTING AS WELL AS A SNYDER INDUSTRIES 500 GALLON LIQUID LEVEL GAUGE OR ENGINEER APPROVED EQUAL. LIQUID LEVEL GAUGE TO HAVE A PVC GAUGE GUARD, 2" PVC BUSHING, HDPE FLOAT, INTERNAL KYNAR PLASTIC RODS, CALIBRATION CONSISTING OF AN OUTER PLASTIC PIECE, AND AN INNER GLASS PIECE AND PAPER LEVEL DECAL.
6. GOOSENECK VENT TO EXTEND TO 1'-0"H ABOVE TOP OF TANK
7. INSTALL SNYDER INDUSTRIES ULTRASONIC LEVEL INDICATOR OR ENGINEER APPROVED EQUAL. LEVEL INDICATOR TO HAVE A 4-20 MA SIGNAL OUTPUT FOR LOW LEVEL ALARM AND OTHER CONTROL SYSTEM CAPABILITY. LEVEL INDICATOR TO HAVE A MINIMUM RANGE OF 20 FT.
8. PIPE, VALVES AND FITTINGS TO BE SCH 80 PVC.
9. SKID TO BE CONSTRUCTED OF MINIMUM 1/2" THICK CORROSION RESISTANT FRP WITH STRUCTURAL FIBERGLASS REINFORCEMENT TO MINIMIZE DEFLECTION AND RESIN SHALL BE COMPATIBLE WITH CHEMICAL SPECIFIED. SKID SHALL BE WALL MOUNTED USING 3/8" SST BOLTS. PROVIDE 3" MINIMUM SIDEWALL DEPTH FOR CHEMICAL CONTAINMENT.
10. TRANSITION TO 3/8" POLYTUBING INSIDE 3" SCH80 PVC CONDUIT.
11. INSTALL 3/8"ø POLYETHYLENE TUBING INSIDE A 1 1/2"ø SCH 80 PVC CONDUIT FROM THE ALUM PUMP DISCHARGE TO THE DOSAGE POINT INTO THE AERATION BASIN. PROVIDE ISOLATION VALVE ON 3/8" TUBING TO ALLOW PERIODIC REMOVAL AND REPLACEMENT OF THE 3/8" TUBING.
12. PLUG PUMPS INTO DUPLEX OUTLET. REFER TO ELECTRICAL DWGS AND CONTROL LOGIC FOR SENDING/RECEIVING 4-20 MA SIGNALS FROM EFFLUENT FLOW METER FOR FLOW PACING OF THE ALUM PUMP SYSTEM.
13. SEE CIVIL DRAWINGS FOR ADDITIONAL DETAIL ON CHEMICAL CONDUIT AND YARD PIPING ALIGNMENTS.
14. INSULATE ALL ABOVE GRADE PIPING THAT IS 4"ø OR LESS; AND IS OUTSIDE OF THE BUILDING PER SPECIFICATIONS INCLUDING ALUMINUM WEATHER JACKET.
15. REFER TO YARD PIPING FOR CONTINUATION.
16. BACKWASH/WASTE PUMP TO BE PROVIDED BY FILTER MANUFACTURER.
17. ALL DISCHARGE PIPING, FITTINGS, AND APPURTENANCES STARTING AT BACKWASH PUMP DISCHARGE FLANGE SHALL BE PROVIDED BY THE CONTRACTOR.
18. 2" BACKWASH/SOLID WASTE ELECTRIC BALL VALVE ASSEMBLY TO BE PROVIDED BY FILTER MANUFACTURER (TYP).
19. PER IFC§5003.5 AND NFPA 704, STATIONARY CONTAINER, ABOVEGROUND TANKS, AND ENTRANCES TO LOCATIONS WHERE HAZARDOUS MATERIALS ARE STORED, DISPENSED, USED, OR HANDLED SHALL HAVE VISIBLE HAZARD IDENTIFICATION SIGNS. BULK STORAGE TANKS SHALL HAVE NAME PLATE IDENTIFICATION THAT INCLUDES NAME OF CHEMICAL AND TANK NUMBER, IF MORE THAN ONE.
20. VACUUM GAUGE/TRANSDUCER TO BE PROVIDED BY FILTER MANUFACTURER. CONTRACTOR TO COORDINATE WITH THE MANUFACTURER REGARDING THE LOCATION OF THE GAUGE ON THE PUMP SUCTION LINE.
21. 2" BALL VALVE PROVIDED BY FILTER MANUFACTURER.
22. 2" RECIRCULATION VALVE PROVIDED BY THE FILTER MANUFACTURER.
23. CONTRACTOR TO COORDINATE WITH FILTER MANUFACTURER TO ROUTE RECIRCULATION LINE BACK INTO FILTER BASIN.
24. PROVIDE 5' X 5' FIBERGLASS BUILDING PER SPECIFICATION 13140.

NO.	QTY	DESCRIPTION	MANUFACTURER
1	2	QDOS 30 PERISTALTIC METERING PUMP WITH CAPACITY OF 0.001 GPH (MIN) AND 7.93 GPH (MAX); 5000:1 TURN DOWN RATIO	WATSON MARLOW
2	1	CALIBRATION COLUMN	PRIMARY FLUIDS
3	1	PRESSURE RELIEF VALVE	PRIMARY FLUIDS
4	2	DIAPHRAGM CHECK VALVE	PLASTOMATIC
5	1	PVC MULTIPORT HEADBLOCK WITH DIAPHRAGM SEAL	EI2
6	1	0-160 PSI PRESSURE GAUGE W/ DIAPHRAGM SEAL	WIKA
7	10	1/2" TRUE UNION BALL VALVE	GEORGE FISCHER
8	1	LOT OF 1/2" SCH 80 PVC PIPE AND FITTINGS	
9	1	FRP WALL MOUNTED PUMP SKID	ASSOCIATED FRP

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

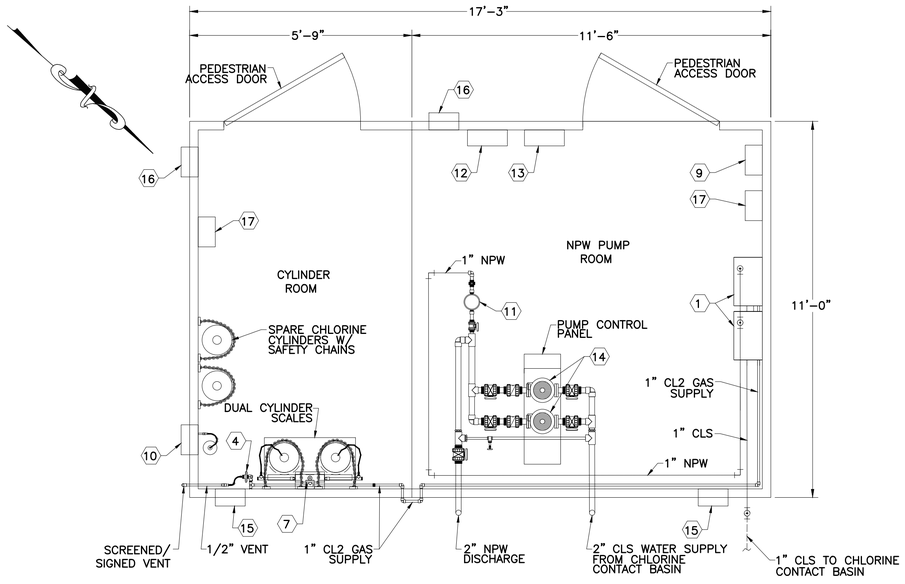
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

PROCESS - ALUM PUMP BUILDING AND STORAGE TANK

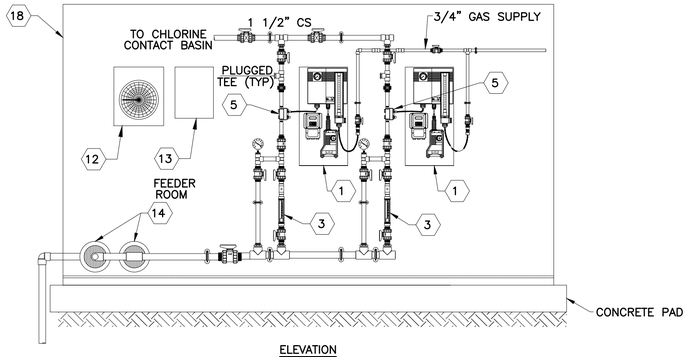
DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 02P-09

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\02P-09.dwg, LAST SAVED ON: Feb 04 2026 1:12pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:21pm, CFG:



NOTE:
1. PORTABLE PRESSURIZED EYEWASH STATION TO BE KEPT ONSITE.

CHLORINE BUILDING PLAN 1
N.T.S.

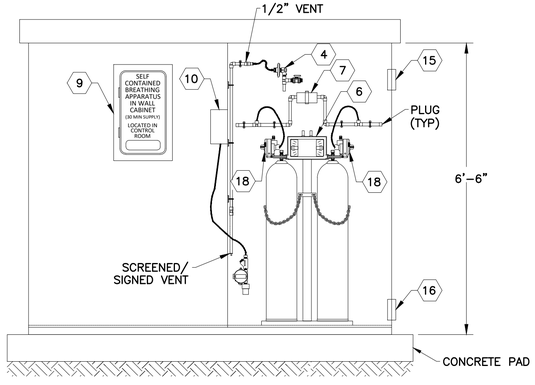


ELEVATION

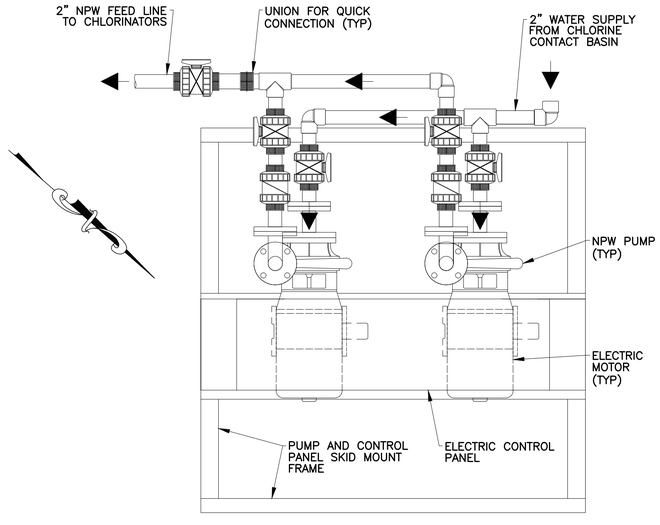
NOTE:
SOME ITEMS ROTATED OR NOT SHOWN FOR THE CLARITY OF OTHER ITEMS.

CHLORINATION EQUIPMENT SCHEDULE		
ITEM	NO. REQ'D	DESCRIPTION
1	2	CHLORINATOR
2	–	NOT USED
3	2	0–30 GPM ROTOMETER
4	2	REMOTE PRESSURE RELIEF VALVE
5	1	VACUUM EJECTOR
6	1	55–340 CYLINDER SCALE
7	1	REMOTE VACUUM SWITCH OVER
8	2	CYLINDER MOUNTED VACUUM REGULATORS
9	1	30 MINUTE – SELF CONTAINED BREATHING APPARATUS (SCBA) (LOCATE IN NPW PUMP ROOM)
10	1	GAS MONITORING SYSTEM w/AUDIBLE & VISUAL ALARM w/SENSOR RUN TO CHEM FEEDER ROOM
11	1	2" PVC BASKET STRAINER
12	1	CIRCULAR CHART RECORDER (TWO PEN)
13	1	FLOW METER
14	1	CHLORINE SOLUTION WATER SUPPLY PUMP
15	2	160 CFM SCREENED FAN (LOCATE NEAR ROOF, AIR BLOWS IN)
16	2	12" SCREENED LOUVER VENT (LOCATE NEAR FLOOR, LOUVERS SHALL CLOSE WHEN FAN IS OFF)
17	2	HEATER (TO MAINTAIN 65° F, YEAR ROUND)
18	1	17' x 11' FIBERGLASS TWO COMPARTMENT BUILDING

CHLORINE FEED ROOM ELEVATION 2
N.T.S.



CHLORINE BUILDING CYLINDER ROOM ELEVATION 3
N.T.S.



NPW PUMP PLAN 4
N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

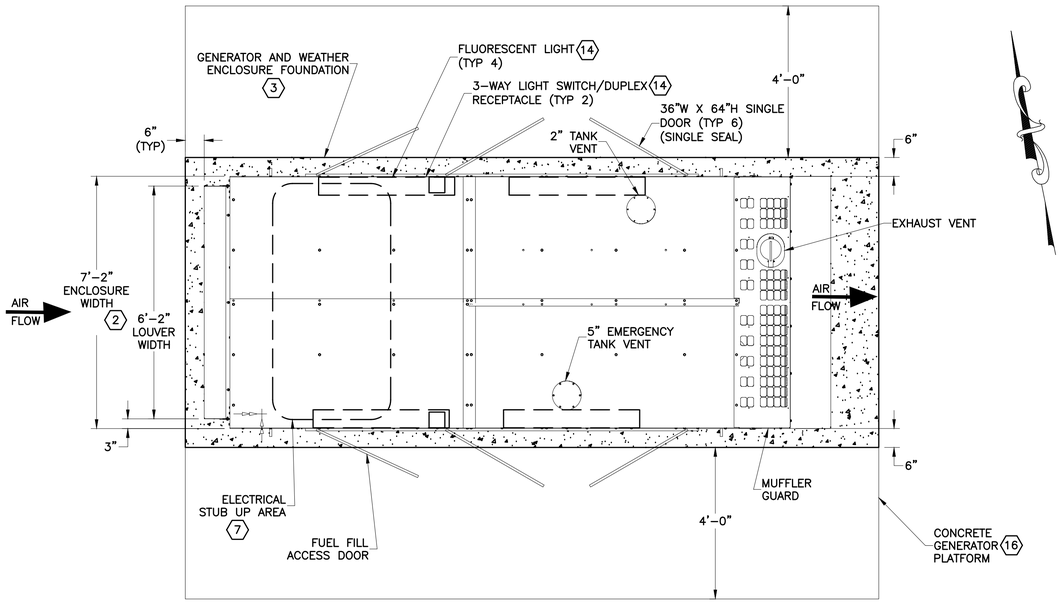
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

PROCESS - CHEMICAL STORAGE BUILDING AND DETAILS

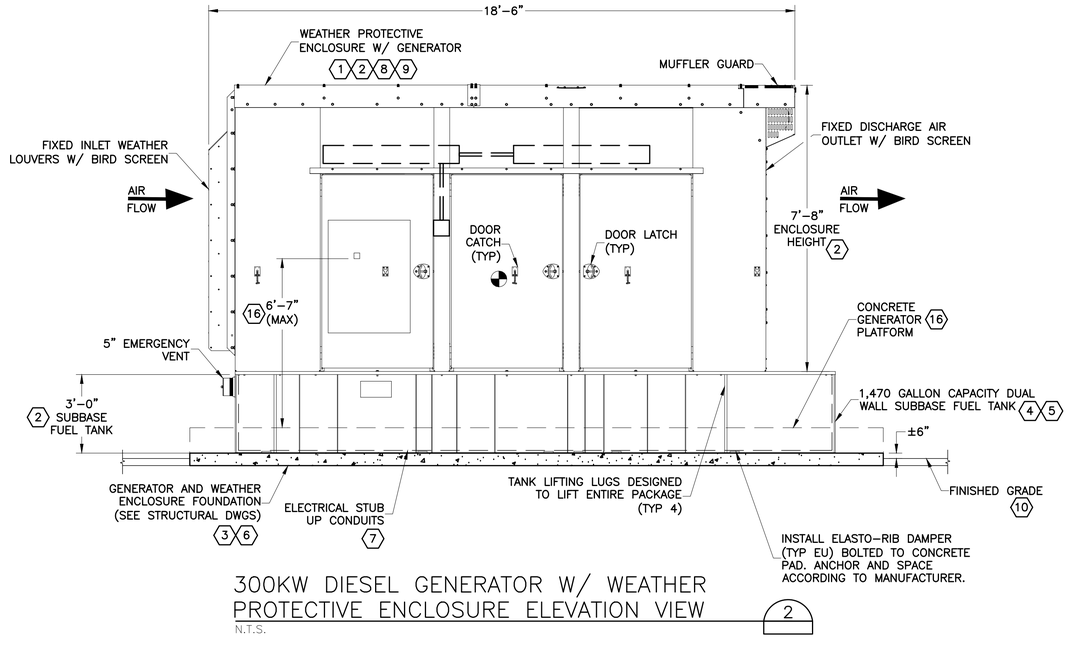
DATE: FEBRUARY 2026
SCALE: N.T.S.
DRAWING: 02P-10

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\02P-10.dwg, LAST SAVED ON: Feb 04 2026 1:12pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:22pm, CFG:



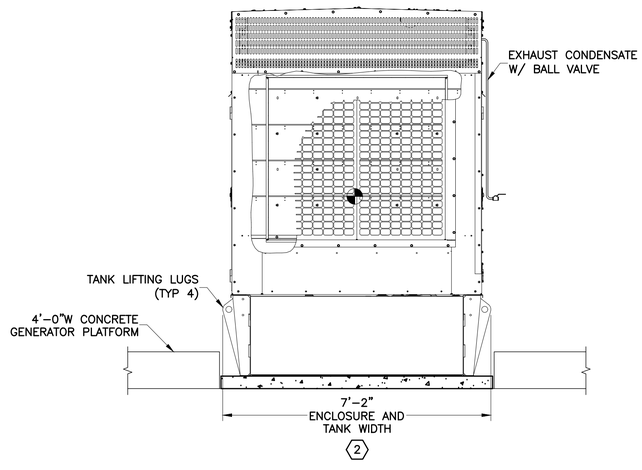
300KW DIESEL GENERATOR W/ WEATHER PROTECTIVE ENCLOSURE PLAN VIEW (1)

N.T.S.



300KW DIESEL GENERATOR W/ WEATHER PROTECTIVE ENCLOSURE ELEVATION VIEW (2)

N.T.S.



WEATHER PROTECTIVE ENCLOSURE END VIEW (3)

N.T.S.

KEY NOTES:

(1) ALL DIMENSIONS SHALL BE FIELD VERIFIED. CONNECT NEW ELECTRICAL CONDUIT/WIRING TO PROPOSED GENERATOR PER ELECTRICAL DRAWINGS.

(2) WEATHER ENCLOSURE DIMENSIONS SHOWN TO BE VERIFIED PER MANUFACTURER'S SPECIFICATIONS.

(3) FOUNDATION DIMENSIONS TO EXTEND 6" FROM WEATHER ENCLOSURE OUTER WALLS. ADJUST PAD DIMENSIONS AS REQUIRED TO SUIT ACTUAL ENCLOSURE INSTALLED. NO SEPARATE PAY.

(4) A NEW 300KW DIESEL GENERATOR WITH 1,470 GALLON CAPACITY DUAL WALL SUB BASE FUEL TANK, TO BE SUPPLIED BY THE CONTRACTOR. WEATHER ENCLOSURE TO FIT ON TOP OF SUPPLIED TANK. SECURE GENERATOR ATOP SUB-BASE FUEL TANK PER WRITTEN INSTRUCTIONS FROM GENERATOR MANUFACTURER. THE TANK SHALL BE CONSTRUCTED OF CORROSION RESISTANT STEEL AND SHALL BE UL142 LISTED. TANK SHALL INCLUDE: FUEL SUPPLY TUBE EXTENDED TO TANK BOTTOM, FUEL RETURN LINE SEPARATED FROM SUPPLY ELECTRICAL STUB UP AREA IN BASE, MECHANICAL FUEL LEVEL GAUGE, LOW LEVEL ALARM SWITCH WIRED TO GENERATOR SET CONTROL, LIQUID IN RUPTURE BASIN ALARM WIRED TO GENERATOR SET CONTROL, LOCKABLE FUEL FILLER CAP, FUEL TANK DRAIN, FUEL TANK VENT WITH CAP, AND CONTAINMENT TANK VENT WITH CAP.

(5) CONTRACTOR SHALL TOP OFF NEW FUEL TANK WITH DIESEL FUEL UPON COMPLETION OF ALL TESTING AND STARTUP ACTIVITIES. CONTRACTOR SHALL PROVIDE REQUIRED FUEL AT NO ADDITIONAL COST TO THE OWNER.

(6) INSTALL A 1" EXPANSION BOARD WITH SEALANT BETWEEN PROPOSED GENERATOR PAD AND ADJACENT SIDEWALK.

(7) ELECTRICAL STUB-UP CONDUITS TO TRAVEL VERTICALLY THROUGH NEW FUEL TANK TO GENERATOR. PROVIDE BLOCKOUT AS REQUIRED TO ACCOMMODATE CONDUIT LOCATIONS ON EXIST GENERATOR. REFERENCE STRUCTURAL AND ELECTRICAL SHEETS.

(8) PRIOR TO PERFORMING KEY NOTE 9, CONTRACTOR SHALL RUN GENERATOR UNLOADED FOR 1 HOUR AND CONFIRM FREQUENCY AND VOLTAGE ARE WITHIN MANUFACTURER'S SPECIFICATIONS. PROVIDE WRITTEN TEST RESULTS TO ENGINEER.

(9) GENERATOR LOAD TEST; CONTRACTOR SHALL OPERATE PLANT USING THE GENERATOR CONTINUOUSLY FOR 4 HOURS. TEST LOAD SEQUENCING PER DIVISION 13.

(10) SEE SITE PLAN FOR PROP ADJACENT SIDEWALKS, AND GRADING.

(11) COLOR OF WEATHER ENCLOSURE SHALL BE FROM MANUFACTURERS STANDARD COLOR CHART. PAINT AND SURFACE PREP SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S STANDARD PROCEDURE.

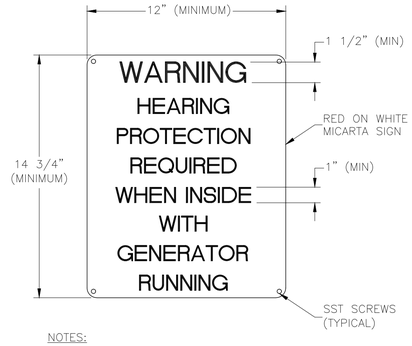
(12) ALL HARDWARE TO BE 316 STAINLESS STEEL.

(13) DO NOT ROUTE GROUND CONDUCTORS ACROSS TOP OF SLAB INSIDE OR OUTSIDE ENCLOSURE. INSTALL IN SCH 80 PVC IN SLAB.

(14) GENERATOR MANUFACTURER WILL INSTALL LIGHTS, LIGHT SWITCH, DUPLEX RECEPTACLE, AND FIRE EXTINGUISHER INSIDE ENCLOSURES.

(15) EXCESSIVE TWISTING OF THE FUEL TANK, WHEN FASTENING IT TO A FOUNDATION, MAY RESULT IN STRUCTURAL FAILURE OF THE TANK. TO INSURE THE INSTALLATION DOES NOT EXCESSIVELY TWIST THE FUEL TANK, REFER TO MANUFACTURERS INSTALLATION PROCEDURES.

(16) THE CENTER OF THE BREAKER HANDLE GRIP, WHEN IN ITS HIGHEST POSITION, SHALL NOT BE HIGHER THAN 6'7"(MAX) FROM THE TOP OF THE WORKING PLATFORM OF THE GENERATOR. CONTRACTOR SHALL ADJUST BREAKER HANDLE HEIGHT, HEIGHT OF FUEL TANK, AND/OR HEIGHT OF CONCRETE PLATFORM ADJACENT TO ENCLOSURE FOR THE FULL LENGTH OF THE ENCLOSURE (TYP BOTH SIDES). NO SEPARATE PAY.

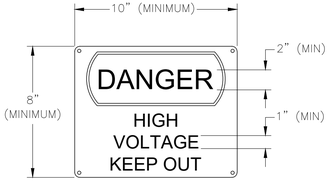


NOTES:

1. PLACE WARNING SIGN ON THE FRONT OF THE MAIN SERVICE BREAKER ENCLOSURE.

WARNING SIGN DETAIL (4)

N.T.S.



HIGH VOLTAGE SIGN DETAIL (5)

N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

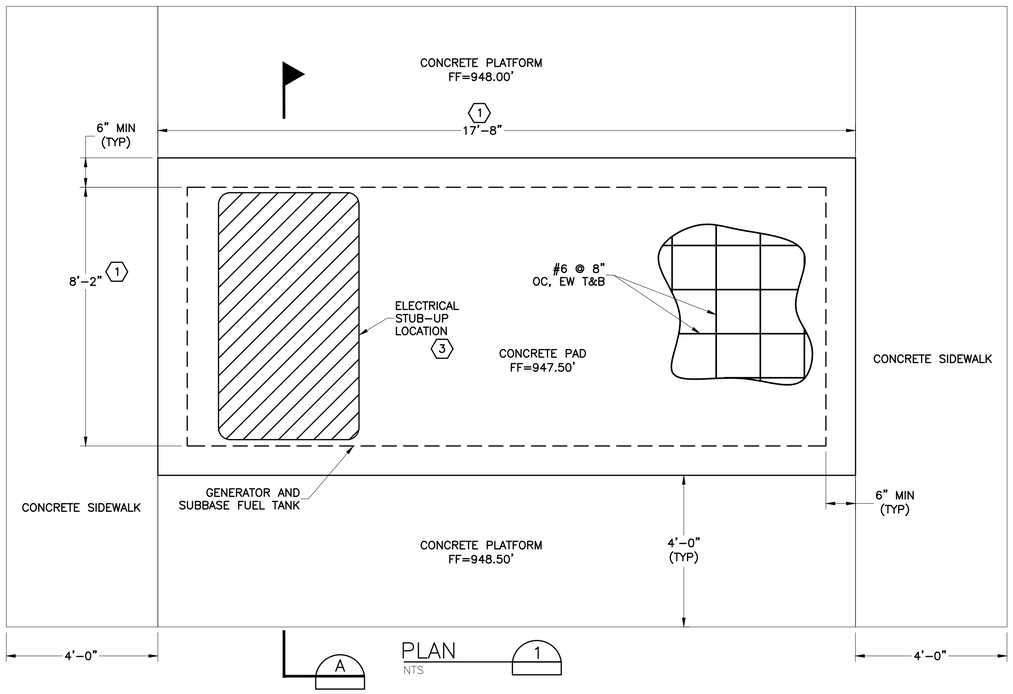
PROCESS - EMERGENCY GENERATOR PLAN AND ELEVATION

DATE: FEBRUARY 2026

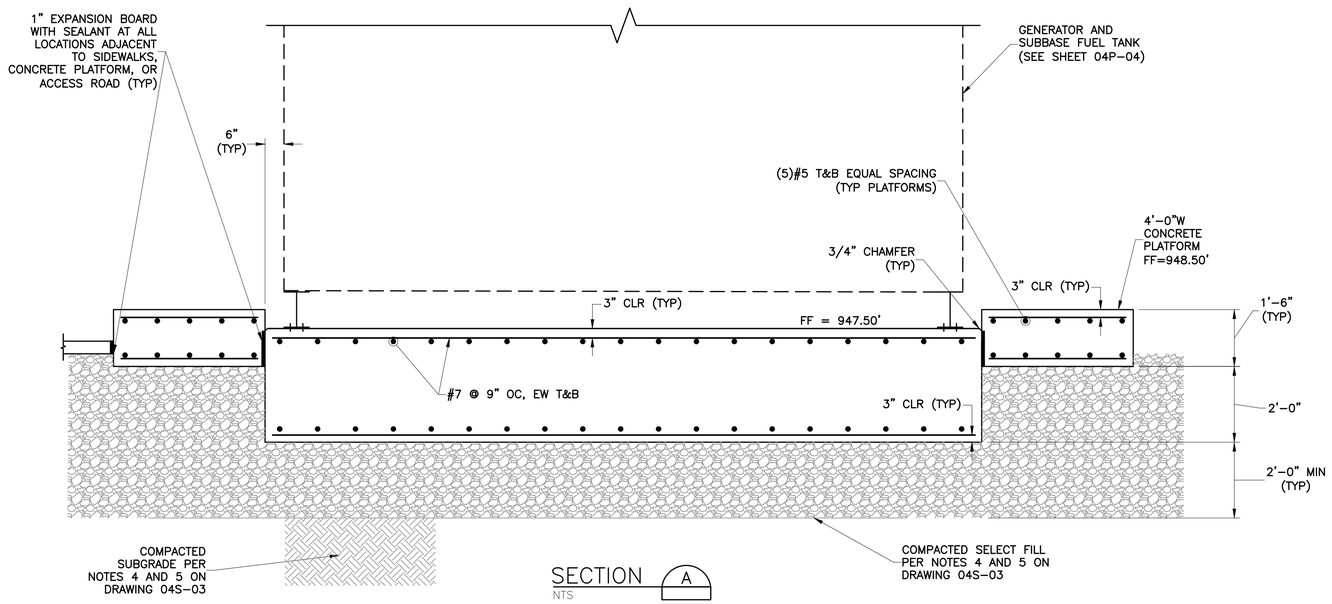
SCALE: AS NOTED

DRAWING: 02P-11

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\02P-11.dwg, LAST SAVED ON: Feb 04 2026 1:12pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:22pm, CFG:



A PLAN 1
NTS

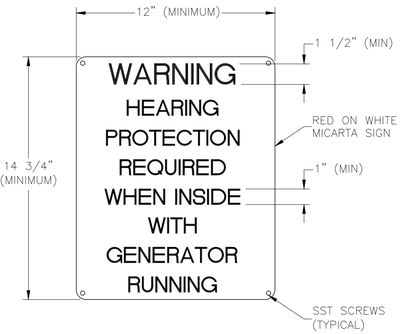


SECTION A
NTS

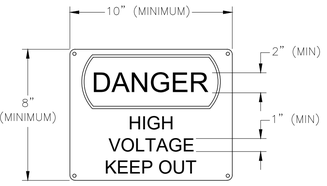
GENERATOR DATA	
ITEMS	DATA
GENERATOR	300 KW, 378 KVA, FUEL CONSUMPTION RATE 1/2 LOAD – 12.2 GPH FULL LOAD – 23.1 GPH WT = 6,057 LBS
ENCLOSURE	WEATHER WT = 12,540 LBS
SUBBASE FUEL TANK	CAPACITY = 1,470 GAL WT = 7,035 LBS (TANK WITH FUEL)
NFPA 110	LEVEL 1, TYPE 10

KEY NOTES:

1. CONTRACTOR SHALL CONFIRM DIMENSIONS OF PROPOSED GENERATOR AND ADJUST GENERATOR PAD SIZE AS REQUIRED TO PROVIDE A MINIMUM OF 6" CLEAR AROUND THE GENERATOR/ SUBBASE FUEL TANK.
2. REFER TO FOUNDATION NOTES ON SHEET 00S-01 FOR EXCAVATION, SUBGRADE PREPARATION & SELECT FILL REQUIREMENTS.
3. COORDINATE WITH ELECTRICAL DRAWINGS AND GENERATOR MANUFACTURER FOR LOCATION OF CONDUIT STUB-UPS THROUGH FOUNDATION.
4. BOLT GENERATOR TO GENERATOR PAD PER MANUFACTURER'S RECOMMENDATIONS.
5. SEE SITE PLAN FOR GRADING AND DRAINAGE OF ADJACENT SIDEWALKS AND STRUCTURES.
6. PLACE WARNING AND HIGH VOLTAGE SIGNS ON THE FRONT OF THE MAIN SERVICE BREAKER ENCLOSURE.



WARNING SIGN DETAIL 2
N.T.S.



HIGH VOLTAGE SIGN DETAIL 3
N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS
HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER
TREATMENT PLANT - PHASE I

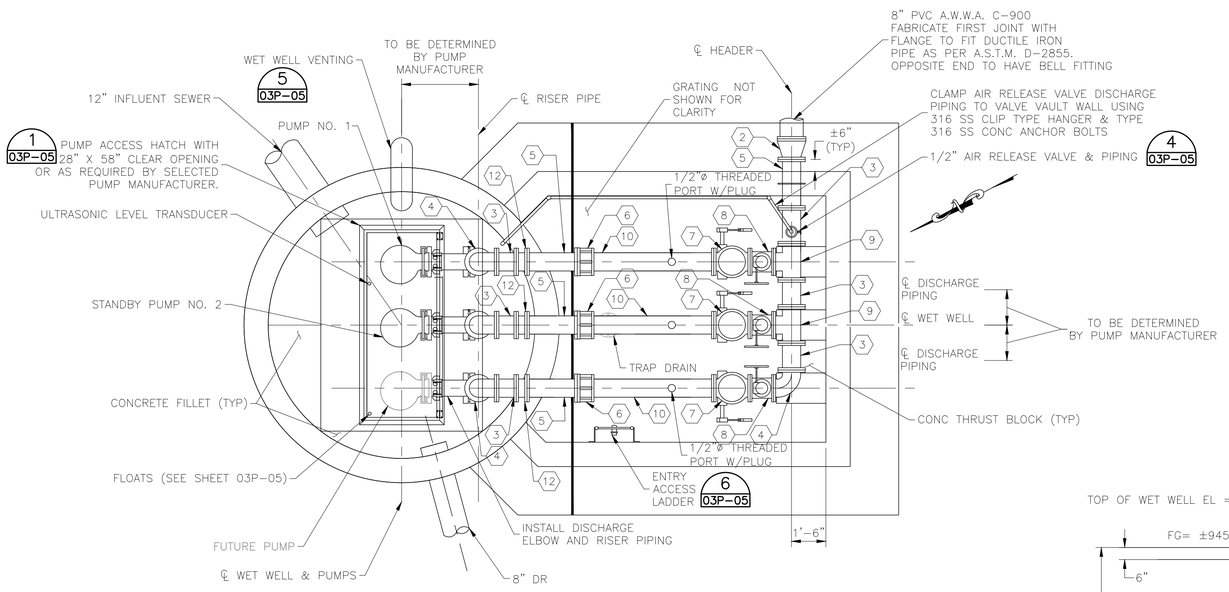
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED
PROFESSIONAL ENGINEER
2/5/26

WASTEWATER TREATMENT PLANT

STRUCTURAL - EMERGENCY GENERATOR
PLAN AND SECTION

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 02S-01

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\02S-01.dwg, LAST SAVED ON: Feb 04 2026 1:12pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:22pm, CFG:



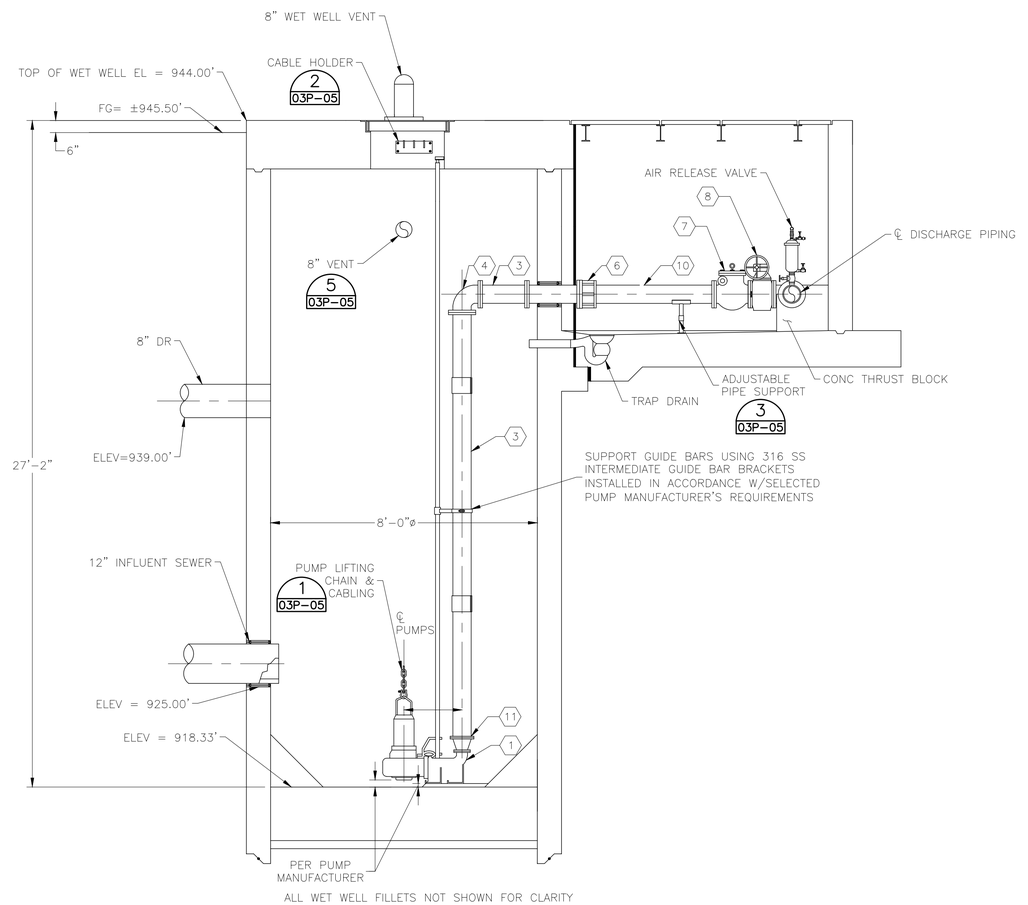
LIFT STATION MECHANICAL PLAN 1

N.T.S.

PIPING & VALVE SCHEDULE		
MARK	SIZE AND TYPE	DESCRIPTION
1	4" STD CLASS 125 C.I. FLANGE	AS PER PUMP MANUFACTURER
2	6" X 8" FLG/FLG	DI CONCENTRIC REDUCER
3	6" FLG/FLG	DI SPOOL PIECE
4	6" FLG/FLG	DI 90° LONG RADIUS ELBOW
5	6" FLG/FLG	DI FLANGED WALL PIPE
6	6"	DI RESTRAINED FLANGE COUPLING ADAPTER
7	6" FLG/FLG	SWING CHECK VALVE W/EXTERIOR WEIGHT AND LEVERS
8	6" FLG/FLG	PLUG VALVE (HANDWHEEL)
9	6" x 6" FLG/FLG	DI TEE
10	6" FLG/PLN	DI SPOOL PIECE
11	6" X 4" FLG/FLG	DI ECCENTRIC REDUCER
12	6"	DI RESTRAINED FLANGE COUPLING ADAPTER

NOTES:

1. ALL INTERIOR SURFACES OF CONCRETE WET WELL SHALL BE COATED IN ACCORDANCE WITH SPECIFICATION SECTION 11311. NO SEPARATE PAY.
2. ALL PIPING IN THE WET WELL AND VALVE VAULT SHALL BE FLANGED, DUCTILE IRON CLASS 53 WITH INTERIOR COATINGS PER SPECIFICATIONS. NO FLANGED COUPLING ADAPTORS, OR VICTAULIC STYLE COUPLING SHALL BE PERMITTED INSIDE THE WET WELL.
3. ALL VALVE BOLTING TO BE TYPE 316 SST.
4. ALL STEEL COMPONENTS WITHIN THE WET WELL, INCLUDING SUPPORTS, ANCHOR BOLTS, AND FLANGE BOLTS SHALL BE TYPE 316 STAINLESS STEEL.
5. SPOOL PIECES TO BE MIN 6" LENGTH.
6. SOME OBJECTS ROTATED FOR CLARITY.



LIFT STATION MECHANICAL ELEVATION 2

N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS · KIMBERLY HAMMOND · 151874 · LICENSED PROFESSIONAL ENGINEER

2/5/26

INFLUENT AND EFFLUENT PUMP STATION

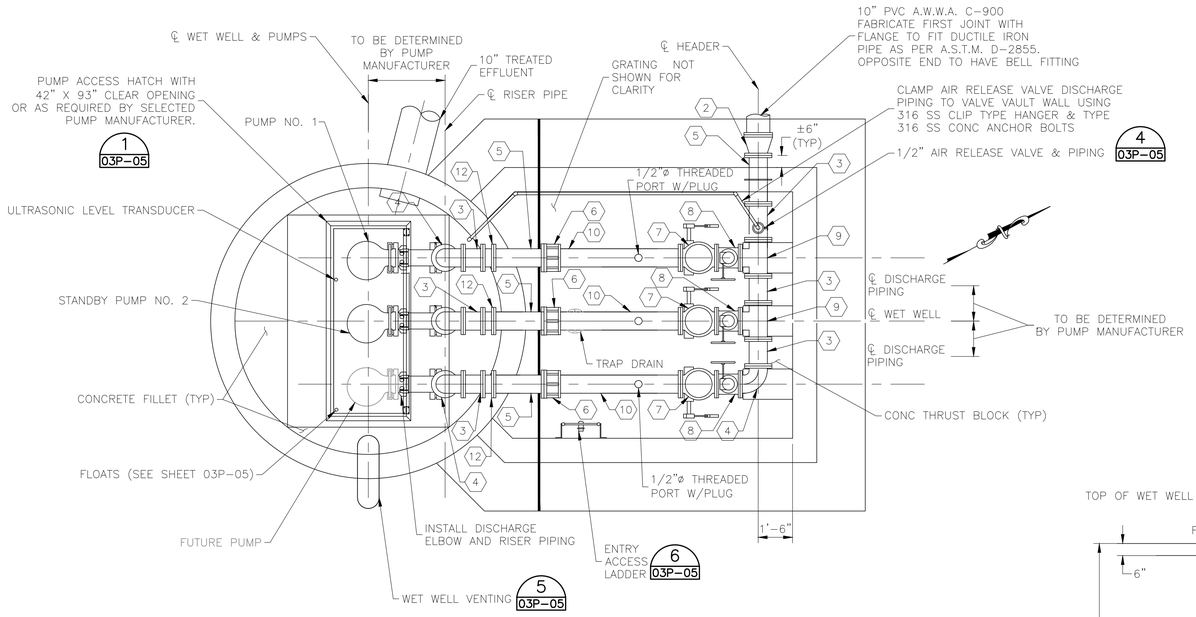
PROCESS - INFLUENT PLAN AND ELEVATION

DATE: FEBRUARY 2026

SCALE: AS NOTED

DRAWING: 03P-01

FILENAME: Z:\Projects 1501-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\03P-01.dwg, LAST SAVED ON: Oct 07 2025 4:54pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:23pm, CFG:



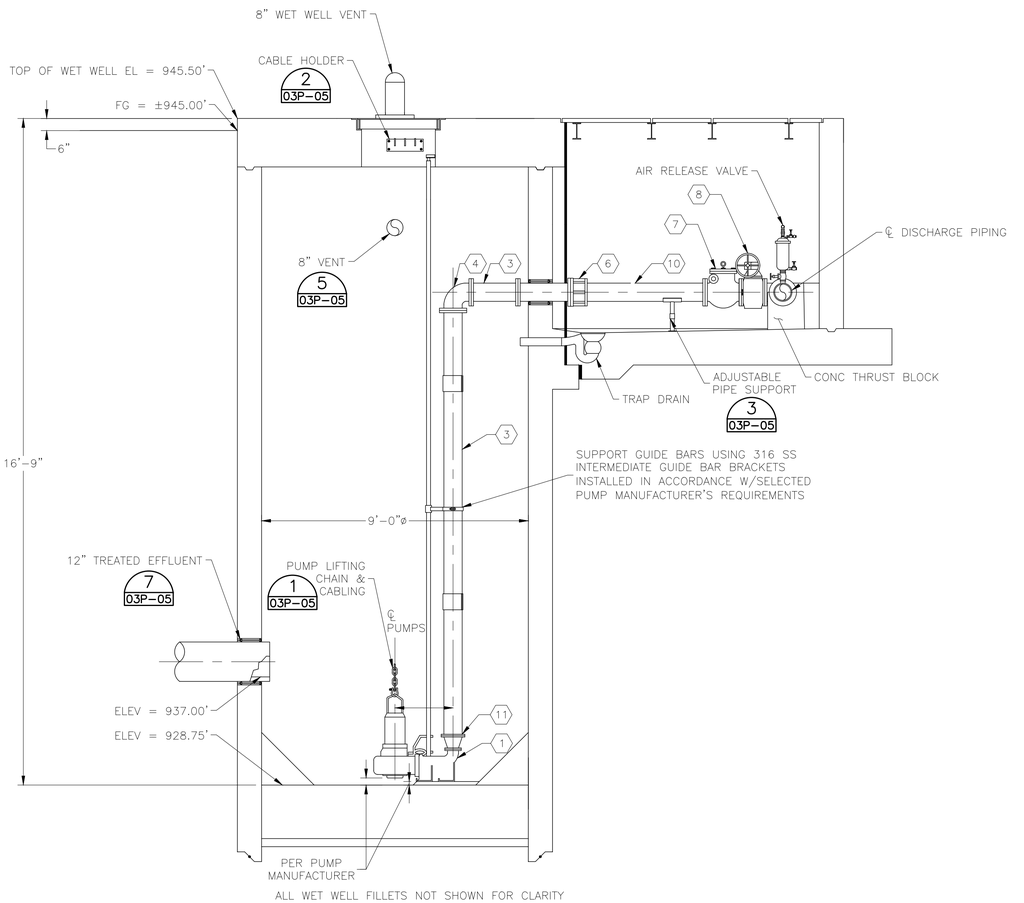
LIFT STATION MECHANICAL PLAN 1

N.T.S.

PIPING & VALVE SCHEDULE		
MARK	SIZE AND TYPE	DESCRIPTION
1	4" STD CLASS 125 C.I. FLANGE	AS PER PUMP MANUFACTURER
2	8" X 10" FLG/FLG	DI CONCENTRIC REDUCER
3	8" FLG/FLG	DI SPOOL PIECE
4	8" FLG/FLG	DI 90° ELBOW
5	8" FLG/FLG	DI FLANGED WALL PIPE
6	8"	DI RESTRAINED FLANGE COUPLING ADAPTER
7	8" FLG/FLG	SWING CHECK VALVE W/EXTERIOR WEIGHT AND LEVERS
8	8" FLG/FLG	PLUG VALVE (HANDWHEEL)
9	8" x 8" FLG/FLG	DI TEE
10	8" FLG/PLN	DI SPOOL PIECE
11	8" X 4" FLG/FLG	DI ECCENTRIC REDUCER
12	8"	DI RESTRAINED FLANGE COUPLING ADAPTER

NOTES:

1. ALL INTERIOR SURFACES OF CONCRETE WET WELL SHALL BE COATED IN ACCORDANCE WITH SPECIFICATION SECTION 11311. NO SEPARATE PAY.
2. ALL PIPING IN THE WET WELL AND VALVE VAULT SHALL BE FLANGED, DUCTILE IRON CLASS 53 WITH INTERIOR COATINGS PER SPECIFICATIONS. NO FLANGED COUPLING ADAPTORS, OR VICTAULIC STYLE COUPLING SHALL BE PERMITTED INSIDE THE WET WELL.
3. ALL VALVE BOLTING TO BE TYPE 316 SST.
4. ALL STEEL COMPONENTS WITHIN THE WET WELL, INCLUDING SUPPORTS, ANCHOR BOLTS, AND FLANGE BOLTS SHALL BE TYPE 316 STAINLESS STEEL.
5. SPOOL PIECES TO BE MIN 6" LENGTH.
6. SOME OBJECTS ROTATED FOR CLARITY.



LIFT STATION MECHANICAL ELEVATION 2

N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

INFLUENT AND EFFLUENT PUMP STATION

PROCESS - EFFLUENT PLAN AND ELEVATION

DATE: FEBRUARY 2026

SCALE: AS NOTED

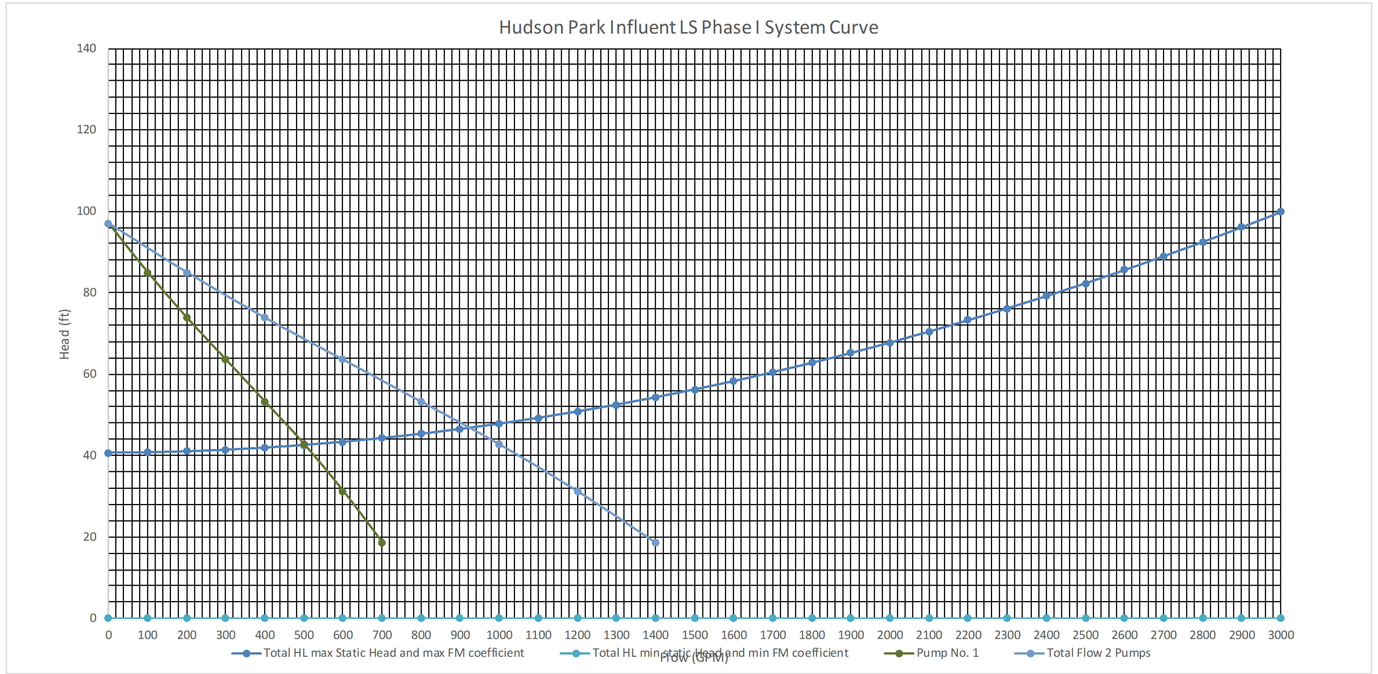
DRAWING: 03P-02

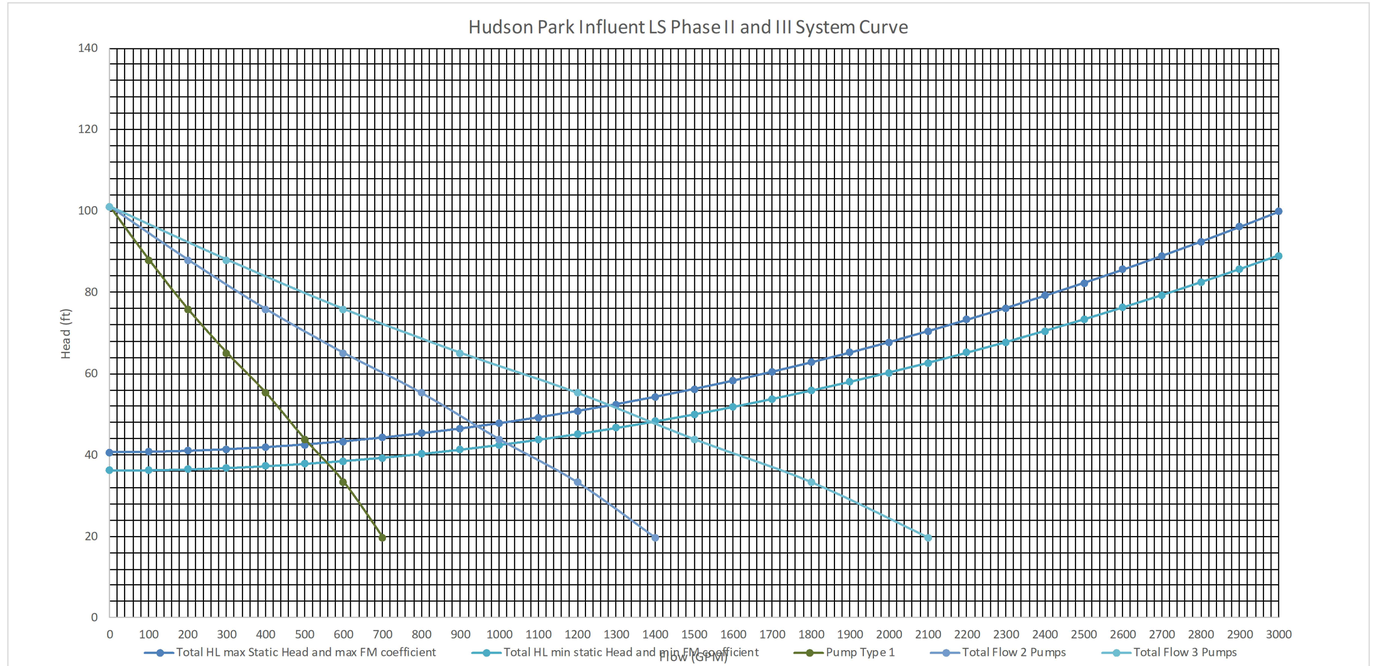
FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\03P-02.dwg, LAST SAVED ON: Oct 07 2025 4:54pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:23pm, CFG:

LIFT STATION OPERATION TABLES		
DUPLEX SYSTEM		
RISING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMP(S) IN OPERATION
921.35'	ALL PUMPS OFF – NO ACTION	ALL PUMPS ARE OFF
924.00'	LEAD PUMP TURNS ON	LEAD PUMP TURNS ON
925.00'	STANDBY PUMP ON	ALL PUMPS ON
925.50'	HIGH LEVEL ALARM ON	HIGH LEVEL ALARM SOUND
FALLING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMP(S) IN OPERATION
925.00'	HIGH LEVEL ALARM OFF, STANDBY PUMP OFF	STANDBY PUMP STOPPED, LEAD PUMP ON
921.35'	LEAD PUMP TURNS OFF	ALL PUMPS OFF – STANDBY SWITCHES TO LEAD PUMP LEAD PUMP SWITCHES TO STANDBY
919.85'	LOW LEVEL ALARM ON	ALL PUMPS OFF
TRIPLEX SYSTEM (ULTIMATE CONDITION)		
RISING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMP(S) IN OPERATION
921.35'	ALL PUMPS OFF – NO ACTION	ALL PUMPS ARE OFF
921.25'	PUMP 1 TURNS ON	PUMP 1 ON
924.05'	PUMP 2 TURNS ON	PUMP 1 & 2 ON
925.50'	STANDBY PUMP TURNS ON	ALL PUMPS ON
925.05'	HIGH LEVEL ALARM ON	HIGH LEVEL ALARM SOUND
FALLING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMP(S) IN OPERATION
924.50'	HIGH LEVEL ALARM OFF	STANDBY PUMP ON, PUMPS 1 & 2 ON
923.55'	STANDBY PUMP OFF	STANDBY STOPPED, PUMP 1 AND PUMP 2 ON
921.35'	ALL PUMPS OFF	ALL PUMPS OFF – STANDBY SWITCHES TO PUMP 1 PUMP 2 SWITCHES TO STANDBY PUMP 1 SWITCHES TO PUMP 2
919.85'	LOW LEVEL ALARM ON	ALL PUMPS OFF

	TRIPLEX SYSTEM OPERATING CAPACITY					
**PUMP(S) IN OPERATION	TOTAL GPM	T.D. HEAD IN FEET	NOMINAL PUMP SPEED RPM	MINIMUM PUMP DISCHARGE SIZE	HP	EFFICIENCY
LEAD PUMP	500	43'	3494	4"	11.3	68%
LEAD AND LAG PUMP	940	47'	3515	4"	11.3	65%

** NOTE: PUMP OPERATION BASED ON KSB PUMP MODEL NO. D-MAX 100-170. ACTUAL PUMP INSTALLED SHALL MEET THE MINIMUM PUMPING REQUIREMENTS AND APPROVED MANUFACTURERS LIST PER SPECIFICATION SECTION 11311.





REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

INFLUENT AND EFFLUENT PUMP STATION

PROCESS - INFLUENT PUMP CURVES AND OPERATION TABLE

DATE: FEBRUARY 2026

SCALE: AS NOTED

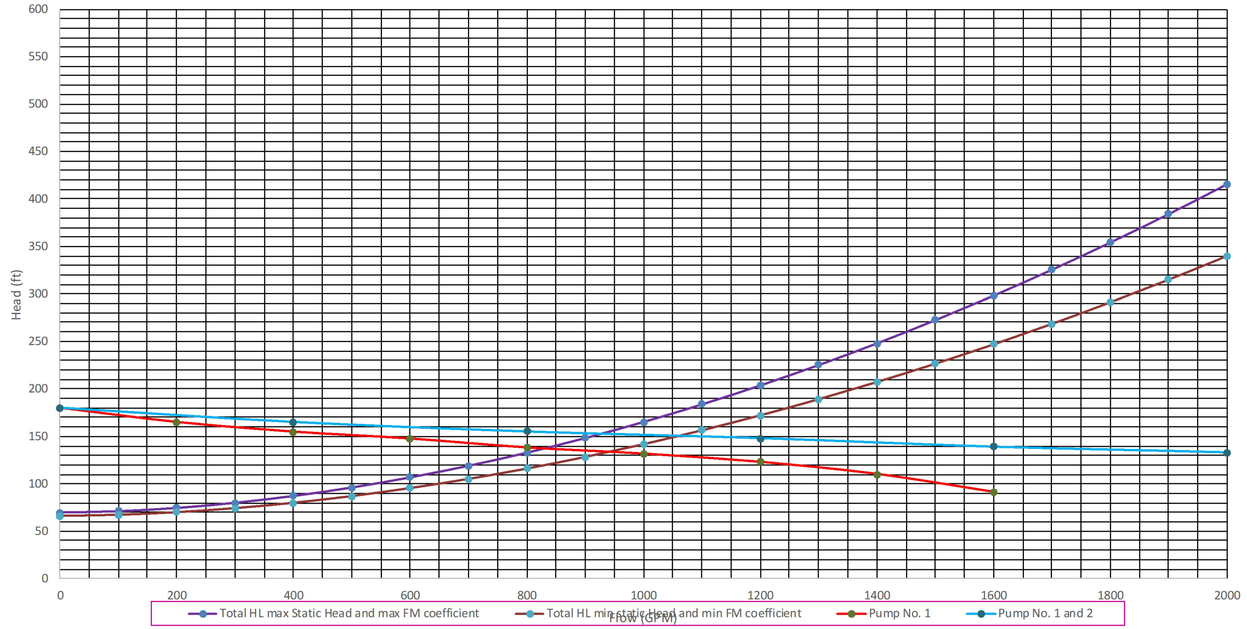
DRAWING: 03P-03

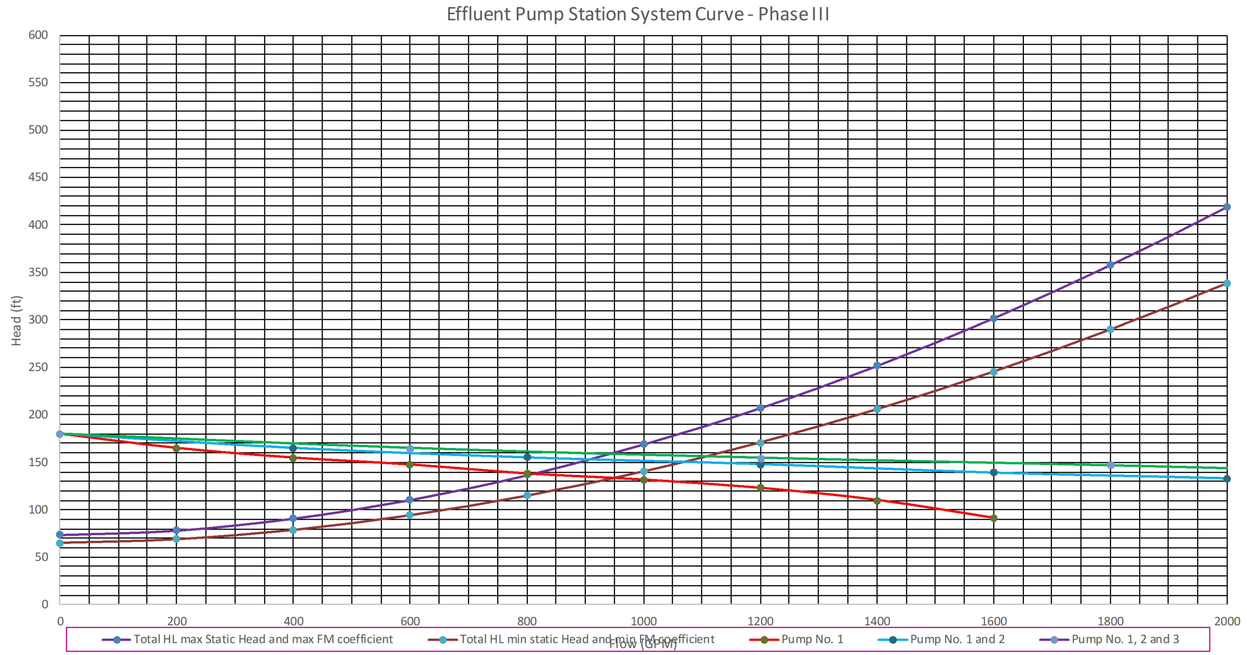
FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\03P-03.dwg, LAST SAVED ON: Feb 04 2026 1:11pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:24pm, CFG:

LIFT STATION OPERATION TABLES		
DUPLEX SYSTEM		
RISING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMP(S) IN OPERATION
933.20'	ALL PUMPS OFF – NO ACTION	ALL PUMPS ARE OFF
935.90'	LEAD PUMP TURNS ON	LEAD PUMP TURNS ON
936.90'	STANDBY PUMP ON	ALL PUMPS ON
937.40'	HIGH LEVEL ALARM ON	HIGH LEVEL ALARM SOUND
FALLING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMP(S) IN OPERATION
937.00'	HIGH LEVEL ALARM OFF, STANDBY PUMP OFF	STANDBY PUMP STOPPED, LEAD PUMP ON
935.90'	LEAD PUMP TURNS OFF	ALL PUMPS OFF – STANDBY SWITCHES TO LEAD PUMP LEAD PUMP SWITCHES TO STANDBY
929.75'	LOW LEVEL ALARM ON	ALL PUMPS OFF
TRIPLEX SYSTEM (ULTIMATE CONDITION)		
RISING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMP(S) IN OPERATION
933.20'	ALL PUMPS OFF – NO ACTION	ALL PUMPS ARE OFF
934.35'	PUMP 1 TURNS ON	PUMP 1 ON
935.55'	PUMP 2 TURNS ON	PUMP 1 & 2 ON
937.00'	STANDBY PUMP TURNS ON	ALL PUMPS ON
936.55'	HIGH LEVEL ALARM ON	HIGH LEVEL ALARM SOUND
FALLING LEVEL CYCLE		
WATER LEVEL ELEVATION	ACTION	PUMP(S) IN OPERATION
936.00'	HIGH LEVEL ALARM OFF	STANDBY PUMP ON, PUMPS 1 & 2 ON
935.00'	STANDBY PUMP OFF	STANDBY STOPPED, PUMP 1 AND PUMP 2 ON
933.20'	ALL PUMPS OFF	ALL PUMPS OFF – STANDBY SWITCHES TO PUMP 1 PUMP 2 SWITCHES TO STANDBY PUMP 1 SWITCHES TO PUMP 2
929.75'	LOW LEVEL ALARM ON	ALL PUMPS OFF

**PUMP(S) IN OPERATION	TRIPLEX SYSTEM OPERATING CAPACITY		NOMINAL PUMP SPEED RPM	MINIMUM PUMP DISCHARGE SIZE	HP	EFFICIENCY
	TOTAL GPM	T.D. HEAD IN FEET				
LEAD PUMP	810	132	1791	4"	60	66%
LEAD AND LAG PUMP	920	150	1791	4"	60	54%

** NOTE: PUMP OPERATION BASED ON KSB PUMP MODEL NO. KRTK 100-400. ACTUAL PUMP INSTALLED SHALL MEET THE MINIMUM PUMPING REQUIREMENTS AND APPROVED MANUFACTURERS LIST PER SPECIFICATION SECTION 11311.





REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

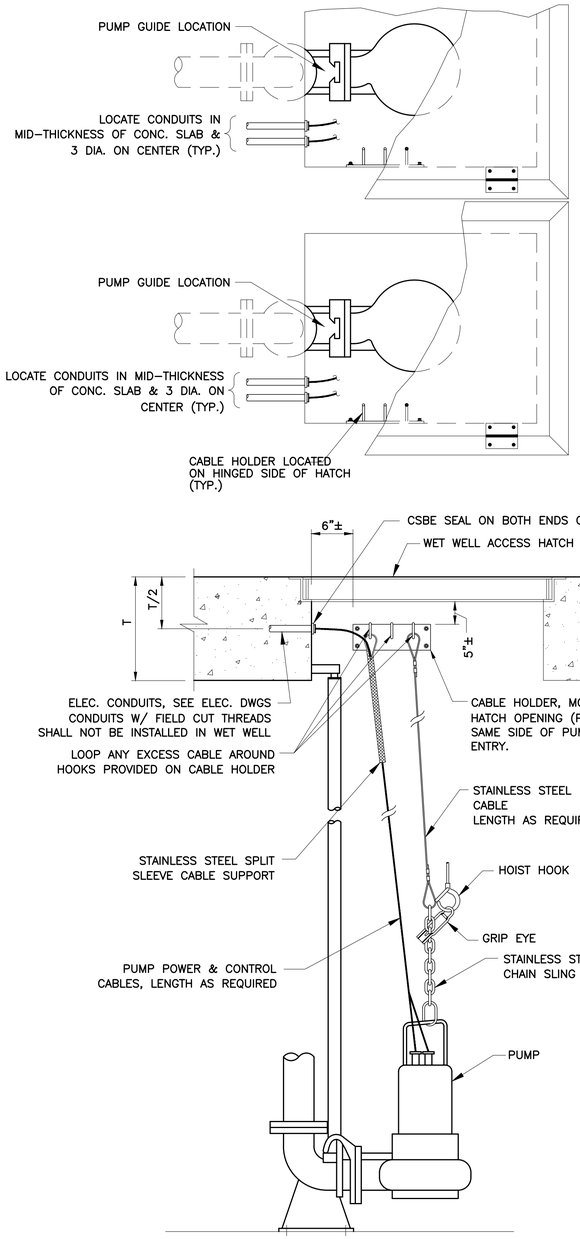
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

INFLUENT AND EFFLUENT PUMP STATION

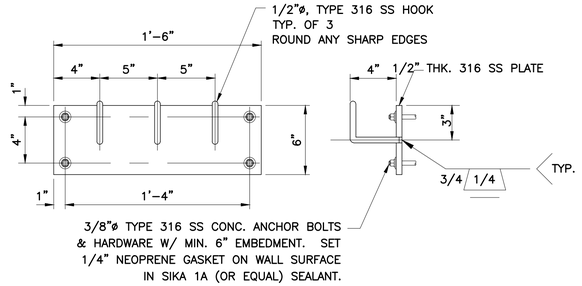
PROCESS - EFFLUENT PUMP CURVES AND OPERATION TABLE

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 03P-04

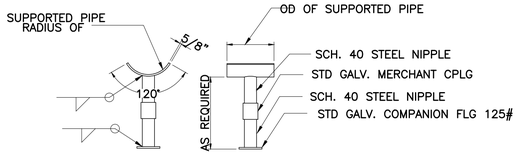
FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\03P-04.dwg, LAST SAVED ON: Feb 04 2026 1:11pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:24pm, CFG:



PUMP LIFTING AND CABLE DETAIL 1
N.T.S.



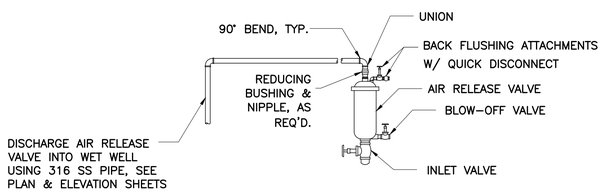
CABLE HOLDER DETAIL 2
N.T.S.



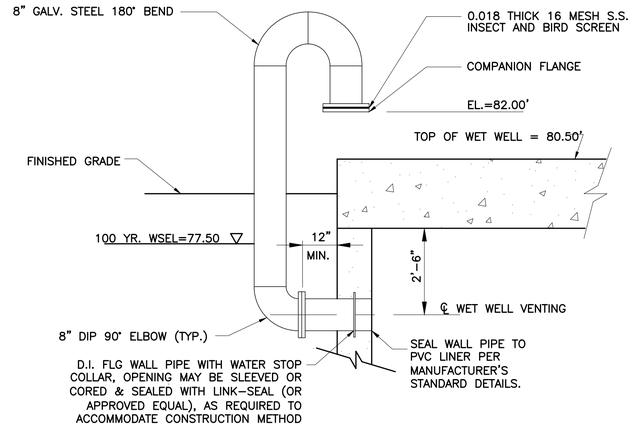
NOTES:

1. ADJUSTABLE PIPE SUPPORT ASSEMBLY TO BE HOT DIPPED GALVANIZED AFTER FABRICATION. COLD GALVANIZING COMPOUND TO BE USED AS TOUCH UP AFTER INSTALLATION.
2. AT CONTRACTOR'S OPTION, THE ADJUSTABLE PIPE SUPPORT MAY BE AN EQUAL PURCHASED PRODUCT AS MANUFACTURED BY MATERIAL RESOURCES, GRINNELL OR OTHER MANUFACTURER.

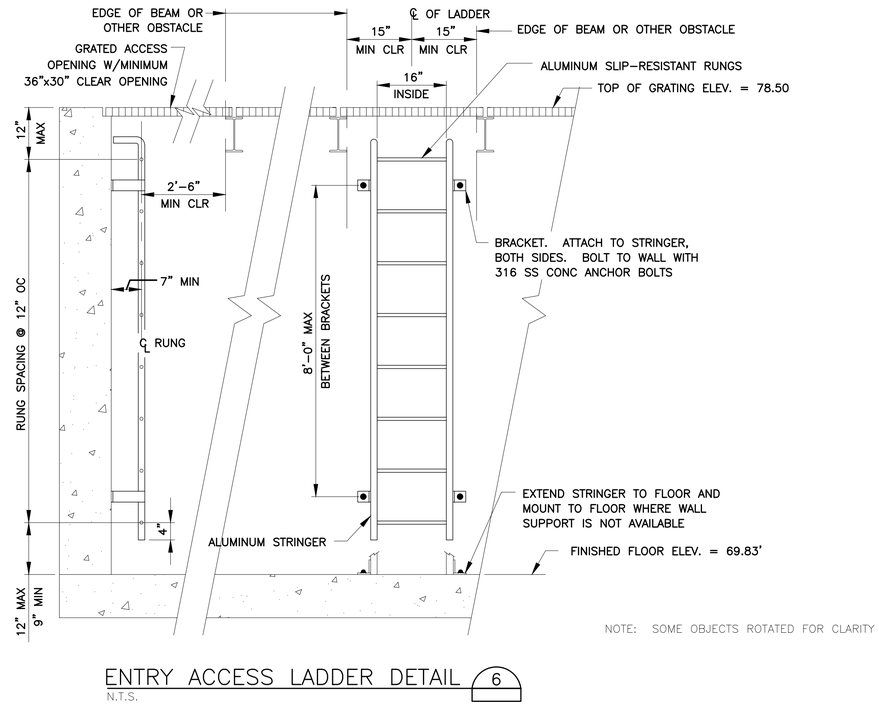
ADJUSTABLE PIPE SUPPORT 3
N.T.S.



AIR RELEASE VALVE ASSEMBLY 4
N.T.S.



HIGH PROFILE WET WELL VENTING DETAIL 5
N.T.S.



ENTRY ACCESS LADDER DETAIL 6
N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

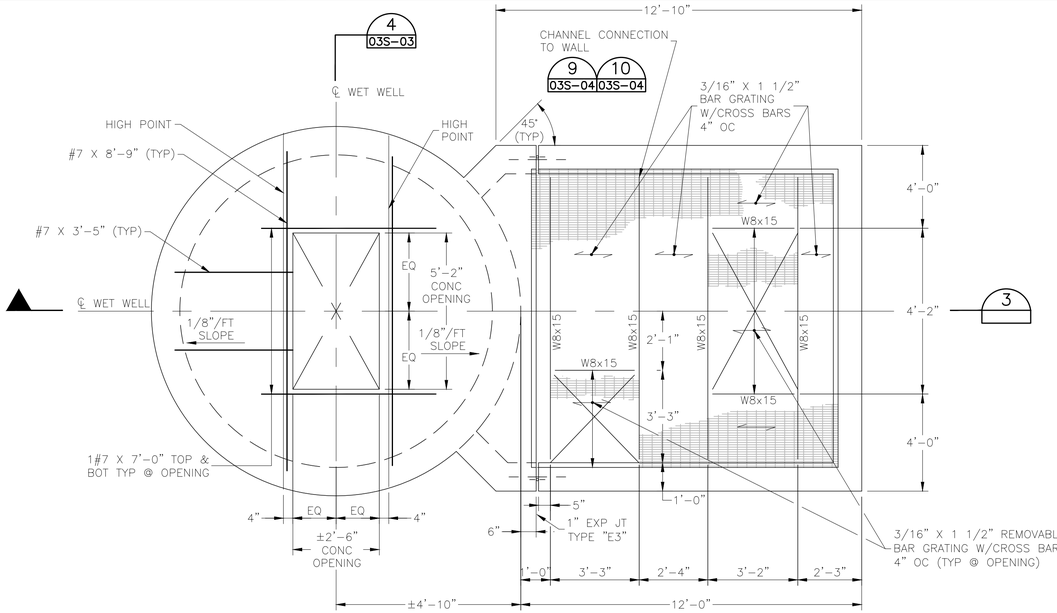
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

INFLUENT AND EFFLUENT PUMP STATION

PROCESS - LIFT STATION DETAILS

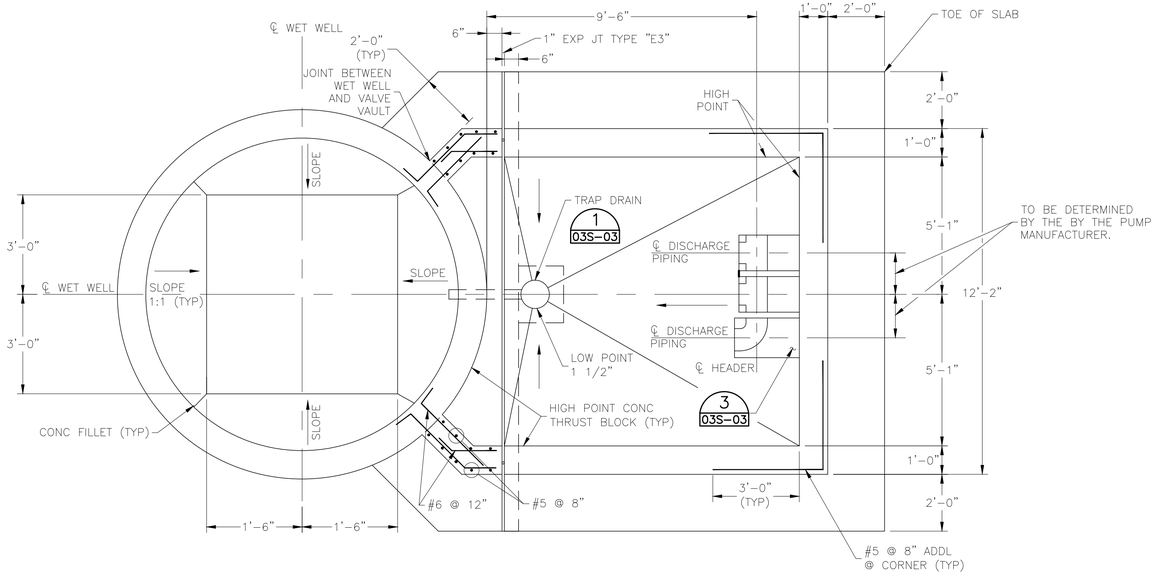
DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 03P-05

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\03P-05.dwg, LAST SAVED ON: Jul 09 2025 8:19pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:24pm, CFG:



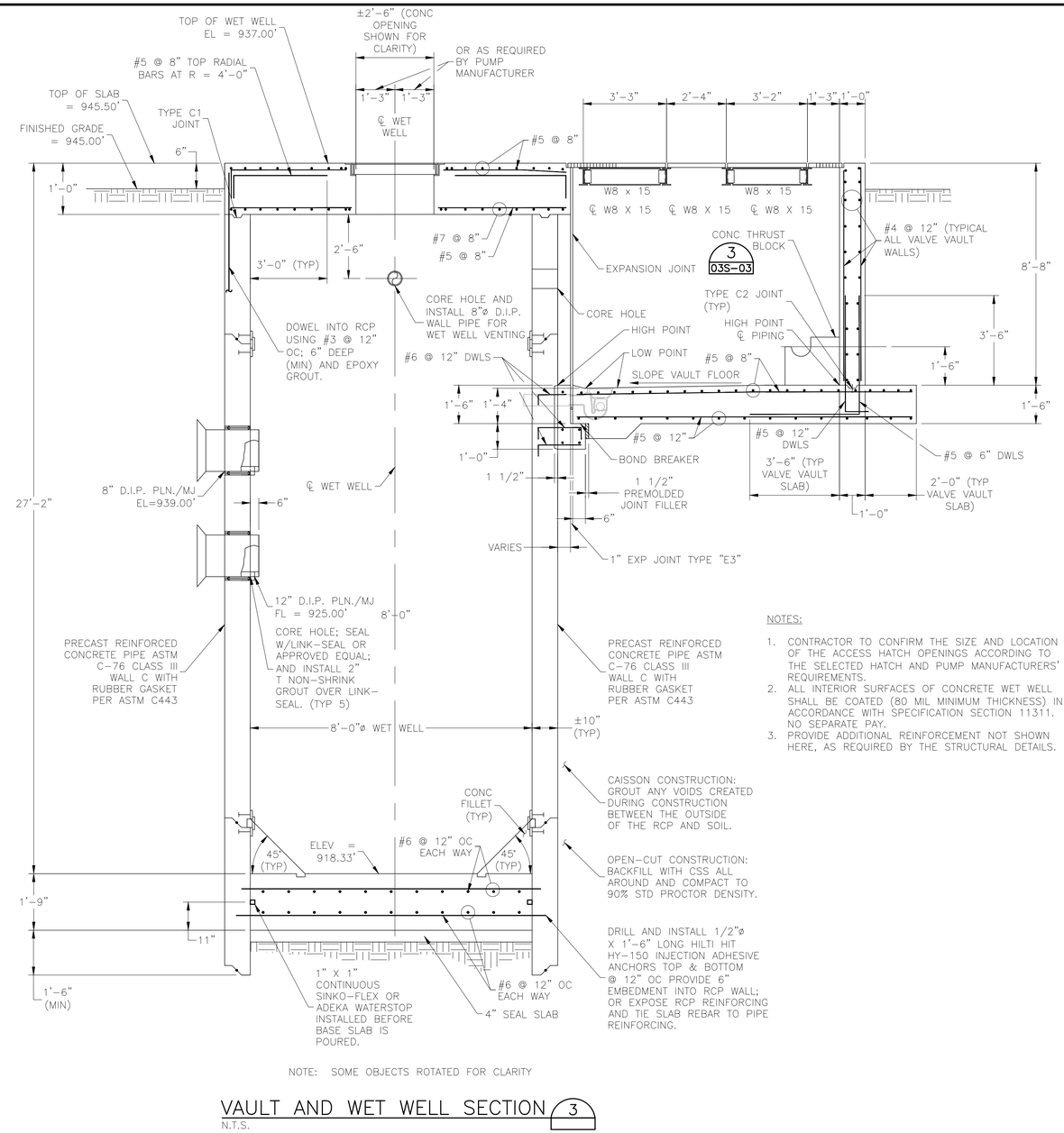
VAULT AND WET WELL – PLAN VIEW AT GRADE 1

N.T.S.



VAULT AND WET WELL – PLAN VIEW AT FLOOR 2

N.T.S.



NOTE: SOME OBJECTS ROTATED FOR CLARITY

VAULT AND WET WELL SECTION 3

N.T.S.

NOTES:

1. CONTRACTOR TO CONFIRM THE SIZE AND LOCATION OF THE ACCESS HATCH OPENINGS ACCORDING TO THE SELECTED HATCH AND PUMP MANUFACTURERS' REQUIREMENTS.
2. ALL INTERIOR SURFACES OF CONCRETE WET WELL SHALL BE COATED (80 MIL MINIMUM THICKNESS) IN ACCORDANCE WITH SPECIFICATION SECTION 11311. NO SEPARATE PAY.
3. PROVIDE ADDITIONAL REINFORCEMENT NOT SHOWN HERE, AS REQUIRED BY THE STRUCTURAL DETAILS.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

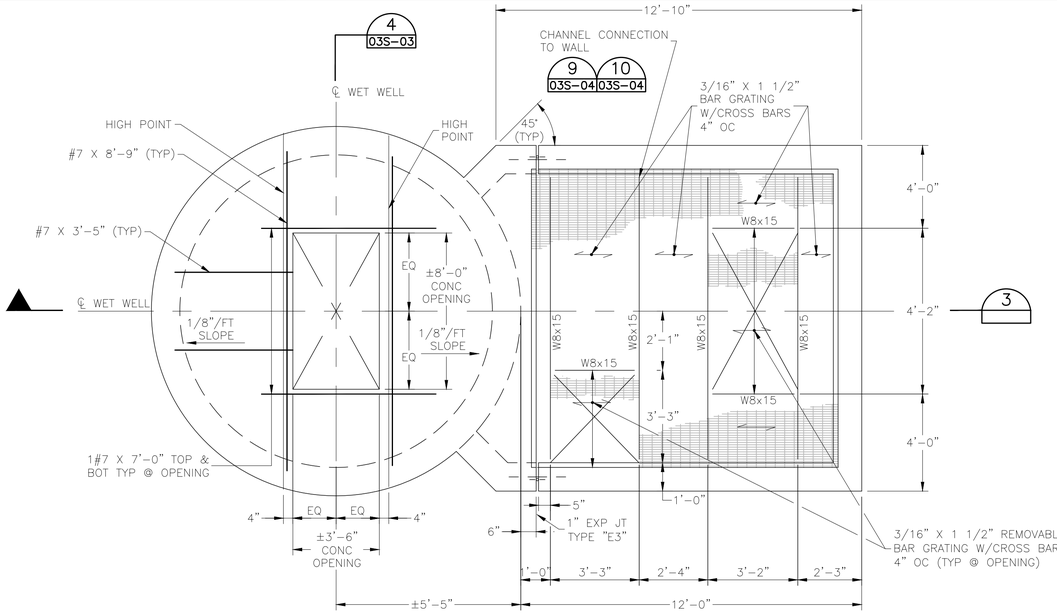
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

INFLUENT AND EFFLUENT PUMP STATION

STRUCTURAL - INFLUENT PLAN AND ELEVATION

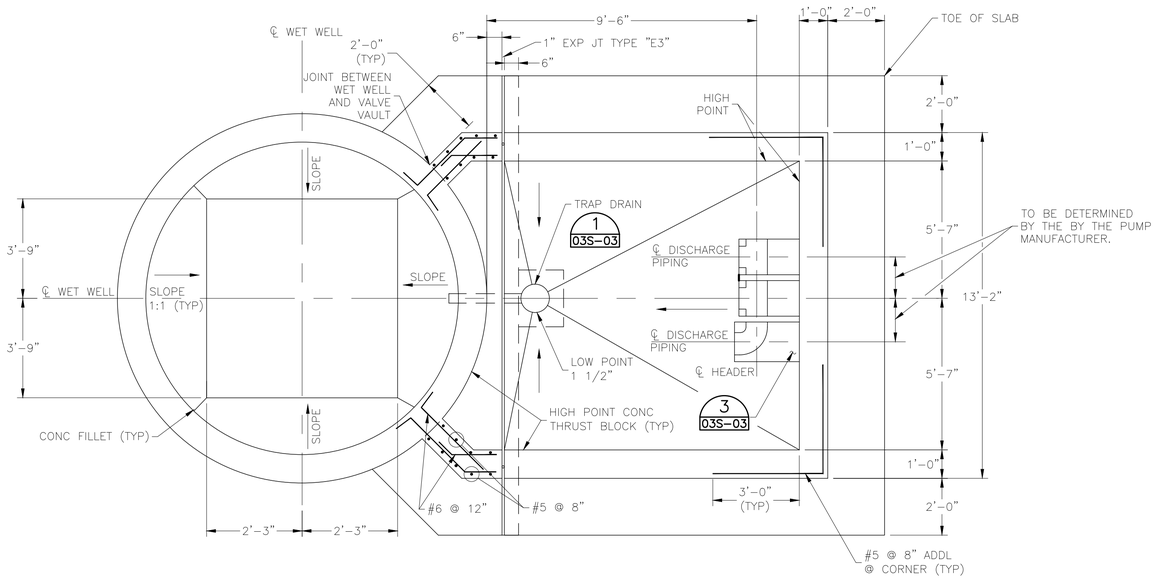
DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 03S-01

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\03S-01.dwg, LAST SAVED ON: Feb 04 2026 1:11pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:25pm, CFG:



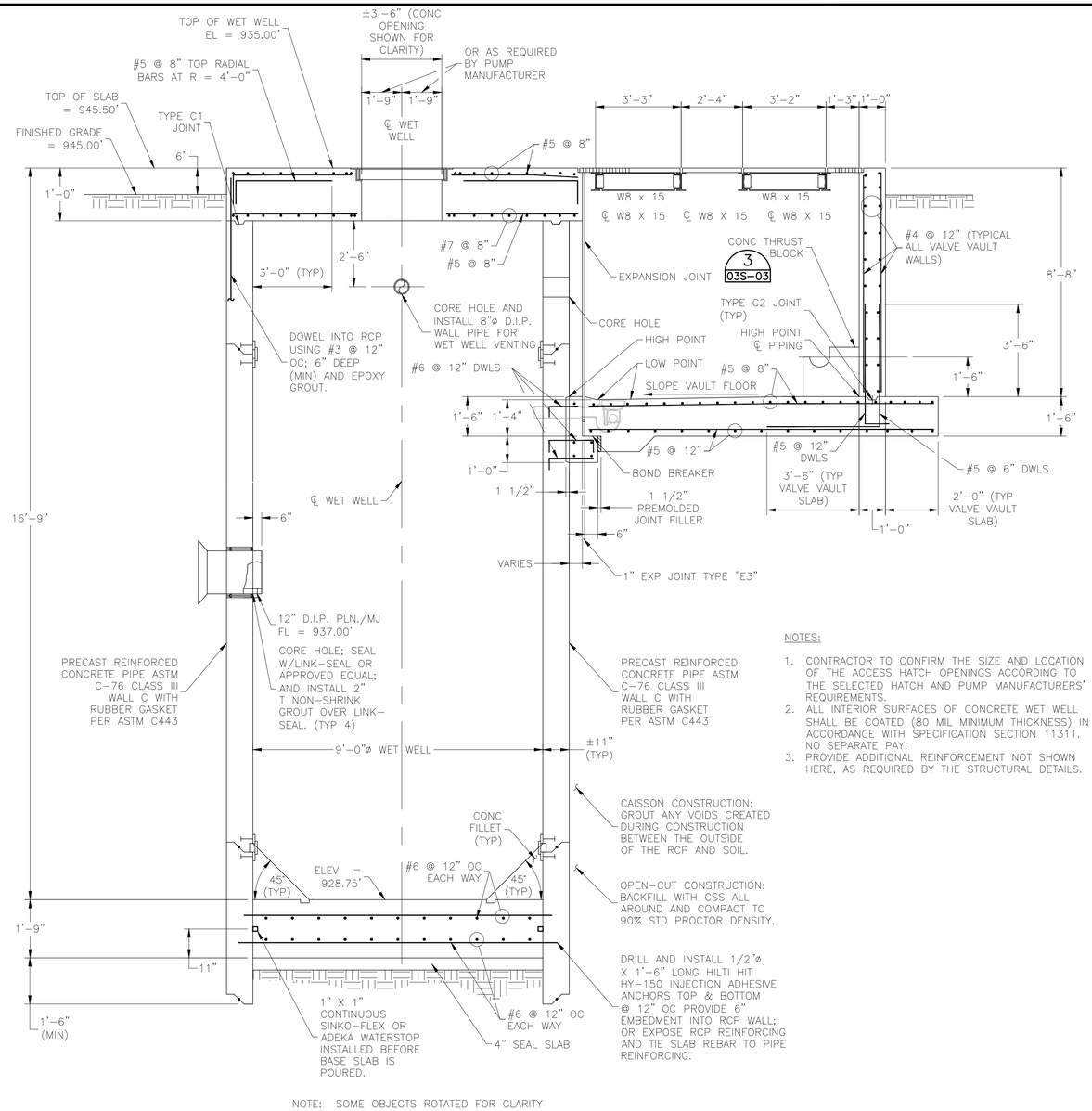
VAULT AND WET WELL – PLAN VIEW AT GRADE 1

N.T.S.



VAULT AND WET WELL – PLAN VIEW AT FLOOR 2

N.T.S.



NOTE: SOME OBJECTS ROTATED FOR CLARITY

VAULT AND WET WELL SECTION 3

N.T.S.

NOTES:

1. CONTRACTOR TO CONFIRM THE SIZE AND LOCATION OF THE ACCESS HATCH OPENINGS ACCORDING TO THE SELECTED HATCH AND PUMP MANUFACTURERS' REQUIREMENTS.
2. ALL INTERIOR SURFACES OF CONCRETE WET WELL SHALL BE COATED (80 MIL MINIMUM THICKNESS) IN ACCORDANCE WITH SPECIFICATION SECTION 11311. NO SEPARATE PAY.
3. PROVIDE ADDITIONAL REINFORCEMENT NOT SHOWN HERE, AS REQUIRED BY THE STRUCTURAL DETAILS.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

INFLUENT AND EFFLUENT PUMP STATION

STRUCTURAL - EFFLUENT PLAN AND ELEVATION

DATE: FEBRUARY 2026

SCALE: AS NOTED

DRAWING: 03S-02

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\03S-02.dwg, LAST SAVED ON: Oct 07 2025 4:54pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:25pm, CFG:

GENERAL NOTES FOR STRUCTURES

CONCRETE

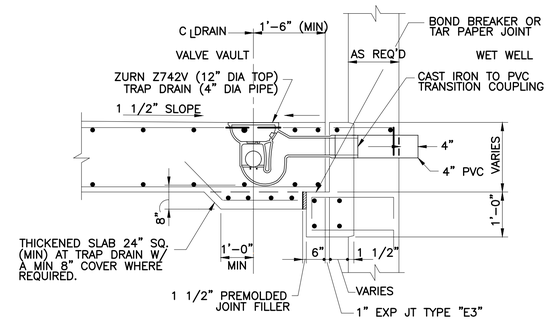
1. DESIGN SHALL CONFORM TO THE LATEST BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI-318) WITH SPECIAL REQUIREMENTS OF ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES (ACI-350)
2. ALL REINFORCING BARS SHALL CONFORM TO ASTM A-615, GRADE 60. ARRANGEMENT AND DETAILS OF REINFORCING STEEL, INCLUDING BAR SUPPORTS AND SPACERS, SHALL BE IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL, UNLESS OTHERWISE NOTED.
3. ALL SLAB AND BEAM REINFORCEMENT SHALL HAVE A MINIMUM EXTENSION INTO THE SUPPORT IN ACCORDANCE WITH THE LATEST ACI CODE. IF SUCH EXTENSION IS NOT POSSIBLE, BARS SHALL TERMINATE IN STANDARD HOOKS.
4. HORIZONTAL WALL REINFORCEMENT AND TEMPERATURE REINFORCEMENT SHALL LAP A MINIMUM OF 1.7Ld AT SPLICES. WALL DOWELS AND WALL BAR EXTENSIONS AND ALL STRESS SPLICES SHALL LAP A MINIMUM OF 1.7 Ld, UNLESS OTHERWISE NOTED.
5. WALL OR COLUMNS SHALL HAVE DOWELS FROM FOUNDATIONS OR CONSTRUCTION BELOW OF SAME SIZE AND SPACING AS WALL OR COLUMN VERTICAL STEEL. SEE FOOTING SCHEDULE.
6. UNLESS OTHERWISE NOTED ON THE DRAWINGS, CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL NOT BE LESS THAN THE FOLLOWING:
   - STRUCTURAL MEMBERS, FOUNDATIONS, WALLS AND SUSPENDED SLABS ---- 4000 PSI
   - SLABS ON GRADE ---------- 4000 PSI
   - LEAN CONCRETE CLASS B ---------- 1500 PSI
   - GROUT FILL CLASS H ---------- 3000 PSI
7. UNLESS OTHERWISE SHOWN, THE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
   - SLABS
     - TOP AND BOTTOM OF FORMED SLABS ----------2"
     - TOP OF WALK AND DRIVEWAY SLABS ----------2"
     - SURFACES IN CONTACT WITH LIQUID ----------2"
     - BOTTOM OF SLABS ON FILL OR SOIL ----------3"
   - FOOTINGS:
     - TOP AND SIDES ----------2 1/2"
     - BOTTOM ----------3"
   - WALLS:
     - LESS THAN 12" THICK ----------1 1/2"
     - 12" OR OVER IN THICKNESS WITH POURS LESS THAN 10 FEET HIGH----------2"
     - 12" OR OVER IN THICKNESS WITH POURS MORE THAN 10 FEET HIGH----------2 1/2"
   - BEAMS AND GIRDERS:
     - COVER AT TOP, BOTTOM OR SIDES OF LONGITUDINAL REINF----------2"
   - COLUMNS:
     - 2" COVER FOR VERTICAL BARS ----------2"
8. HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS SHOWN OR NOTED ON THE PLANS ARE RECOMMENDED. ANY DEVIATION FROM THOSE SHOWN SHALL HAVE APPROVAL OF THE ENGINEER.
9. ANY STOP IN FRAMED CONCRETE WORK MUST BE MADE IN THE CENTER OF THE SPAN AND INCORPORATE AN APPROVED KEYWAY. REINFORCEMENT SHALL EXTEND THROUGH THESE JOINTS IF REQUIRED FOR CONTINUITY.
10. USE TYPE 'C2' JOINT FOR ALL CONSTRUCTION JOINTS IN WALLS AND SLABS BELOW GRADE AND WALLS WHICH SEPARATE AREAS OF SOIL OR LIQUID FROM PERMANENTLY DRY AREAS SUCH AS TUNNELS, GALLERIES, BASEMENT ROOMS, ETC. USE TYPE 'C1' JOINT AT ALL OTHER CONSTRUCTION JOINTS, UNLESS OTHERWISE NOTED ON DRAWINGS.
11. CONCRETE WALLS AND PARTITIONS SHALL BE POURED IN MAXIMUM LENGTHS OF 40 FEET BETWEEN VERTICAL CONSTRUCTION JOINTS.
12. ALL CONCRETE SLABS OVER 8" IN THICKNESS, REINFORCED WITH BARS, AND POURED AGAINST SOIL SHALL BE POURED IN A STRIP PATTERN OF 40 FEET OR LESS IN EACH DIRECTION.
13. ALL EXPOSED EDGES OF BEAMS, COLUMNS, SLABS AND WALLS SHALL BE CHAMFERED 3/4" UNLESS MASONRY OR OTHER MEMBERS ARE ERECTED FLUSH WITH THEM.
14. REFER TO ARCHITECTURAL, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL SLEEVES, . PIPES, CONDUITS AND MISCELLANEOUS ANCHORING DEVICES TO BE INCORPORATED IN THE CONSTRUCTION

STRUCTURAL STEEL

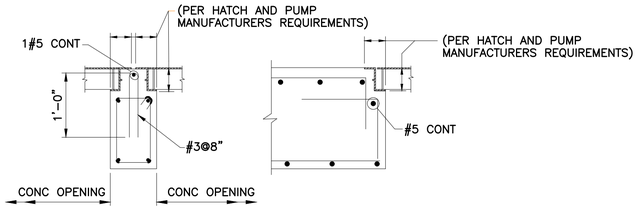
1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS". ALL STRUCTURAL STEEL SHALL BE ASTM A36.
2. ELEVATIONS OF STEEL BEAMS SHOWN ON FRAMING PLANS REFER TO TOP OF FLANGE, UNLESS OTHERWISE NOTED.
3. ALL BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER ASTM A-325 BOLTS EXCEPT AS OTHERWISE SHOWN OR NOTED. ALL CONNECTIONS SHALL BE CAPABLE OF SUPPORTING ONE HALF THE MAXIMUM ALLOWABLE UNIFORM LOAD FOR INDICATED BEAM SIZE AND SPAN IN AISC MANUAL OF STEEL CONSTRUCTION, EXCEPT AS OTHERWISE NOTED.
4. FIELD CONNECTIONS SHALL BE BOLTED, EXCEPT AS OTHERWISE SHOWN OR NOTED.
5. ALL WELDING SHALL CONFORM TO THE LATEST SPECIFICATION OF THE AMERICAN WELDING SOCIETY. ALL WELDED CONNECTIONS SHALL BE MADE WITH AWS A5.1 OR A5.5 E70 XX ELECTRODE.
6. ANCHOR BOLTS AND MISC EMBEDDED STEEL----------ASTM A36. ANCHOR BOLTS WHICH ARE SUBMERGED, LOCATED ABOVE A LIQUID SURFACE, OR ARE IN A CORROSIVE ATMOSPHERE----------316 SS.
7. ALL EQUIPMENT ANCHOR BOLT DIMENSIONS AND LOCATIONS SHALL BE VERIFIED FROM CERTIFIED VENDOR DRAWINGS, PRIOR TO CONSTRUCTION.

FOUNDATIONS

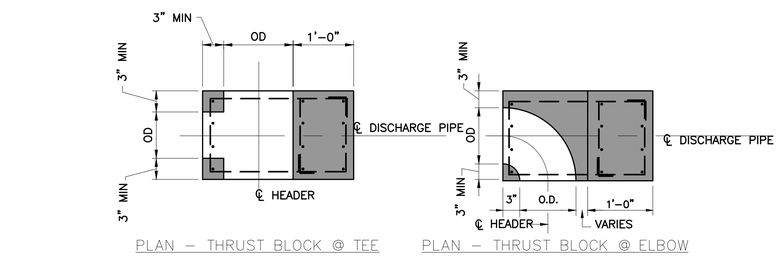
1. ALLOWABLE SOIL BEARING PRESSURE, EXCAVATION AND BACKFILL FOR FOUNDATIONS AND STRUCTURES SHALL BE AS RECOMMENDED IN THE GEOTECHNICAL REPORT.
2. ALL EXCAVATIONS SHALL BE CARRIED OUT IN THE DRY, AND PROVISIONS SHALL BE MADE TO PREVENT THE BOTTOM OF ALL EXCAVATIONS FROM FREEZING OR FLOODING AT ALL TIMES.
3. ALL FOUNDATIONS SHALL BE CONSTRUCTED IN EXCAVATIONS FREE OF STANDING WATER.
4. BACKFILL MATERIAL, PLACING AND COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH THE DRAWINGS, AND THE CONTRACT SPECIFICATIONS.



TRAP DRAIN DETAIL 1
N.T.S.

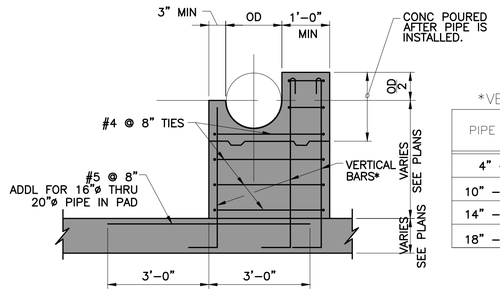


HATCH FRAME DETAILS 2
N.T.S.



PLAN – THRUST BLOCK @ TEE

PLAN – THRUST BLOCK @ ELBOW

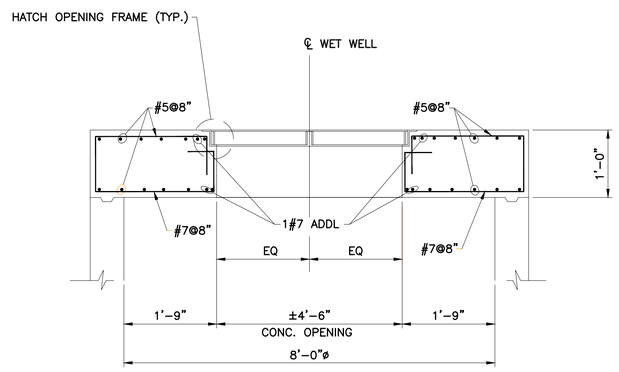


*VERTICAL BARS

PIPE DIA	NO. OF VERT BARS
4" – 8"	3 – 2#5
10" – 12"	3 – 3#5
14" – 16"	3 – 4#5
18" – 20"	3 – 4#5

ELEVATION

CONCRETE THRUST BLOCK DETAILS 3
N.T.S.



HATCH FRAME SECTION 4
N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

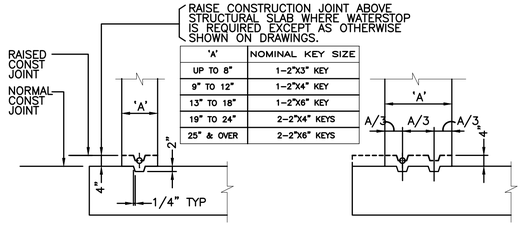
STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

INFLUENT AND EFFLUENT PUMP STATION

STRUCTURAL - LIFT STATION DETAILS - SHEET NO. 1

DATE: FEBRUARY 2026
SCALE: AS NOTED
DRAWING: 03S-03

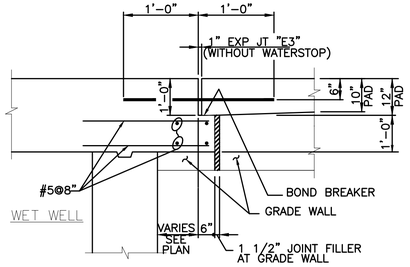
FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\03S-03.dwg, LAST SAVED ON: Jul 10 2025 9:23am, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:25pm, CFG:



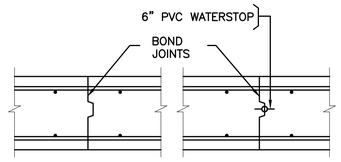
'A'	NOMINAL KEY SIZE
UP TO 8"	1–2"X3" KEY
9" TO 12"	1–2"X4" KEY
13" TO 18"	1–2"X6" KEY
19" TO 24"	2–2"X4" KEYS
25" & OVER	2–2"X6" KEYS

NUMBER AND SIZE OF KEYS SHOWN APPLY TO JOINTS IN SLABS AND TO BOTH VERTICAL AND HORIZONTAL JOINTS IN WALLS EXCEPT AS OTHERWISE NOTED ON DRAWINGS.

CONSTRUCTION JOINT KEY DETAILS 1
N.T.S.



EXPANSION JOINT BETWEEN WET WELL AND VALVE PAD 2
N.T.S.

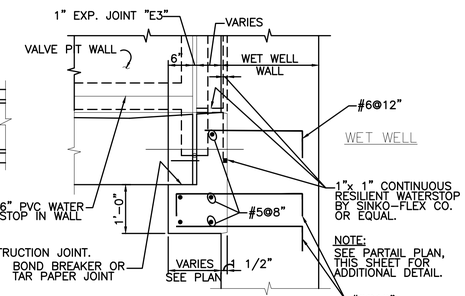


IN JOINTS WITH MORE THAN ONE KEY, PLACE WATERSTOP IN KEY NEAREST TO SURFACE AGAINST EARTH OR WATER.

REINFORCING STEEL IS CONTINUOUS THROUGH CONSTRUCTION JOINT.

TYPE C1 TYPE C2

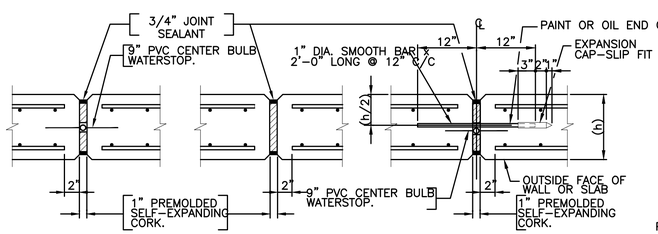
CONSTRUCTION JOINTS 3
N.T.S.



NOTE: SEE PARTAIL PLAN, THIS SHEET FOR ADDITIONAL DETAIL.

SECTION JOINT BETWEEN WET WELL AND VAULT FLOOR 4
N.T.S.

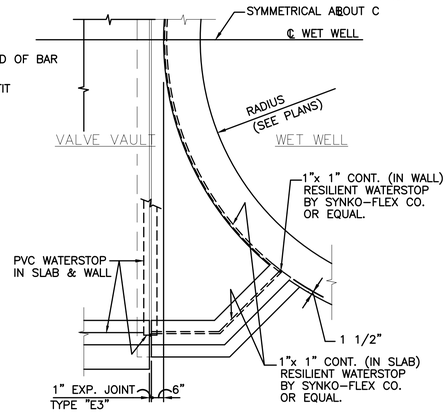
NOTES:
1. PROVIDE 2–#6 X (B+4'–0") ADDITIONAL REBARS @ TOP AND BOTTOM AND 2–#6 X (A+4'–0") ADDITIONAL REBARS AT EACH SIDE OF OPENING IN WALLS ONLY.
2. PROVIDE ADDL BARS EQUAL TO ONE–HALF OF BARS INTERRUPTED AT EACH SIDE OF OPENING AT 3" C/C. THESE BARS SHALL BE ORIGINAL SIZES AND LENGTHS AS THOSE OF THE INTERRUPTED BARS. (TYPICAL FOR OPENINGS IN SLABS AND PRESSURE WALLS.)



CHAMFER EXPANSION JOINTS IN WALLS AND CEILINGS FOR FLOOR JOINTS USE EDGER INSTEAD OF CHAMFERING

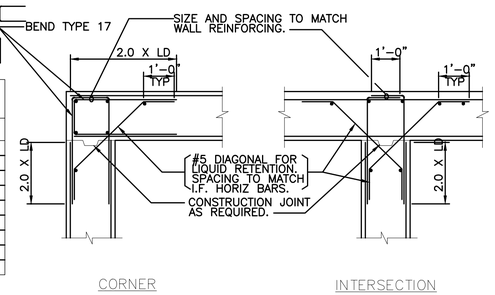
TYPE "E1" TYPE "E2" TYPE "E3"

EXPANSION JOINTS 5
N.T.S.



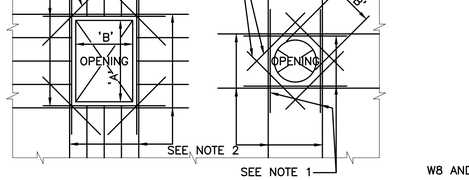
PARTIAL PLAN JOINT BETWEEN WET WELL AND VAULT 6
N.T.S.

LD=TENSILE DEVELOPMENT LENGTH FOR REINF BARS WITH FY = 60 KSI	
BAR SIZE	TENSION DEVELOPMENT LENGTH 'LD' INCHES
3	12
4	12
5	15
6	19
7	26
8	35
9	44
10	56
11	68

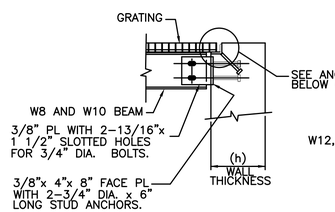


CORNER INTERSECTION

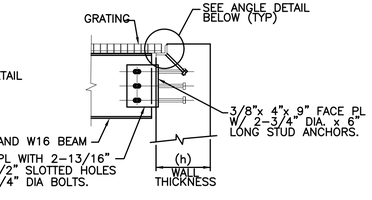
WALL REINFORCEMENT DETAILS 7
N.T.S.



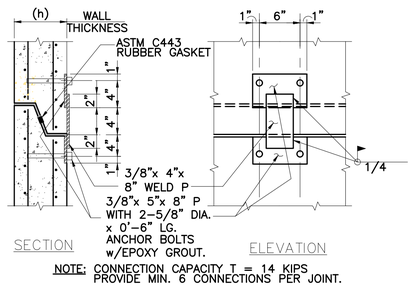
ADDITIONAL REINFORCEMENT STEEL AT OPENINGS IN WALLS AND SLABS 8
N.T.S.



BEAM CONNECTION TO CONCRETE WALL 9
N.T.S.

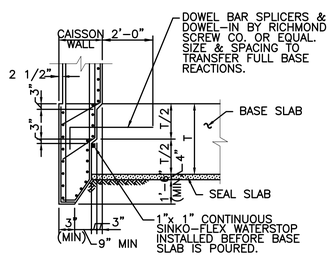


BEAM CONNECTION TO CONCRETE WALL 10
N.T.S.

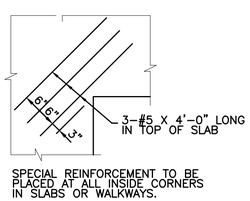


NOTE: CONNECTION CAPACITY T = 14 KIPS PROVIDE MIN. 6 CONNECTIONS PER JOINT.

PRECAST UNITS CONNECTION DETAILS CAISSON CONSTRUCTION METHOD 11
N.T.S.

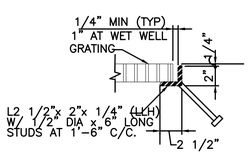


CAISSON METHOD – BASE DETAIL FOR PC AND CIP WET WELL 12
N.T.S.



SPECIAL REINFORCEMENT TO BE PLACED AT ALL INSIDE CORNERS IN SLABS OR WALKWAYS.

SLAB DETAIL AT RE–ENTRANT CORNER 13
N.T.S.



ANGLE DETAIL 14
N.T.S.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS · KIMBERLY HAMMOND · 151874 · LICENSED PROFESSIONAL ENGINEER

2/5/26

INFLUENT AND EFFLUENT PUMP STATION

STRUCTURAL - LIFT STATION DETAILS - SHEET NO. 2

DATE: FEBRUARY 2026

SCALE: AS NOTED

DRAWING: 03S-04

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\03S-04.dwg, LAST SAVED ON: Aug 21 2025 12:35pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 9:26pm, CFG:

CONTRIBUTING ZONE PLAN ATTACHMENT N

INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

DRB Group Texas, LLC, a Delaware limited liability company f/k/a Brightland Homes, Ltd.

Hudson Park WWTP

Inspection, Maintenance, Repair, and Retrofit Plan

Written documentation of inspections should be kept at the site during the project duration. Revegetated areas identified to be areas of erosion must be replanted. Trash and debris items should be removed.

Batch Detention Basins

The batch detention pond should be inspected at least twice a year. One inspection should be immediately following wet weather to verify that 12-hour detention and 48-hour drawdown times are being met. Remaining inspections should be between weather events to evaluate facility operation. The outlet structure and trash screen should be inspected for signs of clogging. As part of these inspections, erosion areas inside the downstream of the pond should be repaired/revegetated.

Mowing

The upper stage, side slopes, embankment, and emergency spillway of the batch detention basin must be mowed regularly to discourage woody growth and control weeds. If vegetation frequently exceeds 18 inches in height, mowing should take place more than twice a year.

Structural Repairs and Replacement

With each inspection, any damage to the structural elements of the system should be identified and repaired immediately. These repairs include patching of cracked concrete, sealing of voids, and removal of vegetation from cracks and joints. The various inlet/outlet and riser works in a basin will eventually deteriorate and must be replaced.

Nuisance Control

As part of the twice-yearly inspections, the basin should be evaluated for nuisance control including insects, weeds, odors, algae, etc.

Sediment Removal

Sediment shall be removed from the basin at least every ten years, when sediment depth exceeds 6 inches, or when the basin does not drain within 48 hours.

Logic Controller

The logic controller should be inspected as part of the twice-yearly inspections. Verify that the external indicators (active, cycle in progress) are operating properly by triggering the level sensor

to initiate a cycle. The valve should be opened and closed with the switch to verify valve operation. The controller and all other circuitry and wiring should be inspected for signs of corrosion, water leaks, or other damage.

An amended copy of this document will be provided to the Texas Commission on Environmental Quality within thirty (30) days for any changes in the following information.

Responsible Party for Maintenance: DRB GROUP TEXAS, LLC

Address: 3815 S Capital of TX Hwy Suite 275

City, State, Zip: Austin, TX, 78704

Telephone Number: 972-383-4382

Signature of Responsible Party: , DIVISION VICE PRESIDENT

CONTRIBUTING ZONE PLAN ATTACHMENT P

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

Measures for Minimizing Surface Stream Contamination

Pollution of stormwater that originates on-site or flows off-site will be mitigated through the batch detention pond, which will be constructed as shown on the water quality pond plan. No runoff increase is expected from the site due to the pond.

Docusign Envelope ID: E4E579C3-256B-4D8F-BAB4-C8AFFD4804BD

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: HUDSON PARK WWTP
Regulated Entity Location: GEORGETOWN, TX
Name of Customer:DRB Group Texas, LLC, a Delaware limited liability company f/k/a Brightland Homes, Ltd.
Contact Person: Kimberly Hammond Phone: 514-614-6171
Customer Reference Number (if issued):CN 606467306
Regulated Entity Reference Number (if issued):RN 111827143
Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	*Size*	*Fee Due*
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	2.12 Acres	$ 4,000
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: Jason Lewis Date: 2/2/2026

Docusign Envelope ID: E4E579C3-256B-4D8F-BAB4-C8AFFD4804BD

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 606467306		**RN 111827143**

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	1/14/2026

☐ 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:*
DRB Group Texas, LLC	

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

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

12. Number of Employees	**13. Independently Owned and Operated?**
☐ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher	☐ **Yes** ☐ **No**

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

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

15. Mailing Address:							
	City		**State**		**ZIP**	**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)*

(972) 383-4382		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

HUDSON PARK WWTP

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

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

25. Description to Physical Location:	Site is located approximately 750 feet northeast of the intersection between Ronald Reagan Blvd and Rd 289.

26. Nearest City	**State**	**Nearest ZIP Code**
GEORGETOWN	TX	78633

Latitude/Longitude are required and may be added/updated to meet TCEQ Core Data Standards. (Geocoding of the Physical Address may be used to supply coordinates where none have been provided or to gain accuracy).

27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	43	39.45	97	49	50.56

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)
4952			

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

Collect and treat domestic wastewater

34. Mailing Address:	**3815 S Capital of Tx Hwy Suite 275**						
	City	**Austin**	**State**	**TX**	**ZIP**	**78704**	**ZIP + 4**
35. E-Mail Address:	**jasonlewis@drbgroup.com**						

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(972) 383-4382		( ) -

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

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

SECTION IV: Preparer Information

40. Name:	Kimberly Hammond	**41. Title:**	Project Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512 **)** 614-6171		**( ) -**	khammond@dsc-engineering.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:	DCS Engineering LLC	**Job Title:**	Project Manager
Name *(In Print):*	Kimberly Hammond	**Phone:**	**(** 737 **)** 667- **6673**
Signature:	Kimberly Hammond	**Date:**	2/5/2026

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

I Jason Lewis,
Print Name

Division Vice President,
Title - Owner/President/Other

of DRB Group Texas, LLC, a Delaware limited liability company f/k/a Brightland Homes, Ltd.,
Corporation/Partnership/Entity Name

have authorized Kimberly Hammond, PE
Print Name of Agent/Engineer

of DCS Engineering, LLC
Print Name of Firm

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

I also understand that:

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

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

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

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

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

SIGNATURE PAGE:

Applicant's Signature

1/14/26
Date

THE STATE OF Texas §

County of Travis §

BEFORE ME, the undersigned authority, on this day personally appeared Jason Lewis, Division Vice President 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 14th day of January, 2026.

NOTARY PUBLIC

LINDA E. BAIERS
My Notary ID # 126122989
Expires August 6, 2027

Linda E. Baiers
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 08/06/2027

STORMWATER POLLUTION PREVENTION PLAN (SWP3)

TPDES General Permit (TXR150000)

DRB GROUP TEXAS, LLC
HUDSON PARK WWTP
GEORGETOWN, TX
WILLIAMSON COUNTY

2/5/2026

Prepared by:

DCS
1101 S. Capital of Texas Highway, Building G-100
Austin, Texas 78746
Tel: (512) 614-6171
T.B.P.E. Firm No. F-13162

Table of Contents

Section		Page
1	Section 1: Operator Overview and Responsibilities	1-3
	1.1 Shared SWP3 Development	1-1
	1.2 Responsibilities of Operators	1-1
	1.3 Plan Review and Making Plans Available	2-2
	1.4 Revisions and Updates to the SWP3	2-3
2	Section 2: Site Evaluation, Assessment, and Planning	3-5
	2.1 Project Site/ Information	3-3
	2.2 Description of Construction Activities	3-4
	2.3 Potential Pollutants and Sources	4-4
	2.4 Site Acreage	4-4
	2.5 Soils	4-4
	2.6 Location Map	4-4
	2.7 Detailed Site Map	4-4
	2.8 Supporting Construction Activity	4-5
	2.9 Receiving Waters	5-5
	2.10 Copy of TPDES General Permit	5-5
	2.11 Copy of NOI	5-5
3	Section 3: Best Management Practices	5-7
	3.1 General Requirements	5-5
	3.2 Erosion Control and Stabilization Practices	5-6
	3.3 Stormwater Controls	6-6
	3.4 Other Controls and BMPs	6-7
4	Section 4: Maintenance and Inspections	7-9
	4.1 Maintenance Requirements	7-7
	4.2 Inspection of Controls	8-8
	4.3 Inspection Control Variances	8-8
	4.4 Revisions to the SWP3 Resulting from Inspections	8-8
	4.5 Inspection Report	9-9
	4.6 Dewatering	9-9
5	Section 5: Recordkeeping	9-11
	5.1 Retention of Records	9-10
	5.2 Standard Permit Conditions	10-11
	5.3 Non-Stormwater Discharges	11-11
	5.4 Prohibited Discharges	11-11
	5.5 List of Rare Species	11-11

Appendices

Appendix

A	Location Map
B	Detailed Site Map
C	TPDES General Permit TXR 150000
D	Notice of Intent(s) (NOIs)
E	Grading, Construction Activities, and Stabilization Log
F	Materials List
G	Edwards Aquifer Protection Program Approval Letter (CZP)
H	SWP3 Inspection and Maintenance Report Form
I	Adverse Conditions: Log Sheet
J	List of Rare Species
K	Project Site Notice(s)

Section 1
Operator Overview and Responsibilities

1.1 SHARED SWP3 DEVELOPMENT

This construction site has no shared or common areas with another operator. This Storm Water Pollution Prevention Plan (SWP3) has been written and implemented by a single operator. DRB Group Texas, LLC is solely responsible for satisfying the requirements described in this plan.

1.2 RESPONSIBILITES OF OPERATORS

Secondary Operators and Primary Operators with Control Over Construction Plans and Specifications must:

a) Ensure the project specifications allow or provide that adequate best management practices (BMPs) are developed to meet the requirements of part III of the General Permit TXR150000.
b) Ensure that the SWP3 indicates the areas of the project where they have control over project specifications, including the ability to make modifications in specifications.
c) Ensure that all other operators affected by modifications in project specifications are notified in a timely manner so that those operators may modify their BMP s as necessary to remain compliant with the conditions of this general permit; and Construction General Permit TPDES General Permit No. TXR150000 Part III, Sections C & D Page 31.
d) Ensure that the SWP3 for portions of the project where each operator has control indicates the name and site-specific TPDES authorization number(s) for operators with the day-to-day operational control over those activities necessary to ensure compliance with the SWP3 and other permit conditions. If a primary operator has not been authorized or has abandoned the site, the secondary operator is considered to be the responsible party and must obtain authorization as a primary operator under the permit, until the authority for day-to-day operational control is transferred to another primary operator. The new primary operator must update or develop a new SWP3 that will reflect the transfer of operational control and include any additional updates to the SWP3 to meet requirements of the permit.

"I certify under penalty of law that I understand the terms and conditions of the general Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000 that authorizes the storm water discharges associated with construction activity from construction sites"

Printed Name & Title:			
Signature:		Company:	DRB Group Texas, LLC
Responsible for:	Development of the SWP3. Oversight of Operators with day-to-day operational control. Compliance with TPDES General Permit.		

Primary Operators with Day-to-Day Operational Control must ensure that the SWP3 accomplishes the following requirements:

a) Meets the requirements of this general permit for those portions of the project where they are operators.
b) Identifies the parties responsible for implementation of BMPs described in the SWP3.
c) Indicates areas of the project where they have operational control over day-to-day activities.
d) The name and site-specific TPDES authorization number of the parties with control over project specifications, including the ability to make modifications in specifications for areas where they have operational control over day-to-day activities.

"I certify under penalty of law that I understand the terms and conditions of the general Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR150000 that authorizes the storm water discharges associated with construction activity from construction sites"

Printed Name & Title:			
Signature:		Company:	DRB Group Texas, LLC
Responsible for:	Development of the SWP3. Oversight of Operators with day-to-day operational control. Compliance with TPDES General Permit.		

1.3 PLAN REVIEW AND MAKING PLANS AVAILABLE

The SWP3 must be retained on-site at the construction site or, if the site is inactive or does not have an on-site location to store the plan, a notice must be posted describing the location of the SWP3. The SWP3 must be made readily available at the time of an on-site inspection to: the executive director; a federal, state, or local agency approving sediment and erosion plans, grading plans, or stormwater management plans; local government officials; and the operator of a municipal separate storm sewer receiving discharges from the site. If the SWP3 is retained off-site, then it shall be made available as soon as reasonably possible. In most instances, it is reasonable that the SWP3 shall be made available within 24 hours of the request.

DRB Group Texas, LLC will post a TCEQ large construction site notice at the construction site entrance, where it can be readily available for viewing by the general public and local, state, and federal authorities.

1.4 REVISIONS AND UPDATES TO THE SWP3

DRB Group Texas, LLC must revise or update this SWP3, within 7 days, whenever any of the following occur:

- A change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants and that has not been previously addressed in the SWP3
- Changing site conditions based on updated plans and specifications, new operators, new areas of responsibility, and changes in BMPs
- Results of inspections or investigations by construction site personnel authorized by the permittee, operators of a municipal separate storm sewer system receiving the discharge, authorized TCEQ personnel, or a federal, state or local agency approving sediment and erosion plans indicate the SWP3 is proving ineffective in eliminating or significantly minimizing pollutants in discharges authorized under this general permit

Section 2
Site Evaluation, Assessment, and Planning

2.1 PROJECT SITE/INFORMATION

Hudson Park WWTP consists of 2.12 acres that is being developed for commercial use. The proposed developments include a Wastewater Treatment Plant. Regulated activities at the site will consist of clearing/grading, construction of access road, parking, a WWTP, and a batch detention pond. This Storm Water Pollution Prevention Plan (SWPPP) was prepared to minimize potential pollutants in storm water runoff associated with construction activities. The project site is located within the city of Georgetown and currently undeveloped.

Location: Georgetown, TX

Near ZIP Code: 78633

Latitude: N 30° 43’ 39.45”

Longitude: W 97° 49’ 50.56”

Estimated Project Start Date: June 1st 2026

Estimated Project End Date: June 1st 2028

2.2 DESCRIPTION OF CONSTRUCTION ACTIVITIES

Major activities which will disturb soil during the construction of this project include:

- Clearing vegetation 2.12 Acres
- Grading (excavation and filling) 0.69 Acres
- Placement of asphalt and concrete pavements 0.23 Acres

- Construction of Wastewater Treatment Plant 0.09 Acres
- Soil Stabilization of disturbed areas where construction did not occur 1.43 Acres

2.3 POTENTIAL POLLUTANTS AND SOURCES

- Soil Erosion: Erosion caused due to site excavation and topsoil disruption.
- Vehicle Fluids: Oil, grease, fuel, and hydraulic fluid contamination from construction equipment drippings.
- Hydrocarbons from asphalt paving operations.
- Construction Material waste.
- Concrete Truck Washout
- Miscellaneous trash and litter from construction workers and material wrappings

2.4 SITE ACREAGE

- Total Site Acreage 2.12 Acres
- Areas of Construction Disturbance 2.12 Acres
- Off-site material storage areas None

2.5 SOILS

Per geotechnical report, the first 0 to 5 feet consists of inorganic clay. Below that, consists of intact limestone seen up to a depth of 30 feet.

Per geotechnical report, the first 0 to 8 feet consist of inorganic clay of high plasticity. Below that, from 8 to 10 feet consists of inorganic clay. Below that, from 10 to 13 feet consists of weathered limestone. Below that, from 13 to 33 feet consists of intact limestone. Below that, from 33 up to 45 feet consists of weathered limestone.

Per geotechnical report the first 0 to 6 feet consists of inorganic clay of high plasticity. Below that, from 6 to 15 feet consists of inorganic clay. Below that, from 15 to 16 feet consists of weathered limestone. Below that, from 16 up to 18 feet consists of intact limestone.

Per geotechnical report the first 0 to 5 feet consists of inorganic clay of high plasticity. Below that, from 5 to 10 feet consists of inorganic clay. Below that, from 10 up to 13 feet consists of intact limestone.

2.6 LOCATION MAP

See **Appendix A.**

2.7 DETAILED SITE MAP

See **Appendix B.**

2.8 SUPPORTING CONSTRUCTION ACTIVITY

- There will be concrete paving operations on this site
- There will be asphalt paving operations on this site
- There will be concrete washout on this site
- There will be a material staging area on this site

2.9 RECEIVING WATERS

- North Fork San Gabriel River

2.10 COPY OF TPDES GENERAL PERMIT

See **Appendix C.**

2.11 COPY OF NOI

See **Appendix D.**

Section 3
BEST MANAGEMENT PRACTICES

3.1 GENERAL REQUIREMENTS

- The site preparation and construction stage erosion and sediment controls are designed to retain sediment on site to the extent possible with consideration for local topography, soil type, and rainfall.
- Control Measures are to be installed and maintained in accordance with manufacturer's and/or designer specifications.
- Construction debris and construction materials exposed to storm water will be prevented from becoming a pollutant source for stormwater discharge through collection, disposal and, containment.
- A list of grading, construction activities, and stabilization shall be recorded as part of this SWP3 (Appendix E)

3.2 EROSION CONTROL AND STABILIZATION PRACTICES

A concrete washout pit and material storage area will be required during the construction phase. The staging and concrete shall both be in the southmost area of the site.

Silt fencing will be utilized as the primary sediment control in this project. The site size of 2.12 acres places it below the threshold requiring a sedimentation basin.

- Steel or wood posts shall be installed to support the silt fence at a slight angle towards the anticipated runoff source. Posts must be embedded a minimum of 12 inches. If wood is unable to achieve this depth, steel posts shall be used.

- The downslope of the silt fence slope shall be trenched so that the downslide is perpendicular to the

Erosion stabilization measures must be initiated immediately where construction activities have temporarily ceased and will not continue for a period exceeding 14 calendar days.

- Where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased due to frozen conditions, non-vegetative controls must be implemented until thawing conditions are present.
- in areas where non-vegetative controls are infeasible, the operator may alternatively utilize temporary perimeter controls. The operator must document in the SWP3 the reason why stabilization measures are not feasible, and must demonstrate that the perimeter controls will retain sediment on site to the extent practicable.

Per a tree survey, three trees on this site will require protection. No construction shall occur within an area that constitutes more than 50 percent of the total critical root zone. Fence shall completely surround the dripline of the existing tree.

Curb inlet protection shall be utilized to avoid the storm sewer becoming clogged and potentially losing a portion of its capacity following sediment loading.

Final stabilization must be achieved prior to termination of permit coverage.

3.3 STORMWATER CONTROLS

The permanent stormwater control to be implemented on this site is composed of inlets conducing the stormwater runoff into a batch detention pond in the southwest corner of the site.

3.4 OTHER CONTROLS AND BMPS

Off-Site Vehicle Tracking

Vehicular traffic leaving the construction site will exit through the stabilized construction exit. Mud or dirt tracked off-site should be removed immediately by hand or mechanical broom sweeping. Stabilized construction entrances will be placed near the entrance of the site. This entrance should be perpendicular to the abutting existing roadway.

- Stone size shall be 3-5” open graded rock
- Length shall be a minimum of 50’
- Thickness shall not be less than 8”

Waste Removal and Disposal

A list of construction and waste materials to be stored on the site shall be recorded and regularly updated (Appendix F). Construction and waste materials shall be stored within a designated storage area.

Velocity Dissipation Devices for Discharge

DRB Group Texas, LLCshall place velocity dissipation devices at discharge locations and along the length of any outfall channel (i.e., runoff conveyance) to provide a non-erosive flow velocity from the structure to a water course, so that the natural physical and biological characteristics and functions are maintained and protected.

Compliance with Approved State and Local Plans

This SWP3 was designed to be consistent with applicable sediment and erosion site plans or permits, and stormwater management site plans or site permits. Any other future applications will prompt review of the SWP3 to ensure consistency with those plans or permits.

The SWP3 will be updated as necessary to remain consistent with any site plans or site permits approved by state or local officials for which DRB Group Texas, LLC receives written notice.

A Contributing Zone Plan was prepared as required by the Edwards Aquifer Protection Program. A copy of that plan will be made readily available upon request by authorized TCEQ personnel. A copy of the approval letter for the plan shall be maintained with this SWP3 (Appendix G).

Spill Response Actions

The owner shall be responsible for the adequate cleanup of any chemical spills during construction. The cleanup will be performed to TCEQ standards, RG-348, July 2005.

The contractor will notify TCEQ of any chemical spills as required and outlined in these standards at the phone numbers listed below.

1.4.16 Spill Prevention and Control

The objective of this sections is to describe measures to prevent or reduce the discharge of pollutants to drainage systems or watercourses from leaks and spills by reducing the chance for spills, stopping the source of spills, containing, and cleaning up spills, properly disposing of spill materials, and training employees. The following steps will help reduce the stormwater impacts of leaks and spills:

Education

1. Be aware that different materials pollute in different amounts. Make sure that each employee knows what a “significant spill” is for each material they use, and what is the appropriate response for “significant” and “insignificant” spills. Employees shall also be aware of when spill must be reported to the TCEQ. Information is available in 30 TAC 327.4 and 40 CFR 302.4.
2. Educate employees and subcontractors on potential dangers to humans and the environment from spills and leaks.
3. Hold regular meetings to discuss and reinforce appropriate disposal procedures (incorporate into regular safety meetings).
4. Establish a continuing education program to indoctrinate new employees.
5. Have contractor’s superintendent or representative oversee and enforce proper spill prevention and control measures.

General Measures

1. To the extent that the work can be accomplished safety, spills of oil, petroleum products, substances listed under 40 CFR shall be contained and cleaned up immediately.
2. Store hazardous materials and waste in covered containers and protect from vandalism
3. Place a stockpile of spill cleanup materials where it will be readily accessible.
4. Train employees in spill prevention and cleanup.
5. Designate responsible individuals to oversee and enforce control measures.
6. Spill shall be covered and protected from stormwater runoff during rainfall to the extent that it doesn't compromise cleanup activities.
7. Do not bury or wash spills with water. 1-118
8. Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
9. Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
10. Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
11. Place Material Safety Data Sheets (MSDS), as well as proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
12. Keep waste storage areas clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter control, containment structures, covers, and liners, shall be repaired or replaced as needed to maintain proper function.

Cleanup

1. Clean up leaks and spills immediately
2. Use a rag for small spills on paved surfaces, a damp mop for the general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposes 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. See the waste management BMPs in this section for specific information.
4. If a spill does occur in the basin, all components of the controller must be inspected and checked for proper operation within 7 days.

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 shall be promptly removed and disposed of properly.

4. Follow the practice below for a minor spill:
5. Contain the spread of the spill.
6. Recover spilled materials.
7. Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

Semi-significant spills still can 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.

Spill shall be cleaned up immediately:

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 and earthen dike. Dig up and properly dispose of contaminated soil.
5. If the spill occurs during rain, cover the spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

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 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.
2. For spills of federal reportable quantities, in conformance with the requirements in 40 CFR parts 110,119, and 302, the contractor shall notify the National Response Center at (800) 424-8802.
3. Notification shall first be made by telephone and followed up with a written report.
4. The services of a spills contractor or a Haz-Mat team shall be obtained immediately. Construction personnel shall not attempt to clean up until the appropriate and qualified staff 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 Sheriff Office, Fire Departments. Etc.

More information on spill rules and appropriate responses is available on the TCEQ website at: http://www.tceq.texas.gov/response/spills

Section 4
MAINTENANCE AND INSPECTIONS

4.1 MAINTENANCE REQUIREMENTS

a) All protective measures identified in the SWP3 must be maintained in effective operating condition. If, through inspections or other means, as soon as DRB Group Texas, LLC determines that BMPs are not operating effectively, then maintenance shall be performed as necessary to maintain the continued effectiveness of stormwater controls, and prior to the next rain event if feasible. If maintenance prior to the next anticipated storm event is impracticable, the reason shall be documented in the SWP3 and maintenance must be scheduled and accomplished as soon as practicable. Erosion and sediment controls that have been intentionally disabled, run-over, removed, or otherwise rendered ineffective must be replaced or corrected immediately upon discovery.

b) If periodic inspections or other information indicates a control has been used incorrectly, is performing inadequately, or is damaged, then the operator shall replace or modify the control as soon as practicable after making the discovery.

c) Sediment must be removed from sediment traps and sedimentation ponds no later than the time that design capacity has been reduced by 50%. For perimeter controls such as silt fences, berms, etc., the trapped sediment must be removed before it reaches 50% of the above-ground height.

d) If sediment escapes the site, accumulations must be removed at a frequency that minimizes off-site impacts, and prior to the next rain event.

4.2 INSPECTION OF CONTROLS

Designated personnel shall inspect control measures **every 7 days** and within 24-hours following a storm event greater than 0.5 inches of rainfall.

- Silt fence will be inspected for depth of sediment, tears, to ensure fabric is firmly attached to posts, and verify that posts are firmly in the ground. If 6 or more inches of sediment are retained by the silt fence this material will be removed and discarded appropriately. If fence material is torn or clogged the silt fence will be repaired or replaced.
- Stabilized construction entrance will be cleaned when soil collection causes sufficient decrease in the intended effectiveness. Protection structures will be rebuilt as needed.
- The batch detention pond will be inspected for the amount of sediment accumulated. Removal of sediment will likely need to occur after every heavy rain event. Additionally, any trash or litter should be removed to avoid become a clog at the outlet. If the structure is damaged, it shall be repaired or replaced.
- If sediment in the rock berms reach a depth equal to one-third the height of the berm, or 6 inches, the sediment shall be removed and discarded appropriately. The stone and/or fabric core woven sheathing shall be replaced when the structure ceases to function as intended due to sediment accumulation.

- If sediments in the curb inlet protection reach a depth of 2 inches, the sediment shall be removed and discarded appropriately.
- Tree protection fencing that is damaged shall be repaired or replaced.

4.3 INSPECTION SCHEDULE VARIANCES

The inspection frequencies can vary between a 14-day and 7-day schedule given the following provisions:

- The schedule can only be changed once per month
- Schedule must be implemented within the first 5 business days of the calendar month.
- The reason for the change in schedule must be documented in this SWP3.

4.4 REVISIONS TO THE SWP3 RESULTING FROM INSPECTIONS

The SWP3 must be modified based on the results of inspections, as necessary, to better control pollutants in runoff. Revisions to the SWP3 must be completed within seven (7) calendar days following the inspection. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in the SWP3 and wherever possible those changes implemented before the next storm event.

4.5 INSPECTION REPORT

A report summarizing the scope of any inspection must be completed within 24-hours following inspection (Appendix H). The report must include the date of the inspection, the reason for the inspection, and any major observations. Major observations must include:

- Locations where erosion and discharges of sediment or other pollutants occurred.
- Locations needing BMP maintenance or additional BMPS
- Locations where BMPs failed or are inadequate

The names and qualifications of the personnel performing the inspections shall be documented once in this SWP3 rather than included with every report.

If there are no incidents of non-compliance, the report must contain a certification that the site complies with the SWP3 and TXR150000. The report is to be retained as part of this SWP3 and signed by personnel with signatory authority.

Adverse conditions are those dangerous to personnel (e.g. high winds or excessive lighting) or prohibit access to site (e.g. flooding or freezing conditions). If Adverse Conditions cause a delay or suspension of the inspections in the SWP3, the adverse conditions log sheet shall be completed (Appendix I). Documentation for adverse conditions must include:

- Date and time of adverse conditions
- Names of Personnel that witnessed the adverse condition
- Description of the adverse condition

4.6 DEWATERING

If dewatering were to be necessary at any moment during this project, this would need to be observed every day that it is done. The following information shall be documented as part of this observation

- Date
- Name and title of personnel
- Estimate of the rate (in gallons per day) of discharge
- Any indication of pollutants
- Major observations
- Locations needing BMP management or where BMPs failed

If there are no incidents non-compliance, a statement as seen in the inspection report shall be signed by personnel with signatory authority.

Section 5
RECORDKEEPING

5.1 RETENTION OF RECORDS

a) A copy of this SWP3
b) All reports and actions required by this permit, including a copy of the TCEQ construction site notice;
c) All data used to complete the NOI, if an NOI is required for coverage under this general permit
d) All records of submittal of forms submitted to the operator of any MS4 receiving the discharge and to the secondary operator of a large construction site, if applicable.

5.2 STANDARD PERMIT CONDITIONS

a) DRB Group Texas, LLC has a duty to comply with all permit conditions. Failure to comply with any permit condition is a violation of the general permit and statutes under which it was issued and is grounds for enforcement action, for terminating, revoking and reissuance, or modification, or denying coverage under the general permit, or for requiring a discharger to apply for and obtain an individual TPDES permit.
b) Authorization under the general permit may be suspended or otherwise suspended for cause. Filing a notice of planned changes or anticipated non-compliance does not stay any permit condition. The permittee must furnish to the executive director, upon request and within a reasonable time, any information necessary for the executive director to determine whether cause exists for modifying, revoking and reissuing, terminating or, otherwise suspending authorization under the permit. Additionally, DRB Group Texas, LLC must provide to the executive director, upon request, copies of all records required to be maintained as a condition of the general permit.

c) It is not a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the permit conditions.
d) Inspection and entry shall be allowed under TWC Chapters 26-28, Texas Health and Safety Code §§ 361.032-361.033 and 361.037, and 40 CFR § 122.41(i). The statement in TWC § 26.014 that commission entry of a facility shall occur according to an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility or site, but merely describes the commission's duty to observe appropriate rules and regulations during an inspection.
e) The discharger is subject to administrative, civil, and criminal penalties, as applicable, under TWC Chapter 7 for violations including but not limited to the following:

    1. negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under CWA § 402, or any requirement imposed in a pretreatment program approved under CWA §§ 402(a)(3) or 402(b)(8);

    2. knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under a permit, including monitoring reports or reports of compliance or noncompliance;

    3. knowingly violating CWA §303 and placing another person in imminent danger of death or serious bodily injury.

e) All reports and other information requested by the executive director must be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).
f) Authorization under the general permit does not convey property or water rights of any.
g) DRB Group Texas, LLC shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.
h) The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit.
i) DRB Group Texas, LLC shall comply with the monitoring and reporting requirements in 40 CFR § 122.41(j) and (l), as applicable.
j) Analysis must be performed using sufficiently sensitive methods for analysis that comply with the rules located in 40 CFR §§ 136.1(c) and 122.44(i)(1)(iv).

5.3 NON-STORMWATER DISCHARGES

Stormwater discharges from this development may be intermittently mixed with no storm water discharges from fire hydrant flushing, emergency firefighting activities, water used to wash vehicles without detergents or soap, irrigation drainage from watering vegetation, pavement wash

waters, where spills or leaks of toxic or hazardous materials have not occurred. These non-storm water would exit the site in via the same drainage path utilized by stormwater runoff.

5.4 PROHIBITED DISCHARGES

a) Wastewater from wash out of concrete, unless managed by an appropriate control.
b) Wastewater from wash out and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.
c) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
d) Soaps or solvents used in vehicle and equipment washing.

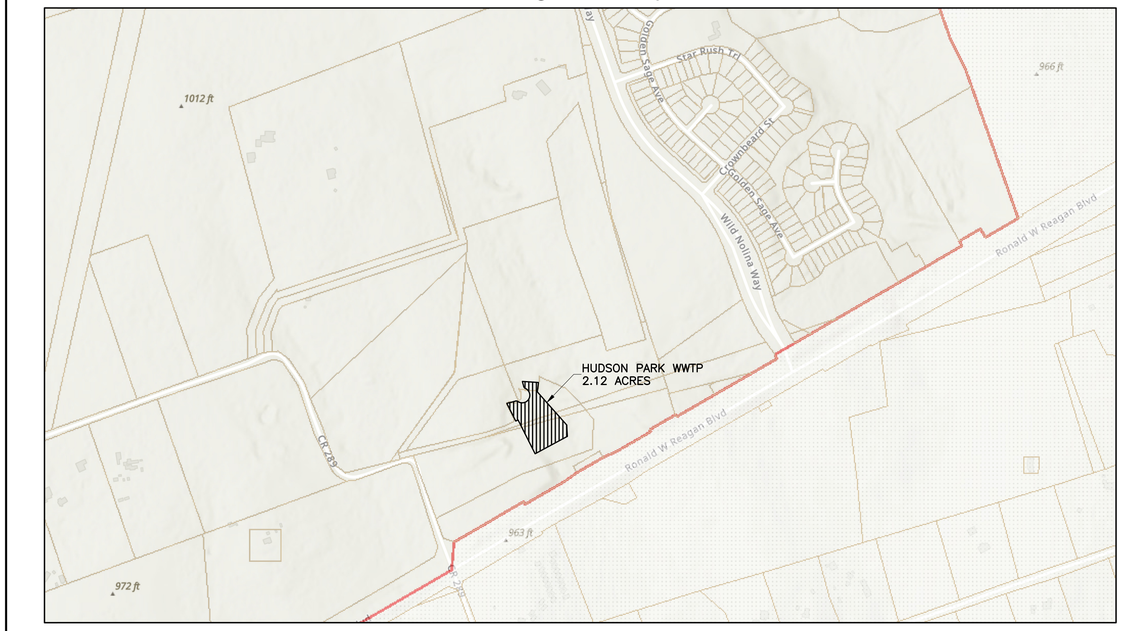
5.5 LIST OF RARE SPECIES

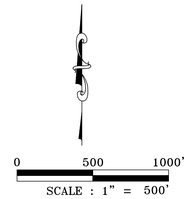
See **Appendix J.**

APPENDIX A

LOCATION MAP

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\160 - Project_Mnmgt\1.6.7 - Corres\TCEQ CZP Submittal\7 TPDES General Permit TXR150000\7.4 Appendix A Location Map\Appendix A.dwg, LAST SAVED ON: Dec 22 2025 10:05am, PLOTTED BY: AHERRERA, ON: Feb 04 2026 3:47pm, CFG:





REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	ISV
DRAWN BY:	AH
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G-100
AUSTIN, TX 78746
TEL: (512) 614-6171
T.B.P.E. FIRM NO. F-13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF KIMBERLY HAMMOND, P.E. 151874 FEBRUARY 5, 2026. NOT FOR CONSTRUCTION DCS ENGINEERING, LLC

APPENDIX A

LOCATION MAP

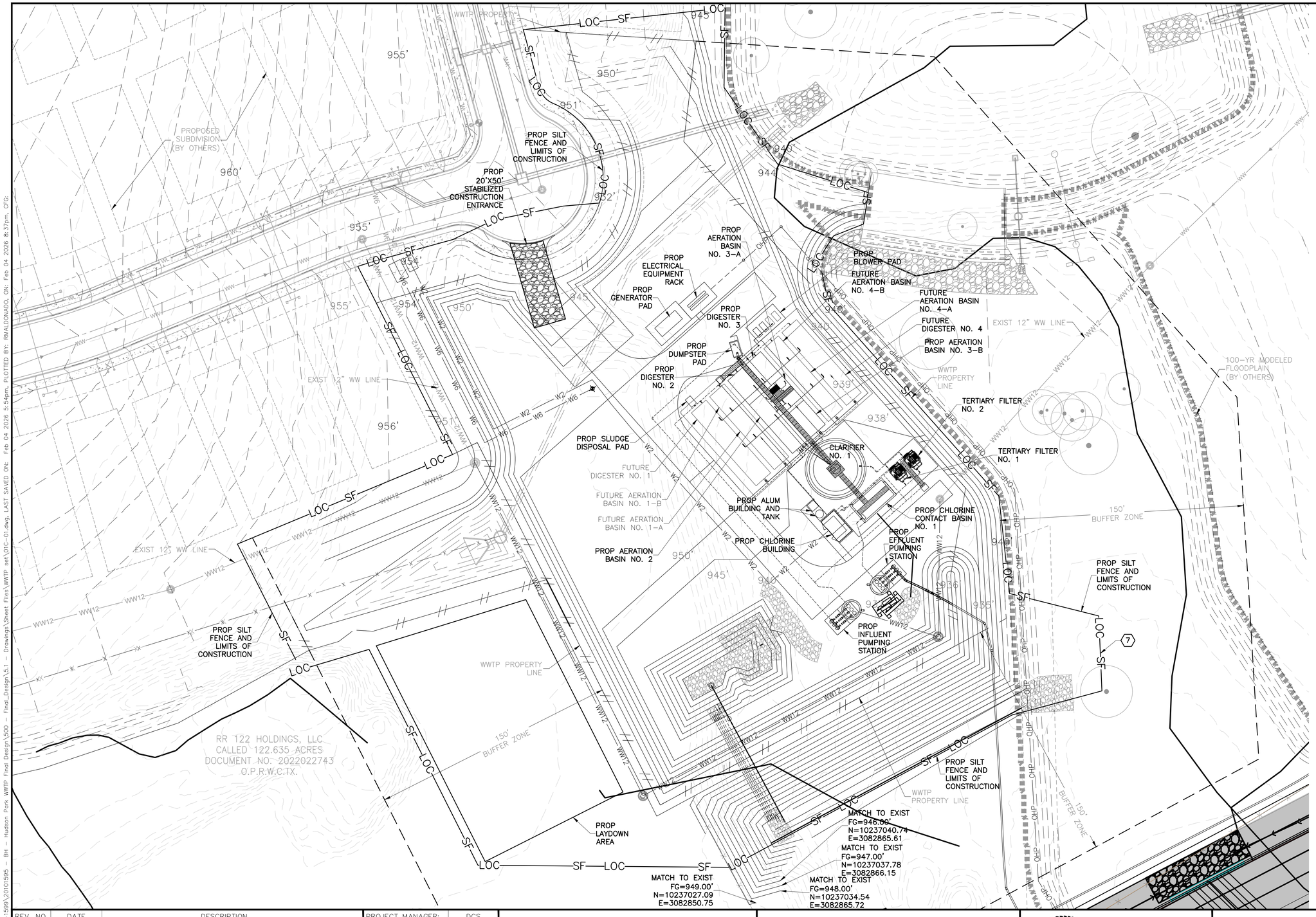
DATE: FEBRUARY 2026

SCALE: 1" = 500'

DRAWING: FIGURE 1

APPENDIX B

DETAILED SITE MAP



LEGEND:

- 945' EXIST NG
- 945' PROPOSED CONTOURS (BY OTHERS)
- **945'** PROPOSED CONTOURS
- LOC—SF PROPOSED SILT FENCE AND LIMITS OF CONSTRUCTION
- STABILIZED CONSTRUCTION ENTRANCE

KEY NOTES:

1. REMOVE STABILIZED CONSTRUCTION ACCESS UPON COMPLETION OF PROJECT. RESTORE EXIST ACCESS ROAD TO EQUAL OR BETTER THAN EXIST CONDITION. REMOVE MUD TRACKED ON TO EXIST ACCESS ROAD. NO SEPARATE PAY.
2. A VEHICLE WASH–DOWN AREA MAY BE LOCATED BY THE CONTRACTOR TO FACILITATE THE PROJECT. WHILE UTILIZING THE WASH–DOWN AREA, THE CONTRACTOR SHALL PROTECT THE DRAINAGE FEATURES WHERE THE WASH–DOWN WATER IS DIRECTED AS PER PPP TEXT. THE LOCATION OF THE WASH–DOWN IS AT THE CONTRACTOR'S OPTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL FACILITIES INDICATED ON THIS PLAN.
4. THE CONTRACTOR SHALL CONSTRUCT SILT BARRIERS INDICATED ON THIS PLAN IN ADDITION TO CONFORMING WITH ALL ITEMS DISCUSSED IN THE WRITTEN STORMWATER POLLUTION PREVENTION PLAN TEXT. PLAN SHALL FOLLOW THE BEST MANAGEMENT PRACTICES.
5. UPON PROJECT COMPLETION, THE ENTIRE DISTURBED AREA SHALL BE SEEDED.
6. UPON PROJECT COMPLETION AND FINAL STABILIZATION, ALL SILT FENCE SHALL BE REMOVED AND DISPOSED OF.
7. SILT FENCE SHALL BE INSTALLED AS SHOWN IN PLANS AT END OF OUTFALL PIPE TO PREVENT SILT FROM ENTERING THE EXISTING WATERWAY.
8. CONTRACTOR SHALL COORDINATE WITH ADJACENT SUBDIVISION CONTRACTOR TO RECEIVE APPROXIMATELY 9,430 CY OF SPOIL MATERIAL RESULTING FROM EXCAVATION IN THE SUBDIVISION PROJECT AND UTILIZE IT TO ACHIEVE PROPOSED FINISHED GRADE ELEVATIONS ON THE WWTP SITE. CONTRACTOR SHALL ALSO COORDINATE WITH ADJACENT 10" FORCEMAIN CONTRACTOR TO RECEIVE APPROXIMATELY 2,542 CY OF SPOIL MATERIAL RESULTING FROM EXCAVATION IN THE 10" EFFLUENT FORCEMAIN PROJECT AND UTILIZE IT TO ACHIEVE PROPOSED FINISHED GRADE ELEVATIONS ON THE WWTP SITE.

REV. NO.	DATE	DESCRIPTION

PROJECT MANAGER:	DCS
DESIGNED BY:	KM
CHECKED BY:	RM
DRAWN BY:	RM
DCS PROJECT NO:	20101595

DCS ENGINEERING, LLC
1101 S. CAPITAL OF TEXAS HIGHWAY, BUILDING G–100
AUSTIN, TX 78746
TEL: (512) 614–6171
T.B.P.E. FIRM NO. F–13162

HUDSON PARK

0.120 MGD WASTEWATER TREATMENT PLANT - PHASE I

STATE OF TEXAS
KIMBERLY HAMMOND
151874
LICENSED PROFESSIONAL ENGINEER
2/5/26

SITE IMPROVEMENTS

CIVIL - PROPOSED SITE AND EROSION CONTROL PLAN

DATE: FEBRUARY 2026
SCALE: 1" = 30'
DRAWING: 01C-01

FILENAME: Z:\Projects 1551-1599\20101595 - BH - Hudson Park WWTP Final Design\500 - Final_Design\5.1 - Drawings\Sheet Files\WWTP set\01C-01.dwg, LAST SAVED ON: Feb 04 2026 5:54pm, PLOTTED BY: RMALDONADO, ON: Feb 04 2026 8:37pm, CFG:

APPENDIX C

TPDES GENERAL PERMIT TXR 150000

Texas Commission on Environmental Quality

P.O. Box 13087, Austin, Texas 78711-3087

GENERAL PERMIT TO DISCHARGE UNDER THE

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

This permit supersedes and replaces
TPDES General Permit No. TXR150000,
effective March 5, 2018, and amended January 28, 2022

Construction sites that discharge stormwater associated with construction activity located in the state of Texas may discharge to surface water in the state only according to monitoring requirements and other conditions set forth in this general permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ or Commission), the laws of the State of Texas, and other orders of the Commission of the TCEQ. The issuance of this general permit does not grant to the permittee the right to use private or public property for conveyance of stormwater and certain non-stormwater discharges along the discharge route. This includes property belonging to but not limited to any individual, partnership, corporation or other entity. Neither does this general permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This general permit and the authorization contained herein shall expire at midnight, on March 5, 2028.

EFFECTIVE DATE: March 5, 2023

ISSUED DATE: February 27, 2023

For the Commission

TPDES GENERAL PERMIT NUMBER TXR150000
RELATING TO STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

Table of Contents

Part I. Flow Chart and Definitions 5
Section A. Flow Chart to Determine Whether Coverage is Required 5
Section B. Definitions 6
Part II. Permit Applicability and Coverage 12
Section A. Discharges Eligible for Authorization 12
1. Stormwater Associated with Construction Activity 12
2. Discharges of Stormwater Associated with Construction Support Activities 12
3. Non-Stormwater Discharges 12
4. Other Permitted Discharges 13
Section B. Concrete Truck Wash Out 13
Section C. Limitations on Permit Coverage 13
1. Post Construction Discharges 13
2. Prohibition of Non-Stormwater Discharges 13
3. Compliance with Water Quality Standards 14
4. Impaired Receiving Waters and Total Maximum Daily Load (TMDL) Requirements 14
5. Discharges to the Edwards Aquifer Recharge or Contributing Zone 14
6. Discharges to Specific Watersheds and Water Quality Areas 15
7. Protection of Streams and Watersheds by Other Governmental Entities 15
8. Indian Country Lands 15
9. Exempt Oil and Gas Activities 15
10. Stormwater Discharges from Agricultural Activities 16
11. Endangered Species Act 16
12. Storage of High-Level Radioactive Waste 16
13. Other 17
Section D. Deadlines for Obtaining Authorization to Discharge 17
1. Large Construction Activities 17
2. Small Construction Activities 17
Section E. Obtaining Authorization to Discharge 17
1. Automatic Authorization for Small Construction Activities with Low Potential for Erosion 17
2. Automatic Authorization for Small Construction Activities 18

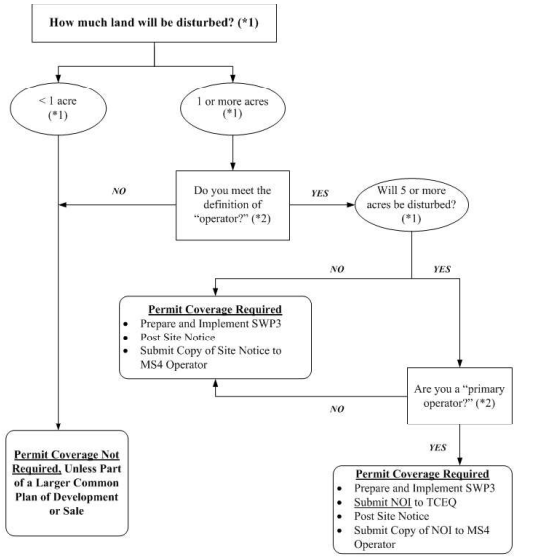
3. Authorization for Large Construction Activities 19
4. Waivers for Small Construction Activities: 21
5. Effective Date of Coverage 21
6. Contents of the NOI 22
7. Notice of Change (NOC) 22
8. Signatory Requirement for NOI Forms, NOT Forms, NOC Forms, and Construction Site Notices 23
Section F. Terminating Coverage 24
1. Notice of Termination (NOT) Required 24
2. Minimum Contents of the NOT 24
3. Termination of Coverage for Small Construction Sites and for Secondary Operators at Large Construction Sites 25
4. Transfer of Day-to-Day Operational Control 25
Section G. Waivers from Coverage 26
1. Waiver Applicability and Coverage 26
2. Steps to Obtaining a Waiver 27
3. Effective Date of an LREW 27
4. Activities Extending Beyond the LREW Period 28
Section H. Alternative TPDES Permit Coverage 28
1. Individual Permit Alternative 28
2. General Permit Alternative 28
3. Individual Permit Required 28
Section I. Permit Expiration 29
Part III. Stormwater Pollution Prevention Plans (SWP3) 29
Section A. Shared SWP3 Development 30
Section B. Responsibilities of Operators 30
1. Secondary Operators and Primary Operators with Control Over Construction Plans and Specifications 30
2. Primary Operators with Day-to-Day Operational Control 31
Section C. Deadlines for SWP3 Preparation, Implementation, and Compliance 31
Section D. Plan Review and Making Plans Available 31
Section E. Revisions and Updates to SWP3s 32
Section F. Contents of SWP3 32
Part IV. Erosion and Sediment Control Requirements Applicable to All Sites 43
Section A. Erosion and Sediment Controls 43
Section B. Soil Stabilization 44
Section C. Dewatering 44

Section D. Pollution Prevention Measures 44
Section E. Prohibited Discharges 45
Section F. Surface Outlets 45
Part V. Stormwater Runoff from Concrete Batch Plants 45
Section A. Benchmark Sampling Requirements 46
Section B. Best Management Practices (BMPs) and SWP3 Requirements 47
Section C. Prohibition of Wastewater Discharges 50
Part VI. Concrete Truck Wash Out Requirements 50
Part VII. Retention of Records 50
Part VIII. Standard Permit Conditions 51
Part IX. Fees 52
Appendix A: Automatic Authorization 53
Appendix B: Storm Erosivity (EI) Zones in Texas 55
Appendix C: Isoerodent Map 56
Appendix D: Erosivity Indices for EI Zones in Texas 57

Part I. Flow Chart and Definitions

Section A. Flow Chart to Determine Whether Coverage is Required

When calculating the acreage of land area disturbed, include the disturbed land-area of all construction and construction support activities.



*(*1) To determine the size of the construction project, use the size of the entire area to be disturbed, and include the size of the larger common plan of development or sale, if the project is part of a larger project (refer to Part I.B., "Definitions," for an explanation of "common plan of development or sale").*
*(*2) Refer to the definitions for "operator," "primary operator," and "secondary operator" in Part I., Section B. of this permit.*

Section B. Definitions

Arid Areas – Areas with an average annual rainfall of zero (0) to ten (10) inches.

Best Management Practices (BMPs) – Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

Commencement of Construction – The initial disturbance of soils associated with clearing, grading, or excavation activities, as well as other construction-related activities (e.g., demolition; grubbing; stockpiling of fill material; placement of raw materials at the site).

Common Plan of Development – A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development (also known as a "common plan of development or sale") is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities. A common plan of development does not necessarily include all construction projects within the jurisdiction of a public entity (e.g., a city or university). Construction of roads or buildings in different parts of the jurisdiction would be considered separate "common plans," with only the interconnected parts of a project being considered part of a "common plan" (e.g., a building and its associated parking lot and driveways, airport runway and associated taxiways, a building complex, etc.). Where discrete construction projects occur within a larger common plan of development or sale but are located one quarter (¼) mile or more apart, and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale, provided that any interconnecting road, pipeline or utility project that is part of the same "common plan" is not included in the area to be disturbed.

Construction Activity – Includes soil disturbance activities, including clearing, grading, excavating, construction-related activity (e.g., stockpiling of fill material, demolition), and construction support activity. This does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g., the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing rights-of-way, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

Construction Support Activity – A construction-related activity that specifically supports construction activity, which can involve earth disturbance or pollutant-generating activities of its own, and can include, but are not limited to, activities associated with concrete or asphalt batch plants, rock crushers, equipment staging or storage areas, chemical storage areas, material storage areas, material borrow areas, and excavated material disposal areas. Construction support activity must only directly support the construction activity authorized under this general permit.

Dewatering – The act of draining accumulated stormwater or groundwater from building foundations, vaults, trenches, and other similar points of accumulation.

Discharge – For the purposes of this permit, the drainage, release, or disposal of pollutants in stormwater and certain non-stormwater from areas where soil disturbing activities (e.g., clearing, grading, excavation, stockpiling of fill material, and demolition), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck wash out, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

Drought-Stricken Area – For the purposes of this permit, an area in which the National Oceanic and Atmospheric Administration's U.S. Seasonal Drought Outlook indicates for the period during which the construction will occur that any of the following conditions are likely: (1) "Drought to persist or intensify", (2) "Drought ongoing, some improvement", (3) "Drought likely to improve, impacts ease", or (4) "Drought development likely". See http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html.

Edwards Aquifer – As defined under Texas Administrative Code (TAC) § 213.3 of this title (relating to the Edwards Aquifer), that portion of an arcuate belt of porous, water-bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

Edwards Aquifer Recharge Zone – Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the Texas Commission on Environmental Quality (TCEQ) and the appropriate regional office. The Edwards Aquifer Map Viewer, located at https://www.tceq.texas.gov/gis/edwards-viewer.html

Edwards Aquifer Contributing Zone – The area or watershed where runoff from precipitation flows downgradient to the recharge zone of the Edwards Aquifer. The contributing zone is located upstream (upgradient) and generally north and northwest of the recharge zone for the following counties: all areas within Kinney County, except the area within the watershed draining to Segment No. 2304 of the Rio Grande Basin; all areas within Uvalde, Medina, Bexar, and Comal Counties; all areas within Hays and Travis Counties, except the area within the watersheds draining to the Colorado River above a point 1.3 miles upstream from Tom Miller Dam, Lake Austin at the confluence of Barrow Brook Cove, Segment No. 1403 of the Colorado River Basin; and all areas within Williamson County, except the area within the watersheds draining to the Lampasas River above the dam at Stillhouse Hollow reservoir, Segment No. 1216 of the Brazos River Basin. The contributing zone is illustrated on the Edwards Aquifer map viewer at https://www.tceq.texas.gov/gis/edwards-viewer.html

Effluent Limitations Guideline (ELG) – Defined in 40 Code of Federal Regulations (CFR) § 122.2 as a regulation published by the Administrator under § 304(b) of the Clean Water Act (CWA) to adopt or revise effluent limitations.

Facility or Activity – For the purpose of this permit, referring to a construction site, the location of construction activity, or a construction support activity that is regulated under this general permit, including all contiguous land and fixtures (for example, ponds and materials stockpiles), structures, or appurtenances used at a construction site or industrial site.

Final Stabilization – A construction site status where any of the following conditions are met:

(a) All soil disturbing activities at the site have been completed and a uniform (that is, evenly distributed, without large bare areas) perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, or gabions) have been employed.

(b) For individual lots in a residential construction site by either:

(1) the homebuilder completing final stabilization as specified in condition (a) above; or

(2) the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization. If temporary stabilization is not feasible, then the homebuilder may fulfill this requirement by retaining perimeter controls or BMPs, and informing the homeowner of the need for removal of temporary controls and the establishment of final stabilization. Fulfillment of this requirement must be documented in the homebuilder's stormwater pollution prevention plan (SWP3).

(c) For construction activities on land used for agricultural purposes (such as pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to surface water and areas that are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

(d) In arid, semi-arid, and drought-stricken areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:

(1) temporary erosion control measures (for example, degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by the operator, and

(2) the temporary erosion control measures are selected, designed, and installed to achieve 70% of the native background vegetative coverage within three years.

High-Level Radioactive Waste – Meaning as assigned by 42 United States Code (U.S.C.) Section 10101 (12) and includes spent nuclear fuel as defined by 42 U.S.C. Section 10101 (23).

Hyperchlorination of Waterlines – Treatment of potable water lines or tanks with chlorine for disinfection purposes, typically following repair or partial replacement of the waterline or tank, and subsequently flushing the contents.

Impaired Water – A surface water body that is identified as impaired on the latest approved CWA § 303(d) List or waters with an EPA-approved or established total maximum daily load (TMDL) that are found on the latest EPA approved *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)*, which lists the category 4 and 5 water bodies.

Indian Country Land – (1) All land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation; (2) all dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and (3) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. (40 CFR § 122.2)

Indian Tribe – Any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian Reservation (40 CFR § 122.2).

Infeasible – Not technologically possible, or not economically practicable and achievable in light of best industry practices. (40 CFR § 450.11(b)).

Large Construction Activity – Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than five (5) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities).

Linear Project – Includes the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.

Low Rainfall Erosivity Waiver (LREW) – A written submission to the executive director from an operator of a construction site that is considered as small construction activity under the permit, which qualifies for a waiver from the requirements for small construction activities, only during the period of time when the calculated rainfall erosivity factor is less than five (5).

Minimize – To reduce or eliminate to the extent achievable using stormwater controls that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) – A separate storm sewer system owned or operated by the United States, a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over the disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, that discharges to surface water in the state.

Notice of Change (NOC) – Written notification to the executive director from a discharger authorized under this permit, providing changes to information that was previously provided to the agency in a notice of intent form.

Notice of Intent (NOI) – A written submission to the executive director from an applicant requesting coverage under this general permit.

Notice of Termination (NOT) – A written submission to the executive director from a discharger authorized under this general permit requesting termination of coverage.

Operator – The person or persons associated with a large or small construction activity that is either a primary or secondary operator as defined below:

Primary Operator – The person or persons associated with construction activity that meets either of the following two criteria:

(a) the person or persons have on-site operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

(b) the person or persons have day-to-day operational control of those activities at a construction site that are necessary to ensure compliance with a Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (for example, they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

Secondary Operator – The person or entity, often the property owner, whose operational control is limited to:

(a) the employment of other operators, such as a general contractor, to perform or supervise construction activities; or

(b) the ability to approve or disapprove changes to construction plans and specifications, but who does not have day-to-day on-site operational control over construction activities at the site.

Secondary operators must either prepare their own SWP3 or participate in a shared SWP3 that covers the areas of the construction site, where they have control over the construction plans and specifications.

If there is not a primary operator at the construction site, then the secondary operator is defined as the primary operator and must comply with the requirements for primary operators.

Outfall – For the purpose of this permit, a point source at the point where stormwater runoff associated with construction activity discharges to surface water in the state and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other water of the U.S. and are used to convey waters of the U.S.

Permittee – An operator authorized under this general permit. The authorization may be gained through submission of a notice of intent, by waiver, or by meeting the requirements for automatic coverage to discharge stormwater runoff and certain non-stormwater discharges from construction activity.

Point Source – Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff (40 CFR § 122.2).

Pollutant – Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into any surface water in the state. The term "pollutant" does not include tail water or runoff water from irrigation or rainwater runoff from cultivated or uncultivated rangeland, pastureland, and farmland. For the purpose of this permit, the term "pollutant" includes sediment.

Pollution – The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose (Texas Water Code (TWC) § 26.001(14)).

Rainfall Erosivity Factor (R factor) – The total annual erosive potential that is due to climatic effects, and is part of the Revised Universal Soil Loss Equation (RUSLE).

Receiving Water – A "Water of the United States" as defined in 40 CFR § 122.2 or a surface water in the state into which the regulated stormwater discharges.

Semi-arid Areas – Areas with an average annual rainfall of 10 to 20 inches.

Separate Storm Sewer System – A conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), designed or used for collecting or conveying stormwater; that is not a combined sewer, and that is not part of a publicly owned treatment works (POTW).

Small Construction Activity – Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities).

Steep Slopes – Where a state, Tribe, local government, or industry technical manual (e.g., stormwater BMP manual) has defined what is to be considered a "steep slope", this permit's definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 15 percent or greater in grade.

Stormwater (or Stormwater Runoff) – Rainfall runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Associated with Construction Activity – Stormwater runoff, as defined above, from a construction activity.

Structural Control (or Practice) – A pollution prevention practice that requires the construction of a device, or the use of a device, to reduce or prevent pollution in stormwater runoff. Structural controls and practices may include but are not limited to: silt fences, earthen dikes, drainage swales, sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

Surface Water in the State – Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state (from the mean high water mark (MHWM) out 10.36 miles into the Gulf), and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems which are authorized by state or federal law, regulation, or permit, and which are created for the purpose of waste treatment are not considered to be water in the state.

Temporary Stabilization – A condition where exposed soils or disturbed areas are provided a protective cover or other structural control to prevent the migration of pollutants. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either permanent stabilization can be achieved or until further construction activities take place.

Thawing Conditions – For the purposes of this permit, thawing conditions are expected based on the historical likelihood of two (2) or more days with daytime temperatures greater than 32 degrees Fahrenheit (F). This date can be determined by looking at historical weather data.

NOTE: The estimation of thawing conditions is for planning purposes only. During construction, the permittee will be required to conduct site inspections based upon actual conditions (i.e., if thawing conditions occur sooner than expected, the permittee will be required to conduct inspections at the regular frequency).

Total Maximum Daily Load (TMDL) – The total amount of a pollutant that a water body can assimilate and still meet the Texas Surface Water Quality Standards.

Turbidity – A condition of water quality characterized by the presence of suspended solids and/or organic material.

Waters of the United States – Waters of the United States or waters of the U.S. means the term as defined in 40 CFR § 122.2.

Part II. Permit Applicability and Coverage

Section A. Discharges Eligible for Authorization

1. Stormwater Associated with Construction Activity

   Discharges of stormwater runoff and certain non-stormwater discharges from small and large construction activities may be authorized under this general permit, except as described in Part II.C. of this permit.

2. Discharges of Stormwater Associated with Construction Support Activities

   Discharges of stormwater runoff and certain non-stormwater discharges from construction support activities as defined in Part I.B. of this general permit may be authorized, provided that the following conditions are met:

   (a) the construction support activities are located within one (1) mile from the boundary of the construction site where the construction activity authorized under the permit is being conducted that requires the support of these activities;

   (b) an SWP3 is developed and implemented for the permitted construction site according to the provisions in Part III.F. of this general permit, including appropriate controls and measures to reduce erosion and the discharge of pollutants in stormwater runoff according to the provisions in Part IV. of this general permit;

   (c) the activities are directly related to the construction site;

   (d) the activities are not a commercial operation, nor serve other unrelated construction projects; and

   (e) the activities do not continue to operate beyond the completion of the construction activity at the project it supports.

   Construction support activities that operate outside the terms provided in (a) through (e) above must obtain authorization under a separate Texas Pollutant Discharge Elimination System (TPDES) permit, which may include the TPDES Multi-Sector General Permit (MSGP), TXR050000 (related to stormwater discharges associated with industrial activity), an alternative general permit (if available), or an individual water quality permit.

3. Non-Stormwater Discharges

   The following non-stormwater discharges from sites authorized under this general permit are also eligible for authorization under this general permit:

(a) discharges from emergency fire-fighting activities (emergency fire-fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, or similar activities);

(b) uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life), which include flushings from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushings do not include systems utilizing reclaimed wastewater as a source water);

(c) water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where solvents, detergents, and soaps are not used, where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust;

(d) uncontaminated water used to control dust;

(e) potable water sources, including waterline flushings, but excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life;

(f) uncontaminated air conditioning condensate;

(g) uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents; and

(h) lawn watering and similar irrigation drainage.

4. Other Permitted Discharges

Any discharge authorized under a separate National Pollutant Discharge Elimination System (NPDES), TPDES, or TCEQ permit may be combined with discharges authorized by this general permit, provided those discharges comply with the associated permit.

Section B. Concrete Truck Wash Out

The wash out of concrete trucks at regulated construction sites must be performed in accordance with the requirements of Part VI of this general permit.

Section C. Limitations on Permit Coverage

1. Post Construction Discharges

Discharges that occur after construction activities have been completed, and after the construction site and any supporting activity site have undergone final stabilization, are not eligible for coverage under this general permit. Discharges originating from the sites are not authorized under this general permit following the submission of the Notice of Termination (NOT) or removal of the appropriate TCEQ site notice, as applicable, for the regulated construction activity.

2. Prohibition of Non-Stormwater Discharges

Except as otherwise provided in Part II.A. of this general permit, only discharges that are composed entirely of stormwater associated with construction activity may be authorized under this general permit.

3. Compliance with Water Quality Standards

Discharges to surface water in the state that would cause, have the reasonable potential to cause, or contribute to a violation of water quality standards or that would fail to protect and maintain existing designated uses of surface water in the state are not eligible for coverage under this general permit. The executive director may require an application for an individual permit or alternative general permit (see Parts II.H.2. and 3.) to authorize discharges to surface water in the state if the executive director determines that any activity will cause, has the reasonable potential to cause, or contribute to a violation of water quality standards or is found to cause, has the reasonable potential to cause, or contribute to, the impairment of a designated use. The executive director may also require an application for an individual permit considering factors described in Part II.H.3. of this general permit.

4. Impaired Receiving Waters and Total Maximum Daily Load (TMDL) Requirements

The permittee shall determine whether the authorized discharge is to an impaired water body on the latest EPA-approved CWA § 303(d) List or waters with an EPA-approved or established TMDL that are found on the latest EPA-approved *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)*, which lists the category 4 and 5 water bodies.

New sources or new discharges of the pollutants of concern to impaired waters are not authorized by this permit unless otherwise allowable under 30 TAC Chapter 305 and applicable state law. Impaired waters are those that do not meet applicable water quality standard(s) and are listed as category 4 or 5 in the current version of the *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)*, and waterbodies listed on the CWA § 303(d) List. Pollutants of concern are those for which the water body is listed as impaired.

Discharges of the pollutants of concern to impaired water bodies for which there is a TMDL are not eligible for coverage under this general permit unless they are consistent with the approved TMDL. Permittees must incorporate the conditions and requirements applicable to their discharges into their SWP3, in order to be eligible for coverage under this general permit. For consistency with the construction stormwater-related items in an approved TMDL, the SWP3 must be consistent with any applicable condition, goal, or requirement in the TMDL, TMDL Implementation Plan (I-Plan), or as otherwise directed by the executive director.

5. Discharges to the Edwards Aquifer Recharge or Contributing Zone

Discharges cannot be authorized by this general permit where prohibited by 30 TAC Chapter 213 (relating to Edwards Aquifer). In addition, commencement of construction (see definition for commencement of construction in Part I.B. above)) at a site regulated under 30 TAC Chapter 213, may not begin until the appropriate Edwards Aquifer Protection Plan (EAPP) has been approved by the TCEQ's Edwards Aquifer Protection Program.

(a) For new discharges located within the Edwards Aquifer Recharge Zone, or within that area upstream from the recharge zone and defined as the Contributing Zone (CZ), operators must meet all applicable requirements of, and operate according to, 30 TAC Chapter 213 (Edwards Aquifer Rule) in addition to the provisions and requirements of this general permit.

(b) For existing discharges located within the Edwards Aquifer Recharge Zone, the requirements of the agency-approved Water Pollution Abatement Plan (WPAP) under the Edwards Aquifer Rule are in addition to the requirements of this general permit. BMPs and maintenance schedules for structural stormwater controls, for example, may be required as a provision of the rule. All applicable requirements of the Edwards Aquifer Rule for reductions of suspended solids in stormwater runoff are in addition to the requirements in this general permit for this pollutant.

(c) For discharges located within ten (10) stream miles upstream of the Edwards Aquifer recharge zone, applicants shall also submit a copy of the NOI to the appropriate TCEQ regional office.

Counties: Comal, Bexar, Medina, Uvalde, and Kinney

Contact: TCEQ Water Program Manager
San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480
(210) 490-3096

Counties: Williamson, Travis, and Hays

Contact: TCEQ Water Program Manager
Austin Regional Office
12100 Park 35 Circle
Room 179, Building A
Austin, Texas 78753
(512) 339-2929

6. Discharges to Specific Watersheds and Water Quality Areas

Discharges otherwise eligible for coverage cannot be authorized by this general permit where prohibited by 30 TAC Chapter 311 (relating to Watershed Protection) for water quality areas and watersheds.

7. Protection of Streams and Watersheds by Other Governmental Entities

This general permit does not limit the authority or ability of federal, other state, or local governmental entities from placing additional or more stringent requirements on construction activities or discharges from construction activities.

8. Indian Country Lands

Stormwater runoff from construction activities occurring on Indian Country lands are not under the authority of the TCEQ and are not eligible for coverage under this general permit. If discharges of stormwater require authorization under federal NPDES regulations, authority for these discharges must be obtained from the U.S. Environmental Protection Agency (EPA).

9. Exempt Oil and Gas Activities

The CWA § 402(l)(2) provides that stormwater discharges from construction activities related to oil and gas exploration, production, processing, or treatment, or transmission facilities are exempt from regulation under this permit. The term "oil and gas exploration, production, processing, or treatment operations, or transmission facilities" is defined in 33 U.S.C. Annotated § 1362 (24).

The exemption in CWA § 402(l)(2) *includes* stormwater discharges from construction activities regardless of the amount of disturbed acreage, which are necessary to prepare a site for drilling and the movement and placement of drilling equipment, drilling waste management pits, in field treatment plants, and in field transportation infrastructure (e.g., crude oil pipelines, natural gas treatment plants, and both natural gas transmission pipeline compressor and crude oil pumping stations) necessary for the operation of most producing oil and gas fields. Construction activities are defined in 33 U.S. Code § 1362(24) and interpreted by EPA in the final rule. *See* June 12, 2006 Amendments to the NPDES Regulations for Storm Water Discharges Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities (71 FR 33628, Part V. Terminology).

The exemption *does not include* stormwater discharges from the construction of administrative buildings, parking lots, and roads servicing an administrative building at an oil and gas site, as these are considered traditional construction activities.

As described in 40 CFR § 122.26(c)(1)(iii) [*regulations prior to 2006*], discharges from oil and gas construction activities are waived from CWA § 402(l)(2) permit coverage *unless* the construction activity (or construction support activity) has had a discharge of stormwater resulting in the discharge of a reportable quantity of oil or hazardous substances or the discharge contributes to a violation of water quality standards.

Exempt oil and gas activities which have lost their exemption as a result of one of the above discharges, must obtain permit coverage under this general permit, an alternative general permit, or a TPDES individual permit prior to the next discharge.

10. Stormwater Discharges from Agricultural Activities

Stormwater discharges from agricultural activities that are not point source discharges of stormwater are not subject to TPDES permit requirements. These activities may include clearing and cultivating ground for crops, construction of fences to contain livestock, construction of stock ponds, and other similar agricultural activities. Discharges of stormwater runoff associated with the construction of facilities that are subject to TPDES regulations, such as the construction of concentrated animal feeding operations, would be point sources regulated under this general permit.

11. Endangered Species Act

Discharges that would adversely affect a listed endangered or threatened aquatic or aquatic-dependent species or its critical habitat are not authorized by this permit, unless the requirements of the Endangered Species Act are satisfied. Federal requirements related to endangered species apply to all TPDES permitted discharges and site-specific controls may be required to ensure that protection of endangered or threatened species is achieved. If a permittee has concerns over potential impacts to listed species, the permittee may contact TCEQ for additional information.

12. Storage of High-Level Radioactive Waste

Discharges of stormwater from construction activities associated with the construction of a facility that is licensed for the storage of high-level radioactive waste by the United States Nuclear Regulatory Commission under 10 CFR Part 72 are not authorized by this general permit. Texas Health and Safety Code (THSC) § 401.0525 prohibits TCEQ from issuing any TPDES authorizations for the construction or operation of these facilities.

Discharges of stormwater from the construction activities associated with the construction of a facility located at the site of currently or formerly operating nuclear power reactors and currently or formerly operating nuclear research and test reactors operated by a university are not prohibited under THSC § 401.0525 and continue to be regulated under this general permit.

13. Other

Nothing in Part II. of the general permit is intended to negate any person's ability to assert *force majeure* (act of God, war, strike, riot, or other catastrophe) defenses found in 30 TAC § 70.7

Section D. Deadlines for Obtaining Authorization to Discharge

1. Large Construction Activities

(a) New Construction – Discharges from sites where the commencement of construction activity occurs on or after the effective date of this general permit must be authorized, either under this general permit or a separate TPDES permit, prior to the commencement of those construction activities.

(b) Ongoing Construction – Operators of large construction activities continuing to operate after the effective date of this permit, and authorized under the TPDES Construction General Permit (CGP) TXR150000 (effective on March 5, 2018, and amended on January 28, 2022), must submit an NOI to renew authorization or an NOT to terminate coverage under this general permit within 90 days of the effective date of this general permit. During this interim or grace period, as a requirement of this TPDES permit, the operator must continue to meet the conditions and requirements of the issued and amended 2018 TPDES CGP.

2. Small Construction Activities

(a) New Construction – Discharges from sites where the commencement of construction activity occurs on or after the effective date of this general permit must be authorized, either under this general permit or a separate TPDES permit, prior to the commencement of those construction activities.

(b) Ongoing Construction – Discharges from ongoing small construction activities that commenced prior to the effective date of this general permit, and that do not meet the conditions to qualify for termination of this permit as described in Part II.F. of this general permit, must meet the requirements to be authorized, either under this general permit or a separate TPDES permit, within 90 days of the effective date of this general permit. During this interim period, as a requirement of this TPDES permit, the operator must continue to meet the conditions and requirements of the issued and amended 2018 TPDES CGP.

Section E. Obtaining Authorization to Discharge

1. Automatic Authorization for Small Construction Activities with Low Potential for Erosion

Operators of small construction activity, as defined in Part I.B. of this general permit, shall not submit an NOI for coverage, unless otherwise required by the executive director.

Operators of small construction activities, which occur in certain counties and during periods of low potential for erosion that do not meet the conditions of the waiver described in Part II.G. of this general permit, may be automatically authorized under this general permit if all the following conditions are met prior to the commencement of construction.

(a) The construction activity occurs in a county and during the corresponding date range(s) listed in Appendix A;

(b) The construction activity is initiated and completed, including either final or temporary stabilization of all disturbed areas, within the time frame identified in Appendix A for the location of the construction site;

(c) All temporary stabilization is adequately maintained to effectively reduce or prohibit erosion, permanent stabilization activities have been initiated, and a condition of final stabilization is completed no later than 30 days following the end date of the time frame identified in Appendix A for the location of the construction site; the permittee signs a completed TCEQ Small Construction Site Notice for low potential for erosion (Form TCEQ-20964), including the certification statement;

(d) A signed and certified copy of the TCEQ Small Construction Site Notice for low potential for erosion is posted at the construction site in a location where it is readily available for viewing by the general public, local, state, and federal authorities prior to commencing construction activities, and maintained in that location until final stabilization has been achieved;

NOTE: Posted TCEQ site notices may have a redacted signature as long as there is an original signed and certified TCEQ site notice, with a viewable signature, located on-site and available for review by any applicable regulatory authority.

(e) A copy of the signed and certified TCEQ Small Construction Site Notice for low potential for erosion is provided to the operator of any MS4 receiving the discharge at least two (2) days prior to commencement of construction activities;

(f) Discharges of stormwater runoff or other non-stormwater discharges from any supporting concrete batch plant or asphalt batch plant is separately authorized under an individual TPDES permit, another TPDES general permit, or under an individual TCEQ permit where stormwater and non-stormwater is disposed of by evaporation or irrigation (discharges are adjacent to water in the state); and

(g) Any non-stormwater discharges are either authorized under a separate permit or authorization, are not considered by TCEQ to be a wastewater, or are captured and routed for disposal at a publicly operated treatment works or licensed waste disposal facility.

If all of the conditions in (a) – (h) above are met, then the operator(s) of small construction activities with low potential for erosion are not required to develop a SWP3.

If an operator is conducting small construction activities and any of the above conditions (a) – (h) are not met, the operator cannot declare coverage under the automatic authorization for small construction activities with low potential for erosion and must meet the requirements for automatic authorization (all other) small construction activities, described below in Part II.E.2.

For small construction activities that occur during a period with a low potential for erosion, where automatic authorization under this section is not available, an operator may apply for and obtain a waiver from permitting (Low Rainfall Erosivity Waiver – LREW), as described in Part II.G. of this general permit. Waivers from coverage under the LREW do not allow for any discharges of non-stormwater and the operator must ensure that discharges on non-stormwater are either authorized under a separate permit or authorization.

2. Automatic Authorization for Small Construction Activities

Operators of small construction activities as defined in Part I.B. of this general permit shall not submit an NOI for coverage, unless otherwise required by the executive director.

Operators of small construction activities, as defined in Part I.B. of this general permit or as defined but who do not meet in the conditions and requirements located in Part II.E.1 above, may be automatically authorized for small construction activities, provided that they meet all of the following conditions:

(a) develop a SWP3 according to the provisions of this general permit, that covers either the entire site or all portions of the site for which the applicant is the operator, and implement the SWP3 prior to commencing construction activities;

(b) all operators of regulated small construction activities must post a copy of a signed and certified TCEQ Small Construction Site Notice (Form TCEQ-20963), the notice must be posted at the construction site in a location where it is safely and readily available for viewing by the general public, local, state, and federal authorities, at least two (2) days prior to commencing construction activity , and maintain the notice in that location until completion of the construction activity (for linear construction activities, e.g. pipeline or highway, the TCEQ site notice must be placed in a publicly accessible location near where construction is actively underway; notice for these linear sites may be relocated, as necessary, along the length of the project, and the notice must be safely and readily available for viewing by the general public; local, state, and federal authorities);

(c) operators must maintain a posted TCEQ Small Construction Site Notice on the approved TCEQ form at the construction site until final stabilization has been achieved; and

NOTE: Posted TCEQ site notices may have a redacted signature as long as there is an original signed and certified TCEQ Small Construction Site Notice, with a viewable signature, located on-site and available for review by an applicable regulatory authority.

(d) provide a copy of the signed and certified TCEQ Small Construction Site Notice to the operator of any municipal separate storm sewer system (MS4) receiving the discharge at least two (2) days prior to commencement of construction activities.

(e) if signatory authority is delegated by an authorized representative, then a Delegation of Signatory form must be submitted as required by 30 TAC § 305.128 (relating to Signatories to Reports). Operators for small construction activities must submit this form via mail following the instructions on the approved TCEQ paper form. A new Delegation of Signatory form must be submitted if the delegation changes to another individual or position.

As described in Part I.B of this general permit, large construction activities include those that will disturb less than five (5) acres of land, but that are part of a larger common plan of development or sale that will ultimately disturb five (5) or more acres of land and must meet the requirements of Part II.E.3. below.

3. Authorization for Large Construction Activities

Operators of large construction activities that qualify for coverage under this general permit must meet all of the following conditions:

(a) develop a SWP3 according to the provisions of this general permit that covers either the entire site or all portions of the site where the applicant is the operator. The SWP3 must be developed and implemented prior to obtaining coverage and prior to commencing construction activities;

(b) primary operators of large construction activities must submit an NOI prior to commencing construction activity at a construction site. A completed NOI must be submitted to TCEQ electronically using the online ePermits system on TCEQ's website.

Operators with an electronic reporting waiver must submit a completed paper NOI to TCEQ at least seven (7) days prior to commencing construction activity to obtain provisional coverage 48-hours from the postmark date for delivery to the TCEQ. An authorization is no longer provisional when the executive director finds the NOI is administratively complete, and an authorization number is issued to the permittee for the construction site indicated on the NOI.

If an additional primary operator is added after the initial NOI is submitted, the additional primary operator must meet the same requirements for existing primary operator(s), as indicated above.

If the primary operator changes due to responsibility at the site being transferred from one primary operator to another after the initial NOI is submitted, the new primary operator must submit an electronic NOI, unless they request and obtain a waiver from electronic reporting, at least ten (10) days prior to assuming operational control of a construction site and commencing construction activity.

(c) all operators of large construction activities must post a TCEQ Large Construction Site Notice on the approved TCEQ form (Form TCEQ-20961) in accordance with Part III.D.2. of this permit. The TCEQ site notice must be located where it is safely and readily available for viewing by the general public, local, state, and federal authorities prior to commencing construction activities, and must be maintained in that location until final stabilization has been achieved. For linear construction activities, e.g., pipeline or highway, the TCEQ site notice must be placed in a publicly accessible location near where construction is actively underway; notice for these linear sites may be relocated, as necessary, along the length of the project, and the notice must be safely and readily available for viewing by the general public, local, state, and federal authorities;

(d) two days prior to commencing construction activities, all primary operators must:

i. provide a copy of the signed NOI to the operator of any MS4 receiving the discharge and to any secondary construction operator, and

ii. list in the SWP3 the names and addresses of all MS4 operators receiving a copy;

(e) if signatory authority is delegated by an authorized representative, then a Delegation of Signatories form must be submitted as required by 30 TAC § 305.128 (relating to Signatories to Reports). Primary operators must submit this form electronically using the State of Texas Environmental Electronic Reporting System (STEERS), TCEQ's online permitting system, or by paper if the permittee requested and obtained an electronic reporting waiver. A new Delegation of Signatories form must be submitted, if the delegation changes to another individual or position;

(f) all persons meeting the definition of "secondary operator" in Part I of this permit are hereby notified that they are regulated under this general permit, but are not required to submit an NOI, provided that a primary operator at the site has submitted an NOI, or prior to commencement of construction activities, a primary operator is required to submit an NOI and the secondary operator has provided notification to the operator(s) of the need to obtain coverage (with records of notification available upon request). Any secondary operator notified under this provision may alternatively submit an NOI under this general permit, may seek coverage under an alternative TPDES individual permit, or may seek coverage under an alternative TPDES general permit if available; and

(g) all secondary operators of large construction activities must post a copy of the signed and certified TCEQ Large Construction Site Notice for Secondary Operators on the approved TCEQ form (Form TCEQ-20962) and provide a copy of the signed and certified TCEQ site notice to the operator of any MS4 receiving the discharge at least two (2) days prior to the commencement construction activities.

NOTE: Posted TCEQ site notices may have a redacted signature as long as there is an original signed and certified TCEQ Large Construction Site Notice for Secondary Operators, with a viewable signature, located on-site and available for review by an applicable regulatory authority.

Applicants must submit an NOI using the online ePermits system (accessed using STEERS) available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

4. Waivers for Small Construction Activities:

Operators of certain small construction activities may obtain a waiver from coverage under this general permit, if applicable. The requirements are outlined in Part II.G. below.

5. Effective Date of Coverage

(a) Operators of small construction activities as described in either Part II.E.1. or II.E.2. above are authorized immediately following compliance with the applicable conditions of Part II.E.1. or II.E.2. Secondary operators of large construction activities as described in Part II.E.3. above are authorized immediately following compliance with the applicable conditions in Part II.E.3. For activities located in areas regulated by 30 TAC Chapter 213, related to the Edwards Aquifer, this authorization to discharge is separate from the requirements of the operator's responsibilities under that rule. Construction may not commence for sites regulated under 30 TAC Chapter 213 until all applicable requirements of that rule are met.

(b) Primary operators of large construction activities as described in Part II.E.3. above that electronically submit an NOI are authorized immediately following confirmation of receipt of the electronic form by the TCEQ, unless otherwise notified by the executive director.

Operators with an electronic reporting waiver are provisionally authorized 48-hours from the date that a completed paper NOI is postmarked for delivery to the TCEQ, unless otherwise notified by the executive director. An authorization is no longer provisional when the executive director finds the NOI is administratively complete and an authorization number is issued to the permittee for the construction site indicated on the NOI.

For construction activities located in areas regulated by 30 TAC Chapter 213, related to the Edwards Aquifer, this authorization to discharge is separate from the requirements of the operator's responsibilities under that rule. Construction activities may not commence for sites regulated under 30 TAC Chapter 213 until all applicable requirements of that rule are met.

(c) Operators are not prohibited from submitting late NOIs or posting late site notices to obtain authorization under this general permit. The TCEQ reserves the right to take appropriate enforcement action for any unpermitted activities that may have occurred between the time construction commenced and authorization under this general permit was obtained.

(d) If operators that submitted NOIs have active authorizations for construction activities that are ongoing when this general permit expires on March 5, 2028, and a new general permit is issued, a 90-day interim (grace) period is granted to provide coverage that is administratively continued until operators with active authorizations can obtain coverage under the newly issued CGP. The 90-day grace period starts on the effective date of the newly issued CGP.

6. Contents of the NOI

The NOI form shall require, at a minimum, the following information:

(a) the TPDES CGP authorization number for existing authorizations under this general permit, where the operator submits an NOI to renew coverage within 90 days of the effective date of this general permit;

(b) the name, address, and telephone number of the operator filing the NOI for permit coverage;

(c) the name (or other identifier), address, county, and latitude/longitude of the construction project or site;

(d) the number of acres that will be disturbed by the applicant;

(e) the estimated construction project start date and end date;

(f) confirmation that the project or site will not be located on Indian Country lands;

(g) confirmation if the construction activity is associated with an oil and gas exploration, production, processing, or treatment, or transmission facility (see Part II.C.9.)

(h) confirmation that the construction activities are not associated with the construction of a facility that is licensed for the storage of high-level radioactive waste by the United States Nuclear Regulatory Commission under 10 CFR Part 72 (see Part II.C.12.);

(i) confirmation that a SWP3 has been developed in accordance with all conditions of this general permit, that it will be implemented prior to commencement of construction activities, and that it is compliant with any applicable local sediment and erosion control plans; for multiple operators who prepare a shared SWP3, the confirmation for an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator;

(j) name of the receiving water(s);

(k) the classified segment number for each classified segment that receives discharges from the regulated construction activity (if the discharge is not directly to a classified segment, then the classified segment number of the first classified segment that those discharges reach); and

(l) the name of all surface waters receiving discharges from the regulated construction activity that are on the latest EPA-approved CWA § 303(d) List of impaired waters or *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)* as not meeting applicable state water quality standards.

7. Notice of Change (NOC)

(a) If relevant information provided in the NOI changes, the operator that has submitted the NOI must submit an NOC to TCEQ at least fourteen (14) days before the change occurs. Where a 14-day advance notice is not possible, the operator must submit an NOC to TCEQ within fourteen (14) days of discovery of the change. If the operator becomes aware that it failed to submit any relevant facts or submitted

incorrect information in an NOI, the correct information must be submitted to TCEQ in an NOC within fourteen (14) days after discovery.

(b) Information on an NOC may include, but is not limited to, the following:

i. a change in the description of the construction project;

ii. an increase in the number of acres disturbed (for increases of one (1) or more acres);

iii. or the name of the operator (where the name of the operator has changed).

(c) Electronic NOC.

Applicants must submit an NOC using the online ePermits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. All waivers from electronic reporting are not transferrable. Electronic reporting waivers expire on the same date as the authorization to discharge, except for temporary waivers that expire one (1) year from issuance. A copy of the NOC form or letter must also be placed in the SWP3 and provided to the operator of any MS4 receiving the discharge. Operators are authorized immediately following confirmation of receipt of the electronic form by the TCEQ, unless otherwise notified by the executive director.

(d) Paper NOC.

Applicants who request and obtain an electronic reporting waiver shall submit the NOC on a paper form provided by the executive director, or by letter if an NOC form is not available.

(e) A copy of the NOC form or letter must also be placed in the SWP3 and provided to the operator of any MS4 receiving the discharge. A list that includes the names and addresses of all MS4 operators receiving a copy of the NOC (or NOC letter) must be included in the SWP3. Information that may not be included on an NOC includes but is not limited to the following:

i. transfer of operational control from one operator to another, including a transfer of the ownership of a company. A transfer of ownership of a company includes changes to the structure of a company, such as changing from a partnership to a corporation or changing corporation types, so that the filing or charter number that is on record with the Texas Secretary of State (SOS) must be changed.

ii. coverage under this general permit is not transferable from one operator to another. Instead, the new operator will need to submit an NOI or LREW, as applicable, and the previous operator will need to submit an NOT.

iii. a decrease in the number of acres disturbed. This information must be included in the SWP3 and retained on site.

8. Signatory Requirement for NOI Forms, NOT Forms, NOC Forms, and Construction Site Notices

NOI forms, NOT forms, NOC forms, and Construction Site Notices that require a signature must be signed according to 30 TAC § 305.44 (relating to Signatories for Applications).

Section F. Terminating Coverage

1. Notice of Termination (NOT) Required

Each operator that has submitted an NOI for authorization of large construction activities under this general permit must apply to terminate that authorization following the conditions described in this section of the general permit.

Authorization of large construction must be terminated by submitting an NOT electronically via the online ePermits system available through the TCEQ website, or on a paper NOT form to TCEQ supplied by the executive director with an approved waiver from electronic reporting. Authorization to discharge under this general permit terminates at midnight on the day a paper NOT is postmarked for delivery to the TCEQ or immediately following confirmation of the receipt of the NOT submitted electronically by the TCEQ.

Applicants must submit an NOT using the online ePermits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge, except for temporary waivers that expire one (1) year from issuance.

The NOT must be submitted to TCEQ, and a copy of the NOT provided to the operator of any MS4 receiving the discharge (with a list in the SWP3 of the names and addresses of all MS4 operators receiving a copy), within 30 days after any of the following conditions are met:

(a) final stabilization has been achieved on all portions of the site that are the responsibility of the operator;

(b) a transfer of operational control has occurred (See Section II.F.4. below); or

(c) the operator has obtained alternative authorization under an individual TPDES permit or alternative TPDES general permit.

Compliance with the conditions and requirements of this permit is required until the NOT is submitted and approved by TCEQ.

2. Minimum Contents of the NOT

The NOT form shall require, at a minimum, the following information:

(a) if authorization for construction activity was granted following submission of an NOI, the permittee's site-specific TPDES authorization number for a specific construction site;

(b) an indication of whether final stabilization has been achieved at the site and a NOT has been submitted or if the permittee is simply no longer an operator at the site;

(c) the name, address, and telephone number of the permittee submitting the NOT;

(d) the name (or other identifier), address, county, and location (latitude/longitude) of the construction project or site; and

(e) a signed certification that either all stormwater discharges requiring authorization under this general permit will no longer occur, or that the applicant is no longer the operator of the facility or construction site, and that all temporary structural erosion controls have either been removed, will be removed on a schedule defined in the SWP3, or have been transferred to a new operator if the new operator has applied for permit coverage. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal.

3. Termination of Coverage for Small Construction Sites and for Secondary Operators at Large Construction Sites

   (a) Each operator that has obtained automatic authorization for small construction or is a secondary operator for large construction must perform the following when terminating coverage under the permit:

      i. remove the TCEQ site notice;

      ii. complete the applicable portion of the TCEQ site notice related to removal of the TCEQ site notice; and

      iii. submit a copy of the completed TCEQ site notice to the operator of any MS4 receiving the discharge (or provide alternative notification as allowed by the MS4 operator, with documentation of such notification included in the SWP3).

   (b) The activities described in Part II.F.3.(a) above must be completed by the operator within 30 days of meeting any of the following conditions:

      i. final stabilization has been achieved on all portions of the site that are the responsibility of the operator;

      ii. a transfer of day-to-day operational control over activities necessary to ensure compliance with the SWP3 and other permit conditions has occurred (See Section II.F.4. below); or

      iii. the operator has obtained alternative authorization under an individual or general TPDES permit.

   For Small Construction Sites and Secondary Operators at Large Construction Sites, authorization to discharge under this general permit terminates immediately upon removal of the applicable TCEQ construction site notice. Compliance with the conditions and requirements of this permit is required until the TCEQ construction site notice is removed. The construction site notice cannot be removed until final stabilization has been achieved.

4. Transfer of Day-to-Day Operational Control

   (a) When the primary operator of a large construction activity changes or operational control over activities necessary to ensure compliance with the SWP3 and other permit conditions is transferred to another primary operator, the original operator must do the following:

      i. submit an NOT within ten (10) days prior to the date that responsibility for operations terminates, and the new operator must submit an NOI at least ten (10) days prior to the transfer of operational control, in accordance with condition (c) below; and

      ii. submit a copy of the NOT from the primary operator terminating its coverage under the permit and its operational control of the construction site and submit a copy of the NOI from the new primary operator to the operator of any MS4 receiving the discharge in accordance with Part II.F.1. above.

   (b) For transfer of operational control, operators of small construction activities and secondary operators of large construction activities who are not required to submit an NOI must do the following:

      i. the existing operator must remove the original TCEQ construction site notice, and the new operator must post the required TCEQ construction site notice prior to the transfer of operational control, in accordance with the conditions in Part II.F.4.(c) i or ii below; and

      ii. a copy of the TCEQ construction site notice, which must be completed and provided to the operator of any MS4 receiving the discharge, in accordance with Part II.F.3. above.

   (c) Each operator is responsible for determining its role as an operator as defined in Part I.B. and obtaining authorization under the permit, as described above in Part II.E. 1. - 3. Where authorization has been obtained by submitting an NOI for coverage under this general permit, permit coverage is not transferable from one operator to another. A transfer of operational control can include changes to the structure of a company, such as changing from a partnership to a corporation, or changing to a different corporation type such that a different filing (or charter) number is established with the Texas Secretary of State (SOS). A transfer of operational control can also occur when one of the following criteria is met, as applicable:

      i. another operator has assumed control over all areas of the site that do not meet the definition for final stabilization;

      ii. all silt fences and other temporary erosion controls have either been removed, scheduled for removal as defined in the SWP3, or transferred to a new operator, provided that the original permitted operator has attempted to notify the new operator in writing of the requirement to obtain permit coverage. Records of this notification (or attempt at notification) shall be retained by the operator transferring operational control to another operator in accordance with Part VI of this permit. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal; or

      iii. a homebuilder has purchased one (1) or more lots from an operator who obtained coverage under this general permit for a common plan of development or sale. The homebuilder is considered a new operator and shall comply with the requirements of this permit. Under these circumstances, the homebuilder is only responsible for compliance with the general permit requirements as they apply to the lot(s) it has operational control over in a larger common plan of development, and the original operator remains responsible for common controls or discharges, and must amend its SWP3 to remove the lot(s) transferred to the homebuilder.

Section G. Waivers from Coverage

The executive director may waive the otherwise applicable requirements of this general permit for stormwater discharges from small construction activities under the terms and conditions described in this section.

1. Waiver Applicability and Coverage

   Operators of small construction activities may apply for and receive a waiver from the requirements to obtain authorization under this general permit, when the calculated rainfall erosivity (R) factor for the entire period of the construction project is less than five (5).

   The operator must submit a Low Rainfall Erosivity Waiver (LREW) certification form to the TCEQ electronically via the online ePermits system available through the TCEQ website. The LREW form is a certification by the operator that the small construction activity will commence and be completed within a period when the value of the calculated R factor is less than five (5).

   Applicants who request and obtain an electronic reporting waiver shall submit the LREW on a paper form provided by the executive director at least seven (7) days prior to commencing construction activity to obtain provisional coverage 48-hours from the postmark date for delivery to the TCEQ. An authorization is no longer provisional when the executive director finds the LREW is administratively complete, and an authorization number is issued to the permittee for the construction site indicated on the LREW. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge, except for temporary waivers that expire one (1) year from issuance.

   This LREW from coverage does not apply to any non-stormwater discharges, including what is allowed under this permit. The operator must ensure that all non-stormwater discharges are either authorized under a separate permit or authorization or are captured and routed to an authorized treatment facility for disposal.

2. Steps to Obtaining a Waiver

   The construction site operator may calculate the R factor to request a waiver using the following steps:

   (a) estimate the construction start date and the construction end date. The construction end date is the date that final stabilization will be achieved.

   (b) find the appropriate Erosivity Index (EI) zone in Appendix B of this permit.

   (c) find the EI percentage for the project period by adding the results for each period of the project using the table provided in Appendix D of this permit, in EPA Fact Sheet 2.1, or in USDA Handbook 703, by subtracting the start value from the end value to find the percent EI for the site.

   (d) refer to the Isoerodent Map (Appendix C of this permit) and interpolate the annual isoerodent value for the proposed construction location.

   (e) multiply the percent value obtained in Step (c) above by the annual isoerodent value obtained in Step (d). This is the R factor for the proposed project. If the value is less than five (5), then a waiver may be obtained. If the value is five (5) or more, then a waiver may not be obtained, and the operator must obtain coverage under Part II.E.2. of this permit.

   Alternatively, the operator may calculate a site-specific R factor utilizing the following online calculator: https://lew.epa.gov/, or using another available resource.

   A copy of the LREW certification form is not required to be posted at the small construction site.

3. Effective Date of an LREW

   Unless otherwise notified by the executive director, operators of small construction activities seeking coverage under an LREW are provisionally waived from the otherwise applicable requirements of this general permit 48-hours from the date that a completed paper LREW certification form is postmarked for delivery to TCEQ, or immediately upon receiving confirmation of approval of an electronic submittal, made via the online ePermits system available through the TCEQ website.

   Applicants seeking coverage under an LREW must submit an application for an LREW using the online ePermits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

4. Activities Extending Beyond the LREW Period

   If a construction activity extends beyond the approved waiver period due to circumstances beyond the control of the operator, the operator must either:

   (a) recalculate the R factor using the original start date and a new projected ending date, and if the R factor is still under five (5), submit a new LREW form at least two (2) days before the end of the original waiver period; or

   (b) obtain authorization under this general permit according to the requirements for automatic authorization for small construction activities in Part II.E.2. of this permit, prior to the end of the approved LREW period.

Section H. Alternative TPDES Permit Coverage

1. Individual Permit Alternative

   Any discharge eligible for coverage under this general permit may alternatively be authorized under an individual TPDES permit according to 30 TAC Chapter 305 (relating to Consolidated Permits). Applications for individual permit coverage must be submitted at least 330 days prior to commencement of construction activities to ensure timely authorization. Existing coverage under this general permit should not be terminated until an individual permit is issued and in effect.

2. General Permit Alternative

   Any discharges eligible for authorization under this general permit may alternatively be authorized under a separate general permit according to 30 TAC Chapter 205 (relating to General Permits for Waste Discharges), as applicable.

3. Individual Permit Required

   The executive director may require an operator of a construction site, otherwise eligible for authorization under this general permit, to apply for an individual TPDES permit in the following circumstances:

   (a) the conditions of an approved TMDL or TMDL I-Plan on the receiving water;

   (b) the activity being determined to cause, has a reasonable potential to cause, or contribute to a violation of water quality standards or being found to cause, or contribute to, the loss of a designated use of surface water in the state; and

   (c) any other consideration defined in 30 TAC Chapter 205 (relating to General Permits for Waste Discharges) including 30 TAC § 205.4(c)(3)(D), which allows the commission to deny authorization under the general permit and require an individual permit if a discharger has been determined by the executive director to have been out of compliance with any rule, order, or permit of the commission, including non-payment of fees assessed by the executive director.

      A discharger with a TCEQ compliance history rating of “unsatisfactory” is ineligible for coverage under this general permit. In that case, 30 TAC § 60.3 requires the executive director to deny or suspend an authorization to discharge under a general permit. However, per TWC § 26.040(h), a discharger is entitled to a hearing before the commission prior to having an authorization denied or suspended for having an “unsatisfactory” compliance history.

   Denial of authorization to discharge under this general permit or suspension of a permittee’s authorization under this general permit for reasons other than compliance history shall be done according to commission rules in 30 TAC Chapter 205 (relating to General Permits for Waste Discharges).

Section I. Permit Expiration

1. This general permit is effective for a term not to exceed five (5) years. All active discharge authorizations expire on the date provided on page one (1) of this permit. Following public notice and comment, as provided by 30 TAC § 205.3 (relating to Public Notice, Public Meetings, and Public Comment), the commission may amend, revoke, cancel, or renew this general permit. All authorizations that are active at the time the permit term expires will be administratively continued as indicated in Part II.I.2. below and in Part II.D.1.(b) and D.2.(b) of this permit.
2. If the executive director publishes a notice of the intent to renew or amend this general permit before the expiration date, the permit will remain in effect for existing, authorized discharges until the commission takes final action on the permit. Upon issuance of a renewed or amended permit, permittees may be required to submit an NOI within 90 days following the effective date of the renewed or amended permit, unless that permit provides for an alternative method for obtaining authorization.
3. If the commission does not propose to reissue this general permit within 90 days before the expiration date, permittees shall apply for authorization under an individual permit or an alternative general permit. If the application for an individual permit is submitted before the expiration date, authorization under this expiring general permit remains in effect until the issuance or denial of an individual permit. No new NOIs will be accepted nor new authorizations honored under the general permit after the expiration date.

Part III. Stormwater Pollution Prevention Plans (SWP3)

All regulated construction site operators shall prepare an SWP3, prior to submittal of an NOI, to address discharges authorized under Parts II.E.2. and II.E.3. of this general permit that will reach waters of the U.S. This includes discharges to MS4s and privately owned separate storm sewer systems that drain into surface water in the state or waters of the U.S.

Individual operators at a site may develop separate SWP3s that cover only their portion of the project, provided reference is made to the other operators at the site. Where there is more than one (1) SWP3 for a site, operators must coordinate to ensure that BMPs and controls are consistent and do not negate or impair the effectiveness of each other. Regardless of whether a single comprehensive SWP3 is developed or separate SWP3s are developed for each operator, it is the responsibility of each operator to ensure compliance with the terms and conditions of this general permit in the areas of the construction site where that operator has control over construction plans and specifications or day-to-day operations.

An SWP3 must describe the implementation of practices that will be used to minimize to the extent practicable the discharge of pollutants in stormwater associated with construction activity and non-stormwater discharges described in Part II.A.3., in compliance with the terms and conditions of this permit.

An SWP3 must also identify any potential sources of pollution that have been determined to cause, have a reasonable potential to cause, or contribute to a violation of water quality standards or have been found to cause or contribute to the loss of a designated use of surface water in the state from discharges of stormwater from construction activities and construction support activities. Where potential sources of these pollutants are present at a construction site, the SWP3 must also contain a description of the management practices that will be used to prevent these pollutants from being discharged into surface water in the state or waters of the U.S.

NOTE: Construction support activities can also include vehicle repair areas, fueling areas, etc. that are present at a construction site solely for the support construction activities and are only used by operators at the construction site.

The SWP3 is intended to serve as a road map for how the construction operator will comply with the effluent limits and other conditions of this permit. Additional portions of the effluent limits are established in Part IV. of the permit.

Section A. Shared SWP3 Development

For more effective coordination of BMPs and opportunities for cost sharing, a cooperative effort by the different operators at a site is encouraged. Operators of small and large construction activities must independently obtain authorization under this permit but may work together with other regulated operators at the construction site to prepare and implement a single, comprehensive SWP3, which can be shared by some or all operators, for the construction activities that each of the operators are performing at the entire construction site.

1. The SWP3 must include the following:
   (a) for small construction activities **–** the name of each operator that participates in the shared SWP3;
   (b) for large construction activities **–** the name of each operator that participates in the shared SWP3, the general permit authorization numbers of each operator (or the date that the NOI was submitted to TCEQ by each operator that has not received an authorization number for coverage under this permit); and
   (c) for large and small construction activities **–** the signature of each operator participating in the shared SWP3.
2. The SWP3 must clearly indicate which operator is responsible for satisfying each shared requirement of the SWP3. If the responsibility for satisfying a requirement is not described in the plan, then each permittee is entirely responsible for meeting the requirement within the boundaries of the construction site where they perform construction activities. The SWP3 must clearly describe responsibilities for meeting each requirement in shared or common areas.
3. The SWP3 may provide that one operator is responsible for preparation of a SWP3 in compliance with the CGP, and another operator is responsible for implementation of the SWP3 at the project site.

Section B. Responsibilities of Operators

1. Secondary Operators and Primary Operators with Control Over Construction Plans and Specifications

   All secondary operators and primary operators with control over construction plans and specifications shall:
   (a) ensure the project specifications allow or provide that adequate BMPs are developed to meet the requirements of Part III of this general permit;
   (b) ensure that the SWP3 indicates the areas of the project where they have control over project specifications, including the ability to make modifications in specifications;
   (c) ensure that all other operators affected by modifications in project specifications are notified in a timely manner so that those operators may modify their BMP s as necessary to remain compliant with the conditions of this general permit; and

   (d) ensure that the SWP3 for portions of the project where each operator has control indicates the name and site-specific TPDES authorization number(s) for operators with the day-to-day operational control over those activities necessary to ensure compliance with the SWP3 and other permit conditions. If a primary operator has not been authorized or has abandoned the site, the secondary operator is considered to be the responsible party and must obtain authorization as a primary operator under the permit, until the authority for day-to-day operational control is transferred to another primary operator. The new primary operator must update or develop a new SWP3 that will reflect the transfer of operational control and include any additional updates to the SWP3 to meet requirements of the permit.

2. Primary Operators with Day-to-Day Operational Control

   Primary operators with day-to-day operational control of those activities at a project that are necessary to ensure compliance with an SWP3 and other permit conditions must ensure that the SWP3 accomplishes the following requirements:
   (a) meets the requirements of this general permit for those portions of the project where they are operators;
   (b) identifies the parties responsible for implementation of BMPs described in the SWP3;
   (c) indicates areas of the project where they have operational control over day-to-day activities; and
   (d) the name and site-specific TPDES authorization number of the parties with control over project specifications, including the ability to make modifications in specifications for areas where they have operational control over day-to-day activities.

Section C. Deadlines for SWP3 Preparation, Implementation, and Compliance

The SWP3 must be prepared prior to obtaining authorization under this general permit, and implemented prior to commencing construction activities that result in soil disturbance. The SWP3 must be prepared so that it provides for compliance with the terms and conditions of this general permit.

Section D. Plan Review and Making Plans Available

1. The SWP3 must be retained on-site at the construction site or, if the site is inactive or does not have an on-site location to store the plan, a notice must be posted describing the location of the SWP3. The SWP3 must be made readily available at the time of an on-site inspection to: the executive director; a federal, state, or local agency approving sediment and erosion plans, grading plans, or stormwater management plans; local government officials; and the operator of a municipal separate storm sewer receiving discharges from the site. If the SWP3 is retained off-site, then it shall be made available as soon as reasonably possible. In most instances, it is reasonable that the SWP3 shall be made available within 24 hours of the request.

   NOTE: The SWP3 may be prepared and kept electronically, rather than in paper form, if the records are: (a) in a format that can be read in a similar manner as a paper record; (b) legally valid with no less evidentiary value than their paper equivalent; and (c) immediately accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be, if the records were stored in paper form.
2. Operators with authorization for construction activity under this general permit must post a TCEQ site notice at the construction site at a place readily available for viewing by the general public, and local, state, and federal authorities.

   (a) Primary and secondary operators of large construction activities must each post a TCEQ construction site notice, respective to their role as an operator at the construction site, as required above and according to requirements in Part II.E.3. of this general permit.
   (b) Primary and secondary operators of small construction activities must post the TCEQ site notice as required in Part III.D.2.(a) above and for the specific type of small construction described in Part II.E.1. and 2. of the permit.
   (c) If the construction project is a linear construction project, such as a pipeline or highway, the notices must be placed in a publicly accessible location near where construction is actively underway. TCEQ construction site notices for small and large construction activities at these linear construction sites may be relocated, as necessary, along the length of the project, but must still be readily available for viewing by the general public; local, state, and federal authorities; and contain the following information:
      i. the site-specific TPDES authorization number for the project if assigned;
      ii. the operator name, contact name, and contact phone number;
      iii. a brief description of the project; and
      iv. the location of the SWP3.
3. This permit does not provide the general public with any right to trespass on a construction site for any reason, including inspection of a site; nor does this permit require that permittees allow members of the general public access to a construction site.

Section E. Revisions and Updates to SWP3s

The permittee must revise or update the SWP3, including the site map, within seven (7) days of when any of the following occurs:

1. a change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants and that has not been previously addressed in the SWP3;
2. changing site conditions based on updated plans and specifications, new operators, new areas of responsibility, and changes in BMPs; or
3. results of inspections or investigations by construction site personnel authorized by the permittee, operators of a municipal separate storm sewer system receiving the discharge, authorized TCEQ personnel, or a federal, state or local agency approving sediment and erosion plans indicate the SWP3 is proving ineffective in eliminating or significantly minimizing pollutants in discharges authorized under this general permit.

Section F. Contents of SWP3

The SWP3 must be developed and implemented by primary operators of small and large construction activities and include, at a minimum, the information described in this section and must comply with the construction and development effluent guidelines in Part IV. of the general permit.

1. A site or project description, which includes the following information:
   (a) a description of the nature of the construction activity;
   (b) a list of potential pollutants and their sources;
   (c) a description of the intended schedule or sequence of activities that will disturb soils for major portions of the site, including estimated start dates and duration of activities;

(d) the total number of acres of the entire property and the total number of acres where construction activities will occur, including areas where construction support activities (defined in Part I.B. of this general permit) occur;

(e) data describing the soil or the quality of any discharge from the site;

(f) a map showing the general location of the site (e.g., a portion of a city or county map);

(g) a detailed site map (or maps) indicating the following:

i. property boundary(ies);

ii. drainage patterns and approximate slopes anticipated before and after major grading activities;

iii. areas where soil disturbance will occur (note any phasing), including any demolition activities;

iv. locations of all controls and buffers, either planned or in place;

v. locations where temporary or permanent stabilization practices are expected to be used;

vi. locations of construction support activities, including those located off-site;

vii. surface waters (including wetlands) either at, adjacent, or in close proximity to the site, and also indicate whether those waters are impaired;

NOTE: Surface waters adjacent to or in close proximity to the site means any receiving waters within the site and all receiving waters within one mile downstream of the site's discharge point(s).

viii. locations where stormwater discharges from the site directly to a surface water body or a municipal separate storm sewer system;

ix. vehicle wash areas; and

x. designated points on the site where vehicles will exit onto paved roads (for instance, this applies to construction transition from unstable dirt areas to exterior paved roads).

Where the amount of information required to be included on the map would result in a single map being difficult to read and interpret, the operator shall develop a series of maps that collectively include the required information.

(h) the location and description of support activities authorized under the permittee's NOI, including asphalt plants, concrete plants, and other activities providing support to the construction site that is authorized under this general permit;

(i) the name of receiving waters at or near the site that may be disturbed or that may receive discharges from disturbed areas of the project;

(j) a copy of this TPDES general permit (an electronic copy of this TPDES general permit or a current link to this TPDES general permit on the TCEQ webpage is acceptable);

(k) the NOI and the acknowledgement of provisional and non-provisional authorization for primary operators of large construction sites, and the TCEQ site notice for small construction sites and for secondary operators of large construction sites;

(l) if signatory authority is delegated by an authorized representative, then a copy of the formal notification to TCEQ, as required by 30 TAC 305.128 relating to Signatories to Reports must be filed in the SWP3 and made available for review upon request by TCEQ or local MS4 Operator. For primary operators of large construction activities, the formal notification to TCEQ must be submitted either electronically through

STEERS, TCEQ's electronic reporting system, or, if qualifying for an electronic reporting waiver, by paper on a Delegation of Signatories form. For operators or small construction activities, the formal notification to TCEQ must be submitted by paper on a Delegation of Signatories form.

(m) stormwater and allowable non-stormwater discharge locations, including storm drain inlets on site and in the immediate vicinity of the construction site where construction support activities will occur; and

(n) locations of all pollutant-generating activities at the construction site and where construction support activities will occur, such as the following: Paving operations; concrete, paint and stucco washout and water disposal; solid waste storage and disposal; and dewatering operations.

2. A description of the BMPs that will be used to minimize pollution in runoff.

The description must identify the general timing or sequence for installation and implementation. At a minimum, the description must include the following components:

(a) General Requirements

i. Erosion and sediment controls must be designed to retain sediment on-site to the extent practicable with consideration for local topography, soil type, and rainfall.

ii. Control measures must be properly selected, installed, and maintained according to good engineering practices, and the manufacturer's or designer's specifications.

iii. Controls must be developed to minimize the offsite transport of litter, construction debris, construction materials, and other pollutants required of Part IV.D.

(b) Erosion Control and Stabilization Practices

The SWP3 must include a description of temporary and permanent erosion control and stabilization practices for the construction site, where small or large construction activity will occur. The erosion control and stabilization practices selected by the permittee must be compliant with the requirements for sediment and erosion control, located in Part IV. of this permit. The description of the SWP3 must also include a schedule of when the practices will be implemented. Site plans must ensure that existing vegetation at the construction site is preserved where it is possible.

i. Erosion control and stabilization practices may include but are not limited to: establishment of temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, slope texturing, temporary velocity dissipation devices, flow diversion mechanisms, and other similar measures.

ii. The following records must be maintained and either attached to or referenced in the SWP3, and made readily available upon request to the parties listed in Part III.D.1 of this general permit:

(A) the dates when major grading activities occur;

(B) the dates when construction activities temporarily or permanently cease on a portion of the site; and

(C) the dates when stabilization measures are initiated.

iii. Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding fourteen (14) calendar days. Stabilization

measures that provide a protective cover must be initiated immediately in portions of the site where construction activities have permanently ceased. The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased. Except as provided in (A) through (D) below, these measures must be completed as soon as practicable, but no more than fourteen (14) calendar days after the initiation of soil stabilization measures:

(A) where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased due to frozen conditions, non-vegetative controls must be implemented until thawing conditions (as defined in Part I.B. of this general permit) are present, and vegetative stabilization measures can be initiated as soon as practicable.

(B) in arid areas, semi-arid areas, or drought-stricken areas, as they are defined in Part I.B. of this general permit, where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased or is precluded by arid conditions, other types of erosion control and stabilization measures must be initiated at the site as soon as practicable. Where vegetative controls are infeasible due to arid conditions, and within fourteen (14) calendar days of a temporary or permanent cessation of construction activity in any portion of the site, the operator shall immediately install non-vegetative erosion controls in areas of the construction site where construction activity is complete or has ceased. If non-vegetative controls are infeasible, the operator shall install temporary sediment controls as required in Part III.F.2.(b)iii.(C) below.

(C) in areas where non-vegetative controls are infeasible, the operator may alternatively utilize temporary perimeter controls. The operator must document in the SWP3 the reason why stabilization measures are not feasible, and must demonstrate that the perimeter controls will retain sediment on site to the extent practicable. The operator must continue to inspect the BMPs at the frequencies established in Part III.F.8.(c) for unstabilized sites.

(D) the requirement for permittees to initiate stabilization is triggered as soon as it is known with reasonable certainty that construction activity at the site or in certain areas of the site will be stopped for 14 or more additional calendar days. If the initiation or completion of vegetative stabilization is prevented by circumstances beyond the control of the permittee, the permittee must employ and implement alternative stabilization measures immediately. When conditions at the site changes that would allow for vegetative stabilization, then the permittee must initiate or complete vegetative stabilization as soon as practicable.

iv. Final stabilization must be achieved prior to termination of permit coverage.

v. TCEQ does not expect that temporary or permanent stabilization measures to be applied to areas that are intended to be left un-vegetated or un-stabilized following construction (e.g., dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, or materials).

(c) Sediment Control Practices

The SWP3 must include a description of any sediment control practices used to remove eroded soils from stormwater runoff, including the general timing or sequence for implementation of controls. Controls selected by the permittee must be compliant with the requirements in Part IV. of this permit.

i. Sites With Drainage Areas of Ten (10) or More Acres

(A) Sedimentation Basin(s) or Impoundments

(1) A sedimentation basin or similar impoundment is required, where feasible, for a common drainage location that serves an area with ten (10) or more acres disturbed at one time. A sedimentation basin or impoundment may be temporary or permanent, and must provide sufficient storage to contain a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained. When calculating the volume of runoff from a 2-year, 24-hour storm event, it is not required to include the flows from offsite areas and flow from onsite areas that are either undisturbed or have already undergone permanent stabilization, if these flows are diverted around both the disturbed areas of the site and the sediment basin or similar impoundment. Capacity calculations shall be included in the SWP3. Sedimentation basins must be designed for and appropriate for controlling runoff at the site and existing detention or retention ponds at the site may not be appropriate.

(2) Where rainfall data is not available, or a calculation cannot be performed, the sedimentation basin must provide at least 3,600 cubic feet of storage per acre drained until final stabilization of the site.

(3) If a sedimentation basin or impoundment is not feasible, then the permittee shall provide equivalent control measures until final stabilization of the site. In determining whether installing a sediment basin or impoundment is feasible, the permittee may consider factors such as site soils, slope, available area, public safety, precipitation patterns, site geometry, site vegetation, infiltration capacity, geotechnical factors, depth to groundwater, and other similar considerations. The permittee shall document the reason that the sediment basins or impoundments are not feasible, and shall utilize equivalent control measures, which may include a series of smaller sediment basins or impoundments.

(4) Unless infeasible, when discharging from sedimentation basins and impoundments, the permittee shall utilize outlet structures that withdraw water from the surface.

(B) Perimeter Controls: At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area, and for those side slope boundaries deemed appropriate as dictated by individual site conditions.

ii. Controls for Sites with Drainage Areas Less than Ten (10) Acres:

(A) Sediment traps and sediment basins may be used to control solids in stormwater runoff for drainage locations serving less than ten (10) acres. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area, and for those side slope boundaries deemed appropriate as dictated by individual site conditions.

(B) Alternatively, a sediment basin that provides storage for a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained may be utilized. Where rainfall data is not available or a calculation cannot be performed, a temporary or permanent sediment basin providing 3,600 cubic feet of storage per acre drained may be provided. If a calculation is performed, then the calculation shall be included in the SWP3.

(C) If sedimentation basins or impoundments are used, the permittee shall comply with the requirements in Part IV.F. of this general permit.

3. Description of Permanent Stormwater Controls

A description of any stormwater control measures that will be installed during the construction process to control pollutants in stormwater discharges that may occur after construction operations have been completed must be included in the SWP3. Permittees are responsible for the installation and maintenance of stormwater management measures, as follows:

(a) permittees authorized under the permit for small construction activities are responsible for the installation and maintenance of stormwater control measures prior to final stabilization of the site; or

(b) permittees authorized under the permit for large construction activities are responsible for the installation and maintenance of stormwater control measures prior to final stabilization of the site and prior to submission of an NOT.

4. Other Required Controls and BMPs

(a) Permittees shall minimize, to the extent practicable, the off-site vehicle tracking of sediments and dust. The SWP3 shall include a description of controls utilized to control the generation of pollutants that could be discharged in stormwater from the site.

(b) The SWP3 must include a description of construction and waste materials expected to be stored on-site and a description of controls to minimize pollutants from these materials.

(c) The SWP3 must include a description of potential pollutant sources in discharges of stormwater from all areas of the construction site where construction activity, including construction support activities, will be located, and a description of controls and measures that will be implemented at those sites to minimize pollutant discharges.

(d) Permittees shall place velocity dissipation devices at discharge locations and along the length of any outfall channel (i.e., runoff conveyance) to provide a non-erosive flow velocity from the structure to a water course, so that the natural physical and biological characteristics and functions are maintained and protected.

(e) Permittees shall design and utilize appropriate controls in accordance with Part IV. of this permit to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water from the site.

(f) Permittees shall ensure that all other required controls and BMPs comply with all of the requirements of Part IV. of this general permit.

(g) For demolition of any structure with at least 10,000 square feet of floor space that was built or renovated before January 1, 1980, and the receiving waterbody is impaired for polychlorinated biphenyls (PCBs):

i. implement controls to minimize the exposure of PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures to precipitation and to stormwater; and

ii. ensure that disposal of such materials is performed in compliance with applicable state, federal, and local laws.

5. Documentation of Compliance with Approved State and Local Plans

(a) Permittees must ensure that the SWP3 is consistent with requirements specified in applicable sediment and erosion site plans or site permits, or stormwater management site plans or site permits approved by federal, state, or local officials.

(b) SWP3s must be updated as necessary to remain consistent with any changes applicable to protecting surface water resources in sediment erosion site plans or site permits, or stormwater management site plans or site permits approved by state or local official for which the permittee receives written notice.

(c) If the permittee is required to prepare a separate management plan, including but not limited to a WPAP or Contributing Zone Plan in accordance with 30 TAC Chapter 213 (related to the Edwards Aquifer), then a copy of that plan must be either included in the SWP3 or made readily available upon request to authorized personnel of the TCEQ. The permittee shall maintain a copy of the approval letter for the plan in its SWP3.

6. Maintenance Requirements

(a) All protective measures identified in the SWP3 must be maintained in effective operating condition. If, through inspections or other means, as soon as the permittee determines that BMPs are not operating effectively, then the permittee shall perform maintenance as necessary to maintain the continued effectiveness of stormwater controls, and prior to the next rain event if feasible. If maintenance prior to the next anticipated storm event is impracticable, the reason shall be documented in the SWP3 and maintenance must be scheduled and accomplished as soon as practicable. Erosion and sediment controls that have been intentionally disabled, run-over, removed, or otherwise rendered ineffective must be replaced or corrected immediately upon discovery.

(b) If periodic inspections or other information indicates a control has been used incorrectly, is performing inadequately, or is damaged, then the operator shall replace or modify the control as soon as practicable after making the discovery.

(c) Sediment must be removed from sediment traps and sedimentation ponds no later than the time that design capacity has been reduced by 50%. For perimeter controls such as silt fences, berms, etc., the trapped sediment must be removed before it reaches 50% of the above-ground height.

(d) If sediment escapes the site, accumulations must be removed at a frequency that minimizes off-site impacts, and prior to the next rain event, if feasible. If the permittee does not own or operate the off-site conveyance, then the permittee shall work with the owner or operator of the property to remove the sediment.

7. Observation and Evaluation of Dewatering Controls Pursuant to Part IV.C. of this General Permit

(a) Personnel provided by the permittee must observe and evaluate dewatering controls at a minimum of once per day on the days where dewatering discharges from the construction site occur. Personnel conducting these evaluations must be knowledgeable of this general permit, the construction activities at the site, and the SWP3 for the site. Personnel conducting these evaluations are not required to have signatory authority for reports under 30 TAC § 305.128 (relating to Signatories to Reports).

(b) Requirements for Observations and Evaluations

i. A report summarizing the scope of any observation and evaluation must be completed within 24-hours following the evaluation. The report must also include, at a minimum, the following:

(A) date of the observations and evaluation;

(B) name(s) and title(s) of personnel making the observations and evaluation;

(C) approximate times that the dewatering discharge began and ended on the day of evaluation, or if the dewatering discharge is a continuous discharge that continues after normal business hours, indicate that the discharge is continuous (this information can be reported by personnel initiating the dewatering discharge);

(D) estimates of the rate (in gallons per day) of discharge on the day of evaluation;

(E) whether or not any indications of pollutant discharge were observed at the point of discharge (e.g., foam, oil sheen, noticeable odor, floating solids, suspended sediments, or other obvious indicators of stormwater pollution); and

(F) major observations, including: the locations of where erosion and discharges of sediment or other pollutants from the site have occurred; locations of BMPs that need to be maintained; locations of BMPs that failed to operate as designed or proved inadequate for a particular location; and locations where additional BMPs are needed.

ii. Actions taken as a result of evaluations, including the date(s) of actions taken, must be described within, and retained as a part of, the SWP3. 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 SWP3 and this permit. The report must be retained as part of the SWP3 and signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

iii. The names and qualifications of personnel making the evaluations for the permittee may be documented once in the SWP3 rather than being included in each report.

8. Inspections of All Controls

(a) Personnel provided by the permittee must inspect disturbed areas (cleared, graded, or excavated) of the construction site that do not meet the requirements of final stabilization in this general permit, all locations where stabilization measures have been implemented, areas of construction support activity covered under this permit, stormwater controls (including pollution prevention controls) for evidence of, or the potential for, the discharge of pollutants, areas where stormwater typically flows within the construction site, and points of discharge from the construction site.

i. Personnel conducting these inspections must be knowledgeable of this general permit, the construction activities at the site, and the SWP3 for the site.

ii. Personnel conducting these inspections are not required to have signatory authority for inspection reports under 30 TAC § 305.128 (relating to Signatories to Reports).

(b) Requirements for Inspections

i. Inspect all stormwater controls (including sediment and erosion control measures identified in the SWP3) to ensure that they are installed properly, appear to be operational, and minimizing pollutants in discharges, as intended.

ii. Identify locations on the construction site where new or modified stormwater controls are necessary.

iii. Check for signs of visible erosion and sedimentation that can be attributed to the points of discharge where discharges leave the construction site or discharge into any surface water in the state flowing within or adjacent to the construction site.

iv. Identify any incidents of noncompliance observed during the inspection.

v. Inspect locations where vehicles enter or exit the site for evidence of off-site sediment tracking.

vi. If an inspection is performed when discharges from the construction site are occurring: identify all discharge points at the site, and observe and document the visual quality of the discharge (i.e., color, odor, floating, settled, or suspended solids, foam, oil sheen, and other such indicators of pollutants in stormwater).

vii. Complete any necessary maintenance needed, based on the results of the inspection and in accordance with the requirements listed in Part III.F.6. above.

(c) Inspection frequencies:

i. Inspections of construction sites must be conducted at least once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater, unless as otherwise provided below in Part III.F.8.(c)ii. – v. below.

(A) If a storm event produces 0.5 inches or more of rain within a 24-hour period (including when there are multiple, smaller storms that alone produce less than 0.5 inches but together produce 0.5 inches or more in 24 hours), you are required to conduct one inspection within 24 hours of when 0.5 inches of rain or more has fallen. When the 24-hour inspection time frame occurs entirely outside of normal working hours, you must conduct an inspection by no later than the end of the next business day.

(B) If a storm event produces 0.5 inches or more of rain within a 24-hour period on the first day of a storm and continues to produce 0.5 inches or more of rain on subsequent days, you must conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the last day of the storm that produces 0.5 inches or more of rain (i.e., only two (2) inspections would be required for such a storm event). When the 24-hour inspection time frame occurs entirely outside of normal working hours, you must conduct an inspection by no later than the end of the next business day.

ii. Inspection frequencies must be conducted at least once every month in areas of the construction site that meet final stabilization or have been temporarily stabilized.

iii. Inspection frequencies for construction sites, where runoff is unlikely due to the occurrence of frozen conditions at the site, must be conducted at least once every month until thawing conditions begin to occur (see definitions for thawing conditions in Part I.B.). The SWP3 must also contain a record of the approximate beginning and ending dates of when frozen conditions occurred at the site, which resulted in inspections being conducted monthly, while those

conditions persisted, instead of at the interval of once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

iv. In arid, semi-arid, or drought-stricken areas, inspections must be conducted at least once every month and within 24 hours after the end of a storm event of 0.5 inches or greater. The SWP3 must also contain a record of the total rainfall measured, as well as the approximate beginning and ending dates of when drought conditions occurred at the site, which resulted in inspections being conducted monthly, while those conditions persisted, instead of at the interval of once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

v. As an alternative to the inspection schedule in Part III.F.8.(c)i. above, the SWP3 may be developed to require that these inspections will occur at least once every seven (7) calendar days. If this alternative schedule is developed, then the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.

vi. The inspection procedures described in Part III.F.8.(c)i. – v above can be performed at the frequencies and under the applicable conditions indicated for each schedule option, provided that the SWP3 reflects the current schedule and that any changes to the schedule are made in accordance with the following provisions: the inspection frequency schedule can only be changed a maximum of once per calendar month and implemented within the first five (5) business days of a calendar month; and the reason for the schedule change documented in the SWP3 (e.g., end of "dry" season and beginning of "wet" season).

(d) Utility line installation, pipeline construction, and other examples of long, narrow, linear construction activities may provide inspection personnel with limited access to the areas described in Part III.F.8.(a) above.

i. Inspection of linear construction sites could require the use of vehicles that could compromise areas of temporary or permanent stabilization, cause additional disturbance of soils, and result in the increase the potential for erosion. In these circumstances, controls must be inspected at least once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater, but representative inspections may be performed.

ii. For representative inspections, personnel must inspect controls along the construction site for 0.25 mile above and below each access point where a roadway, undisturbed right-of-way, or other similar feature intersects the construction site and allows access to the areas described in Part III.F.8.(a) above. The conditions of the controls along each inspected 0.25-mile portion may be considered as representative of the condition of controls along that reach extending from the end of the 0.25-mile portion to either the end of the next 0.25-mile inspected portion, or to the end of the project, whichever occurs first.

As an alternative to the inspection schedule described in Part III.F.8.(c)i. above, the SWP3 may be developed to require that these inspections will occur at least once every seven (7) calendar days. If this alternative schedule is developed, the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.

iii. the SWP3 for a linear construction site must reflect the current inspection schedule. Any changes to the inspection schedule must be made in accordance with the following provisions:

(A) the schedule may be changed a maximum of one time each month;

(B) the schedule change must be implemented at the beginning of a calendar month, and

(C) the reason for the schedule change must be documented in the SWP3 (e.g., end of "dry" season and beginning of "wet" season).

(e) Adverse Conditions.

Requirements for inspections may be temporarily suspended for adverse conditions. Adverse conditions are conditions that are either dangerous to personnel (e.g., high wind, excessive lightning) or conditions that prohibit access to the site (e.g., flooding, freezing conditions). Adverse conditions that result in the temporary suspension of a permit requirement to inspect must be documented and included as part of the SWP3. Documentation must include:

i. the date and time of the adverse condition,

ii. names of personnel that witnessed the adverse condition, and

iii. a narrative for the nature of the adverse condition.

(f) In the event of flooding or other adverse conditions which prohibit access to the inspection sites, inspections must be conducted as soon as access is practicable. Inspection Reports.

i. A report summarizing the scope of any inspection must be completed within 24-hours following the inspection. The report must also include the date(s) of the inspection and major observations relating to the implementation of the SWP3. Major observations in the report must include: the locations of where erosion and discharges of sediment or other pollutants from the site have occurred; locations of BMPs that need to be maintained; locations of BMPs that failed to operate as designed or proved inadequate for a particular location; and locations where additional BMPs are needed.

ii. Actions taken as a result of inspections, including the date(s) of actions taken, must be described within, and retained as a part of, the SWP3. 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 SWP3 and this permit. The report must be retained as part of the SWP3 and signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

iii. The names and qualifications of personnel making the inspections for the permittee may be documented once in the SWP3 rather than being included in each report.

(g) The SWP3 must be modified based on the results of inspections, as necessary, to better control pollutants in runoff. Revisions to the SWP3 must be completed within seven (7) calendar days following the inspection. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in the SWP3 and wherever possible those changes implemented before the next storm event. If implementation before the next anticipated storm event is impracticable, these changes must be implemented as soon as practicable. If necessary, modify your site map to reflect changes to your stormwater controls that are no longer accurately reflected on the current site map.

9. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for all eligible non-stormwater components of the discharge, as listed in Part II.A.3. of this permit.

10. The SWP3 must include the information required in Part III.B. of this general permit.

11. The SWP3 must include pollution prevention procedures that comply with Part IV.D. of this general permit.

Part IV. Erosion and Sediment Control Requirements Applicable to All Sites

Except as provided in 40 CFR §§ 125.30-125.32, any discharge regulated under this general permit, with the exception of sites that obtained waivers based on low rainfall erosivity, must achieve, at a minimum, the following effluent limitations representing the degree of effluent reduction attainable by application of the best practicable control technology currently available (BPT). The BPT are also required by and must satisfy the Effluent Limitations Guideline (ELG) permitting requirement for application of 40 CFR § 450.24 New Source Performance Standards (NSPS), 40 CFR § 450.22 Best Available Technology Economically Achievable (BAT), and 40 CFR § 450.23 Best Conventional Pollutant Control Technology (BCT).

Section A. Erosion and Sediment Controls

Design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed, and maintained to:

1. control stormwater volume and velocity within the site to minimize soil erosion in order to minimize pollutant discharges;
2. control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge point(s);
3. minimize the amount of soil exposed during construction activity;
4. minimize the disturbance of steep slopes;
5. minimize sediment discharges from the site. The design, installation, and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
6. provide and maintain appropriate natural buffers around surface water in the state. Direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible. If providing buffers is infeasible, the permittee shall document the reason that natural buffers are infeasible and shall implement additional erosion and sediment controls to reduce sediment load;
7. preserve native topsoil at the site, unless the intended function of a specific area of the site dictates that the topsoil be disturbed or removed, or it is infeasible; and
8. minimize soil compaction. In areas of the construction site where final vegetative stabilization will occur or where infiltration practices will be installed, either:
   (a) restrict vehicle and equipment use to avoid soil compaction; or
   (b) prior to seeding or planting areas of exposed soil that have been compacted, use techniques that condition the soils to support vegetative growth, if necessary and feasible.

   Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted.
9. TCEQ does not consider stormwater control features (e.g., stormwater conveyance channels, storm drain inlets, sediment basins) to constitute "surface water" for the purposes of triggering the buffer requirement in Part IV.A.(6) above.

Section B. Soil Stabilization

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating, or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding fourteen (14) calendar days. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next workday, following the day when the earth-disturbing activities have temporarily or permanently ceased. Temporary stabilization must be completed no more than fourteen (14) calendar days after initiation of soil stabilization measures, and final stabilization must be achieved prior to termination of permit coverage. In arid, semi-arid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative non-vegetative stabilization measures must be employed as soon as practicable. Refer to Part III.F.2.(b) for complete erosion control and stabilization practice requirements. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed.

Section C. Dewatering

Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited, unless managed by appropriate controls to address sediment and prevent erosion. Operators must observe and evaluate the dewatering controls once per day while the dewatering discharge occurs as described in Part III.F.7. of this general permit.

Section D. Pollution Prevention Measures

Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented, and maintained to:

1. minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
2. minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater;
3. minimize the exposure of waste materials by closing waste container lids at the end of the workday and during storm events. For waste containers that do not have lids, where the container itself is not sufficiently secure enough to prevent the discharge of pollutants absent a cover and could leak, the permittee must provide either a cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, stormwater, and wind, or a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment). Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use);
4. minimize exposure of wastes by implementing good housekeeping measures. Wastes must be cleaned up and disposed of in designated waste containers on days of operation at the site. Wastes must be cleaned up immediately if containers overflow;

5. minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302 as soon as you have knowledge of the release. You must also, within seven (7) calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release; and
6. minimize exposure of sanitary waste by positioning portable toilets so that they are secure and will not be tipped or knocked over, and so that they are located away from surface water in the state and stormwater inlets or conveyances.

Section E. Prohibited Discharges

The following discharges are prohibited:

1. wastewater from wash out of concrete, unless managed by an appropriate control;
2. wastewater from wash out and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
3. fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. soaps or solvents used in vehicle and equipment washing; and
5. toxic or hazardous substances from a spill or other release.

Section F. Surface Outlets

When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible. If infeasible, the permittee must provide documentation in the SWP3 to support the determination, including the specific conditions or time periods when this exception will apply.

Part V. Stormwater Runoff from Concrete Batch Plants

Discharges of stormwater runoff from concrete batch plants present at regulated construction sites and operated as a construction support activity may be authorized under the provisions of this general permit, provided that the following requirements are met for concrete batch plant(s) authorized under this permit. Only the discharges of stormwater runoff and non-stormwater from concrete batch plants that meet the requirements of a construction support activity can be authorized under this permit (see the requirements for "Non-Stormwater Discharges" in Part II.A.3. and "Discharges of Stormwater Associated with Construction Support Activity" in Part II.A.2.).

If discharges of stormwater runoff or non-stormwater from concrete batch plants are not authorized under this general permit, then discharges must be authorized under an alternative general permit or individual permit [see the requirement in Part II.A.2.(c)].

This permit does not authorize the discharge or land disposal of any wastewater from concrete batch plants at regulated construction sites. Authorization for these wastes must be obtained under an individual permit or an alternative general permit.

Section A. Benchmark Sampling Requirements

1. Operators of concrete batch plants authorized under this general permit shall sample the stormwater runoff from the concrete batch plants according to the requirements of this section of this general permit, and must conduct evaluations on the effectiveness of the SWP3 based on the following benchmark monitoring values:

Table 1. Benchmark Parameters

Benchmark Parameter	Benchmark Value	Sampling Frequency	Sample Type
Oil and Grease (*1)	15 mg/L	1/quarter (*2) (*3)	Grab (*4)
Total Suspended Solids (*1)	50 mg/L	1/quarter (*2) (*3)	Grab (*4)
pH	6.0 – 9.0 Standard Units	1/quarter (*2) (*3)	Grab (*4)
Total Iron (*1)	1.3 mg/L	1/quarter (*2) (*3)	Grab (*4)

(*1) All analytical results for these parameters must be obtained from a laboratory that is accredited based on rules located in 30 TAC § 25.4 (a) or through the National Environmental Laboratory Accreditation Program (NELAP). Analysis must be performed using sufficiently sensitive methods for analysis that comply with the rules located in 40 CFR §§ 136.1(c) and 122.44(i)(1)(iv).

(*2) When discharge occurs. Sampling is required within the first 30 minutes of discharge. If it is not practicable to take the sample, or to complete the sampling, within the first 30 minutes, sampling must be completed within the first hour of discharge. If sampling is not completed within the first 30 minutes of discharge, the reason must be documented and attached to all required reports and records of the sampling activity.

(*3) Sampling must be conducted at least once during each of the following periods. The first sample must be collected during the first full quarter that a stormwater discharge occurs from a concrete batch plant authorized under this general permit.

January through March
April through June
July through September
October through December

For projects lasting less than one full quarter, a minimum of one sample shall be collected, provided that a stormwater discharge occurred at least once following submission of the NOI or following the date that automatic authorization was obtained under Part II.E.2., and prior to terminating coverage.

(*4) A grab sample shall be collected from the stormwater discharge resulting from a storm event that is at least 0.1 inches of measured precipitation that occurs at least 72 hours from the previously measurable storm event. The sample shall be collected downstream of the concrete batch plant, and where the discharge exits any BMPs utilized to handle the runoff from the batch plant, prior to commingling with any other water authorized under this general permit.

2. The permittee must compare the results of sample analyses to the benchmark values above, and must include this comparison in the overall assessment of the SWP3's effectiveness. Analytical results that exceed a benchmark value are not a violation of this permit, as these values are not numeric effluent limitations. Results of analyses are indicators that modifications of the SWP3 should be assessed and may be necessary to protect water quality. The operator must investigate the cause for each exceedance and must document the results of this investigation in the SWP3 by the end of the quarter following the sampling event.

   The operator's investigation must identify the following:

   (a) any additional potential sources of pollution, such as spills that might have occurred;

   (b) necessary revisions to good housekeeping measures that are part of the SWP3;

   (c) additional BMPs, including a schedule to install or implement the BMPs; and

   (d) other parts of the SWP3 that may require revisions in order to meet the goal of the benchmark values.

   Background concentrations of specific pollutants may also be considered during the investigation. If the operator is able to relate the cause of the exceedance to background concentrations, then subsequent exceedances of benchmark values for that pollutant may be resolved by referencing earlier findings in the SWP3. Background concentrations may be identified by laboratory analyses of samples of stormwater run-on to the permitted facility, by laboratory analyses of samples of stormwater run-off from adjacent non-industrial areas, or by identifying the pollutant is a naturally occurring material in soils at the site.

Section B. Best Management Practices (BMPs) and SWP3 Requirements

Minimum SWP3 Requirements – The following are required in addition to other SWP3 requirements listed in this general permit, which include, but are not limited to the applicable requirements located in Part III.F.8. of this general permit, as follows:

1. Description of Potential Pollutant Sources – The SWP3 must provide a description of potential sources (activities and materials) that can cause, have a reasonable potential to cause or contribute to a violation of water quality standards or have been found to cause, or contribute to, the loss of a designated use of surface water in the state in stormwater discharges associated with concrete batch plants authorized under this permit. The SWP3 must describe the implementation of practices that will be used to minimize to the extent practicable the discharge of pollutants in stormwater discharges associated with industrial activity and non-stormwater discharges (described in Part II.A.3. of this general permit), in compliance with the terms and conditions of this general permit, including the protection of water quality, and must ensure the implementation of these practices.

   The following must be developed, at a minimum, in support of developing this description:

   (a) Drainage – The site map must include the following information:

      i. the location of all outfalls for stormwater discharges associated with concrete batch plants that are authorized under this permit;

      ii. a depiction of the drainage area and the direction of flow to the outfall(s);

      iii. structural controls used within the drainage area(s);

      iv. the locations of the following areas associated with concrete batch plants that are exposed to precipitation: vehicle and equipment maintenance activities (including fueling, repair, and storage areas for vehicles and equipment scheduled for maintenance); areas used for the treatment, storage, or disposal of wastes; liquid storage tanks; material processing and storage areas; and loading and unloading areas; and

      v. the locations of the following: any bag house or other dust control device(s); recycle/sedimentation pond, clarifier or other device used for the treatment of facility wastewater (including the areas that drain to the treatment device); areas with significant materials; and areas where major spills or leaks have occurred.

   (b) Inventory of Exposed Materials – A list of materials handled at the concrete batch plant that may be exposed to stormwater and precipitation and that have a potential to affect the quality of stormwater discharges associated with concrete batch plants that are authorized under this general permit.

   (c) Spills and Leaks – A list of significant spills and leaks of toxic or hazardous pollutants that occurred in areas exposed to stormwater and precipitation and that drain to stormwater outfalls associated with concrete batch plants authorized under this general permit must be developed, maintained, and updated as needed.

   (d) Sampling Data – A summary of existing stormwater discharge sampling data must be maintained, if available.

2. Measures and Controls – The SWP3 must include a description of management controls to regulate pollutants identified in the SWP3's "Description of Potential Pollutant Sources" from Part V.B.1. of this permit, and a schedule for implementation of the measures and controls. This must include, at a minimum:

   (a) Good Housekeeping – Good housekeeping measures must be developed and implemented in the area(s) associated with concrete batch plants.

      i. Operators must prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), settled dust, or other significant materials from paved portions of the site that are exposed to stormwater. Measures used to minimize the presence of these materials may include regular sweeping or other equivalent practices. These practices must be conducted at a frequency that is determined based on consideration of the amount of industrial activity occurring in the area and frequency of precipitation, and shall occur at least once per week when cement or aggregate is being handled or otherwise processed in the area.

      ii. Operators must prevent the exposure of fine granular solids, such as cement, to stormwater. Where practicable, these materials must be stored in enclosed silos, hoppers or buildings, in covered areas, or under covering.

   (b) Spill Prevention and Response Procedures – Areas where potential spills that can contribute pollutants to stormwater runoff and precipitation, and the drainage areas from these locations, must be identified in the SWP3. Where appropriate, the SWP3 must specify material handling procedures, storage requirements, and use of equipment. Procedures for cleaning up spills must be identified in the SWP3 and made available to the appropriate personnel.

   (c) Inspections – Qualified facility personnel (i.e., a person or persons with knowledge of this general permit, the concrete batch plant, and the SWP3 related to the concrete batch plant(s) for the site) must be identified to inspect designated equipment and areas of the facility specified in the SWP3. Personnel conducting these inspections are not required to have signatory authority for inspection reports under 30 TAC § 305.128. Inspections of facilities in operation must be performed

once every seven (7) days. Inspections of facilities that are not in operation must be performed at a minimum of once per month. The current inspection frequency being implemented at the facility must be recorded in the SWP3. The inspection must take place while the facility is in operation and must, at a minimum, include all areas that are exposed to stormwater at the site, including material handling areas, above ground storage tanks, hoppers or silos, dust collection/containment systems, truck wash down and equipment cleaning areas. Follow-up procedures must be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections must be maintained and be made readily available for inspection upon request.

(d) Employee Training – An employee training program must be developed to educate personnel responsible for implementing any component of the SWP3, or personnel otherwise responsible for stormwater pollution prevention, with the provisions of the SWP3. The frequency of training must be documented in the SWP3, and at a minimum, must consist of one (1) training prior to the initiation of operation of the concrete batch plant.

(e) Record Keeping and Internal Reporting Procedures – A description of spills and similar incidents, plus additional information that is obtained regarding the quality and quantity of stormwater discharges, must be included in the SWP3. Inspection and maintenance activities must be documented and records of those inspection and maintenance activities must be incorporated in the SWP3.

(f) Management of Runoff – The SWP3 shall contain a narrative consideration for reducing the volume of runoff from concrete batch plants by diverting runoff or otherwise managing runoff, including use of infiltration, detention ponds, retention ponds, or reusing of runoff.

3. Comprehensive Compliance Evaluation – At least once per year, one or more qualified personnel (i.e., a person or persons with knowledge of this general permit, the concrete batch plant, and the SWP3 related to the concrete batch plant(s) for the site) shall conduct a compliance evaluation of the plant. The evaluation must include the following:

(a) visual examination of all areas draining stormwater associated with regulated concrete batch plants for evidence of, or the potential for, pollutants entering the drainage system. These include, but are not limited to: cleaning areas, material handling areas, above ground storage tanks, hoppers or silos, dust collection/containment systems, and truck wash down and equipment cleaning areas. Measures implemented to reduce pollutants in runoff (including structural controls and implementation of management practices) must be evaluated to determine if they are effective and if they are implemented in accordance with the terms of this permit and with the permittee's SWP3. The operator shall conduct a visual inspection of equipment needed to implement the SWP3, such as spill response equipment.

(b) based on the results of the evaluation, the following must be revised as appropriate within two (2) weeks of the evaluation: the description of potential pollutant sources identified in the SWP3 (as required in Part V.B.1., "Description of Potential Pollutant Sources"); and pollution prevention measures and controls identified in the SWP3 (as required in Part V.B.2., "Measures and Controls"). The revisions may include a schedule for implementing the necessary changes.

(c) the permittee shall prepare and include in the SWP3 a report summarizing the scope of the evaluation, the personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the SWP3, and actions taken in response to the findings of the evaluation. The report must identify any incidents of noncompliance. Where the report does not identify incidences of noncompliance, the report must contain a statement that the evaluation did not identify any

incidence(s), and the report must be signed according to 30 TAC § 305.128 (relating to Signatories to Reports).

(d) the Comprehensive Compliance Evaluation may substitute for one of the required inspections delineated in Part V.B.2.(c) of this general permit.

Section C. Prohibition of Wastewater Discharges

Wastewater discharges associated with concrete production including wastewater disposal by land application are not authorized under this general permit. These wastewater discharges must be authorized under an alternative TCEQ water quality permit or otherwise disposed of in an authorized manner. Discharges of concrete truck wash out at construction sites may be authorized if conducted in accordance with the requirements of Part VI of this general permit.

Part VI. Concrete Truck Wash Out Requirements

This general permit authorizes the land disposal of wash out from concrete trucks at construction sites regulated under this general permit, provided the following requirements are met. Any discharge of concrete production wastewater to surface water in the state must be authorized under a separate TCEQ general permit or individual permit.

A. Discharge of concrete truck wash out water to surface water in the state, including discharge to storm sewers, is prohibited by this general permit.

B. Concrete truck wash out water shall be disposed in areas at the construction site where structural controls have been established to prevent discharge to surface water in the state, or to areas that have a minimal slope that allow infiltration and filtering of wash out water to prevent discharge to surface water in the state. Structural controls may consist of temporary berms, temporary shallow pits, temporary storage tanks with slow rate release, or other reasonable measures to prevent runoff from the construction site.

C. Wash out of concrete trucks during rainfall events shall be minimized. The discharge of concrete truck wash out water is prohibited at all times, and the operator shall insure that its BMPs are sufficient to prevent the discharge of concrete truck wash out as the result of rainfall or stormwater runoff.

D. The disposal of wash out water from concrete trucks, made under authorization of this general permit must not cause or contribute to groundwater contamination.

E. If a SWP3 is required to be implemented, the SWP3 shall include concrete wash out areas on the associated site map.

Part VII. Retention of Records

The permittee must retain the following records for a minimum period of three (3) years from the date that a NOT is submitted as required in Part II.F.1. and 2. of this permit. For activities in which an NOT is not required, records shall be retained for a minimum period of three (3) years from the date that the operator terminates coverage under Section II.F.3. of this permit. Records include:

A. a copy of the SWP3;

B. all reports and actions required by this permit, including a copy of the TCEQ construction site notice;

C. all data used to complete the NOI, if an NOI is required for coverage under this general permit; and

D. all records of submittal of forms submitted to the operator of any MS4 receiving the discharge and to the secondary operator of a large construction site, if applicable.

Part VIII. Standard Permit Conditions

A. The permittee has a duty to comply with all permit conditions. Failure to comply with any permit condition is a violation of the permit and statutes under which it was issued (CWA and TWC), and is grounds for enforcement action, for terminating, revoking and reissuance, or modification, or denying coverage under this general permit, or for requiring a discharger to apply for and obtain an individual TPDES permit, based on rules located in TWC § 23.086, 30 TAC § 305.66, and 40 CFR § 122.41 (a).

B. Authorization under this general permit may be modified, suspended, revoked and reissued, terminated or otherwise suspended for cause, based on rules located in TWC § 23.086, 30 TAC § 305.66, and 40 CFR § 122.41(f). Filing a notice of planned changes or anticipated non-compliance by the permittee does not stay any permit condition. The permittee must furnish to the executive director, upon request and within a reasonable time, any information necessary for the executive director to determine whether cause exists for modifying, revoking and reissuing, terminating or, otherwise suspending authorization under this permit, based on rules located in TWC § 23.086, 30 TAC § 305.66, and 40 CFR § 122.41 (h). Additionally, the permittee must provide to the executive director, upon request, copies of all records that the permittee is required to maintain as a condition of this general permit.

C. It is not a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the permit conditions.

D. Inspection and entry shall be allowed under TWC Chapters 26-28, Texas Health and Safety Code §§ 361.032-361.033 and 361.037, and 40 CFR § 122.41(i). The statement in TWC § 26.014 that commission entry of a facility shall occur according to an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility or site, but merely describes the commission's duty to observe appropriate rules and regulations during an inspection.

E. The discharger is subject to administrative, civil, and criminal penalties, as applicable, under TWC Chapter 7 for violations including but not limited to the following:

1. negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under CWA § 402, or any requirement imposed in a pretreatment program approved under CWA §§ 402(a)(3) or 402(b)(8);
2. knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under a permit, including monitoring reports or reports of compliance or noncompliance; and
3. knowingly violating CWA §303 and placing another person in imminent danger of death or serious bodily injury.

F. All reports and other information requested by the executive director must be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

G. Authorization under this general permit does not convey property or water rights of any sort and does not grant any exclusive privilege.

H. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

I. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

J. The permittee shall comply with the monitoring and reporting requirements in 40 CFR § 122.41(j) and (l), as applicable.

K. Analysis must be performed using sufficiently sensitive methods for analysis that comply with the rules located in 40 CFR §§ 136.1(c) and 122.44(i)(1)(iv).

Part IX. Fees

A. A fee of must be submitted along with the NOI:

1. $225 if submitting an NOI electronically, or
2. $325 if submitting a paper NOI.

B. Fees are due upon submission of the NOI. An NOI will not be declared administratively complete unless the associated fee has been paid in full.

C. No separate annual fees will be assessed for this general permit. The Water Quality Annual Fee has been incorporated into the NOI fees as described above.

Appendix A: Automatic Authorization

Periods of Low Erosion Potential by County – Eligible Date Ranges

Andrews: Nov. 15 - Apr. 30
Archer: Dec. 15 - Feb. 14
Armstrong: Nov. 15 - Apr. 30
Bailey: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Baylor: Dec. 15 - Feb. 14
Borden: Nov. 15 - Apr. 30
Brewster: Nov. 15 - Apr. 30
Briscoe: Nov. 15 - Apr. 30
Brown: Dec. 15 - Feb. 14
Callahan: Dec. 15 - Feb. 14
Carson: Nov. 15 - Apr. 30
Castro: Nov. 15 - Apr. 30
Childress: Dec. 15 - Feb. 14
Cochran: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Coke: Dec. 15 - Feb. 14
Coleman: Dec. 15 - Feb. 14
Collingsworth: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28
Concho: Dec. 15 - Feb. 14
Cottle: Dec. 15 - Feb. 14
Crane: Nov. 15 - Apr. 30
Crockett: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30
Crosby: Nov. 15 - Apr. 30
Culberson: Nov. 1 - May 14
Dallam: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Dawson: Nov. 15 - Apr. 30
Deaf Smith: Nov. 15 - Apr. 30
Dickens: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30
Dimmit: Dec. 15 - Feb. 14
Donley: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28
Eastland: Dec. 15 - Feb. 14
Ector: Nov. 15 - Apr. 30
Edwards: Dec. 15 - Feb. 14
El Paso: Jan. 1 - Jul. 14, or May 15 - Jul. 31, or Jun. 1 - Aug. 14, or Jun. 15 - Sept. 14, or Jul. 1 - Oct. 14, or Jul. 15 - Oct. 31, or Aug. 1 - Apr. 30, or Aug. 15 - May 14, or Sept. 1 - May 30, or Oct. 1 - Jun. 14, or Nov. 1 - Jun. 30, or Nov. 15 - Jul. 14
Fisher: Dec. 15 - Feb. 14
Floyd: Nov. 15 - Apr. 30
Foard: Dec. 15 - Feb. 14
Gaines: Nov. 15 - Apr. 30
Garza: Nov. 15 - Apr. 30
Glasscock: Nov. 15 - Apr. 30
Hale: Nov. 15 - Apr. 30
Hall: Feb. 1 - Mar. 30
Hansford: Nov. 15 - Apr. 30
Hardeman: Dec. 15 - Feb. 14
Hartley: Nov. 15 - Apr. 30
Haskell: Dec. 15 - Feb. 14
Hockley: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Howard: Nov. 15 - Apr. 30
Hudspeth: Nov. 1 - May 14
Hutchinson: Nov. 15 - Apr. 30
Irion: Dec. 15 - Feb. 14
Jeff Davis: Nov. 1 - Apr. 30 or Nov. 15 - May 14
Jones: Dec. 15 - Feb. 14
Kent: Nov. 15 - Jan. 14 or Feb. 1 - Mar. 30
Kerr: Dec. 15 - Feb. 14
Kimble: Dec. 15 - Feb. 14
King: Dec. 15 - Feb. 14
Kinney: Dec. 15 - Feb. 14
Knox: Dec. 15 - Feb. 14
Lamb: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Loving: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Lubbock: Nov. 15 - Apr. 30
Lynn: Nov. 15 - Apr. 30
Martin: Nov. 15 - Apr. 30
Mason: Dec. 15 - Feb. 14
Maverick: Dec. 15 - Feb. 14
McCulloch: Dec. 15 - Feb. 14
Menard: Dec. 15 - Feb. 14
Midland: Nov. 15 - Apr. 30
Mitchell: Nov. 15 - Apr. 30
Moore: Nov. 15 - Apr. 30
Motley: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30
Nolan: Dec. 15 - Feb. 14
Oldham: Nov. 15 - Apr. 30

Parmer: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Pecos: Nov. 15 - Apr. 30
Potter: Nov. 15 - Apr. 30
Presidio: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Randall: Nov. 15 - Apr. 30
Reagan: Nov. 15 - Apr. 30
Real: Dec. 15 - Feb. 14
Reeves: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Runnels: Dec. 15 - Feb. 14
Schleicher: Dec. 15 - Feb. 14
Scurry: Nov. 15 - Apr. 30
Shackelford: Dec. 15 - Feb. 14
Sherman: Nov. 15 - Apr. 30
Stephens: Dec. 15 - Feb. 14
Sterling: Nov. 15 - Apr. 30
Stonewall: Dec. 15 - Feb. 14
Sutton: Dec. 15 - Feb. 14
Swisher: Nov. 15 - Apr. 30
Taylor: Dec. 15 - Feb. 14
Terrell: Nov. 15 - Apr. 30
Terry: Nov. 15 - Apr. 30
Throckmorton: Dec. 15 - Feb. 14
Tom Green: Dec. 15 - Feb. 14
Upton: Nov. 15 - Apr. 30
Uvalde: Dec. 15 - Feb. 14
Val Verde: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30
Ward: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Wichita: Dec. 15 - Feb. 14
Wilbarger: Dec. 15 - Feb. 14
Winkler: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Yoakum: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Young: Dec. 15 - Feb. 14
Wheeler: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28
Zavala: Dec. 15 - Feb. 14

Appendix B: Storm Erosivity (EI) Zones in Texas

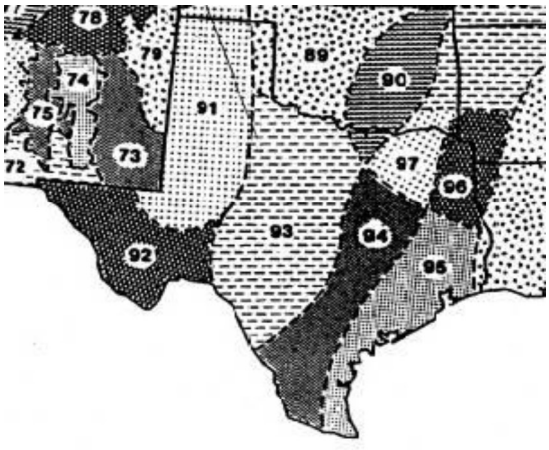


Figure B. EI Distribution Zones

Adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service

Appendix C: Isoerodent Map

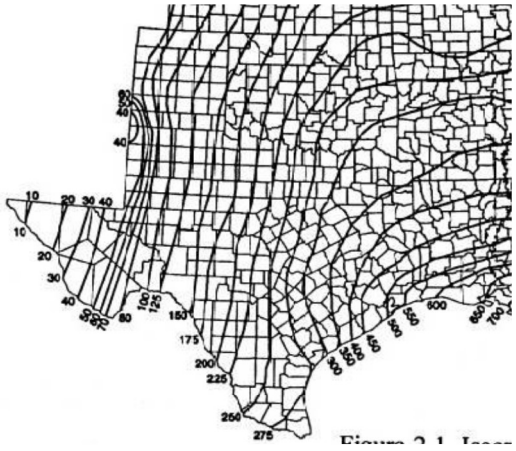


Figure C. Isoerodent Map of Texas. Units are hundreds ft*tonf*in(ac*h*yr)-1

Adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service

Appendix D: Erosivity Indices for EI Zones in Texas

Table D. EI as percentage of average annual computed selected geographic areas (EI number) by date period (month/day).

Date Periods* (Month/Day)

EI #	1/1	1/16	1/31	2/15	3/1	3/16	3/31	4/15	4/30	5/15	5/30	6/14	6/29	7/14	7/29	8/13	8/28	9/12	9/27	10/12	10/27	11/11	11/26	12/11	12/31
89	0	1	1	2	3	4	7	2	8	27	38	48	55	62	69	76	83	90	94	97	98	99	100	100	100
90	0	1	2	3	4	6	8	13	21	29	37	46	54	60	65	69	74	81	87	92	95	97	98	99	100
91	0	0	0	0	1	1	1	2	6	16	29	39	46	53	60	67	74	81	88	95	99	99	100	100	100
92	0	0	0	0	1	1	1	2	6	16	29	39	46	53	60	67	74	81	88	95	99	99	100	100	100
93	0	1	1	2	3	4	6	8	13	25	40	49	56	62	67	72	76	80	85	91	97	98	99	99	100
94	0	1	2	4	6	8	10	15	21	29	38	47	53	57	61	65	70	76	83	88	91	94	96	98	100
95	0	1	3	5	7	9	11	14	18	27	35	41	46	51	57	62	68	73	79	84	89	93	96	98	100
96	0	2	4	6	9	12	17	23	30	37	43	49	54	58	62	66	70	74	78	82	86	90	94	97	100
97	0	1	3	5	7	10	14	20	28	37	48	56	61	64	68	72	77	81	86	89	92	95	98	99	100
106	0	3	6	9	13	17	21	27	33	38	44	49	55	61	67	71	75	78	81	84	86	90	94	97	100

*Each period begins on the date listed in the table above and lasts until the day before the following period. The final period begins on December 11 and ends on December 31.

Table adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service.

APPENDIX D

NOTICE OF INTENT(S) (NOIS)

APPENDIX E

GRADING, CONSTRUCTION ACTIVITIES, AND STABILIZATION LOG

Grading, Construction Activities, and Stabilization Log

DATE	Check those that apply			Area Affected	Comments
	Major Grading Occurring	Construction Activities Ceased	Stabilization Measures Initiated		

APPENDIX F

MATERIAL LIST

MATERIALS LIST

Material	Quantity Exposed	Location & Method of Storage	BMP(s) for Material	Affected Outfalls(s)

APPENDIX G

EDWARDS AQUIFER PROTECTION PROGRAM APPROVAL LETTER (CZP)

APPENDIX H

SWP3 INSPECTION AND MAINTENANCE REPORT FORM

INSPECTION PLANS AND PROCEDURES

Inspection Information:	Reason for Inspection:
Inspector Name:	☐ 14-day inspection
Inspector Title:	☐ Weekly inspection
Inspection Date:	☐ 0.5 inch or greater rainfall event

Inspection Questions:

Did you see any indications of pollutant discharge?

☐ **Yes (describe below)** ☐ **No**

Did you see any erosion?

☐ **Yes (describe below)** ☐ **No**

Did you see any instances of non-compliance?

☐ **Yes (describe below)** ☐ **No**

Are existing BMPs properly and completely implemented?

☐ **Yes** ☐ **No (describe below)**

_____

_____

_____

_____

Do you recommend any corrective actions or additional control measures?

☐ **Yes** ☐ **No (describe below)**

_____

_____

_____

_____

List any other observations:

_____

_____

_____

_____

Certification Statement:

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

Signature: _____ Date: _____

APPENDIX I

ADVERSE CONDITIONS: LOG SHEET

Adverse Conditions: Log Sheet

Date:
Time:
Witness Name:

Description of adverse conditions:

APPENDIX J

LIST OF RARE SPECIES

IPaC U.S. Fish & Wildlife Service

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Williamson County, Texas

Local office

Austin Ecological Services Field Office

(512) 937-7371

1505 Ferguson Lane
Austin, TX 78754-4501

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NOT FOR CONSULTATION

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Golden-cheeked Warbler Setophaga chrysoparia Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/33	Endangered
Piping Plover Charadrius melodus This species only needs to be considered if the following condition applies: • Wind Energy Projects There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot Calidris canutus rufa Wherever found This species only needs to be considered if the following condition applies: • Wind Energy Projects There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane Grus americana There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/758	Endangered

Amphibians

NAME	STATUS
Georgetown Salamander Eurycea naufragia Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7278	Threatened

NOT FOR CONSULTATION

NAME	STATUS
Salado Salamander *Eurycea chisholmensis*	Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/3411

Clams

NAME	STATUS
Balcones Spike *Fusconaia iheringi*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/10909

Insects

NAME	STATUS
Coffin Cave Mold Beetle *Batrisodes texanus*	Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6234

Monarch Butterfly *Danaus plexippus*	Proposed Threatened

Wherever found

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/9743

Tooth Cave Ground Beetle *Rhadine persephone*	Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5625

Arachnids

NAME	STATUS
Bone Cave Harvestman *Texella reyesi*	Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5306

NOT FOR CONSULTATION

NAME	STATUS
Tooth Cave Spider *Tayshaneta myopica*	Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2360

Flowering Plants

NAME	STATUS
Bracted Twistflower *Streptanthus bracteatus*	Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/2856

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

NOT FOR CONSULTATION

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-

measures.pdf

- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Jul 31

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

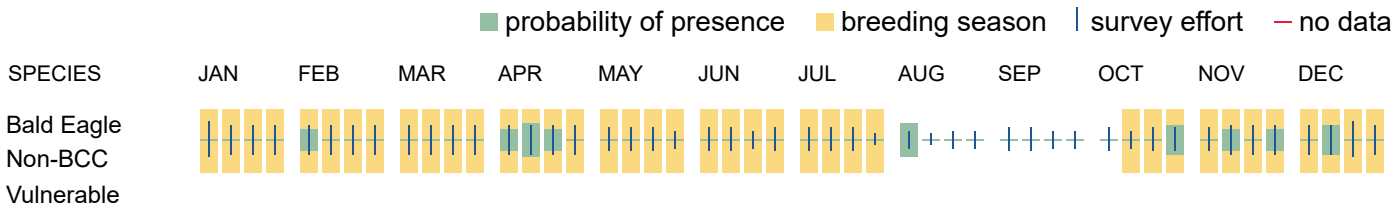
No Data (–)

NOT FOR CONSULTATION

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

NOT FOR CONSULTATION

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Jul 31
Black-capped Vireo Vireo atricapilla This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5716	Breeds Apr 1 to Sep 15

NOT FOR CONSULTATION

Chimney Swift Chaetura pelagica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Meadowlark Sturnella magna This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 25 to Aug 31
Field Sparrow Spizella pusilla This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Aug 15
Grasshopper Sparrow Ammodramus savannarum perpallidus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Painted Bunting Passerina ciris This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 25 to Aug 15
Pectoral Sandpiper Calidris melanotos This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Rufous-crowned Sparrow Aimophila ruficeps eremoeca This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 10 to Sep 20

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

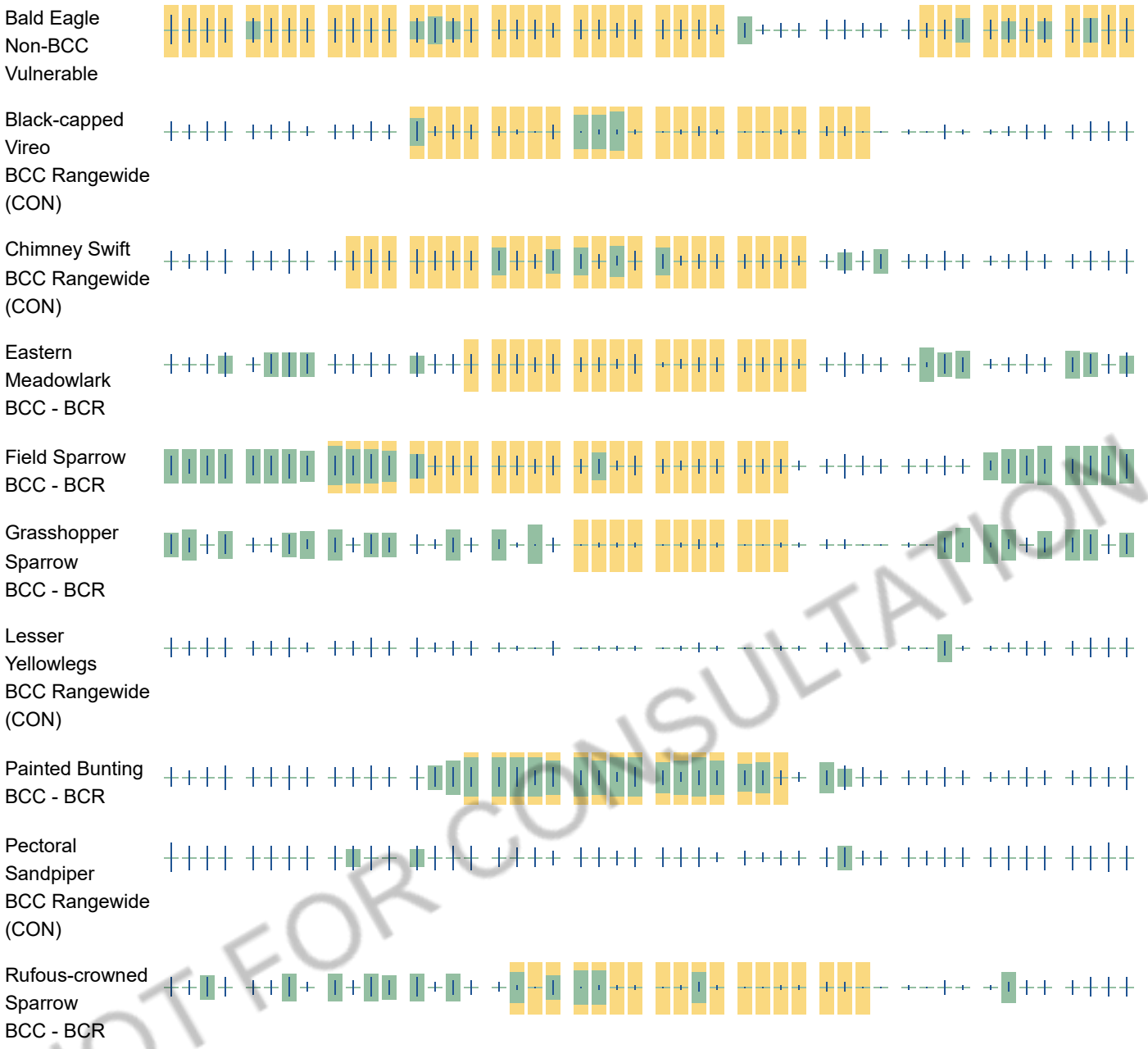
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION

■ probability of presence ■ breeding season | survey effort – no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC



NOT FOR CONSULTATION

Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);

NOT FOR CONSULTATION

2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

NOT FOR CONSULTATION

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

NOT FOR CONSULTATION

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

NOT FOR CONSULTATION

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate

Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

APPENDIX K

PROJECT SITE NOTICE(S)

☐ TCEQ Large Construction Site Notice

Primary Operator

Large construction sites disturb more than five acres or are part of a larger common plan of development that disturbs more than five acres. Primary operators of large construction sites will fill out this notice. Primary operators will then post this notice at the construction site in a location where it is safely and readily available for viewing by the general public and local, state, and federal authorities. Additional information about the TCEQ Construction Stormwater General Permit may be found on TCEQ's webpage on Assistance Tools for Construction Stormwater General Permits.

Note: You must also develop a Stormwater Pollution Prevention Plan prior to the commencement of construction.

Site-Specific TPDES Authorization Number: TXR15 _____

Primary Operator Name: ***DRB Group Texas, LLC*** _____

Contact Name and Phone Number: ***Jason Lewis (972)-383-4382*** _____

Project Description:

Physical

Location/Description The proposed site is located 1,000 feet northeast of the intersection between Ronald Reagan Blvd and CO Rd 289. _____

Estimated Start Date 06/01/2026 _____

Projected End Date or Date Disturbed Soils Will Be Stabilized 06/01/2028 _____

Location of Stormwater Pollution Prevention Plan (SWP3): *On site* _____