

Storm Water Pollution Prevention Plan (SWPPP)

For:

Ruby Crossing – Land Development

Intersection of Red Hill & Red Forest Lane

San Antonio, Texas 78264

TPDES Permit ID: TXR1590CS

SWPPP prepared for:

Lennar Homes of Texas Land and Construction, Ltd.

Brian Barron, Division President

100 NE Loop 410, Suite 1155

San Antonio, Texas 78216

Phone: 210-403-6200

SWPPP prepared by:

Environmental Management Group, LLC

Matthew D. Martin

2260 Highland Village Rd., Suite 400

Highland Village, Texas 75077

Phone: 214-923-2086

SWPPP Preparation Date: 6/20/2023

Estimated Construction Start Date: June 20, 2023

Estimated Construction Complete Date: June 30, 2025

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INTRODUCTION

This SWPPP is designed to address the following objectives:

- Address discharges authorized by the Construction General Permit (CGP) that will reach Waters of the U.S., including discharges to municipal separate storm sewer systems (MS4s) and privately owned separate storm sewer systems that drain to Waters of the U.S.
- Identify and address all pollutants and their sources that are reasonably expected to affect the quality of discharges from the construction site, including off-site material storage areas, overburden and stockpiles of dirt, borrow areas, equipment storage areas, vehicle repair areas, fueling areas, etc., used solely by the permitted project.
- Describe the implementation of practices that will be used to minimize to the extent practicable the discharge of pollutants in storm water associated with construction activity and non-stormwater discharges in compliance with the terms and conditions of the CGP.
- Ensure site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity.
- Ensure stabilization BMPs are installed that reduce or eliminate pollutants after construction is completed.

A copy of the Owner's Notice of Intent ("NOI") submitted to the Texas Commission on Environmental Quality (TCEQ) on the "STEERS" electronic filing system and the permit certificate indicating a Permit Authorization number will be included in Appendix "D" of this SWPPP once it is filed.

The SWPPP will be kept electronically. 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. In most instances, it is reasonable that the SWPPP shall be made available within 24 hours of the request. This SWP3 is made readily available by scanning the QR Code located on the TCEQ Primary Operator Construction Site Notice posted on site. This SWP3 is kept and updated electronically in a digital cloud based software, Per Section D.1 of the Construction General Permit. A paper copy of this SWP3 can be made available within 24 hours of the request.

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SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 Contact Information & Areas of Responsibility

Contact	Area of Responsibility
Owner/Primary Operator: Brian Barron, Division President 100 NE Loop 410, Suite 1155 San Antonio, TX 78216 Phone: 512-418-0258	<p>The Owner, "Lennar Homes of Texas Land and Construction, Ltd." has complete control over the plans and specification for the development. The Owner will develop and implement the SWPPP and Construction General Permit (CGP) requirements on a day-to-day basis for the entire development, monitor and direct Contractors / Operators, Owner's BMP installers and Owner's maintenance personnel. The Owner will hire Contractors to construct the development and will delegate various SWPPP responsibilities to Third Party Inspectors, BMP installers and Contractors / Operators. The Owner will supply the Contractors / Operators with plans specifications and SWPPP requirements prior to the start of the Contractor's / Operator's start of work. Owner will provide Contractors / Operators with any changes to the original plans, specifications and SWPPP in a timely manner.</p> <p>Lennar's Land Development Manager (LDM) is a delegated signatory of SWPPP inspections and amendments. The LDM will implement the CGP on a day-to-day basis, and monitor and direct Contractors, BMP installers, and stormwater compliance inspectors. The LDM will coordinate the corrective actions found on the inspection and sign inspection reports as the Duly Authorized Representatives of Lennar. (Other Lennar associates will also have signing authority for cases when the LDM is not available. See Delegation of Signatories form delegating signing authority)</p>
Owner's Erosion & Sediment Control Contractor: Environmental Allies 1251 Goforth Road Kyle, Texas 78640 Attention: Collin Wright Phone Number: O (512) 383-9209 F (512) 383-9208 Email: cwright@environmenatalallies.com	Install, maintain, repair or replace erosion and sediment controls and temporary or permanent soil stabilization at the direction of the Owner or General Contractor / Operator.
SWPPP Preparer: Environmental Management Group, LLC Matthew D. Martin, Principal Owner 2260 Highland Village Road, Suite 400 Highland Village, TX 75077 Telephone: 214-923-2086 Email: infor@emg-llc.net	Develop the SWPPP. Evaluate changing conditions and develop SWPPP amendments at the direction of the Owner.

<p>SWPPP BMP Inspector: Environmental Management Group, LLC Jose Garcia, Field Operations Manager 2300 Highland Village Road, Building 5, Suite 550 Highland Village, TX 75077 Telephone: 214-923-2086 Email: infor@emg-llc.net</p>	<p>Perform SWPPP inspections according to the following schedule:</p> <p><input checked="" type="checkbox"/> Every 7 calendar days</p> <p><input type="checkbox"/> Every 7 calendar days and after .5" or greater storm event</p> <p>Inspection reports will be completed using StormPro, a web based SWPPP Inspection and reporting database. (See Section 4.1 – Inspection Schedule and Procedures)</p>
<p>SWPPP Contact(s) Lennar Homes of Texas, Land and Construction Ltd. 100 NE Loop 410, Suite 1155 San Antonio, TX 78216 Phone: 737-600-6686 Marcus Walters, Division Environmental Manager (DEM) 830-388-1002 Melissa Castro, Division Environmental Manager (DEM) 210-954-3694 Matt Cardenas, Division Environmental Manager (DEM) 726-223-1102 Jimena Koszuta, Division Environmental Manager, (DEM) 726-437-9473</p>	<p>Provide oversight for the implementation of the Construction General Permit and the SWPPP on behalf of the Owner. Attend pre-construction meetings with the General Contractor / Operators and assign General Contractor / Operators SWPPP responsibilities. Interact with and direct the SWPPP Preparer and BMP Inspector. Coordinate SWPPP amendments with the SWPPP Preparer and maintain the SWPPP document.</p>
<p>General Contractor /Operator: Not Awarded INSERT Company Name INSERT First Last Name INSERT Address INSERT City, State ZIP INSERT Phone Email: INSERT Email Address</p>	<p>Each General Contractor is a Primary Operator and has day to day operational control of all geographic areas of the project site where they are performing construction activities. The construction activities that the General Contractor is responsible for are listed in Section 1.2 and the geographic area of SWPPP control is delineated on the site map. The. Each General Contractor working under this shared SWPPP is responsible for the following items:</p> <ul style="list-style-type: none"> • Meet the requirements set forth in Part III. B. 2. of TXR150000 (Responsibilities of Primary Operators with day to day control). • Before earth disturbing activities begin, sign and certify the SWPPP, submit a Notice of Intent (NOI) to the TCEQ, submit a copy of the NOI to the local MS4, and post a Construction Site Notice at the entrance to General Contractor / Operator's construction activity. • Comply with the SWPPP by implementing and maintaining BMPs for which the General Contractor / Operator is responsible for in accordance with the "Operator Responsibilities" form included in Appendix "G".

Landscape / Hardscape Contractor
Mundo Verde Irrigation & Landscaping
Carlos Palos, Owner
6400 Grissom Rd.
San Antonio, TX 78238
Phone: (210) 389-0615

At the direction of the Owner, install landscaping, including plants and trees; install permanent soil stabilization measures, including hydroseed, hydromulch, broadcast seed, and/or sod; install hardscape, including sidewalks, entrance monuments and masonry work in common areas.

1.2 Nature of Construction

Lennar Homes of Texas Land and Construction, Ltd., is developing the infrastructure, finished lots, and related amenities for a residential community known as “ ”. Construction for this development community will progress in a series of construction activities and the start of each activity will be dependent on economic conditions and other determining factors. Each construction activity may be performed by a different General Contractor / Operator, and more than one activity may occur at a time. When development of finished lots is complete, control of the lots will transfer to the new owner or to Lennar’s homebuilding department, and the transferred lots will no longer be under control of this SWPPP.

Lot Transfer Process (Check which scenario applies):

- ☐ Finished lots will be transferred both to Lennar’s homebuilding department and to other merchant homebuilders.

At the completion of land development activity in each section of the development, Lennar Homes of Texas Land and Construction, Ltd. will transfer control of the finished lots both to homebuilders that purchase them through a purchase contract and to Lennar’s homebuilding department through an internal transfer process. For lots that are sold to other homebuilders, provisions for compliance with state stormwater regulations are included in the purchase agreement between the Lennar Homes of Texas Land and Construction, Ltd. and the homebuilders.

- ☒ Lots will be transferred to Lennar’s homebuilding department.

At the completion of land development activity in each section of the development, Lennar Homes of Texas Land and Construction, Ltd. will transfer control of the finished lots to Lennar’s homebuilding department through an internal transfer process. Lots that have transferred to Lennar’s homebuilding department will be under control of a separate SWPPP.

Whether the finished lots are “taken down” by another homebuilder or Lennar’s homebuilding department, the lots will be appropriately identified on the SWPPP site map and will no longer be under control of this SWPPP. Upon transfer of control, the homebuilder purchasing the lots or Lennar’s homebuilding department will be responsible for compliance with the CGP for areas of their work, developing and implementing a SWPPP, installing and maintaining BMPs for their work, installing and maintaining inlet protection for inlets they discharge into, and cleaning the streets of track out generated by homebuilder operations in accordance with the CGP.

Lennar Homes of Texas Land and Construction, Ltd. will maintain the “public/common areas” such as sediment basins, outfalls, parks, and other open spaces until the storm drain system is accepted by the respective public agency or homeowners’ association, whichever the case may be.

Lennar Homes of Texas Land and Construction, Ltd. has submitted a TCEQ Primary Operator Notice of Intent and has received an authorization to discharge in accordance with the TCEQ construction General Permit.

Lennar Homes of Texas Land and Construction, Ltd. and each General Contractor / Operator shall file a NOT with the TCEQ within 30 days after either of the following is achieved: (a) final stabilization has been achieved on all portions of the site that are the responsibility of the permittee; (b) a transfer of operational control has occurred to another permittee; or (c) the operator has obtained authorization under an alternative TPDES general permit.

The acres disturbed column will reflect the acreage that each General Contractor / Operator will be wholly or partially responsible for. Multiple General Contractor / Operators may work on the same acreage depending on the construction activity and therefore the acreage listed in the table is not intended to be used to calculate the total disturbed acreage of the entire development. Operator responsibilities and permit documentation will be documented in Appendix “G”.

[illegible]

1.3 *Areas of Control*

Shared SWPPP Development

For more effective coordination of BMPs and opportunities for cost sharing, a cooperative effort by the different operators has been developed for this project. Operators shall independently obtain authorization but shall also work together to prepare and implement this single, comprehensive SWPPP for the entire construction site.

Lennar Homes of Texas Land and Construction, Ltd. is the Owner of the Ruby Crossing community, will act as a Primary Operator, and shall meet the requirements set forth in Part III. B. of TXR150000

As development progresses, Lennar Homes of Texas Land and Construction, Ltd. will contract with one or more General Contractors to perform the construction activities, such as demolition, clearing & grubbing, grading, underground utilities, street paving, and landscaping. The construction activities may be performed by the same General Contractor, or each construction activity may be performed by different General Contractors. The construction activities and General Contractors covered by this SWPPP are listed in Section 1.2: Nature and Sequence of Construction Activity.

The General Contractor(s) performing construction activities in this development will be Primary Operators; shall meet the requirements set forth in Part III. B. of TXR150000; and will all work under this shared SWPPP. Each Operator will sign and certify the SWPPP in accordance with the Construction General Permit (CGP). As development progresses and new General Contractors are added to this SWPPP, their contact information will be added to Section 1.1 "Contact Information" and they will sign and certify the SWPPP.

As each construction activity is added, this SWPPP will be amended to include the associated details for that construction activity. The information will include the area under the General Contractor's control and the area under the Owners control, the disturbed acreage for the activity, maps with proposed BMP's and their proposed locations, a description of the BMPs that the Owner and General Contractor will implement, the operator responsible for installing, maintaining and removing each of the controls, the construction start date, dates of major grading work, dates of completion and dates of stabilization for each activity, and the additional operator's signed SWPPP Certification and Notice of Intent.

Each General Contractor will have day-to-day operational control of the activities that are necessary to ensure compliance with the Construction General Permit and the SWPPP in areas of the project where they are operators. Lennar Homes of Texas Land and Construction, Ltd. will implement the SWPPP and CGP requirements during "Idle" periods where there are no General Contractors onsite and land development activity transitions from one construction activity to another. SWPPP responsibility that has been assigned to a General Contractor / Operator for any particular construction activity will transfer to the Owner after acceptance or substantial completion of the General Contractor / Operator's work.

1.4 Project / Site Information

Project / Site Name: Ruby Crossing		
Project Location / Intersection: Intersection of Red Hill & Red Forest Lane		
City: San Antonio	State: Texas	ZIP Code: 78264
County: Bexar		
Latitude: 29.215098° N (decimal)		Longitude: -98.446258° W (decimal)
Method for determining latitude/longitude:		
<input type="checkbox"/> USGS topographic map (specify scale: 7.5 minute series)	<input type="checkbox"/> EPA Website	<input type="checkbox"/> GPS
<input checked="" type="checkbox"/> Other (please specify): Google Maps		
Is the project located in Indian country?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable." Not applicable		
Owner/Primary Operator's TPDES Authorization Number: TXR1590CS		
Will this project be developed in multiple units within a larger common plan of development?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
Estimated Start Date for all of Land Development activity per Unit:	Unit 3A	June 20, 2023
	Unit 3B See Amendment 001 – 8/23/2023	January 1, 2024
Estimated Project Completion Date for all Land Development activity per Unit:	Unit 3A	June 30, 2025
	Unit 3B See Amendment 001 – 8/23/2023	January 1, 2026
Percentage impervious area before construction per Unit:	Unit 3A	0%
	Unit 3B See Amendment 001 – 8/23/2023	0%
Percentage impervious area after construction per Unit:	Unit 3A	47.2%
	Unit 3B See Amendment 001 – 8/23/2023	53.03%
Runoff coefficient before construction:	0.39	
Runoff coefficient after construction:	0.67	
List the areas covered by this SWPPP and the associated disturbed acreage under Lennar's control per Unit:	Unit 3A	18.50 acres
	Unit 3B See Amendment 001 – 8/23/2023	16.34 acres

SWP3 Rewrite Amendment 001
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

Total acreage to be disturbed:	69.2 acres
Total project acres:	69.2 acres
Will there be other operators conducting construction activity in this development?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Will there be other operators using this SWPPP?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

Support facility activities:

List and describe all support activities that are dedicated to serving this project, including asphalt plants, concrete batch plants, borrow pits, or other activities supporting this construction site (N/A if not applicable); associated permits located in Appendix "F"

Description:	N/A
Location:	N/A
Responsible Party:	N/A
Will this support facility activity be covered under Owner's TPDES Authorization number?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
If Yes, list the sections of the SWPPP that discuss BMPs associated with the support facility.	N/A
If No, enter the TPDES Authorization Number associated with this support activity?	TXR15
If No, describe the location of the SWPPP that covers the support facility activities	N/A

1.5 *Sediment Basin*

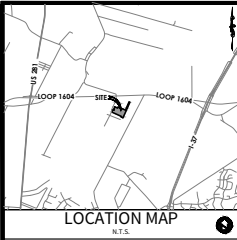
Sites With Drainage Areas of Ten or More Acres

Sedimentation Basin(s)

- a) A sedimentation basin 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 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. 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.
- b) 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.
- c) If a sedimentation basin is not feasible, then the permittee shall provide equivalent control measures until final stabilization of the site. In determining whether installing a sediment basin 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 are not feasible, and shall utilize equivalent control measures, which may include a series of smaller sediment basins.
- d) Unless infeasible, when discharging from sedimentation basins and impoundments, the permittee shall utilize outlet structures that withdraw water from the surface.

Sediment Basin Calculations:	
Will a sediment basin be used?	<input checked="checked" type="checkbox"/> YES <input type="checkbox"/> NO, a sediment basin is not required. <input type="checkbox"/> NO, it is infeasible to install a sediment basin.
If No, explain the reason(s) that it is not required or infeasible to install a sediment basin:	
If No, list the equivalent control measures that will be used:	
If Yes, enter the following information and calculations (<i>repeat chart for each sediment basin used</i>):	

Basin Name or Location:	Lot 902, Blk 8; Fire Stone & Andalusite
Total Service Area (acres) served by the drainage location. <i>Do not include offsite or stabilized areas if flows from these areas are diverted around the disturbed soil and the basin:</i>	This sedimentation pond will serve 14.26 acres
Disturbed acreage served by the drainage location:	0.87 acres
2-year, 24-hour storm event depth:	4.4 in
Basin Volume Capacity Calculations:	See attached detention pond construction plan
Required volume of basin (Calculated runoff from a 2-year, 24-hour storm event):	2.85 ac-ft
Provided volume of the Sediment Basin:	3.62 ac-ft



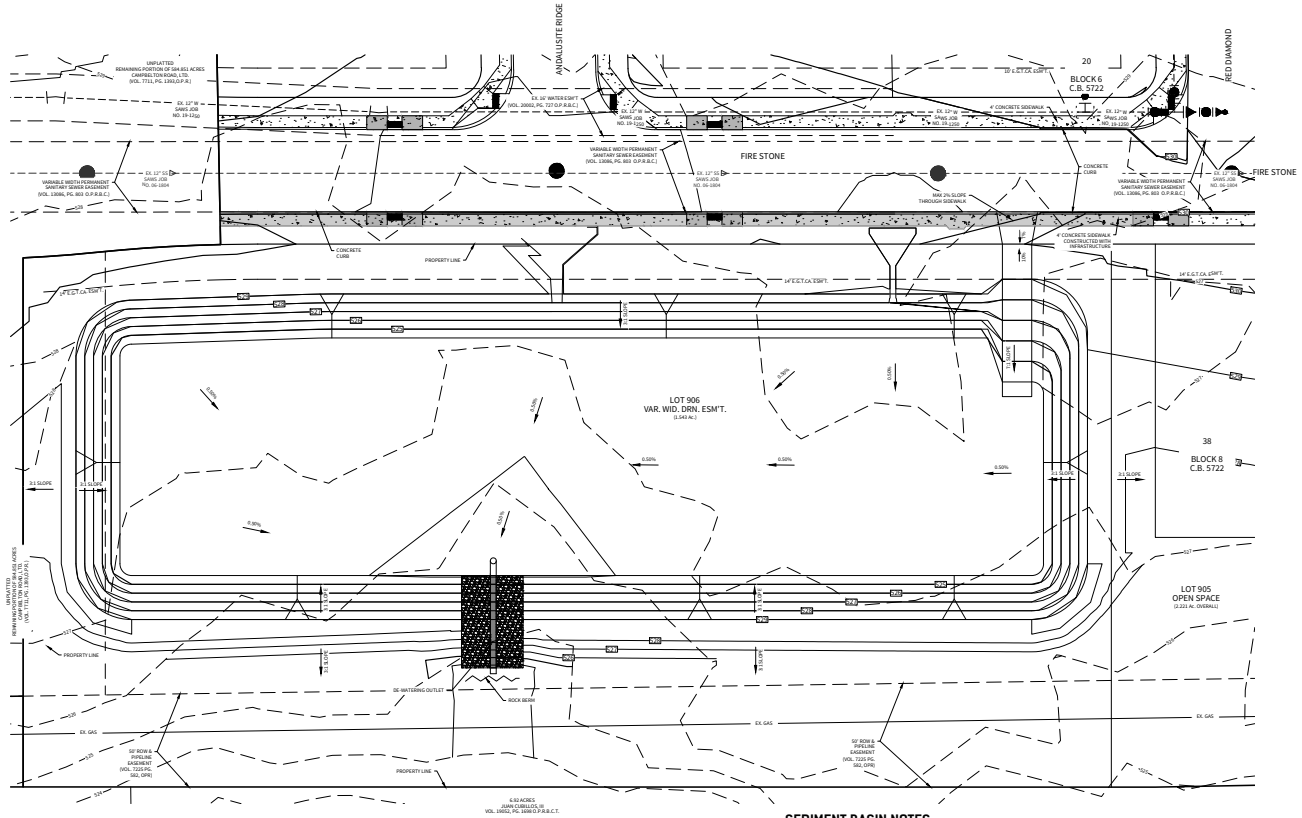
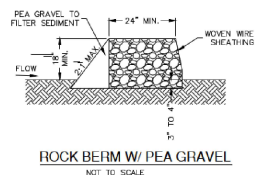
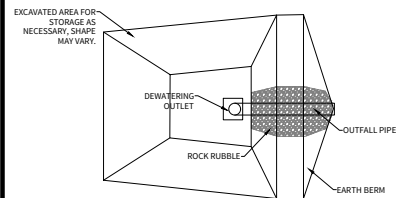
DEVELOPER:
LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.
CONTACT PERSON: RICHARD MOTT
100 NE LOOP 410, SUITE 1155
SAN ANTONIO, TX 78216
TEL: (210) 403-6200

CIVIL ENGINEER:
M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: CHRIS CHAFFEE, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112

LEGEND:

- 12% --- = EXISTING CONTOUR
- - - - - = PROPOSED CONTOUR
- - - - - = PARK VILLAGE UNIT 6 BOUNDARY
- - - - - = PROPOSED FLOW ARROW

0.50%



SEDIMENT BASIN - PLAN VIEW

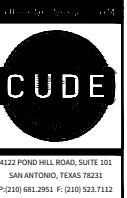
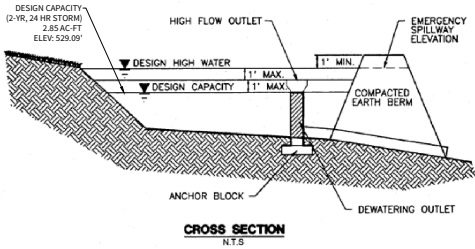
SCALE: 1" = 20'

SEDIMENT BASIN NOTES:

1. THE 48 HOUR DRAWDOWN TIME WILL BE ACHIEVED BY USING A RISER PIPE PERFORATED AT THE POINT MEASURED FROM THE BOTTOM OF THE RISER PIPE EQUAL TO 1/2 THE VOLUME OF THE BASIN. THIS IS THE MAXIMUM SEDIMENT STORAGE ELEVATION.
2. THE BASIN SHOULD INCLUDE A PERMANENT STAKE TO INDICATE THE SEDIMENT LEVEL IN THE POOL AND MARKED TO INDICATE WHEN THE SEDIMENT OCCUPIES 50% OF THE BASIN VOLUME (NOT THE TOP OF THE STAKE).
3. RISER PIPES ARE TO BE CLEARLY MARKED AND PERFORATED WITH DEWATERING HOLES AT THE MAXIMUM SEDIMENT STORAGE ELEVATION (529').
4. DEWATERING HOLES ARE TO HAVE A MINIMUM AREA (A₀) OF 0.071 SF. PERFORATING THE RISER WITH MULTIPLE HOLES WITH A COMBINED SURFACE AREA EQUAL TO A₀ IS ACCEPTABLE. HOLES ARE TO BE EVENLY SPACED AROUND THE RISER PIPE AT THE ELEVATION NOTED ABOVE.

SEDIMENT BASIN DESIGN:

BASIN DISTURBED AREA = 0.87 ACRES
DESIGN RAINFALL DEPTH = 4.4 IN (2-YR, 24 HR STORM)
SEDIMENT VOLUME REQUIRED = 2.85 AC-FT
SEDIMENT VOLUME PROVIDED = 3.62 AC-FT



RUBY CROSSING UNIT 3A

TEMPORARY SEDIMENTATION BASIN "A"

DATE
04/10/2023

PROJECT NO.
02122.205

DRAWN BY
NNR/MAS

CHECKED BY
KMH

REVISIONS	
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	

CUDE ENGINEERS
TYPE No. 455
TRPLS No. 10048500

PLAT NO.
22-11800793

EX 1

1.6 Soils, Slopes, Vegetation, and Drainage Patterns

Soil type(s):

Wilco Series

The Wilco series consists of very deep, well drained, slowly permeable soils that formed in sandy alluvium and eolian deposits over clayey residuum weathered from sandstone and shale. These soils are on nearly level to sloping paleoterraces. Slopes range from 0 to 8 percent. Mean annual precipitation is about 736 mm (29 in) and the mean annual temperature is about 22 degrees C (72 degrees F).

- Ap--0 to 15 cm (0 to 6 in); pale brown (10YR 6/3) loamy fine sand, brown (10YR 5/3) moist; single grain; loose, very friable; many fine roots; moderately acid; clear smooth boundary. (10 to 20 cm [4 to 8 in] thick)
- A--15 to 41 cm (6 to 16 in); pale brown (10YR 6/3) loamy fine sand, brown (10YR 5/3) moist; single grain; soft, very friable; many fine roots; moderately acid; abrupt wavy boundary. (15 to 30 cm [6 to 12 in] thick)
- Bt1--41 to 51 cm (16 to 20 in); brown (10YR 5/3) sandy clay, brown (10YR 4/3) moist; many medium and coarse distinct yellowish red (5YR 5/6) lithochromic mottles; moderate fine blocky structure; very hard, very firm; few fine roots; few fine pores; common clay films on faces of peds; slightly acid; gradual wavy boundary. (8 to 25 cm [3 to 10 in] thick)
- DRAINAGE AND PERMEABILITY: Well drained; slow runoff; slow permeability.

LEMING SERIES

See Amendment 001 – 9/6/2023

The Leming series consists of very deep, moderately well drained soils that formed in loamy alluvium of Pleistocene age. These nearly level to gently sloping soils are on high stream terraces. Slope ranges from 0 to 5 percent. Mean annual precipitation is about 737 mm (29 in) and the mean annual air temperature is about 21 degrees C (70 degrees F).

- A--0 to 46 cm (0 to 18 in); pale brown (10YR 6/3) loamy fine sand, brown (10YR 4/3) moist; single grained; loose; many fine roots; few worm casts; slightly acid; clear smooth boundary. (20 to 86 cm [8 to 34 in] thick)
- E1--46 to 71 cm (18 to 28 in); very pale brown (10YR 7/3) loamy fine sand, pale brown (10YR 6/3) moist; single grained; loose; common fine roots; few worm casts; slightly acid; clear wavy boundary.
- E2--71 to 79 cm (28 to 31 in); light brownish gray (10YR 6/2) loamy fine sand, grayish brown (10YR 5/2) moist; single grained; loose; common fine roots; few faint yellowish brown masses of oxidized iron; few worm casts; slightly acid, abrupt wavy boundary. (combined thickness of E subhorizons is 15 to 51 cm [6 to 20 in])
- DRAINAGE AND PERMEABILITY: Moderately well drained. Permeability is slow. Runoff is low on slopes less than 1 percent and medium on 1 to 5 percent slopes. A perched water table exists above the Bt horizons for approximately 4 to 12 weeks during the wettest 1 to 3 years out of 10. This soil does not have aquic conditions in most years.

Unit(s)	Soil(s) Associated with Unit
Unit 3A	Wilco Series
Unit 3B See Amendment 001 – 9/6/2023	Wilco and Leming Series

Slopes:

Unit 3A	3% to 5%
Unit 3B See Amendment 001 – 9/6/2023	3% to 5%

Vegetation: Existing vegetation on the site consists of native grasses and trees.

Description of drainage system:

The drainage system in this development consists of concrete streets, curbs, and gutters, which convey stormwater to storm sewer inlets, into the underground storm sewer system that drain engineered drainage channels which discharge into an onsite detention pond.

Unit 3A

Pre-construction Drainage Patterns:

Stormwater sheet flows over property that drains primarily towards the east (prior to grading).

Post-construction Drainage Patterns:

Stormwater from this Unit flows east through the underground storm sewer system to an outfall with a riprap velocity dissipation device and into a dry detention pond to the east of the development, and then outfalls into the receiving waters.

Run on is not anticipated for this Unit.

Unit 3B

See Amendment 001 – 9/6/2023

Pre-construction Drainage Patterns:

Stormwater sheet flows over property that drains primarily towards the southeast (prior to grading).

Post-construction Drainage Patterns:

Stormwater from this Unit flows east through the underground storm sewer system to an outfall with a riprap velocity dissipation device and into a dry detention pond located in Unit 3A, and then outfalls into the receiving waters.

Run on is not anticipated for this Unit.

Floodplain:

Unit 3A	No portion of the site is within the 100-year floodplain.
Unit 3B See Amendment 001 – 9/6/2023	No portion of the site is within the 100-year floodplain.

1.7 Receiving Waters / Impaired Waters / TMDL

Description of receiving waters:

The receiving water at or near the site that may be disturbed or may receive discharges from the disturbed areas of this development is: SegID: 1903 Medina River Below Medina Diversion Lake

Stormwater discharges from the eastern side of the detention pond then sheet flows into an unnamed tributary to the east of the development. The unnamed tributary drains north under S Loop 1604 E through pastureland then confluences with Medina River Below Medina Diversion Lake.

Medina River Below Medina Diversion Lake is approximately 2.48 mile north of the development.

Description of impaired waters:

Is the receiving water listed on the 2022 Texas Integrated Report Index of Water Quality Impairments?

☒ YES ☐ NO

If yes, the pollutants associated with the impaired water body are:

Segment ID	Segment Name	AU ID	Parameter	Category	Carry Forward
1903	Medina River Below Medina Diversion Lake	1903_01	Bacteria in water (Recreation Use)	5c	N
		1903_02	Bacteria in water (Recreation Use)	5c	N
		1903_03	Bacteria in water (Recreation Use)	5c	N

Is the receiving water body a 303(d) listed water body?

☒ YES ☐ NO

If yes, the pollutants associated with the 303(d) water body are:

Segment ID	Segment Name	AU ID	Impairment Description	Year First Listed	Impairment Category
1903	Medina River Below Medina Diversion Lake	1903_01	Bacteria in water (Recreation Use)	2010	5c
		1903_02	Bacteria in water (Recreation Use)	2010	5c
		1903_03	Bacteria in water (Recreation Use)	2010	5c

Total Maximum Daily Load (TMDL) Requirements

Does this receiving water(s) for this site have an existing TMDL and I-Plan?

☐ YES ☒ NO

If yes, are additional BMPs required in order to be consistent with any applicable condition, goal, or requirement in the TMDL?

☐ YES, the additional BMPs required include:

☐ NO, the requirements of the Construction General Permit, and the BMPs listed in this SWPPP are adequate to be consistent with the TMDL.

☒ N/A

Does the receiving water(s) for this site have a TMDL under development?

☐ YES ☒ NO

Waterbody Name	Waterbody ID	Most Current Data Available	Location	Map	Waterbody Type	Size	Unit	Status	State TMDL Development Status
<u>Medina River Below Medina Diversion Lake</u>	TX-1903_02	2014	From 5 Mi Upstream Of San Antonio River To 1.5 Mi Upstream Of Leon Creek	Waterbody Map	Freshwater Stream	4.3	Miles	Impaired	TMDL needed

1.8 *Endangered or Threatened Species*

Are there any endangered or threatened species and critical habitats that will be impacted by construction activity at the site?

☐ YES ☒ NO

If yes, describe the species and/or critical habitat (per information provided by the developer) and any BMPs applicable to protecting critical habitat: N/A

1.9 Historic Preservation

Are there any historic sites that will be impacted by construction activity at the site?

☐ YES ☒ NO

Describe how this determination was made: National Registration of Historic Places

If yes, describe the location of the historic site in relation to the construction site:

If yes, are additional BMPs required in order to minimize impacts to the historical site by construction activity at this site?

☐ YES Additional BMPs required:

☐ NO, the requirements of the Construction General Permit, and the BMPs listed in this SWPPP are adequate to minimize impacts.

1.10 *Applicable Federal, Tribal, State or Local Programs*

Tribal: This site is not located in an area where separate Tribal Requirements may apply. Therefore, no additional stormwater management controls are required to minimize the effects of stormwater runoff to affected areas. There are no Tribal properties that fall under the Tribal Requirements for the State of Texas.

Local Regulations-Municipal Separate Storm Sewer System (MS4) Operator:

The following local regulations, ordinances and requirements have been included for reference and are not intended to be enforceable by federal governments but may be enforceable by state governments. (Local Qualified or State Delegated Programs). The local requirements are provided herein to assist in maintaining the SWPPPs consistency with local requirements for soil and erosion control and stormwater management. These local requirements will be updated to include changes or additional requirements during the period of coverage under the CGP. Copies of the applicable ordinances or local regulations are included in Appendix "M" of this SWPPP. The complete ordinances can be found on the respective regulatory agency's website.

The site is located in the Bexar County MS4.

The following sections of the Bexar County Code of Ordinances were taken into consideration in the development of this SWPPP:

Bexar County Regulations For Storm Water Pollution Prevention

Part II. E. 3 (d) of the TXR150000 Construction General Permit requires that all primary operators must (1) provide a copy of the signed NOI to the operator of any MS4 receiving the discharge, and (2) list in the SWPPP the names and addresses of all MS4 operators receiving a copy. The TCEQ Notice of Intent for each operator for this site shall be submitted to the MS4 at the mailing address or email address below. A copy of the cover letter and return receipt or printed email correspondence is located under Appendix "D": NOI/NOC/NOT.

Land Development projects must apply and obtain a Bexar County SWPPP Permit and Bexar County Post Construction Permit prior to commencement of construction activities. A copy of the Land Development SWPPP must be submitted along with a Permit Application to the Bexar County Storm Water Team for review and approval.

Copies of these permits are included in Appendix M.

MS4 ADDRESS:

Bexar County
Infrastructure Services Department
1948 Probandt
San Antonio, TX 78214
(210) 335-6700
swq@bexar.org

1.11 Site Features and Sensitive Areas to be Protected

Sensitive areas located on site that must be protected include: N/A

Description of measures to protect these features: N/A

Edwards Aquifer:

Does site discharge to the Edwards Aquifer Recharge Zone: ☐ YES ☒ NO

Does site discharge to the Edwards Aquifer Contributing Zone: ☐ YES ☒ NO

If yes, a copy of the Edwards Aquifer Protection Plan (EAPP), which may include a Water Pollution Abatement Plan (WPAP) or a Contributing Zone Plan (CZP) will be kept onsite and the approval letter will be placed in Appendix "L".

This SWPPP includes all provisions and BMPs necessary to meet the requirements of the EAPP for this development.

For discharges located within ten 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

1.12 Potential Sources of Pollution

Table #1: Potential sources of sediment to stormwater runoff (Check if pollutant applies to site):

- ☒ Installation of Sediment and Erosion Controls
- ☒ Vehicle Tracking
- ☒ Grading Operations
- ☒ Exposed Soils and Slopes
- ☒ Import/Export Operations
- ☒ Utility Excavation Operations
- ☒ Landscaping Operations
- ☒ Topsoil Stripping and Stockpiling
- ☒ Fine Grading of Lots
- ☐ Other:

Table #2: Construction Activities associated with Pollutants: (Check if pollutant applies to site and update the list as necessary):

Activity Type		Pollutant	Visually Observable
Soil Disturbance:			
<input checked="" type="checkbox"/>	Clear & Grub	Sediment and organics	Cloudy to opaque
<input checked="" type="checkbox"/>	Remove and Re-compact	Sediment	Cloudy to opaque
<input checked="" type="checkbox"/>	Fine Grading	Sediment	Cloudy to opaque
<input checked="" type="checkbox"/>	Trenching	Sediment	Cloudy to opaque
<input checked="" type="checkbox"/>	Stockpiling	Sediment	Cloudy to opaque
Asphalt:			
<input checked="" type="checkbox"/>	Street Construction	Hydrocarbons	Oily sheen
<input checked="" type="checkbox"/>	Street Improvements	Hydrocarbons	Oily sheen
<input checked="" type="checkbox"/>	Street Demolition	Hydrocarbons	Oily sheen
Concrete Laden Liquid:			
<input checked="" type="checkbox"/>	Curb & Gutter	pH	Cloudy to Milky
<input checked="" type="checkbox"/>	Sidewalks	pH	Cloudy to Milky
<input checked="" type="checkbox"/>	Foundations	pH	Cloudy to Milky
<input checked="" type="checkbox"/>	Driveways	pH	Cloudy to Milky
<input checked="" type="checkbox"/>	Medians	pH	Cloudy to Milky
<input type="checkbox"/>	Stuccoing	pH	Cloudy to Milky
<input checked="" type="checkbox"/>	Grouting	pH	Cloudy to Milky
<input checked="" type="checkbox"/>	Washouts/Clean up	pH	Cloudy to Milky
General:			
<input type="checkbox"/>	Framing	Sawdust	Yes
<input type="checkbox"/>	Painting	Paint (when wet)	Yes
<input type="checkbox"/>	Dry Walling	Gypsum/Joint Compound	Yes
<input type="checkbox"/>	Tiling	Ceramic dust	Yes
<input type="checkbox"/>	Cabinet Building/Installing	Sawdust	Yes
<input type="checkbox"/>	Plumbing	PVC Glue (when wet)/Plastic	Yes
<input type="checkbox"/>	Wiring/Electrical Utilities	Copper/Plastic/Metals	Yes
<input type="checkbox"/>	Heating/Air Conditioning	Sheet metal/fiberglass wool	Yes

SWP3 Rewrite Amendment 001
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

Activity Type		Pollutant	Visually Observable
<input checked="" type="checkbox"/>	Landscaping	Containers/mulch/soil	Yes

	<u>Equipment Type</u>		<u>Equipment Type</u>
<input checked="" type="checkbox"/>	Backhoe loader(s)	<input checked="" type="checkbox"/>	Fork & Rough-terrain lifts (Pettibone)
<input checked="" type="checkbox"/>	Water truck(s)	<input checked="" type="checkbox"/>	Generator(s)
<input checked="" type="checkbox"/>	Scraper(s)	<input checked="" type="checkbox"/>	Concrete boom pumps
<input checked="" type="checkbox"/>	Loader(s)	<input checked="" type="checkbox"/>	Concrete pumps
<input checked="" type="checkbox"/>	Bull dozer(s)	<input checked="" type="checkbox"/>	Asphalt planer / grinder
<input checked="" type="checkbox"/>	Motor-grader	<input checked="" type="checkbox"/>	Asphalt paving machine
<input checked="" type="checkbox"/>	Excavator(s) / Track hoe(s)	<input checked="" type="checkbox"/>	Street striping equipment
<input checked="" type="checkbox"/>	Dump trucks (10-wheel)	<input checked="" type="checkbox"/>	Building material delivery trucks
<input checked="" type="checkbox"/>	Belly/Bottom dumps (tractor/trailer)	<input checked="" type="checkbox"/>	Personal cars and light trucks
<input checked="" type="checkbox"/>	Tractor: skip loader	<input checked="" type="checkbox"/>	Waste hauling trucks
<input checked="" type="checkbox"/>	Skid steer loaders (Bobcat)	<input checked="" type="checkbox"/>	Trencher(s)
<input checked="" type="checkbox"/>	Concrete delivery trucks	<input type="checkbox"/>	Stucco/Plaster spray pumps
<input checked="" type="checkbox"/>	Portable concrete mixers	<input type="checkbox"/>	Spray paint equipment (airless)
<input checked="" type="checkbox"/>	Compaction equipment	<input type="checkbox"/>	Other

Table #3: Potential Construction Site Pollutants (Check if pollutant applies to site):

YES	Pollutant	Constituent	Visually Observable	Typical Location
Asphalt Products				
<input checked="" type="checkbox"/>	Hot Asphalt	Hydrocarbons- liquid or solid	Yes- Black material, Rainbow surface Brown suspension	Streets, Material storage
<input checked="" type="checkbox"/>	Asphalt Emulsion	Hydrocarbons- liquid or solid	Yes- Black material, Rainbow surface Brown suspension	Streets, Material storage
<input type="checkbox"/>	Cold Mix	Hydrocarbons- liquid or solid	Yes- Black material, Rainbow surface Brown suspension	Streets, Material storage
<input type="checkbox"/>	Crumb Rubber	Hydrocarbons- liquid or solid	Yes- Black material, Rainbow surface Brown suspension	Streets, Material storage
<input type="checkbox"/>	Asphalt Concrete	Hydrocarbons- liquid or solid	Yes- Black material, Rainbow surface Brown suspension	Streets, Material storage

YES	Pollutant	Constituent	Visually Observable	Typical Location
Cleaning Products				
<input checked="" type="checkbox"/>	Detergents	Suds, foam, froth	Yes	All areas
<input checked="" type="checkbox"/>	Solvents	VOC, SVOC	No	Staging areas, Material Storage
<input checked="" type="checkbox"/>	Acids	Acids, - pH	No	All areas
<input checked="" type="checkbox"/>	Bleaches	Residual Chlorine	No	Material Storage
<input checked="" type="checkbox"/>	TSP	Phosphate	No	Material Storage
Vehicle				
<input checked="" type="checkbox"/>	Batteries	Sulfuric acid, Lead, pH	No	Staging, streets, and material storage areas
<input checked="" type="checkbox"/>	Diesel Fuel	Petroleum distillates, naphthalene, xylene	Yes- Sheen/Stain	Staging, streets, and material storage areas
<input checked="" type="checkbox"/>	Gasoline	Benzene, toluene, xylene, MTBE	Yes- Sheen/Stain	Staging, streets, and material storage areas
<input checked="" type="checkbox"/>	Hydraulic Oil	Mineral oil, trace additives	Yes- Sheen/Stain	Staging, streets, and material storage areas
<input checked="" type="checkbox"/>	Engine Oil	Mineral oil, additives, combustion byproducts	Yes- Sheen/Stain	Staging, streets, and material storage areas
<input checked="" type="checkbox"/>	Transmission Oil	Mineral oil, trace additives	Yes- Sheen/Stain	Staging, streets, and material storage areas
<input checked="" type="checkbox"/>	Engine Coolant	Ethylene and propylene glycol, heavy metals	Yes- Green/red liquid/stain	Staging, streets, and material storage areas
<input checked="" type="checkbox"/>	Grease	Petroleum hydrocarbons	Yes- Sheen/Stain	Staging, streets, and material storage areas
<input type="checkbox"/>	Kerosene	Petroleum hydrocarbons	Yes- Sheen/Stain	Staging, streets, and material storage areas
Landscaping and Other Products				
<input checked="" type="checkbox"/>	Fertilizer-in-organic	Nitrate, Phosphate, Organic Nitrogen, Potassium	No	Material storage area Landscaping Activities
<input checked="" type="checkbox"/>	Fertilizers organic	TOC, Nitrate, Organic Nitrogen, COD	No	Material storage area Landscaping Activities
<input checked="" type="checkbox"/>	Lime	Alkalinity, pH	No	Material storage area Landscaping Activities
<input checked="" type="checkbox"/>	Pesticide	Check lab for specific pesticide	No	Material storage area Landscaping activities
<input checked="" type="checkbox"/>	Herbicide	Check lab for specific herbicide	No	Material storage area Landscaping activities
<input checked="" type="checkbox"/>	Natural Earth	Sand, Gravel, and Top Soil	Yes- Cloudiness and turbidity	Material storage area Landscaping Activities
Portland Concrete Cement and Masonry Products				
<input checked="" type="checkbox"/>	Concrete (wet)	Fly ash, heavy metals, Portland cement	Yes- White solid, milky liquid	Streets & building pads
<input checked="" type="checkbox"/>	Concrete coring slurry	Turbidity and pH	Yes- Gray liquid	Streets
<input checked="" type="checkbox"/>	Concrete sawing slurry	Turbidity and pH	Yes- Gray liquid	Streets
<input checked="" type="checkbox"/>	Portland Cement (PCC)	Aluminum calcium iron oxide, calcium sulfate pH	Yes -Gray powder	Material Storage Areas, Streets
<input checked="" type="checkbox"/>	Sealant	Methyl Methacrylate, Cobalt, Zinc	No	Material Storage Areas, Streets

YES	Pollutant	Constituent	Visually Observable	Typical Location
<input checked="" type="checkbox"/>	Concrete rinse water	pH	Yes- Milky liquid	Streets, Drainage Structures, Concrete Truck Washout, Concrete Rinse Water
<input checked="" type="checkbox"/>	Masonry Products	pH, Alkalinity	No	Material Storage Areas, Streets
<input checked="" type="checkbox"/>	Curing Compounds	Glass Oxide, urea extended phenol	Yes- Creamy white	Material Storage Areas, Streets
<input checked="" type="checkbox"/>	Non-pigmented curing compounds	Acidity, alkalinity, pH, VOC, SVOC	No	Material Storage Areas, Streets
<input checked="" type="checkbox"/>	Grout	Silica sand, Portland cement	Yes- White powder	Landscaping Activities
<input type="checkbox"/>	Drywall joint compound	Pigment, vinyl acetate	Yes- White putty	
Painting Products				
<input checked="" type="checkbox"/>	Paint	Ethylene glycol, titanium oxide, VOC	Yes- Colored liquid	Material Storage Area, Railings, Streets
<input checked="" type="checkbox"/>	Paint strippers	VOC, SVOC	No	Material Storage Area
<input checked="" type="checkbox"/>	Lacquers, Varnish, Enamels, Turpentine	COD, VOC, SVOC	No	Material Storage Area
<input checked="" type="checkbox"/>	Thinners	VOC, COD	No	Material Storage Area
<input checked="" type="checkbox"/>	Sealers	Diacetone alcohol, COD	No	Material Storage Area, Streets
<input checked="" type="checkbox"/>	Solvents	COD, VOC, SVOC	NO	Material Storage Area, Streets
Soil Amendments/Stabilization Products				
<input checked="" type="checkbox"/>	Polymer/copolymer	BOD, COD, DOC, Nitrate, Sulfate, Nickel	No	Landscaping Activities, Material Storage, runoff from treated areas
<input checked="" type="checkbox"/>	Straw/mulch	Solids	Yes	Landscaping Activities, material storage, runoff from treated areas
<input checked="" type="checkbox"/>	Lignon Sulfonate	Alkalinity, TDS	No	Landscaping Activities, material storage, runoff from treated areas
<input checked="" type="checkbox"/>	Psyllium	COD, TOC	No	Landscaping Activities, material storage, runoff from treated areas
<input checked="" type="checkbox"/>	Guar/Plant Gums	COD.TOC, Nickel	No	Landscaping Activities, material storage, runoff from treated areas
<input checked="" type="checkbox"/>	Gypsum	Ph, Calcium. Sulfate, Aluminum, Barium, Manganese, Vanadium	No	Landscaping Activities, material storage, runoff from treated areas

Dust Palliative Products				
<input checked="" type="checkbox"/>		Salts (Magnesium Chloride, Calcium Chloride, and natural Brines)	No	All areas
Treated Wood Products				
<input checked="" type="checkbox"/>	Wolmanized Natural Select™ (Copper Azole), Preserve and NatureWood® (ACQ), MicroPro™, Smart Sense™ (MCQ), and Advance Guard® (Borate).)	Copper , Arsenic, Zinc, Chromium	No	Material Storage
<input checked="" type="checkbox"/>	Creosote	Rainbow Surface or Brown Suspension	Yes	All areas
Other Pollutants				
<input checked="" type="checkbox"/>	Adhesives	Cod, Phenols , SVOC	No	Material Storage
<input checked="" type="checkbox"/>	Animal Waste	Solids	Yes	All areas
<input checked="" type="checkbox"/>	Human Sanitary Waste	Solids & Liquids	Yes	Sanitation Facilities (portable toilets)
<input checked="" type="checkbox"/>	Hydro-testing/flushing	Chlorine, turbidity	Chlorine is not visible	All areas
<input checked="" type="checkbox"/>	Sediment	Soil, Turbidity, dust	Yes- Muddy, dusty,	All areas
<input checked="" type="checkbox"/>	Vegetation	Organic matter	Yes	All areas
<input checked="" type="checkbox"/>	Solid Waste	Floatable and blowable trash and debris	Yes	All areas
<input type="checkbox"/>	Tile	Solids	Yes	Material Storage Areas
<input checked="" type="checkbox"/>	Contaminated Soils	Petroleum	Yes- rainbow surface, sheen and odor	All areas
<input checked="" type="checkbox"/>	Portable Toilet Waste	Bacteria, organic waste, disinfectant	Yes, colored liquid and solids	Staging areas & all construction areas
<input type="checkbox"/>	Historic Land Use contaminants (if applicable)			

1.13 Allowable Non-Stormwater Discharges

The non-stormwater discharges that are authorized by the Construction General Permit TXR150000 are as follows:

- 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, and similar activities)
- Uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first de-chlorinated 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);
- Water from the routine washing of vehicles, the external portion of buildings or structures, and pavement, where detergents and soaps are not used and 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), where pressure washing is not conducted, and where the purpose is to remove mud, dirt, or dust;
- Water used to control dust;
- Potable water sources including waterline flushings (excluding discharges of hyper-chlorinated water, unless the water is first de-chlorinated and discharges are not expected to adversely affect aquatic life);
- Uncontaminated air conditioning condensate;
- Uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents; and Lawn watering and similar irrigation drainage.

The allowable non-stormwater discharges that may occur at this site and the associated BMPs are as follows: (Refer to Section 2 for specific BMP specification sheets)

Potable Water Sources

BMP Description: Do not allow hoses or irrigation lines to run unchecked. Shut off water or use a nozzle to stop the flow of water when not needed. Maintain back of curb protection and inlet protection as the best management practice to control the discharge of pollutants.

<i>Responsible Staff</i>	The General Contractor managing the potable water source is responsible to implement BMPs for potable water sources.
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Fire Hydrant Flushings

BMP Description: Fire hydrant and water line flushings will be directed away from disturbed soil, allowed to flow along the paved curb and gutter system, and toward storm sewer inlets with inlet protection in place. (See BMP S8 – S8.4) The water being discharged from water line flushings typically does not contain chlorine at levels above that which are safe for drinking, therefore de-chlorination would not typically be necessary. If disinfection by hyperchlorination is necessary, however, the water line flushings will be de-chlorinated by either injecting sodium dioxide (de-chlor) into the water line near the discharge point, or by mixing sodium dioxide in powder form at the discharge location. De-chlorinating the water line flushings is the responsibility of the General Contractor / Operator conducting the water line flushing.

<i>Responsible Staff</i>	The General Contractor conducting the hydrant flushing is responsible to implement BMPs.
--------------------------	--

Water from the routine washing of the external portion of buildings or structures, and pavement

BMP Description: Surfaces to be washed will be scraped or broomed clean prior to applying water. The minimum amount of water will be used to minimize the non-stormwater discharges. Wash water will be directed to adequate sediment controls, such as vegetated areas, inlet protection, silt fences, rock berms, or sediment ponds. (See BMPs EC4, S1, S3, S5, S6, S7, S8 – S8-4, PC2)

<i>Responsible Staff:</i>	The General Contractor or subcontractor conducting the washing of buildings, structures or pavement is responsible to implement BMPs.
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Water used to control dust

BMP Description: Water for dust control will be applied at the minimum rate to adequately control fugitive dust while minimizing runoff, and will be conducted in a location with vegetated buffers or adequate sediment controls, such as silt fences, rock berms, or a sediment pond, are in place down-stream. (BMP NS2)

<i>Responsible Staff:</i>	The General Contractor or subcontractor conducting the construction activity or with operational control of the area where dust control measures are being implemented.
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Uncontaminated ground water or spring water

BMP Description: If necessary, ground water will be discharged using one or more of several BMPs prior to discharge including using a water pump gravity bag filter, discharging to a large vegetated area, directing discharges to in-place sediment controls such as vegetated buffers, silt fences, rock berms, or to a sediment pond. (BMP PC2)

<i>Responsible Staff:</i>	The General Contractor or subcontractor conducting the dewatering is responsible to implement BMPs.
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Lawn watering and similar irrigation drainage

BMP Description: Lawn watering and similar irrigation will be conducted in a manner to minimize overspray onto paved or concrete surfaces. The time and volume of water applied will be limited so as to provide sufficient infiltration, but to minimize erosion.

<i>Responsible Staff:</i>	The General Contractor or subcontractor conducting the irrigation is responsible to implement BMPs.
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All practicable efforts shall be made to minimize or eliminate non-stormwater discharges. Onsite representatives of each operator shall observe the development for non-stormwater discharges and activities with a potential to cause a non-stormwater discharge as part of their routine day-to-day activities and implement measures to minimize impacts to stormwater by having the discharges directed to sediment and erosion control structures prior to discharge.

The Operator that generates the non-stormwater discharge or the potential for a non-stormwater discharge is responsible for implementation, maintenance, and management of the appropriate controls associated with the discharge.

1.14 Prohibited Discharges

The following discharges are prohibited:

- (a) Wastewater from wash out of concrete trucks, unless managed by appropriate controls;
- (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; and
- (d) Soaps or solvents used in vehicle and equipment washing.
- (e) Toxic or hazardous substances from a spill or other release.

1.15 *Past Land Uses*

This site has primarily been used for agricultural purposes.

Are there any known contaminations on site from previous land uses or operations?

☐ YES ☒ NO

1.16 Amendments to the SWPPP

The project site and activities are dynamic and continually undergoing change. The very nature of construction is to transform one set of conditions into another and does this through on-going changes. As such, the storm water pollution prevention plan must be flexible and evolve with the project. As conditions change and necessitate the need for SWPPP revisions, the SWPPP will be updated and amended by the SWPPP preparer to address these changes.

The SWPPP must be modified based on the results of inspections, as necessary, to better control pollutants in runoff. Revisions to the SWPPP must be completed within 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 SWPPP 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.

The SWPPP must be modified when:

- A change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants and that has not be previously addressed in the SWPPP;
- Changing site conditions based on updated plans and specifications, new operators, new areas of responsibility, and changes in BMPs;
- Result of inspections or investigations by site operators, operators of a municipal separate storm sewer system (MS4) receiving the discharge, authorized TCEQ personnel, or federal, state or local agency approving sediment and erosion plans indicate the SWPPP is proving ineffective in eliminating or significantly minimizing pollutants in discharges authorized under this general permit.
- The permittee receives written notice of changes applicable to protecting surface water resources in sediment and erosion control site plans or site permits, stormwater management site plans, or site permits approved by state or local officials.

Amendments to the SWPPP will be ordered by Lennar Homes of Texas Land and Construction, Ltd., prepared by the SWPPP preparer listed in Section 1.1, documented on the amendment form; and tracked on the amendment log both contained in Appendix "E". The forms are to be filled out completely, documenting the reason for the amendment and how it modifies current conditions. The amendment form shall be signed in accordance with 30 TAC §305.144 (relating to Signatories to Reports), or by a Duly Authorized Representative (DAR) pursuant to 30 TAC §305.128. See Section 4.4 for a list of the delegated Duly Authorized Representatives (DARs) and Appendix "I" for copies of the Delegation of Signatory form authorizing the DAR to sign documents

When making an amendment to the SWPPP document:

1. Add a very brief description of the amendment to the Amendment Log and assign an amendment number.
2. Cross out the old information in the SWPPP that is being amended (do not throw anything away).
3. Make the necessary change by writing in the new information, inserting the new page(s), adding the revised text/chart.
4. Label the changes with the corresponding amendment number and a brief description of what changed.
5. Complete the amendment form documenting the reason for the amendment and how it modifies SWPPP. Include the amendment number on the amendment form.
6. Place the amendment form and any associated documents in the applicable sections of the SWPPP.
7. If an entire page has been replaced with a new page through amendment, cross out the old page and place it in Appendix "O." Appendix "O" contains pages of the SWPPP that have been replaced through amendments. These pages are not current and are included for reference only.

SECTION 2: BEST MANAGEMENT PRATICES

See Amendment 001 – 9/6/2023

This section describes practices that will be implemented to minimize or control potential pollutants in stormwater discharges and the timing of their installation. Best Management Practices (BMPs) may either be structural or nonstructural in nature. Structural BMPs are physical measures designed to minimize impacts to stormwater runoff by functioning mechanically to minimize erosion, sediment, and pollutant discharges. These erosion and sediment controls may be temporarily used during construction only and removed after stabilization has been achieved, or they may be permanent, designed to remain in place after construction is complete. Nonstructural BMPs are processes and practices implemented to minimize the potential for pollutant discharge during and after construction. This SWPPP is designed to implement an effective combination of both structural and nonstructural BMPs to minimize impacts to stormwater runoff during construction activities.

Construction Activity and BMP Description

Listed below are the major construction activities for each project, the BMPs associated with each activity, and the general timing of their implementation. The dates of major grading activities, specific timing for each construction activity will be identified on the “BMP Tracking Map” in Appendix “B”.

The operator responsible for implementing each BMP will be identified on the “Operator Information and Responsibilities” form for the associated construction activity in Appendix “G”: Additional Operator Information and Responsibilities

Sequence of Major Land Development Activities

Unit 3A Land Development Construction Activities			
No.	Sequence of Construction Activities	Estimat ed Start Date	Duration (in Days)
1.	Clearing and grubbing the entire site		
2.	Rough grade of sediment basin / detention basin, lots, and street.		
3.	Installation of sanitary sewer, water, storm sewer and dry utilities (electric, phone, communications)		
4.	Installation of pavement base material, concrete curb and asphalt pavement		
5.	Landscape/Hardscape/Sidewalks/Monuments		

Unit 3B Land Development Construction Activities

See Amendment 001 – 9/6/2023

No.	Sequence of Construction Activities	Estimated Start Date	Duration (in Days)
1.	Clearing and grubbing the entire site		
2.	Rough grade of lots and street.		
3.	Installation of sanitary sewer, water, storm sewer and dry utilities (electric, phone, communications)		
4.	Installation of pavement base material, concrete curb and asphalt pavement		
5.	Landscape/Hardscape/Sidewalks/Monuments		

The General Contractor will file a Notice of Termination after all the above work is complete. Lennar activities will continue under this permit number for home building purposes.

General timing of installation of associated BMPs:

The items below apply to all construction activities, shall be installed or maintained prior to commencing construction, and apply at all times from initial mobilization onto the development through acceptance of the Notice of Termination.

1. Conduct pre-construction meeting with General Contractor / Operator responsible for this construction activity and assign SWPPP responsibility. (See "Operator Responsibilities" page that corresponds to the General Contractor / Operator's construction activity in Appendix "G")
2. Established equipment and material storage area (BMP M2)
3. Cleaning, washing or maintenance of construction equipment or vehicles is not allowed on site. (BMPs M1 & M2)
4. Minimize tracking of sediment offsite and provide street cleaning as necessary (BMP Ns4)
5. Prevent and manage spills of stored substances per the spill response plan. (Section 3.1 & BMPs M1 & M2) Keep a spill kit on site during land development.
6. Install and maintain temporary sanitary facilities (portable toilets) for workforce on dirt and away from water courses and inlets. (BMP WM2)
7. Install and maintain trash and debris containment, such as dumpsters, trash pens, or barrels. (BMP WM3)
8. Minimize the exposure of waste materials to storm water. If the waste containers have lids, the lids must be closed at the end of each workday. 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 container should be covered to minimize exposure of waste to precipitation. Appropriate methods include the use of a tarp, plastic sheeting, temporary roof, placing waste in a location with a roof such as inside the garage of a home, or a similarly effective means to minimize discharge of a waste stream, such as providing secondary containment. Install and maintain equipment and material storage areas where materials will be stored on disturbed soils. (BMPs M1 & M2)
9. Provide dust control. (BMP NS2)
10. Prevent discharges from waste disposal containers to the stormwater drainage system or receiving water. (BMP WM3)
11. Conduct proper equipment and vehicle fueling and maintenance procedures. (BMP F)
12. When making saw-cuts in pavement, use as little water as possible. Contain the slurry by placing sand or gravel bags downgradient of the sawcut activity or around the downgradient inlets. After the liquid evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove from site. (BMP WM4)
13. Implement material handling BMPs for all hazardous and non-hazardous materials being used. (BMP M1)
14. Implement measures to control all non-stormwater discharges during construction.
15. Implement spill prevention and control BMPs. (Section 3.1)
16. Properly manage and contain trash and waste material at all times (WM1, WM3)
17. Initiate temporary or permanent stabilization on all areas where construction activity will cease for at least 14 days. (BMPs EC1 – EC7)

Unit 3A Land Development – BMP Implementation

Clearing and grubbing the entire site

1. Install and/or Maintain Stabilized Construction Exits for the site. (BMP S4)
2. Clear only enough areas to install the first set of erosion and sediment controls required for the specific construction activity.
3. Install perimeter silt fences downgradient of construction activity on areas indicated on the site map. (BMP S1)
4. Preserve native topsoil at the site, unless infeasible.
5. Begin overall site clearing, grubbing and topsoil stripping and stockpiling.
6. Begin clearing vegetation and trees.
7. Establish topsoil stockpiles and stabilize with erosion controls if activity will cease on the stockpile for more than 14 days. (BMP M3)
8. Initiate temporary or permanent stabilization on all areas where construction activity will cease for at least 14 days. (BMPs EC2)
9. All temporary erosion and sediment controls are to remain in place or be replaced with an alternative control until the up-gradient areas are stabilized.
10. Temporary erosion and sediment controls may remain in place for use during subsequent construction activity or may be removed after stabilization is achieved.

Rough grade of Rough Grade of Temporary Sediment Basin, Detention Pond lots, and street.

1. Install and/or Maintain Stabilized Construction Exits for the site. (BMP S4)
2. If not already cleared, clear only enough areas to install the first set of erosion and sediment controls required for the specific construction activity.
3. Install or verify previous installation of perimeter silt fences downgradient of construction activity on areas indicated on the site map. (BMP S1)
4. Construct Temporary Sediment Basin and Detention Pond using borrow and fill locations as indicated on the site map. (BMP S16 - Temporary Sediment Basin / PCA – Stormwater Detention Structure)
5. Install Gravel Bag Berm / Rock Berms / Check Dams at down gradient discharge points of Temporary Sediment Basin and Detention Pond, (BMP S15 - Gravel Bag Berm / BMP S7 - Rock Berms / Check Dams)
6. Install slope protection on final graded slopes of Temporary Sediment Basin and Detention Pond (BMP EC4 - Erosion Control Blanket (i.e. "Curlex"))
7. Install velocity dissipation devices at outfall of Detention Pond, Temporary Sediment Basin and Detention Pond.
8. If concrete is being installed, establish concrete washout area per the concrete washout specification (BMP S9).
9. Implement BMPs for dewatering operations if applicable. (BMP NS4)
10. Perform earthwork on lots and streets.
11. Minimize soil compaction in post-construction pervious areas unless infeasible.
12. Initiate temporary or permanent stabilization on all areas where construction activity will cease for at least 14 days. (BMPs EC2)
13. Install stockpile containment as needed (BMP M3) and stabilize with erosion controls if activity will cease on the stockpile for more than 14 days.

Installation of sanitary sewer, water, storm sewer and dry utilities (electric, phone, communications)

1. Install and/or Maintain Stabilized Construction Exits for the site. (BMP S4)
2. Avoid excavation of trenches and stockpiling of material during inclement weather, schedule construction accordingly.
3. Implement BMPs for dewatering operations. (BMP NS4)
4. Install concrete washout area per the Concrete Washout Specification. (BMP S9)
5. Install Gravel Bag Berm / Rock Berms / Check Dams at down gradient discharge points prior to headwall construction (BMP S15 - Gravel Bag Berm / BMP S7 - Rock Berms / Check Dams)
6. Install water distribution system, sanitary sewer collection system, storm sewer collection system.
7. Install inlet protection once inlet boxes are installed and connected. (BMPs S8, S8-1, S8-2)
8. Install dry utilities such as electrical, phone, and communications on lots.
9. Backfill areas of utility installation to subgrade.
10. Initiate temporary or permanent stabilization on all areas where construction activity will cease for at least 14 days. (BMPs EC2)

Installation of pavement base material, concrete curb and asphalt pavement

1. Locate storm sewer inlets and verify Stage 1 inlet protection. (BMPs S8, S8-1, S8-2)
2. Lay first course of road base material and perform proof roll. Use material delivery BMPs.
3. If not already installed, install concrete washout area per the Concrete Washout Specification. (BMP S9)
4. Install concrete curb and back fill the lots to the curb.
5. Lay second course of road base material and roll to final grade.
6. Lay asphalt pavement.
7. Install back of curb protection and curb inlet protection (BMPs S1, S8). If temporary access to the lots is needed, install Culex buffer (S3)
8. Spread topsoil from stockpiles in landscape areas and finished lots.
9. Initiate temporary or permanent stabilization on all areas where construction activity will cease for at least 14 days. Hydraulic Mulch right of ways (BMP EC3) & Broadcast seed on finished lots (BMP EC2)
10. All temporary erosion and sediment controls are to remain in place or be replaced with an alternative control until the up gradient areas are stabilized.

Landscape/Hardscape/Sidewalks/Monuments

1. Verify existing installation of perimeter controls such as silt fences or straw wattles and inlet protection and re-install or maintain as needed.
2. Locate storm sewer inlets and establish inlet protection if not already established. (BMP S8) Clear areas to be landscaped of temporary erosion controls as needed.
3. Install concrete washout area per the concrete washout specification. (BMP S9)
4. Install hardscape, sidewalks, landscape and irrigation in common areas.
5. Initiate permanent stabilization on all areas where construction activity will cease for at least 14 days. If applicable, install non trenched erosion control at back of curb in newly landscaped areas. (BMP EC6 Sod)
6. Remove temporary erosion and sediment controls when vegetation is established.

Unit 3B Land Development – BMP Implementation

See Amendment 001 – 9/6/2023

Clearing and grubbing the entire site

1. Install and/or Maintain Stabilized Construction Exits for the site. (BMP S4)
2. Clear only enough areas to install the first set of erosion and sediment controls required for the specific construction activity.
3. Install perimeter silt fences downgradient of construction activity on areas indicated on the site map. (BMP S1)
4. Preserve native topsoil at the site, unless infeasible.
5. Begin overall site clearing, grubbing and topsoil stripping and stockpiling.
6. Begin clearing vegetation and trees.
7. Establish topsoil stockpiles and stabilize with erosion controls if activity will cease on the stockpile for more than 14 days. (BMP M3)
8. Initiate temporary or permanent stabilization on all areas where construction activity will cease for at least 14 days. (BMPs EC2)
9. All temporary erosion and sediment controls are to remain in place or be replaced with an alternative control until the up-gradient areas are stabilized.
10. Temporary erosion and sediment controls may remain in place for use during subsequent construction activity or may be removed after stabilization is achieved.

Rough grade of Rough Grade of lots and street.

1. Install and/or Maintain Stabilized Construction Exits for the site. (BMP S4)
2. If not already cleared, clear only enough areas to install the first set of erosion and sediment controls required for the specific construction activity.
3. Install or verify previous installation of perimeter silt fences downgradient of construction activity on areas indicated on the site map. (BMP S1)
4. If concrete is being installed, establish concrete washout area per the concrete washout specification (BMP S9).
5. Implement BMPs for dewatering operations if applicable. (BMP NS4)
6. Perform earthwork on lots and streets.
7. Minimize soil compaction in post-construction pervious areas unless infeasible.
8. Initiate temporary or permanent stabilization on all areas where construction activity will cease for at least 14 days. (BMPs EC2)
9. Install stockpile containment as needed (BMP M3) and stabilize with erosion controls if activity will cease on the stockpile for more than 14 days.

Installation of sanitary sewer, water, storm sewer and dry utilities (electric, phone, communications)

1. Install and/or Maintain Stabilized Construction Exits for the site. (BMP S4)
2. Avoid excavation of trenches and stockpiling of material during inclement weather, schedule construction accordingly.
3. Implement BMPs for dewatering operations. (BMP NS4)
4. Install concrete washout area per the Concrete Washout Specification. (BMP S9)
5. Install Gravel Bag Berm / Rock Berms / Check Dams at down gradient discharge points prior to headwall construction (BMP S15 - Gravel Bag Berm / BMP S7 - Rock Berms / Check Dams)
6. Install water distribution system, sanitary sewer collection system, storm sewer collection system.
7. Install inlet protection once inlet boxes are installed and connected. (BMPs S8, S8-1, S8-2)
8. Install dry utilities such as electrical, phone, and communications on lots.
9. Backfill areas of utility installation to subgrade.
10. Initiate temporary or permanent stabilization on all areas where construction activity will cease for at least 14 days. (BMPs EC2)

Installation of pavement base material, concrete curb and asphalt pavement

1. Locate storm sewer inlets and verify Stage 1 inlet protection. (BMPs S8, S8-1, S8-2)
2. Lay first course of road base material and perform proof roll. Use material delivery BMPs.
3. If not already installed, install concrete washout area per the Concrete Washout Specification. (BMP S9)
4. Install concrete curb and back fill the lots to the curb.
5. Lay second course of road base material and roll to final grade.
6. Lay asphalt pavement.
7. Install back of curb protection and curb inlet protection (BMPs S1, S8). If temporary access to the lots is needed, install Culex buffer (S3)
8. Spread topsoil from stockpiles in landscape areas and finished lots.
9. Initiate temporary or permanent stabilization on all areas where construction activity will cease for at least 14 days. Hydraulic Mulch right of ways (BMP EC3) & Broadcast seed on finished lots (BMP EC2)
10. All temporary erosion and sediment controls are to remain in place or be replaced with an alternative control until the up gradient areas are stabilized.

Landscape/Hardscape/Sidewalks/Monuments

1. Verify existing installation of perimeter controls such as silt fences or straw wattles and inlet protection and re-install or maintain as needed.
2. Locate storm sewer inlets and establish inlet protection if not already established. (BMP S8) Clear areas to be landscaped of temporary erosion controls as needed.
3. Install concrete washout area per the concrete washout specification. (BMP S9)
4. Install hardscape, sidewalks, landscape and irrigation in common areas.
5. Initiate permanent stabilization on all areas where construction activity will cease for at least 14 days. If applicable, install non trenched erosion control at back of curb in newly landscaped areas. (BMP EC6 Sod)
6. Remove temporary erosion and sediment controls when vegetation is established.

General Contractor(s) to File Notice of Termination upon completion of work

1. All disturbed soils/areas shall be stabilized in accordance with CGP and SWPPP requirements.
2. Convert the temporary detention basin to a permanent facility in accordance with design plans and specifications including removal of accumulated sediment, installing the permanent outfall, installation of landscaping and irrigation.
3. Remove silt fence in common areas once vegetative final stabilization has been established.
4. Remove inlet protection from inlets in common areas and reserves where all upstream areas have been stabilized.
5. Certain temporary erosion and sediment control BMPs such as perimeter silt fence on lots and inlet protection on nearby curb inlets will remain in place after stabilization and after the lots have been purchased by homebuilders or transferred to Lennar's homebuilding department. *Homebuilders that purchase lots, including Lennar's homebuilding department, are responsible for compliance with the CGP for areas of their work. Upon purchase, the homebuilders are required obtain permit coverage, develop and implement a SWPPP, install and maintain BMPs for their work, install and maintain inlet protection for inlets they discharge into, clean the streets of track out generated by homebuilding operations in accordance with the CGP.*
6. All construction materials and debris will be removed from the site.
7. All underground drainage structures will be clean and working at full capacity.
8. Remove all other temporary erosion and sediment control BMPs and if applicable stabilize any areas that permanent stabilization measures did not establish well enough to meet NOT requirements.
9. Maintenance schedules for the applicable Post Construction BMPs are to be delivered to the permitting agency or the Home Owners Association, whichever the case may be.
10. General Contractor to file NOT in accordance with the CGP.
11. Lennar Homes of Texas Land and Construction, Ltd. Stormwater Permit will carry over to the homebuilding SWP3 and will cover all areas owned by Lennar Homes.

GOOD HOUSEKEEPING BMPs

M1 Material Handling

BMP Description:

The purpose of this BMP is to prevent or reduce the discharge of pollutants to the storm sewer system or watercourses from material use onsite. These procedures apply when the following materials are used or prepared onsite:

- Pesticides and herbicides
- Fertilizers
- Detergents
- Petroleum products such as fuel, oil, and grease
- Asphalt and other concrete components
- Other hazardous chemicals such as acids, lime, glues, adhesives, paints, solvents, and curing compounds
- Other materials that may be detrimental if released to the environment

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

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. 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).

Chemicals will be stored in their original containers with the labels intact for proper identification.

Safety Data Sheets (Available by calling the 3E Company at 800-451-8346) and original labels for products used or stored at the site will be retained as they contain important storage, handling, and disposal information.

Dispose of latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths, when thoroughly dry and are no longer hazardous, with other construction debris.

Paint brushes and equipment for water and oil based paints should be cleaned within a contained area and should not be allowed to contaminate site soils, watercourses, or drainage systems. Waste paints, thinners, solvents, residues, and sludges that cannot be recycled or reused should be disposed of as hazardous waste. When thoroughly dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths should be disposed of as solid waste.

Do not clean out brushes or rinse paint containers into the dirt, street, gutter, storm drain, or stream. "Paint out" brushes as much as possible. Rinse water-based paints to the sanitary sewer where permitted, or into a concrete washout pit or temporary sediment trap. Filter and reuse thinners and solvents. Dispose of excess oil-based paints and sludge as hazardous waste.

Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. Clean up and properly dispose of all spills immediately.

Construction materials will be used according to the manufacturer's recommendation for proper use and disposal.

Equipment and Construction materials delivery drivers will exit the site through the stabilized construction exit so as to minimize offsite sediment tracking. Any sediment tracked offsite will be cleaned as soon as practicable so as to minimize impacts to stormwater.

During landscaping, fertilizers and pesticides will not be applied just before or during a storm event. Such landscape chemicals will be applied in the minimum amount recommended by the manufacturer. Fertilizers will be worked into the soil to minimize contact with stormwater.

<i>Installation Schedule:</i>	Whenever construction materials are being used onsite.
<i>Installation, Maintenance and Inspection:</i>	Inspect every 7 days. Material storage areas will be kept clean and organized. Perimeter controls, containment structures, covers, and liners will be repaired or replaced as needed to maintain proper function.
<i>Responsible Staff:</i>	The General Contractor / Operator will implement material handling BMPs for the materials they are using.
<i>Location:</i>	Wherever materials are being handled or used.

M2 Material and Equipment Storage and Staging Area

BMP Description:

Construction equipment and construction materials will be stored at the combined material and equipment staging area. A large container may be used to store small tools, parts or other construction material. 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. 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). All hazardous or regulated waste materials such as oil filters, petroleum products, paint and equipment maintenance fluids will be stored in sealed containers under cover within the staging area.

<i>Installation Schedule:</i>	Grade the material and equipment storage and staging area prior to storing materials. Complete the installation before any infrastructure is constructed at the site. Maintain until final demobilization of equipment.
<i>Installation, Maintenance and Inspection:</i>	Inspect every 7 days. Staging areas will be kept clean and organized. Perimeter controls, containment structures, covers, and liners will be repaired or replaced as needed to maintain proper function.
<i>Responsible Staff:</i>	The General Contractor / Operator will implement material and equipment storage and staging BMPs from initial mobilization to final demobilization.
<i>Location:</i>	At a location with relative easy access and in proximity to the construction entrance to facilitate delivery of materials.

M3 Stockpile Management

BMP Description:

If soil, sediment, and aggregate is stockpiled for more than one day or has the potential to discharge pollutants, the stockpile must be managed properly so as to minimize discharges of sediment or other pollutants. This is done by implementing control measures such as silt fence or wattles around the stockpile, or by placing the stockpile where offsite stormwater discharges from the stockpile are minimized.

<i>Installation Schedule:</i>	Make plans for stockpile placement and install perimeter controls (if applicable) prior to stockpiling soil or sediment. If protection from wind is needed, cover, or contain the stockpile whenever it is not actively being accessed.
<i>Installation, Maintenance and Inspection:</i>	Protect from contact with stormwater (including run-on) using a temporary sediment barrier such as silt fence, straw wattles, or a sand bag sediment barrier. Where practicable, provide cover or appropriate temporary stabilization to avoid direct contact with precipitation or to minimize sediment discharge. Do not hose down or sweep soil or accumulated sediment on pavement into any stormwater conveyance (unless connected to a sediment basin or similar control), storm drain inlet, or surface water. Contain and securely protect from wind during windy conditions. Inspect every 7 days for the presence of proper stockpile management practices.
<i>Responsible Staff:</i>	The General Contractor / Operator who generated the stockpile is responsible for installation and maintenance of stockpile management BMPs.
<i>Location:</i>	Whenever possible, locate stockpiles behind existing sediment controls, outside of any natural vegetated buffers.

WM1 Waste Management

BMP Description:

Large volumes of debris and trash are often generated at construction sites, including packaging, pallets, wood waste, personal trash, scrap material, and a variety of other wastes. Debris and trash management is used to minimize floatables and other wastes in stormwater. By controlling the trash and debris onsite, stormwater quality is improved and the need for extensive clean up upon completion of the project is reduced. The site will be routinely patrolled for regular trash and debris collection. Once collected, the waste will be stored in trash containers as described below. When full, the containers will be emptied and the trash hauled to an approved off site landfill. To prevent clogging of the storm drainage system, litter and debris removal from drainage grates, trash racks, and ditch lines should be a priority.

Minimize the exposure of construction wastes, trash, sanitary waste and other materials present on the site to precipitation and to stormwater. 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).

Waste generation will be minimized by purchasing only the amount of material estimated as necessary for the application, and where practicable, using all of a product prior to disposal of the container. If disposal is necessary for excess product, the manufacturer's recommendations or local or state regulations for proper disposal will be followed.

Disposal of concrete truck wash outs, stucco wastes, masonry wastes, surplus concrete, drum water, or paint washout will be limited to the designated concrete washout areas.

All liquid waste, including hazardous and regulated waste generated on site will be stored under cover, in leak proof and appropriately labeled containers to await proper disposal by licensed disposal companies. The sub-contractor that generated the hazardous or regulated waste is responsible for its disposal. Minimize the discharge of pollutants from equipment washing. Wash waters must be contained onsite in a designated area and prevented from discharging offsite.

Place an adequate number of portable toilets in relative proximity to where workers are present.

<i>Installation Schedule:</i>	Verify that activity-based BMPs are in place prior to the commencement of associated activities.
<i>Installation, Maintenance and Inspection:</i>	Inspect waste storage and disposal areas during regular weekly, pre-rain event, extended event, and post rain event inspections. Arrange for regular waste collection.
<i>Responsible Staff:</i>	The General Contractor is responsible for waste management BMPs for the associated construction activity including disposal of solid and liquid waste.
<i>Location:</i>	Locate waste storage areas, washouts, and receptacles away from the street or stormwater conveyances.

WM2 Portable Toilet Facilities

BMP Description:

The objective of sanitary waste management is to provide for collection and disposal of sanitary waste in a manner that minimizes the exposure to precipitation and stormwater. This is most often accomplished by providing portable facilities for construction site workers.

<i>Installation Schedule:</i>	Place portable toilets at the beginning of construction, before workers are present and maintain until final demobilization.
<i>Installation, Maintenance and Inspection:</i>	Inspected every 7 days for proper location placement and evidence of leaking holding tanks. Toilets with leaking holding tanks will be removed from the site and replaced with new portable toilets. Portable toilets shall be maintained by independent contractor on their recommended guidelines. Portable Toilets shall be placed on level ground and maintained regularly. When high winds are expected, portable toilets shall be anchored or otherwise secured to prevent them from being blown over.
<i>Responsible Staff:</i>	The General Contractor / Operator will be responsible for placing, maintaining, and removing portable toilet facilities for their construction activities.
<i>Location:</i>	Sanitary facilities shall be placed a minimum of 50 feet away from storm drain inlets, conveyance channels or surface waters. If unable to meet the 50 foot requirement due to site configuration, portable toilets shall be a minimum of 20 feet away from storm drain inlets, conveyance channels or surface waters and secondary containment shall be provided in case of spills. Once streets have been paved, place portable toilets on the lot in the front of the homesite, behind the back of curb controls. Portable toilet facilities must be positioned so that they are secure and will not be tipped or knocked over, and so that they are located away from surface water and stormwater inlets or conveyances. They should be located on a level permeable area at least 6 feet from streets/gutters or other conveyances and 20 feet away from storm drain inlets, unless infeasible.

WM3 Trash Containment

BMP Description:

Waste materials will be collected and contained in trash pens, trash barrels, metal dumpsters in the staging area or as determined by the general contractor. .Minimize the exposure of waste materials to storm water. If the containers have lids, the lids must be closed at the end of each work day. 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 container should be covered to minimize exposure of waste to precipitation. Appropriate methods include the use of a tarp, plastic sheeting, temporary roof, placing waste in a location with a roof such as inside the garage of a home, or a similarly effective means to minimize discharge of a waste stream, such as providing secondary containment.

<i>Installation Schedule:</i>	Install trash containers after initial mobilization, once the staging area has been established. Maintain until construction activities are complete.
<i>Installation, Maintenance and Inspection:</i>	Inspect every 7 days for the presence of functional waste containers such as pens, trash barrels or metal dumpsters and for uncontained blowable or floatable trash or debris. Police the construction area and surrounding areas daily and collect all blowable or floatable construction debris, trash and litter in containers. Containers shall be located at least 10 feet away from storm sewer inlets and waterways and up gradient of sediment controls. No construction waste materials will be buried on site. Empty the container when debris reaches the capacity of the container or sooner. Wastes must be cleaned up immediately if containers overflow.
<i>Responsible Staff:</i>	The General Contractor / Operator will be responsible for collecting, containing and disposing of trash, and for placing, maintaining, and removing trash containers for their construction activities.
<i>Location:</i>	The location shall be determined by the General Contractor / Operator, but should be located in proximity to the location where trash and debris are being generated. Locations will be indicated on the site map.

WM4 Temporary Sanitary Wastewater Storage & Management Facility

BMP Description:

This waste management BMP provides temporary facilities to manage the storage and transportation of the sanitary wastewater produced in the service area prior to connecting the sanitary sewer collection system to the permanent wastewater treatment facility.

The temporary sanitary wastewater storage and management facility (Facility) includes a series of double-walled, self-contained storage tanks and pumps. Additional storage tanks shall be added as necessary to accommodate additional storage needs. Stored wastewater shall be removed from the tanks by a licensed waste hauler and transported to an offsite wastewater treatment facility.

<i>Installation Schedule:</i>	Install the Facility once the sanitary sewer system has been approved by the local municipality and prior to discharge of wastewater by occupied homes within the service area. The Facility will remain operational until the permanent wastewater treatment facility is operational and connected to the sanitary sewer collection system.
<i>Installation, Maintenance and Inspection:</i>	<ul style="list-style-type: none"> ● The Facility shall be constructed on level ground, away from stormwater conveyance systems. ● Provide secondary containment by using double-walled storage tanks and providing a stabilized earthen berm and/or trench around the tanks capable of containing leaks or spills generated during the wastewater transfer process. ● Provide stabilize access such as asphalt or concrete pavement, or a stabilized construction access (S4) to the Facility to minimize offsite tracking. ● Clean streets daily or as needed to remove track out or deposited sediment from paved surfaces, including public roads, private roads, curbs and gutters. ● Inspect every 7 days for offsite tracking, structural concerns and evidence of leaking holding tanks, pumps or hoses. ● Routinely inspect throughout the day when transfer of wastewater is occurring. ● Any leaking storage tanks will be removed from the site and replaced with a new tank. ● Immediately clean up and properly dispose of any spills.
<i>Responsible Staff:</i>	The General Contractor / Operator will be responsible for installation, operation, maintenance, and removal of the Facility.
<i>Location:</i>	The facility should be located on level soil or a permeable area atop an impervious liner and near the lowest manhole in the sanitary sewer collection system. Locations will be shown on the site map.

WM5 Concrete Sawcutting Waste Management

Sawcutting of concrete pavement is a routine practice used to control shrinkage cracking immediately following placement of plastic concrete. It is also used to remove curb sections and pavement sections for pavement repairs, utility trenches, and driveways. Sawcutting for joints involves sawing a narrow, shallow groove in the concrete, while sawcutting for removals is usually done full depth through the slab. Water is used to control saw blade temperature and to flush the detritus from the sawed groove. The objective of concrete sawcutting waste management is to prevent the resulting slurry of process water and fine particles with its high pH from becoming a water pollutant.

BMP Description:

Concrete sawcutting waste management is applicable on construction activities where sawcutting is part of the work, regardless of the size of the total area disturbed. It is also applicable on repair and maintenance projects that may not be required to implement erosion and sediment controls.

Concrete sawcutting waste management is based on the proper collection and disposal of the slurry and cuttings.

Installation Schedule:	Whenever sawcutting of concrete on streets, curbs, or alleys is occurring.
Installation, Maintenance, and Inspection:	<p>Slurry Collection</p> <ul style="list-style-type: none">• During sawcutting operations, the slurry and cuttings shall be recovered and not be allowed to discharge from the site.• If the pavement to be cut is near a storm drain inlet, the inlet shall be blocked by sandbags or equivalent temporary measures to prevent the slurry from entering the inlet. Remove the sandbags immediately after completing sawcutting operations, so they do not cause drainage problems during storm events.• The slurry and cuttings shall not be allowed to remain on the pavement to dry out. <p>Slurry Disposal</p> <ul style="list-style-type: none">• Develop pre-determined, safe slurry disposal areas.• Collected slurry and cuttings should be immediately hauled from the site for disposal at a waste facility. If this is not possible, the slurry and cuttings shall be discharged into onsite containment.• The onsite containment may be an excavated or bermed pit lined with plastic that is a minimum of 10 millimeters thick. Refer to S6 Concrete Washout Area for additional design criteria and an example schematic. If the project includes placement of new concrete, slurry from sawcutting may be disposed of in facilities designated for the washout of concrete trucks instead constructing a separate containment.• The containment shall be located a minimum of 50 feet away from inlets, swales, drainage ways, channels, and other waters, if the site configuration provides sufficient space to do so. In no case shall the collection area be closer than 20 feet from inlets, swales, drainage ways, channels and other waters.• Several, portable, pre-fabricated, concrete washout, collection basins are commercially available and are an acceptable alternative to an onsite containment pit.• Remove waste concrete when the containment is half full. Always maintain a minimum of one-foot freeboard.• Onsite evaporation of slurry water and recycling of the concrete waste is the preferred disposal method. When this is not feasible, discharge from the collection area shall only be allowed if a passive treatment system is used to remove the fines. Criteria are in Section 3.7 Passive

	<p>Treatment System. Mechanical mixing is required in the collection area. The pH must be tested, and discharge is allowed only if the pH does not exceed 8.0. The pH may be lowered by adding sulfuric acid to the slurry water. Dewatering of the collection area after treatment shall follow the criteria NS5 Dewatering Operations.</p> <ul style="list-style-type: none">• Care shall be exercised when treating the slurry water for discharge. Monitoring must be implemented to verify that discharges from the collection area do not violate groundwater or surface water quality standards.• Geotextile fabrics such as those used for silt fence should not be used to control sawcutting waste, since the grain size is significantly smaller than the apparent opening size of the fabric.• Use waste and recycling haulers and facilities approved by the local municipality. <p>Concrete sawcutting waste management measures should be inspected regularly (at least as often as required by the TPDES Construction General Permit). Project personnel should inspect the operations to assure that operators are diligent in controlling the water produced by the sawcutting activities.</p> <p>Pavement should be inspected each day after operations to ensure that waste removal has been adequately performed. Residual waste should be cleaned. Reinforce proper procedures with workers.</p> <p>Inspect the collection area for signs of unauthorized discharges. Repair containment area as needed. Remove sediment and fines when the collection area volume is reduced by 50 percent.</p>
Responsible Staff:	Saw Cutting Trade Partner and General Contractor
Location:	Where cutting of concrete is occurring.

WM6 Sensitive Area / Orange Safety Fence / Construction Debris Fence

BMP Description:

It is advantageous to promote the protection of watersheds, surface waters, and sensitive areas within the areas of SWP3 control while providing secondary containment for floatable and blowable construction debris and litter.

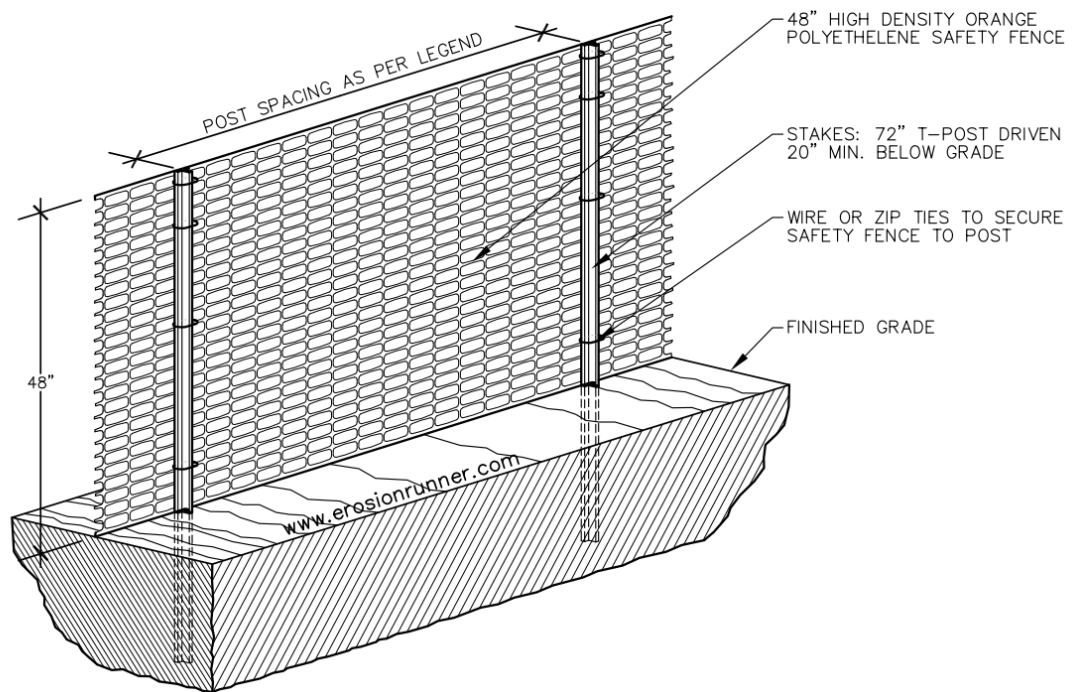
- Limits the movement of personnel, vehicles, and equipment, to only specific, predetermined areas necessary for ingress/egress and for performing the work. This minimizes disruption of the site, maximizes the preservation of existing vegetation, and reduces the potential for soil erosion or compaction.
- Protecting sensitive areas, such as water bodies or newly seeded areas.
- Preventing unnecessary, unauthorized, or inadvertent access by people, vehicles, and equipment, to structural BMPs or other prohibited areas of the construction site.
- Using barriers for confining construction activities, debris, and litter to specific, predetermined locations at a given construction site reduces the potential for soil erosion, by minimizing the area of disturbance.

<i>Installation Schedule:</i>	Sensitive Area / Orange Safety Fence / Construction Debris Fence should be in place before any excavation or grading is begun, should be kept in good repair for the duration of construction activities, and should be the last items removed during the final cleanup after the completion of the construction activity.
<i>Installation, Maintenance and Inspection:</i>	Inspect every 7 days for fence damage. Inspect for the presence of Sensitive Area / Orange Safety Fence / Construction Debris Fence where necessary to protect preserved areas. Repair or replace any Sensitive Area / Orange Safety Fence / Construction Debris Fence that has been damaged or removed.
<i>Responsible Staff:</i>	The General Contractor is responsible for installing Sensitive Area / Orange Safety Fence / Construction Debris Fence
<i>Location:</i>	Property lines adjacent to watersheds, surface waters, and sensitive areas within the areas of SWP3 control and any area where secondary containment of floatable and blowable construction debris and litter is needed. Locations will be indicated on the site map(s).

48" Safety Fence, 72" T-Posts

LEGEND

SAF12	48" ORANGE FENCE, 12 FEET O.C.
SAF11	48" ORANGE FENCE, 11 FEET O.C..
SAF10	48" ORANGE FENCE, 10 FEET O.C.
SAF9	48" ORANGE FENCE, 9 FEET O.C.
SAF8	48" ORANGE FENCE, 8 FEET O.C..
SAF7	48" ORANGE FENCE, 7 FEET O.C.
SAF6	48" ORANGE FENCE, 6 FEET O.C.



F Proper Equipment and Vehicle Fueling and Maintenance Procedures

BMP Description:

Several types of vehicles and equipment will be used onsite throughout construction, including delivery trucks and trailers, water trucks, tractors, dozers, trackhoes, scrapers, cement mixers, trenchers, excavators and skid-steers. All major equipment / vehicle maintenance will be performed offsite and only minor equipment maintenance will occur onsite. All equipment fluids generated from maintenance activities will be disposed of into designated drums or sealed containers, labeled accordingly, stored in secondary containment such as spill trays and hauled offsite to an appropriate disposal facility. Where possible, vehicles and equipment will be stored over an impervious surface, away from stormwater conveyances, to facilitate cleanup of potential leaks or spills and minimize contact with stormwater. Conduct equipment and vehicle maintenance on level ground over impervious secondary containment such as drip pans, polyethylene sheeting, or equivalent. Vehicles and equipment used on site will be monitored and maintained to prevent leaks from occurring.

NOTE: NO EQUIPMENT OR VEHICLE WASHING IS ALLOWED ON THE JOBSITE.

<i>Installation Schedule:</i>	Implement fueling and maintenance practices whenever equipment is onsite.
<i>Installation, Maintenance and Inspection:</i>	The construction areas and equipment storage areas will be inspected during the regular BMP inspection for the evidence of proper equipment fueling and maintenance procedures. Leaks will be repaired immediately, or the leaky vehicle or equipment will be removed from the site. Keep ample supply of spill-cleanup materials onsite. Clean up all spills immediately.
<i>Responsible Staff:</i>	The General Contractor / Operator is responsible for implementing proper equipment and vehicle fueling and maintenance for their own equipment or vehicles.
<i>Location:</i>	At the designated material and equipment storage and staging area. Locations will be indicated on the site maps.

Non-Structural Erosion and Sediment Controls

This section describes the non-structural BMPs that will be implemented onsite. Nonstructural BMPs are processes and practices implemented to minimize the potential for pollutant discharge during construction

NS1 *Non-Structural Erosion and Sediment Controls*

Construction activity will be phased allowing vegetation to remain in place until necessary to remove it for construction to proceed. Areas are not to be disturbed until it is necessary for construction to proceed.

Disturbed areas are to be temporarily or permanently stabilized as soon as practicable after construction is complete.

Whenever possible, vegetated buffers will be preserved around the area of construction activity so as to minimize impacts to stormwater runoff.

Materials and equipment should not be delivered during rain events or extremely wet conditions. Monitor weather conditions and forecasts to schedule material and equipment deliveries to occur before anticipated rain events.

If sediment enters the street, storm drain system, or stormwater management basins, accumulations will be removed at a frequency to minimize negative effects and prior to the next rain event, if possible.

NS2 Dust Control

BMP Description:

The purpose of dust control is to prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards and improve traffic safety. This practice is applicable to areas subject to dust blowing and movement where on and off-site impacts are likely without treatment. Dust can be controlled by using one or more of the following methods.

- Irrigation by water sprinkling
- Mulches bound with natural or chemical binders.
- Temporary Vegetative cover
- Sprayed-on adhesives on mineral soils
- Tillage to roughen surface and bring clods to the surface

<i>Installation Schedule:</i>	Implement dust control methods immediately whenever dust can be observed blowing or there is a potential for dust to blow on the site.
<i>Installation, Maintenance and Inspection:</i>	The site shall be inspected daily by personnel provided by the General Contractor / Operator conducting the construction activity, and every 7 days by the BMP inspector for the need to implement dust control. Areas where dust control has been applied will be inspected for potential runoff or offsite tracking of sediment.
<i>Responsible Staff:</i>	The General Contractor / Operator will be responsible for implementing dust control BMPs for their construction activities.
<i>Location:</i>	Applicable to all disturbed areas of the development

NS3 Vegetated Buffer Strips

BMP Description:

A vegetated buffer strip is a continuous strip of land that is either left vegetated with native plant community intact or has been temporarily planted, sodded, or seeded. A vegetated sediment filter strip is not considered stabilized unless the perennial vegetative cover is uniform (evenly distributed without large bare areas) and has a density of at least 70 percent of the natural cover of the native vegetation. The purpose of this BMP is to reduce stormwater runoff velocity as it passes through the vegetated strip and filter out sediment and coarse debris from bare ground of construction areas. Vegetated buffers prevent erosion, trap sediment, filter runoff, provide public access, enhance the site amenities, and function as a floodplain during high water periods. They also provide a pervious strip along a shoreline to accept sheet flow from developed areas and help minimize the adverse impacts of runoff

<i>Installation Schedule:</i>	Vegetated Buffer Strips should be allocated and preserved prior to commencement of construction and remain in place throughout the construction activity.
<i>Installation Maintenance and Inspection:</i>	The site will be inspected every 7 days for the presence and function of vegetated buffers. Alternative controls such as silt fence will be installed on areas where buffers have been disturbed or are not feasible.
<i>Responsible Staff:</i>	The General Contractor is responsible to preserve and maintain the vegetated buffer strip.
<i>Location:</i>	<p>The locations of the buffer strips will be identified on the BMP site map. Buffer strips should be used in the following conditions:</p> <ul style="list-style-type: none">• Where physical site conditions preclude installation of any barrier-type erosion control measures to control runoff, erosion, and sedimentation adequately.• Along specific internal elements of the construction area such as roads, parking areas, and around buildings.• Between a construction area and a critical natural area such as wildlife refuge, wetlands, and drainage corridors (rivers, bayous, streams, channels, and ditches).• Areas where sediment can be quickly transported from the construction site such as along existing roadways with nearby storm inlets. <p>The natural buffer around a sensitive feature should extend a minimum of 50 feet in all directions. Where the boundary of the drainage area to the feature lies more than 50 feet from the feature, the buffer should extend to the boundary of the drainage area or 200 feet, whichever is less. Vegetated buffer strips are not required if the existing barrier-type erosion control measures, such as silt fence, control runoff, erosion, and sedimentation adequately. An adequately sized buffer strip may be used without other barrier-type measures if the adjacent area is undisturbed and is an area where future construction activities will occur in relation to the development of the project.</p>

NS4 Street Cleaning

BMP Description:

Street cleaning is the process of removing track out or deposited sediment from paved surfaces, including public roads, private roads, curbs and gutters. The purpose of this BMP is to reduce the amount of sediment tracked and deposited into roadways from construction traffic.

<i>Implementation Schedule:</i>	Perform street cleaning as needed from the initial mobilization until filing of the NOT. If excess sediment has been tracked into the streets, or if rain is expected, clean the streets as often as necessary to keep the streets as clean as possible.
<i>Installation, Maintenance and Inspection:</i>	The streets will be inspected routinely and during the regular BMP inspection for track-out and deposited sediment on to paved areas or roads. Perform street cleaning to supplement stabilized access roads and parking areas. Remove and dispose of swept material properly. Disposal of sediment into inlets is prohibited. Dust suppression measures must be implemented while sweeping is being conducted.
<i>Responsible Staff:</i>	The General Contractor / Operator is responsible to clean the tracking associated with construction activity. The Owner is responsible for street cleaning after acceptance or completion of the General Contractor / Operator's work and when there is not a General Contractor conducting construction activity.
<i>Location:</i>	On all onsite paved streets and adjacent to the construction site.

NS5 Dewatering Operations

BMP Description:

Dewatering operations are Best Management Practices that minimize the discharge of pollutants when non-stormwater, accumulated precipitation, and/or groundwater must be removed from a work location so that construction work may be accomplished. If the water cannot be discharged to a sediment basin prior to discharge, it must be treated with the appropriate BMPs prior to discharge to any surface waters. Options for discharge not entering a sediment basin are as follows:

- **Using a water pump gravity bag filter.**
 - The bag should be installed where its discharge will flow away from the disturbed area and onto vegetation or into a swale or drainage ditch with erosion and sediment controls. Bags should be placed on a level, stable surface that is prepared with mulch, straw, small aggregate, or other material as recommended by the manufacturer. In some cases, the bag may be placed directly on vegetation or well graded soil. The key is to have a surface without rocks or other protrusions that could puncture the bag.
 - The bag should be made of a non-woven, needle-punched, geotextile.
 - The smallest apparent opening size currently available is 70 microns. This size will not capture fine silt and clay particles. A passive treatment system will be necessary with the bag to capture these soils.
 - Bags are available in sizes ranging from 6 feet x 6 feet to 15 feet x 25 feet. The size of the bag should be specified based on availability of space, flow rates, and duration of use. If space is available, larger bags will last longer between replacements and may have a lower price per square foot. However, larger bags are heavier when sediment-laden. Equipment must be available to lift and remove the bag from the site for disposal.
 - Bags are not reusable. Make sure they are installed at a location where equipment has access to the bags for lifting and removal without causing erosion or damaging other erosion and sediment controls.
- **Discharging to a large vegetated area.** The vegetated area must be large enough to detain the volume being dewatered. The size of area needed is dependent on type of vegetation (interception storage and water uptake capacity) and soil type (infiltration rate) and condition (wet or dry).
- **Directing discharges to in-place sediment controls** such as silt fences, rock berms, or to a sediment basin. Controls for continuous dewatering, such as a condition of high groundwater, need to provide effective removal of sediment over long periods. Controls that clog easily are not appropriate for controlling long-term dewatering operations.

The discharge points must be adequately protected from erosion and scour. Pumped water may be sprayed through a nozzle on the end of a discharge hose to provide velocity dissipation. The discharge must not flow over disturbed soil, but must be dispersed over rock riprap, sand bags, plastic sheeting or other energy dissipation measures.

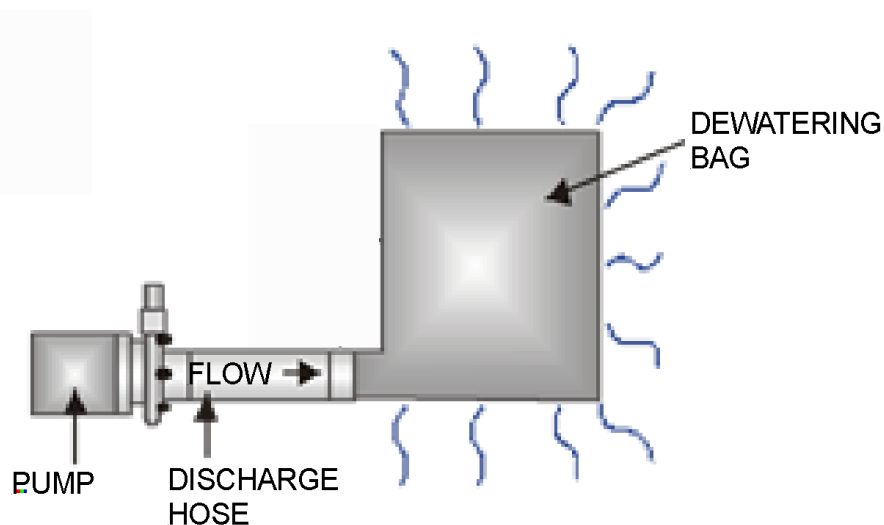
Pumped water that has sheen or other evidence of pollutants shall be collected and sampled before it is discharged. State or local discharge permit requirements may exist for the pollutant(s) suspected of being in the water.

If the collected water is contaminated with oil, grease, or other petroleum products, oil/water separator or a filtration mechanism may be necessary prior to the discharge.

<i>Installation Schedule:</i>	Prior to commencement of dewatering operations and throughout the dewatering process.
<i>Installation, Maintenance and Inspection:</i>	Site personnel provided by the General Contractor / Operator must monitor the dewatering operations. Install energy dissipation devices or erosion controls at the discharge points prior to commencing operations. Eroded areas should be repaired, and erosion controls should be installed to prevent future erosion.

	<p>Dewatering pumps and sediment controls should be monitored frequently, at least hourly, while pumps are in operation to prevent unauthorized discharges and to catch erosion problems or control failure.</p> <p>Personnel must observe and evaluate dewatering controls at a minimum of once per day on the days when dewatering discharges from the construction site occur. Please reference Section 4.1 for Observation and Evaluation of dewatering controls protocols.</p> <p>Conventional sediment controls should be inspected at least weekly when used for continuous dewatering, because they will become overcome with sediment more quickly than when used to control runoff from storm events. The controls shall be maintained according to the criteria in their respective sections. They should be replaced when they no longer provide the necessary level of sediment removal.</p> <p>Sediment filter bags should be checked to determine if they need replacing. The bags cannot be cleaned or reused. They should be used until they reach the manufacturer's recommended capacity. The entire bag with sediment can be disposed of as solid waste. If a controlled location onsite or a spoil site is available, the bag can be cut open and the sediment spread on the ground. Only the bag is waste in this case.</p>
Responsible Staff:	The General Contractor / Operator conducting the dewatering operations is responsible for installing and maintaining dewatering BMPs.
Location:	Near the location of the accumulated water, in a large vegetated area, upstream of erosion and sediment controls or sediment basins, and as indicated on the site map.

Water Pump Gravity Bag Filter Option



NS6 Subgrade Stabilization Management

BMP Description:

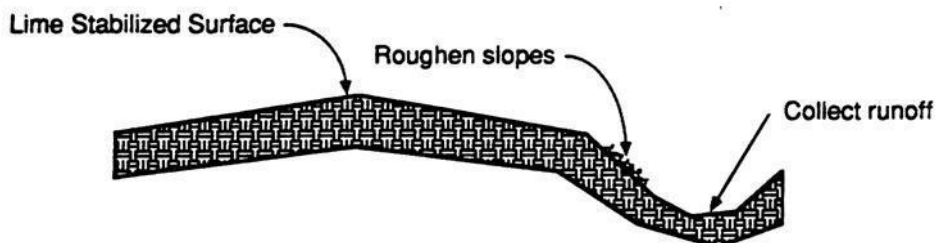
Lime and other chemicals are used extensively in the Texas region to stabilize pavement subgrades for roadways, parking lots, and other paved surfaces, and as a subgrade amendment for building pad sites. These chemicals are applied to the soil and mixed through disking and other techniques, and then allowed to cure. The objective of subgrade stabilization management is to reduce the potential for runoff to carry the chemicals offsite, where they may impact aquatic life in streams, ponds, and other water bodies.

Subgrade Stabilization Management should include the following criteria, if feasible:

- The contractor shall limit the amount of stabilizing agent onsite to that which can be thoroughly mixed and compacted by the end of each workday.
- Stabilizers shall be applied at rates that result in no runoff, if feasible.
- Stabilization shall not occur immediately before and during anticipated rainfall events.
- Geotextile fabrics such as those used for silt fence should not be used to treat chemical runoff, because the chemicals are dissolved in the water and won't be affected by a barrier and the suspended solids are significantly smaller than the apparent opening size of the fabric.
- Provide containment around chemical storage, loading and dispensing areas.
- If soil stabilizers are stored onsite, they shall be considered hazardous material and shall be managed according to the criteria in M1.

Installation Schedule:	Whenever cement, lime or other any chemicals are required for soil stabilization.
Installation, Maintenance and Inspection:	Subgrade stabilization operation should be observed frequently by the contractor as the operations proceed for evidence of discharges. Inspect the down slope perimeter and all outfalls for evidence of discharges. Pay particularly attention to the outfall of drainage pipes connected to inlets within the area being stabilized. If a discharge is found, immediately halt stabilization operations until additional controls can be implemented.
Responsible Staff:	The General Contractor / Operator will be responsible subgrade stabilization management that is related to their construction activity.
Location:	All areas where chemical stabilization is being used and where stabilization chemicals are being stored or delivered.

The following schematic is an example application of the construction control. It is intended to assist in understanding the control's design and function. The schematic is **not for construction**.



Schematic of Controls for Subgrade Stabilization

NS7 Paving Operations

BMP Description:

Prevent or reduce the discharge of pollutants from paving operations, using measures to prevent runoff and runoff pollution, properly disposing of wastes, and training employees and subcontractors. These procedures are implemented where paving, surfacing, resurfacing, or saw cutting, may pollute stormwater runoff or discharge to the storm drain system or watercourses.

Implementation

- Avoid paving during the wet season when feasible.
- Reschedule paving and grinding activities if rain is in the forecast.
- Store materials away from drainage courses to prevent stormwater runoff (see M1 – Material Handling and M2 – Material and Equipment Storage and Staging Area)
- Protect drainage courses, particularly in areas with a grade, by employing BMPs to divert runoff or to trap and filter sediment.
- Stockpile material removed from roadways away from drain inlets, drainage ditches, and watercourses. Materials should be stored consistent with M3 - Stockpile Management.
- Disposal of concrete and asphalt waste should be in conformance with WM1 - Waste Management.

Saw Cutting, Grinding, and Pavement Removal

- Shovel or vacuum saw-cut slurry and remove from site. Cover or barricade storm drains during saw cutting to contain slurry.
- When paving involves asphalt concrete (AC), the following steps should be implemented to prevent the discharge of grinding residue, un-compacted or loose AC, tack coats, equipment cleaners, or unrelated paving materials:
 - AC grindings, pieces, or chunks used in embankments or shoulder backing must not be allowed to enter any storm drains or watercourses.
 - Collect and remove all broken asphalt and recycle when practical. Old or spilled asphalt must be recycled or disposed.
- Do not allow saw-cut slurry to enter storm drains or watercourses.

Asphaltic Concrete Paving

- Do not allow sand or gravel placed over new asphalt to wash into storm drains, streets, or creeks. Vacuum or sweep loose sand and gravel and properly dispose of this waste properly.
- Old asphalt must be disposed of properly. Collect and remove all broken asphalt from the site and recycle whenever possible.

Sealing Operations

- During chip seal application and sweeping operations, petroleum or petroleum covered aggregate must not be allowed to enter any storm drain or water courses. Apply temporary perimeter controls until structure is stabilized.
- Seal coat, tack coat, slurry seal, or fog seal should not be applied if rainfall is predicted to occur during the application or curing period.

Paving Equipment

- Leaks and spills from paving equipment can contain toxic levels of heavy metals and oil and grease. Place drip pans or absorbent materials under paving equipment when not in use.
- Clean up spills with absorbent materials rather than burying.
- Use only non-toxic substances to coat asphalt transport trucks and asphalt spreading equipment.
- Paving equipment parked onsite should be parked over plastic to prevent soil contamination.
- Clean asphalt coated equipment offsite whenever possible.

<i>Installation Schedule:</i>	Prior to and during all asphalt paving activities.
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<i>Installation, Maintenance and Inspection:</i>	Verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect during regular weekly and post rain event inspections. Observe non-stormwater BMPs as a part of routine activities. Keep ample supplies of drip pans or absorbent materials onsite. Inspect and maintain machinery regularly to minimize leaks and drips.
<i>Responsible Staff:</i>	The General Contractor / Operator will be responsible for implementing paving BMPs related to their construction activity.
<i>Location:</i>	All areas where paving activities are being performed.

Structural Erosion and Sediment Controls

This section describes erosion and sediment control BMPs that are designed and installed to minimize the discharge of sediment in stormwater runoff by mechanically reducing the flow velocity and promoting sediment deposition.

S1 Silt Fence

BMP Description:

A silt fence is a temporary sediment control fence consisting of geotextile fabric supported by wood or metal T-posts to minimize sediment loss from a site. When properly used, silt fences can be highly effective at controlling sediment from disturbed areas. The purpose of a silt fence is to decrease the velocity of sheet flow and intercept and detain stormwater, causing runoff to pond allowing heavier solids to settle out while allowing water to percolate through. Silt fence should not be used in areas of concentrated flows. The drainage area above any fence should usually not exceed a quarter of an acre. Avoid long runs of silt fence because they concentrate the water in a small area where it will easily overflow the fence. Use J-hooks which have ends turning up the slope to break up long fence runs and provide multiple storage areas that work like mini-retention areas.

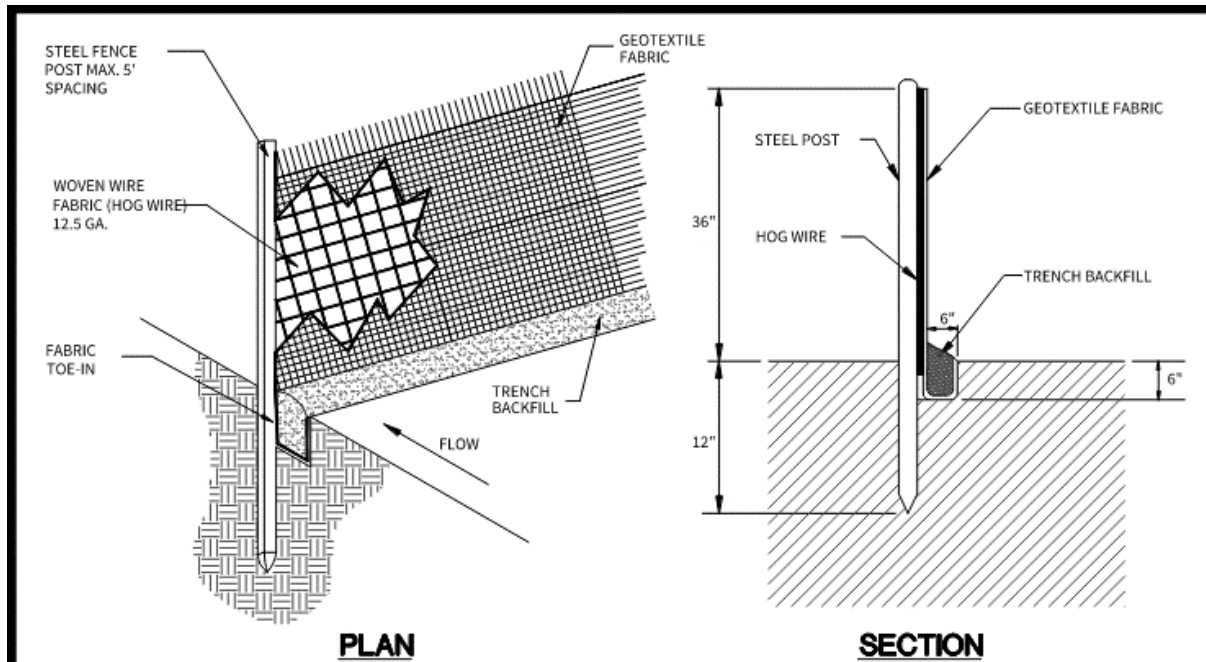
The silt fence fabric shall be of woven or non-woven polypropylene, polyethylene or polyamide thermoplastic fibers. The silt fence fabric shall be non-biodegradable, inert to most soil chemicals, ultraviolet resistant, unaffected by moisture or other weather conditions, and permeable to water while retaining sediment. Silt fence may be standard non-reinforced type, or steel reinforced type. The type of silt fence used will depend on several factors including design life, contributing slope, local requirements, or other factors.

Standard non-reinforced silt fence may be used when the contributing slope is less than or equal to 3%. It consists of geotextile filter fabric supported by 2" x 2" wood posts at least 42" in length, spaced no more than 6 feet apart; driven at least 18" into the ground; or by steel T- posts at least 4 feet in length, spaced not more than 8 feet apart driven at least 12" into the ground.

Reinforced silt fence shall be used when the contributing slope is greater than 3%. It consists of woven or non-woven geotextile filter fabric supported a minimum of 4-inch by 4-inch 14 gage wire mesh. Posts shall be steel and at least 4 feet in length, spaced no more than 8 feet apart driven at least 12" into the ground.

<i>Installation Schedule:</i>	Install silt fence in locations indicated on the SWPPP site map prior to earth disturbing activity. Refer to "Section 2: General timing of implementation of associated BMPs" for the timing of installation for each construction activity.
<i>Installation Maintenance and Inspection:</i>	Inspect every 7 days. Silt fences shall be placed on the topographical contour to the extent practicable. They may not be placed perpendicular to the contour on slopes greater than 2%. Double row fences may be used. Silt fencing within the site may be temporarily moved during the day to allow construction activity provided it is replaced and properly anchored to the ground at the end of the day. Silt fences on the perimeter of the site or around drainage ways should not be moved at any time. Silt fence should remain in place until the upstream disturbed area is permanently stabilized. Under normal conditions, silt fences require removal of deposited sediment. Sediment deposits should be removed when accumulation reaches 50% of the above ground height of the silt fence. If maintenance is difficult due to location or presence of wet soils that prohibit prompt cleaning after runoff events, additional parallel fences should be constructed.
<i>Responsible Staff:</i>	The operator responsible for installation, maintenance, and removal of silt fence will be indicated on the "Operator Responsibilities" page in Appendix G for the associated construction activity. After acceptance or completion of the General Contractor / Operator's work, the Owner will be responsible. As finished lots are transferred to homebuilders, the homebuilders will be responsible for maintenance of silt fence on areas that are downgradient of their construction activity.
<i>Location:</i>	Along the downgradient edge of disturbed areas where erosion is likely to occur in the form of sheet or rill erosion and around or downslope of soil stockpiles.

	Silt fence should not be used where there is a concentration of water in a channel or drainage way. If concentrated flow occurs after installation, corrective action must be taken such as placing a rock berm in the areas of concentrated flow. Refer to site map(s) for locations.
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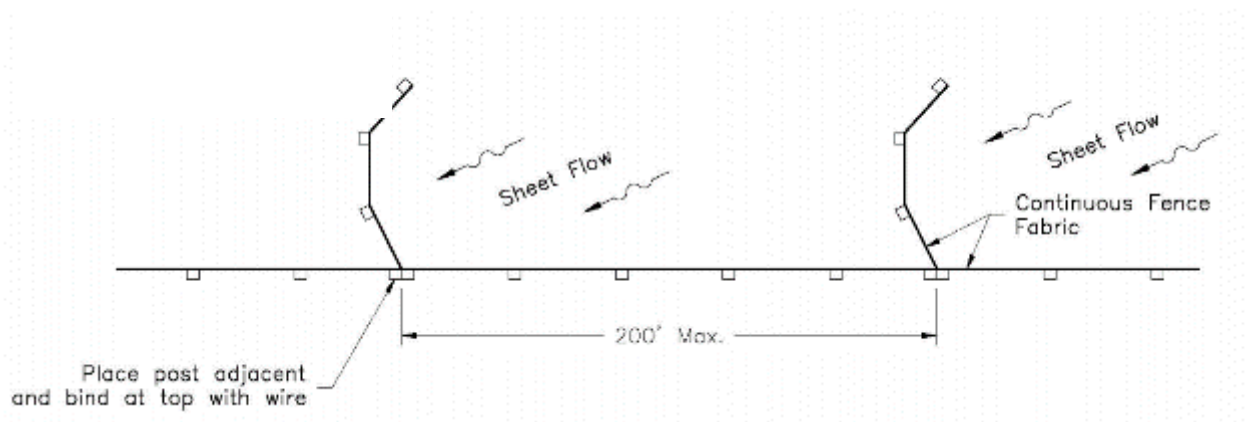
NOTES:

1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NON WOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN 2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT 2, AND BRINELL HARDNESS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12.5 GAUGE MINIMUM.
4. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1 FOOT DEEP AND SPACED NOT MORE THAN 5 FEET ON CENTER.
5. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.
6. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
7. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
8. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
9. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
10. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES, OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE OLD FENCE.
11. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
12. REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.

1

SILT FENCE DETAIL

SCALE: NONE



J-Hook Typical Installation

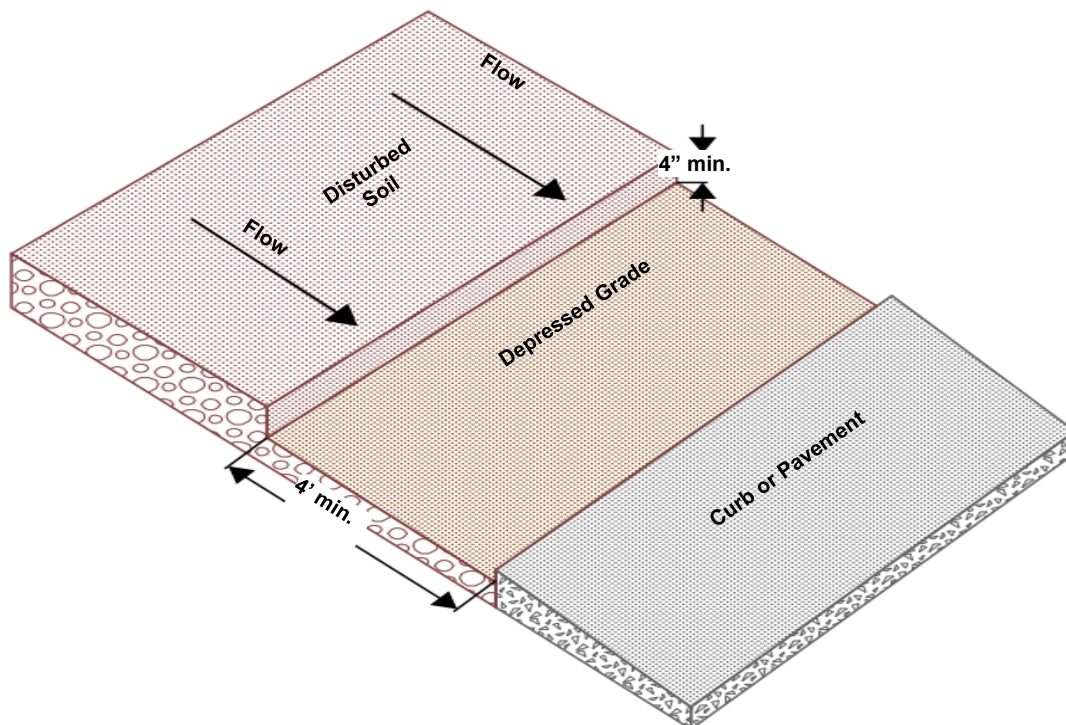
S2 Depressed Grade Sediment Trap (Cut Back Curb)

BMP Description:

A temporary sediment trap formed by grading or leaving the grade at the back-of-curb or edge of pavement depressed to intercept sediment-laden runoff from the site during construction and retain sediment onsite. The hardscape (street, sidewalk, curb, alley or roadway) acts as a barrier to retain the stormwater to promote sediment deposition prior to the stormwater discharging offsite.

Installation Schedule:	To be implementing along the perimeter of paved streets. Apply depressed grade sediment traps during street construction and when installing the concrete curbs. As the depressed grade sediment traps are back-filled to grade the lots, install alternative sediment controls such as silt fence along the back of curbs.
Installation, Maintenance and Inspection:	Excavate soil from behind the curb, sidewalk, or roadway 3-4 inches down from the top of the hardscape and excavate the soil back 3-4 feet back from the hardscape. The depth and length of the excavated area may be increased if more sediment storage is needed. Maintain the sediment trap by removing accumulated sediment when it reaches 50% of the capacity of the control.
Responsible Staff:	The General Contractor / Operator conducting the paving or related construction activity is responsible to maintain the sediment trap from before the paving is installed until back of curb sediment control, such as silt fence is installed.
Location:	Along the perimeter of disturbed soil where there is hardscape, such as a curb, street, alley or roadway and where the drainage area is equal to or smaller than the size of a typical residential lot. All new and existing roadways, curbs, and gutters must be protected from sediment-laden runoff and are considered as perimeters of the site. This control measure should not be used if there is no hardscape near the perimeter of the site, or for large drainage areas.

The following schematic is an example application of the construction control. It is intended to assist in understanding the control's design and function. The schematic is **not for construction**.



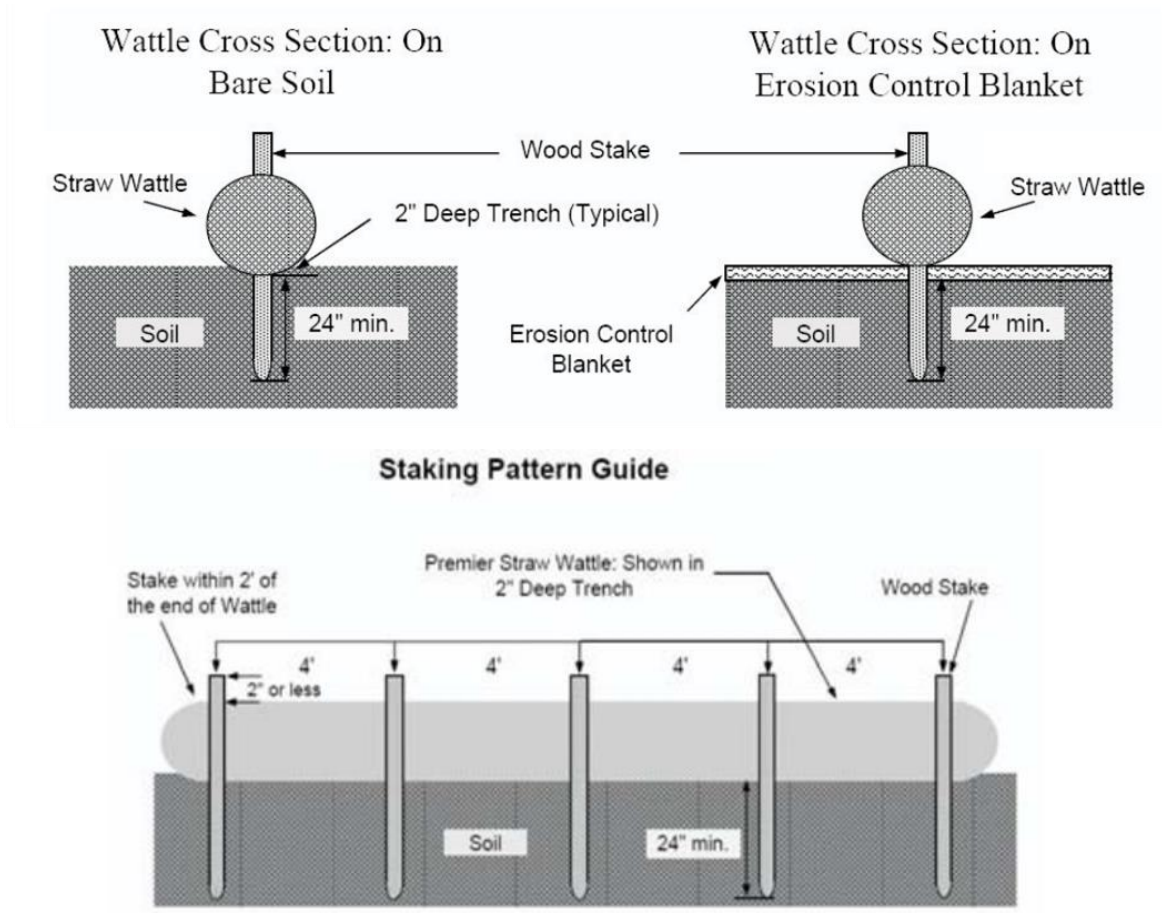
S3 *Straw Wattles / Fiber Rolls / Mulch Sock*

BMP Description:

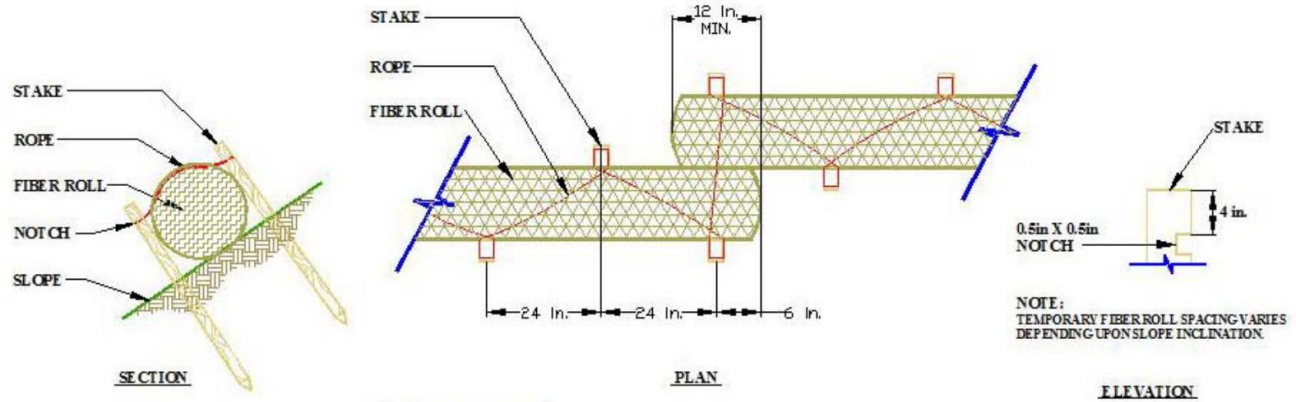
Straw Wattles, fiber rolls, and mulch socks are tubular products consisting of agricultural straw fibers, mulch, or other similar material encased in biodegradable tubular plastic or similar encasing material. When straw wattles are placed at the toe and on the face of slopes, they intercept runoff as sheet flow, and provide removal of sediment from the runoff. Locations of installation shall be indicated on the site map. Typical applications are as follows:

- Downslope of disturbed areas
- Along back-of-curb where stormwater flows into the street
- Along the perimeter of the area of earth disturbance
- Around temporary stockpiles
- On hillslopes to break up slope length and overland flow
- Across channel bottoms to pool water, reduce flow velocities and collect sediment on site.
- May be used in lieu of silt fence in common areas and reserves during installation of landscape and irrigation.

<i>Installation Schedule:</i>	Install prior to upslope soil disturbing activities. Straw wattles shall be placed on the topographical contour to the extent practicable, unless installing across a channel bottom. May be used in lieu of silt fence as a structural erosion / sediment control. See Section 2 for timing of installation for each construction activity.
<i>Installation, Maintenance and Inspection:</i>	Inspect every 7 days to ensure the BMP is in contact with the soil and no "bridging" or undermining is occurring. Straw Wattles are typically installed in a two inch deep trench that is constructed along the contour, perpendicular to the slope or direction of flow. Ends of the wattles shall be turned up the slope, so as to retain water and prevent its release from the end of the wattle. Wattles shall be secured to the subgrade by wooden stakes spaced every four lineal feet across the length of the wattle. Stakes shall be driven through the center of the wattle and into the ground a minimum of 12", with less than two inches projecting above the top of the wattle and spaced every four lineal feet across the length of the wattle, or stakes may be driven into the ground on both the upgradient and downgradient sides of the wattle, with a rope tied between the stakes to secure the wattle in place.. A stake shall be placed within two feet of the end of the wattle. When joining two wattles, overlap the wattles approximately six inches. If wattles are joined together by abutting the ends, tie the ends together using heavy twine or plastic locking ties. Maintain by removing accumulated sediment when deposits exceed 50% of the capacity of the control. Straw Wattles shall remain in place until fully established vegetation and root systems are present and can survive on their own. Wattles that are not removed will degrade in-place.
<i>Responsible Staff:</i>	The operator responsible for installation, maintenance, and removal of wattles will be indicated on the "Operator Responsibilities" page in Appendix G for the associated construction activity. If the BMP needs to be moved for construction activity such as landscape or irrigation installation to progress, the General Contractor / Operator is responsible to move and reinstall the control at the end of each work day. After acceptance or completion of the General Contractor / Operator's work, the Owner will be responsible.
<i>Location:</i>	Along the downslope edge of disturbed areas where erosion is likely to occur in the form of sheet or rill erosion and around or downslope of soil stockpiles. Across channel bottoms to pool water, reduce flow velocities and collect sediment on site. Refer to site map(s) for locations.



Straw Wattle / Fiber Roll / Mulch Sock Typical Installation

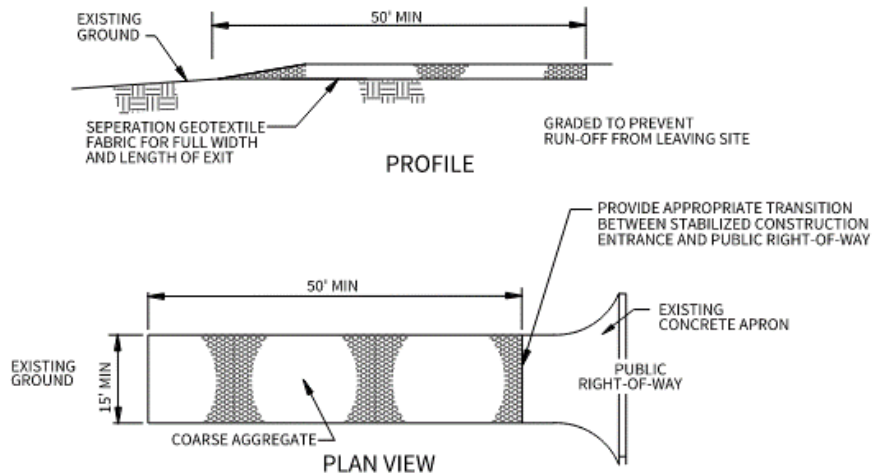


S4 Stabilized Construction Exit

BMP Description:

A Stabilized Construction Exit (SCE) will be installed at each exit from the development to the public road, as identified on the SWPPP site map to provide a stable entrance/exit condition from the construction site and minimize the tracking of mud and sediment onto public roads. A SCE is a stabilized pad of "rock" (coarse aggregate or recycled concrete), located at any point traffic will be leaving the construction site from an unpaved or disturbed area. To minimize the amount of track out, access to the construction site should be limited to as few points as possible and vegetation around the perimeter should be protected were access is not necessary.

<i>Installation Schedule:</i>	Install prior to initial mobilization of equipment on the construction site. Maintain throughout duration of construction activity until access to disturbed area is no longer needed or a paved entrance is installed.
<i>Installation, Maintenance and Inspection:</i>	Construct on level ground or properly grade each construction exit to prevent runoff from leaving the construction site. The SCE shall be at least 50 feet in length, and a minimum of 10 feet wide, and shall consist of a 6-inch layer of rock, 3-5" in diameter. Inspect every 7 days for functionality of the SCE. If the SCE has been compacted and is no longer effective, maintain by "stirring" or roughening the compacted rock. If the SCE has accumulated a significant amount of sediment and is causing trackout, maintain the SCE adding clean rock to the SCE.
<i>Responsible Staff:</i>	The operator responsible for installation, maintenance, and removal of each SCE will be indicated on the "Operator Responsibilities" page in Appendix G for the associated construction activity. The General Contractor / Operator may be assigned responsibility for installation, maintenance and removal the SCE for his construction activity, however if the SCE will be used by several different General Contractors / Operators, the Owner may be responsible for installation, maintenance, and removal. The SCE may remain in place after demobilization if it is planned for use during subsequent construction activities.
<i>Location:</i>	A SCE should be used at all designated access and exit points.



GENERAL NOTES

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMODATE A TRUCK WASHING AREA WHEN SHOWN ON THE CONSTRUCTION DRAWING. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE TRUCK WASHING AREA.
5. STONE MATERIAL SHALL CONSIST OF 3 TO 5 INCH OPEN GRADED ROCK AND SHALL BE PLACED IN A LAYER OF AT LEAST 8 INCHES THICKNESS.

NOTES:

1. THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD 2, A MULLEN BURST RATING OF 140 LB/IN 2, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
4. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
5. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
6. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
7. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
8. PLACE STONE TO DIMENSIONS AND GRADE SHOWN. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
9. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
10. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
11. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
12. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
13. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE.

S5 Diversion Berm / Diversion Dike

BMP Description:

A temporary diversion dike is a barrier created by the placement of an earthen embankment to reroute the flow of runoff to an erosion control device or away from an open, easily erodible area. A diversion dike intercepts runoff from small upland areas and diverts it away from exposed slopes to a stabilized outlet, such as a rock berm, sandbag berm, or stone outlet structure. These controls can be used on the perimeter of the site to prevent runoff from entering the construction area. Dikes are generally used for the duration of construction to intercept and reroute runoff from disturbed areas to prevent excessive erosion until permanent drainage features are installed and/or slopes are stabilized.

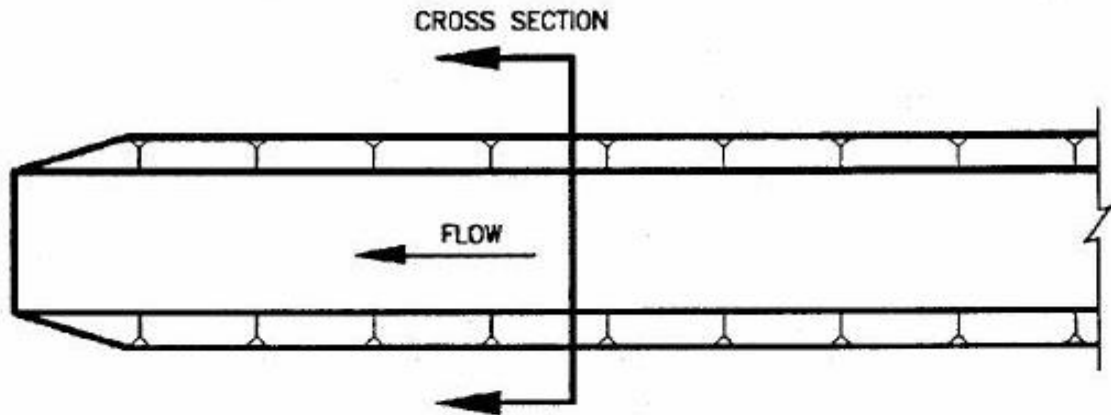
<i>Installation Schedule:</i>	Diversions and outlets shall be constructed prior to earth disturbing activity.
<i>Installation, Maintenance and Inspection:</i>	Inspect every 7 days for proper function, positive grade, evidence of erosion, and if applicable, sufficient vegetative cover.
<i>Responsible Staff:</i>	The General Contractor / Operator for the associated construction activity will be responsible for installation and maintenance of the diversion berm. If the diversion berm is to remain in place after acceptance or completion of the General Contractor / Operator's work, responsibility will transfer to the Owner.
<i>Location:</i>	Upslope of disturbed areas where erosion is likely to occur, upslope of soil stockpiles when diverting water around the stockpile, downslope of disturbed soil when directing runoff from an area to a stabilized outlet, sediment trap, or basin.

S6 Drainage Channels or Swales

BMP Description:

Drainage channels or swales are channels lined with vegetation, riprap, concrete, etc. A diversion or interceptor swale intercepts runoff from small upland areas and diverts it away from slopes to a stabilized outlet, such as a rock berm or stone outlet structure. These controls can be used on the upstream perimeter of the site to prevent runoff from entering the construction area or at the downgradient perimeter to intercept and reroute runoff to prevent excessive erosion until permanent drainage features are installed and/or slopes are stabilized.

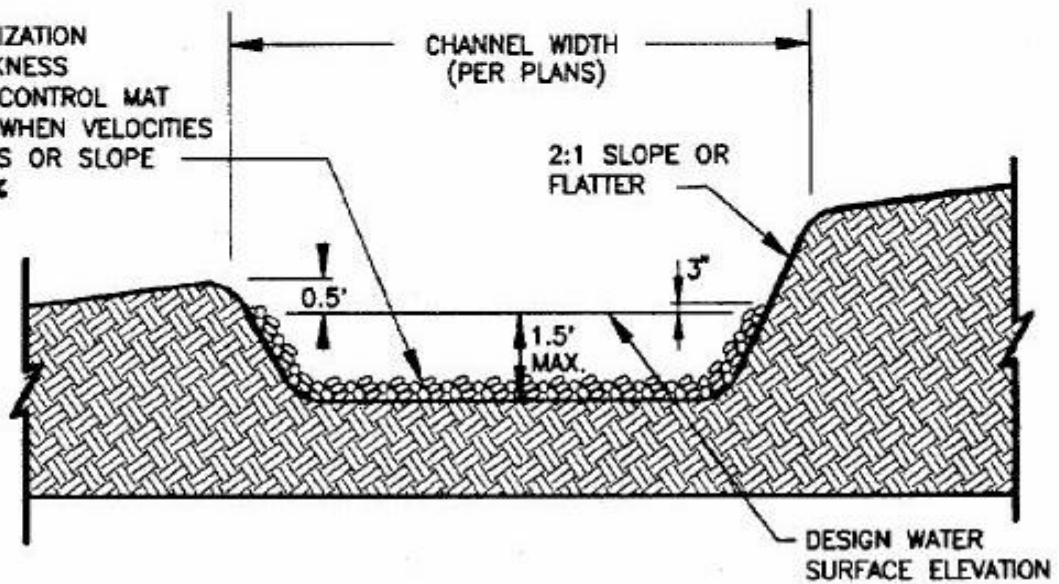
<i>Installation Schedule:</i>	Drainage swales and interceptor swales will be constructed prior to earth disturbing activity.
<i>Installation, Maintenance and Inspection:</i>	Inspect every 7 days for proper function, positive grade, evidence of erosion, and if applicable, sufficient vegetative cover.
<i>Responsible Staff:</i>	The General Contractor / Operator for the associated construction activity will be responsible for installation and maintenance of the drainage channel or swale. If the drainage channel or swale is to remain in place after acceptance or completion of the General Contractor / Operator's work, responsibility will transfer to the Owner.
<i>Location:</i>	At the upstream perimeter of the site to prevent runoff from entering the construction area or downslope of disturbed soil when directing runoff from an area to a stabilized outlet, sediment trap, or basin.



PLAN VIEW

N.T.S.

STONE STABILIZATION
MIN. 3" THICKNESS
OR EROSION CONTROL MAT
IS REQUIRED WHEN VELOCITIES
EXCEED 6 FPS OR SLOPE
EXCEEDS 2.0%



CROSS SECTION

N.T.S.

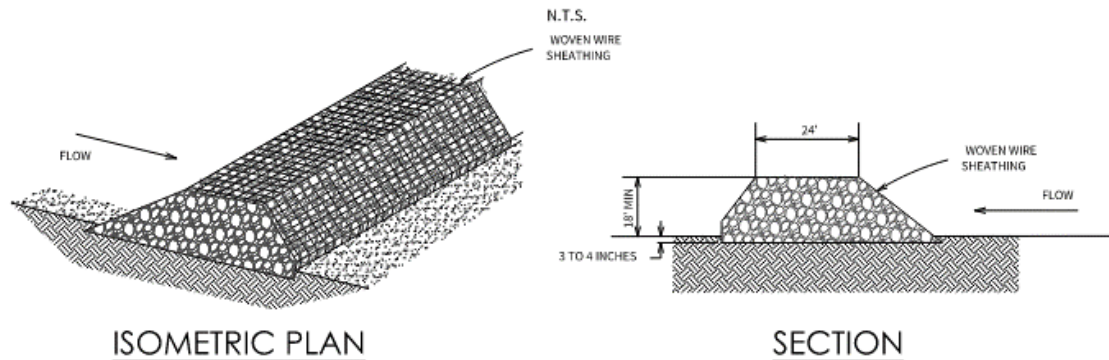
S7 Rock Berms / Check Dams

BMP Description:

The purpose of a rock berm is to serve as a check dam in areas of concentrated flow, to intercept sediment-laden runoff, reduce the velocity of water, provide energy dissipation, detain the sediment and release the water. Rock berms consist of various size rock (coarse aggregate or recycled concrete). Rock berms are used in areas where the volume of runoff is too great for a silt fence to contain. They are less effective for sediment removal than silt fences, particularly for fine particles, but are able to withstand higher flows than a silt fence. As such, rock berms are often used in areas of channel flows (ditches, gullies, etc.). Rock berms are most effective at reducing bed load in channels and should not be substituted for other erosion and sediment control measures farther up the watershed.

<i>Installation Schedule:</i>	Prior to upstream earth disturbing activity. To remain in place until upstream disturbed soil is stabilized.
<i>Installation, Maintenance and Inspection:</i>	Install in areas of concentrated flow, such as channels, swales, or ditches so that the sides of the rock berm extend up the sides of the channel above the lowest point in top of the berm, so that stormwater will overtop the rock berm in the middle, instead of flowing around the sides.
<i>Responsible Staff:</i>	The operator responsible for installation, maintenance, and removal of rock berms / check dams will be indicated on the "Operator Responsibilities" page in Appendix G for the associated construction activity.
<i>Location:</i>	Install in areas of concentrated flow, such as channels, swales, or bayous as indicated on the site map(s).

The following schematics are example applications of the construction controls. They are intended to assist in understanding the control's design and function. The schematic is **not for construction**.



NOTES:

1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOOT RINGS.
2. CLEAN, OPEN GRADED 3 TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-TO 8-INCH DIAMETER ROCKS MAY BE USED.
3. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE.
4. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
5. PLACE THE ROCK ALONG THE SHEATHING TO A HEIGHT NOT LESS THAN 18".
6. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
7. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
8. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
9. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
10. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT OF IN AN APPROVED MANNER AND REPAIR ANY LOOSE WIRE SHEATHING.
11. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
12. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

S8 *Inlet Protection*

Inlet protection is used to minimize sediment, trash/debris, and other pollutant discharges into the stormwater conveyance systems. All inlets that may receive storm runoff from disturbed areas should be protected. Inlet Protection consists of a series of temporary measures that provide protection against silt transport or accumulation in storm sewer systems by promoting sediment deposition prior to entering the storm sewer system. Inlet protection also provides protection from trash, litter, and debris entering the system.

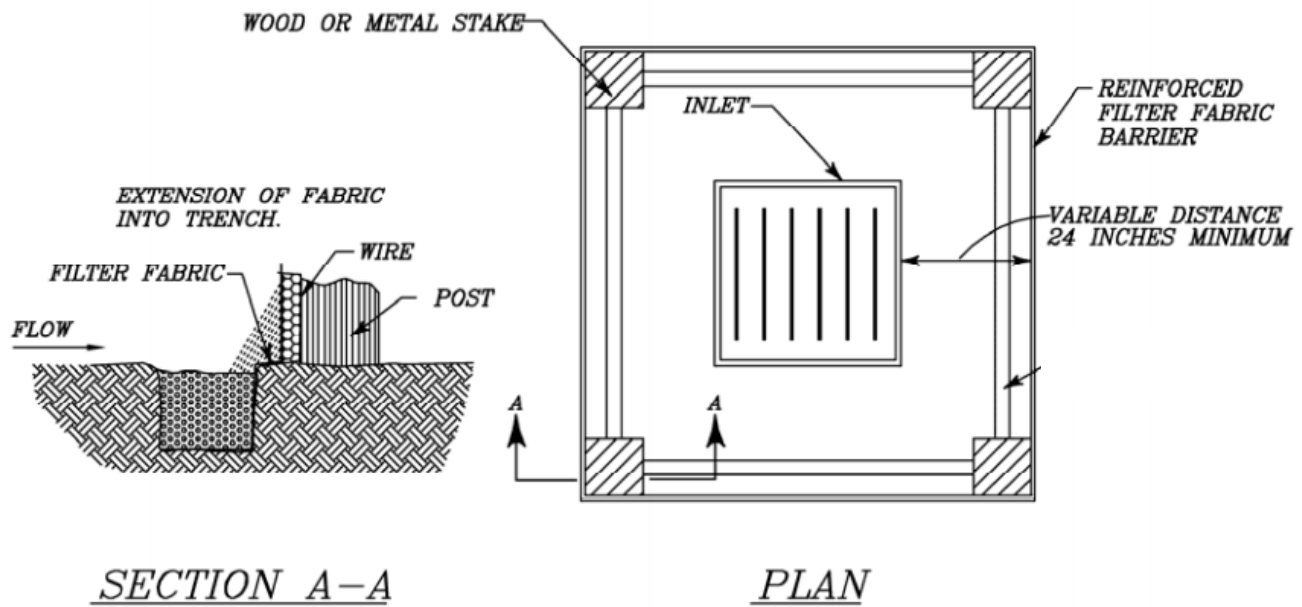
S81 Inlet Protection for Type "E" Inlets, Area Inlets, Drop Inlets

BMP Description:

Inlet Protection for Type "E" inlets, area inlets, and drop inlets consists of standing silt fence around the inlet on all four sides. The purpose is to minimize sediment discharge into the storm sewer system by temporarily detaining stormwater to promote sediment deposition prior to discharge.

Installation Schedule:	Install prior to upstream earth disturbance. Inlet protection shall remain in place until all upstream areas are stabilized.
Installation, Maintenance and Inspection:	Install silt fence (See BMP S1 for Silt Fence installation details) around the inlet opening with steel t-posts positioned at the corners of the inlet box and properly trench the silt fence 6" into compacted soil. Ensure the silt fence connections are overlapped at least 1 foot to prevent any gaps where water can flow through. Inspect every 7 days to ensure there are no gaps or holes in the silt fence. Maintain by reinstalling the silt fence or by removing accumulated sediment when deposits reach a depth of 6" or 50% of the capacity of the control.
Responsible Staff:	The operator responsible for installation, maintenance, and removal of inlet protection will be indicated on the "Operator Responsibilities" page in Appendix G for the associated construction activity. After acceptance or completion of the General Contractor / Operator's work, the Owner will be responsible. As finished lots are transferred to homebuilders, the homebuilders will be responsible for maintenance of inlet protection on inlets that are downgradient of their construction activity.
Location:	At all Type "E" inlets, area inlets, and drop inlets that are downgradient from disturbed areas, as indicated on the site map. Type "E" inlets typically occur in reserves or emergency overflows into detention ponds.

The following schematic is an example application of the construction control. It is intended to assist in understanding the control's design and function. The schematic is **not for construction**.

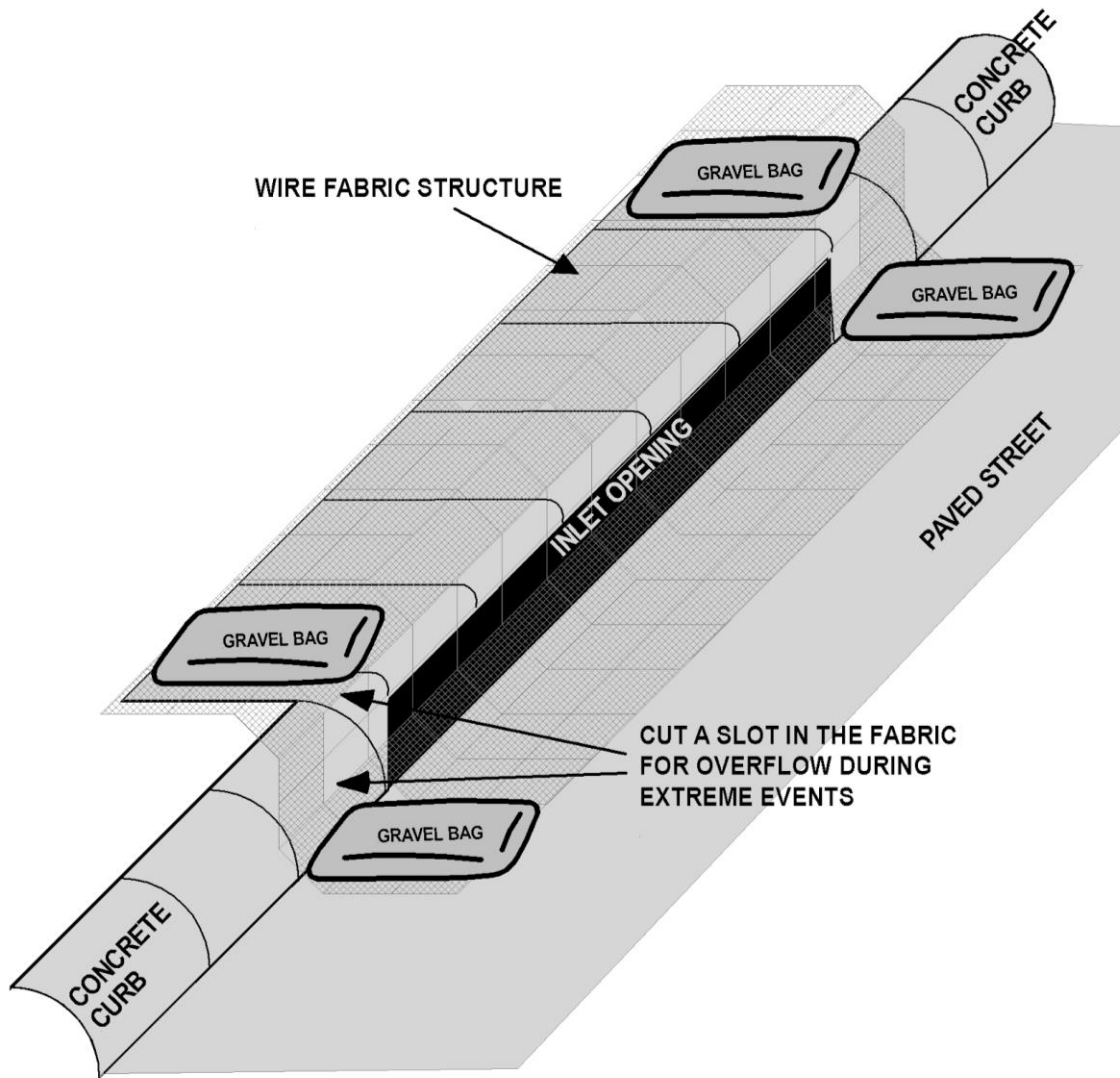


S82 Curb Inlet Protection (Wire Fabric Structure)

BMP Description:

The purpose of curb inlet protection is to temporarily detain storm water, promoting sediment deposition, to filter sediment as water flows through the fabric, and to filter trash, litter, and debris as it flows through the wire structure. Curb inlet protection consists of placing a wire fabric structure over the inlet opening. The wire fabric structure must be formed so that it has maximum contact with the concrete around the inlet opening. A slot must be cut in the fabric to allow increased volume of storm water to over flow the structure and enter the inlet during heavy rain events. The bottom of the slot must be at least 4" above the bottom of the inlet opening. The wire fabric structure should be held in place with 20lb gravel bags.

<i>Installation Schedule:</i>	Installed after inlet construction and remain in place until all upstream areas are stabilized.
<i>Installation, Maintenance and Inspection:</i>	Place the wire fabric structure over the inlet opening making sure the structure is in 100% contact with the curb and gutter with no gaps or "bridging." Place a total of 4 gravel bags on top of the wire fabric structure at each side of the inlet opening, both on the lower portion in contact with the street, and the upper portion in contact with the top of the inlet. Remove sediment accumulations weekly, or as often as necessary to minimize discharge into the storm sewer system. Inspect every 7 days for proper function, for broken gravel bags, and sediment or trash accumulation. Maintain by removing the inlet protection, cleaning any sediment or trash accumulations, and reinstalling over the inlet.
<i>Responsible Staff:</i>	The operator responsible for installation, maintenance, and removal of inlet protection will be indicated on the "Operator Responsibilities" page in Appendix G for the associated construction activity. After acceptance or completion of the General Contractor / Operator's work, the Owner will be responsible. As finished lots are transferred to homebuilders, the homebuilders will be responsible for maintenance of inlet protection on inlets that are downgradient of their construction activity.
<i>Location:</i>	At all curb inlets downgradient of disturbed soil, as indicated on the site map.



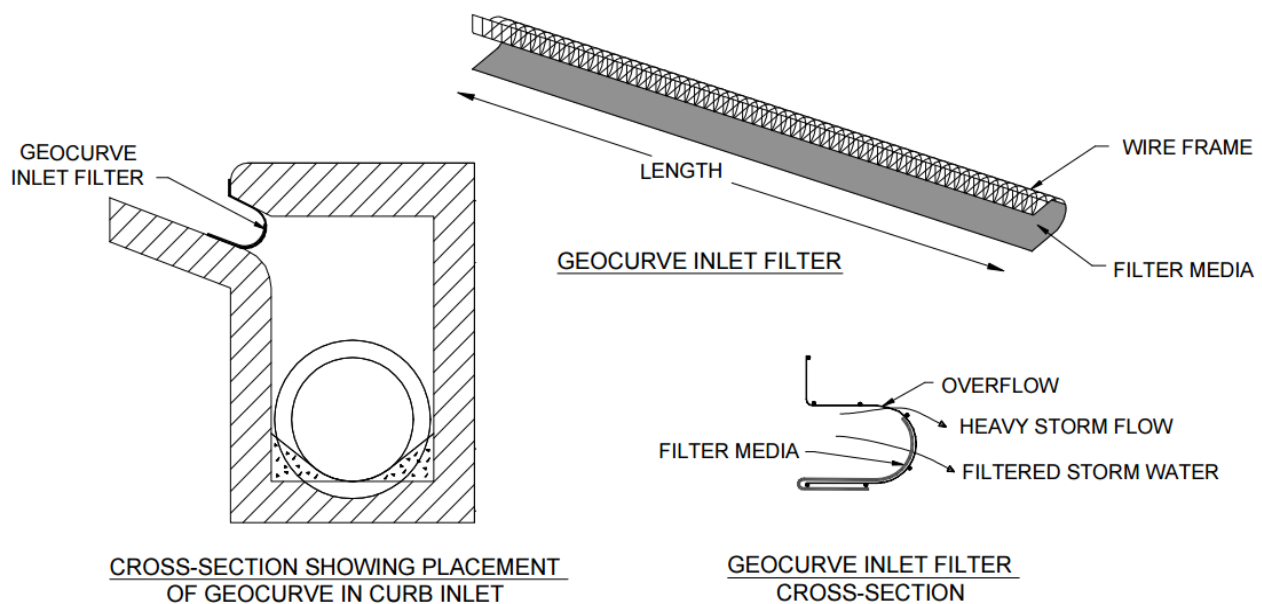
Curb Inlet Protection (Wire Fabric Structure) Typical Installation

S83 GeoCurve Curb Inlet Protection

BMP Description:

The purpose of curb inlet protection is to temporarily detain storm water, promoting sediment deposition, to filter sediment as water flows through the fabric, and to filter trash, litter, and debris as it flows through the wire structure. Curb inlet protection consists of placing a GeoCurve Inlet Filter just inside the inlet opening. It is pressed into the inlet opening. The wire fabric structure filters sediment, trash, litter, and debris from storm water prior to entering the storm sewer system. A slot must be cut in the fabric to allow increased volume of storm water to over flow the structure and enter the inlet during heavy rain events.

<i>Installation Schedule:</i>	Installed after inlet construction and remain in place until all upstream areas are stabilized.
<i>Installation, Maintenance and Inspection:</i>	Cut the GeoCurve Inlet Filter to the length of the inlet opening. Press the GeoCurve into the inlet opening so that it is held in place by the pressure of the wire against the mouth of the inlet. Remove sediment accumulations weekly, or as often as necessary to minimize discharge into the storm sewer system. Inspect every 7 days for proper function, for broken gravel bags, and sediment or trash accumulation. Maintain by removing the inlet protection, cleaning any sediment or trash accumulations, and reinstalling over the inlet.
<i>Responsible Staff:</i>	The operator responsible for installation, maintenance, and removal of inlet protection will be indicated on the "Operator Responsibilities" page in Appendix G for the associated construction activity. After acceptance or completion of the General Contractor / Operator's work, the Owner will be responsible. As finished lots are transferred to homebuilders, the homebuilders will be responsible for maintenance of inlet protection on inlets that are downgradient of their construction activity.
<i>Location:</i>	At all curb inlets downgradient of disturbed soil, as indicated on the site map.

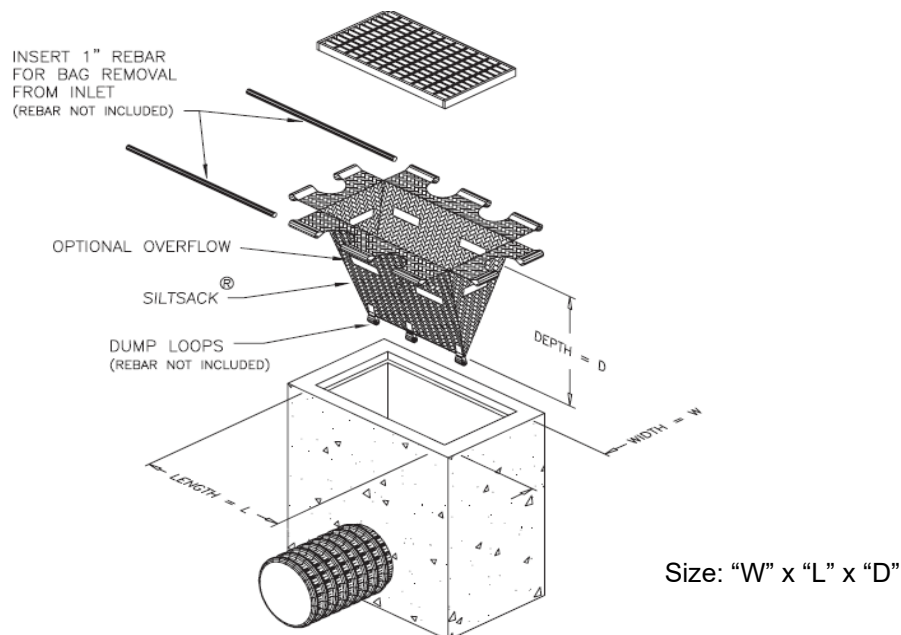


S84 Siltsack Drop Inlet Protection

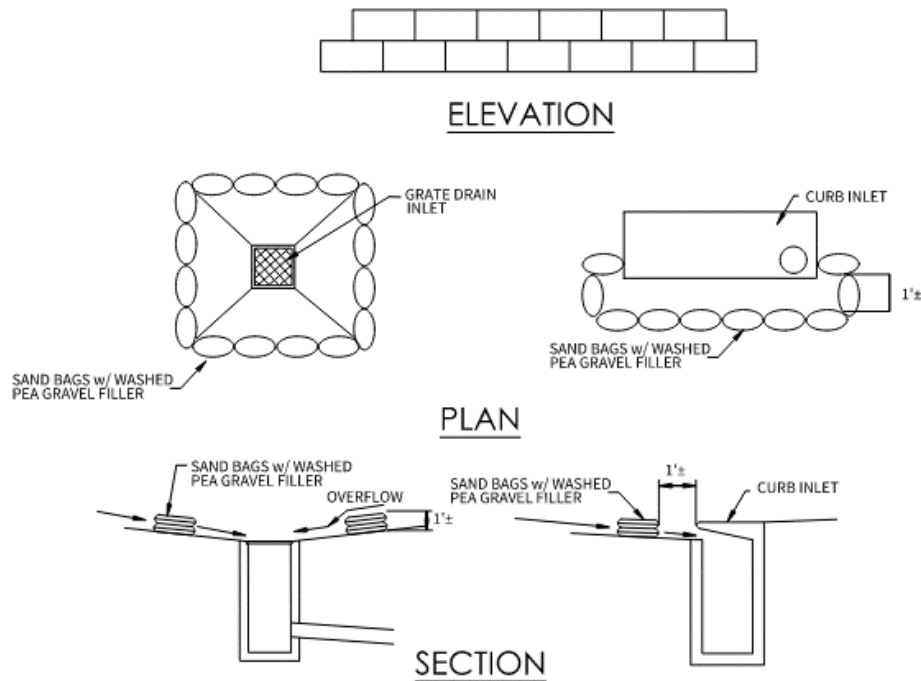
BMP Description: A Siltsack is a sediment control device used to prevent silt and sediment from entering the storm sewer system by catching the silt and sediment while allowing water to pass through freely. Siltsack can be used as a primary or secondary sediment control device to prevent failure of your drainage system due to clogging. It must be maintained on a regular basis to function properly.

Installation Schedule:	Installed prior to earth-disturbing activity upstream of the inlet and shall remain in place until all upstream areas are stabilized.
Installation, Maintenance and Inspection:	Remove the inlet grate and place the Siltsack in the opening. Hold approximately six inches of the sack (the lifting straps) outside the frame.. Replace the grate to hold the sack in place. Inspect every 7 days for the level of collected sediment. When the restraint cord is no longer visible, Siltsack is full and should be emptied. To remove Siltsack, take two pieces of 1" diameter rebar or equivalent and place through the lifting loops on each side of the sack to facilitate the lifting of the sack. To empty the Siltsack, place the unit where the contents will be collected. Place the rebar through the lift straps (connected to the bottom of the sack) and lift. This will lift Siltsack from the bottom and empty the contents. Clean out and rinse. Return Siltsack to its original shape and place back in the basin. Siltsack is reusable.
Responsible Staff:	The operator responsible for installation, maintenance, and removal of inlet protection will be indicated on the "Operator Responsibilities" page in Appendix G for the associated construction activity. After acceptance or completion of the General Contractor / Operator's work, the Owner will be responsible. As finished lots are transferred to homebuilders, the homebuilders will be responsible for maintenance of inlet protection on inlets that are downgradient of their construction activity.
Location:	At all drop inlets downgradient of disturbed soil, as indicated on the site map.

7



S85 *Bagged Gravel Inlet Filter*



BAGGED GRAVEL INLET FILTER NOTES

1. THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD 2, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
2. THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6 INCHES.
3. THE GRAVEL BAGS SHOULD BE FILLED WITH $\frac{3}{4}$ " GRAVEL.
4. WHEN A GRAVEL BAG IS FILLED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.
5. THE GRAVEL BAGS SHOULD BE PLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
6. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
7. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
8. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
9. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

3

BAGGED GRAVEL INLET FILTER

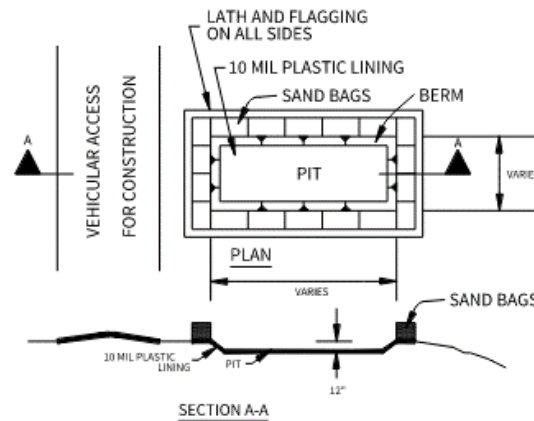
SCALE: NONE

S9 Concrete Washout Area

BMP Description:

Discharges from concrete truck wash outs, surplus concrete or drum water, masonry and stucco operations shall be contained. Discharge of concrete truck wash water to any surface water, including discharge to storm sewers is prohibited. Wash water shall be discharged to designated areas at the construction site where controls have been established to prevent discharge to surface waters. Structural controls may consist of temporary berms or temporary shallow pits. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material. Washout of trucks during rainfall events shall be minimized. The discharge of wash out water must not cause or contribute to groundwater contamination.

<p><i>Installation Schedule:</i></p>	<p>Install before concrete operations commence onsite, such as pouring streets, sidewalks, driveways and slabs; constructing headwalls and inlets; or installing stucco and masonry. Maintain concrete washouts throughout concrete operations. Concrete washout area may be removed at the cessation of concrete activities onsite.</p>
<p><i>Installation, Maintenance and Inspection:</i></p>	<p>Designated concrete washout areas shall be:</p> <ul style="list-style-type: none"> ● at least 15 feet from a curb or paved surface ● at least 50 feet from storm drains, open ditches, or water bodies if feasible ● excavated below grade for the pit area ● lined with a 10-millimeter polyethylene-liner to minimize groundwater impacts ● have a large stabilized entrance to minimize sediment tracking if the washout area is outside of the Stabilized Construction Exit ● have sufficient perimeter BMP's to minimize or prevent concrete wash water from discharging offsite. <p>Concrete washout areas will be maintained by removing the hardened concrete when the capacity of the washout reaches 70%. Alternatively an additional washout area may be constructed to provide additional capacity. Inspect every 7 days for the presence and placement of the concrete washout, available capacity, effective containment measures and structural controls, and offsite sediment tracking from the washout area. Upon completion of concrete pouring operations, the designated concrete washout area(s) will be removed by removing the hardened concrete from the washout area, removing the containment measures and disposing of them at an approved dump site.</p>
<p><i>Responsible Staff:</i></p>	<p>The General Contractor / Operator conducting any concrete operations is responsible for installation, maintenance, and removal of the concrete washout area.</p>
<p><i>Location:</i></p>	<p>In or adjacent to the Material and Equipment Staging Area, or near the Stabilized Construction Exit, but at least 15 feet away from any paved surface, 50 feet from any storm drains, open ditches, or water bodies if feasible, and on a flat surface with minimal slope. Locations of washout(s) will be indicated on the site map(s).</p>



NOTES:

1. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.

S9b Alternative Concrete Washout System: Portable Concrete Washout Container

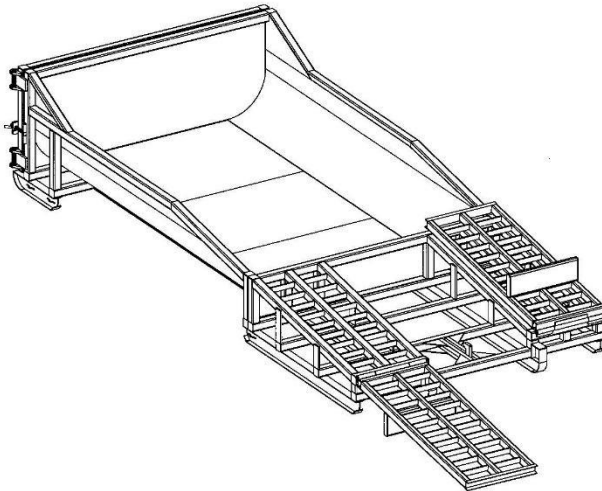
As an alternative to the Concrete Washout Area, Lennar may use portable concrete washout containers. Factors determining which washout design to implement include, feasibility, practicality, jobsite conditions, available locations, community locations, site geography, and any additional unforeseen factors.

BMP Description:

A portable, self-contained and watertight container that controls, captures, and contains caustic concrete wastewater and washout material. The container must be portable and temporary, watertight and have a holding capacity to accept washout from approximately 150-350 yards of poured concrete depending upon the container.

<i>Installation Schedule:</i>	Install before concrete operations commence onsite, such as pouring concrete slab foundations, sidewalks, driveways and air conditioning pads; or installing stucco and masonry. Maintain portable concrete washout containers throughout concrete operations.
<i>Installation, Maintenance and Inspection:</i>	<p>Install in dedicated areas with rock protected entrances of varying sizes predicated by the size of the lot/homesite</p> <p>Maintain portable concrete washout containers by replacing the container when it is three-quarters full; do not allow the container to over flow. The concrete waste material is taken to a licensed concrete recycling facility and is converted to varying types of aggregate.</p> <p>Inspect every 7 calendar days for the presence and placement of the concrete washout, available capacity, and effective containment measures and structural controls. Inspect wastewater level and request a vacuum if needed. The portable concrete washout company provides licensed vacuum, hauling and recycling of concrete wastewater.</p> <p>A rampless container may be used in conjunction with the ramped container by itself if a concrete pump is not needed. A second type of container with lower sides may be utilized to capture concrete waste from a pump truck.</p> <p>The wastewater must be disposed of or treated or recycled in an environmentally safe manner and in accordance with the federal, state, or local regulatory guidelines.</p>
<i>Responsible Staff:</i>	Lennar
<i>Location:</i>	The portable concrete washout container will be placed on a lot or on existing homesites without a rock entrance where the concrete trucks can reach the container without tracking.

PORTABLE CONCRETE WASHOUT CONTAINER



CONCRETE WASHOUT SYSTEMS

PO Box 2604
Carmichael, CA. 95609
Phone: 1.877.292.7468
Fax: 1.916.244.0403
info@concretewashout.com
www.concretewashout.com
Patent Pending

Representative depiction of unit,
on-site unit(s) may not have ramps
and may include specialty units for
pump trucks

DESCRIPTION

A portable, self-contained and watertight container affixed with ramps that controls, captures and contains caustic concrete wastewater and washout material.

PURPOSE & OBJECTIVE

Allows trade personnel to easily washout concrete trucks, pumps and other equipment associated with cement on site and allows easy off site recycling of the same concrete materials and wastewater.

APPLICATION

Construction projects where concrete, stucco, mortar, grout and cement are used as a construction material or where cementitious wastewater is created.

MAINTENANCE

Inspect and clean out when $\frac{3}{4}$ full, not allowing the container to overflow.

Inspect wastewater level and request a vacuum if needed.

Inspect subcontractors to ensure that proper housekeeping measures are employed when washing out equipment.

SPECIFICATIONS

The container must be portable and temporary, watertight, equipped with ramps and have a holding capacity to accept washout from approximately 350 yards of poured concrete. A vacuum service must accompany washout container and be used by site superintendent as needed. A rampless container may be used in conjunction with a ramped container or by itself if a concrete pump is not needed. The washwater must be disposed of or treated and recycled in an environmentally safe manner and in accordance with federal, state or local regulatory guidelines.

TARGETED POLLUTANTS

Caustic wastewater (high pH level near 12 units)

Suspended solids

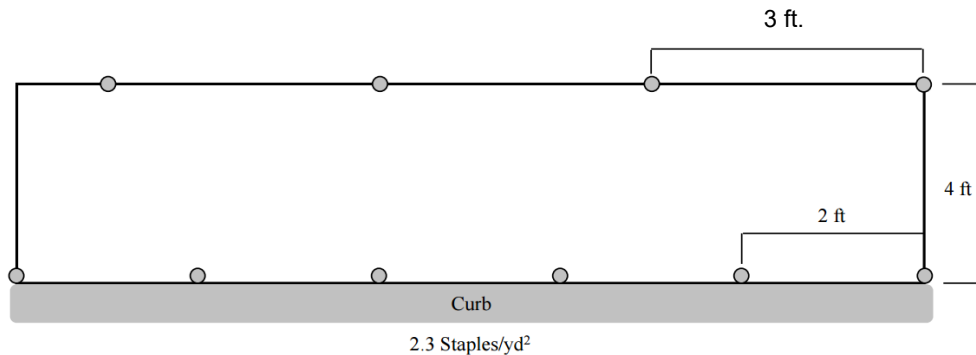
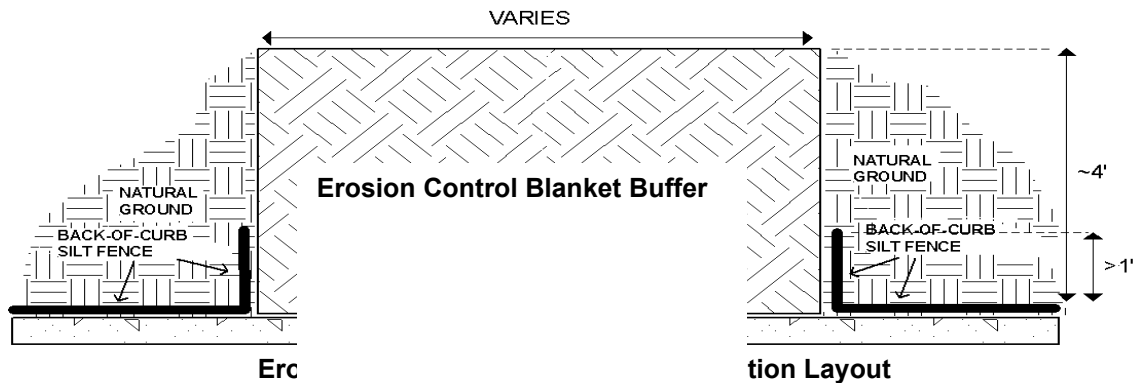
Assorted Metals; Chromium VI, Nickel, Sulfate, Potassium, Magnesium and Calcium Compounds

S12a Erosion Control Blanket Buffer

BMP Description:

An erosion control blanket buffer is a temporary sediment control that is traversable by vehicle or foot traffic. It is typically used along the back of curb, or at the end of any hardscape, to minimize sediment discharge into a paved surface, but also to allow short-term access to the finished lots for vehicles and material deliveries. This control measure should not be used as a Stabilized Construction Exit to minimize offsite sediment tracking.

Installation Schedule:	Install after curb or other hardscape installation. Install during installation of back-of-curb sediment control on newly paved streets, curbs, or parking lots where short-term vehicular access to finished lots is needed.
Installation, Maintenance and Inspection:	The erosion control blanket buffer should be installed between sections of back-of-curb sediment control such as silt fence. Maintain and re-install as needed. Inspect every 7 days for function and condition. Areas needing maintenance will be documented in the SWPPP BMP inspection report.
Responsible Staff:	The Owner is responsible for installation and maintenance of the erosion control blanket buffer.
Location:	At areas where vehicles will access the construction areas from the streets; locations to be determined in the field.



Erosion Control Blanket Staple Pattern

S14 Earthen Berm Check Dam

BMP Description:

An earthen berm serves as a check dam and provides a containment area where sediment-laden runoff is temporarily detained under quiescent conditions, allowing sediment to settle out or before the runoff is discharged. Earthen berms are formed by excavating or constructing an earthen embankment across a waterway or low drainage area.

Design

An earthen berm serves as a check dam for ponding stormwater and is formed by excavation or by construction of an earthen embankment. They are used primarily as temporary measures in long drainage swales, rough graded roadways or ditches in which permanent vegetation may not be established and erosive velocities are present. They are typically used in conjunction with other techniques such as inlet protection, riprap or other sediment reduction techniques. Check dams provide limited treatment. They are more useful in reducing flow to acceptable levels for other techniques.

Suitable Applications

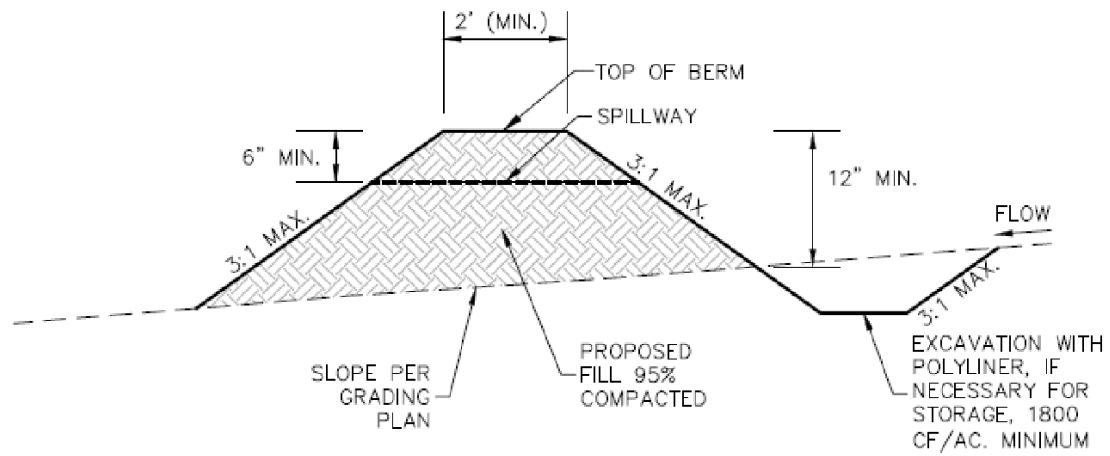
Earthen berms should be considered for use:

- At multiple locations within the project site where sediment control is needed.
- Around or upslope from storm drain inlet protection measures.
- On construction projects where the drainage area is 2-10 acres.
- As a supplemental control, earthen berms provide additional controls for reducing sediment load before it enters a drainage system.

Limitations

- Requires large surface areas to permit infiltration and settling of sediment.
- Only removes large and medium sized particles and requires upstream erosion control.
- Conducive to vector production.
- Should not be located in live streams.

<i>Installation, Maintenance and Inspection:</i>	<ul style="list-style-type: none">● The dam height should be between 18 and 36 inches.● The center of the check dam should be at least 6 inches lower than the outer edges.● The dam should be designed so that the 2-year, 24-hour storm can pass the dam without causing excessive upstream flooding.● The fill material for the embankment must be free of roots or other woody vegetation as well as oversized stones, rocks, organic material, or other objectionable material. The embankment may be compacted by traversing with equipment while it is being constructed.● All cut-and-fill slopes should be 3:1 or flatter.● Regular inspections should be made to insure that the center of the dam is lower than the edges. Erosion caused by high flows around the edges of the dam should be corrected immediately.● Sediment should be removed when it reaches one half of the original height of the measure.● Ponding that requires dewatering measures shall be attended while dewatering takes place.
<i>Responsible Staff:</i>	The General Contractor is responsible for installation and maintenance of Earthen berms.
<i>Location:</i>	Install in areas of concentrated flow, such as rough graded streets, channels or swales at locations indicated on the civil plans.



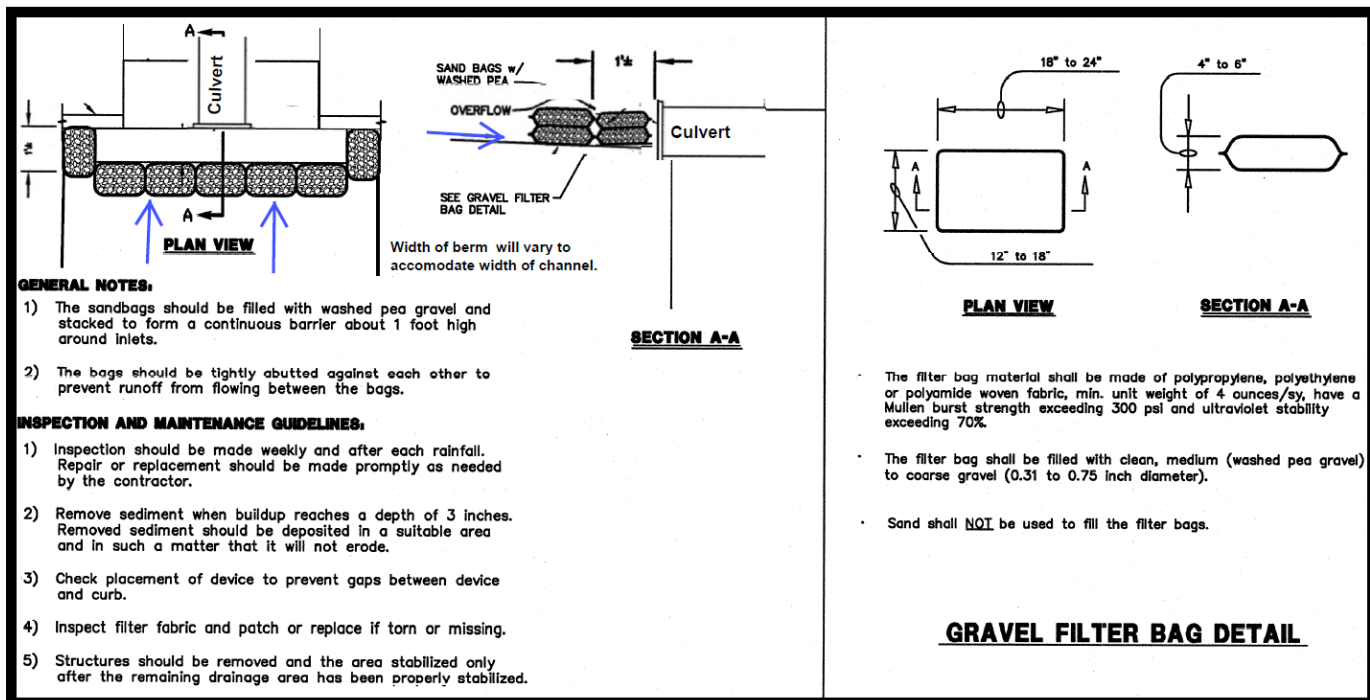
EARTHEN BERM W/ POLYLINER AND SPILLWAY

S15 Gravel Bag Berm

BMP Description:

The purpose of a gravel bag berm is to serve as a temporary check dam in areas of concentrated flow where placement of a rock berm or rock check dam is not feasible, to intercept sediment-laden runoff, reduce the velocity of water, provide energy dissipation, detain the sediment and release the water. Gravel bag berms consist of a various number of gravel bags filled with wash pea gravel or other small aggregate (no sand or dirt) arranged in single or double height stacked arrangements. Gravel bag berms are used in areas where the volume of runoff is too great for a silt fence to contain. They are less effective for sediment removal than silt fences, particularly for fine particles, but are able to withstand higher flows than a silt fence. As such, gravel bag berms are often used in areas of channel flows (ditches, gullies, etc.). Gravel bag berms are most effective at reducing bed load in channels and should not be substituted for other erosion and sediment control measures farther up the watershed.

Installation Schedule:	Prior to upstream earth disturbing activity. To remain in place until upstream disturbed soil is stabilized.
Installation, Maintenance and Inspection:	Install in areas of concentrated flow, such as channels, swales, or bayous so that the sides of the gravel bag berm extend up the sides of the channel above the lowest point in top of the berm, so that stormwater will overtop the gravel bag berm in the middle, instead of flowing around the sides.
Responsible Staff:	The General Contractor / Operator will be responsible for installation and maintenance of gravel bag berms. If gravel bag berms are to remain in place after acceptance or completion of the General Contractor / Operator's work, responsibility will transfer to the Owner.
Location:	Install in areas of concentrated flow, such as channels or swales as indicated on the site map(s).



S16 Temporary Sediment Basin

BMP Description:

Description and purpose:

A sediment basin is a sediment control that consists of a temporary basin formed by excavation or by constructing an embankment so that sediment-laden run off is temporarily detained under quiescent conditions, allowing sediment to settle out before the runoff is discharged.

Requirements:

- Sediment basins are required, where feasible, for a common drainage location that serves an area with 10 or more acres disturbed at one time.
- A sediment basin must provide sufficient storage to contain a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained.
- Storage volume does not need to include offsite areas, undisturbed areas, or areas that have undergone permanent stabilization if these flows are diverted around both the disturbed areas and the basin.
- Capacity calculations shall be included in the SWPPP.
- If a sediment basin is not feasible, equivalent control measures shall be used until final stabilization of upgradient areas, and the reason that the basins are not feasible shall be documented in the SWPPP.
- Construct before clearing and grading work begins when feasible.
- Temporary stabilization measures should be specified for all areas disturbed to create the basin.

Planning Considerations:

- To improve the effectiveness of the basin, it should be located to intercept runoff from the largest possible amount of disturbed area. The best locations are generally low areas.
- Do not locate in a stream. It should be located to trap sediment-laden runoff before it enters the stream. The basin should not be located where its failure would result in the loss of life or interruption of the use or service of public utilities or roads.
- Sediment basins should be designed, constructed, and maintained to minimize mosquito breeding habitats by minimizing the creation of standing water.
- Limit the contributing area to the sediment basin to only the runoff from the disturbed soil areas. Use temporary concentrated flow conveyance controls to divert runoff from undisturbed areas away from the sediment basin if feasible.

Sediment basins should be considered for use:

- Where sediment-laden water may enter the drainage system or watercourses.
- At the outlet of disturbed watersheds between 5 acres and 75 acres and evaluated on a site by site basis
- Where post construction stormwater detention basins are to be installed.
- In association with dikes, temporary channels, and pipes used to convey runoff from disturbed areas.

Limitations

Sediment basins must be installed only within the property limits and where failure of the structure will not result in loss of life, damage to homes or buildings, or interruption of use or service of public roads or utilities. In addition, sediment basins are attractive to children and can be very dangerous. Local ordinances regarding health and safety must be adhered to. If fencing of the basin is required, the type of fence and its location should be shown in the SWPPP and in the construction specifications. Sediment basins have a limited effectiveness in removing fine silt and clays and should be used in conjunction with other erosion and sediment controls.

Design

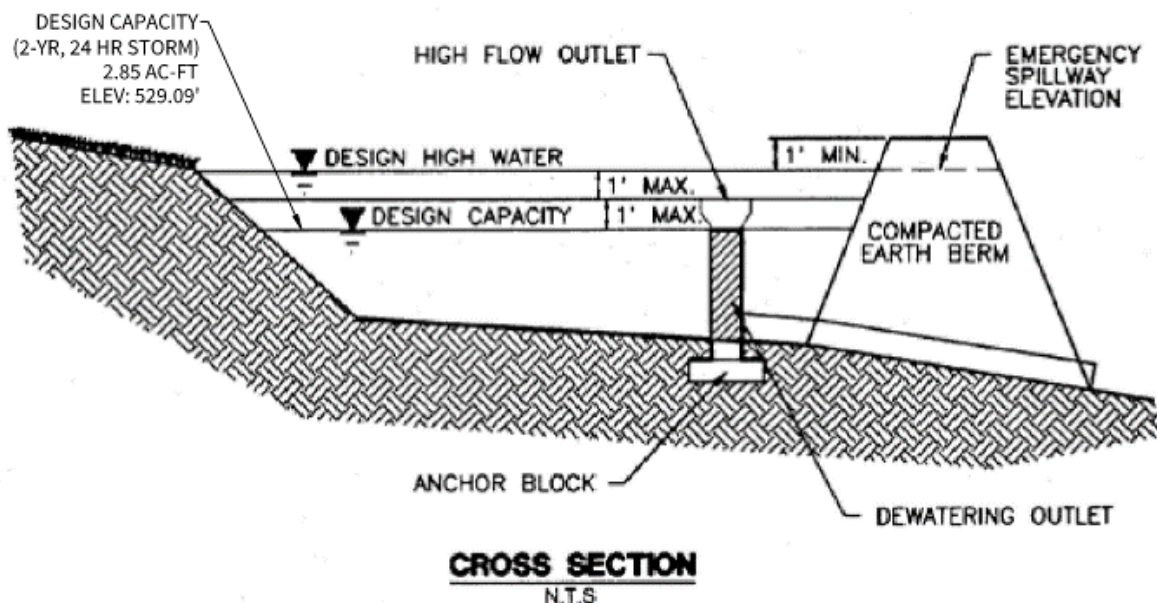
Temporary sediment basins shall be installed in accordance with the approved civil engineering plans and specifications. Comply with local ordinances for sediment basin design and maintenance provided that the design efficiency is as protective as or more protective of water quality than the GCP.

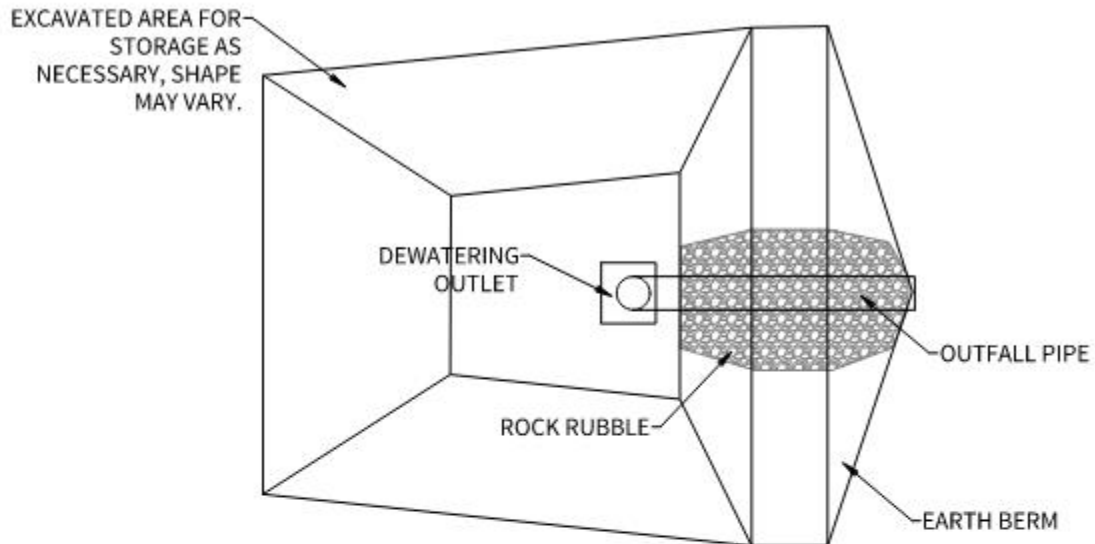
Design Considerations:

- Sediment basins are best used in conjunction with erosion controls.
 - Basins should be designed to drain within 36-96 hours following storm events or as dictated by local regulations.
 - Sediment basins, regardless of size and storage volume, should include features to accommodate overflow or bypass flows that exceed the design storm event.
 - Include an emergency spillway to accommodate flows not carried by the principal spillway. The spillway should consist of an open channel (earthen or vegetated) over undisturbed material (not fill) or constructed of a non-erodible material.
 - The spillway control section, which is a level portion of the spillway channel at the highest elevation in the channel, should be a minimum of 20 ft in length.
 - Rock or vegetation should be used to protect the basin inlet and slopes against erosion.
 - A fore bay, constructed upgradient of the basin may be provided to remove debris and larger particles. The outflow from the sediment basin should be provided with velocity dissipation devices to prevent erosion and scouring of the embankment and channel.
 - Basin inlets should be located to maximize travel distance to the basin outlet.
 - Unless infeasible, the primary outlet structure should withdraw water from the surface of the impounded water. Outlet structures that do this include surface skimmers, solid risers (nonperforated), flashboard risers, and weirs.
 - Surface skimmers use a floating orifice to discharge water from the basin. Skimmers have the advantage of being able to completely drain the detention basin. Skimmers typically result in the greatest sediment removal efficiency for a basin, because they allow for a slower discharge rate than other types of surface outlets. Due to this slower discharge rate, a high flow riser may still be needed to discharge the conveyance storm if a large enough spillway is not feasible due to site constraints.
 - Solid risers should consist of a corrugated metal, high density polyethylene (HDPE), or reinforced concrete riser pipe with dewatering holes and an anti-vortex device and trash rack attached to the top of the riser, to prevent floating debris from flowing out of the basin or obstructing the system. This principal structure should be designed to accommodate the inflow design storm.
 - A rock pile or rock-filled gabions can serve as alternatives to the debris screen; although the designer should be aware of the potential for extra maintenance involved should the pore spaces in the rock pile clog.
 - A perforated riser may be used as an outlet when surface discharge is not feasible. A perforated riser has the advantage of dewatering the basin; however, it also results in the lowest sediment removal efficiency. Perforated risers provide a relatively rapid drawdown of the pool, and they discharge water from the entire water column, resulting in more suspended sediment being discharged than with a surface outlet.
 - Geotextile fabric or gravel (1½ to 3 inches) may be placed around the perforated riser to aid sediment removal, particularly the removal of fine soil particles, and to keep trash from plugging the perforations.
 - The outlet structure should be placed on a firm, smooth foundation with the base securely anchored with concrete or other means to prevent floatation.
 - Attach riser pipe (watertight connection) to a horizontal pipe (barrel). Provide anti-seep collars on the barrel.
 - Cleanout level should be clearly marked on the riser pipe.
 - Proper hydraulic design of the outlet is critical to achieving the desired performance of the basin. The outlet should be designed to drain the basin within a minimum of 36 hours (also referred to as “drawdown time”).
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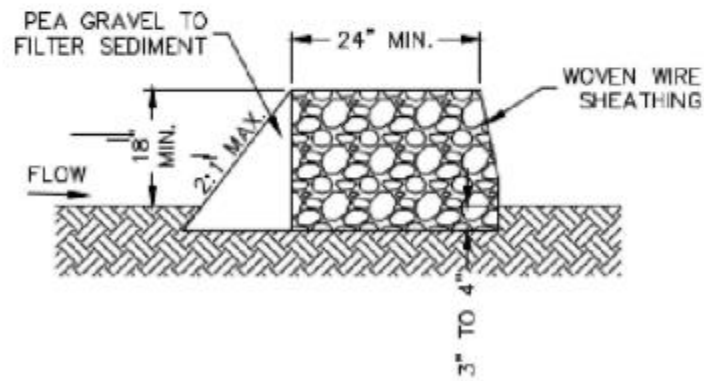
Installation Schedule:	Prior to upgradient earth disturbing activity. To remain in place until upgradient disturbed soil is stabilized.
Installation, Maintenance and Inspection:	<ul style="list-style-type: none"> • Inspect BMPs during weekly inspections and if required, after qualifying rain events. • Examine basin banks for seepage and structural soundness. • Check inlet & outlet structures, spillway and surrounding areas for any damage, obstructions or erosion. Repair as needed. • Check fencing for damage and repair as needed. • Remove sediment when capacity is reduced by 50% • Remove standing water from basin within 96 hours after accumulation. • Implement dewatering BMPs when dewatering basin.
Responsible Staff:	The General Contractor / Operator will be responsible for installation and maintenance of temporary sediment basins.
Location:	Install at areas downgradient of most other construction activity. The exact location will be indicated on other plans as they are designed. The basin should be located: (1) by excavating a suitable area or where a low embankment can be constructed across a swale, (2) where post-construction (permanent) detention basins will be constructed, and (3) where the basins can be maintained on a year-round basis to provide access for maintenance, including sediment removal and sediment stockpiling in a protected area, and to maintain the basin to provide the required capacity.

The following schematic is an example application of the construction control. It is intended to assist in understanding the control's design and function. The schematic is **not for construction**.





LAND ATTEN



ROCK BERM W/ PEA GRAVEL

NOT TO SCALE

PC1 Post Construction BMPs

The post construction stormwater management measures will be installed during the construction process to control pollutants in stormwater after construction operations have been completed, and will be designed and installed in compliance with applicable local requirements for erosion and sediment control and stormwater management.

The post construction BMPs include:

The post construction BMPs will be installed by a General Contractor / Operator. Before construction of the post construction BMPs begin, this SWPPP will be amended to include the Operator responsible for installation. The General Contractor / Operator will be responsible for the installation and maintenance until the construction of the post construction BMP is complete and the contractor has demobilized. After construction of each post construction BMP is complete, Lennar Homes of Texas Land and Construction, Ltd. will be responsible for maintenance until the Home Owner's Association, Municipal Utility District, or MS4 becomes responsible for long-term maintenance.

PC2 Post Construction Stormwater Detention Structures

BMP Description:

Extended detention basins or sediment basins are normally used to remove particulate pollutants and to reduce maximum runoff rates associated with development to their pre-development levels. The water quality benefits are the removal of sediment and buoyant materials. Furthermore, nutrients, heavy metals, toxic materials, and oxygen-demanding materials associated with the particles also are removed. The control of the maximum runoff rates serves to protect drainage channels below the device from erosion and to reduce downstream flooding. Although detention facilities designed for flood control have different design requirements than those used for water quality enhancement, it is possible to achieve these two objectives in a single facility.

<i>Installation Schedule:</i>	Stormwater detention structures will be constructed as the detention capacity is needed. They will be completed before construction commences on other upstream projects that contribute stormwater to the detention facility. Stormwater detention structures are permanent and will remain in place.
<i>Installation, Maintenance and Inspection:</i>	Installation is performed according to the civil engineering plans. Maintenance is performed by repairing erosion on slopes and re-establishing erosion controls, removing accumulated sediment, and gathering trash and debris. During construction of the stormwater detention structure, alternative BMPs such as silt fences, rock berms, and inlet protection shall be implemented to minimize impacts to stormwater. Unless infeasible, when discharging from sedimentation basins, outlet structures that withdraw water from the surface will be utilized. Inspect every 7 days for accumulations of sediment or trash and erosion at the outfall structures or along banks of the pond. Remove accumulated sediment when deposits reach 50% of the capacity or when deposits negatively affect the structure's ability to properly treat stormwater. Return detention basins that are used for temporary sediment basins during construction to plan design specifications upon completion of work.
<i>Responsible Staff:</i>	The General Contractor / Operator who is constructing the stormwater detention structure is responsible for installation and maintenance until construction is complete and demobilization has occurred. Lennar Homes of Texas Land and Construction, Ltd. will be responsible for long-term maintenance until the Home Owner's Association, Municipal Utility District, or MS4 contractually takes over maintenance.
<i>Location:</i>	Various locations throughout the master-planned community, but typically at areas downgradient of most other construction activity. The exact location will be indicated on other plans as they are designed.

EC1 Vegetation

Vegetation, used as an erosion control, is the sowing or sodding of grasses, small grains, or legumes to provide temporary and final vegetative stabilization for disturbed areas.

Exposed soil surfaces should be minimized at all times. Whenever possible, natural vegetation on the site should be preserved. Sediment controls that are in place downgradient of disturbed soil should remain in place until temporary or permanent stabilization is achieved.

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 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. *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.*

Vegetation is used as a temporary or final stabilization measure for areas disturbed by construction. As a temporary control, vegetation is used to stabilize stockpiles, earthen dikes, and barren areas that are inactive for longer than two weeks. As a final control at the end of construction, grasses and other vegetation provide good protection from erosion along with some filtering for overland runoff. Subjected to acceptable runoff velocities, vegetation can provide a positive method of long-term stormwater management as well as a visual amenity to the site. Other control measures may be required to assist during the establishment of vegetation. These other controls include erosion control blankets, mulching, swales, and dikes to direct flow around newly seeded areas and proper grading to limit runoff velocities during construction.

Vegetation effectively reduces erosion in channels and swales and on stockpiles, dikes, and mild to medium slopes.

Vegetation is a highly effective erosion control when the vegetation is fully established. Until then, additional controls are needed. Sediment controls should not be removed from vegetated areas until the vegetation is established.

To minimize soil compaction of areas to be vegetated, limit vehicle and equipment traffic in these areas to the minimum necessary to accomplish grading.

Install all necessary erosion structures such as dikes, swales, diversions, etc. prior to seeding or sodding.

Stabilization Sodding or seeding may be used to establish vegetation for final stabilization of areas disturbed by construction activity. The vegetation must achieve a cover that is 70 percent of the native background vegetative cover to be considered final stabilization.

Permanent, or Final stabilization for land development activities is achieved when all soil disturbing activities at the site, or in an area, have been completed and a uniform perennial vegetative cover with a density of at least 70% of the native background vegetative cover has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures such as riprap, gabions, or geotextiles, have been employed. Permanent stabilization may include hydromulch, hydroseed, broadcast seed, or sod.

EC2 Seeding

BMP Description:

Seed bed should be well pulverized and loosened to a minimum depth of 3 inches and then raked to have a uniform surface. When establishing vegetation from seed, groove or furrow slopes steeper than 3:1 on the contour line before seeding.

Use only high quality, USDA certified seed. Use an appropriate species or species mixture adapted to the local climate, onsite soil conditions and the season as shown below, or consult with the local office of the Natural Resource Conservation Service (NRCS) or Texas AgriLife Extension Service for selection of proper species and application technique in this area.

Chemical fertilization is not recommended at the time of seeding, because it typically stimulates and is consumed by fast growing weeds that out-compete the slower growing grasses and legumes. Evenly apply seed using a seed drill, cultipacker, terraseeding, or hydroseeder. Hydro-seeding should not be used on slopes of 5:1 or steeper unless Bonded Fiber Matrix is used.

Seeded areas shall be thoroughly watered immediately after planting. Water shall be applied at a rate that moistens the top 6 inches of soil without causing runoff. Provide water daily for the first 14 days after seeding and thereafter as needed to aid in establishment of vegetation.

Use appropriate mulching techniques where necessary, especially during cold periods of the year.

The following table lists recommended plant species for the Central Texas region depending on the season for planting.

Recommended Grass Mixture for Temporary Erosion Control		
<i>Season</i>	<i>Common Name</i>	<i>Pure Live Seed Rate (Lbs/Acre)</i>
Sep 1 - Nov 30	Tall Fescue	4.5
	Oats	24
	Wheat	34
May 1 - Aug 31	Foxtail Millet	34.0
Feb 15 – May 31 Sep 1 – Dec 31	Annual Rye	20.0

Areas receiving temporary seeding and vegetation shall be landscaped, re-seeded or sodded with perennial species to establish final vegetation at the end of construction. Vegetation for Final Stabilization Sodding or seeding may be used to establish vegetation for final stabilization of areas disturbed by construction activity. The vegetation must achieve a cover that is 70 percent of the native background vegetative cover to be considered final stabilization.

Grass seed for establishing final stabilization can be sown at the same time as seeding for temporary (annual) vegetation. Fertilizers are not normally used to establish native grasses, but mulching is effective in retaining soil moisture for the native plants.

Recommended Grass Mixture for Final Stabilization of Upland in Rural Areas				
Planting Date	Clay Soils		Sandy Soils	
	Species and Pure Live Seed Rate (Lbs/Acre)		Species and Pure Live Seed Rate (Lbs/Acre)	
February 1 – May 15	Green Sprangletop (Van Horn)	1.0	Green Sprangletop (Van Horn)	1.0
	Sideoats Grama (South Texas)	1.0	Slender Grama (Dilley)	2.0
	Texas Grama (Atascosa)	1.0	Hairy Grama (Chaparral)	0.6
	Slender Grama (Dilley)	1.0	Shortspike Windmillgrass (Welder)	0.4
	Shortspike Windmillgrass (Welder)	0.2	Pink Pappusgrass (Maverick)	0.6
	Pink Pappusgrass (Maverick)	0.6	Plains Bristlegrass (Catarina Blend)	0.2
	Halls Panicum (Oso)	0.2	Hooded Windmillgrass (Mariah)	0.3
	Plains Bristlegrass (Catarina Blend)	0.2	Multi-flowered False Rhoades	0.1
	False Rhodes Grass (Kinney)	0.1	Grass (Hidalgo)	
	Hooded Windmillgrass (Mariah)	0.2	Arizona Cottontop (La Salle)	0.2
	Arizona Cottontop (La Salle)	0.2		

(Source: TxDOT Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges, Item 164)

Recommended Grass Mixture for Final Stabilization of Upland in Urban Areas				
Planting Date	Clay Soils		Sandy Soils	
	Species and Pure Live Seed Rate (Lbs/Acre)		Species and Pure Live Seed Rate (Lbs/Acre)	
February 1 – May 15	Green Sprangletop	0.3	Green Sprangletop	0.3
	Bermudagrass	2.4	Bermudagrass	4.8
	Sideoats Grama (South Texas)	3.6	Buffalograss (Texoka)	1.6
	Buffalograss (Texoka)	1.6		

(Source: TxDOT Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges, Item 164)

Installation Schedule:	Stabilization measures that provide a protective cover must be initiated immediately in portions of the site where construction activities have permanently ceased. <i>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.</i>
Installation, Maintenance and Inspection:	Protect newly seeded areas from excessive runoff and traffic until vegetation is established. Vegetation for final stabilization must be maintained until the vegetative cover is 70 percent of the native background vegetative cover. Vegetation should be inspected every 7 days to ensure that the plant material is established properly and remains healthy. Bare spots shall be reseeded and/or protected from erosion by mulch or other measures. Accumulated sediment deposited by runoff should be removed to prevent smothering of the vegetation. In addition, determine the source of excess sediment and implement appropriate measures to control the erosion.
Responsible Staff:	The operator responsible for installation and maintenance of stabilization measures will be indicated on the "Operator

	Responsibilities” page in Appendix G for the associated construction activity. After acceptance or completion of the General Contractor / Operator’s work, the Owner will be responsible.
Location:	On portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding 14 calendar days. Locations will be indicated on the site map.

EC3 Hydromulch / Hydroseed

BMP Description:

Hydraulic mulch (Hydromulch) is the application of an aqueous mixture of seed, water, fertilizer, mulch, and tackifier to the seedbed that can be used for establishment of temporary or permanent vegetation. It temporarily protects exposed soil from erosion by raindrop impact or wind.

Suitable Applications:

- Disturbed areas that will remain inactive for longer than permit required thresholds (e.g., 14 days) or otherwise requiring temporary protection until permanent stabilization is established.
- Soil stockpiles
- Slopes with exposed soil between existing vegetation such as trees or shrubs.
- Slopes planted with live, container-grown vegetation or plugs.

Implementation:

- Apply according to manufacturer specifications located immediately behind this section.
- Prior to application, roughen embankment and fill areas by rolling with a crimping or punching type roller or by track walking up and down the slopes.
- To be effective, hydraulic matrices require 24 hours to dry before rainfall occurs.
- May require a second application in order to remain effective for an entire rainy season.
- Avoid mulch over spray onto roads, sidewalks, drainage channels, existing vegetation, etc.
- Paper based hydraulic mulches alone shall not be used for erosion control.

Materials:

Hydraulic Mulches

Wood fiber mulch can be applied alone or as a component of hydraulic matrices. Wood fiber mulch is manufactured from wood or wood waste from lumber mills or from urban sources. Wood fiber applied alone is typically applied at the rate of

- 2,000 to 4,000 lb/acre.

Hydraulic Matrices

Hydraulic matrices include a mixture of wood fiber and acrylic polymer or other tackifier as binder. Apply as liquid slurry using a hydraulic application machine (i.e., hydro seeder) at the following minimum rates, or as specified by the manufacturer to achieve complete coverage of the target area:

- 2,000 to 4,000 lb/acre wood fiber mulch, and
- 5 to 10% (by weight) of tackifier (acrylic copolymer, guar, psyllium, etc.)

Bonded Fiber Matrix

Bonded fiber matrix (BFM) is a hydraulically applied system of fibers and adhesives that upon drying forms an erosion resistant blanket that promotes vegetation, and prevents soil erosion. A biodegradable BFM is composed of materials that are 100% biodegradable. The binder in the BFM should also be biodegradable and should not dissolve or disperse upon re-wetting. Typically, biodegradable BFMs should not be applied immediately before, during or immediately after rainfall if the soil is saturated. Depending on the product, BFMs typically require 12 to 24 hours to dry and become effective. BFMs are typically applied at rates from

- 3,000 lb/acre to 4,000 lb/acre

<i>Installation Schedule:</i>	Initiate stabilization measures immediately on portions of the site where construction activities have temporarily or permanently ceased and will not resume for a period exceeding 14 calendar days. Do not apply immediately before, during or immediately after rainfall if the soil is saturated. Depending on the product, BFMs typically require 12 to 24 hours to dry and become effective.
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<i>Installation, Maintenance and Inspection:</i>	Hydromulch may be applied on any disturbed soil. Interim or final grading must be completed prior to application, minimizing all steep slopes. In addition, all necessary erosion structures such as dikes, swales, diversions, should also be installed. A proper seedbed shall be prepared before seeding. Inspect every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater to ensure mulch doesn't wash away or blow from wind. Inspect for sufficient coverage density according to the manufacturer's recommendations. If application is not adequate, reapplication is needed. Reapply in bare areas or areas of sparse density, or where hydromulch has migrated due to storm events. Application rates for seed and/or hydromulch are to be determined by the respective jurisdictional agency or manufacturer's recommendations, whichever are more stringent.
<i>Responsible Staff:</i>	Each General Contractor / Operator is responsible for implementing temporary stabilization measures in areas of their work where construction temporarily ceases for a period exceeding 14 days, and for permanent stabilization measures at waste water treatment plants, sanitary sewer lift stations, creek crossings, basins, channels, and any water quality features. The Owner is responsible for stabilization measures in landscaped channels and common areas along Mustang Vista Blvd and on finished lots in residential units.
<i>Location:</i>	On disturbed areas and bare soil where construction activities have ceased and will not resume for a period exceeding 14 calendar days. Slopes that are steeper than 3:1 should be covered with appropriate soil stabilization matting as described in the following section to prevent loss of soil and seed. Locations will be indicated on the site map.

EC4 Erosion Control Blanket (i.e. "Curlex")

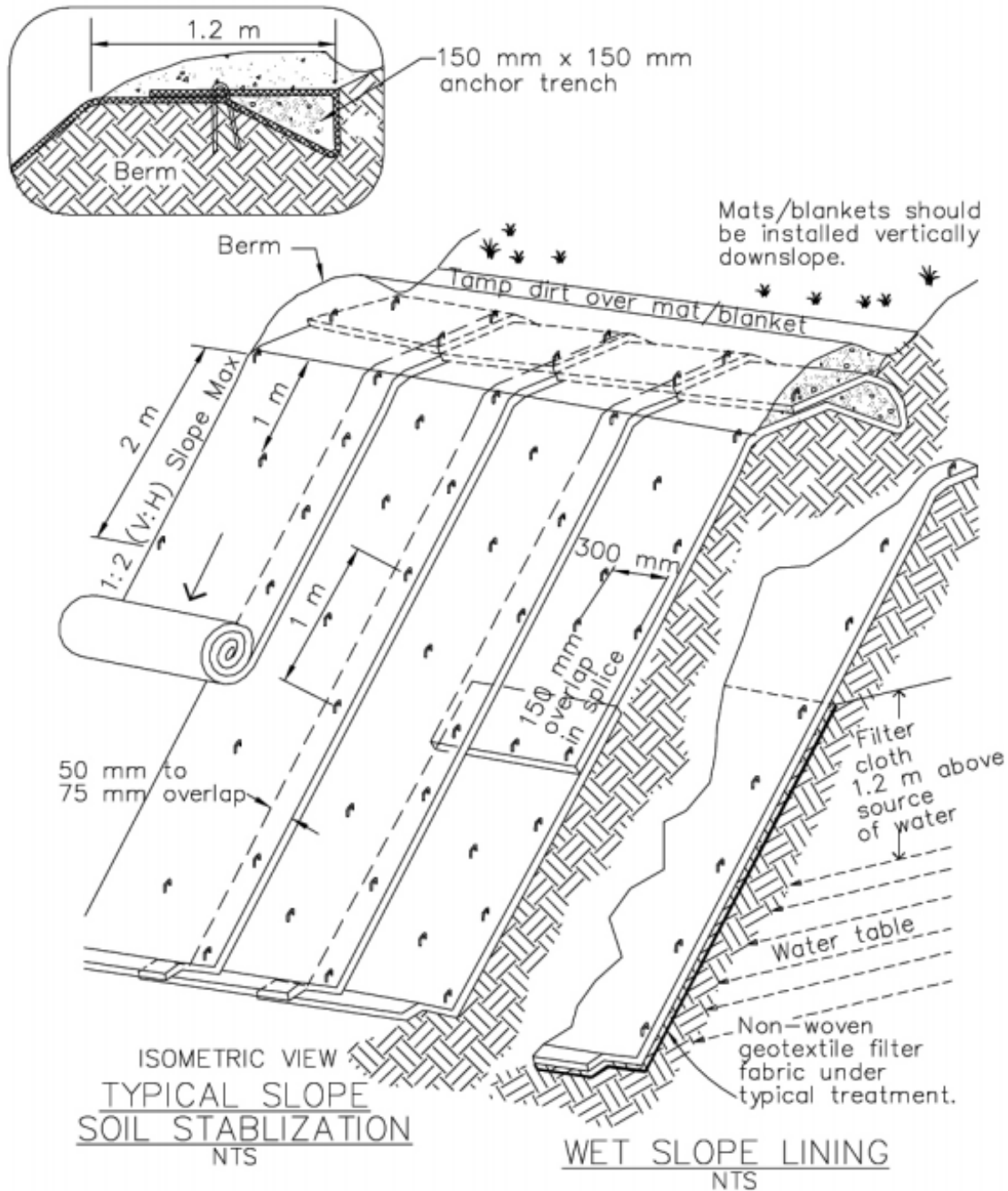
BMP Description:

Geotextile erosion control blankets and matting material can be used as an aid to control erosion on critical sites during establishment period of protective vegetation. Seed will be applied in these areas with the blanket to quickly establish temporary or permanent vegetation. It is used on areas of steep slopes (greater than 4:1) and for areas of concentrated flow (i.e. swales).

<i>Installation Schedule:</i>	Initiate stabilization with geotextiles immediately on portions of the site where construction activities have ceased and will not resume for a period exceeding 14 calendar days.
<i>Installation, Maintenance and Inspection:</i>	Inspect every 7 days to ensure blanket is in good contact with the soil, for adequate stapling of the blanket and for undermining following rain events. Repair or reinstall areas of erosion or where the blanket has been damaged or removed.
<i>Responsible Staff:</i>	The operator responsible for installation and maintenance of erosion control blankets will be indicated on the "Operator Responsibilities" page in Appendix G for the associated construction activity. After acceptance or completion of the General Contractor / Operator's work, the Owner will be responsible.
<i>Location:</i>	On disturbed areas and bare soil where construction activities have ceased and will not resume for a period exceeding 14 calendar days. The most common uses are in channels, swales, diversion dikes, and on short, steep slopes where erosion hazard is high and planting is likely to be slow to establish adequate protective cover; and on stream banks where moving water is likely to wash out new vegetative plantings. Apply at a rate to sufficiently cover the disturbed soil with wood fiber matrix or equivalent erosion control. Locations will be indicated on the site map.

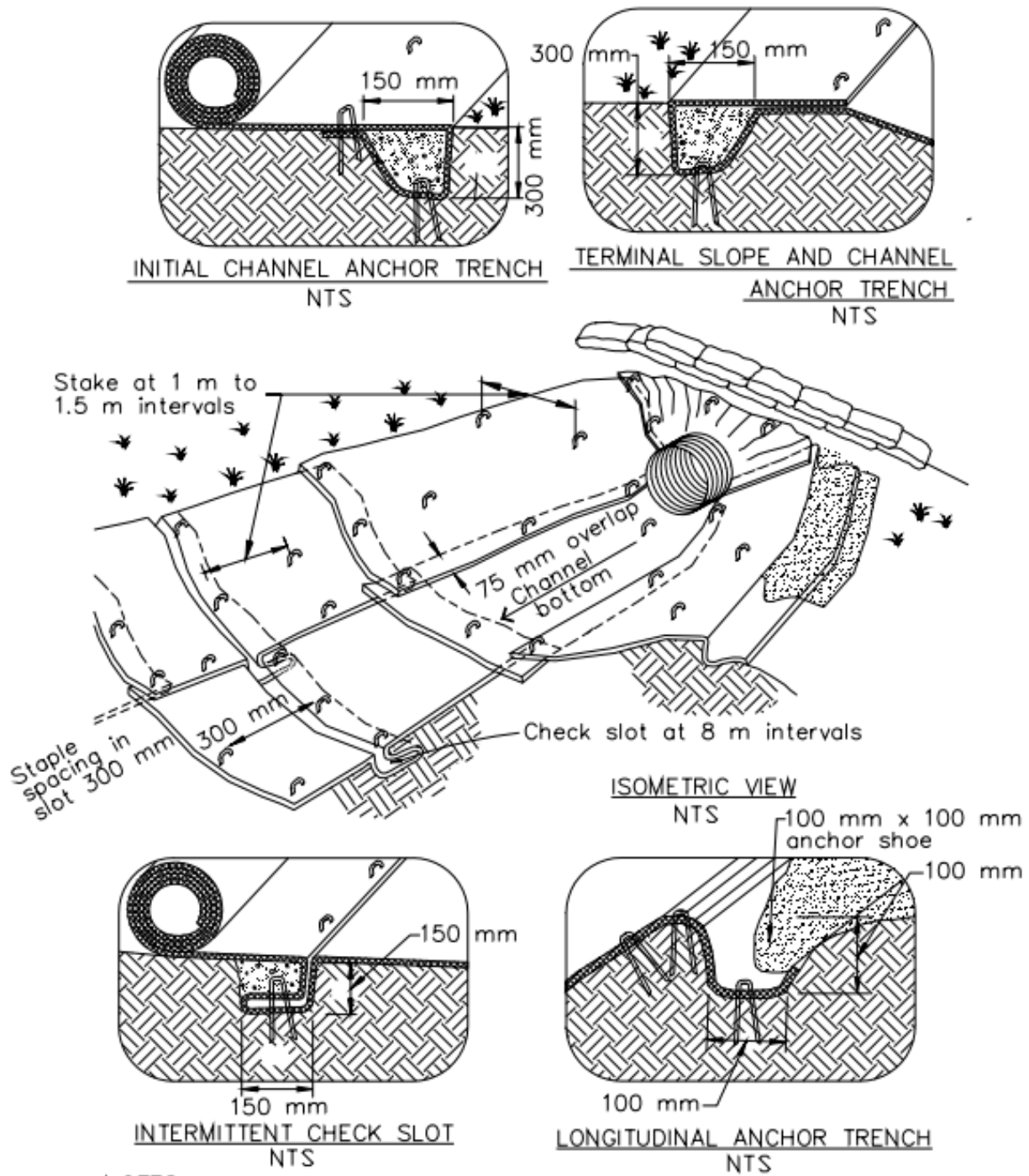
Blankets and Mats installed on Slopes

Typical Installation Detail



Blankets and Mats in Channels

Typical Installation Detail



NOTES:

EC5 Sod Stabilization

BMP Description:

Sodding is the application of sod rolls or mats to rapidly establish a permanent grass cover to stabilize disturbed areas. Sodding can be used to prevent channel erosion by protecting soil surfaces and decreasing flows and velocities, through in-channel and upland flow retardance and infiltration. Sodding stabilizes disturbed areas to minimize erosion by decreasing the velocity of sheet flow.

<i>Installation Schedule:</i>	Initiate stabilization with sod immediately on portions of the site where construction activities have ceased and will not resume for a period exceeding 14 calendar days.
<i>Installation, Maintenance and Inspection:</i>	Before laying the sod, clear the soil surface of stones, debris sticks and clods larger than 2 inches in diameter. Grade the surface, filling or leveling to avoid standing water, and to achieve a level final grade. Firm the soil by rolling or cultipacking. Avoid excessive compaction from the use of heavy equipment on the area. Install the sod no later than 7 days after final grading of the channel or area. The sod must be moist, and installation should be completed within 2 days of harvest. Begin placement downslope, and progress upslope. Placement shall be in staggered rows, as in laying bricks, at right angles to the direction of flow. For grassed waterways, edges should butt tightly together. Extend the sod sideward from the channel centerline to a point at least 1 foot in elevation above the flowline elevation. Along the perimeter of the sodded area, one strip of sod should be extended outward a minimum of 30 inches beyond others at 8-foot intervals or closer. On slopes of 3:1 or greater, or wherever erosion may be a problem, secure the sod with stakes or staples. In critical areas, secure sod with netting and staples. Roll newly installed sod to establish firm contact between roots and soil. Irrigate well after rolling. Keep the sodded areas moist until the grass takes root. Inspect every 7 days to ensure adequate coverage of disturbed areas. Reinstall sod in areas that have been damaged or removed.
<i>Responsible Staff:</i>	The General Contractor / Operator installing the water quality pond, landscape or hardscape is responsible for sod installation and maintenance until the sod takes root.
<i>Location:</i>	On disturbed areas and bare soil where construction activities have ceased and will not resume for a period exceeding 14 calendar days. Sodding may be used where initial flow velocity is low to moderate. Sodding can be applied to unstabilized ponds, swales, ditches, or diversions where flow velocities are less than five (5) feet per second. Sodding is also applicable to any disturbed area with overland flow runoff. Sod will be used in professionally landscaped areas such as common areas or near community monuments and recreation centers, areas around drop inlets or in grassed swales, where quick use or aesthetics are factors. See SWPPP site map will identify sod placement locations

EC6 Mulching

BMP Description:

Mulching is the application of a uniform layer of organic material over barren areas to reduce the effects of erosion from rainfall. Mulch may be used by itself to temporarily stabilize bare areas or with seed to establish final stabilization of bare areas. Mulch protects the soil from erosion and moisture loss by lessening the effects of wind, water, and sunlight. It also decreases the velocity of sheet flow, thereby reducing the volume of sediment-laden water flow leaving the mulched area.

Types of mulch include compost mixtures, straw, wood chips, bark, or other fibers. Commercialized surface treatments that combine straw or other mulch material with organic or inorganic soil binding systems are also available and are particularly useful on steep slopes.

Mulch is frequently applied with seeding for vegetation. Mulch may also be applied with commercially available polymers for soil surface treatment to bind the mulch with the soil. This method is particularly useful on steep slopes.

<i>Installation Schedule:</i>	Initiate stabilization of disturbed soil with mulch immediately on portions of the site where construction activities have ceased and will not resume for a period exceeding 14 calendar days.
<i>Installation, Maintenance and Inspection:</i>	<p>Mulch should be applied in an even and uniform manner where concentrated water flow is negligible. Do not apply mulch within the ordinary high-water mark of natural surface waters or within the design flow depth of constructed ditches and channels.</p> <p>Mulch may consist of straw mulch, chipped site vegetation, erosion control compost, or other suitable material. Immediately upon completion of planting of seed and fertilizing, spray or hand spread hay mulch uniformly over the area at the rate of 2 tons of hay or hay mulch per acre. When watering seeded areas, use fine spray to prevent erosion of seeds or soil. Reseed any areas damaged by erosion for any reason. Mulching operation to follow seeding and fertilizing immediately in continuous operation. Care must be taken not to drive mulching equipment on seeded/planted areas.</p> <p>Inspect every 7 days for thin or bare spots caused by natural decomposition or weather related events. Mulch in high traffic areas should be replaced on a regular basis to maintain uniform protection. Excess mulch should be brought to the site and stockpiled for use during the maintenance period to dress problem spots.</p>
<i>Responsible Staff:</i>	The operator responsible for installation and maintenance of stabilization measures will be indicated on the "Operator Responsibilities" page in Appendix G for the associated construction activity. After acceptance or completion of the General Contractor / Operator's work, the Owner will be responsible.
<i>Location:</i>	<p>Mulch may be applied on most areas disturbed by construction that require surface protection including:</p> <p>Freshly seeded or planted areas;</p> <p>Disturbed areas at risk of erosion due to the time period being unsuitable for growing vegetation;</p> <p>Disturbed areas that are not conducive to vegetation for temporary stabilization.</p>

SECTION 3: SPILL PREVENTION AND CONTROL

3.1 Spill Prevention and Control Measures

Description and Purpose: 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. Spill control procedures are implemented anytime chemicals or hazardous substances are stored on the construction site, including the following materials:

- Soil stabilizers/binders
- Dust palliatives
- Herbicides
- Growth inhibitors
- Fertilizers
- Deicing/anti-icing chemicals
- Fuels
- Lubricants
- Other petroleum distillates

Implementation

- To the extent that the work can be accomplished safely, spills of oil, petroleum products, and substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- Store hazardous materials and wastes in covered containers and protect from vandalism.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Train employees in spill prevention and cleanup.
- Designate responsible individuals to oversee and enforce control measures.
- Place proper storage, cleanup, and spill reporting instructions for hazardous materials stored or used on the project site in an open, conspicuous, and accessible location.
- Keep waste storage areas clean, well organized, and equipped with ample clean supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Use the following measures related to specific activities:

Vehicle and Equipment Maintenance

- If maintenance must be performed onsite, use a designated area and secondary containment, located away from drainage courses, to prevent the run on of stormwater and the runoff of spills.
- Regularly inspect onsite vehicles and equipment for leaks and repair immediately
- Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.

Vehicle and Equipment Fueling

- If fueling must be performed onsite, designate areas located away from drainage courses to prevent the run on of stormwater and the runoff of spills.
- Discourage "topping off" of fuel tanks.

3.2 *Spill Response Plan*

Response Action: In the event of a hazardous substance spill or release, immediately take the following measures to keep the spill from entering sewer or storm drains, spreading off-site, or affecting public health. In all cases caution and common sense must be maintained with the primary goal being to prevent and/or limit personal injury.

Stop, contain, and clean up the chemical spill if:

- The spilled chemical and its hazardous properties have been identified;
 - The spill is small and easily contained;
 - Responder is aware of the chemicals' hazardous properties.
- 1) If possible, shut off the source of the spill immediately.
 - 2) Notify spill contact person & other emergency contact(s): immediate supervisor, owner, project manager, onsite representative, etc.
 - 3) Use appropriate personal protective equipment depending on the spilled material.
 - 4) Use absorbent materials, such as absorbent pads, floor sweeping compound or kitty litter to contain spills that are relatively small in nature and where the spilled chemical and its hazardous properties have been properly identified and assessed.
 - 5) Cover/block any drains/catch basins in the spill area to prevent material from entering into the stormwater system, sanitary sewer system or septic system.
 - 6) Collect spent absorbent materials and rags in a leak-proof container or bag and dispose of at an authorized hazardous waste disposal facility.
 - 7) Obtain a waste disposal manifest or receipt from the disposal facility and retain for records retention.
 - 8) Document the following information and include in the SWPPP using a Spill Report form located in Appendix "N":
 - a. The date and time of the spill or release.
 - b. The identity or chemical name of any material released or spilled.
 - c. An estimate of the quantity of material released or spilled and the time or duration of the event.
 - d. The exact location of the spill.
 - e. The extent of actual and potential water pollution.
 - f. The actions that caused the spill and the source of the spilled material.
 - g. The name, address, and phone number of the party in charge of, or responsible for, the spill.
 - h. The steps were taken to clean up the spill and any precautions taken to minimize impacts.
 - i. Possible hazards to the environment (air, soil, water, wildlife, etc.).
 - j. The identities of any representatives responding at the scene.
 - k. The identities of the party responsible for removal and disposal of any cleanup materials.
 - l. Include a disposal manifest or receipt from the disposal facility and retain for records retention.

If a spill or release cannot be controlled or injuries have occurred due to the release, the following procedures should be implemented:

- 1) Evacuate immediate area, and provide care to the injured- Call 911.
- 2) If potential fire or explosion hazards exist initiate evacuation procedures- Call 911;
- 3) Notify spill contact person & other emergency contact(s): your immediate supervisor, owner, project manager, onsite representative, etc...;
- 4) Respond defensively to any uncontrolled spills:
 - Use appropriate personal protective equipment when responding to any spill;
 - Attempt to shut off the source of the release (if safe to do so);
 - Eliminate sources of ignition (if safe to do so);
 - Protect drains by use of adsorbent, booms or drain covers (if safe to do so).
- 5) Notify onsite emergency contact(s);
- 6) Notify other trained staff to assist with the spill response and cleanup activities;
- 7) If necessary, coordinate response activities with local emergency personnel (fire department);
- 8) Be prepared to provide SDS information to fire department, EMT, hospital or physician;
- 9) Notify appropriate agency if a release has entered the environment. Refer to Notification and Reporting section below for reporting thresholds.

Evacuation Procedures:

In the event of a hazardous substance release that has the potential for fire, explosion or other human health hazards the following procedures will be implemented:

- Facility staff will be notified of evacuation by one or more of the following method(s): Verbal, Portable Radio, Alarm, Car Horn;
- Notification to emergency services will be performed- Call 911;
- Facility staff will follow predetermined evacuation routes and assemble at designated areas. Evacuation maps must be displayed throughout the facility;
- Individuals responsible for coordinating evacuations must confirm if the business has been completely evacuated;
- Facility staff will be made familiar with evacuation procedures during new employee orientation, and annual trainings thereafter;
- Designated emergency response contacts will coordinate all activities with outside emergency personnel.

Important Contacts:	
ENTER Lennar Entity Name Division Environmental Manager(s) / Spill Contact Person(s):	Spill Response Companies:
Marcus Walters (830) 388-1002	Alamo Environmental Inc. (Alamo 1): 800-322-5058 www.alamo1.com
Safety Data Sheets (SDS) from Verisk 3E:	800-451-8346

Notification and Reporting

THE LENNAR DIVISION ENVIRONMENTAL MANAGER AND THE LAND DEVELOPMENT MANAGER MUST BE CONTACTED PRIOR TO NOTIFYING A STATE OR FEDERAL AGENCY OF A SPILL AS OUTLINED BELOW. IN THE EVENT OF AN EMERGENCY SITUATION CALL 911 FIRST AND WHEN THE SITUATION IS UNDER CONTROL, CALL YOUR SUPERVISOR.

State Reporting Requirements:

In Texas, upon determining that a reportable discharge or spill has occurred, the responsible person must notify the state. The threshold quantity that triggers the requirement to report a spill is called the reportable quantity (RQ). The reportable quantity depends on the type of substance released and where released (e.g. into water vs. on land); different kinds of spills are subject to different provisions of state and federal rules.

State of Texas Spill Reporting Hotline: **800-832-8224**

Federal Reporting Requirements:

The **National Response Center (NRC)** is the federal government's national communications center, which is staffed 24 hours a day by U.S. Coast Guard officers. The NRC is the sole federal point of contact for reporting all hazardous substances releases and oil spills. The NRC receives all reports of releases involving hazardous substances and oil that trigger federal notification requirements under several laws. The National Response Center requires spills to be reported if the spilled quantity is larger than that found in the typical construction site.

National Response Center Hotline: **800-424-8802**

Reportable Quantities:

Kind of spill	Where discharged	Reportable quantity	Rule, statute, or responsible agency
Hazardous substance	onto land	"Final RQ" in Table 302.4 in 40 CFR 302.4 (PDF)	30 TAC 327
	into water	"Final RQ" or 100 lbs, whichever is less	
Any oil	coastal waters	as required by the Texas General Land Office	Texas General Land Office
Petroleum product, used oil	onto land	25 gallons	30 TAC 327
	directly into water	enough to create a sheen	
Other substances that may be useful or valuable and are not ordinarily considered to be waste, but will cause pollution if discharged into water in the state	into water	100 lbs	30 TAC 327

Source: TCEQ Table of Reportable Quantities (https://www.tceq.texas.gov/response/spills/spill_rq.html)

When making a telephone report of a spill or pollution complaint, it will be helpful if the following information at hand:

- The date and time of the spill or release.
- The identity or chemical name of any material released or spilled, as well as whether the substance is extremely hazardous.
- An estimate of the quantity of material released or spilled and the time or duration of the event.
- The exact location of the spill, including the name of waters involved or threatened, and any other media affected by the release or spill.
- The extent of actual and potential water pollution.
- The source of the release or spill.
- The name, address, and phone number of the party in charge of, or responsible for, the facility, vessel, or activity associated with the release or spill. If that party is not at the site, also have the name and phone number of the party at the site who is in charge of operations.
- The steps being taken or proposed to contain and clean up the released or spilled material and any precautions taken to minimize impacts, including evacuation.
- The extent of injuries, if any.
- Any known or anticipated health risks associated with the incident and, where appropriate, advice regarding medical attention necessary for persons exposed.
- Possible hazards to the environment (air, soil, water, wildlife, etc.). This assessment may include references to accepted chemical databases, material safety data sheets, and health advisories. The TCEQ may request estimated or measured concentrations of the contaminant for the state's hazard assessment.
- The identities of any government or private-sector representatives responding at the scene.

3.3 SPCC Requirements – Title 40 CFR part 112 (Oil Pollution Prevention)

Introduction:

The Spill Prevention, Control, and Countermeasures rule establishes requirements to prepare and implement SPCC Plans. SPCC Plans complement existing laws, regulations, rules, standards, policies, and procedures pertaining to safety, fire prevention, and oil pollution prevention. The purpose of an SPCC Plan is to form a comprehensive oil spill prevention program that minimizes the potential for discharges. The SPCC Plan must address all relevant spill prevention, control, and countermeasures necessary at the specific facility.

Section 112.1 establishes the general applicability of the SPCC rule.

The SPCC rule applies to facilities that:

- Are non-transportation-related;
- Have an aboveground oil storage capacity of more than 1,320 U.S. gallons or a completely buried oil storage capacity greater than 42,000 U.S.; and
- Could reasonably be expected to discharge oil to navigable waters or adjoining shorelines in quantities that may be harmful.

Defining the “Facility”

A “facility” is defined under federal SPCC requirements to include “any contiguous or non-contiguous building, property, parcel, lease, structure, installation” in which oil is stored or used, and this includes construction sites. The regulations give some discretion in defining the facility, and a single construction site owned by Lennar Homes of Texas Land and Construction, Ltd. may include several distinct facilities. In defining the facility, it is appropriate to consider various factors such as who owns the land, who owns the buildings, structures and equipment, who operates the buildings, structures and equipment, and the type and timing of activity taking place at the site. Lennar Homes of Texas Land and Construction, Ltd. projects typically involve various land development activities, each activity is separate, and each is conducted by a different facility operator. Therefore each construction activity at a single construction site should be defined as a separate “facility” for SPCC purposes. The contact information for the Operator conducting the construction activity at each facility is located in Appendix G: Additional Operators and Responsibilities.

Based on consideration of the relevant regulatory factors, it would be appropriate to define the facility in the following manner: Areas undergoing “major” construction activity such as demolition, earth moving/mass grading, site concrete, underground utilities, and paving activities, or dedicated concrete or asphalt batch plant operations, can each be defined as a separate “facility”.

Each of these activities typically occur during separate stages of land development; they each involve distinct equipment and activities; and, they are each typically under the control and ownership of separate General Contractors who are responsible for making decisions regarding the use and control of oil storage and transfer for their activity. Each facility will be subject to the SPCC Plan requirements only if it independently exceeds the 1,320 gallon oil storage capacity threshold. In that case, the SPCC Plan shall be prepared and implemented by the General Contractor / Operator responsible for the construction activity at the facility.

If applicable, the SPCC plan will be kept onsite.

SECTION 4: INSPECTIONS

4.1 Inspection Schedule and Procedures

The site inspections will be performed by personnel knowledgeable of CGP, familiar with the construction site, knowledgeable of the SWPPP for the site. The contact information of the assigned inspection personnel are listed in the contact list in Section 1.1 and qualifications of the inspector are included in Appendix "H".

Inspection personnel must inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, discharge locations, and structural controls for evidence of, or the potential for, pollutants entering the drainage system. Sediment and erosion control measures identified in the SWPPP must be inspected to ensure that they are operating correctly. Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

A report summarizing the scope of the inspection, the date(s) of the inspection and major observations relating to the implementation of the SWPPP will be made and retained as part of the SWPPP. Major observations will include: the locations of discharges of sediment or other pollutants from the site; 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. Actions taken as a result of inspections will be described within, and retained as part of the SWPPP. Reports will identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report will contain a certification that the facility or site is in compliance with the SWPPP and the Construction General Permit. The report will be signed by a person and in the manner required by 30 TAC §305.128 (relating to Signatories to Reports), or by a Duly Authorized Representative (DAR). See Section 4.4 for a list of the delegated Duly Authorized Representatives (DARs) and Appendix "I" for copies of the Delegation of Signatories form authorizing the DAR to sign reports.

Based on the results of the inspection, the SWPPP shall be modified as necessary to include additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP shall be completed within 7 calendar days following the inspection.

When conducting post rainfall inspections, the rainfall totals are obtained from a website that utilized the Citizen Weather Observer Program (CWOP) to record weather data and are taken from the Weather Station that is nearest to the site, but within 5 miles whenever possible. The current weather onsite is visually observed and is noted on the current inspection report as well.

Inspection reports will be completed using StormPro, a web-based SWPPP inspection and reporting database. After completing the inspection, the inspector will enter the information into the inspection report and save it in the database. The inspection report is distributed by via email to the Construction Manager, (the onsite representative(s) of Lennar) and to the Erosion and Sediment Control maintenance contractor to be used as a checklist to address the corrective action items. Once all the corrective actions identified in the current report are completed, the corrective action manager will electronically document the inspection report with actions taken as a result of the inspection. A Duly Authorized Representative of Lennar and the BMP inspector will electronically sign the inspection report.

Inspection Frequency

BMP inspections will be completed according to the following schedule:

- ☒ **At least once every 7 calendar days.** The inspection schedule of once every 7 calendar days is an alternative to the inspection schedule of once every 14 calendar days and within 24 hours of a storm event of 0.5 inches or greater. This alternative inspection schedule is authorized by Part III. F. 7. a. of the TXR150000 Construction General Permit.
- ☐ **At least once every 7 calendar days and within 24 hours of the end of a storm event of .5 inches or greater.**

Where the site has been finally or temporarily stabilized, inspections will be conducted at least once every month. Changes to the inspection schedule can only be changed once per month and implemented within the first five business days of a calendar month.

If the inspection frequency changes to once every 14 days and within 24 hours of a storm event of 0.5" or greater or to once every month, the reason for the change and the dates that the change is effective will be listed below.

Alternate Inspection Schedule		Date range of alternate inspection schedule.	Reason for changing inspection schedule:
14 days/ post rain	Monthly	Beginning Date--Ending Date	
<input type="checkbox"/>	<input type="checkbox"/>	--	
<input type="checkbox"/>	<input type="checkbox"/>	--	
<input type="checkbox"/>	<input type="checkbox"/>	--	
<input type="checkbox"/>	<input type="checkbox"/>	--	

Inspect areas during business hours and only if there is safe access. In the event it is unsafe to inspect certain areas, make a notation of the circumstances on the inspection report. In the event none of the BMPs are safely accessible, attempt to inspect the discharge point(s) and downstream of the discharge points to determine the condition and quality of the discharge from the site. Missed inspections will be conducted as soon as the conditions are safe (for example, the next day after the storm or condition that created the unsafe condition).

If the inspector observes or suspects contaminated soil as evidenced by discoloration, odors, oily appearance or buried debris, the inspector shall immediately contact the site supervisor. The site supervisor shall contact the Lennar Division Environmental Manager (DEM) and, as appropriate, implement "Spill Prevention and Control" measures and procedures (Section 3.1). If upon discovery the responsible party is identified by the site supervisor, the responsible party will be directed to take prompt action to respond, clean, and dispose of the suspected contaminated soils. If the responsible party is not identified after the discovery, the DEM will coordinate identification of the potential contamination and proper disposal. The DEM will notify appropriate federal, state, and local agencies as required. Contaminated soil will be disposed of properly in accordance with all applicable regulations.

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. If an adverse condition suspends requirements for inspections the date and time of the adverse condition, names of personnel that witnessed the adverse condition, and a narrative for the nature of the adverse condition will be documented on the inspection report, or on the inspection report for the next inspection performed.:

In the event of flooding or other adverse conditions which prohibit access to the site, the inspection must be conducted as soon as access is practicable.

Inspection Protocols:

- Inspect each drainage area indicated on the SWPPP Site Map for the presence of authorized and unauthorized non-stormwater discharges.
- Inspect all stormwater controls (including existing BMPs, areas of disturbance, areas of stabilization, all material and equipment storage, and all outfall/discharge locations including downstream areas if accessible) to ensure that the controls are installed properly, appear to be operational, and minimizing pollutants in discharges, as intended.
- 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.
- Inspect locations where vehicles enter or exit the site for evidence of off-site sediment tracking.
- Look for any spills, leaks or uncontrolled pollutant sources.
- Note the presence or absence of floating materials, sheen on the surface, discolorations, odors, and/or sources of any observed pollutants.
- If there is a breach or spill, or if there are indications of the presence of visible or non-visible pollutants in the discharges at the outfalls, locate the source(s), follow spill response procedures, where applicable.
- Determine if BMPs have been properly implemented according to the SWPPP.
- Determine if additional or upgraded BMPs are necessary.
- Identify locations on the construction site where new or modified stormwater controls are necessary.
- Identify any incidents of noncompliance observed during the inspection.
- Determine if the SWPPP needs to be amended.
- If an inspection is performed when discharges from the construction site are occurring: identify all discharge points at the site, 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).
- If it is determined during the inspection that maintenance, repairs, or installation of additional or more appropriate BMPs is needed, begin implementing appropriate corrective actions as soon as practicable and prior to the next rain event if feasible.

Observation and Evaluation of Dewatering Controls:

Dewatering controls must be observed and evaluated once per day on the days where dewatering discharges from the construction site occur.

A report summarizing the scope of any observation and evaluation must be completed within 24-hours following the evaluation.

4.2 *BMP Maintenance*

All stormwater best management practices identified in the SWPPP must be maintained in effective operating condition. If, through inspections or other means, it is determined 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 SWPPP 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.

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.

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.

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 accumulations are on property not owned by Lennar Homes of Texas Land and Construction, Ltd., Lennar Homes of Texas Land and Construction, Ltd. will work with the owner or operator of the property to remove the sediment.

4.3 *Recordkeeping*

- Actions that need to be taken as a result of the inspection or observation of dewatering controls are entered into an electronic inspection form on StormPro, a web-based SWPPP inspection and reporting database.
- If for any reason the StormPro system is not available, inspections or observation of dewatering controls will be documented in hard copy format using the inspection form included in the SWPPP
- Completely fill out the inspection report to document the conditions found during the inspection.
- Describe any actions needed and the location of the action needed in the corrective action log (Section G of the inspection report) and include a description of any additional BMPs that need to be installed.
- Review previous inspection reports that may have open corrective action items to confirm they have been completed.
- The inspector and the Duly Authorized Representative of the Owner will electronically sign and certify the inspection.
- Upon completion of an action item, the corrective action manager will electronically initial and date when corrective actions were completed on the corrective action log.
- The inspection form will not be downloaded until all of the corrective action items have been addressed and documented as complete.
- Amend the SWPPP within 7 days if the inspection reveals there are SWPPP deficiencies and keep the amendments and an amendment log in the SWPPP.
- All documents will be kept for a minimum of 3 years from the acceptance of the NOT.

Updating the site map:

Document and update on the site map as site conditions or locations of BMPs change throughout construction. Create a legend that includes symbols for all the items that will be tracked on the SWPPP site map. Use the symbols to track the locations of the BMPs on the SWPPP site map. The items that will be tracked include the following:

- Property boundaries
- Active areas of construction,
- Current and up to date boundaries of operational control,
- Discharge locations,
- Areas of soil disturbance (cut or fill),
- Locations of sensitive habitats, watercourses, or other features which are not to be disturbed,
- Surface waters (including wetlands) either at, adjacent, or in close proximity to the site, and also indicate whether those waters are impaired. See
- Sediment and erosion controls,
- Temporary and permanent stabilization,
- Waste disposal areas including dumpsters and portable toilets,
- Material storage/staging areas,
- Vehicle/equipment storage areas,
- Stockpiles,
- Stabilized entrances or exits

Track the dates of the following items on the “BMP Tracking Map” located in Appendix “B” for each construction activity.

- Start of major grading activity;
- Completion of major grading activity;
- Temporary and final stabilization;
- Addition or reduction in acreage

At the completion of land development activity in the various residential sections, Lennar Homes of Texas Land and Construction, Ltd. will transfer ownership of the finished lots to various homebuilders. Residential lots that have been sold to other homebuilders will be identified as “not under SWPPP control,” and the date that ownership transferred will be recorded on the SWPPP site map.

The site map will be kept as a permanent record. If a site map becomes too cluttered with documentation, a new site map will be developed and up dated and the old site map will be kept as a permanent record in the SWPPP. The old site map is not to be discarded under any circumstances.

A sample copy of the inspection form is included on the next page.



If this is a post-storm event inspection for a storm .5" or greater, then document the approximate rainfall amount (In inches) that triggered the post storm inspection: _____

BMP Inspection Report

Community _____ Date: _____

A. Type of Inspection & Schedule

☐ General Inspection ☐ Post-Storm Event
Inspection Schedule: ☐ Every 7 calendar days ☐ Every 14 calendar plus post storm event ☐ Monthly ☐ Other: _____

B. Phase of Construction: (check all that apply)

☐ Pre-Construction ☐ Clearing/Demo/Grading ☐ Utilities & Streets ☐ Site Concrete ☐ Paving/Street Work ☐ Landscaping
☐ Vertical Construction ☐ Off-Site Backbone/Public Improvements ☐ Site Stabilized

C. Check the response for each question below:

Item #	Questions	Yes	No	N/A
1	Is the inspector qualified to perform this inspection?	<input type="checkbox"/>	<input type="checkbox"/>	--
2	Are the inspector's qualifications documented in this SWPPP? (If not, amend and add to the SWPPP)	<input type="checkbox"/>	<input type="checkbox"/>	--
3	Were all home sites in our control inspected today? (N/A if land Development)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: Items 4 through 7 were intentionally deleted

D. Check the observed status of all items. Provide "Action Required" details and dates completed on the back of this page.

Item No.	Inspection Items	Not In Use	In Use & Acceptable	In Use & Action Required
8	Community perimeter controls			
9	Outfalls/Discharge points/Outlet protection			
10	BMPs at streams, rivers, lakes, ponds, 303(d) waters, wetlands, & protected areas			
11	Stabilized exits maintained/functional			
12	Track out in public streets			
13	Onsite streets & gutters free of sediment, silt, mud, & debris			
14	Disturbed areas			
15	Slope stabilization: Erosion control blankets, mulch, vegetation, soil binders etc.			
16	Erosion controls: EC blankets, vegetation, soil binders, mulch, etc.			
17	Wind Erosion Controls: Dust control, wind fence, water, palliatives, soil binders, etc.			
18	Slope drainage structures (engineered structures, ditches, drains, etc.)			
19	Temporary sediment basins/sediment traps			
20	Detention/Retention basins			
21	Turbidity barrier			
22	Drainage swales & channels			
23	Buffer strips			
24	Berms and dikes			
25	Check dams			
26	Gabions			
27	Silt fences			
28	Sand/gravel bags/rock socks			
29	Straw wattles/fiber rolls			
30	Cutback curbs			
31	Catch basins/ Inlet protection			
32	Construction materials properly stored & protected			
33	Stockpile management			
34	Trash/Debris bins used, not overflowing & regularly collected			
35	Proper disposal of litter, construction debris & liquid waste			
36	Sanitary waste facilities properly located and maintained			
37	Concrete wash outs			
38	Paint wash outs			
39	Non-stormwater discharges properly controlled (e.g. wash water, landscape irrigation, etc.)			
40	Dewatering BMPs (e.g. filter bags, removable pump station, sump pit, etc.)			
41	Soil & paving free of stains from leaks from vehicles, power tools and/or equipment			

42	Secondary containment used for portable gas/diesel powered items			
43	Secondary containment used for bulk storage of oils, chemicals, fuels & liquid waste			
44	Material & equipment storage yards clean & maintained			
45	Drip barriers for equipment stored, parked, & under repair			
46	Other			

E. I have inspected all of the following: (All must be inspected)

All "In place" BMPs Yes ☐ No ☐ All material storage areas Yes ☐ No ☐ NA ☐
 All construction entrances and exits Yes ☐ No ☐ All disturbed soils areas Yes ☐ No ☐ NA ☐
 All discharge locations Yes ☐ No ☐ All equipment storage areas Yes ☐ No ☐ NA ☐
 All areas where stormwater flows within site Yes ☐ No ☐ Construction support activity Yes ☐ No ☐ NA ☐

Was any portion of the site unsafe for access, inaccessible, and not inspected? Yes ☐ No ☐ If yes, explain: _____

Were there any discharges observed during the inspection? Yes ☐ No ☐ If yes, identify the discharge points, document the visual quality of any discharges and associated visible erosion and discharges of sediment if applicable. Identify action required in Section "G"

Discharge Point	Document the visual quality of discharges (i.e., color, odor, floating, settled, or suspended solids, foam, oil sheen, and other such indicators of pollutants in stormwater below), associated visible erosion and discharges of sediment caused by the discharge if applicable.

F. Since the last inspection has there been:

- a) A change in design, construction, operation, or maintenance that may affect discharges of pollutants from our community? Yes ☐ No ☐
- b) Changing site conditions based on updated plans and specifications, new operators, new areas of responsibility, and changes in BMPs? Yes ☐ No ☐
- c) A regulatory agency inspection that caused changes to be made to the SWPPP or additional BMPs added in the community? Yes ☐ No ☐
- d) Additional or different BMPs used or needed that are not included in the current list of BMPs in the SWPPP? Yes ☐ No ☐
- e) Incident(s) of non-compliance observed? Yes ☐ No ☐

If "Yes" to any Section "F" question(s), describe the event; when, where, and why it happened; what action was taken & when. Be Specific.

If "YES" to any questions in Section "F", does the SWPPP need to be amended? (If "Yes" contact the DEM) Yes ☐ No ☐

General Comments: _____

Check the following box if correct: ☐ There were no incidents of non-compliance noted during the inspection. The construction site is in compliance with the SWPPP and the Texas Construction General Permit.

By inserting my electronic signature below, I intend to sign this document and I hereby acknowledge and agree that my signature is being provided electronically and that my electronic signature and/or initials appearing on this report are the same as if I had affixed my original handwritten signature for the purpose of validity, enforceability, and admissibility. I acknowledge that I have access to this report.

"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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Inspected By (Print Name): _____

Signature: _____ Date: _____

Company: _____

Certification and Signature by Permittee or "Duly Authorized Representative":

Check the following box if correct: ☐ There were no incidents of non-compliance noted during the inspection. The construction site is in compliance with the SWPPP and the Texas Construction General Permit.

By inserting my electronic signature below, I intend to sign this document and I hereby acknowledge and agree that my signature is being provided electronically and that my electronic signature and/or initials appearing on this report are the same as if I had affixed my original handwritten signature for the purpose of validity, enforceability, and admissibility. I acknowledge that I have access to this report.

"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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature of Permittee or
"Duly Authorized Representative":

Signature: _____ Date: _____

Printed Name: _____ Title: _____



Texas Construction Dewatering Discharge Form

Observe and evaluate the dewatering controls at a minimum of once per day while the dewatering discharges occur from the construction site. Complete this form within 24 hours following the evaluation. Keep hard copy in the SWPPP.

A. General Information

Community:	TPDES Permit No.:	Evaluation Date:
Name:-		
Title:		

B. Complete the following items for each active construction dewatering discharge onsite.

General Comments:

2. Dewatering Discharge Location: _____

2. Approximate times the dewatering discharge began and ended today. (If the dewatering discharge is a continuous discharge that continues after normal business hours, just check the box labeled 'Continuous'.)	Time discharge began today: _____ Time discharge ended today: _____ <input type="checkbox"/> Continuous
---	---

3. Estimate of the rate of discharge during this inspection.	_____ gallons per day
--	-----------------------

4. Did you observe any indications of pollutant discharge at the point of discharge (e.g., foam, oil sheen, noticeable odor, floating solids, suspended sediments, or other obvious indicators of stormwater pollution)?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, document observations and actions needed in the table below. If No, proceed to the Certification and Signature section.
--	--

In the below table describe locations 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. Document, initial, & date when the action taken has been completed on this page.

Date Noted:	Description & Precise Location of Action Required Item(s):	Action Taken:	Date Actions Taken & Initial:

Were any incidents of non-compliance observed during this construction dewatering discharge inspection? ☐ Yes ☐ No
If Yes, describe the incident(s): when, where, and why it happened; what action(s) was taken and when. Be specific.

Certification and Signature by BMP Inspector:

Check the following box if correct: ☐ There were no incidents of non-compliance noted during the inspection. The construction site is in compliance with the SWPPP and the Texas Construction General Permit.

By inserting my electronic signature below, I intend to sign this document and I hereby acknowledge and agree that my signature is being provided electronically and that my electronic signature and/or initials appearing on this report are the same as if I had affixed my original handwritten signature for the purpose of validity, enforceability, and admissibility. I acknowledge that I have access to this report.

“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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Inspected By (Print Name): _____ Title: ____

Signature: _____ Date: ____

Company: _____

Certification and Signature by Permittee or “Duly Authorized Representative”:

Check the following box if correct: ☐ There were no incidents of non-compliance noted during the inspection. The construction site is in compliance with the SWPPP and the Texas Construction General Permit.

By inserting my electronic signature below, I intend to sign this document and I hereby acknowledge and agree that my signature is being provided electronically and that my electronic signature and/or initials appearing on this report are the same as if I had affixed my original handwritten signature for the purpose of validity, enforceability, and admissibility. I acknowledge that I have access to this report.

“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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Signature of Permittee or
“Duly Authorized Representative”:

Print Name: _____ Title: _____

Signature: _____ Date: _____

4.4 *Delegation of Authority*

As required by 30 TAC §305.128, all SWPPP reports shall be signed by a person described in 30 TAC §305.44(a) or by a duly authorized representative of that person provided that:

1. The authorization is made in writing by a person described in §305.44(a).
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated activity.
3. The written authorization is submitted electronically using the State of Texas Environmental Electronic Reporting System (STEERS), to the Executive Director of the TCEQ. (See Appendix "I" for copies of the Delegation of Signatories form.
- 4.

Listed below is the contact information for the Duly Authorized Representatives or Positions that are authorized to sign SWPPP inspection reports.

Duly Authorized Representative(s) or Position(s):

VP of Land Development
Director of Land Development
Land Development Manager
Sr Land Development Manager
Division Environmental Manager
Safety and Environmental Manager

Lennar Homes of Texas Land and Construction, Ltd.
100 NE Loop 410, Suite 1155,
San Antonio, TX 78216

See Appendix "I" for copies of the Letters of Delegation to the Executive Director.

SECTION 5: SWPPP CERTIFICATIONS

This SWPPP shall signed and certified by the Owner, Lennar Homes of Texas Land and Construction, Ltd., and by all General Contractors / Operators in accordance with 30 TAC §305.128.

Blank SWPPP certification pages are kept in this section.

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

OWNER'S SWPPP CERTIFICATION

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

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

Sign as required by 30 TAC §305.128(a)

LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.,
a Texas limited partnership

By: U.S. Home LLC, a Delaware limited liability
company (as successor-in-interest by conversion
to U. S. Home corporation, a Delaware corporation),
its General Partner

By:  DocuSigned by:
C1AABF3E777450...

Name: Brian Barron

Title: Division President

Date: 6/20/2023



TCEQ TPDES General Permit No. TXR150000 Storm Water CERTIFICATIONS

Project: Ruby Crossing – Land Development

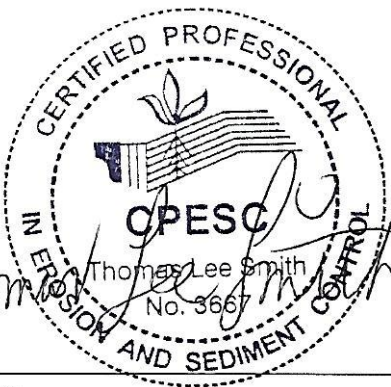
Certification of: Storm Water Pollution Prevention Plan

"I certify under penalty of law that this Storm Water Pollution Prevention Plan 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."

SWP3 (SWPPP) Reviewer:

Thomas Lee Smith
Printed Name

CPESC No. 3667
Qualification



Signature

June 21, 2023
Date



GENERAL CONTRACTOR / OPERATOR'S SWPPP CERTIFICATION

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

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

Sign as required by 30 TAC §305.128(a)

Signature: _____

Name: _____

Title: _____

Company Name: _____

Date: _____

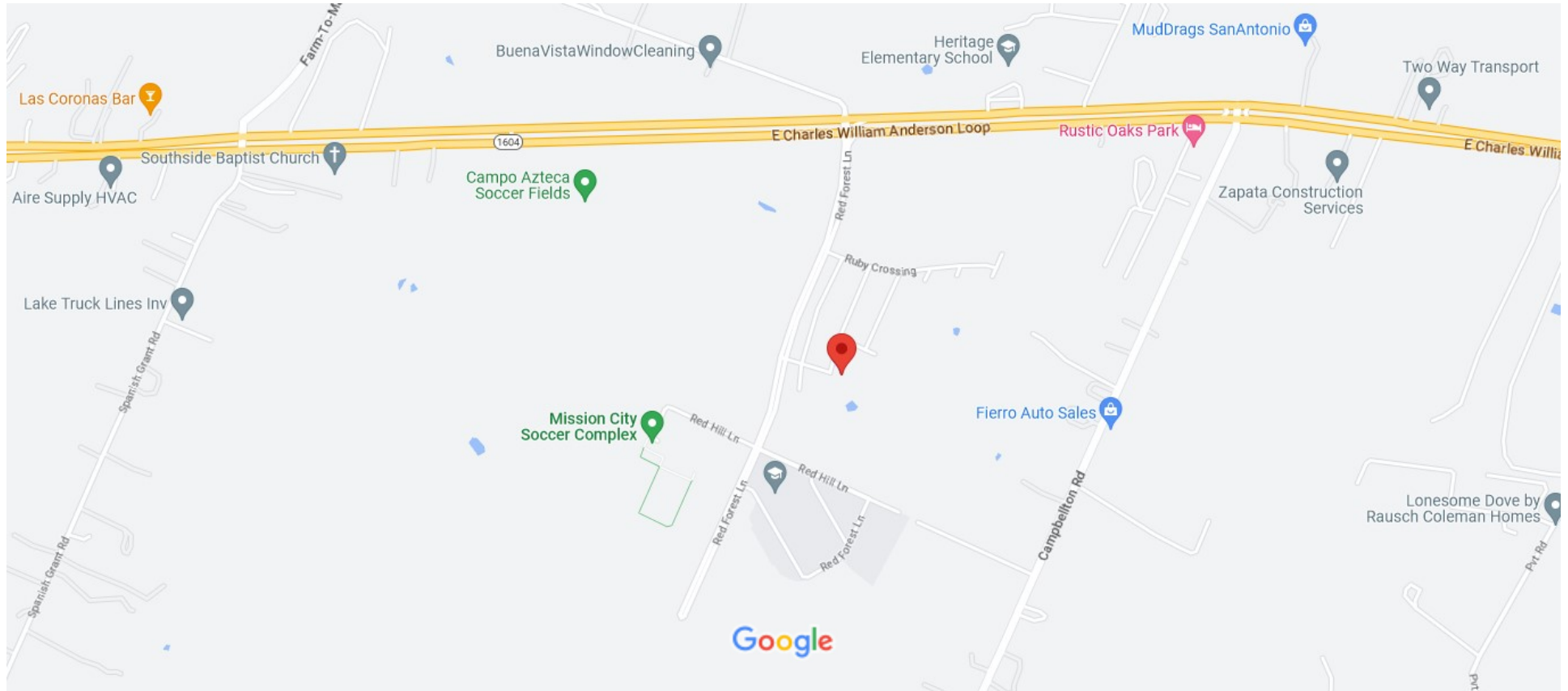
Appendix "A" General Location Map / Topo Map

See Amendment 001 – 9/6/2023



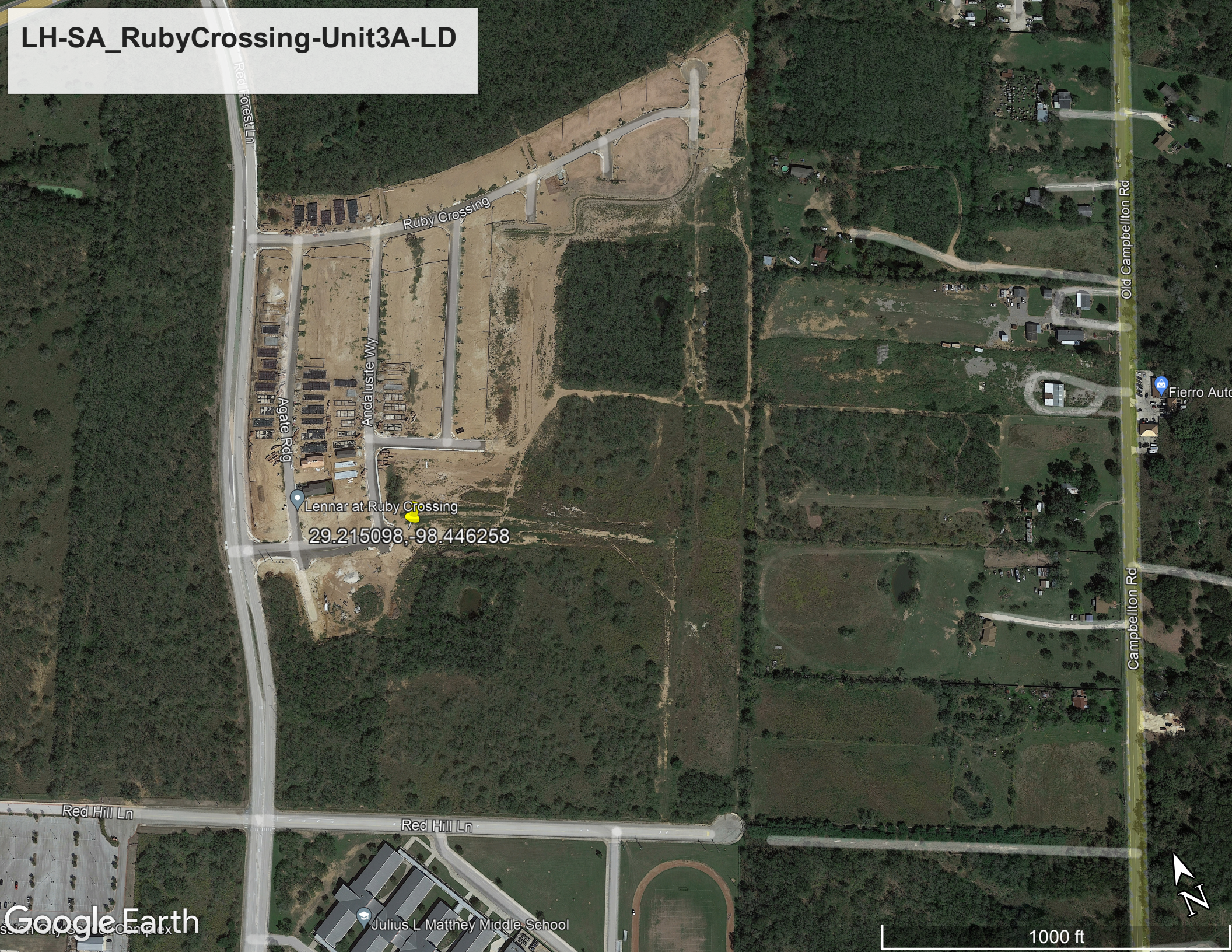
29°12'54.4"N 98°26'46.5"W

LH-SA_RubyCrossing-Unit3A-LD



Map data ©2023 1000 ft

LH-SA_RubyCrossing-Unit3A-LD



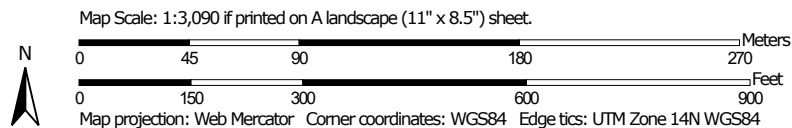
Lennar at Ruby Crossing

29.215098, -98.446258

Soil Map—Bexar County, Texas
(LH-SA_RubyCrossing-Unit3A-LD)



Soil Map may not be valid at this scale.



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

3/29/2023
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas

Survey Area Data: Version 26, Aug 24, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 15, 2020—Nov 16, 2020

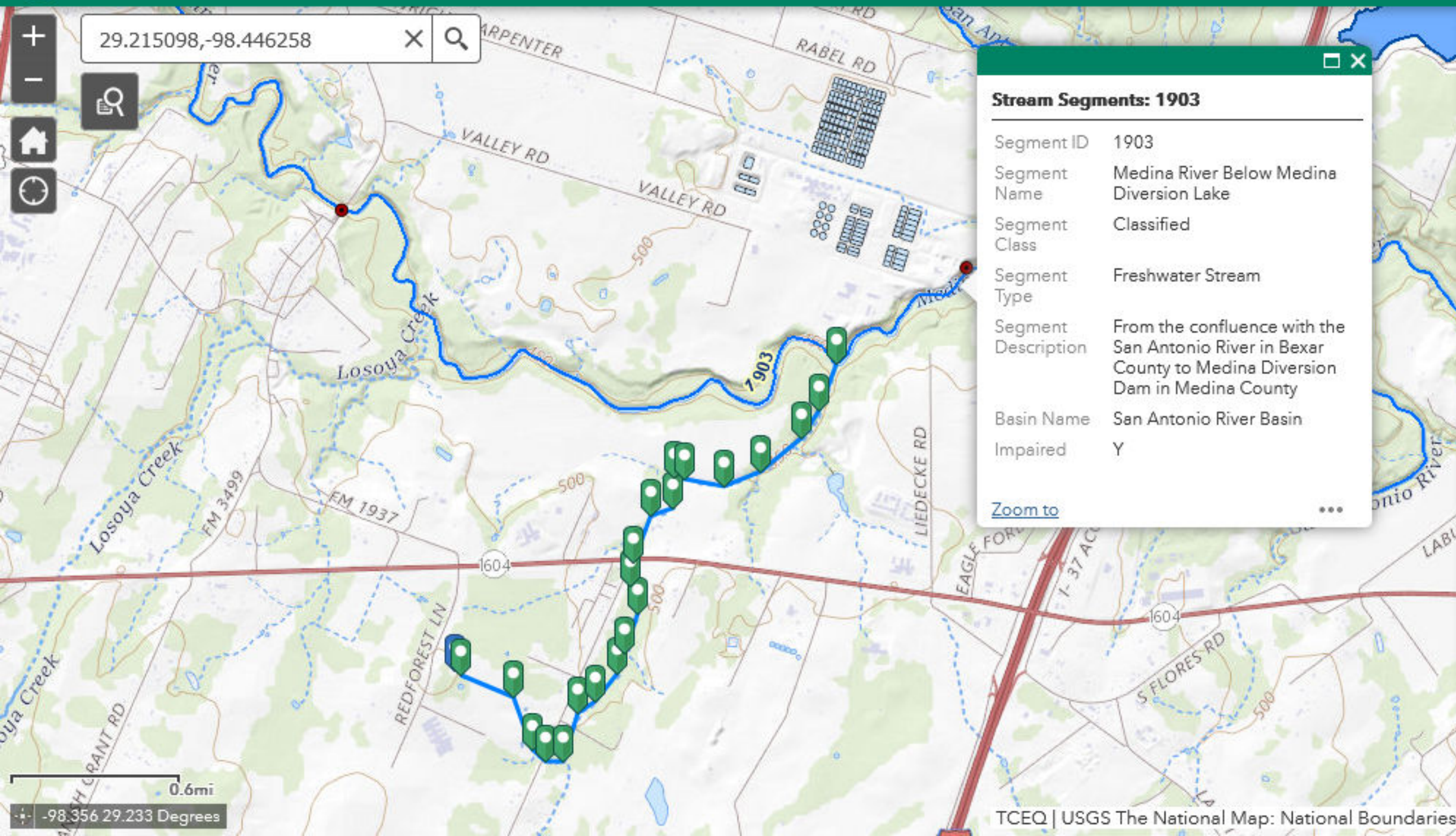
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HkC	Wilco loamy fine sand, 3 to 5 percent slopes	14.7	82.1%
HkC2	Wilco loamy fine sand, 3 to 5 percent slopes, eroded	3.2	17.9%
Totals for Area of Interest		17.9	100.0%



29.215098,-98.446258

**Stream Segments: 1903**

Segment ID	1903
Segment Name	Medina River Below Medina Diversion Lake
Segment Class	Classified
Segment Type	Freshwater Stream
Segment Description	From the confluence with the San Antonio River in Bexar County to Medina Diversion Dam in Medina County
Basin Name	San Antonio River Basin
Impaired	Y

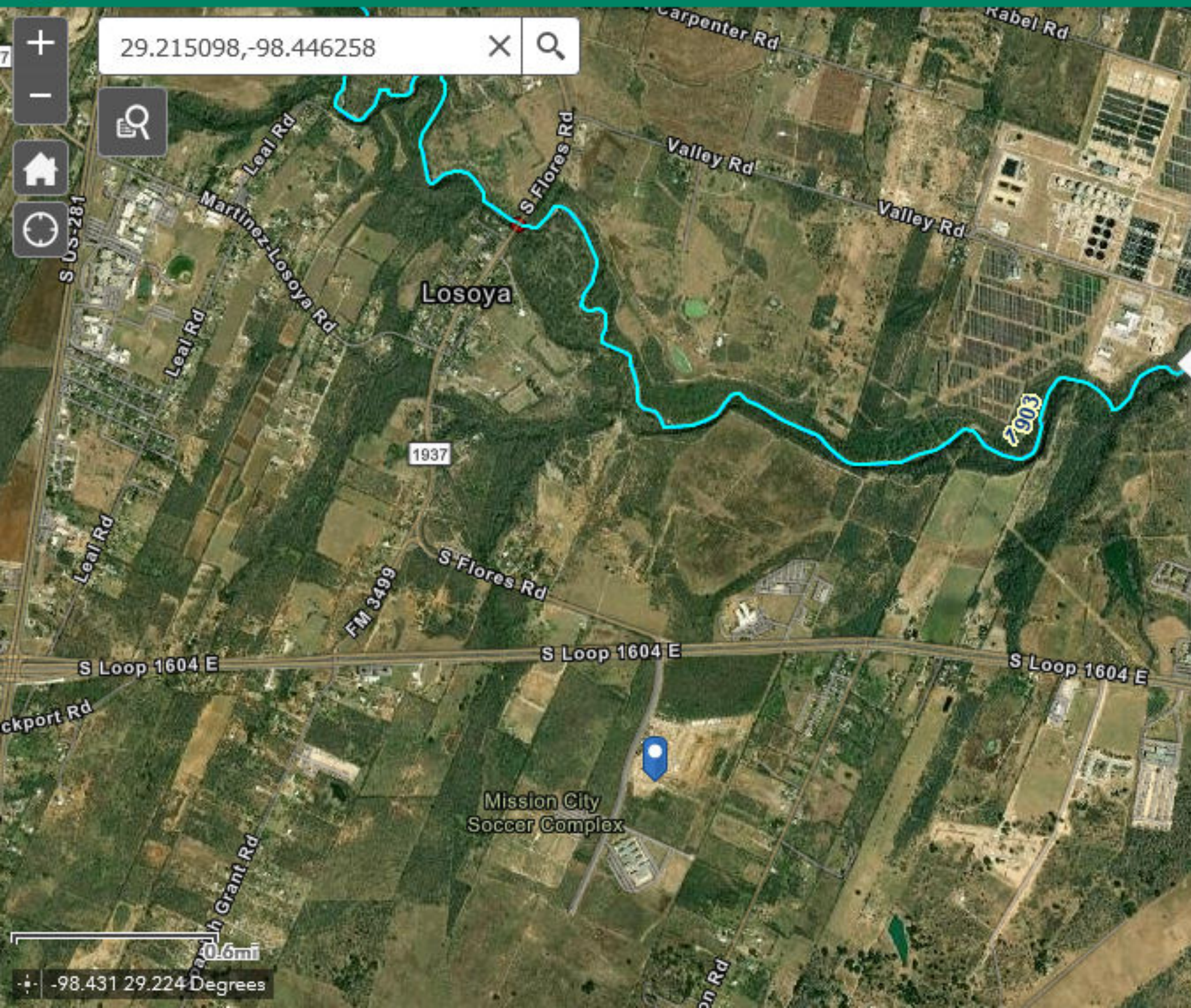
[Zoom to](#)**Measure**

| Miles ▾

Measurement Result

2.48 Miles

Clear

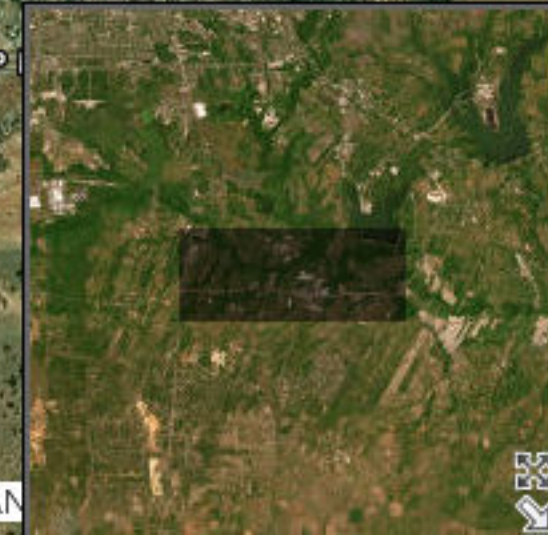


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[Zoom to](#)

...





U.S. Fish and Wildlife Service

National Wetlands Inventory

LH-SA_RubyCrossing-Unit3A-LD



U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

March 29, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

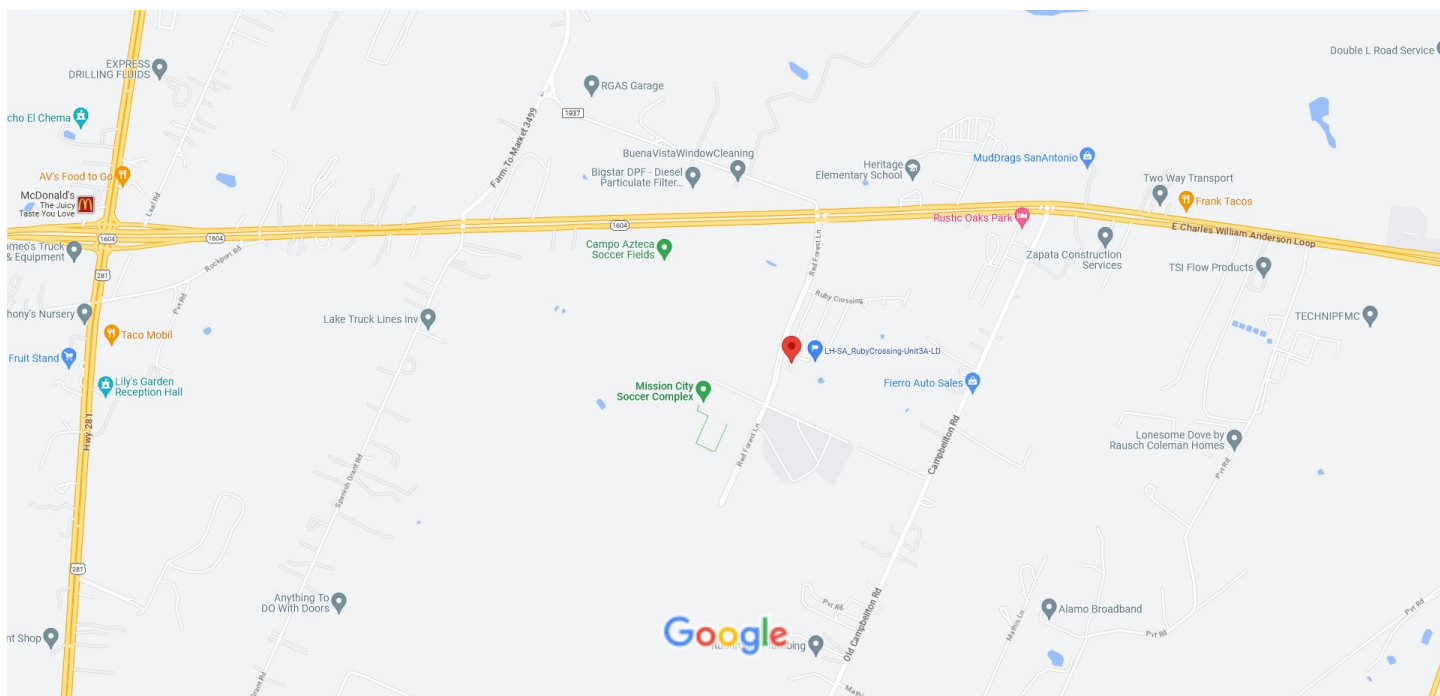
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



29°12'54.3"N 98°26'50.3"W

LH-SA_RubyCrossing-Unit3B-LD



Map data ©2023 1000 ft

LH-SA_RubyCrossing-Unit3B-LD



Lennar at Ruby Crossing

Red Diamond

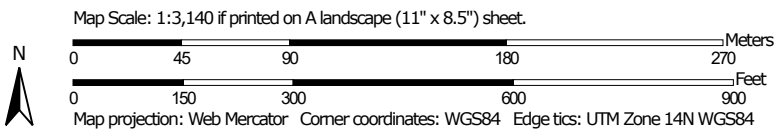
29.215070, -98.447294

Red Forest Ln

Red Hill Ln

Red Hill Ln

Soil Map—Bexar County, Texas
(LH-SA_RubyCrossing-Unit3B-LD)



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bexar County, Texas

Survey Area Data: Version 26, Aug 24, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Nov 15, 2020—Nov 16, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

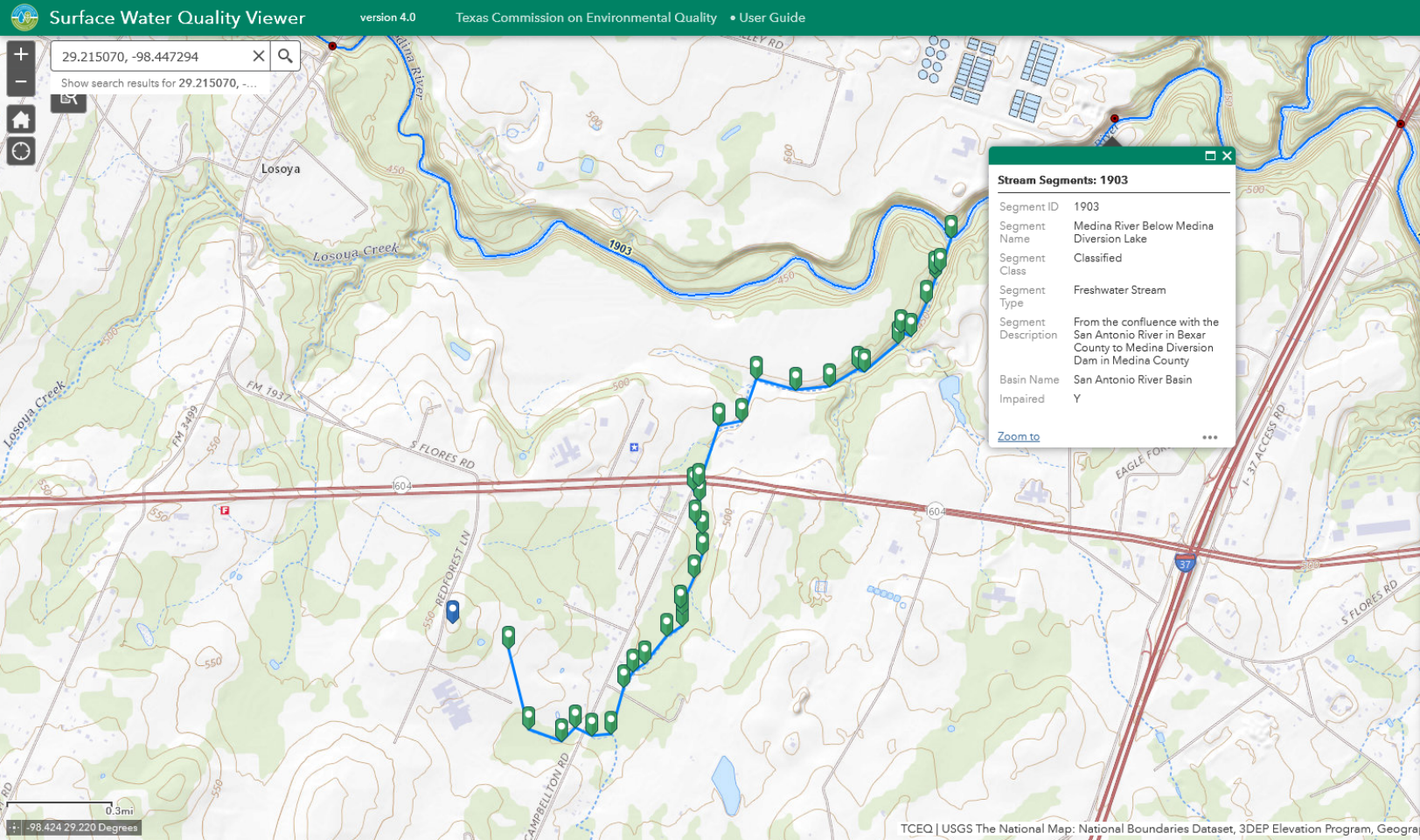
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HkC	Wilco loamy fine sand, 3 to 5 percent slopes	13.5	82.0%
HkC2	Wilco loamy fine sand, 3 to 5 percent slopes, eroded	3.0	18.0%
LfB	Leming loamy fine sand, 0 to 3 percent slopes	0.0	0.0%
Totals for Area of Interest		16.4	100.0%



29.215070, -98.447294



Show search results for 29.215070, -...



Stream Segments: 1903

Segment ID	1903
Segment Name	Medina River Below Medina Diversion Lake
Segment Class	Classified
Segment Type	Freshwater Stream
Segment Description	From the confluence with the San Antonio River in Bexar County to Medina Diversion Dam in Medina County
Basin Name	San Antonio River Basin
Impaired	Y

[Zoom to](#)

Measure



| Miles

Measurement Result

2.49 Miles

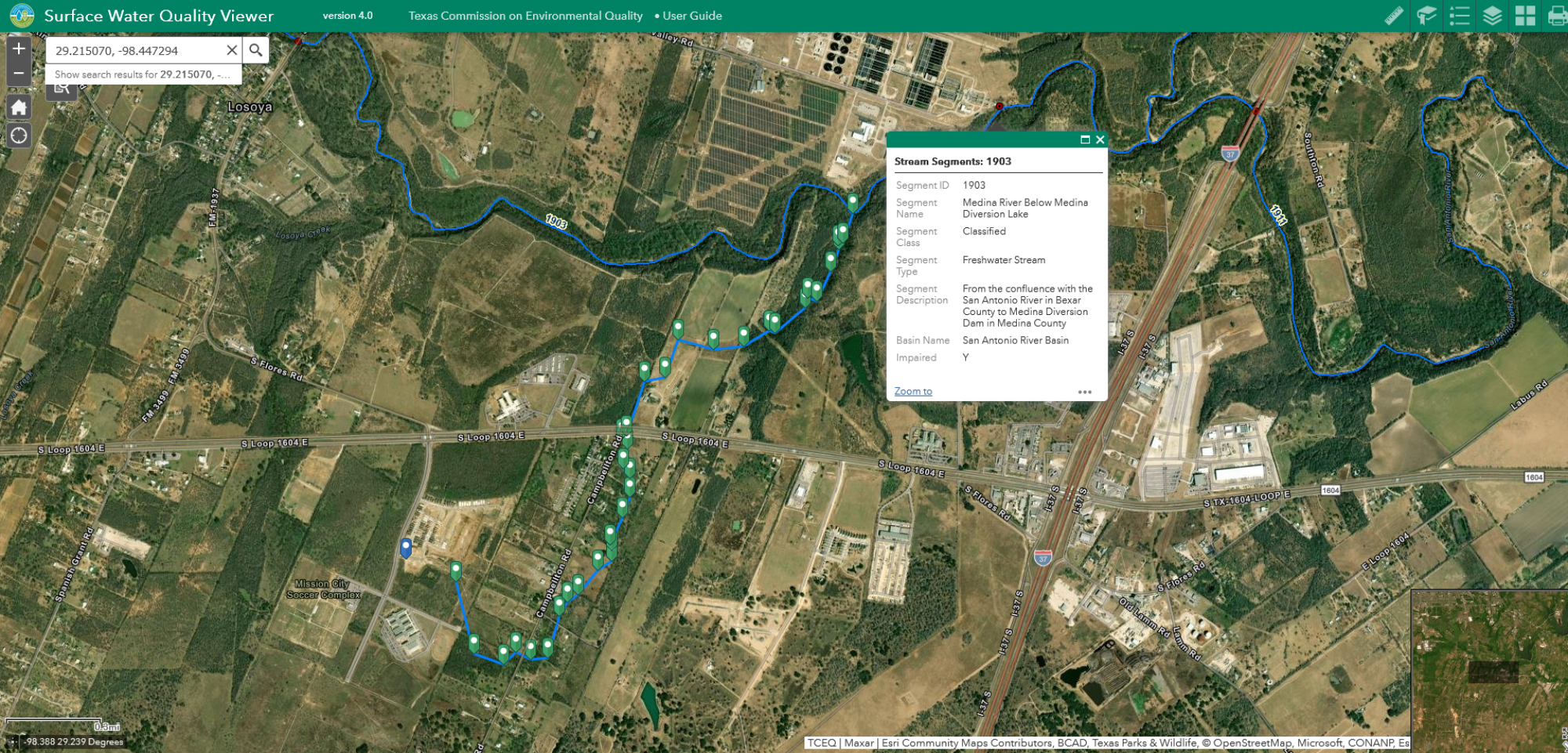
Clear



29.215070, -98.447294



Show search results for 29.215070, -...

**Stream Segments: 1903**

Segment ID	1903
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Impaired	Y

[Zoom to](#)



U.S. Fish and Wildlife Service

National Wetlands Inventory

LH-SA_RubyCrossing-Unit3B-LD



U.S. Fish and Wildlife Service, National Standards and Support Team
wetlands_team@fws.gov

August 14, 2023

Wetlands

	Estuarine and Marine Deepwater		Freshwater Emergent Wetland		Lake
	Estuarine and Marine Wetland		Freshwater Forested/Shrub Wetland		Other
			Freshwater Pond		Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Appendix "B" Site Maps

See Amendment 001 – 9/6/2023

This appendix contains auxiliary maps and copies of civil engineering plans that were used to develop the SWPPP site map.

The Best Management Practices Tracking Map Legend, Areas Under SWP3 Control Map, Best Management Practices Tracking Map(s), Stabilization Map, and Approved Civil Engineering Plans will be in this appendix.

The location of the proposed controls and buffers is identified on the approved civil engineering erosion and sediment control plans provided in this appendix.

1. Ruby Crossing – Unit 3A – Storm Water Pollution Prevention Plan – Sheet C1.00
2. Ruby Crossing – Unit 3B – Storm Water Pollution Prevention Plan – Sheet C1.00

BMP MAP GENERAL NOTES



NOT UNDER SWP3 CONTROL
TRANSFERRED FROM LENNAR'S LAND DEPARTMENT
TO LENNAR HOME BUILDING

Good House Keeping BMPs

*GOOD HOUSEKEEPING BMP LOCATIONS WILL BE DETERMINED AND IDENTIFIED
ON BMP TRACKING MAP AFTER COMMENCEMENT OF CONSTRUCTION

M	MATERIAL STORAGE
S	STOCKPILE CONTAINMENT
T	TRASH CONTAINMENT
P	PORTABLE TOILET
ES	EQUIPMENT STORAGE
F	FUEL TANK
D	DEWATERING OPERATIONS
CT	CONSTRUCTION TRAILER / OFFICE
SN	SWP3 Posting
FT	FRAC TANK

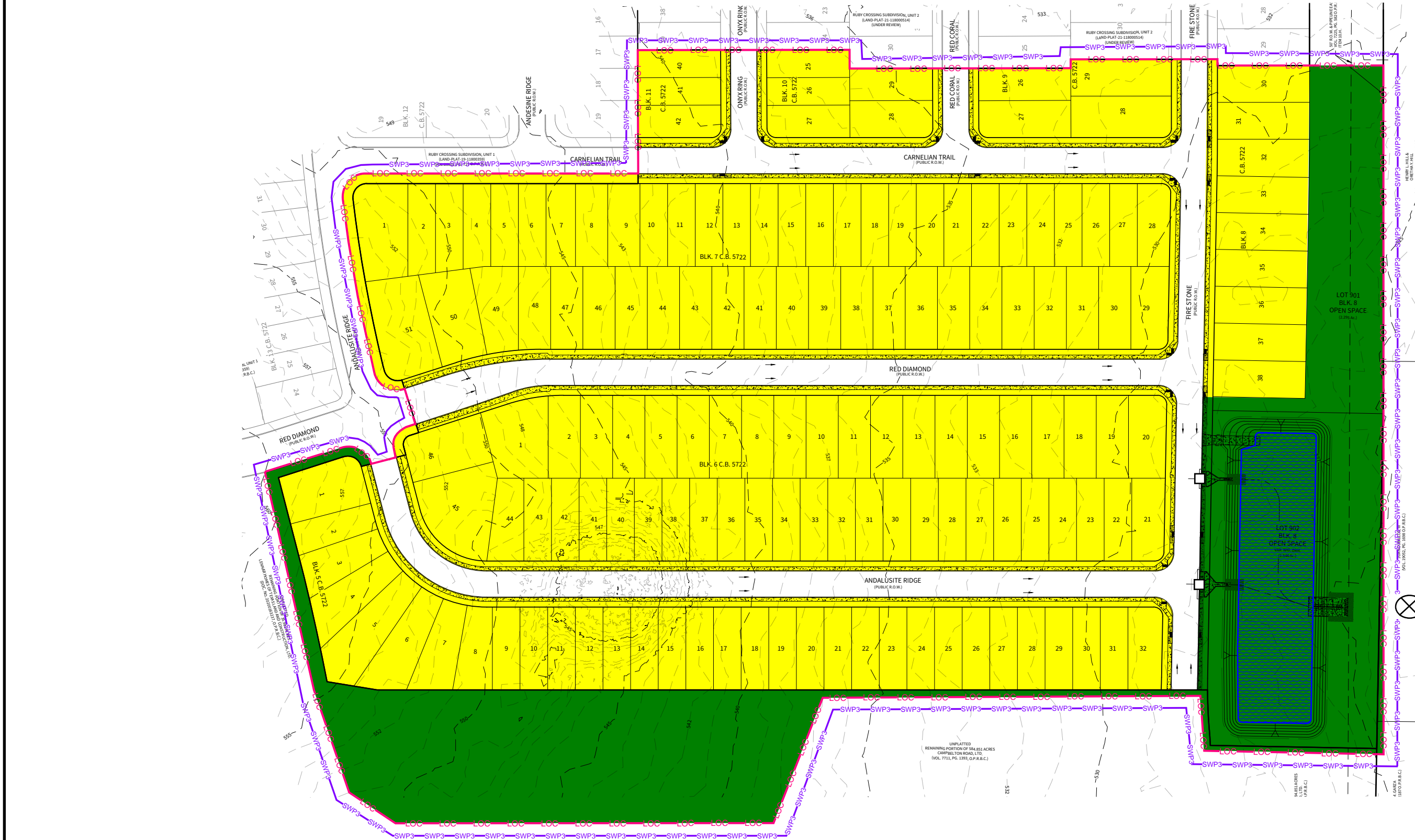
BMP TRACKING MAP SITE LEGEND

—SWP3—SWP3—SWP3—SWP3—	AREA UNDER SWPPP CONTROL
—LOC—LOC—LOC—LOC—	LIMITS OF CONSTRUCTION
—Flood—Flood—	100 YEAR FLOOD PLAIN
	AREA OF DISTURBANCE
	AREA NOT UNDER SWPPP CONTROL
	VEGETATED BUFFER
	TEMPORARY STABILIZATION
	PERMANENT STABILIZATION
	DO NOT DISTURB NATURAL AREA / CRITICAL ENVIRONMENTAL FEATURE
	DETENTION POND
	TEMPORARY SEDIMENT BASIN
	WETLAND
	SURFACE WATER / CREEK
► Receiving Water ►	RECEIVING WATERS
→	GRADING / POST CONSTRUCTION DRAINAGE
→	PRE-CONSTRUCTION DRAINAGE
	HEADWALL

Structural Erosion And Sediment Controls

	SILT FENCE
	CUTBACK CURB
	STRAW WATTLE / MULCH SOCK
	DURAWATTLE
	STABILIZED CONSTRUCTION EXIT
	EARTH BERM
	DRAINAGE CHANNEL
	PROPOSED / UNPROTECTED INLET
	PROTECTED INLET
	PROTECTED TYPE "E" INLET UNDER SWPPP CONTROL
	CONCRETE TRUCK WASHOUT AREA
OX XO	TEMPORARY CULVERT CROSSING
	ROCK CHECK DAM / ROCK BERM
	WIND FENCE / TREE PROTECTION
	EROSION CONTROL BLANKET
	MULCH BUFFER
X	MATERIAL DELIVERY POINT
X	BMPs or EROSION & SEDIMENT CONTROLS NO LONGER INSTALLED
	GRAVEL BAG BERM
	OUTFALL TO SURFACE WATER
	OUTFALL TO EXITING STORM SEWER

LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD. LAND DEVELOPMENT - BEST MANAGEMENT PRACTICES TRACKING MAP LEGEND



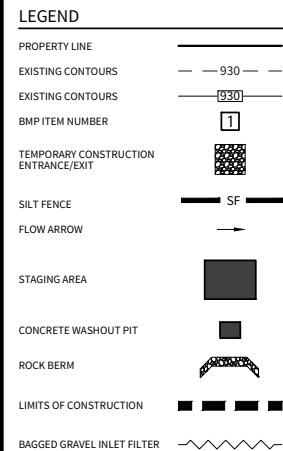
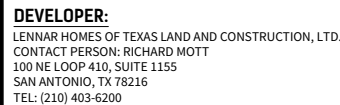
#1-UNIT3A

RUBY CROSSING - UNIT 3A

LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.
LAND DEVELOPMENT | STABILIZATION MAP

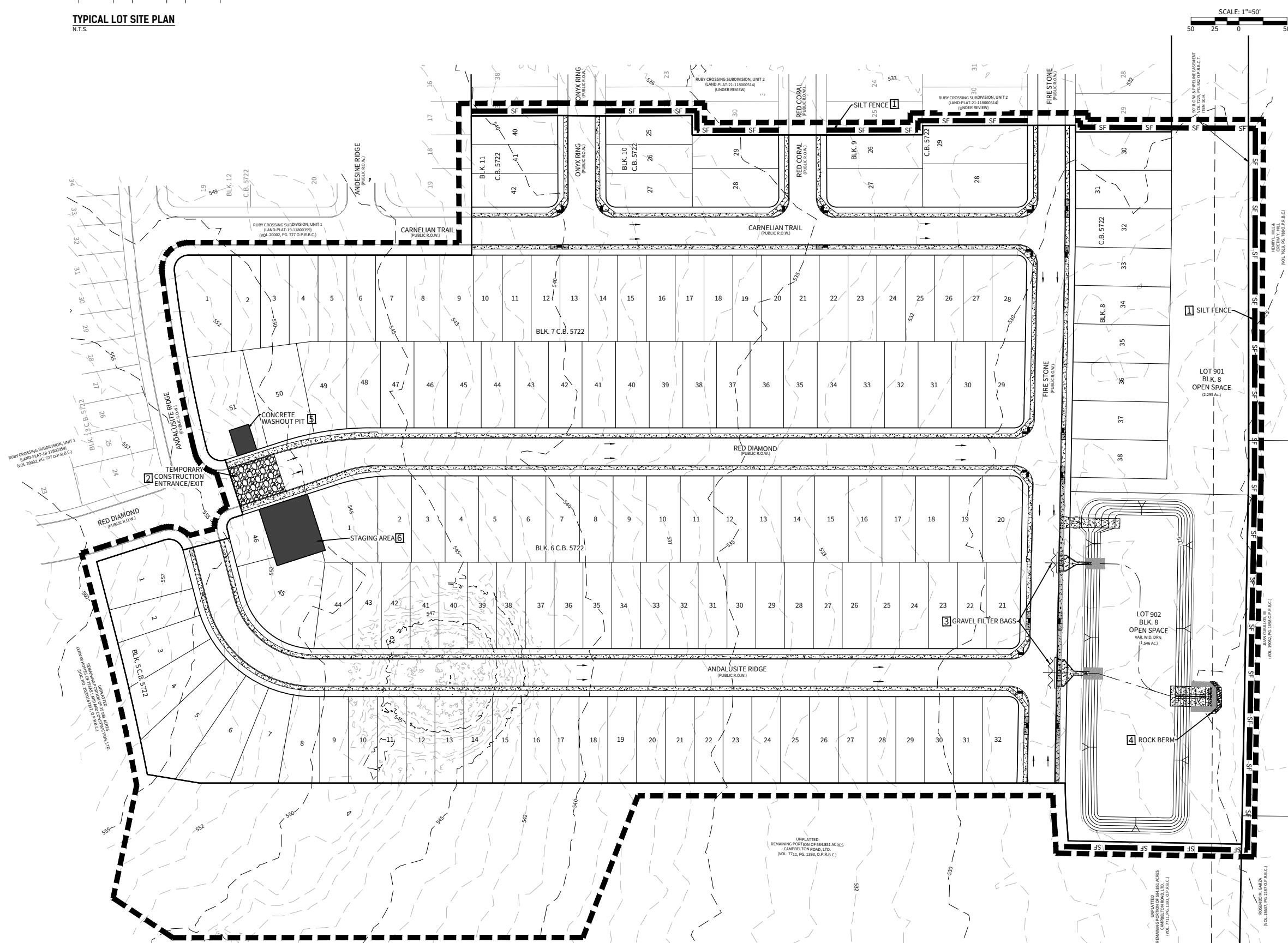


"Refer to the "Best Management Practice Map Legend" located in Appendix "B" of the SWP3 for BMP Symbols and Definition."



NOTE:

1. ALL SILT FENCES AND/OR ROCK BERMS AND TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE PLACED AT THE MOST DOWN-GRADE POINT OF CONSTRUCTION AS SHOWN ON THIS SITE PLAN. CONTRACTOR SHALL TAKE INTO CONSIDERATION ANY PROPOSED CONSTRUCTION THAT MAY TAKE PLACE AT THESE LOCATIONS. ANY RELOCATION OF SILT FENCE, ROCK BERMS AND/OR TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE AT THE CONTRACTOR'S EXPENSE.
2. AREA OF SOIL DISTURBANCES INCLUDE STREET RIGHT-OF-WAYS, UTILITY EASEMENTS & LOTS.
3. THERE WILL NOT BE STORMWATER DISCHARGES INTO THE FEMA FLOOD PLAIN.
4. THE CONTRACTOR IS REQUIRED TO MAINTAIN EROSION CONTROLS THROUGHOUT THE DURATION OF THE PROJECT.
5. THE CITY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF MODIFICATIONS.



DATE	03/01/2023
PROJECT NO.	02122.205
DRAWN BY	NNR/MAS
CHECKED BY	KMH

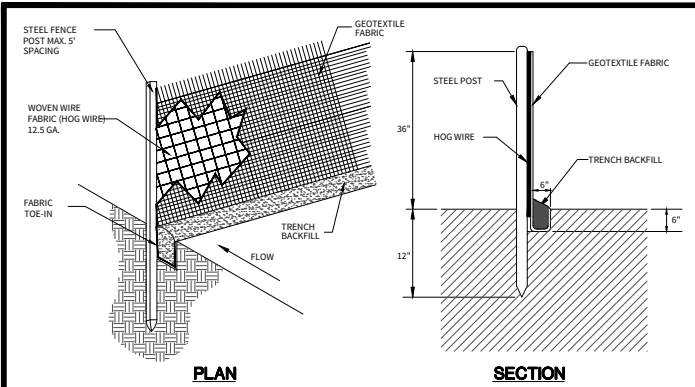
REVISIONS

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

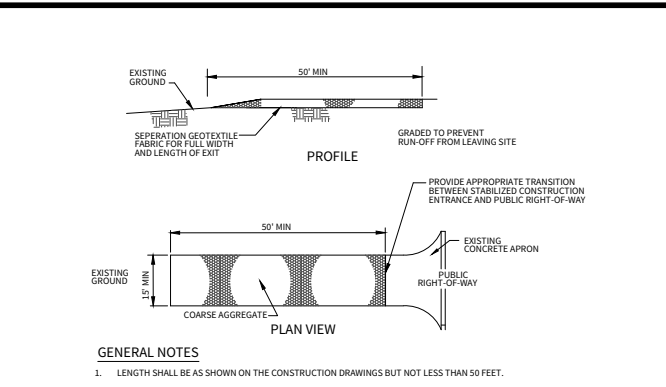


PLAT NO.
22-11800793

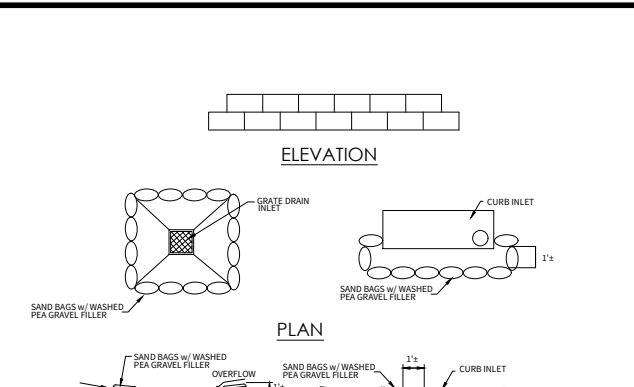
C1.00



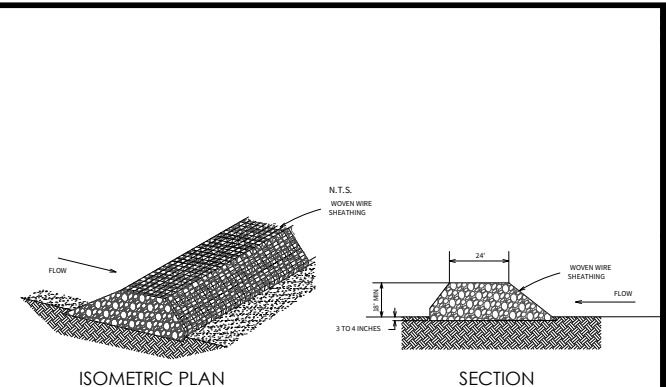
- NOTES:**
- SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NON WOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN², ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.
 - FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT², AND BRINELL HARDNESS EXCEEDING 140.
 - WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12.5 GAUGE MINIMUM.
 - STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 3 FEET DEEP AND SPACED NOT MORE THAN 5 FEET ON CENTER.
 - LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET² OF FENCE.
 - THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROPS), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
 - THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
 - SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
 - SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
 - REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES, OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE OLD FENCE.
 - REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
 - REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.



- NOTES:**
- THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION.
 - THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
 - THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD², A MULLEN BURST RATING OF 140 LB/IN², AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
 - AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
 - THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
 - THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
 - PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
 - PLACE STONE TO DIMENSIONS AND GRADE SHOWN. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
 - THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 - ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
 - WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 - WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 - ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE.



- BAGGED GRAVEL INLET FILTER NOTES**
- THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD², MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
 - THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6 INCHES.
 - THE GRAVEL BAGS SHOULD BE FILLED WITH 1/4" GRAVEL.
 - WHEN A GRAVEL BAG IS FILLED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.
 - THE GRAVEL BAGS SHOULD BE PLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
 - INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 - CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
 - REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
 - STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



- NOTES:**
- THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOOT RINGS.
 - CLEAN, OPEN GRADED 3 TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-TO 8-INCH DIAMETER ROCKS MAY BE USED.
 - LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE.
 - BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
 - PLACE THE ROCK ALONG THE SHEATHING TO A HEIGHT NOT LESS THAN 18".
 - WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
 - BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
 - THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
 - INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
 - REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT OF IN AN APPROVED MANNER AND REPAIR ANY LOOSE WIRE SHEATHING.
 - THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
 - THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

1 SILT FENCE DETAIL

SCALE: NONE

2 TEMPORARY CONSTRUCTION ENTRANCE / EXIT

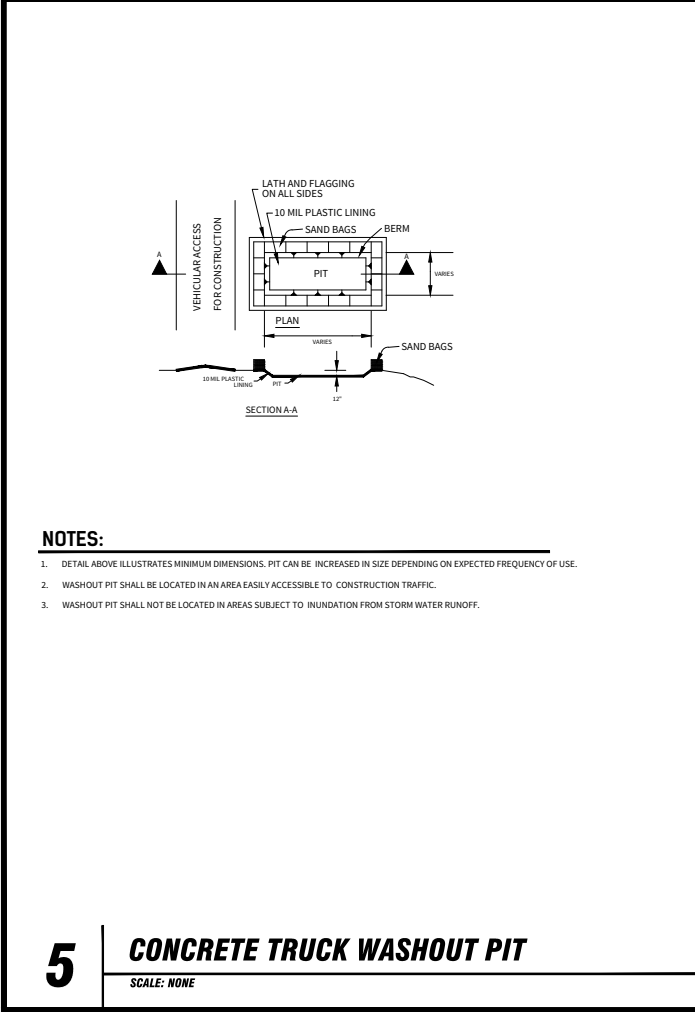
SCALE: NONE

3 BAGGED GRAVEL INLET FILTER

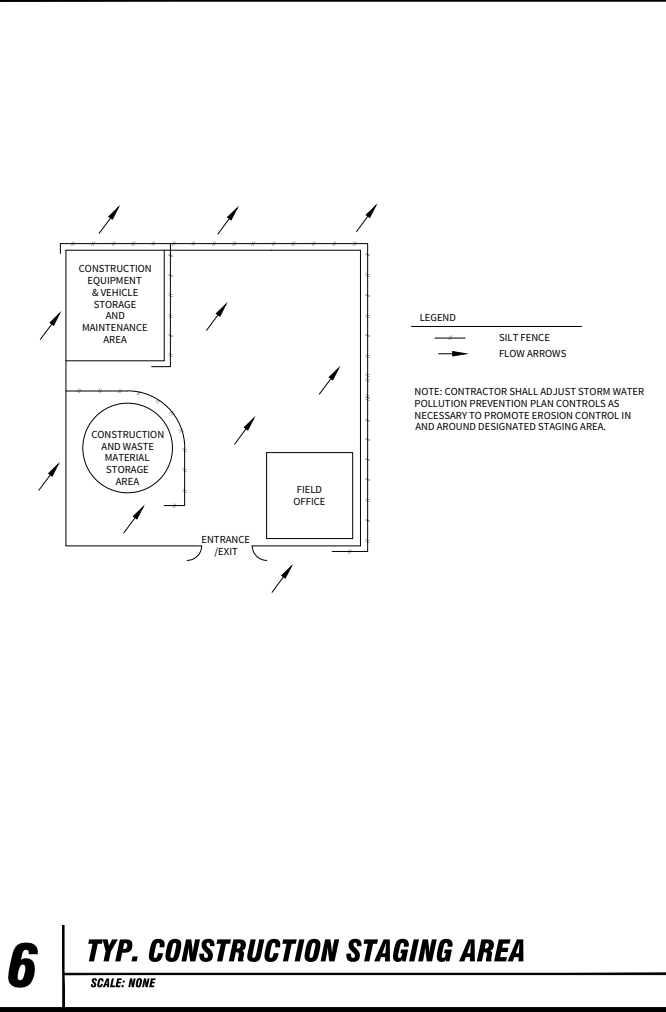
SCALE: NONE

4 ROCK BERM DETAIL

SCALE: NONE



- NOTES:**
- DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
 - WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
 - WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.



6 TYP. CONSTRUCTION STAGING AREA

SCALE: NONE

CUDE ENGINEERS.COM

4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TEXAS 78231
P: (210) 681.2951 F: (210) 523.7112

RUBY CROSSING UNIT 3A

STORMWATER POLLUTION PREVENTION PLAN STANDARD DETAILS

DATE
02/27/2023

PROJECT NO.
02122.205

DRAWN BY
NNR/MAS

CHECKED BY
KMH

REVISIONS

1.	
2.	
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9.	

CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

PLAT NO.
22-11800793











C1.D1

BMP MAP GENERAL NOTES



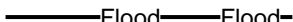
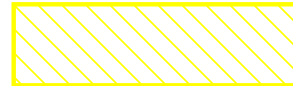






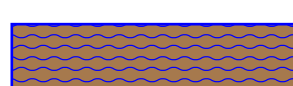
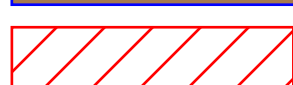





 NOT UNDER SWP3 CONTROL
TRANSFERRED FROM LENNAR'S LAND DEPARTMENT
TO LENNAR HOME BUILDING

Good House Keeping BMPs





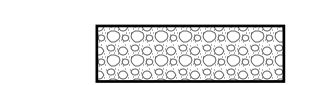



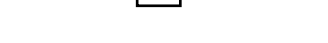












*GOOD HOUSEKEEPING BMP LOCATIONS WILL BE DETERMINED AND IDENTIFIED
ON BMP TRACKING MAP AFTER COMMENCEMENT OF CONSTRUCTION

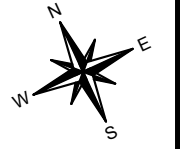
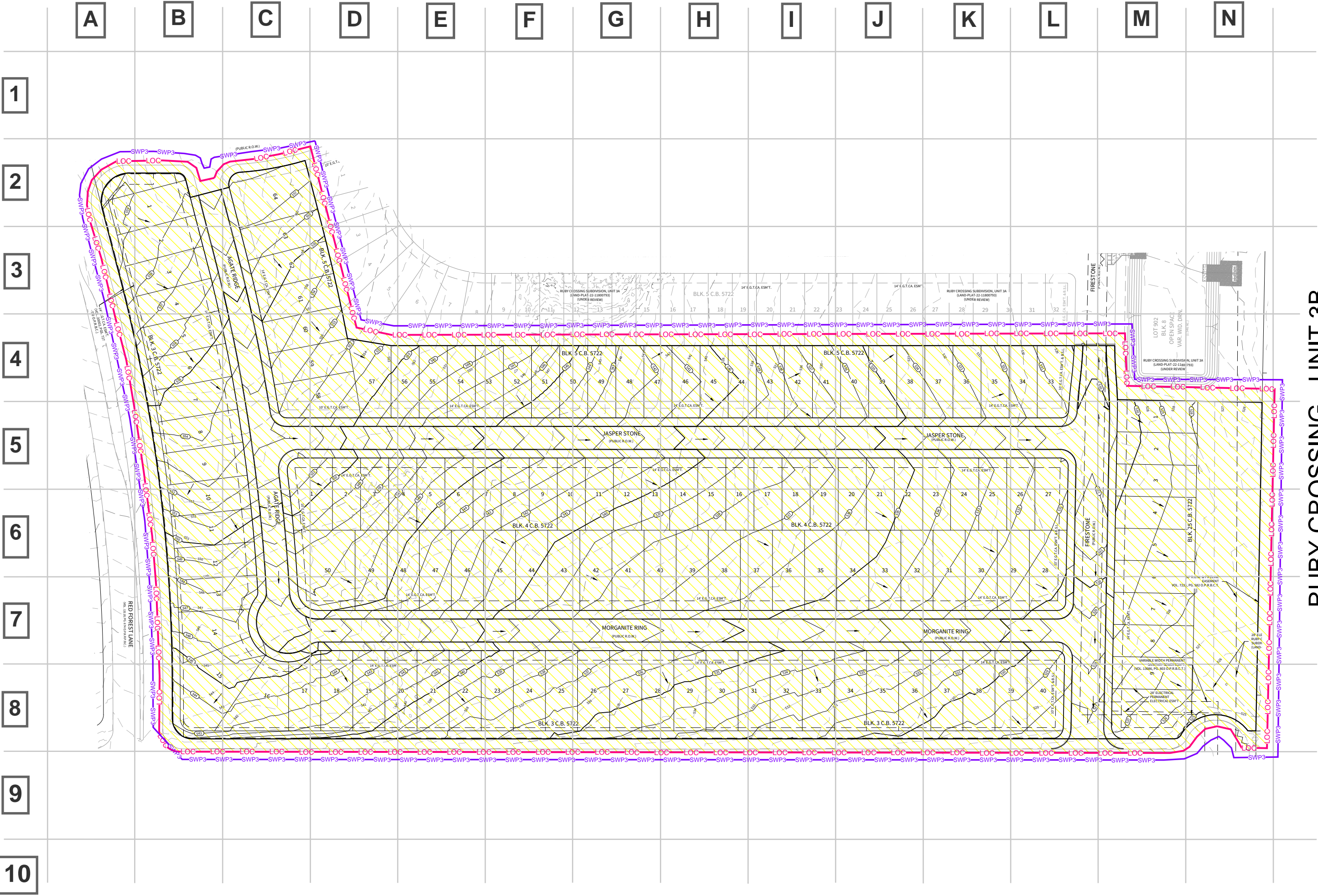
-  MATERIAL STORAGE
-  STOCKPILE CONTAINMENT
-  TRASH CONTAINMENT
-  PORTABLE TOILET
-  EQUIPMENT STORAGE
-  FUEL TANK
-  DEWATERING OPERATIONS
-  CONSTRUCTION TRAILER / OFFICE
-  SWP3 Posting
-  FRAC TANK

BMP TRACKING MAP SITE LEGEND

-  AREA UNDER SWPPP CONTROL
-  LIMITS OF CONSTRUCTION
-  100 YEAR FLOOD PLAIN
-  AREA OF DISTURBANCE
-  AREA NOT UNDER SWPPP CONTROL
-  VEGETATED BUFFER
-  TEMPORARY STABILIZATION
-  PERMANENT STABILIZATION
-  DO NOT DISTURB NATURAL AREA / CRITICAL ENVIRONMENTAL FEATURE
-  DETENTION POND
-  TEMPORARY SEDIMENT BASIN
-  WETLAND
-  SURFACE WATER / CREEK
-  RECEIVING WATERS
-  GRADING / POST CONSTRUCTION DRAINAGE
-  PRE-CONSTRUCTION DRAINAGE
-  HEADWALL

Structural Erosion And Sediment Controls

-  SILT FENCE
-  CUTBACK CURB
-  STRAW WATTLE / MULCH SOCK
-  DURAWATTLE
-  STABILIZED CONSTRUCTION EXIT
-  EARTH BERM
-  DRAINAGE CHANNEL
-  PROPOSED / UNPROTECTED INLET
-  PROTECTED INLET
-  PROTECTED TYPE "E" INLET UNDER SWPPP CONTROL
-  CONCRETE TRUCK WASHOUT AREA
-  TEMPORARY CULVERT CROSSING
-  ROCK CHECK DAM / ROCK BERM
-  WIND FENCE / TREE PROTECTION
-  EROSION CONTROL BLANKET
-  MULCH BUFFER
-  MATERIAL DELIVERY POINT
-  BMPs or EROSION & SEDIMENT CONTROLS NO LONGER INSTALLED
-  GRAVEL BAG BERM
-  OUTFALL TO SURFACE WATER
-  OUTFALL TO EXISTING STORM SEWER



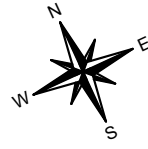
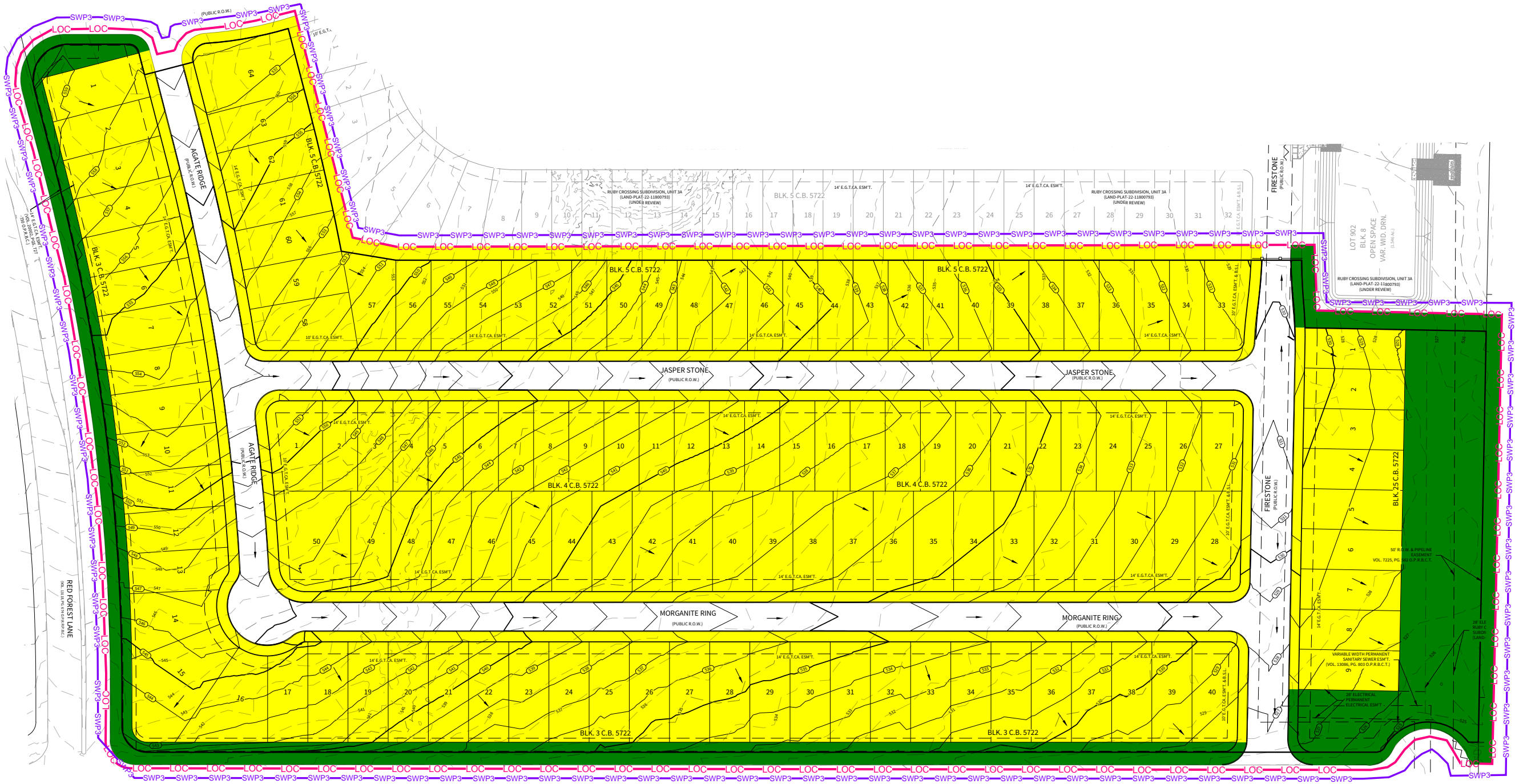
LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.
LAND DEVELOPMENT | BMP TRACKING MAP

RUBY CROSSING - UNIT 3B

REV. NO.
DRAWN BY: ZZ
SHEET 01



"Refer to the "Best Management Practice Map Legend" located in Appendix "B" of the SWP3 for BMP Symbols and Definition."



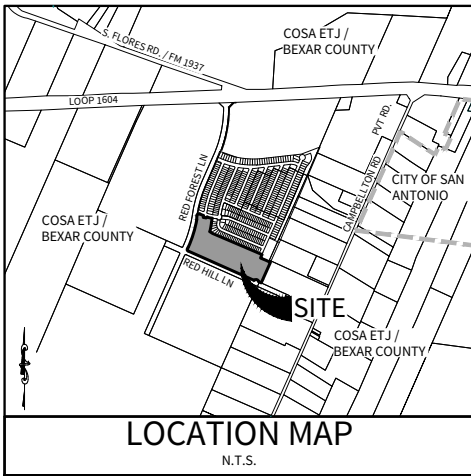
LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.
LAND DEVELOPMENT | STABILIZATION MAP

RUBY CROSSING - UNIT 3B

REV. NO.
DRAWN BY: ZZ
SHEET 01



"Refer to the "Best Management Practice Map Legend" located in Appendix "B" of the SWP3 for BMP Symbols and Definition."



LEGEND

AC.	= ACRES
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ELEV.	= PROPOSED CONTOUR
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○	= UNIT BOUNDARY NODE
○	= CITY LIMITS

KEYNOTES:

1	- 12' E.G.T.C.A. ESMT.
2	- 15' B.S.L.
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4	- 10' E.G.T.C.A. ESMT. & B.S.L.
5	- 1' NON VEHICULAR ACCESS EASEMENT

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2	- 28' ELECTRICAL ESMT. RUBY CROSSING UNIT 3A (CONCURRENT PLAT)



SURVEYOR'S NOTES: (IBS26 - 37.)

- 1/2" IRON RODS WITH CAP STAMPED "CUDE" SET AT ALL PROPERTY CORNERS (IF PRACTICAL) UPON COMPLETION OF CONSTRUCTION.
- COORDINATES SHOWN HEREON ARE TEXAS SOUTH CENTRAL ZONE (4204 TXSC) STATE PLANE GRID COORDINATES, NORTH AMERICAN DATUM OF 1983 (2011) AS DERIVED FROM THE NGS/CORS NETWORK.
- DISTANCES SHOWN HEREON ARE GROUND DISTANCES MEASURED IN U.S. SURVEY FEET.
- BEARINGS SHOWN HEREON ARE BASED ON THE TEXAS SOUTH CENTRAL ZONE (4204 TXSC) STATE PLANE GRID, NORTH AMERICAN DATUM OF 1983 (2011).

SAWS NOTES: (IBS26 - 30-33,35.)

- WATER AND/OR WASTEWATER IMPACT FEES WERE NOT PAID AT THE TIME OF PLATTING FOR THIS PLAT. ALL IMPACT FEES MUST BE PAID PRIOR TO WATER METER SET AND/OR WASTEWATER SERVICE CONNECTION.
- THE NUMBER OF WASTEWATER EQUIVALENT DWELLING UNITS (EDU'S) PAID FOR THIS SUBDIVISION PLAT ARE KEPT ON FILE UNDER THE PLAT NUMBER AT THE SAN ANTONIO WATER SYSTEM.
- THE OWNER DEDICATES THE SANITARY SEWER AND/OR WATER MAINS TO THE SAN ANTONIO WATER SYSTEM UPON COMPLETION BY THE DEVELOPER AND ACCEPTANCE BY THE SAN ANTONIO WATER SYSTEM.
- A PORTION OF THE TRACT IS BELOW THE GROUND ELEVATION OF 645 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS, THE OWNER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO.
- THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1000 GPM AT 25 PSI RESIDUAL PRESSURE TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE RESIDENTIAL DEVELOPMENT. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED PRIOR TO BUILDING PERMIT APPROVAL IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

COMMON AREA MAINTENANCE: (IBS26 - 1)

THE MAINTENANCE OF ALL PRIVATE STREETS, OPEN SPACE, GREENBELTS, PARKS, TREE SAVE AREAS, INCLUDING DRAINAGE EASEMENTS AND EASEMENTS OF ANY OTHER NATURE WITHIN THIS SUBDIVISION SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS, OR THE PROPERTY OWNERS' ASSOCIATION, OR ITS SUCCESSORS OR ASSIGNS AND NOT THE RESPONSIBILITY OF THE CITY OF SAN ANTONIO OR BEXAR COUNTY.

CPS/SAWS/COSA UTILITY: (IBS26 - 22-26.)

THE CITY OF SAN ANTONIO AS PART OF ITS ELECTRIC, GAS, WATER, AND WASTEWATER SYSTEMS - CITY PUBLIC SERVICE BOARD (CPS ENERGY) AND SAN ANTONIO WATER SYSTEM (SAWS) - IS HEREBY DEDICATING EASEMENTS AND RIGHTS-OF-WAY FOR UTILITY, TRANSMISSION AND DISTRIBUTION INFRASTRUCTURE AND SERVICE FACILITIES IN THE AREAS DESIGNATED ON THIS PLAT AS "ELECTRIC EASEMENT," "ANCHOR EASEMENT," "SERVICE EASEMENT," "OVERHANG EASEMENT," "UTILITY EASEMENT," "GAS EASEMENT," "TRANSFORMER EASEMENT," "WATER EASEMENT," "SANITARY SEWER EASEMENT" AND/OR "RECYCLED WATER EASEMENT" FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, RECONSTRUCTING, MAINTAINING, REMOVING, INSPECTING, PATROLLING, AND ERECTING UTILITY INFRASTRUCTURE AND SERVICE FACILITIES FOR THE REASONS DESCRIBED ABOVE. CPS ENERGY AND SAWS SHALL ALSO HAVE THE RIGHT TO RELOCATE SAID INFRASTRUCTURE AND SERVICE FACILITIES WITHIN EASEMENT AND RIGHT-OF-WAY AREAS, TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT LANDS FOR THE PURPOSE OF ACCESSING SUCH INFRASTRUCTURE AND SERVICE FACILITIES AND THE RIGHT TO REMOVE FROM SAID LANDS ALL TREES OR PARTS THEREOF, OR OTHER OBSTRUCTIONS WHICH ENDANGER OR MAY INTERFERE WITH THE EFFICIENCY OF WATER, SEWER, GAS, AND/OR ELECTRIC INFRASTRUCTURE AND SERVICE FACILITIES. NO BUILDINGS, STRUCTURES, CONCRETE SLABS, OR WALLS WILL BE PLACED WITHIN EASEMENT AREAS WITHOUT AN ENCROACHMENT AGREEMENT WITH THE RESPECTIVE UTILITY.

- ANY CPS ENERGY OR SAWS MONETARY LOSS RESULTING FROM MODIFICATIONS REQUIRED OF CPS ENERGY OR SAWS INFRASTRUCTURE AND SERVICE FACILITIES, LOCATED WITHIN SAID EASEMENTS, DUE TO GRADE CHANGES OR GROUND ELEVATION ALTERATIONS SHALL BE CHARGED TO THE PERSON OR PERSONS DEEMED RESPONSIBLE FOR SAID GRADE CHANGES OR GROUND ELEVATION ALTERATIONS.
- THIS PLAT DOES NOT AMEND, ALTER, RELEASE OR OTHERWISE AFFECT ANY EXISTING ELECTRIC, GAS, WATER, SEWER, DRAINAGE, TELEPHONE, CABLE TV EASEMENTS OR ANY OTHER EASEMENTS FOR UTILITIES UNLESS THE CHANGES TO SUCH EASEMENTS ARE DESCRIBED HEREON.
- CONCRETE DRIVEWAY APPROACHES ARE ALLOWED WITHIN THE FIVE (5) AND TEN (10) FOOT WIDE ELECTRIC AND GAS EASEMENTS WHEN LOTS ARE SERVED ONLY BY UNDERGROUND ELECTRIC AND GAS FACILITIES.
- ROOF OVERHANGS ARE ALLOWED WITHIN THE FIVE (5) AND TEN (10) FOOT WIDE ELECTRIC AND GAS EASEMENTS WHEN ONLY UNDERGROUND ELECTRIC AND GAS FACILITIES ARE PROPOSED OR EXISTING WITHIN THOSE FIVE (5) AND TEN (10) FOOT WIDE EASEMENTS.

DRAINAGE EASEMENT ENCROACHMENTS: (IBS26 - 12.)

NO STRUCTURE, FENCES, WALLS OR OTHER OBSTRUCTIONS THAT IMPEDE DRAINAGE SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING OR OTHER TYPE OF MODIFICATIONS, WHICH ALTER THE CROSS-SECTIONS OF THE DRAINAGE EASEMENTS, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE DIRECTOR OF TCI OR DIRECTOR OF PUBLIC WORKS. THE CITY OF SAN ANTONIO AND BEXAR COUNTY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER THE GRANTOR'S ADJACENT PROPERTY TO REMOVE ANY IMPEDING OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENT AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.

TREE NOTE: (IBS26 - 43.)

THIS SUBDIVISION IS SUBJECT TO A MASTER TREE PLAN (TRE-APP-APP21-38801349) WHICH REQUIRES COMPLIANCE BY THE OWNERS OF ALL PROPERTY WITHIN THE PLAT BOUNDARY, AND THEIR EMPLOYEES AND CONTRACTORS, AND SHALL BE BINDING ON ALL SUCCESSORS IN TITLE EXCEPT FOR OWNERS OF SINGLE-FAMILY RESIDENTIAL LOTS SUBDIVIDED HEREUNDER FOR WHICH CONSTRUCTION OF A RESIDENTIAL STRUCTURE HAS BEEN COMPLETED. THE MASTER TREE PLAN IS ON FILE AT THE CITY OF SAN ANTONIO ARBORISTS OFFICE. NO TREES OR UNDERSTORY SHALL BE REMOVED WITHOUT PRIOR APPROVAL OF THE CITY ARBORIST OFFICE PER 35-477(H).

COUNTY FINISHED FLOOR ELEVATION: (IBS26 - 7.)

FINISHED FLOOR ELEVATIONS FOR STRUCTURES ON LOTS CONTAINING FLOODPLAIN OR ADJACENT TO FLOODPLAIN SHALL BE IN COMPLIANCE WITH THE FLOODPLAIN REGULATION IN EFFECT AT TIME OF CONSTRUCTION. CONTACT BEXAR COUNTY PUBLIC WORKS FOR MORE INFORMATION.

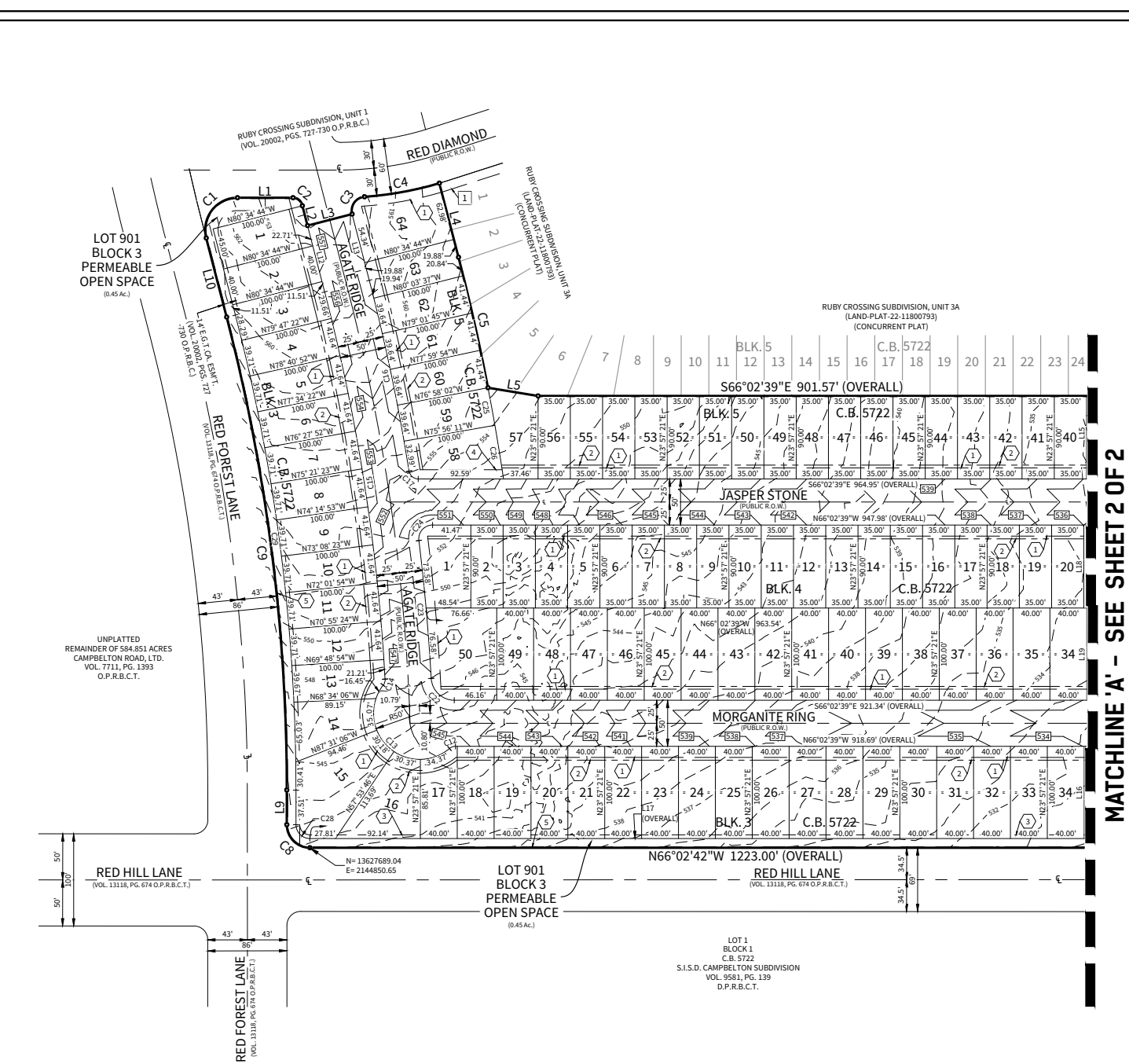
SETBACK: (IBS26 - 41.)

THE SETBACKS ON THIS PLAT ARE IMPOSED BY THE PROPERTY OWNER OR BEXAR COUNTY AND ARE NOT SUBJECT TO ENFORCEMENT BY THE CITY OF SAN ANTONIO.

RESIDENTIAL FINISHED FLOOR ELEVATIONS: (IBS26 - 8.)

RESIDENTIAL FINISHED FLOOR ELEVATIONS MUST BE A MINIMUM OF EIGHT(8) INCHES ABOVE FINAL ADJACENT GRADE FLOODPLAIN VERIFICATION: (IBS26 - 6.)

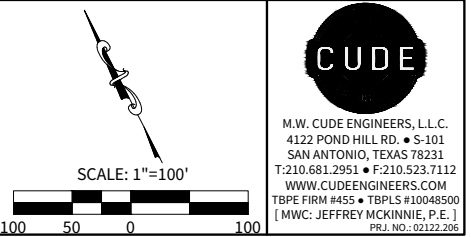
NO PORTION OF THE FEMA 1% ANNUAL CHANCE (100-YEAR) FLOODPLAIN EXISTS WITHIN THIS PLAT AS VERIFIED BY FEMA MAP PANEL: 48029C070F, EFFECTIVE SEPTEMBER 29, 2010. FLOODPLAIN INFORMATION IS SUBJECT TO CHANGE AS A RESULT OF FUTURE FEMA MAP REVISIONS AND/OR AMENDMENTS.



PLAT NUMBER- 22-11800789

SUBDIVISION PLAT
ESTABLISHING
RUBY CROSSING SUBDIVISION, UNIT 3B

BEING 16.339 ACRES OF LAND LOCATED IN THE MANUEL DE LUNA SURVEY 3, ABSTRACT 8, COUNTY BLOCK 4167, BEXAR COUNTY, TEXAS AND BEING OUT OF A CALLED 35.981 ACRES OF LAND RECORDED IN DOCUMENT 20200163237 OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS AND BEING OUT OF A CALLED 33.24 ACRES OF LAND RECORDED IN DOCUMENT 20210351809 OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS



CERTIFICATE OF APPROVAL

THE UNDERSIGNED, COUNTY JUDGE OF BEXAR COUNTY, TEXAS, AND PRESIDING OFFICER OF THE COMMISSIONERS COURT OF BEXAR COUNTY, TEXAS, DOES HEREBY CERTIFY THAT THE ATTACHED PLAT WAS DULY FILED WITH THE COMMISSIONERS COURT OF BEXAR COUNTY, TEXAS, AND THAT AFTER EXAMINATION IT APPEARED THAT SAID PLAT IS IN CONFORMITY WITH THE STATUTES, RULES AND REGULATIONS GOVERNING SAME, AND THIS PLAT WAS APPROVED BY THE SAID COMMISSIONERS COURT.

DATED THIS _____ DAY OF _____, A.D. _____

COUNTY JUDGE, BEXAR COUNTY, TEXAS

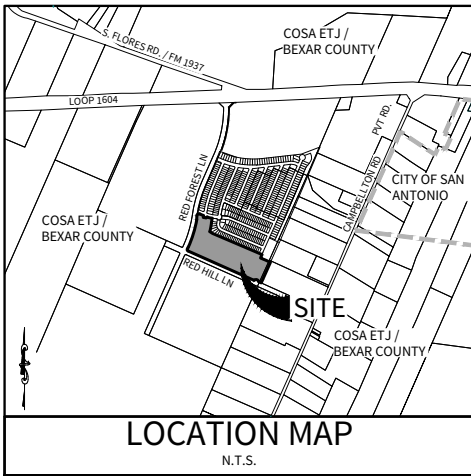
COUNTY CLERK, BEXAR COUNTY, TEXAS

THIS PLAT OF RUBY CROSSING SUBDIVISION, UNIT 3B HAS BEEN SUBMITTED TO AND CONSIDERED BY THE PLANNING COMMISSION OF THE CITY OF SAN ANTONIO, TEXAS, IS HEREBY APPROVED BY SUCH COMMISSION IN ACCORDANCE WITH STATE OR LOCAL LAWS AND REGULATIONS, AND/OR WHERE ADMINISTRATIVE EXCEPTION(S) AND/OR VARIANCE(S) HAVE BEEN GRANTED.

DATED THIS _____ DAY OF _____, A.D. _____

BY: _____ CHAIRMAN

BY: _____ SECRETARY



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1	= 10' B.S.L. & E.G.T.C.A. ESMT. RUBY CROSSING UNIT 3A (CONCURRENT PLAT) (LAND-PLAT-22-11800793)
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SURVEYOR'S NOTES: (IBS26 - 27.)

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LINE TABLE		
LINE	BEARING	LENGTH
L1	S66°02'39"E	60.38'
L2	S09°25'16"W	23.59'
L3	S80°34'44"E	50.00'
L4	S09°25'16"W	82.86'
L5	S56°43'52"E	55.05'
L6	S64°57'49"E	100.32'
L7	S64°57'49"E	80.07'
L8	N65°44'51"W	10.04'
L9	N23°58'13"E	37.53'
L10	N09°26'32"E	88.53'
L12	N09°25'16"E	74.22'
L13	S09°25'16"W	74.22'

LINE TABLE		
LINE	BEARING	LENGTH
L14	N25°02'11"E	5.00'
L15	N23°57'21"E	90.00'
L16	N23°57'21"E	100.00'
L17	N66°02'39"W	1084.19'
L18	N23°57'21"E	90.00'
L19	N23°57'21"E	100.00'

CPS/SAWS/COSA UTILITY: (IBS26 - 22-26.)

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- ANY CPS ENERGY OR SAWS MONETARY LOSS RESULTING FROM MODIFICATIONS REQUIRED OF CPS ENERGY OR SAWS INFRASTRUCTURE AND SERVICE FACILITIES, LOCATED WITHIN SAID EASEMENTS, DUE TO GRADE CHANGES OR GROUND ELEVATION ALTERATIONS SHALL BE CHARGED TO THE PERSON OR PERSONS DEEMED RESPONSIBLE FOR SAID GRADE CHANGES OR GROUND ELEVATION ALTERATIONS.
- THIS PLAT DOES NOT AMEND, ALTER, RELEASE OR OTHERWISE AFFECT ANY EXISTING ELECTRIC, GAS, WATER, SEWER, DRAINAGE, TELEPHONE, CABLE TV EASEMENTS OR ANY OTHER EASEMENTS FOR UTILITIES UNLESS THE CHANGES TO SUCH EASEMENTS ARE DESCRIBED HEREON.
- CONCRETE DRIVEWAY APPROACHES ARE ALLOWED WITHIN THE FIVE (5) AND TEN (10) FOOT WIDE EASEMENT AND GAS EASEMENTS WHEN LOTS ARE SERVED ONLY BY UNDERGROUND ELECTRIC AND GAS FACILITIES.
- ROOF OVERHANGS ARE ALLOWED WITHIN THE FIVE (5) AND TEN (10) FOOT WIDE ELECTRIC AND GAS EASEMENTS WHEN ONLY UNDERGROUND ELECTRIC AND GAS FACILITIES ARE PROPOSED OR EXISTING WITHIN THOSE FIVE (5) AND TEN (10) FOOT WIDE EASEMENTS.

DRAINAGE EASEMENT ENCROACHMENTS: (IBS26 - 12.)

NO STRUCTURE, FENCES, WALLS OR OTHER OBSTRUCTIONS THAT IMPEDE DRAINAGE SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING OR OTHER TYPE OF MODIFICATIONS, WHICH ALTER THE CROSS-SECTIONS OF THE DRAINAGE EASEMENTS, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE DIRECTOR OF TCI OR DIRECTOR OF PUBLIC WORKS. THE CITY OF SAN ANTONIO AND BEXAR COUNTY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER THE GRANTOR'S ADJACENT PROPERTY TO REMOVE ANY IMPEDING OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENT AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.

TREE NOTE: (IBS26 - 43.)

THIS SUBDIVISION IS SUBJECT TO A MASTER TREE PLAN (TRE-APP-APP21-38801349) WHICH REQUIRES COMPLIANCE BY THE OWNERS OF ALL PROPERTY WITHIN THE PLAT BOUNDARY, AND THEIR EMPLOYEES AND CONTRACTORS, AND SHALL BE BINDING ON ALL SUCCESSORS IN TITLE EXCEPT FOR OWNERS OF SINGLE-FAMILY RESIDENTIAL LOTS SUBDIVIDED HEREUNDER FOR WHICH CONSTRUCTION OF A RESIDENTIAL STRUCTURE HAS BEEN COMPLETED. THE MASTER TREE PLAN IS ON FILE AT THE CITY OF SAN ANTONIO ARBORISTS OFFICE. NO TREES OR UNDERSTORY SHALL BE REMOVED WITHOUT PRIOR APPROVAL OF THE CITY ARBORIST OFFICE PER 35-477(H).

COUNTY FINISHED FLOOR ELEVATION: RELATIVE TO FLOODPLAIN: (IBS26 - 7.)

FINISHED FLOOR ELEVATIONS FOR STRUCTURES ON LOTS CONTAINING FLOODPLAIN OR ADJACENT TO FLOODPLAIN SHALL BE IN COMPLIANCE WITH THE FLOODPLAIN REGULATION IN EFFECT AT TIME OF CONSTRUCTION. CONTACT BEXAR COUNTY PUBLIC WORKS FOR MORE INFORMATION.

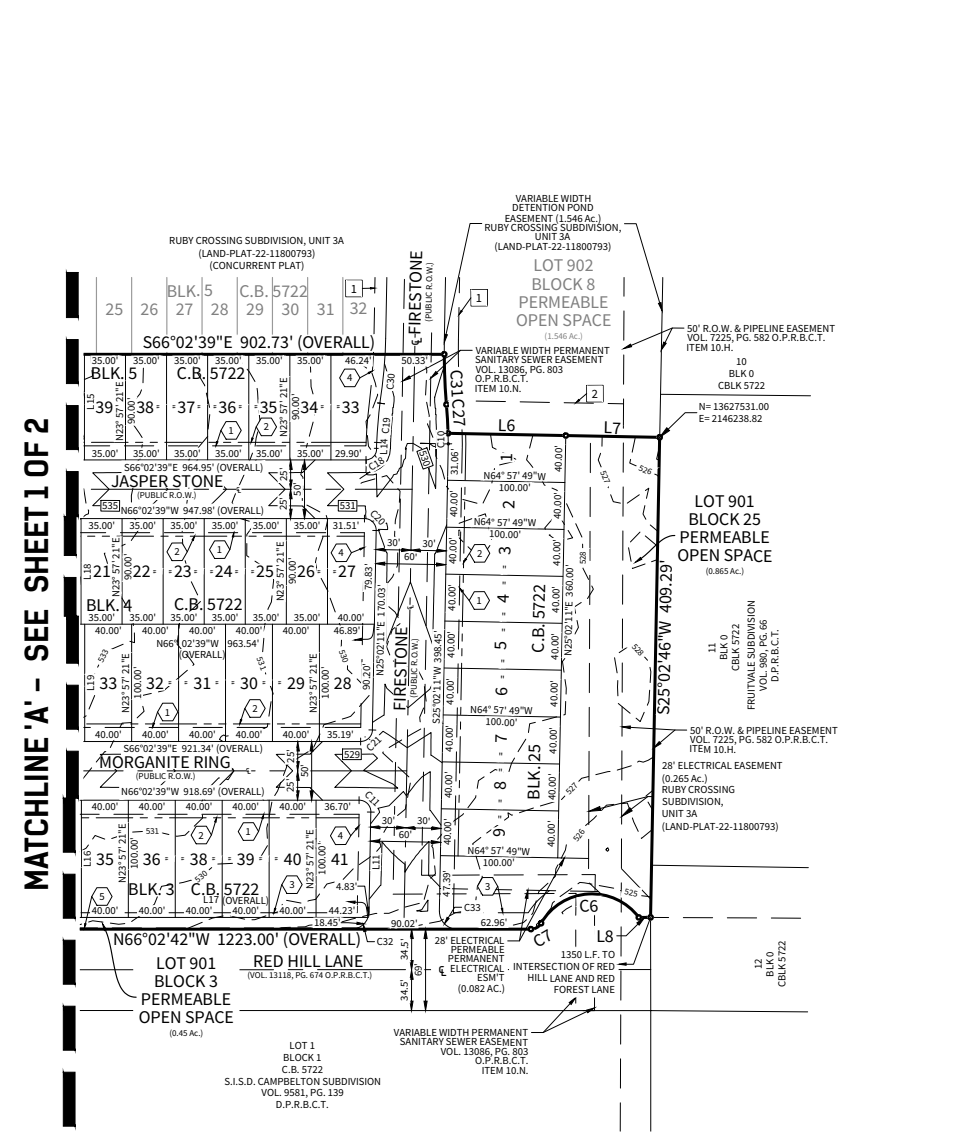
SETBACK: (IBS26 - 41.)

THE SETBACKS ON THIS PLAT ARE IMPOSED BY THE PROPERTY OWNER OR BEXAR COUNTY AND ARE NOT SUBJECT TO ENFORCEMENT BY THE CITY OF SAN ANTONIO.

RESIDENTIAL FINISHED FLOOR (IBS26 - 8.)

RESIDENTIAL FINISHED FLOOR ELEVATIONS MUST BE A MINIMUM OF EIGHT(8) INCHES ABOVE FINAL ADJACENT GRADE FLOODPLAIN VERIFICATION: (IBS26 - 6.)

NO PORTION OF THE FEMA 1% ANNUAL CHANCE (100-YEAR) FLOODPLAIN EXISTS WITHIN THIS PLAT AS VERIFIED BY FEMA MAP PANEL: 48029C0730F, EFFECTIVE SEPTEMBER 29, 2010. FLOODPLAIN INFORMATION IS SUBJECT TO CHANGE AS A RESULT OF FUTURE FEMA MAP REVISIONS AND/OR AMENDMENTS.



PLAT NUMBER- 22-11800789

SUBDIVISION PLAT
ESTABLISHING
RUBY CROSSING SUBDIVISION, UNIT 3B

BEING 16.339 ACRES OF LAND LOCATED IN THE MANUEL DE LUNA SURVEY 3, ABSTRACT 8, COUNTY BLOCK 4167, BEXAR COUNTY, TEXAS AND BEING OUT OF A CALLED 35.981 ACRES OF LAND RECORDED IN DOCUMENT 20200163237 OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS AND BEING OUT OF A CALLED 33.24 ACRES OF LAND RECORDED IN DOCUMENT 20210351809 OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS

SCALE: 1"=100'

M.W. CUDE ENGINEERS, L.L.C.
4122 POND HILL RD. • S-101
SAN ANTONIO, TEXAS 78231
T:210.681.2951 • F:210.523.7112
WWW.CUDEENGINEERS.COM
TBPE FIRM #455 • TBPLS #10048500
[MWC: JEFFREY MCKINNIE, P.E.]
PRJ. NO.: 02122.206

STATE OF TEXAS
COUNTY OF BEXAR

THE OWNER OF THE LAND SHOWN ON THIS PLAT, IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, DEDICATES TO THE USE OF THE PUBLIC, EXCEPT AREAS IDENTIFIED AS PRIVATE OR PART OF AN ENCLAVE OR PLANNED UNIT DEVELOPMENT, FOREVER ALL STREETS, ALLEYS, PARKS, WATERCOURSES, DRAINS, EASEMENTS AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSE AND CONSIDERATION THEREIN EXPRESSED.

OWNER/ DEVELOPER
CENTAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.
A TEXAS LIMITED PARTNERSHIP
100 NE LOOP 410, SUITE 1155
SAN ANTONIO, TEXAS 78216
AUTHORIZED AGENT: RICHARD MOTT, P.E.
PHONE: (210) 403-6200

BY: U.S. HOME L.L.C., A DELAWARE LIMITED LIABILITY COMPANY (AS SUCCESSOR-IN-INTEREST) BY CONVERSION FROM U.S. HOME CORPORATION, A DELAWARE CORPORATION), ITS GENERAL PARTNER

STATE OF TEXAS
COUNTY OF BEXAR

BEFORE ME, THE UNDERSIGNED AUTHORITY ON THIS DAY PERSONALLY APPEARED _____, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, A.D. _____

NOTARY PUBLIC, BEXAR COUNTY, TEXAS

CERTIFICATE OF APPROVAL

THE UNDERSIGNED, COUNTY JUDGE OF BEXAR COUNTY, TEXAS, AND PRESIDING OFFICER OF THE COMMISSIONERS COURT OF BEXAR COUNTY, DOES HEREBY CERTIFY THAT THE ATTACHED PLAT WAS DULY FILED WITH THE COMMISSIONERS COURT OF BEXAR COUNTY, TEXAS, AND THAT AFTER EXAMINATION IT APPEARED THAT SAID PLAT IS IN CONFORMITY WITH THE STATUTES, RULES AND REGULATIONS GOVERNING SAME, AND THIS PLAT WAS APPROVED BY THE SAID COMMISSIONERS COURT.

DATED THIS _____ DAY OF _____, A.D. _____

COUNTY JUDGE, BEXAR COUNTY, TEXAS

COUNTY CLERK, BEXAR COUNTY, TEXAS

THIS PLAT OF RUBY CROSSING SUBDIVISION, UNIT 3B HAS BEEN SUBMITTED TO AND CONSIDERED BY THE PLANNING COMMISSION OF THE CITY OF SAN ANTONIO, TEXAS, IS HEREBY APPROVED BY SUCH COMMISSION IN ACCORDANCE WITH STATE OR LOCAL LAWS AND REGULATIONS, AND/OR WHERE ADMINISTRATIVE EXCEPTION(S) AND/OR VARIANCE(S) HAVE BEEN GRANTED.

DATED THIS _____ DAY OF _____, A.D. _____

BY: _____ CHAIRMAN

BY: _____ SECRETARY

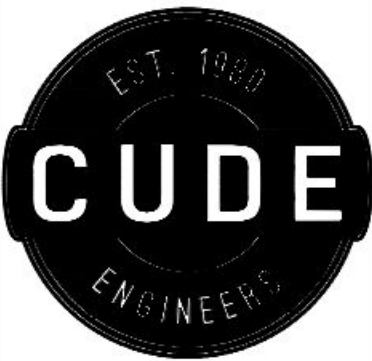
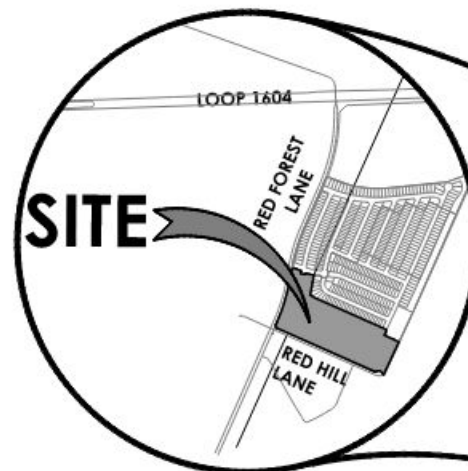
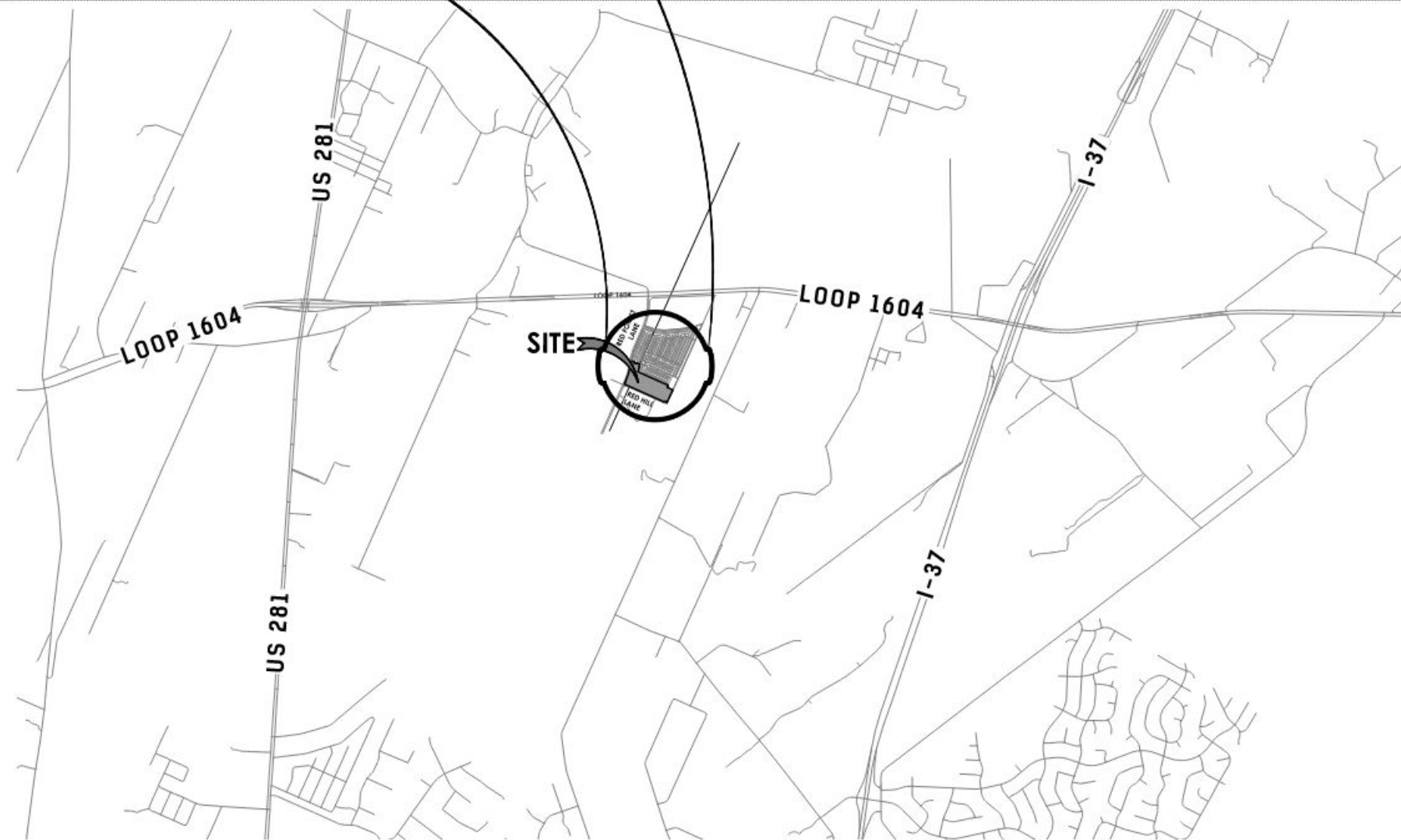


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* DENOTES STANDARD DETAILS ADOPTED FOR USE ON THIS PROJECT



LOCATION MAP



VICINITY MAP

SEWER: SOUTH SEWER/SHED - SDS BIDS W.B.C.

Developer's Name	LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.				
Developer's Address	100 NE LOOP 410, SUITE 1105				
City	SAN ANTONIO	State	TEXAS	Zip	78216
Phone #	(210) 403-6282	Fax #			
SAWS Block Map #	176-502	Total EDU's	132.5	Total Acreage	16.339
Total Linear Footage of Pipe	2,445 L.F. OF 8" SS - SDR 26	Plat No.	22-11800789		
Number of Lots	331	SAWS Job No.	KX-XXXX		

SAWS PRESSURE ZONE B30

Developer's Name	LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.				
Developer's Address	100 NE LOOP 410, SUITE 1105				
City	SAN ANTONIO	State	TEXAS	Zip	78216
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OWNER / DEVELOPER
LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.
CONTACT PERSON: RICHARD MOTT
100 NE LOOP 410, SUITE 1155
SAN ANTONIO, TX 78216
TEL: (210) 403-6200

4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TEXAS 78231
P:(210) 681.2951 F: (210) 523.7112

DRAWN BY
N.N.R./M.A.S.

DATE
2023-07-20

PLAT NO.
22-11800789

CHECKED BY
KYLE HUDEK, P.E.

PROJECT NO.
02122.206

CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500



I HAVE REVIEWED THIS PLAN SET
FOR QUALITY ASSURANCE AND
QUALITY CONTROL PURPOSES.



THIS PLAN SET HAS BEEN PREPARED,
DESIGNED AND REVIEWED UNDER MY
DIRECT SUPERVISION.

RUBY CROSSING

UNIT 3B

CONSTRUCTION PLANS



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2953 F: (210) 523.7112

RUBY CROSSING UNIT 3B

CITY OF SAN ANTONIO GENERAL NOTES

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.
2. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.
3. THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED.
6. IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
7. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
8. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.
9. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION:
SAN ANTONIO WATER SYSTEM (SAWS) 233-2010
BEXAR METROPOLITAN WATER DISTRICT (BEXAR MET) 354-6538 / 357-5744
COSA DRAINAGE 207-8048
COSA SIGNAL OPERATIONS 207-7720 / 207-7765
TEXAS STATE WIDE ONE CALL LOCATOR 1-800-344-8377
- CITY PUBLIC SERVICE ENERGY
- TIME WARNER
- AT&T
- MCI
11. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.
12. ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.
13. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
14. THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND /OR TRACKED CONSTRUCTION MATERIALS AND /OR DEBRIS.
15. IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, CONTACT THE CITY INSPECTOR, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 207-7306 OR 207-3327 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY.
IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT.
IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.
16. IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS, C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND /OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATION SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND /OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A. APPROVAL.
THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE C.O.S.A. INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM THE CITY.
17. CONTRACTOR IS TO INCLUDE A MAILBOX POST BLOCKOUT FOR VACANT LOTS AND ALL RESIDENCES WHICH DO NOT HAVE MAILBOXES AT THE CURB. BLOCKOUTS ARE PROVIDED FOR FUTURE USE BY THE POST OFFICE.

18. CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA FACILITIES. THE CONTRACTOR MUST CONTACT VIA FOURTEEN DAYS PRIOR, FOR THE REMOVAL OF BENCHES, STOP POLES OR ANY OTHER VIA FACILITIES THAT MAY BE PRESENT. PLEASE PROVIDE THIRTY DAYS PRIOR NOTICE FOR SHELTER REMOVAL (TELEPHONE NOS: (210) 362-2155 OR (210) 362-2096). THE CONTRACTOR OR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CONTRACTOR IS REQUIRED TO REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES IF ADJACENT TO WORK AREA.

TREE PROTECTION AND PRESERVATION GENERAL NOTES

1. NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.
2. TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. DURING CONSTRUCTION ACTIVITY, AT LEAST A SIX-INCH LAYER OF COARSE MULCH SHALL BE PLACED AND MAINTAINED OVER THE ROOT PROTECTION ZONE (NO SEPARATE PAY ITEM).
3. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.
4. ROOTS WILL BE CUT WITH A ROCK SAW OR BY HAND, NOT BY AN EXCAVATOR OR OTHER ROAD CONSTRUCTION EQUIPMENT.
5. ALL CURB AND SIDEWALK WORK SHALL USE ALTERNATIVE CONSTRUCTION METHODS TO MINIMIZE EXTENSIVE ROOT DAMAGE TO TREES (REFER TO DETAILS).
6. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH, OR WET BURLAP.
7. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. ROOT PROTECTION ZONE IS 1 FOOT OF RADIUS PER INCH OF TREE'S DIAMETER. A 10-INCH DIAMETER TREE WOULD HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. OAK WOUNDS SHALL BE PAINTED OVER WITHIN 30 MINUTES TO PREVENT OAK WILT.
8. SAPLINGS, SHRUBS OR BUSHES TO BE CLEARED FROM THE PROTECTED ROOT ZONE AREA OF A LARGE TREE SHALL BE REMOVED BY HAND AS DESIGNATED BY THE INSPECTOR.
9. NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREES.
10. TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE CITY STREET OR ALLEY RIGHT-OF-WAY OR PERMANENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES SHALL BE PROPERLY PRUNED FOLLOWING THE ANSI A-300 STANDARDS FOR PRUNING. ALL TREE PRUNING SHALL BE COMPLETED BY A CITY OF SAN ANTONIO TREE MAINTENANCE LICENSED CONTRACTOR (ARTICLE 21-171, CITY CODE) ONLY AFTER APPROVAL FROM THE CAPITAL PROJECTS MANAGEMENT THROUGH THE INSPECTOR.
11. NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.
12. ALL DEBRIS GENERATED BY THE PRUNING AND TRIMMING OF THE TREES AND /OR BUSHES SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY (NO SEPARATE PAY ITEM).
13. TREES MUST BE MAINTAINED IN GOOD HEALTH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE, BUT NOT LIMITED TO: WATERING THE ROOT PROTECTION ZONE, WASHING FOLIAGE, FERTILIZATION, PRUNING, ADDITIONAL MULCH APPLICATIONS AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT.
14. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST. (207-8053)
15. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.
16. TREE PLANTING FOR MITIGATION OR ENHANCEMENT: ALL PLANTED TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. THIS INCLUDES IRRIGATION, FERTILIZING, PRUNING AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT. TREES THAT DIE WITHIN TWELVE (12) MONTHS SHALL BE REPLACED WITH A TREE OF EQUAL SIZE AND SPECIES.

ACCESSIBILITY REQUIREMENTS

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES TO LOCAL RESIDENCES AND BUSINESSES.
2. WHEN THE WORK REQUIRES THE EXCAVATION OF THE STREET AND THE REMOVAL OF THE EXISTING DRIVEWAY APPROACHES AND SIDEWALKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ALL-WEATHER ACCESS TO THE BUSINESSES AND RESIDENCES. THE TEMPORARY DRIVEWAY APPROACHES SHALL BE CONSTRUCTED WITH FLEXIBLE BASE OR GRAVEL MATERIAL AT NO SEPARATE COST TO THE CITY.
3. PRIOR TO INITIATING THE CONSTRUCTION OF NEW DRIVEWAY APPROACHES, THE CONTRACTOR SHALL GIVE ADVANCE WARNING IN PERSON, OR IN WRITING, OF AT LEAST 48 HOURS TO EACH RESIDENCE THAT WILL BE IMMEDIATELY AFFECTED, SO THAT ALTERNATE PLANS MAY BE MADE BY THE RESIDENTS.
4. FOR BUSINESSES WITH MORE THAN ONE DRIVEWAY, AT LEAST ONE DRIVEWAY SHALL REMAIN OPEN WHILE THE OTHER NEW DRIVEWAY APPROACHES ARE CONSTRUCTED. FOR BUSINESSES WITH ONLY ONE DRIVEWAY, THE NEW DRIVEWAY APPROACH SHALL BE CONSTRUCTED IN HALF WIDTHS, UNLESS A TEMPORARY ASPHALT DRIVEWAY IS FIRST INSTALLED AT NO SEPARATE COST TO THE CITY.

NOTE TO CONSULTANT

DO NOT MODIFY, DELETE OR ADD TO THE CITY OF SAN ANTONIO'S GENERAL NOTES STANDARD SHEET. IF MODIFICATIONS ARE REQUIRED, FOLLOW THE INSTRUCTIONS ON THE "SUPPLEMENTAL GENERAL NOTES" SHEET.

DECEMBER 2009

CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CITY OF SAN ANTONIO
GENERAL NOTES

DATE: _____
PROJECT NO.: _____
DRAWN BY: _____ DESIGNED BY: _____ CHECKED BY: _____ SHEET NO.: _____ OF _____

DATE

07/20/2023

PROJECT NO.

02122.206

DRAWN BY

MAS/NNR/KMH

CHECKED BY

KMH

REVISIONS

- 1.
- 2.
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- 7.
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CUDE ENGINEERS

TSPE No. 455

TSPLS No. 10048500

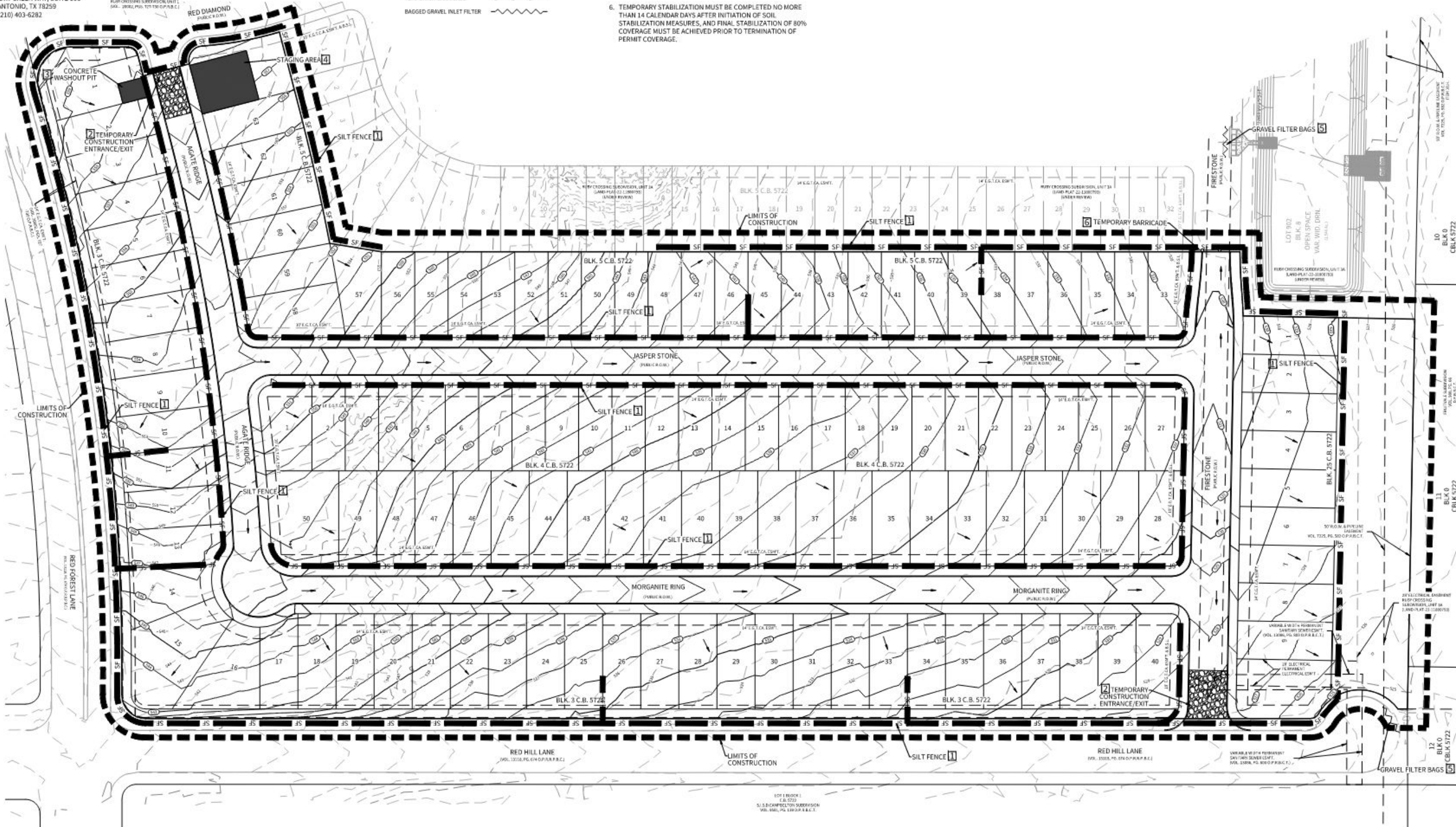
PLAT NO.

22-11800789

C0.00



-
- TYPICAL LOT SITE PLAN**
N.T.S.



REPRODUCTION OF THE ORIGINAL SIGNED AND SEALED PLAN AND/OR ELECTRONIC MEDIA MAY HAVE BEEN INADVERTENTLY ALTERED. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE SCALE OF THE DOCUMENT AND CONTACTING CDE ENGINEERS TO VERIFY DISCREPANCIES PRIOR TO CONSTRUCTION.



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112

RUBY CROSSING UNIT 3B

STORMWATER POLLUTION PREVENTION PLAN STANDARD DETAILS

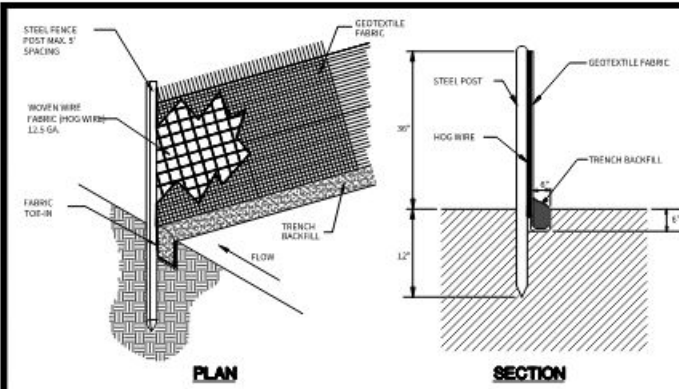
DATE
08/02/2023
PROJECT NO.
02122.206
DRAWN BY
MAS/NNR/KMH
CHECKED BY
KMH

REVISIONS
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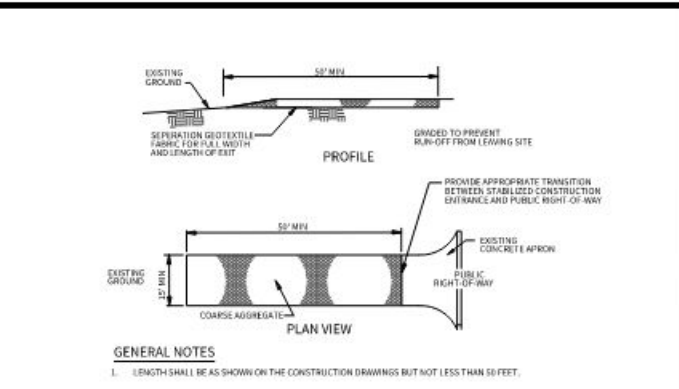
CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

PLAT NO.
22-11800789

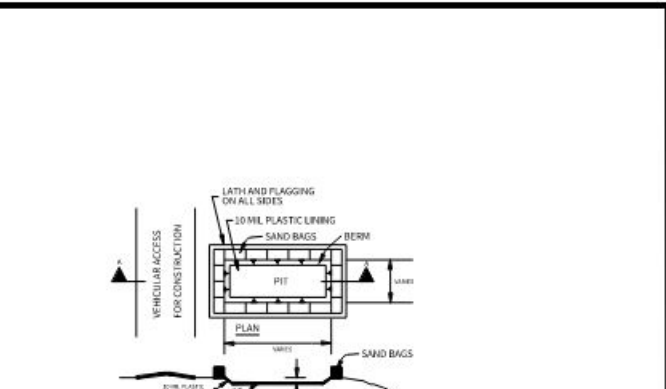
C1.D1



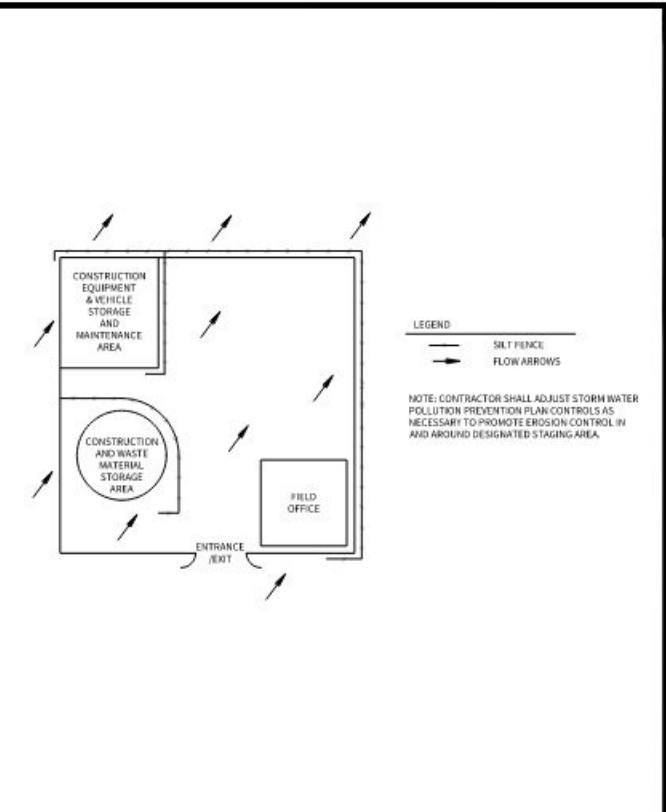
- NOTES:**
- SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NON WOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 150 LBS/2, ULTRAVIOLET STABILITY EXCEEDING 10%, AND MINIMUM APPARENT OPENING SIZE OF 0.15 INCHES.
 - FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST A FEET LONG WITH THE 4" X 4" WIDE CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LBS/2, AND MINIMUM HARDNESS EXCEEDING 140.
 - WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 1" X 4" WELDED WIRE, 12.5 GAUGE MINIMUM.
 - STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A 45 DEGREE ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1 FOOT DEEP AND SPACED NOT MORE THAN 5 FEET ON CENTER.
 - LAY OUT FENCING DOWN SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.
 - THE TOP OF THE SILT FENCE SHOULD BE TRENCHED WITH A SPAD OR MECHANICAL TRENCHER, SO THAT THE DOWN SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED (E.G., PAVEMENT OR ROCK OUTCROPS), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
 - THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 8 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
 - SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
 - SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPED STORM FLOW OR DRAINAGE.
 - REMOVE SEDIMENT WHEN BUILDUP REACHES 4 INCHES, OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE OLD FENCE.
 - REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
 - REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DRAIN MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.



- GENERAL NOTES:**
- LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS BUT NOT LESS THAN 50 FEET.
 - THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
 - WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
 - STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A TRUCK WASHING AREA WHEN SHOWN ON THE CONSTRUCTION DRAWING. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE TRUCK WASHING AREA.
 - STONE MATERIAL SHALL CONSIST OF 3 TO 5 INCH OPEN GRADED ROCK AND SHALL BE PLACED IN A LAYER OF AT LEAST 8 INCHES THICKNESS.
- NOTES:**
- THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION.
 - THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
 - THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROPRIATE RATING OF 60/20/2, A MULLEN BURST RATING OF 140 LBS/2, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
 - AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
 - THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIST ROADWAY, WHICHEVER IS GREATER.
 - THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
 - PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
 - PLACE STONE TO DIMENSIONS AND GRADE SHOWN. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
 - THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 - ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
 - WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 - WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 - ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE.



- NOTES:**
- DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
 - WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
 - WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO FLOODING FROM STORM WATER RUNOFF.



NOTE: CONTRACTOR SHALL ADJUST STORM WATER POLLUTION PREVENTION PLAN CONTROLS AS NECESSARY TO PROMOTE EROSION CONTROL IN AND AROUND DESIGNATED STAGING AREA.

1 SILT FENCE DETAIL

SCALE: NONE

2 TEMPORARY CONSTRUCTION ENTRANCE / EXIT

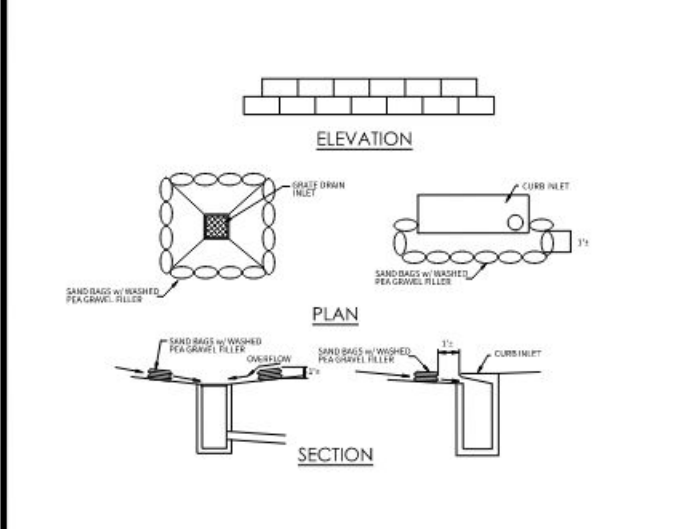
SCALE: NONE

3 CONCRETE TRUCK WASHOUT PIT

SCALE: NONE

4 TYP. CONSTRUCTION STAGING AREA

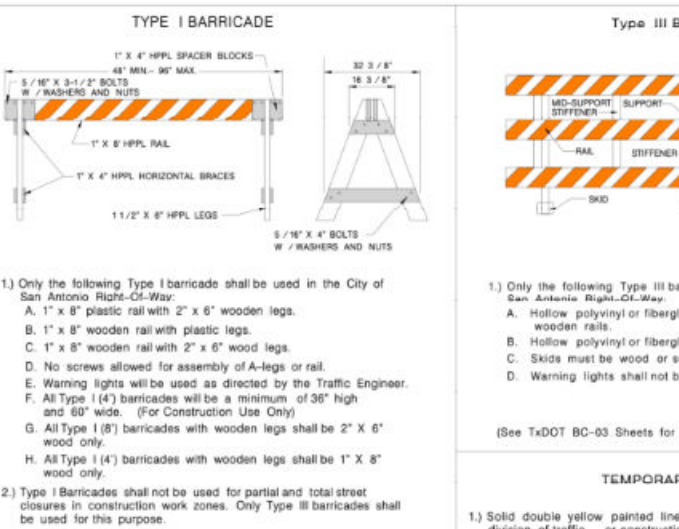
SCALE: NONE



- BAGGED GRAVEL INLET FILTER NOTES**
- THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD 2, MULLEN BURST STRENGTH EXCEEDING 100 LBS AND ULTRAVIOLET STABILITY EXCEEDING 10 PERCENT.
 - THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6 INCHES.
 - THE GRAVEL BAGS SHOULD BE FILLED WITH #40 GRAVEL.
 - WHEN A GRAVEL BAG IS FILLED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.
 - THE GRAVEL BAGS SHOULD BE REPLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY BUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
 - INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 - CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
 - REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
 - STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REPAIRING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

5 BAGGED GRAVEL INLET FILTER

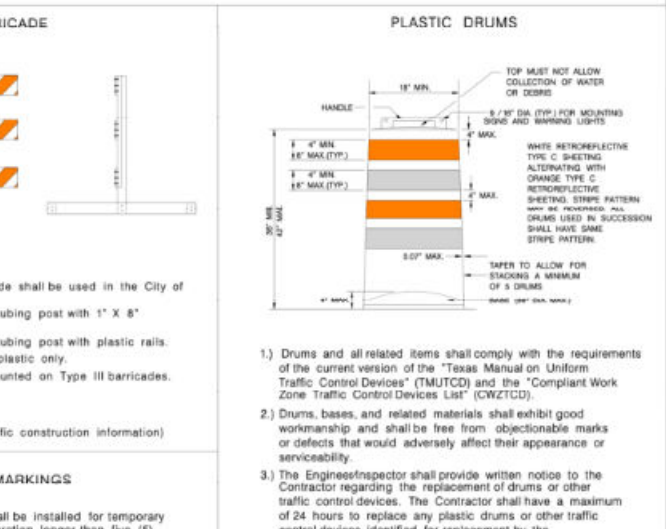
SCALE: NONE



- TYPE I BARRICADE**
- Only the following Type I barricade shall be used in the City of San Antonio Right-Of-Way:
 - 1' x 8' plastic rail with 2' x 6' wooden legs.
 - 1' x 8' wooden rail with plastic legs.
 - 1' x 8' wooden rail with 2' x 6' wood legs.
 - No screws allowed for assembly of A-legs or rail.
 - Warning lights will be used as directed by the Traffic Engineer.
 - All Type I (4') barricades will be a minimum of 36" high and 60" wide. (For Construction Use Only)
 - All Type I (8') barricades with wooden legs shall be 2' x 6' wood only.
 - All Type I (4') barricades with wooden legs shall be 1' x 8' wood only.
 - Type I Barricades shall not be used for partial and total street closures in construction work zones. Only Type III barricades shall be used for this purpose.
 - Warning lights shall not be mounted on Type I barricades.
- (See TxDOT BC-03 Sheets for specific construction information)
- CONES**
-
- Base for 28" high cones must weigh at least 9.0 lbs.
 - Night time cones must have reflective collars.
- (See TxDOT BC-03 Sheets for specific construction information)

6 TEMPORARY BARRICADES

SCALE: NONE



- TYPE III BARRICADE**
- Only the following Type III barricade shall be used in the City of San Antonio Right-Of-Way:
 - Hollow polyvinyl or fiberglass tubing post with 1' x 8' wooden rails.
 - Hollow polyvinyl or fiberglass tubing post with plastic rails.
 - Skids must be wood or solid plastic only.
 - Warning lights shall not be mounted on Type III barricades.
- (See TxDOT BC-03 Sheets for specific construction information)
- TEMPORARY MARKINGS**
- Solid double yellow painted lines shall be installed for temporary division of traffic or construction duration longer than five (5) days, with repainting to occur once monthly or at the discretion of the Traffic Engineer. (All cost of upkeep will be at the contractor's expense.)
 - Solid double yellow tabs, or WP panels shall be installed for temporary division of traffic for construction duration less than five (5) days, with re-tapping to occur at the discretion of the Traffic Engineer. NAILS SHALL NOT BE USED TO FIX TABS TO CEMENT OR BASE (All cost of upkeep will be at the contractor's expense.)
- (See TxDOT BC-03 Sheets for specific construction information)
- TEMPORARY CONCRETE BARRIER**
- All concrete barriers placed on City R.O.W. shall be low profile.
 - No high profile barriers will be allowed.
 - Reflectors will be required on each concrete barrier.
- (See TxDOT BC-03 Sheets for specific construction information)



- PLASTIC DRUMS**
- Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
 - Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
 - The Engineer/Inspector shall provide written notice to the Contractor regarding the replacement of drums or other traffic control devices. The Contractor shall have a maximum of 24 hours to replace any plastic drums or other traffic control devices identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.
 - Each drum must have a 40 lb rubber or plastic snap on.
 - No signs larger than 18" x 24" will be allowed to be mounted on plastic drums.
 - No warning lights will be allowed to be mounted on plastic barrels.
 - In lieu of a warning light, a yellow reflector will be acceptable.
- (See TxDOT BC-03 Sheets for specific construction information)
- CITY OF SAN ANTONIO**
DEPARTMENT OF PUBLIC WORKS
BARRICADE AND CONSTRUCTION STANDARDS
SHEET 2 OF 4
JUNE 2005



DEVELOPER:
LENNAR HOMES
CONTACT PERSON: RICHARD MOTT
1922 DRY CREEK WAY, SUITE 101
SAN ANTONIO, TX 78259
TEL: (210) 403-6282

GENERAL SPECIFICATIONS FOR SITE PREPARATION

1. GENERAL DESCRIPTION

THIS ITEM SHALL CONSIST OF ALL CLEARING AND GRUBBING, DEMOLITION, PREPARATION OF LAND TO BE FILLED, FILLING OF THE LAND, SPREADING, COMPACTION TESTING AND INSPECTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS.

ALL LOT GRADING MUST MEET REQUIREMENTS OF FHWA HANDBOOK 414.3, SPECIFICATIONS FOR LAND DEVELOPMENT ON CONTROLLED EARTHWORK, DATASHEET 795. HUB TSG REQUIREMENTS FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUB TSG COMPACTION TESTING. IN ADDITION, ENGINEERS MUST PROVIDE VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUB TSG.

2. CLEARING THE AREA TO BE FILLED

ALL TIMBER, LOGS, TREES, BRUSH AND RUBBISH SHALL BE REMOVED FROM THE SITE.

3. SCARIFYING THE AREA TO BE FILLED

ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED, AND THE SURFACE SHALL THEN BE DISKED OR SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"). ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE LEVELED PRIOR TO FIELD DENSITY TESTING.

4. COMPACTION OF THE AREA TO BE FILLED

FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLOS. THE AREA SHALL BE BROUGHT TO THE ADEQUATE MOISTURE CONTENT AND COMPACTIONED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT TxDOT TEX-113-C COMPACTION PROCEDURE.

5. FILL MATERIALS

THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DETRIMENTAL SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH.

6. DEPTH AND MIXING OF FILL LAYERS

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LAYER, UNIFORM LAYERS WHICH, WHEN COMPACTIONED, SHALL HAVE A DENSITY CONFORMING TO THAT STIPULATED ABOVE. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTIONED LAYER THICKNESS MAY VARY DEPENDING ON THE COMPACTION EQUIPMENT OF DEMONSTRATED CAPABILITY. THE MAXIMUM LAYER DEPTH FOR ANY MATERIAL SHALL NOT EXCEED TWELVE INCHES (12"). FOR TESTING REQUIREMENTS OF FILL MATERIAL, SEE DENSITY TESTING.

7. ROCK

WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO REST AND ALL Voids MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTIONED. NO LARGE ROCKS WILL BE PERMITTED TO WITHIN EIGHTEEN INCHES (18") OF THE FINISHED SURFACE.

8. COMPACTION OF FILL LAYER

COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTIONING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES).

9. COMPACTION OF SLOPES

THE FACES OF FILL SLOPES SHALL BE COMPACTIONED. COMPACTION OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TO EXCEED FOR PLANTING ON THE SLOPES. COMPACTION OF THE SLOPE FACES MAY BE DONE PROGRESSIVELY IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN (L) HEIGHT AS THIS FILL PROGRESSES OR AFTER THE FILL HAS BEEN BROUGHT TO ITS TOTAL HEIGHT.

10. MOISTURE CONTENT

THE FILL MATERIAL SHALL BE COMPACTIONED AT THE APPROPRIATE MOISTURE CONTENT SPECIFIED FOR THE SOILS BEING USED. APPROPRIATE MOISTURE CONTENT IS DEFINED, TYPICALLY, AS OPTIMUM MOISTURE CONTENT; HOWEVER, FOR EXPANSIVE SOILS IT MAY BE GREATER THAN OPTIMUM MOISTURE CONTENT, AND OTHER MOISTURE CONTENTS MAY BE NECESSARY TO PRODUCE THE DESIRED RESULTS WITH CERTAIN SOILS.

11. DENSITY TESTS

FIELD DENSITY TESTS SHALL BE PERFORMED ON LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE EIGHTEEN INCHES (18"). ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR TO CONDUCT TESTS SHALL BE AT LEAST THE DAY BEFORE. THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION (LOT AND BLOCK), THE LIFT OR HEIGHT OF FILL, AND APPROPRIATE DESIRED TIME OF TESTING. WHEN THESE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL ON PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR UNLESS THE CONTRACTOR CAN SHOW EVIDENCE THAT CIRCUMSTANCES BEYOND HIS CONTROL REQUIRED THE RETESTING. GENERALLY, THE SPECIFIC TESTING WILL BE AS FOLLOWS AND CONDUCTED BY GEOTECHNICAL ENGINEER.

1. THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
2. THE FIRST LIFT OF COMPACTIONED FILL (GENERALLY 6" TO 12") SHALL BE TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. ANY AREAS SUPPORTING THE PROPOSED STRUCTURES REQUIRING FILL SHALL BE TESTED FOR DENSITY COMPLIANCE.
3. FILL SHALL BE TESTED AT MINIMUM OF EACH EIGHTEEN INCHES (18") OF FILL.
4. TEST RESULTS WILL BE PROVIDED BY THE FIELD TECHNICIAN TO THE CONTRACTOR WHEN POSSIBLE; HOWEVER, ALL TEST RESULTS ARE TO BE REVIEWED BY THE GEOTECHNICAL ENGINEER FOR COMPLIANCE. THE CONTRACTOR WILL NOTIFY THE CONTRACTOR OF ALL THE TEST RESULTS.

12. CUT/FILL LOTS

AREAS INVOLVING CUT ON ONE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6" AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. A MINIMUM OF TWO (2) FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE OF DETERMINING UNIFORMITY OF THE AREA SUPPORTING THE PROPOSED STRUCTURES.

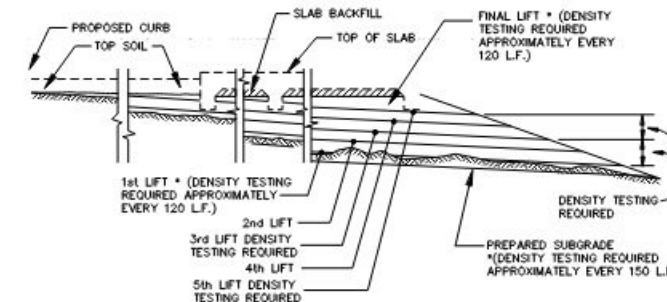
SCALE: 1"=50'

LEGEND

PROPOSED CONTOUR	---
EXISTING CONTOUR	- - - -
PROPOSED ELEVATION	X
EXISTING ELEVATION	X
GRADE BREAK	---
BUILDING SETBACK	---
SHALE	---

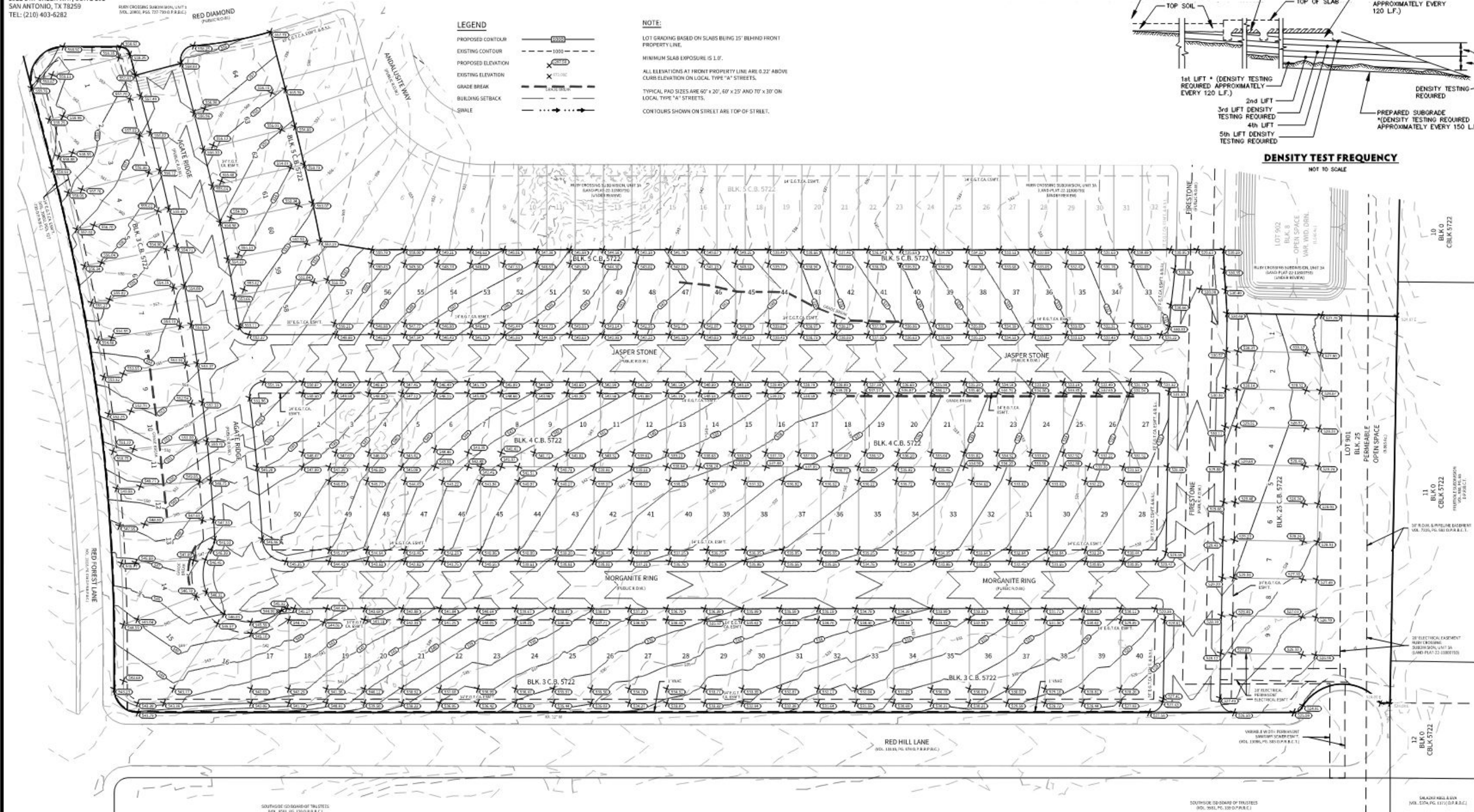
NOTE:

LOT GRADING BASED ON SLABS BEING 15' BEHIND FRONT PROPERTY LINE.
MINIMUM SLAB EXPOSURE IS 1.0'.
ALL ELEVATIONS AT FRONT PROPERTY LINE ARE 0.22' ABOVE CURB ELEVATION ON LOCAL TYPE "A" STREETS.
TYPICAL PAD SIZES ARE 60' x 20', 60' x 25' AND 70' x 30' ON LOCAL TYPE "A" STREETS.
CONTOURS SHOWN ON STREET ARE TOP OF STREET.



DENSITY TEST FREQUENCY

NOT TO SCALE



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112

RUBY CROSSING UNIT 3B

SITE GRADING PLAN

DATE
07/20/2023

PROJECT NO.
02122.206

DRAWN BY
MAS/NNR/KMH

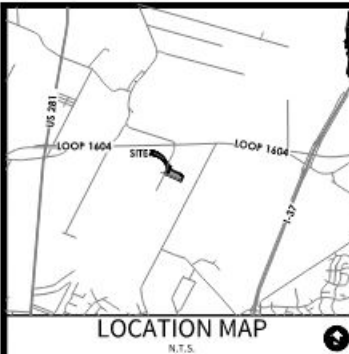
CHECKED BY
KMH

REVISIONS

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CUDE ENGINEERS
TBP# No. 455
TBP# No. 10048500

C2.00



DEVELOPER:
LENNAR HOMES
CONTACT PERSON: RICHARD MOTT
1922 DRY CREEK WAY, SUITE 101
SAN ANTONIO, TX 78259
TEL: (210) 403-6282

CAUTION!!!

THE CONTRACTOR SHALL BE AWARE THAT SANITARY SEWER AND GAS LINES EXIST WITHIN THE SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THESE UTILITIES LOCATIONS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THIS AREA AND BE RESPONSIBLE TO THESE UTILITIES LOCATIONS WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE.

TRENCH EXCAVATION SAFETY PROTECTION

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

NOTE:

THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.

SAN ANTONIO WATER SYSTEM
210-233-2010
COSA DRAINAGE
210-207-2800
CITY SIDEWALK AND TRENCHING DIVISION
210-821-3240
COSA TRAFFIC SIGNAL OPERATIONS
210-207-7765
TEXAS STATE WIDE ONE CALL LOCATOR
1-800-545-6005
CITY PUBLIC SERVICE
AT&T
SPECTRUM
VALERO ENERGY CO.

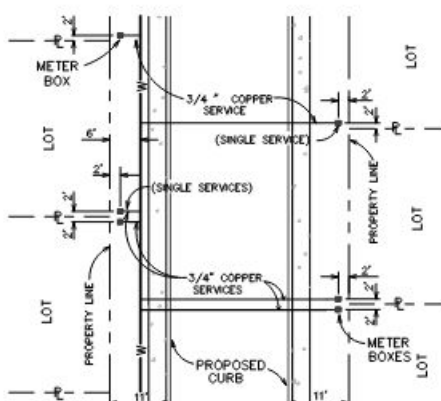
AT&T AND SPECTRUM CABLE LINES TO GO INTO JOINT TRENCH WITH C.P.S. ENERGY LOTS WITH CONFLICTING TRANSFORMER / SECONDARY ENCLOSURE ELECTRIC SERVICE AND WATER METER PLACED 5' FROM PROPERTY LINE WHERE THE CONFLICT OCCURS.

TYPICAL UTILITY CROSSINGS WILL HAVE 2'-6" SCH 80 PVC CONDUIT WITH SWEEPS, 2'-4" SCH 40 CONDUIT WITH SWEEPS, THE TOTAL AMOUNT OF CONDUIT TO BE USED WILL BE DETERMINED DURING CONSTRUCTION.

TYPICAL IRRIGATION CROSSING WILL HAVE 2'-4" SCH 40 PVC CONDUIT WITH SWEEPS,

* CONDUIT ONLY TO BE INSTALLED IF:

- 1.) STREET BASE AND DRAINAGE COMPLETION PRECEDES CPS UTILITY LINE INSTALLATION.
- 2.) INSTALLATION IS AUTHORIZED BY THE DEVELOPER.

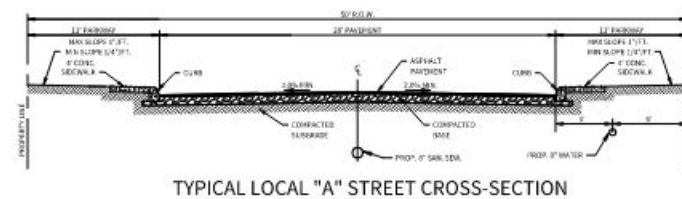


WATER METER BOX LOCATION
N.T.S.

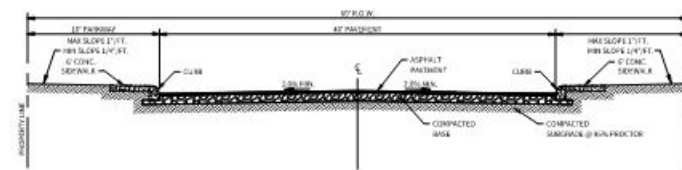
LEGEND

- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING STANDARD FIRE HYDRANT
- PROPOSED STANDARD FIRE HYDRANT
- EXISTING STANDARD GATE VALVE
- PROPOSED STANDARD GATE VALVE
- EXISTING PERMANENT BLOWOFF
- PROPOSED PERMANENT BLOWOFF
- PROPOSED LIGHT POLE
- ELECTRIC, GAS, TELEPHONE, & CABLE T.V. EASEMENT
- BUILDING SETBACK LINE
- UTILITY CONDUIT CROSSING
- IRRIGATION CONDUIT CROSSING

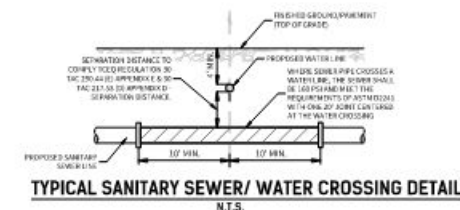
SCALE: 1"=50'



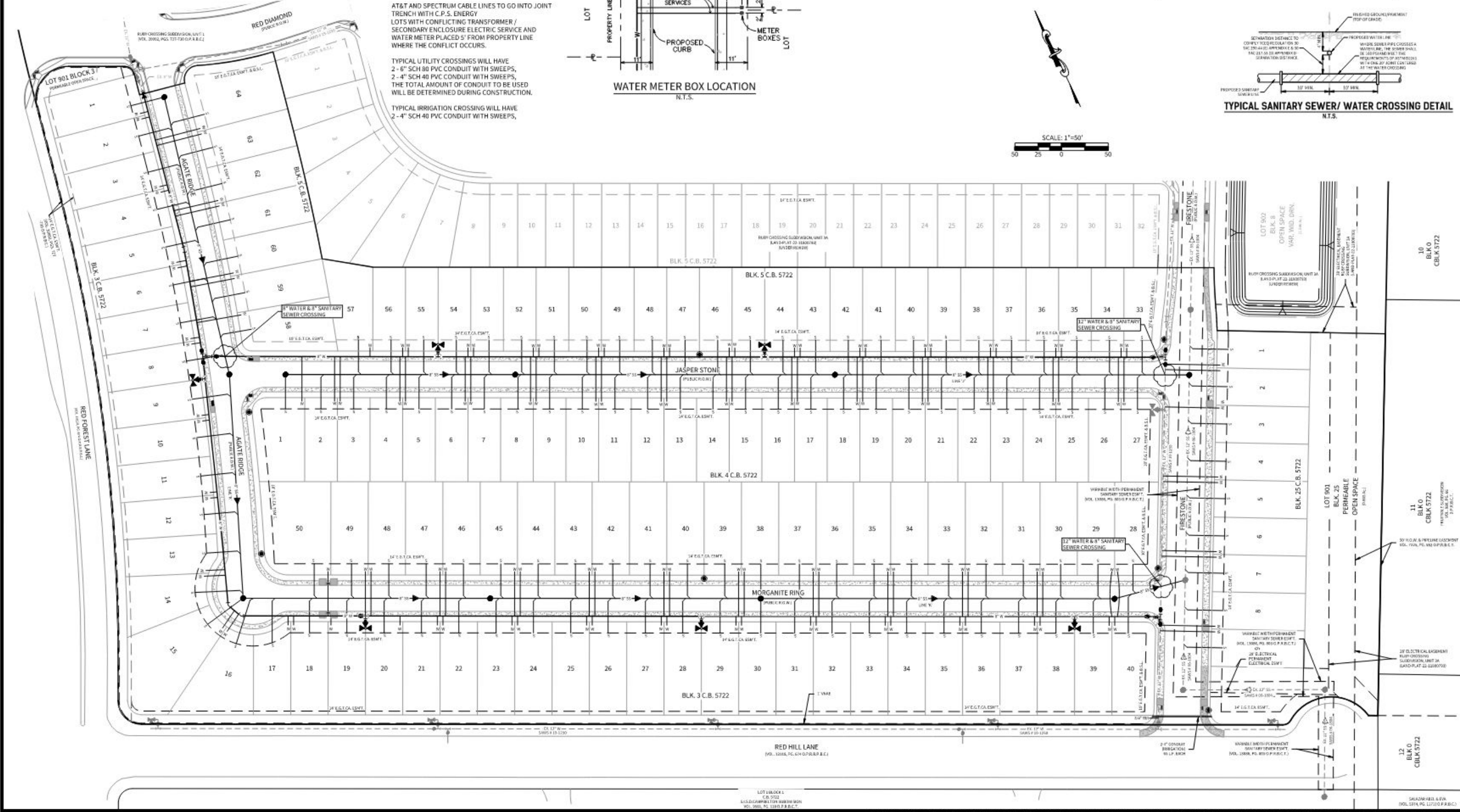
TYPICAL LOCAL "A" STREET CROSS-SECTION



TYPICAL LOCAL TYPE "B" STREET CROSS-SECTION



TYPICAL SANITARY SEWER / WATER CROSSING DETAIL
N.T.S.



RUBY CROSSING UNIT 3B

UTILITY PLAN

DATE
07/20/2023
PROJECT NO.
02122.206
DRAWN BY
MAS/NNR/KMH
CHECKED BY
KMH

REVISIONS

NO.	DESCRIPTION
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	

STATE OF TEXAS
KYLE M. HUEDEK
138755
REGISTERED PROFESSIONAL ENGINEER
07/20/2023
CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

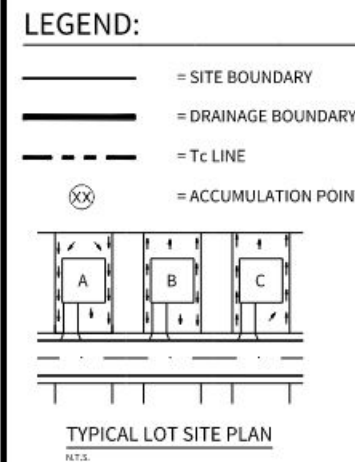
PLAT NO.
22-11800789

C3.00

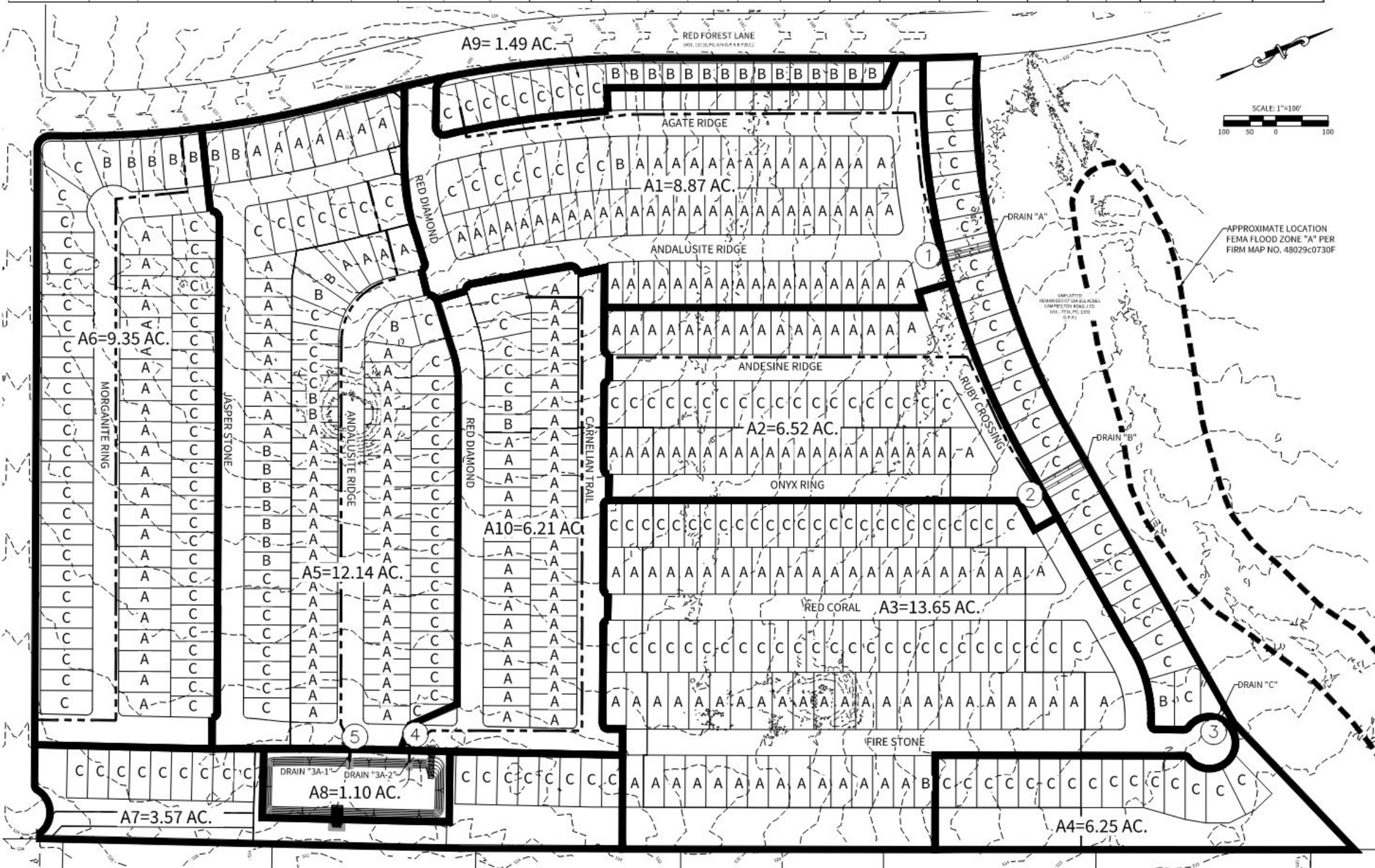


DEVELOPER:
LENNAR HOMES
CONTACT PERSON: RICHARD MOTT
1922 DRY CREEK WAY, SUITE 101
SAN ANTONIO, TX 78259
TEL: (210) 403-6282

CIVIL ENGINEER:
M.W. CUDE ENGINEERS, L.L.C.
CONTACT PERSON: JEFFREY A. MCKINNEY, P.E.
4122 POND HILL ROAD, SUITE 101
SAN ANTONIO, TX 78231
TEL: (210) 681-2951
FAX: (210) 523-7112



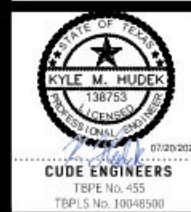
Project Name : Ruby Crossing - Ultimate Conditions Overall Calculation Summary for Time of Concentrations & Flow																	PA5									
HYDROLOGY				Sheet Flow Tc Computations						Shallow Conc. Tc Computations					Concentrated Tc Computations			Overall	INTENSITY			Q FLOW				
Drainage Shed	Shed Area (Ac.)	AREA OF ACCUMULATION (Ac.)	C	Length < 300'	Paved (Y or N)	Upstream Elev.	Downstream Elev	Slope	Time of Concentration	Length < 650'	Paved (Y or N)	Downstream Elev	Slope	Time of Concentration	Length	Velocity (fps)	Time of Concentration	Time of Concentra tion (min)	I5	I25	I100	Q5	Q25	Q100	Drainage She	
A-1	8.87	DRAIN A CAPTURED	0.67	100.00	N	558.00	557.00	1.00%	15.00						1087.00	6	3.02	18.02	4.73	6.52	8.16	28.11	38.75	48.49	A-1	
A-2	6.52	DRAIN B CAPTURED	0.67	100.00	N	546.40	543.20	3.20%	11.80						970.00	6	2.69	14.49	5.30	7.34	9.21	23.15	32.06	40.23	A-2	
A-3	13.65	DRAIN C CAPTURED	0.67	200.00	N	539.00	534.00	2.50%	16.00						1312.00	6	3.64	19.64	4.53	6.24	7.79	41.43	57.07	71.24	A-3	
A-4	6.25	CP RESIDENTIAL UNCAPTURED	0.67	100.00	N	519.00	517.40	1.60%	13.80						0.00			13.80	5.43	7.54	9.46	22.74	31.57	39.61	A-4	
A-5	12.14	BASIN CAPTURED - INLET 1	0.69	300.00	N	557.00	551.00	2.00%	20.00						857.43	6	5.00	25.00	4.01	5.51	6.86	33.59	46.16	57.46	A-5	
A-6	9.35	CP RESIDENTIAL UNCAPTURED	0.67	100.00	N	558.00	556.50	1.50%	14.00						1687.00	6	4.69	18.69	4.64	6.40	8.00	29.07	40.09	50.12	A-6	
A-7	3.57	CP UNDEV UNCAPTURED	0.67	100.00	N	558.00	556.00	2.00%	13.00									13.00	5.59	7.77	9.76	13.37	18.59	23.34	A-7	
A-8	1.10	DETENTION BASIN	0.45	13.50	N	930.00	925.50	33.33%	10.00									10.00	6.24	8.70	10.95	3.09	4.31	5.42	A-8	
A-9	1.49	CP UNDEV UNCAPTURED	0.45	40.00	N	558.00	556.00	5.00%	11.00									11.00	6.01	8.37	10.53	4.03	5.61	7.06	A-9	
A-10	6.21	BASIN CAPTURED - INLET 2	0.69	300.00	N	558.00	556.00	0.67%	20.00						979.00	6	2.72	22.72	4.21	5.78	7.21	18.04	24.77	30.89	A-10	
SUM	69.15																									



RUBY CROSSING UNIT 3B
ULTIMATE CONDITIONS
MASTER DRAINAGE & GRADING PLAN

DATE
07/20/2023
PROJECT NO.
02122.206
DRAWN BY
MAS/NNR/KMH
CHECKED BY
KMH

REVISIONS
1.
2.
3.
4.
5.
6.
7.
8.
9.



CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

PLAT NO.
22-11800789

C6.00

Appendix "C" Construction General Permit

A current link to the TPDES General Permit No. TXR150000 is included as required by Part III. F. j. of the CGP.

<https://www.tceq.texas.gov/downloads/permitting/stormwater/general/construction/2023-cgp-txr150000.pdf>

Appendix “D” NOI, NOC, NOT, Acknowledgement Letter, Permit Certificate, and CSN

This section includes documentation for the Owner only.

Owner’s Document included in this section:

- **Notice of Termination** - *Submitted on and printed from STEERS*
- **Notice(s) of Change** - *Submitted on and printed from STEERS*
- **Construction Site Notice – A copy of the Construction Site Notice must be posted near the entrance of the construction site and must be readily available for viewing by the general public; local, state, and federal authorities; and contain the following information:**
 - a) *the site-specific TPDES authorization number for the project if assigned;*
 - b) *the operator name, contact name, and contact phone number;*
 - c) *a brief description of the project; and*
 - d) *the location of the SWPPP*
- **Cover letter or printed email, acknowledging submittal of the Notices to the MS4.**
- **Permit Certification including TPDES Authorization Number** - *Received and printed from STEERS*
- **Acknowledgement Letter** - *Received and printed from STEERS*
- **Notice of Intent** - *The NOI shall be submitted using the State of Texas Environmental Electronic Report System (STEERS). (<https://www3.tceq.texas.gov/steers/>)*

General Contractor / Operator documentation will be kept in Appendix “G”

NOTE: Records will be retained for a minimum period of at least 3 years after the permit is terminated.



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: TXR1590CS

Primary Operator Name: Lennar Homes of Texas Land and Construciton, Ltd.

Contact Name and Phone Number:
Division Environmental Manager (210) 403-6226

Project Description: Ruby Crossing - Unit 3B

Physical

Location/Description: Intersection of Red Hill & Red Forest Lane, San Antonio, TX 78264

Land Development

Estimated Start Date: January 1, 2024

Projected End Date or Date Disturbed Soils Will Be Stabilized: January 1, 2025

Location of Stormwater Pollution Prevention Plan (SWP3): "In accordance with Section D.1 of the CGP, the SWP3 is kept electronically and can be made available upon request. To request access, scan the QR Code below:"





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: TXR1590CS

Primary Operator Name: Lennar Homes of Texas Land and Construcion, Ltd.

Contact Name and Phone Number:
Division Environmental Manager (210) 403-6226

Project Description: Ruby Crossing - Unit 3A

Physical

Location/Description: Intersection of Red Hill & Red Forest Lane, San Antonio, TX 78264

Land Development

Estimated Start Date: June 20, 2023

Projected End Date or Date Disturbed Soils Will Be Stabilized: June 30, 2025

Location of Stormwater Pollution Prevention Plan (SWP3): "In accordance with Section D.1 of the CGP, the SWP3 is kept electronically and can be made available upon request. To request access, scan the QR Code below:"





Ms Kyle Sykes <ksykes@emg-llc.net>

23.05.24_LH-SA_RubyCrossing_NOIR-MS4Notification

1 message

Ms Kyle Sykes <KSykes@emg-llc.net>

Tue, May 30, 2023 at 4:16 PM

To: Storm Water <swq@bexar.org>

Cc: Matt Martin <mmartin@emg-llc.net>, Ethan Schexnyder <eschexnyder@emg-llc.net>, Marcus Walters <marcus.walters@lennar.com>, Jana Kitts <janak@emg-llc.net>

Bcc: ksykes@emg-llc.net

Hello,

Attached is a TXR150000 Notification for the above referenced project. This email serves as a notification to the MS4 that a Small Construction Site Notice, Notice of Intent, Notice of Change, or a Notice of Termination has been filed with the TCEQ for the above referenced project. A copy of this email will be kept with the SWP3 to document this notification. Please contact EMG, LLC if you have any questions.

*****PLEASE REPLY TO THIS EMAIL CONFIRMING YOU RECEIVED THIS NOTICE*******See New Address Below****KYLE SYKES**

EXECUTIVE ASSISTANT | SWP3 ADMINISTRATOR

ENVIRONMENTAL MANAGEMENT GROUP, LLC

COST EFFECTIVE SWP3 COMPLIANCE CONSULTANTS

SWP3 | PERMITTING | SWP3 INSPECTION

AUSTIN | CORPS CHRISTI | DFW | HOUSTON | SAN ANTONIO | OKLAHOMA

www.EMG-LLC.NET**3 attachments****23.05.24_LH-SA_RubyCrossing_NOIR-Approval.pdf**

424K



23.05.24_LH-SA_RubyCrossing_NOIR-TXR1590CS.pdf
487K



23.05.24_LH-SA_RubyCrossing_NOIR.pdf
1081K

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Erin E. Chancellor, *Interim Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 24, 2023

Dear Applicant:

Re: TPDES General Permit for Construction Stormwater Runoff (TXR150000)
Notice of Intent Authorization

Your Notice of Intent (NOI) application for authorization under the general permit for discharge of stormwater associated with construction activities has been received. Pursuant to authorization from the Executive Director of the Texas Commission on Environmental Quality, the Division Deputy Director of the Water Quality Division has issued the enclosed Certificate.

Please refer to the attached certificate for the authorization number that was assigned to your project/site and the effective date. Please use this number to reference this project/site for future communications with the Texas Commission on Environmental Quality (TCEQ).

Authorization under the Edwards Aquifer Protection Program is required before construction can begin where the site is located within the Edwards Aquifer Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone. See <https://www.tceq.texas.gov/permitting/eapp/viewer.html> for additional information.

It is the responsibility of the Operator to notify the TCEQ Stormwater Processing Center of any change in address supplied on the original Notice of Intent by submitting a Notice of Change.

A Notice of Termination must be submitted when permit coverage is no longer needed.

For questions related to processing of your application you may contact the Stormwater Processing Center by email at SWPERMIT@tceq.texas.gov or by telephone at (512) 239-3700. If you have any technical questions regarding the general permit, you may contact the stormwater technical staff by email at SWGP@tceq.texas.gov or by telephone at (512) 239-4671. Also, you may obtain information on the stormwater web site at <https://www.tceq.texas.gov/permitting/stormwater>.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Sadlier".

Robert Sadlier, Deputy Director
Water Quality Division



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Texas Pollutant Discharge Elimination System
Stormwater Construction General Permit

The Notice of Intent (NOI) for the facility listed below was received on May 24, 2023. The intent to discharge stormwater associated with construction activity under the terms and conditions imposed by the Texas Pollutant Discharge Elimination System (TPDES) stormwater Construction General Permit TXR150000 is acknowledged. Your facility's unique TPDES CGP stormwater authorization number is:

TXR1590CS

Coverage Effective: July 24, 2020

The TCEQ's stormwater CGP requires certain stormwater pollution prevention and control measures, possible monitoring and reporting, and periodic inspections. Among the conditions and requirements of this permit, you must have prepared and implemented a stormwater pollution prevention plan (SWP3) that is tailored to your construction site. As a facility authorized to discharge under the stormwater CGP, all terms and conditions must be complied with to maintain coverage and avoid possible penalties.

Project/Site Information:

RN111074217

Ruby Crossing

South of The Intersection of Charles William Anderson Loop And
Red Forest Lane

San Antonio, TX 78264

Bexar County

Operator:

CN602412207

Lennar Homes of Texas Land And Construction, Ltd.

100 Ne Loop 410 Ste 1155

San Antonio, TX 78216

This CGP and all authorizations expire on March 5, 2028, unless otherwise amended. If you have any questions related to processing of your application, you may contact the Stormwater Processing Center by **email** at SWPERMIT@tceq.texas.gov or **by telephone** at (512) 239-3700. For technical issues, you may contact the stormwater technical staff by **email** at SWGPA@tceq.texas.gov or **by telephone** at (512) 239-4671. Also, you may obtain information on the TCEQ web site at <https://www.tceq.texas.gov/goto/wq-dpa>. A copy of this document should be kept with your SWP3.

A handwritten signature in black ink that reads "Erin E. Chamallor".

FOR THE COMMISSION

Issued Date: May 24, 2023

Texas Commission on Environmental Quality**Construction Notice of Intent Renewal****TXR1590CS****Site Information (Regulated Entity)**

What is the name of the site to be authorized?

RUBY CROSSING

Does the site have a physical address?

No

Physical Address

Because there is no physical address, describe how to locate this site:

SOUTH OF THE INTERSECTION OF
CHARLES WILLIAM ANDERSON
LOOP AND RED FOREST LANE

City

SAN ANTONIO

State

TX

ZIP

78264

County

BEXAR

Latitude (N) (##.#####)

29.217078

Longitude (W) (-###.#####)

-98.446348

Primary SIC Code

6552

Secondary SIC Code

1521

Primary NAICS Code

Secondary NAICS Code

Regulated Entity Site Information

What is the Regulated Entity's Number (RN)?

RN111074217

What is the name of the Regulated Entity (RE)?

RUBY CROSSING

Does the RE site have a physical address?

No

Physical Address

Because there is no physical address, describe how to locate this site:

SOUTH OF THE INTERSECTION OF
CHARLES WILLIAM ANDERSON
LOOP AND RED FOREST LANE

City

SAN ANTONIO

State

TX

ZIP

78264

County

BEXAR

Latitude (N) (##.#####)

29.217078

Longitude (W) (-###.#####)

-98.446348

Facility NAICS Code

What is the primary business of this entity?

OWNER / DEVELOPER

Customer (Applicant) Information

How is this applicant associated with this site?

Operator

What is the applicant's Customer Number (CN)?

CN602412207

Type of Customer

Corporation

Full legal name of the applicant:

Legal Name

Lennar Homes of Texas Land and
Construction, Ltd.

Texas SOS Filing Number

11452910

Federal Tax ID

752792018

State Franchise Tax ID	17527920189
State Sales Tax ID	
Local Tax ID	
DUNS Number	
Number of Employees	21-100
Independently Owned and Operated?	No
I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas.	Yes
Responsible Authority Contact	
Organization Name	Lennar Homes of Texas Land and Construction, Ltd.
Prefix	
First	BRIAN
Middle	
Last	BARRON
Suffix	
Credentials	
Title	DIVISION PRESIDENT
Responsible Authority Mailing Address	
Enter new address or copy one from list:	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	100 NE LOOP 410 STE 1155
Routing (such as Mail Code, Dept., or Attn:)	
City	SAN ANTONIO
State	TX
ZIP	78216
Phone (###-###-####)	2104036200
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	BRIAN.BARRON@LENNAR.COM

Application Contact

Person TCEQ should contact for questions about this application:

Same as another contact?	
Organization Name	EMG LLC
Prefix	
First	MATTHEW
Middle	
Last	MARTIN
Suffix	
Credentials	
Title	OWNER
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	2260 HIGHLAND VILLAGE RD STE 400
Routing (such as Mail Code, Dept., or Attn:)	

City	HIGHLAND VILLAGE
State	TX
ZIP	75077
Phone (###-###-####)	2149232086
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	INFO@EMG-LLC.NET

CNOI-R General Characteristics

- | | |
|---|---------------------------------|
| 1 Is the project or site located on Indian Country Lands? | No |
| 2 Is the project or site associated to 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? | No |
| 3 Is your construction activity associated with an oil and gas exploration, production, processing, or treatment, or transmission facility? | No |
| 4 What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site? | 6552 |
| 5 If applicable, what is the Secondary SIC Code(s)? | 1521 |
| 6 What is the total number of acres that the construction project or site will disturb under the control of the primary operator? | 69.2 |
| 7 What is the construction project or site type? | Other Single-family residential |
| 8 Is the project part of a larger common plan of development or sale? | Yes |
| 9 What is the estimated start date of the project? | 07/21/2020 |
| 10 What is the estimated end date of the project? | 07/21/2025 |
| 11 Will concrete truck washout be performed at the site? | Yes |
| 12 What is the name of the first water body(s) to receive the stormwater runoff or potential runoff from the site? | MEDINA RIVER-1903 |
| 13 What is the segment number(s) of the classified water body(s) that the discharge will eventually reach? | 1903 |
| 14 Is the discharge into a Municipal Separate Storm Sewer System (MS4)? | Yes |
| 14.1 What is the name of the MS4 Operator? | BEXAR COUNTY |
| 15 Is the discharge or potential discharge within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, as defined in 30 TAC Chapter 213? | No |
| 16 I certify that a stormwater pollution prevention plan (SWP3) has been developed, will be implemented prior to construction, and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the general permit TXR150000. Note: For multiple operators who prepare a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator. | Yes |
| 17 I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000). | Yes |
| 18 I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed. | Yes |

Certification

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

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.

1. I am Brian Barron, the owner of the STEERS account ER051116.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Construction Notice of Intent Renewal TXR1590CS.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OPERATOR Signature: Brian Barron OPERATOR

Customer Number:	CN602412207
Legal Name:	Lennar Homes of Texas Land and Construction, Ltd.
Account Number:	ER051116
Signature IP Address:	204.109.18.254
Signature Date:	2023-05-18
Signature Hash:	7478EA0501AC21C24BA381C95D8D6ED759B07B5EE8B196F18774E8D6D9DD614C
Form Hash Code at time of Signature:	84229FC5DE54CAD7E4FC3F9519B7C23C2F222D3640F8D26AF4E5865DBA6DC411

Fee Payment

Transaction by:	The application fee payment transaction was made by ER051116/Brian Barron
Paid by:	The application fee was paid by MARCUS WALTERS
Fee Amount:	\$225.00
Paid Date:	The application fee was paid on 2023-05-22
Transaction/Voucher number:	The transaction number is 582EA000551238 and the voucher number is 642725

Submission

Reference Number:	The application reference number is 563928
Submitted by:	The application was submitted by ER075896/Kyle Sykes
Submitted Timestamp:	The application was submitted on 2023-05-24 at 13:29:05 CDT
Submitted From:	The application was submitted from IP address 75.128.180.183
Confirmation Number:	The confirmation number is 468510
Steers Version:	The STEERS version is 6.65
Permit Number:	The permit number is TXR1590CS

Additional Information

Application Creator: This account was created by Kyle Sykes



Ms Kyle Sykes <ksykes@emg-llc.net>

2022.3.14_LH-SA_RubyCrossing-AddressChange-NOC-MS4Notification

1 message

Ms Kyle Sykes <KSykes@emg-llc.net>

Mon, Mar 14, 2022 at 2:42 PM

To: swq@bexar.org, "Subhi, Zaid" <zaid.subhi@bexar.org>

Cc: Matt Martin <mmartin@emg-llc.net>, Ryan Kenney <rkenney@emg-llc.net>, Eric Smith <esmith@emg-llc.net>, Jeff Romine <jromine@emg-llc.net>

Bcc: Ms Kyle Sykes <ksykes@emg-llc.net>

Hello,

Attached is a TXR150000 Notification for the above referenced project. This email serves as a notification to the MS4 that a Small Construction Site Notice, Notice of Intent, Notice of Change, or a Notice of Termination has been filed with the TCEQ for the above referenced project. A copy of this email will be kept with the SWP3 to document this notification. Please contact EMG, LLC if you have any questions.

*****PLEASE REPLY TO THIS EMAIL CONFIRMING YOU RECEIVED THIS NOTICE*****

KYLE SYKES

ENVIRONMENTAL MANAGEMENT GROUP, LLC

COST EFFECTIVE SWP3 COMPLIANCE CONSULTANTS

SWP3 | PERMITTING | SWP3 INSPECTION

AUSTIN | DFW | HOUSTON | SAN ANTONIO

WWW.EMG-LLC.NET

3 attachments**2022.3.14_LH-SA_RubyCrossing-AddressChange-NOC-AppLetter.pdf**
375K**2022.3.14_LH-SA_RubyCrossing-AddressChange-NOC-TXR1590CS.pdf**
525K**2022.3.14_LH-SA_RubyCrossing-AddressChange-NOC.pdf**
934K



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Texas Pollutant Discharge Elimination System
Stormwater Construction General Permit

The Notice of Change submitted to update the Notice of Intent (NOI) for the facility listed below was received on March 14, 2022. The intent to discharge stormwater associated with construction activity under the terms and conditions imposed by the Texas Pollutant Discharge Elimination System (TPDES) stormwater construction general permit TXR150000 is acknowledged. Your facility's TPDES construction stormwater general permit authorization number is:

TXR1590CS

Coverage Effective: July 24, 2020

TCEQ's stormwater construction general permit requires certain stormwater pollution prevention and control measures, possible monitoring and reporting, and periodic inspections. Among the conditions and requirements of this permit, you must have prepared and implemented a stormwater pollution prevention plan (SWP3) that is tailored to your construction site. As a facility authorized to discharge under the stormwater construction general permit, all terms and conditions must be complied with to maintain coverage and avoid possible penalties.

Project/Site Information:

RN111074217
Ruby Crossing
South of The Intersection of Charles William Anderson Loop And
Red Forest Lane
San Antonio, TX 78264
Bexar County

Operator:

CN602412207
Lennar Homes of Texas Land And Construction, Ltd.
100 Ne Loop 410 Ste 1155
San Antonio, TX 78216

This permit expires on March 05, 2023, unless otherwise amended. If you have any questions related to processing, you may contact the Stormwater Processing Center by email at SWPERMIT@tceq.texas.gov or by telephone at (512) 239-3700. For technical issues, you may contact the stormwater technical staff by email at SWGPA@tceq.texas.gov or by telephone at (512) 239-4671. Also, you may obtain information on the TCEQ web site at <https://www.tceq.texas.gov/goto/wq-dpa>. A copy of this document should be kept with your SWP3.

A handwritten signature in black ink, appearing to read "T. G. Bahr".

FOR THE COMMISSION

Issued Date: March 14, 2022

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 14, 2022

Dear Applicant:

Re: TPDES General Permit for Construction Stormwater Runoff (TXR150000)
Notice of Change (NOC) to an Active Authorization

Your NOC request to update your authorization under the general permit for discharge of stormwater associated with construction activities has been received. Pursuant to authorization from the Executive Director of the Texas Commission on Environmental Quality, the Division Director of the Water Quality Division has issued the enclosed Certificate. The effective date of your authorization under the construction general permit has not changed.

For questions related to the status or processing of your application you may contact the Stormwater Processing Center by email at SWPERMIT@tceq.texas.gov or by telephone at (512) 239-3700.

If you have any technical questions regarding this general permit, you may contact the stormwater technical staff at (512) 239-4671 or by email at SWGPA@tceq.texas.gov. Also, you may obtain information on the stormwater web site at <https://www.tceq.texas.gov/permitting/stormwater>.

Sincerely,

A handwritten signature in black ink, appearing to read "Rob Sadlier", written in a cursive style.

Robert Sadlier, Deputy Director
Water Quality Division

Texas Commission on Environmental Quality

Construction Notice of Change

TXR1590CS

Site Information (Regulated Entity)

What is the name of the site to be authorized?	RUBY CROSSING
Does the site have a physical address?	No
Because there is no physical address, describe how to locate this site:	SOUTH OF THE INTERSECTION OF CHARLES WILLIAM ANDERSON LOOP AND RED FOREST LANE
City	SAN ANTONIO
State	TX
ZIP	78264
County	BEXAR
Latitude (N) (##.#####)	29.217078
Longitude (W) (-###.#####)	-98.446348
Primary SIC Code	6552
Secondary SIC Code	1521
Primary NAICS Code	
Secondary NAICS Code	
Regulated Entity Site Information	
What is the Regulated Entity's Number (RN)?	RN111074217
What is the name of the Regulated Entity (RE)?	RUBY CROSSING
Does the RE site have a physical address?	No
Because there is no physical address, describe how to locate this site:	SOUTH OF THE INTERSECTION OF CHARLES WILLIAM ANDERSON LOOP AND RED FOREST LANE
City	SAN ANTONIO
State	TX
ZIP	78264
County	BEXAR
Latitude (N) (##.#####)	29.217078
Longitude (W) (-###.#####)	-98.446348
Facility NAICS Code	
What is the primary business of this entity?	OWNER / DEVELOPER

Customer (Applicant) Information

How is this applicant associated with this site?	Operator
What is the applicant's Customer Number (CN)?	CN602412207

Type of Customer	Corporation
Full legal name of the applicant:	
Legal Name	Lennar Homes of Texas Land and Construction, Ltd.
Texas SOS Filing Number	11452910
Federal Tax ID	752792018
State Franchise Tax ID	17527920189
State Sales Tax ID	
Local Tax ID	
DUNS Number	
Number of Employees	21-100
Independently Owned and Operated?	No
I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas.	Yes
Responsible Authority Contact	
Organization Name	Lennar Homes of Texas Land and Construction, Ltd.
Prefix	MR
First	BRIAN
Middle	
Last	BARRON
Suffix	
Credentials	
Title	DIVISION PRESIDENT
Responsible Authority Mailing Address	
Enter new address or copy one from list:	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	100 NE LOOP 410 STE 1155
Routing (such as Mail Code, Dept., or Attn:)	
City	SAN ANTONIO
State	TX
ZIP	78216
Phone (###-###-####)	2104036200
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	brian.barron@lennar.com

Application Contact

Person TCEQ should contact for questions

about this application:

Same as another contact?

Organization Name EMG LLC

Prefix

First Kyle

Middle

Last Sykes

Suffix

Credentials

Title SWP3 MANAGER

Enter new address or copy one from list:

Mailing Address

Address Type Domestic

Mailing Address (include Suite or Bldg. here, if applicable) 2300 HIGHLAND VILLAGE RD

Routing (such as Mail Code, Dept., or Attn:) Ste 3204 Building 3

City HIGHLAND VILLAGE

State TX

ZIP 75077

Phone (###-###-####) 2149232086

Extension

Alternate Phone (###-###-####)

Fax (###-###-####)

E-mail INFO@EMG-LLC.NET

Notice of Change General Characteristics

- | | |
|---|-------------------------------------|
| 1) What are you proposing to change from what was last provided for this permit? | Change to Permittee Mailing Address |
| 2) What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site? | 6552 |
| 3) If applicable, what is the Secondary SIC Code(s)? | 1521 |
| 4) What is the total number of acres disturbed? | 69.2 |
| 5) Is the project site part of a larger common plan of development or sale? | Yes |
| 6) What is the estimated start date of the project? | 07/21/2020 |
| 7) What is the estimated end date of the project? | 07/21/2023 |
| 8) Will concrete truck washout be performed at the site? | Yes |

9) What is the name of the first water body(s) to receive the stormwater runoff or potential runoff from the site?	MEDINA RIVER-1903
10) What is the segment number(s) of the classified water body(s) that the discharge will eventually reach?	1903
11) Is the discharge into a Municipal Separate Storm Sewer System (MS4)?	Yes
11.1. What is the name of the MS4 Operator?	BEXAR COUNTY
12) Is the discharge or potential discharge within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, as defined in 30 TAC Chapter 213?	No
13) I certify that a stormwater pollution prevention plan has been developed, will be implemented prior to construction, and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the general permit TXR150000. Note: For multiple operators who operate under a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator.	Yes

Certification

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

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.

1. I am Brian Barron, the owner of the STEERS account ER051116.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Construction Notice of Change TXR1590CS.

9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OPERATOR Signature: Brian Barron OPERATOR

Account Number:	ER051116
Signature IP Address:	99.57.180.204
Signature Date:	2022-03-14
Signature Hash:	5647D627E84FAB1D518808A8B536B7C76B9D64BB12833AA59149485E24EF2895
Form Hash Code at time of Signature:	5F9FA0F2B32E4B32EAAA68F774C80B9AAA4ECCA9574E551BF0FA967A76712FB4

Submission

Reference Number:	The application reference number is 475728
Submitted by:	The application was submitted by ER075896/Kyle Sykes
Submitted Timestamp:	The application was submitted on 2022-03-14 at 14:37:45 CDT
Submitted From:	The application was submitted from IP address 47.187.143.247
Confirmation Number:	The confirmation number is 396177
Steers Version:	The STEERS version is 6.50
Permit Number:	The permit number is TXR1590CS

Additional Information

Application Creator: This account was created by Kyle Sykes



Rita Olguin <rolguin@complianceresourcesinc.com>

MS4 Notification: Ruby Crossing Unit 1 PERMIT and NOI LNR LD

1 message

Rita Olguin <rolguin@complianceresourcesinc.com>

Thu, Jul 30, 2020 at 11:03 AM

To: erin.lowe@bexar.org

Cc: Rita Olguin <rolguin@complianceresourcesinc.com>, Christina Metzger <cmetzger@complianceresourcesinc.com>, Gretchen Reutzel <greutzel@complianceresourcesinc.com>, Jimena Koszuta <jkoszuta@complianceresourcesinc.com>, Marcus.Walters@lennar.com

To whom it may concern,

As required by the TCEQ General Permit Number TXR150000 for discharges of storm water runoff from construction sites, attached is a copy of the **STEERS Notice of Intent** for storm water discharges associated with construction activity.

Thank you,

Rita Olguin

COMPLIANCE RESOURCES, INC.

P.O. Box 2628

Georgetown, Texas 78627

512-930-7733 Office

888-CRI-SW3P Toll Free

512-864-7629 Fax

rolguin@complianceresourcesinc.com

www.complianceresourcesinc.com

*Providing **Accurate, Complete, and Timely** customer service that your company can rely on.*

 Please consider the environment before printing.

**Ruby Crossing Unit 1 PERMIT and NOI LNR LD 072420.pdf**

280K



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Texas Pollutant Discharge Elimination System
Stormwater Construction General Permit

The Notice of Intent (NOI) for the facility listed below was received on July 24, 2020. The intent to discharge stormwater associated with construction activity under the terms and conditions imposed by the Texas Pollutant Discharge Elimination System (TPDES) stormwater construction general permit TXR150000 is acknowledged. Your facility's TPDES construction stormwater general permit authorization number is:

TXR1590CS

Coverage Effective: July 24, 2020

TCEQ's stormwater construction general permit requires certain stormwater pollution prevention and control measures, possible monitoring and reporting, and periodic inspections. Among the conditions and requirements of this permit, you must have prepared and implemented a stormwater pollution prevention plan (SWP3) that is tailored to your construction site. As a facility authorized to discharge under the stormwater construction general permit, all terms and conditions must be complied with to maintain coverage and avoid possible penalties.

Project/Site Information:

RN111074217
Ruby Crossing
South of The Intersection of Charles William Anderson Loop And
Red Forest Lane
San Antonio, TX 78264
Bexar County

Operator:

CN602412207
Lennar Homes of Texas Land And Construction, Ltd.
1922 Dry Creek Way Ste 101
San Antonio, TX 78259

This permit expires on March 05, 2023, unless otherwise amended. If you have any questions related to processing, you may contact the Stormwater Processing Center by email at swpermit@tceq.texas.gov or by telephone at (512) 239-3700. For technical issues, you may contact the stormwater technical staff by email at swgp@tceq.texas.gov or by telephone at (512) 239-4671. Also, you may obtain information on the TCEQ web site at <https://www.tceq.texas.gov/goto/wq-dpa>. A copy of this document should be kept with your SWP3.

A handwritten signature in black ink, appearing to read "T. G. Bahr".

Issued Date: July 24, 2020

FOR THE COMMISSION

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 24, 2020

Dear Applicant:

Re: TPDES General Permit for Construction Stormwater Runoff (TXR150000)
Stormwater Notice of Intent Authorization

Your Notice of Intent application for authorization under the general permit for discharge of stormwater associated with construction activities has been received. Pursuant to authorization from the Executive Director of the Texas Commission on Environmental Quality, the Division Director of the Water Quality Division has issued the enclosed Certificate.

Please refer to the attached certificate for the identification number that was assigned to your project/site and the effective date. Please use this number to reference this project/site for future communications with the Texas Commission on Environmental Quality (TCEQ).

Authorization under the Edwards Aquifer Protection Program is required before construction can begin where the site is located within the Edwards Aquifer Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone. See <http://www.tceq.texas.gov/field/eapp/program.html> for additional information.

A Notice of Termination must be submitted when permit coverage is no longer needed. **It is the responsibility of the Operator to notify the TCEQ Stormwater Processing Center of any change in address supplied on the original Notice of Intent by submitting a Notice of Change.**

For questions related to processing of forms you may contact the Stormwater Processing Center by email at swpermit@tceq.texas.gov or by telephone at (512) 239-3700. If you have any technical questions regarding the general permit, you may contact the stormwater technical staff by email at swgp@tceq.texas.gov or by telephone at (512) 239-4671. Also, you may obtain information on the stormwater web site at www.tceq.texas.gov.

Sincerely,

A handwritten signature in cursive script that reads "David W Galindo".

David W. Galindo, Director

Water Quality Division

Texas Commission on Environmental Quality

Texas Commission on Environmental Quality

Construction Notice of Intent

Site Information (Regulated Entity)

What is the name of the site to be authorized?	Ruby Crossing
Does the site have a physical address?	No
Because there is no physical address, describe how to locate this site:	South of the intersection of Charles William Anderson Loop and Red Forest Lane
City	San Antonio
State	TX
ZIP	78264
County	BEXAR
Latitude (N) (##.#####)	29.217078
Longitude (W) (-###.#####)	-98.446348
Primary SIC Code	6552
Secondary SIC Code	1521
Primary NAICS Code	
Secondary NAICS Code	
Regulated Entity Site Information	
What is the Regulated Entity's Number (RN)?	
What is the name of the Regulated Entity (RE)?	Ruby Crossing
Does the RE site have a physical address?	No
Because there is no physical address, describe how to locate this site:	South of the intersection of Charles William Anderson Loop and Red Forest Lane
City	San Antonio
State	TX
ZIP	78264
County	BEXAR
Latitude (N) (##.#####)	29.217078
Longitude (W) (-###.#####)	-98.446348
Facility NAICS Code	
What is the primary business of this entity?	Owner / Developer

Customer (Applicant) Information

How is this applicant associated with this site?	Operator
What is the applicant's Customer Number (CN)?	CN602412207
Type of Customer	Corporation
Full legal name of the applicant:	
Legal Name	Lennar Homes of Texas Land and Construction, Ltd.
Texas SOS Filing Number	11452910
Federal Tax ID	752792018
State Franchise Tax ID	17527920189
State Sales Tax ID	
Local Tax ID	
DUNS Number	

Number of Employees	
Independently Owned and Operated?	No
I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas.	Yes
Responsible Authority Contact	
Organization Name	Lennar Homes of Texas Land and Construction, Ltd.
Prefix	
First	Brian
Middle	
Last	Barron
Suffix	
Credentials	
Title	Division President
Responsible Authority Mailing Address	
Enter new address or copy one from list:	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	1922 DRY CREEK WAY STE 101
Routing (such as Mail Code, Dept., or Attn:)	
City	SAN ANTONIO
State	TX
ZIP	78259
Phone (###-###-####)	2104036200
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	

Application Contact

Person TCEQ should contact for questions about this application:

Same as another contact?

Organization Name	Compliance Resources, Inc.
Prefix	
First	Amber
Middle	
Last	Scheler
Suffix	
Credentials	
Title	SWP3 MANAGER
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	PO BOX 2628
Routing (such as Mail Code, Dept., or Attn:)	
City	GEORGETOWN
State	TX

ZIP	78627
Phone (###-###-####)	5129307733
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	ascheler@complianceresourcesinc.com

CNOI General Characteristics

1) Is the project located on Indian Country Lands?	No
2) Is your construction activity associated with a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources?	No
3) What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site?	6552
4) If applicable, what is the Secondary SIC Code(s)?	1521
5) What is the total number of acres disturbed?	69.2
6) Is the project site part of a larger common plan of development or sale?	Yes
7) What is the estimated start date of the project?	07/21/2020
8) What is the estimated end date of the project?	07/21/2023
9) Will concrete truck washout be performed at the site?	Yes
10) What is the name of the first water body(s) to receive the stormwater runoff or potential runoff from the site?	Medina River-1903
11) What is the segment number(s) of the classified water body(s) that the discharge will eventually reach?	1903
12) Is the discharge into a Municipal Separate Storm Sewer System (MS4)?	Yes
12.1. What is the name of the MS4 Operator?	Bexar County
13) Are any of the surface water bodies receiving discharges from the construction site on the 2016 Texas Integrated Report of Surface Water Quality?	Yes
13.1. What is the name(s) of the impaired water body(s) receiving the discharges from the construction site?	Medina River Below Medina Diversion Lake-1903
14) Is the discharge or potential discharge within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, as defined in 30 TAC Chapter 213?	No
15) I certify that a stormwater pollution prevention plan has been developed, will be implemented prior to construction, and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the general permit TXR150000. Note: For multiple operators who operate under a shared SWP3, the	Yes

confirmation of an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator.

16) I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000).

Yes

17) I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed.

Yes

Certification

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

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.

1. I am Brian Barron, the owner of the STEERS account ER051116.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Construction Notice of Intent.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OPERATOR Signature: Brian Barron OPERATOR

Account Number:	ER051116
Signature IP Address:	204.109.20.254
Signature Date:	2020-07-23
Signature Hash:	B224CD8467AF4C8018BEB3D852FD0EE155C36A6F573126727009686C582DF8FA
Form Hash Code at time of Signature:	44E9AAB13549E0E68554BE8CE85B68CCA4889BB4001C2A0721A026657BD80C30

Fee Payment

Transaction by:	The application fee payment transaction was made by ER052491/Amber Scheler
Paid by:	The application fee was paid by AMBER SCHELER
Fee Amount:	\$225.00
Paid Date:	The application fee was paid on 2020-07-24
Transaction/Voucher number:	The transaction number is 582EA000395079 and the voucher number is 471809

Submission

Reference Number:	The application reference number is 373652
Submitted by:	The application was submitted by ER052491/Amber Scheler
Submitted Timestamp:	The application was submitted on 2020-07-24 at 08:49:04 CDT
Submitted From:	The application was submitted from IP address 74.196.230.226
Confirmation Number:	The confirmation number is 316059
Steers Version:	The STEERS version is 6.32

Additional Information

Application Creator: This account was created by Amber Scheler

Appendix "E" SWPPP Amendment Log

LENNAR SWPPP AMENDMENT FORM

Name of Project: Ruby Crossing – Land Development

Date of Amendment: 9/6/2023

Date Amendment Implemented: 9/6/2023

Amendment Number: 001

☒ This SWPPP Amendment is made by the responsible corporate officer or the authorized representative; a copy of the Delegation of Signatories form is attached to this section of the SWPPP.

Reason for this SWPPP amendment: Added Unit 3B to the SWP3.

SWPPP amendment modifies the SWPPP by:

1.4 Project / Site Information: Added the disturbed acreage, impervious calculations, description of drainage system, and sediment basin calculations to the SWP3 for Unit 3B.

1.6 Soils, Slopes, Vegetation, and Drainage Patterns: Update soils and drainage for Unit 3B.

Section 2 - Sequence of Major Land Development Activities: Updated Sequence of Major Land Development Activities and BMP Description broken down for Unit 3B.

Appendix "A" – General Location Map / Topo Map: Added location map and soil report to the SWP3 for Unit 3B.

Appendix "B" – Site Maps: Added BMP Tracking Map, Stabilization Map, and engineering plans for Unit 3B.

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

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

Signature: 7CEEC304E6DC437...

Date: 9/6/2023

Print Name/Title: Marcus Walters / Division Environmental Manager

LENNAR SWPPP AMENDMENT FORM

Name of Project:

Date of Amendment: Click or tap to enter a date.

Date Amendment Implemented: Click or tap to enter a date.

Amendment Number: _____

☒ This SWPPP Amendment is made by the responsible corporate officer or the authorized representative; a copy of the Delegation of Signatories form is attached to this section of the SWPPP.

Reason for this SWPPP amendment: _____

SWPPP amendment modifies the SWPPP by:

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

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

Signature:

Date:

Print Name/Title: Marcus Walters / Division Environmental Manager

Appendix “F” Support Facility Permits

Appendix “G” Additional Operator Information & Responsibilities

As land development activity progresses, additional construction activities will begin, and the associated Operators will be added to the SWPPP. This information for each Phase, Section, or Unit, and will include responsibilities of each operator, operators Notice of Intent (NOI), NOI Approval Letter, NOI Certificate, MS4 Notification, Construction Site Notice, and the additional operator’s signed SWPPP Certification.

Operator Responsibilities
for Major Land Development Activities

<input type="checkbox"/> Demolition, Clearing & Grubbing <input type="checkbox"/> Landscape <input type="checkbox"/> Rough Grade Detention Pond, Streets, Lots <input type="checkbox"/> Rec. Center <input type="checkbox"/> Storm, Sanitary Sewer, Water, Dry Utilities <input type="checkbox"/> Lift Station <input type="checkbox"/> Pavement base, curb, asphalt pavement <input type="checkbox"/> Water Well <input type="checkbox"/> Access Road / Boulevard <input type="checkbox"/>

Construction Activity Name:

Construction Activity Phase(s):

(Check all that apply) See Section 1.2 for the Nature and Sequence of each construction activity.

Disturbed Acreage for this Construction Activity:

General Contractor Information: **Name:**

TPDES Permit No.:

Address:

Phone:

Contact Name:

Dates of Major Grading Activities for this Construction Activity:

Grading Start Date (Earth Disturbance):	Estimated Duration:	Grading Complete Date:	Stabilization Initiated:	Stabilization Complete:

Responsibilities of each Primary Operator:

Both the Owner and the General Contractor are Primary Operators. Indicate which Primary Operator is responsible to install, implement, maintain, and remove each of the BMPs.	General Contractor			N/A	Owner (See Sec. 1.1)		
	Install / Implement	Maintain	Remove		Install / Implement	Maintain	Remove
Control Dust by Watering if necessary (NS2)							
Maintain the Spill Response Plan and Keep a Spill Kit Onsite (WM1 & 3.1)							
Conduct proper dewatering practices (NS4)							
Construct Drainage Swales and Dikes (S5,S6 & Appx G)							
Trash and Debris Containment (WM3)							
Equipment and Material storage (M2)							
Concrete washout area (S9)							
Tree Protection on trees that will be preserved (S11)							
Construct Stabilized Construction Exits (S4)							

Orange protection fencing to protect preserved areas (S11)							
Perimeter silt fences (S1), wattles (S3), establish buffers (S12), rock berms (S7), or other BMPs per SWPPP site map							
Sanitary facilities (WM2)							
Sediment Basin and dissipation at outfall (S7 & PC2)							
Stockpile management (M3)							
Inlet protection once inlets are installed (S8, S8-1 thru 8-4)							
Sweep Streets as necessary (NS3)							
Back of curb controls at back of curb once paving is complete (S1, S2 & S3)							
Stabilization measures in areas that will not be disturbed for 14 days (EC1-7)							
Other BMPs:							
Other BMPs:							
Other BMPs:							



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: Enter TXR15#

Primary Operator Name: _____

Contact Name and Phone Number: _____

Project Description: _____

Physical

Location/Description: _____

Grading, WS&D, & Paving

Estimated Start Date: _____

Projected End Date or Date Disturbed Soils Will Be Stabilized: _____

Location of Stormwater Pollution Prevention Plan (SWP3): "In accordance with Section D.1 of the CGP, the SWP3 is kept electronically and can be made available upon request. To request access, scan the QR Code below:"

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

GENERAL CONTRACTOR / OPERATOR'S SWPPP CERTIFICATION

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

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

Sign as required by 30 TAC §305.128(a)

Signature: _____

Name: _____

Title: _____

Company Name: _____

Date: _____

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

Appendix “H” Training Log and Qualifications

This section includes qualifications of the following individuals:

- Owner's Representative, the Land Development Manager
- SWPPP Preparer
- SWPPP BMP Inspector

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

LENNAR'S ONSITE REPRESENTATIVE TRAINING SUMMARY AND TRAINING LOG

LENNAR ENVIRONMENTAL MANAGEMENT SYSTEM (LEMS) – TRAINING SUMMARY

Lennar Homes of Texas Land and Construction, LTD provides on-boarding stormwater and environmental training to all new construction associates. Training is provided through blended training utilizing both on-line and live training modules.

LEMS training covers at a minimum of the following topics:

1. Overview of the National LEMS program
 - a. Storm Water Module
 - b. Air Quality Module
 - c. Environmental Due Diligence Module
 - d. Spill Prevention, Control and Countermeasure Module
2. Introduction to the Clean Water Act
3. Introduction to the Federal Construction General Permit and the Environmental Protection Agency (EPA)
4. Introduction to the State of Texas Construction General Permit - TXR150000 and Texas Commission on Environmental Quality (TCEQ)
5. Understanding the Storm Water Pollution Prevention (SWPPP)
 - a. Specific to each community and SWPPP permit
 - b. Inspections requirements and documentation
 - c. Site Maps
 - d. Best Management Practices (BMPs)
 - e. Enforcement Inspections
6. Training for utilizing the current Inspection Management System/Program
 - a. Responsibility of construction associates
 - b. Certification of Inspections
 - c. Completion of inspection items

LENNAR ENVIRONMENTAL MANAGEMENT SYSTEM (LEMS) – REFRESHER TRAINING SUMMARY

Lennar Homes of Texas Land and Construction, LTD provides routine stormwater and environmental training to all construction associates. Training is provided through live training modules.

Associates receive routine refresher training every twelve to eighteen months.

LEMS routine training covers the following topics:

1. Refresher to General LEMS program including any updates or changes
2. General review of Federal and State Construction General Permit
3. Review of SWPPP, Inspections and BMPs
4. SWPPP and environmental Q/A session regarding active communities or projects

TRAINING LOG

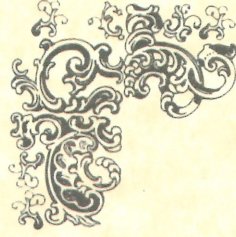
The Training Log following this page documents the LEMS Training received by our Lennar associates.

Live LEMS Training:

Brandon Alvarez
David Arenas (refresher)
Brayden Baker
Mike Cookston**
~~Wesley Di Giuseppe (refresher)~~
Harrison Eich**
Tristan Gutierrez (refresher)
Ryan Kincaid
Edward Klebahn (refresher)
Nicholas Kuykendall**
Jeff Murdock
John Ortiz
Jon Perrin (refresher)
John Pratt
John Reyna**
Anthony Rodriguez (refresher)
Joseph Rodriguez
Esai Ruiz**
Michael Schaar**
Randall Scott
Ethan Sill
Dallas Taylor (refresher)
Adrian Todsén
David Valdez (refresher)
Checotah Wilson
Jose Zuniga-Perez

Here is a link to the “view only” file. You can access any time you need it, but only Greg can edit.

<https://lennar.box.com/s/oa78nz2imsvljuc5e2dlstkne7i8xhbu>



EnviroCert International, Inc.®

certifies that

Eric Jon Teague

Subscribes to the Code of Ethics and Professional Conduct and has met the requirements established for the CPESC® Program as a

**Certified Professional in Erosion and
Sediment Control®**

CPESC® Number: **8754**

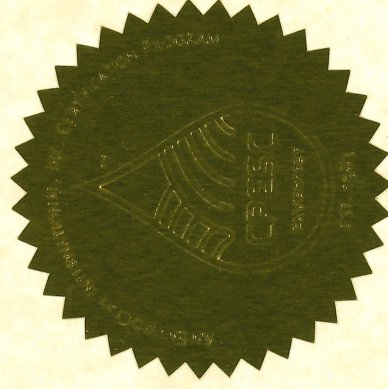
Certificate Date: **June 5, 2017**



Alan Black, Director, Technical Committee Chair



Robert Anderson, EnviroCert Board President



CISEC, Inc.

Board of Directors

certifies that

Marcus Walters

has demonstrated satisfactory evidence of sediment and erosion control inspection skills and successfully passed the certification examination and therefore, as required by CISEC, Inc., is authorized to use the title of

Certified Inspector of Sediment and Erosion Control

Given this 20th day of December, 2016

Lina R. Quana

CISEC, Inc. President

Marcus Walters

CISEC, Inc. Board of Director

1997

Certification Number



EnviroCert International, Inc.

3054 Fite Circle, Suite 108, Sacramento, CA 95827

(279) 888-6911 | www.envirocert.org

Jimena Giuliana Koszuta

CESSWI

Certified Erosion, Sediment and Storm
Water Inspector

4624

CERTIFICATION NO.

7/31/2023

EXPIRES



NOTICE:

All certified professionals are required to adhere strictly to the Code of Conduct and Ethics and are responsible for maintaining their active status with ECI to exercise the rights and privileges under this certification.

EnviroCert International, Inc.®

certifies that

Matthew Scott Cardenas

Subscribes to the Code of Ethics and Professional Conduct and has met the requirements established for the CESSWI™ Program as a

**Certified Erosion, Sediment and
Storm Water Inspector™**

CESSWI™ Number: 3969

Certificate Date: January 31, 2017


Alan Black, Director, Technical Committee Chair


Robert Anderson, EnviroCert Board President



The CESSWI™ Certification was established in 2007



CISEC, Inc.
P.O. Box 188
Parker, CO 80134
Ph: (720) 235-2783
Fax: 303-841-6383
E-mail: contactus@cisecinc.org



CISEC, Inc. Wallet Card

Name: Melissa Castro

Order Date: December 2022

Below is your wallet card.

Please print this card and keep it in your wallet or your files.

 <p>CISEC, Inc. Board of Directors certifies that Melissa Castro <i>has demonstrated satisfactory evidence of sediment and erosion control inspection skills and successfully passed the certification examination and therefore, as required by CISEC, Inc., is authorized to use the title of</i> Certified Inspector of Sediment and Erosion Control 3501  December 30, 2023</p>	<p><i>As a CISEC Registrant, I agree to the following:</i></p> <ul style="list-style-type: none">▪ At all times, strictly abide by the CISEC, Inc. Code of Ethics.▪ Perform all services in a professional manner and uphold professional standards in relating to the public, to other CISEC, Inc. registrants and to other professionals within the industry.▪ Earn at least 12 CDH's each year after becoming a CISEC registrant and▪ Pay CISEC, Inc. annual renewal fees. <p> CISEC, Inc. P.O. Box 188 Parker, CO 80134 720-235-2783 www.cisecinc.org</p>
<p>CISEC # CISEC, Inc. Expiration Date President</p>	<p> Signature (required)</p>

EMPLOYEE NUMBER	DIVISION	LAST NAME	FIRST NAME	PRIOR 6 HOUR TRAINING	LSU COMPLETION STATUS	LSU COMPLETION DATE	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING
222764	SAN	Cardenas	Matthew		Complete	2/1/2022	2/1/2022	1/25/2023			
221788	SAN	Castro	Melissa		Complete	10/5/2021	10/15/2021	1/25/2023			
175730	SAN	Johnson	Ryan		Complete	6/10/2016	5/3/2016	6/7/2017	12/5/2018	2/12/2020	7/14/2021
224867	SAN	Koszuta	Jimena		Complete	8/9/2022	9/6/2022	1/25/2023			
182749	SAN	Mott	Richard		Complete	6/9/2016	5/3/2016	6/7/2017			
208488	SAN	Olivarez Jr	Rogelio		Complete	10/19/2018	4/11/2018	2/12/2020	7/14/2021	1/25/2023	
226527	SAN	Ortiz	John		Complete	7/11/2023					
182176	SAN	Stavinoha	Derrick		Complete	2/7/2022	2/11/2022	1/25/2023			
226692	SAN	Todsen	Adrian		Complete	8/3/2023					
200151	SAN	Walters	Marcus		Complete	1/9/2018	4/11/2018	1/25/2023			
225854	SAN	Zamora	Lorenzo		Complete	5/2/2023	5/22/2023				

EMPLOYEE NUMBER	DIVISION	LAST NAME	FIRST NAME	PRIOR 6 HOUR TRAINING	LSU COMPLETION STATUS	LSU COMPLETION DATE	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING
201616	SAN	Abowd	Joseph		Complete	6/5/2018	12/5/2018	1/22/2020		
174638	SAN	Acuna	Ryan		Complete		11/8/2012			
219732	SAN	Adams	Vincent		Complete	1/13/2022				
200173	SAN	Aguayo	John		Complete	1/10/2018				
214559	SAN	Aguilera	Eric		Complete	1/17/2019	2/13/2019	7/14/2021		
217568	SAN	Alderman	Cody		Complete	2/14/2021				
216299	SAN	Alford	William (Brian)		Complete	7/30/2019	1/23/2020	7/14/2021	1/25/2023	
223764	SAN	Allen	Nathanael		Complete	4/26/2022	6/10/2022			
220343	SAN	Allen	Nicholas		Complete	5/11/2021	7/2/2021			
187550	SAN	Allgater	Kevin		Complete	12/4/2017				
224249	SAN	Allison	Joshua		Complete	6/7/2022	10/21/2022	1/25/2023		
226210	SAN	Alvarez	Brandon		Complete	6/7/2023				
200740	SAN	Alvarez	Mario		Complete	3/28/2018	4/11/2018	2/13/2019	1/22/2020	
223601	SAN	Amaro	Juan		Complete	4/12/2022	5/3/2022	1/25/2023		
		Anderson	Donna S.		Complete		7/14/2021			
201148	SAN	Andrade	Eloy		Complete	5/2/2018	12/5/2018	1/22/2020		
221851	SAN	Arce	Joseph		Complete	10/12/2021	1/14/2022			
222706	SAN	Arenas	David		Complete	1/25/2022	2/11/2022			
220388	SAN	Arredondo	Ray		Complete	5/11/2021				
226172	SAN	Atkinson	Dustin		Complete	5/31/2023				
219210	SAN	Auler	Nicholas		Complete	1/5/2021	7/14/2021	1/25/2023		
224607	SAN	Badillo	Rene		Complete	7/6/2022				
220340	SAN	Baer	Ignacio		Complete	5/11/2021	7/2/2021	1/25/2023		
226582	SAN	Baker	Brayden		Complete	8/1/2023				
224964	SAN	Barrera	Jaime		Complete	8/23/2022	10/21/2022	1/25/2023		
222243	SAN	Barrera, Jr.	Jesus		Complete	11/30/2021	1/14/2022	1/25/2023		
2159708	SAN	Barron	Brian	12/9/2004	Complete	8/8/2008	10/14/2009	6/22/2010	11/8/2012	5/3/2016
200703	SAN	Barta	Todd		Complete	3/27/2018	4/11/2018			
164497	SAN	Baynham	Jerad	5/16/2007	Complete	7/31/2008	10/14/2009	6/22/2010	11/8/2012	12/11/2013
223588	SAN	Becerra	Joseph		Complete	4/19/2022	6/10/2022	1/25/2023		
219686	SAN	Benavides	Casey		Complete	3/2/2021	4/9/2021	7/14/2021		
179702	SAN	Best	Rick		Complete		6/2/2015			
219228	SAN	Billman	Garrett		Complete	1/5/2021				
225238	SAN	Bird	John		Complete	10/11/2022				
216020	SAN	Bircher	Blake		Complete	6/26/2019	7/10/2019	7/14/2021	1/25/2023	
201839	SAN	Blackler	Adam		Complete	6/26/2018				
180395	SAN	Blake	Jon-Michael		Complete	5/31/2016	6/2/2015	5/3/2016		
215700	SAN	Bonnell	Wade		Complete	5/21/2019	7/10/2019			
182330	SAN	Bonner	Jonathan		Complete	12/2/2015				
213931	SAN	Boyd	Paul		Complete	10/16/2018	12/5/2018	1/22/2020	7/14/2021	
169337	SAN	Bravenec	Jonathon		Complete	6/10/2016	6/2/2015	5/3/2016	6/7/2017	7/10/2019
224161	SAN	Briar	Jonathan (Jon)		Complete	5/24/2022	6/10/2022			
214312	SAN	Brito	Oscar		Complete	12/5/2018	2/13/2019	7/14/2021	1/25/2023	
214311	SAN	Brogan	Robert		Complete	12/5/2018	2/13/2019			
217760	SAN	Broughton	Robert		Complete	3/23/2020	7/10/2020			
221785	SAN	Buchanan	Stepvon		Complete	10/5/2021	11/2/2021	1/25/2023		
215701	SAN	Caldwell	Rusty		Complete	5/21/2019	7/10/2019			
203272	SAN	Campbell	Richard		Complete		4/11/2018			
221867	SAN	Cantu	Sergio		Complete	10/12/2021	1/14/2022			
222764	SAN	Cardenas	Matthew		Complete	2/1/2022	2/11/2022	1/25/2023		
221545	SAN	Cardenas	Rebecca		Complete	2/13/2022				
224966	SAN	Carey	Patrick		Complete	8/23/2022	10/21/2022	1/25/2023		
215153	SAN	Carrillo	Daniel		Complete	3/26/2019	7/10/2019			
186730	SAN	Casarez, Jr.	Reymundo		Complete	8/1/17, 11/3/20	12/3/2020	7/14/2021		
201139	SAN	Caseres	Brannon		Complete	5/1/2018	2/13/2019			
187384	SAN	Castellanos	Daniel		Complete	11/2/2017				
201268	SAN	Castrejon	Martin		Complete	5/9/2018				
221788	SAN	Castro	Melissa		Complete	10/5/2021	10/15/2021	1/25/2023		
220345	SAN	Cazares	Rodolfo (Rudy)		Complete	5/11/2021	7/2/2021			
223760	SAN	Cervantes	Tomas		Complete	4/26/2022	6/10/2022	1/25/2023		
163377	SAN	Chapa	Perla		Complete	8/12/2008				
222206	SAN	Chavez	Eric		Complete	11/24/2021	1/14/2022	1/25/2023		

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183242	SAN	Chavez	Gabriel		Complete	5/2/2016	5/3/2016	6/7/2017			
177706	SAN	Chavez	Mariano		Complete	3/20/2017	6/2/2015	5/3/2016	6/7/2017		
185687	SAN	Cisneros	Victor		Complete	4/4/2017	6/7/2017				
	SAN	Cobb	Beau	12/9/2004							
186253	SAN	Cole	Cody		Complete	6/5/2017	12/5/2018	1/22/2020			
200424	SAN	Collier	Corte		Complete	2/28/2018	4/1/2018				
159709	SAN	Collier	Dorothy		Complete	8/15/2008					
223000	SAN	Collier	Matthew		Complete	2/24/2022	3/25/2022	1/25/2023			
224257	SAN	Collins	Clay		Complete	6/7/2022	7/22/2022				
187041	SAN	Colwell	Andrew		Complete	9/11/2017					
218465	SAN	Cordova	Gabriel		Complete	6/28/2021					
221300	SAN	Cornier	Fernando		Complete	8/17/2021	9/23/2021	1/25/2023			
200427	SAN	Cortez	Agapito (Pete)		Complete	2/28/2018	4/1/2018	2/13/2019	1/22/2020	12/3/2020	7/14/2021
200218	SAN	Cortez	Leonard		Complete	1/19/2018	4/1/2018	12/3/2020	7/14/2021	1/25/2023	
223398	SAN	Crawford	William (Justin)		Complete	3/29/2022	5/3/2022	3/9/2023			
224608	SAN	Cruz	Nicole		Complete	7/6/2022					
187555	SAN	Dahham	Ahmed (Adam)		Complete	12/4/2017	12/5/2018				
221693	SAN	Daigle	Trina		Complete	1/11/2022					
221860	SAN	Dantuluri	Siva		Complete	10/12/2021	11/12/2021				
223421	SAN	Davila	Cresencio (Chris)		Complete	3/29/2022	5/3/2022	1/25/2023			
200269	SAN	Davis	Hollis		Complete	1/29/2018	4/1/2018				
185014	SAN	Dechert	Kyle		Complete	4/23/2017					
221667	SAN	Delgado Jr.	Ricardo		Complete	10/27/2022	10/15/2021	1/25/2023			
223602	SAN	De La Riva	Cesar A.		Complete	4/12/2022	5/3/2022	1/25/2023			
216296	SAN	De La Riva	Cesar		Complete	7/31/2019	7/10/2020	7/14/2021	1/25/2023		
183937	SAN	De la Riva	Daniel		Complete	7/19/2016	9/20/2016	6/7/2017	12/5/2018	1/22/2020	7/14/2021
185736	SAN	de la Riva, Jr	Daniel		Complete	4/11/2017	6/7/2017				
215169	SAN	de la Riva	David		Complete	3/26/2019	7/10/2019				
221790	SAN	DeLaRosa	Ramon		Complete	10/5/2021	11/12/2021	1/25/2023			
213307	SAN	Denman	Clinton (Josh)		Complete	8/4/2018	12/5/2018				
218686	SAN	Denman	Dillon		Complete	10/20/2020	12/3/2020	7/14/2021			
220879	SAN	DeSanti	Scott		Complete	6/30/2021	9/23/2021				
174634	SAN	DeYoung	Paul		Complete		11/8/2012	12/11/2013			
221810	SAN	Diaz	Carlos		Complete	10/8/2021	11/12/2021				
221781	SAN	Diaz	Lucas		Complete	10/5/2021	11/12/2021	1/25/2023			
213111	SAN	Diaz	Sean-Mikael		Complete	7/25/2018	2/13/2019				
224865	SAN	Dierlam	Christopher (Chris)		Complete	8/9/2022	10/21/2022	1/25/2023			
220557	SAN	Di Giuseppe	Wesley		Complete	6/2/2021	7/14/2021				
223417	SAN	Dixon	Kain		Complete	3/28/2022	5/3/2022	1/25/2023			
217240	SAN	Donovan	Patrick		Complete	12/12/2019	3/25/2022	1/25/2023			
186497	SAN	Dolson	Vincent		Complete	7/11/2017	12/5/2018				
178660	SAN	Doty	Dusty		Complete	8/1/2016	6/2/2015	5/3/2016	6/7/2017		
185987	SAN	Downes	Elvia		Complete	3/21/2022					
201751	SAN	Drake	Dennis		Complete	6/20/2018	12/5/2018	1/22/2020	7/14/2021	3/9/2023	
213323	SAN	Drake	Shane		Complete	8/14/2018	7/10/2020	7/14/2021	3/9/2023		
174785	to AZH	Duffell	Michael		Complete	8/30/2012	6/2/2015	5/3/2016			
222347	SAN	Dylla	John		Complete	12/7/2021	2/1/2022				
213025	SAN	Eddy	Michael		Complete	7/16/2018	2/13/2019				
200274	SAN	Eesa	Ibrahim		Complete	1/29/2018	4/1/2018				
215275	SAN	Emmons	Adam		Complete	4/9/2019					
218958	SAN	Ervin-Hurtado	Ethan		Complete	11/1/2020	12/3/2020				
175323	SAN	Esparza	Richard		Complete	8/1/2016	12/1/2013	6/2/2015	5/3/2016	6/7/2017	7/10/2019
216301	SAN	Espinoza	Juan		Complete	7/31/2019					
224163	SAN	Estrada	Francisco		Complete	5/24/2022	6/10/2022	1/25/2023			
222119	SAN	Estrada	Jerry		Complete	11/9/2021	1/4/2022				
221868	SAN	Estrada	Jesse		Complete	10/12/2021	11/12/2021	1/25/2023			
218690	SAN	Evans	Kyle		Complete	10/23/2020	12/3/2020	7/14/2021	1/25/2023		
204628	SAN	Fackler	Rick		Complete	7/23/2018	4/1/2018	1/22/2020			
204639	SAN	Faller	Gary		Complete		4/1/2018				
223691	SAN	Fernandez	Armando		Complete	4/19/2022					
225199	SAN	Fernandez-Velazquez	Manuel (Alex)		Complete	10/10/2022	1/25/2023				
224655	SAN	Fitzgerald	Brett		Complete	7/12/2022					

EMPLOYEE NUMBER	DIVISION	LAST NAME	FIRST NAME	PRIOR 6 HOUR TRAINING	LSU COMPLETION STATUS	LSU COMPLETION DATE	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING
175311	SAN	Flores	Felix		Complete	7/26/2022				
215152	SAN	Flores	Gerardo		Complete	3/26/2019	7/10/2019			
216303	SAN	Flores	Jose		Complete	7/30/2019				
213169	SAN	Flores	Orlando		Complete	8/1/2018				
221787	SAN	Floyd	Brandon		Complete	10/5/2021	11/12/2021			
183628	SAN	Foley	Andrew		Complete	6/14/2016	9/20/2016	6/7/2017		
200770	SAN	Forar	Joshua		Complete	4/3/2018	4/11/2018	12/5/2018		
214130	SAN	Fox	Gary		Complete	11/7/2018	12/5/2018			
214940	SAN	Frazier	Jeffrey		Complete	2/26/2019				
181067	SAN	Frick	Jonathan		Complete	7/14/2016	5/3/2016	6/7/2017	12/5/2018	7/14/2021
218685	SAN	Fuentes	Denise		Complete	10/21/2020	12/3/2020	7/14/2021		
216484	SAN	Fuller	Corey		Complete	8/20/2019	7/10/2020			
187102	SAN	Ganey	Cody		Complete	9/18/2017	12/5/2018	1/25/2023		
201030	SAN	Gamboia	Samuel (Alec)		Complete	8/22/2018	12/5/2018	1/22/2020		
224605	SAN	Garcia	Alfredo		Complete	8/4/2022	9/6/2022			
218859	SAN	Garcia	David		Complete	11/10/2020				
224260	SAN	Garcia	Derek		Complete	6/7/2022	7/22/2022	1/25/2023		
174691	SAN	Garcia	Fernando		Complete		11/8/2012			
222345	SAN	Garcia	George		Complete	12/7/2021	2/11/2022	1/25/2023		
223838	SAN	Garibay	Christopher		Complete	5/3/2022				
214223	SAN	Gary	Michael-Eugene		Complete	11/13/2018	2/13/2019	7/14/2021	1/25/2023	
225129	SAN	Garza	Jonathan		Complete	9/20/2022	10/21/2022	1/25/2023		
200219	SAN	Garza	Justin		Complete	1/18/2018	4/11/2018			
225272	SAN	Garza	Trisha		Complete	10/20/2022	1/25/2023			
205096	SAN	Gemmer Jr	Donald		Complete	2/20/2020	4/11/2018	1/22/2020	7/14/2021	
216464	SAN	Ghavami	Nariman		Complete	8/20/2019	1/23/2020			
173720	SAN	Gibbins	Bradley		Complete	6/3/2016	12/11/2013	6/2/2015	5/3/2016	
220878	SAN	Gibbins	Troy J.		Complete	6/29/2021	3/25/2022	1/25/2023		
201619	SAN	Gill	David		Complete	6/5/2018	12/5/2018	1/22/2020		
223678	SAN	Glass	Isaac		Complete	4/19/2022	6/10/2022			
179328	SAN	Gloria	Carlos		Complete	8/16/2016	6/2/2015	5/3/2016	12/5/2018	
217695	SAN	Goldenberg	Joel		Complete	2/25/2020				
221670	SAN	Gonzales	Ben		Complete		10/15/2021			
201146	SAN	Gonzalez	Anthony		Complete	5/2/2018				
201140	SAN	Gonzalez	Jesse		Complete	5/1/2018	2/13/2019			
215705	SAN	Gonzalez	William		Complete	5/21/2019				
218813	SAN	Grefsrud	Christopher		Complete	11/3/2020	12/3/2020	7/14/2021	3/9/2023	
218935	SAN	Grimm	Ty		Complete	5/11/2021	7/14/2021	1/25/2023		
107039	AUS	Grove	James		Complete	8/8/2008				
224157	SAN	Guadiano	Aaron		Complete	5/24/2022	6/10/2022			
220855	SAN	Guerra	Daniel C.		Complete	6/30/2021	7/2/2021	7/14/2021		
219803	SAN	Guerra	Jesus		Complete	3/31/2021	4/9/2021			
219669	SAN	Guerrero	Desi		Complete	3/3/2021	4/9/2021	7/14/2021		
177989	SAN	Guerrero	Emmanuel		Complete	7/14/2016	5/3/2016	6/7/2017		
214814	SAN	Guerrero	Jose		Complete	2/13/2019	2/13/2019	7/14/2021	1/25/2023	
217356		Guevara	Gabriel				1/23/2020			
179957	SAN	Guevara	Nicholas				6/2/2015			
222346	SAN	Gutierrez	Tristan		Complete	12/7/2021	2/11/2022			
224609	SAN	Guzman	Marc		Complete	7/7/2022	9/6/2022	1/25/2023		
213620	SAN	Hagy	John		Complete		12/5/2018			
224415	SAN	Harris	Gavin		Complete	6/14/2022	7/22/2022	1/25/2023		
178990	SAN	Harris	Glover				6/2/2015			
205651	SAN	Harris	Jeremiah				6/2/2015	4/11/2018		
218687	SAN	Hartman	Keith		Complete	10/22/2020	12/3/2020	7/14/2021	1/25/2023	
221780	SAN	Haug	Michael (Alex)		Complete	10/5/2021	11/12/2021	1/25/2023		
222806	SAN	Hayes	Hayden		Complete	1/31/2022	10/21/2022			
223762	SAN	Hernandez	Dan		Complete	4/26/2022				
223600	SAN	Hernandez	David		Complete	4/12/2022	5/3/2022			
214219	SAN	Hernandez	Emerio		Complete	11/13/2018	12/5/2018			
222707	SAN	Herrera	Kevin		Complete	1/25/2022	2/11/2022	1/25/2023		
166958	SAN	Heymann	John		Complete	7/30/2008	5/3/2016			
200930	SAN	Hinze	Stephen		Complete	4/18/2018	12/5/2018	1/23/2020		

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200144	SAN	Hockaday	Ryan		Complete	1/10/2018	4/11/2018	1/22/2020		
222553	SAN	Holloway	Mason		Complete	1/4/2022	2/11/2022	1/25/2023		
213382	SAN	Horton	Brian		Complete	8/22/2018	12/5/2018			
201856	SAN	Horton	Christian		Complete	6/26/2018	12/5/2018	7/10/2019		
221045	SAN	House	John		Complete	7/21/2021	9/23/2021	1/25/2023		
217471	SAN	Houser	Stephen		Complete	8/9/2022				
186778	SAN	Huizar	Lawrence		Complete	8/21/2017				
174597	SAN	Hunt	Ronald		Complete		11/8/2012	12/11/2013		
216300	SAN	Huston	Jonathan		Complete	7/31/2019	1/23/2020	7/14/2021	1/25/2023	
222395	SAN	Ibarra	Jesus (Cristian)		Complete	12/14/2021	2/11/2022	1/25/2023		
221107	SAN	Ivy	Billie		Complete	7/27/2021				
223399	SAN	Jahn	Holden		Complete	3/29/2022	5/3/2022	1/25/2023		
219317	SAN	James	Dustin		Complete	1/12/2021	4/9/2021	7/14/2021	1/25/2023	
221479	SAN	James	John D.		Complete	9/8/2021	10/15/2021	1/25/2023		
220081	SAN	Johnson	Adrianna		Complete	3/4/2022				
186824	SAN	Johnson	Ryan T.		Complete	8/15/2017	12/5/2018	1/22/2020		
175730	SAN	Johnson	Ryan		Complete	6/10/2016	5/3/2016	6/7/2017	12/5/2018	2/12/2020
186777	SAN	Johnston	Martin		Complete	8/11/2017	12/5/2018			
219272	SAN	Jones	Gabriella		Complete	1/4/2021				
219323	SAN	Jones	Richard		Complete	1/12/2021				
214566	SAN	Juarez	Ramiro		Complete	1/17/2019	2/13/2019			
222766	SAN	Kangas	Raymond		Complete	2/1/2022	3/25/2022	3/9/2023		
182752	SAN	Karam	Cliffon		Complete	2/26/2019				
226681	SAN	Kincaid	Ryan		Complete	8/3/2023				
222244	SAN	King	Kent		Complete	12/7/2021	2/11/2022	1/25/2023		
221393	SAN	King	Phillip (Marcus)		Complete	8/25/2021	10/15/2021	1/25/2023		
213170	SAN	King	Stephen		Complete	7/31/2018	2/12/2020	7/14/2021	1/25/2023	
224259	SAN	Klebahn	Andrew		Complete	6/7/2022	7/22/2022			
224437	SAN	Klebahn	Edward		Complete	6/21/2022	7/22/2022			
219947	SAN	Koehler	Cory		Complete	3/29/2021	7/2/2021			
224867	SAN	Koszuta	Jimena		Complete	8/9/2022	9/6/2022	1/25/2023		
220342	SAN	Kramer	Brian		Complete	5/11/2021	7/2/2021			
222768	SAN	Kruthof	Joshua		Complete	1/31/2022	3/25/2022			
214991	SAN	Kuwamura	Lawrence		Complete	3/6/2019	7/10/2019			
213381	SAN	Lafferty	Jason		Complete	8/21/2018	12/5/2018	7/14/2021	1/25/2023	
214556	SAN	Lampel	Michael		Complete	1/7/2019	2/13/2019			
218684	SAN	Lara	Enrique		Complete	10/22/2020	12/3/2020	7/14/2021		
216893	SAN	Larsen	Erik		Complete	10/15/2019	1/23/2020	1/25/2023		
201262	SAN	Leal	Gilberto		Complete	5/9/2018				
224158	SAN	LeBlanc	Christopher (Chris)		Complete	5/24/2022	6/10/2022	1/25/2023		
207014	SAN	Leeves	Jason		Complete		4/11/2018			
218689	SAN	Lerma	Vanessa		Complete	10/23/2020	12/3/2020	1/25/2023		
221318	SAN	Levick	Taylor		Complete	8/17/2021	9/23/2021			
200565	SAN	Lewis	Brian		Complete	3/13/2018	4/11/2018	1/22/2020		
182064	SAN	Lohr	John		Complete	3/3/2022				
222999	SAN	Lorigoria	Ricardo (Rick)		Complete	2/23/2022	3/25/2022			
174938	SAN	Lopez	Eddie		Complete	7/12/2016	11/8/2012	12/11/2013	6/2/2015	5/3/2016
222262	SAN	Lopez	Jaime		Complete	11/30/2021	1/14/2022			
215276	SAN	Lopez	Juan		Complete	4/9/2019	7/10/2019			
176338	SAN	Lopez	Rusty		Complete	5/17/2016	12/11/2013	6/2/2015	5/3/2016	
222416	SAN	Lopez	Steven		Complete	1/13/2022	2/11/2022	1/25/2023		
224523	SAN	Loredo	Noe		Complete	6/27/2022	7/22/2022	1/25/2023		
220990	SAN	Lorenzana	Marvin (Tito)		Complete	7/13/2021	9/23/2021			
200933	SAN	Lowe	David		Complete	3/1/2021				
222191	SAN	Luna	Alan E.		Complete	11/16/2021	1/14/2022	1/25/2023		
216453	SAN	Luna	Jonathan		Complete	8/20/2019				
184568	SAN	Luna	Margarito		Complete	10/4/2016				
172349	SAN	Luthringer	Ernest (Jim)		Complete	9/9/2010	6/22/2010	11/8/2012	6/2/2015	5/3/2016
		Lutz	James		Complete		4/11/2018			
213800	SAN	MacCormack	Ryan		Complete	9/25/2018	2/13/2019	2/12/2020	7/14/2021	
219670	SAN	Mach	Hannah		Complete	2/9/2022	3/25/2022	1/25/2023		
222805	SAN	Mackey	Albert		Complete	2/1/2022	3/25/2022	1/25/2023		

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221783	SAN	Magee	Gatlin		Complete	10/6/2021	1/1/2021	1/25/2023		
200408	SAN	Marin	Gilberto		Complete	2/28/2018	4/1/2018			
223164	SAN	Maris	Michael		Complete	3/8/2022	10/21/2022	1/25/2023		
182326	SAN	Marquez	Gaspar		Complete	12/1/2015	5/3/2016	6/7/2017		
221253	SAN	Marquez	Jose		Complete	2/10/2022				
222397	SAN	Marquez	Timothy		Complete	12/14/2021				
219908	SAN	Marroquin	Leonard		Complete	3/23/2021	7/14/2021			
216014	SAN	Martell	Darwin		Complete	7/24/2019	7/10/2019			
219665	SAN	Martin	Cynthia		Complete	3/2/2021	4/9/2021			
180399	SAN	Martin	Eric		Complete	8/2/2016	6/2/2015	5/3/2016	12/5/2018	2/12/2020
179561	SAN	Martin	James		Complete	8/1/16, 3/29/21	6/2/2015	5/3/2016	6/7/2017	7/14/2021
181730	SAN	Martin	Kyle		Complete	2/13/2019	2/13/2019	7/14/2021		
222227	SAN	Martinez	Andrew (A.J)		Complete	11/30/2021	1/14/2022			
225128	SAN	Martinez	Samuel		Complete	9/28/2022	10/21/2022	1/25/2023		
223267	SAN	Mata	Jose (Joe)		Complete	3/16/2022	5/3/2022			
	SAN	Matthews	Michael		Complete	7/30/2008				
214805	SAN	Matthews	Scott		Complete	2/14/2019	2/13/2019			
221680	SAN	McDaniel	Austin		Complete	10/12/2021	11/12/2021	1/25/2023		
185536	SAN	McKinley	Michael		Complete	4/20/2017	6/7/2017			
224412	SAN	McKinney	Brian		Complete	6/14/2022	7/22/2022			
224707	SAN	McLaughlin	Bobby		Complete	7/19/2022	9/6/2022	1/25/2023		
224710	SAN	Medina	Eric		Complete	7/19/2022	1/25/2023			
223268	SAN	Meek	Matthew		Complete	3/15/2022	5/3/2022	1/25/2023		
224708	SAN	Mena	Joshua		Complete	7/19/2022	9/6/2022			
174932	SAN	Menchaca	Sergio		Complete		12/11/2013			
172569	SAN	Mendoza	Angel		Complete	9/2/2010	6/22/2010			
200564	SAN	Mendoza	Mark		Complete	3/12/2018	4/11/2018			
222261	SAN	Mercer	Taylor		Complete	1/4/2022	2/11/2022	1/25/2023		
180610	SAN	Merry	James		Complete	5/31/2016	6/2/2015	5/3/2016		
214806	SAN	Miller	Zachary		Complete	2/13/2019	2/13/2019			
174496	SAN	Mireles	Esteban		Complete		11/8/2012	12/11/2013		
216015	SAN	Moczygomba	Brandon		Complete	6/26/2019	7/10/2019			
200705	SAN	Modrow	Jon		Complete	3/28/2018	4/11/2018			
221481	SAN	Momin	Sana		Complete	9/8/2021	10/15/2021			
219324	SAN	Monarrez	Lorely		Complete	1/26/2021	4/9/2021	7/14/2021		
219054	SAN	Montemayor	Lorena		Complete	2/12/2022				
180516	SAN	Montero	Jorge Aguilar		Complete	2/22/17, 10/27/20	6/2/2015	5/3/2016	6/7/2017	12/3/2020
221301	SAN	Montoya	Santos		Complete	8/17/2021	9/23/2021			
179087	SAN	Morales	Jacob		Complete	8/15/2016	6/2/2015	5/3/2016		
223094	SAN	Morales	Zachary		Complete	3/1/2022	3/25/2022	1/25/2023		
214506	SAN	Moravits	Jeffrey		Complete	18/2019				
220344	SAN	Moreno	Jonathan		Complete	5/11/2021	7/2/2021			
201829	SAN	Moreno	Luis		Complete	6/26/2018				
201269	SAN	Morrison	Tyler		Complete	5/7/2018	12/5/2018	2/12/2020		
215161	SAN	Morrow	Patrick		Complete	3/26/2019	7/10/2019			
182749	SAN	Mott	Richard		Complete	6/9/2016	5/3/2016	6/7/2017		
214939	SAN	Mumma	Richard		Complete	2/26/2019				
185248	SAN	Muniz	Steven		Complete	1/30/2017	6/7/2017			
218860	SAN	Munk	Kevin		Complete	11/10/2020	12/3/2020	7/14/2021		
222816	SAN	Munoz	Walter		Complete	2/2/2022	10/21/2022			
226531	SAN	Murdock	Jeff		Complete	7/11/2023				
215321	SAN	Navarro	Alejandro (Alex)		Complete	4/17/2019	7/10/2019	1/25/2023		
218808	SAN	Neal	Evan		Complete	11/3/2020	12/3/2020	7/14/2021		
220052	SAN	Newman	Keirsta		Complete	4/5/2021	7/2/2021	1/25/2023		
200276	SAN	Newman	Timothy		Complete	7/21/2019	4/11/2018	1/22/2020		
224724	SAN	Ngraidong	Dominic		Complete	7/19/2022				
213249	SAN	Nichols	Donovan		Complete	8/7/2018				
224255	SAN	Nicolai	Robert		Complete	6/7/2022	7/22/2022	1/25/2023		
213168	SAN	Nieschwitz	John		Complete	7/31/2018				
220880	SAN	Nino	Arnulfo		Complete	6/29/2021	9/23/2021	1/25/2023		
216016	SAN	O'Connor	John		Complete	6/26/2019	7/10/2019	7/14/2021	1/25/2023	
222139	SAN	Okawaki	Ryan		Complete	11/16/2021	1/14/2022	1/25/2023		

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224256	SAN	Olazaba	Valerie		Complete	6/7/2022	7/22/2022	1/25/2023		
208488	SAN	Olivarez Jr	Rogelio		Complete	10/19/2018	4/11/2018	2/12/2020	7/14/2021	1/25/2023
213322	SAN	Olson	Robert		Complete	8/14/2018	12/5/2018	2/12/2020		
226769	SAN	Omohundro	Scott		Complete	8/15/2023				
214546	SAN	Oniveros	Priscilla		Complete	2/26/2019	2/13/2019	7/14/2021	1/25/2023	
221392	SAN	Ordonez	Joel		Complete	8/24/2021	10/15/2021			
226527	SAN	Ortiz	John		Complete	7/11/2023				
171936	SAN	Ott	Michael		Complete	10/23/2008	10/14/2009	6/22/2010	11/8/2012	
173633	SAN	Outtonson	Joe		Complete	12/14/2020	12/3/2020			
219802	SAN	Outtonson	Joshua		Complete	4/2/2021	4/9/2021	7/14/2021	1/25/2023	
222869	SAN	Overturf	Lonnie		Complete	2/8/2022	3/25/2022			
215274	SAN	Pacheco	Luis		Complete	4/10/2019	7/10/2019	7/14/2021		
221782	SAN	Pack	Jon		Complete	10/5/2021	11/12/2021	3/9/2023		
178995	SAN	Palomares	Terrence		Complete	5/7/2018	6/2/2015			
216010	SAN	Palomares	Zakry		Complete	6/26/2019	7/10/2019			
219734	SAN	Parthmore	Courtney		Complete	3/2/2021	4/9/2021	7/14/2021	1/25/2023	
186598	SAN	Peacock	Joshua		Complete	3/22/2017	6/7/2017			
220962	SAN	Pearson	Jerry		Complete	7/13/2021	4/18/2022	3/9/2023		
159001	SAN	Pena	Matthew	12/9/2004			10/14/2009	6/22/2010		
162297	SAN	Pena	James	5/4/2006	Complete	9/28/2010	6/22/2010	11/8/2012	12/11/2013	
186307	SAN	Perez	Alan		Complete	4/18/2018	12/5/2018	1/22/2020		
221480	SAN	Perez	Baldemar		Complete	9/10/2021	10/15/2021	1/25/2023		
219325	SAN	Perez	Elias		Complete	1/12/2021	4/9/2021	7/14/2021		
222870	SAN	Perez	Lino		Complete	2/8/2022	3/25/2022			
220341	SAN	Perez	Rubeinia (Ruby)		Complete	6/3/2021	7/14/2021			
213324	SAN	Perrin	Jon		Complete	8/14/2018	12/5/2018	2/12/2020	7/14/2021	
218150	SAN	Pineda	Matthew		Complete	8/4/2020	9/23/2020			
175171	SAN	Pollock	Daniel				11/8/2012			
221817	SAN	Pond	Bryson		Complete	10/6/2021	11/12/2021	1/25/2023		
216465	SAN	Poole	Nicholas		Complete	8/20/2019	1/23/2020			
226080	SAN	Pratt	John		Complete	5/23/2023				
222868	SAN	Quidachay	Michael		Complete	2/8/2022	3/25/2022			
224413	SAN	Railsback	Kyle		Complete	6/14/2022	7/22/2022	1/25/2023		
169543	SAN	Ralph	Samuel		Complete	7/15/2008	6/22/2010			
220346	SAN	Ramirez	Itzel		Complete	5/10/2021	7/2/2021			
209116	SAN	Ramirez	Jason		Complete	9/11/2018				
214804	SAN	Ramirez	Joshua		Complete	2/14/2019	2/13/2019			
174740	SAN	Ramirez	Ricardo				11/8/2012	12/11/2013	6/2/2015	
200250	SAN	Real	Colton		Complete	1/22/2018	4/11/2018			
214557	SAN	Reyes	Nick		Complete	1/17/2019	2/13/2019	7/14/2021		
200149	SAN	Reyes	Pedro		Complete	1/10/2018				
224866	SAN	Reyna	Josue		Complete	8/9/2022	10/21/2022			
224028	SAN	Reynoso	Andrew		Complete	5/24/2022	6/10/2022			
177825	SAN	Ridings	James		Complete	1/14/2022				
		Riebel	Steven				4/11/2018			
182189	SAN	Rienstra	Nicholas		Complete	11/10/2015	5/3/2016	12/5/2018	7/14/2021	1/25/2023
223347	SAN	Rios	Fernando		Complete	3/22/2022				
226530	SAN	Rivera	David		Complete	7/12/2023				
223348	SAN	Rivera	Rafael		Complete	3/29/2022	5/3/2022			
200281	SAN	Rivera	Raymond		Complete	1/29/2018	4/11/2018	1/22/2020		
184912	SAN	Robles	Kenton		Complete	5/2/2017	6/7/2017			
220965	SAN	Rodriguez	Francisco (Frank)		Complete	7/16/2021	9/23/2021	1/25/2023		
223109	SAN	Rodriguez	Javier (Anthony)		Complete	3/1/2022	3/25/2022			
213935	SAN	Rodriguez	Jonathan Z.		Complete	7/23/2021	4/9/2021	7/14/2021		
220524	SAN	Rodriguez	Jose		Complete	5/25/2021				
226074	SAN	Rodriguez	Joseph		Complete	5/23/2023				
212015	SAN	Rodriguez	Maximo		Complete	7/10/2018	12/5/2018	2/12/2020	7/14/2021	1/25/2023
219907	SAN	Rodriguez	Robert A.		Complete	3/23/2021	7/2/2021	1/25/2023		
220740	SAN	Rogers	Hannah		Complete	6/15/2021	9/23/2021	1/25/2023		
200174	SAN	Roman	Jonathan		Complete	1/9/2018	4/11/2018			
221435	SAN	Roman	Luis A.		Complete	8/31/2021	10/15/2021	1/25/2023		
221786	SAN	Rubio II	Marcelino		Complete	10/8/2021	11/12/2021	1/25/2023		

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223272	SAN	Ruelas	Reyes		Complete	3/15/2022	5/3/2022	1/25/2023		
219948	SAN	Ruiz	Justin		Complete	3/29/2021	7/2/2021			
180611	SAN	Ruley	Brian				6/2/2015	5/3/2016		
201137	SAN	Russell	Kody		Complete	5/1/2018	12/5/2018			
215170	SAN	Salazar	Heriberto Fuentes		Complete	3/26/2019	7/10/2019			
179959	SAN	Salgado	Lorenzo		Complete	5/31/2016	6/2/2015	5/3/2016	6/7/2017	12/5/2018
187254	SAN	Salgado	Lorenzo							
184570	SAN	Sam	Byron		Complete	10/4/2016	6/7/2017	12/5/2018		1/25/2023
219207	SAN	Samirpa	Abraham		Complete	1/5/2021	5/3/2016	6/7/2017	12/5/2018	7/14/2021
181732	SAN	Sanctiago	Jose		Complete	6/13/2016	7/2/2021	1/25/2023		
220086	SAN	Santos	David		Complete	4/13/2021	6/2/2015	5/3/2016	6/7/2017	12/5/2018
178812	SAN	Santos	Ramiro		Complete	8/1/2016	6/7/2017	2/13/2019	7/14/2021	1/25/2023
185612	SAN	Sarver	Jeffrey		Complete	3/21/2017	10/15/2021	1/25/2023		
221436	SAN	Satterfield	Trey		Complete	8/31/2021	4/9/2021	3/9/2023		
219949	SAN	Scates	Josh		Complete	3/30/2021	7/10/2019			
216011	SAN	Schultze	Jason		Complete	6/27/2019	3/25/2022	1/25/2023		
222982	SAN	Schurig	Ian		Complete	2/23/2022				
226240	SAN	Scott	Randall		Complete	6/7/2023				
213269	SAN	Seiko	James		Complete	8/7/2018	12/5/2018	2/12/2020	7/14/2021	1/25/2023
216261	SAN	Steenkenius	Michael		Complete	7/31/2019	1/23/2020	7/14/2021	1/25/2023	
226581	SAN	Sill	Ethan		Complete	7/17/2023				
219252	SAN	Silva	Justin		Complete	1/5/2021	7/14/2021	1/25/2023		
186798	SAN	Simpkins	Lance		Complete	12/29/2017				
221257	SAN	Simpson	Nicholas		Complete	8/10/2021	9/23/2021			
164744	SAN	Sims	Bryan	12/19/2006	Complete	8/8/2008	6/22/2010	11/8/2012		
220212	SAN	Skogman	Dustin		Complete	4/28/2021				
176885	SAN	Smidowski	David				12/11/2013			
187552	SAN	Smith	Eric		Complete	12/4/2017	4/11/2018	1/22/2020		
214507	SAN	Snider	Drew		Complete	1/8/2019	7/10/2019			
224160	SAN	Soto	Daniel		Complete	5/24/2022	6/10/2022			
221200	SAN	Soto	Eric		Complete	8/10/2021	10/15/2021			
215703	SAN	Starr	Eric		Complete	5/22/2019	7/10/2019	1/25/2023		
223487	SAN	Stautzenberger	James (Daniel)		Complete	4/4/2022	5/3/2022	1/25/2023		
182176	SAN	Stavinoha	Derrick		Complete	2/7/2022	2/11/2022	1/25/2023		
219318	SAN	Stellato	Timothy		Complete	1/12/2021	4/9/2021	7/14/2021	1/25/2023	
172217	SAN	Stevens	Scott				10/14/2009			
218688	SAN	Stribling	Michael		Complete	10/22/2020	12/3/2020	7/14/2021	1/25/2023	
169735	SAN	Stryk	Wade		Complete	8/18/2008	12/11/2013			
219052	SAN	Sump	Todd		Complete	12/8/2020				
224709	SAN	Svoboda	Curt		Complete	7/19/2022	9/6/2022			
220964	SAN	Szyman	Nicholas		Complete	7/13/2021	10/15/2021	1/25/2023		
210668	SAN	Tavarez	Henoc				4/11/2018			
213110	SAN	Taylor	Dallas		Complete	7/25/2018	12/5/2018	1/22/2020		
179958	SAN	Thies	Richard				6/2/2015			
180082	SAN	Thomas	Tim				6/2/2015			
226692	SAN	Todsen	Adrian		Complete	8/3/2023				
219209	SAN	Toney	Mahaja		Complete	1/5/2021	7/14/2021			
185686	SAN	Trevino	Omar		Complete	4/9/2017	6/7/2017	12/5/2018	7/14/2021	1/25/2023
200556	SAN	Tromblee	Stephen		Complete	3/14/2018	4/11/2018			
200895	SAN	Trujano	Luis		Complete	4/11/2018	12/5/2018			
187101	SAN	Unsworth	Ronald		Complete	9/18/2017				
215269	SAN	Urrabazo	Jose		Complete	4/9/2019				
201617	SAN	Valdez	David J.		Complete	6/5/2018	12/5/2018	1/22/2020	7/14/2021	
214813	SAN	Valdez	David		Complete	2/13/2019	2/13/2019	7/14/2021		
226211	SAN	Vance	Todd		Complete	6/7/2023				
216454	SAN	VanOverborg	Alan		Complete	8/20/2019	7/10/2020			
200958	SAN	Vargas	Xavier		Complete	4/18/2018				
220558	SAN	Vasquez	Anthony		Complete	6/3/2021	7/14/2021	9/23/2021		
178491	SAN	Vazquez	Fernando		Complete	5/20/16?	6/2/2015	5/3/2016		
186363	SAN	Vazquez	Jesus		Complete	2/22/2017	6/7/2017			
224414	SAN	Vazquez	Sergio		Complete	6/14/2022	7/22/2022	1/25/2023		

EMPLOYEE NUMBER	DIVISION	LAST NAME	FIRST NAME	PRIOR 6 HOUR TRAINING	LSU COMPLETION STATUS	LSU COMPLETION DATE	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING
221669	SAN	Velez	Jesus Orona		Complete	4/14/2022				
223765	SAN	Villarreal	Eli		Complete	4/26/2022	6/10/2022	1/25/2023		
216007	SAN	Villarreal	Jacob		Complete	6/28/2019	7/10/2019	7/14/2021		
157109	SAN (from HOU)	Villegas	Jose		Complete	9/9/2015	2/12/2009	6/6/2013	9/11/2014	12/3/2015
200153	SAN	Villegas Jr.	Rogelio		Complete	1/10/2018				
214803	SAN	Vinson	Kelly		Complete	2/13/2019	2/13/2019	1/25/2023		
185537	SAN	Wallek	Tyler		Complete	3/16/2017	6/7/2017	12/5/2018	7/14/2021	
200151	SAN	Walters	Marcus		Complete	1/9/2018	4/11/2018	1/25/2023		
219231	SAN	Waters	Jordan		Complete	1/5/2021	7/14/2021	1/25/2023		
166736	SAN	Weater	John		Complete	6/15/2016	12/11/2013	6/2/2015	5/3/2016	6/7/2017
215151	SAN	Weil	Cody		Complete	3/26/2019	7/10/2019			
225179	SAN	White	Mary		Complete	9/28/2022				
179536	SAN	Whorton	Michael				6/2/2015			
224654	SAN	Williams	Kenneth		Complete	7/12/2022				
218769	SAN	Willis	Randall		Complete	10/27/2020	12/3/2020			
226126	SAN	Wilson	Checotah		Complete	5/23/2023				
219384	SAN	Wise	Jordan		Complete	1/26/2021	4/9/2021	7/14/2021	1/25/2023	
201147	SAN	Wiseley	Chanze		Complete	5/1/2018				
215704	SAN	Wood	Christopher		Complete	5/22/2019	7/10/2019	7/14/2021		
219671	SAN (from HOU)	Woodard	Cody		Complete	2/23/2021	5/6/2021	12/9/2021	1/25/2023	
176089	SAN	Woods	Michael				12/11/2013			
220347	SAN	Wright	Cody		Complete	5/11/2021	7/2/2021			
224522	SAN	Wright	Robert		Complete	6/27/2022				
225854	SAN	Zamora	Lorenzo		Complete	5/22/2023	5/22/2023			
215702	SAN	Zamora	Ruben		Complete	5/22/2019	7/10/2019	7/14/2021	1/25/2023	
221784	SAN	Zarate	Lloyd		Complete	10/6/2021	11/12/2021			
222427	SAN	Zemault	Darrell		Complete	12/29/2021	2/11/2022			
183938	SAN	Zimmer	Kyle		Complete	7/19/2016	9/20/2016	2/13/2019	7/14/2021	1/25/2023
213932	SAN	Zolninger	Brandon		Complete	10/16/2018	12/5/2018			
226079	SAN	Zuniga-Perez	Jose		Complete	5/23/2023				
169414	SAN	Zumwalt	Willard (Michael)		Complete	8/19/2008	10/14/2009			

[illegible]

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



Green and Sustainable Services, LLC

Designing Programs for a Better Future – Developing Processes for Tomorrow & Building Projects for Today!

Thomas Lee Smith, M.B.A., Ph.D., P.E.

Chief Technical Officer

Certifications: BCEE, D.WRE, LEED AP, ENV SP, CPESC, CPSWQ

tsmith@grnserv.com

(940) 597-3723



Professional Experience

Thomas Smith has over 25 plus years of experience including: water treatment, wastewater treatment, water conservation, water efficiency, water resources planning and water reuse; environmental sustainability, regulatory permitting, green building programs, practices, inspections and verifications; smart grown initiatives; low impact development; energy efficiency and conservation measures; air quality and emissions reduction; onsite renewable energy generation; and storm water management. Prior to his duties at Green and Sustainable Services, Dr. Smith served in various executive management roles within the private sector and as a municipal planner in the public sector, and is skilled in working with public and community leaders.

Education

- Doctor of Philosophy in Environmental Science & Engineering – San Francisco Institute of Architecture – January 2014
- Master of Business Administration - Our Lady of the Lake University - May 1999.
- Bachelor of Science in Engineering - Louisiana State University - May 1985.

Professional Licenses and Certifications

- Licensed as a Professional Engineer in the State of Texas, Arizona and Washington
- Board Certified Environmental Engineer (specialties: water/wastewater & environmental sustainability)
- Diplomate, Water Resources Engineer Certification
- Leadership in Energy and Environmental Design Accredited Professional (LEED AP)
- Envision Sustainability Professional
- Certified Professional in Erosion and Sediment Control
- Certified Professional in Storm Water Quality

Professional Affiliations (Present and Past)

- Member and Former President of the North Texas Ground Water Conservation District Board of Directors
- Former member of the Denton County Transportation Authority Board of Directors

Technical Reports and Publications

- Published 13 times in Industry Publications from 1998 to 2016

Papers and Presentations

- 15 Technical Papers and Presentations from 1998 to 2016



Acknowledges that

Matthew Martin

has successfully completed the
Stormwater Management Training Program to become a

**Qualified Preparer of
Storm Water Pollution Prevention Plans
Texas**

0.2 CEUs | 2 PDHs

Courses Completed:

- Texas Construction General Permit
- Principles and Practices of:
 - Erosion Control
 - Sediment Control
 - Pollution Prevention
- On-Site Construction Inspections
- Preparation of a Construction SWPPP

Completion Date: 11/09/2019

Expiration Date: 11/08/2021

Certificate Number: 95b87f32



Andrew Demers

Andrew Demers, President



Acknowledges that

Matthew Martin

has successfully completed the
Stormwater Management Training Program to become a

**Qualified Compliance Inspector of Stormwater
Texas**

0.9 CEUs | 9 PDHs

Courses Completed:

- Texas Construction General Permit
- Principles and Practices of:
 - Erosion Control
 - Sediment Control
 - Pollution Prevention
- On-Site Construction Inspections

Completion Date: 11/09/2019

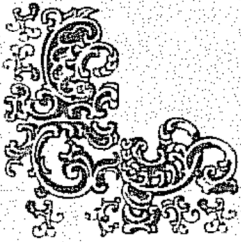
Expiration Date: 11/08/2021

Certificate Number: 95b87f32

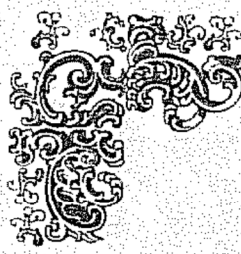


Andrew Demers

Andrew Demers, President



The CESSWI™ Application Review Committee
certifies that



Matthieu Daniel Martin

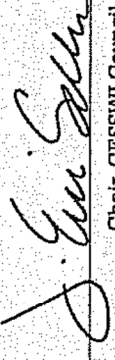
Subscribes to the Code of Ethics and has met the requirements
established by the CESSWI Council as a

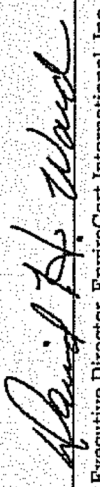
**Certified Erosion, Sediment and
Storm Water Inspector™**

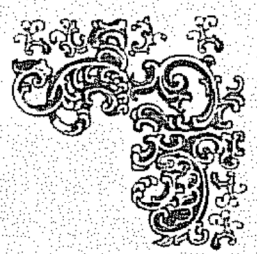
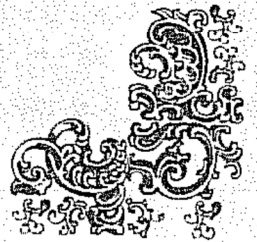
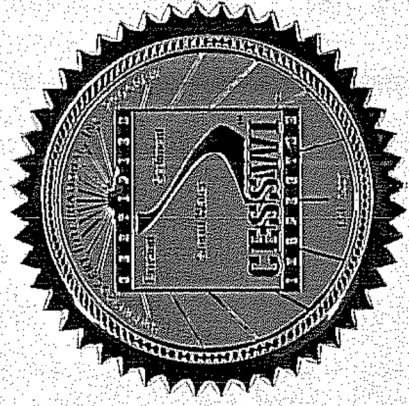
An EnviroCert International, Inc. Program

Certification Number: 0410

Certification Date: December 12, 2008


Chair, CESSWI Council


Executive Director, EnviroCert International, Inc.





Acknowledges that

Caleb Miles

has successfully completed the
Stormwater Management Training Program to become a

**Qualified Compliance Inspector of Stormwater
Texas**

1.6 CEUs | 16 PDHs

Courses Completed:

- Texas Construction General Permit
- Principles and Practices of:
 - Erosion Control
 - Sediment Control
 - Pollution Prevention
- On-Site Construction Inspections



Completion Date: 09/16/2021

Expiration Date: 09/16/2023

Certificate Number: 6844635c

Andrew Demers

Andrew Demers, President



Acknowledges that

David Becker

has successfully completed the
Stormwater Management Training Program to become a

**Qualified Compliance Inspector of Stormwater
Texas**

1.6 CEUs | 16 PDHs

Courses Completed:

- Intro to the TPDES General Permit Program
- Principles and Practices of:
 - Erosion Control
 - Sediment Control
 - Pollution Prevention
- On-Site Construction Inspections



Completion Date: 7/14/2017

Expiration Date: 7/14/2019

Certificate Number: 4435522

Andrew Demers

Andrew Demers, President

EnviroCert International, Inc.[®]

certifies that

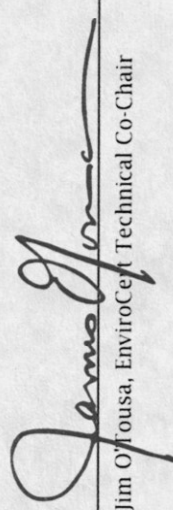
Ethan Schexnayder

Subscribes to the Code of Ethics and Professional Conduct and has met the requirements established for the CESSWI[™] Program as a

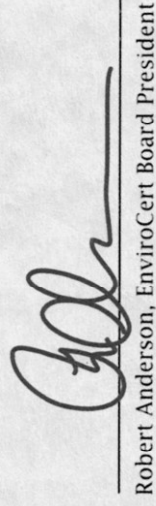
Certified Erosion, Sediment and Storm Water Inspector[™]

CESSWI[™] Number: 5549

Certificate Date: July 16, 2020


Jim O'Tousa, EnviroCert Technical Co-Chair


Michael R. Chase, EnviroCert Technical Co-Chair


Robert Anderson, EnviroCert Board President



The CESSWI[™] Certification was established in 2007



EnviroCert International, Inc.[®]

certifies that

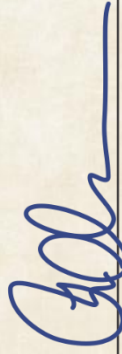
Joseph D. Safer

Subscribes to the Code of Ethics and Professional Conduct and has met the requirements established for the CESSWI[™] Program as a

Certified Erosion, Sediment and Storm Water Inspector[™]

CESSWI Number: **5577**

Certificate Date: **5/24/2022 9:53**

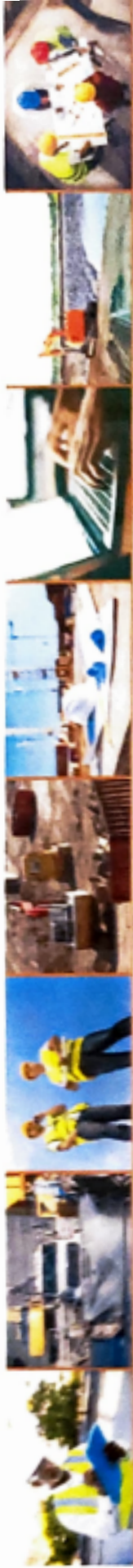


Robert Anderson, EnviroCert Board President



Jim O'Tousa, EnviroCert Technical Advisory Council





CERTIFICATE OF COMPLETION

presented to

Joseph Safer

who has successfully completed EPA's Construction General Permit (CGP) Site Inspector Training Course
and passed the final exam

Chris Kloss, Water Permits Division Director



Date Certified: 10/4/2022

Expiration Date: May 17, 2027

By completing this course and passing the final exam, Joseph Safer has complied with the CGP Part 6.3.a training requirements
for conducting construction inspections under the 2022 CGP.



EnviroCert International, Inc.

3054 Fite Circle, Suite 108, Sacramento, CA 95827
(279) 888-6911 | www.envirocert.org

Joseph D. Safer

CESSWI

Certified Erosion, Sediment and StormWater
Inspector

5577

CERTIFICATION NO.

7-Jun-2024

EXPIRES



NOTICE:

All certified professionals are required to adhere strictly to the Code of Conduct and Ethics and are responsible for maintaining their active status with ECI to exercise the rights and privileges under this certification.



CISEC, Inc.
P.O. Box 188
Parker, CO 80134
Ph: (720) 235-2783
Fax: 303-841-6383
E-mail: contactus@cisecinc.org




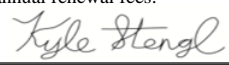
CISEC, Inc. Wallet Card

Name: Kyle Stengl

Order Date: November 2022

Below is your wallet card.

Please print this card and keep it in your wallet or your files.

		CISEC, Inc. Board of Directors certifies that Kyle Stengl <i>has demonstrated satisfactory evidence of sediment and erosion control inspection skills and successfully passed the certification examination and therefore, as required by CISEC, Inc., is authorized to use the title of</i> Certified Inspector of Sediment and Erosion Control 3269  November 30, 2023		As a CISEC Registrant, I agree to the following: <ul style="list-style-type: none">At all times, strictly abide by the CISEC, Inc. Code of Ethics,Perform all services in a professional manner and uphold professional standards in relating to the public, to other CISEC, Inc. registrants and to other professionals within the industry,Earn at least 12 CDH's each year after becoming a CISEC registrant andPay CISEC, Inc. annual renewal fees.		 CISEC, Inc. P.O. Box 188 Parker, CO 80134 720-235-2783 www.cisecinc.org	
CISEC #	CISEC, Inc. President	Expiration Date	 Signature (required)				

CISEC, Inc.

Board of Directors

certifies that

Kyle Stengl

has demonstrated satisfactory evidence of sediment and erosion control inspection skills and successfully passed the certification examination and therefore, as required by CISEC, Inc., is authorized to use the title of

Certified Inspector of Sediment and Erosion Control

Given this 29th day of November 2021



CISEC, Inc. President



CISEC, Inc. Vice President

CISEC 3269

Certification Number



CERTIFICATE OF COMPLETION

presented to

Kyle Stengl

who has successfully completed EPA's Construction General Permit (CGP) Site Inspector Training Course
and passed the final exam

Chris Kloss, Water Permits Division Director



Date Certified: 9/29/2022

Expiration Date: May 17, 2027

By completing this course and passing the final exam, Kyle Stengl has complied with the CGP Part 6.3.a training requirements
for conducting construction inspections under the 2022 CGP.





CISEC, Inc.
P.O. Box 188
Parker, CO 80134
Ph: (720) 235-2783
Fax: 720-600-2658
E-mail: contactus@cisecinc.org




CISEC, Inc. Wallet Card

Name: Chloe Masiakowski

Order Date: March 2022

Below is your wallet card.

Please print this card and keep it in your wallet or your files.

 <p>CISEC, Inc. Board of Directors certifies that Chloe Masiakowski <i>has demonstrated satisfactory evidence of sediment and erosion control inspection skills and successfully passed the certification examination and therefore, as required by CISEC, Inc., is authorized to use the title of</i> Certified Inspector of Sediment and Erosion Control 3342  March 31, 2023</p>	<p><i>As a CISEC Registrant, I agree to the following:</i></p> <ul style="list-style-type: none">▪ At all times, strictly abide by the CISEC, Inc. Code of Ethics.▪ Perform all services in a professional manner and uphold professional standards in relating to the public, to other CISEC, Inc. registrants and to other professionals within the industry.▪ Earn at least 12 CDH's each year after becoming a CISEC registrant and▪ Pay CISEC, Inc. annual renewal fees.  <p>CISEC, Inc. P.O. Box 188 Parker, CO 80134 720-235-2783 www.cisecinc.org</p>
<p>CISEC # CISEC, Inc. Expiration Date President</p>	<p>Signature (required)</p>



CERTIFICATE OF COMPLETION

presented to

Chloe Masiakowski

who has successfully completed EPA's Construction General Permit (CGP) Site Inspector Training Course
and passed the final exam



Chris Kloss, Water Permits Division Director

Date Certified: 9/20/2022

Expiration Date: May 17, 2027

By completing this course and passing the final exam, Chloe Masiakowski has complied with the CGP Part 6.3.a training requirements for conducting construction inspections under the 2022 CGP.





CISEC, Inc.
P.O. Box 188
Parker, CO 80134
Ph: (720) 235-2783
Fax: 720-600-2658
E-mail: contactus@cisecinc.org




CISEC, Inc. Wallet Card

Name: Henry Wesolowski

Order Date: March 2022

Below is your wallet card.

Please print this card and keep it in your wallet or your files.

 <p>CISEC, Inc. Board of Directors certifies that Henry Wesolowski <i>has demonstrated satisfactory evidence of sediment and erosion control inspection skills and successfully passed the certification examination and therefore, as required by CISEC, Inc., is authorized to use the title of</i> Certified Inspector of Sediment and Erosion Control 3341  March 31, 2023</p>	<p><i>As a CISEC Registrant, I agree to the following:</i></p> <ul style="list-style-type: none">▪ At all times, strictly abide by the CISEC, Inc. Code of Ethics.▪ Perform all services in a professional manner and uphold professional standards in relating to the public, to other CISEC, Inc. registrants and to other professionals within the industry.▪ Earn at least 12 CDH's each year after becoming a CISEC registrant and▪ Pay CISEC, Inc. annual renewal fees.  <p>CISEC, Inc. P.O. Box 188 Parker, CO 80134 720-235-2783 www.cisecinc.org</p>
<p>CISEC # CISEC, Inc. Expiration Date President</p>	<p>Signature (required)</p>



CERTIFICATE OF COMPLETION

presented to

Henry Lee Wesolowski

who has successfully completed EPA's Construction General Permit (CGP) Site Inspector Training Course
and passed the final exam

Chris Kloss, Water Permits Division Director



Date Certified: 10/8/2022

Expiration Date: May 17, 2027

By completing this course and passing the final exam, Henry Lee Wesolowski has complied with the CGP Part 6.3.a training requirements
for conducting construction inspections under the 2022 CGP.



CERTIFICATE OF COMPLETION

presented to

Marco Aguero

who has successfully completed EPA's Construction General Permit (CGP) Site Inspector Training Course
and passed the final exam

Chris Kloss, Water Permits Division Director



Date Certified: 11/4/2022

Expiration Date: May 17, 2027

By completing this course and passing the final exam, Marco Aguero has complied with the CGP Part 6.3.a training requirements
for conducting construction inspections under the 2022 CGP.





CISEC, Inc.

P.O. Box 188
Parker, CO 80134
Ph: (720) 235-2783
Fax: 303-841-6383

E-mail: contactus@cisecinc.org



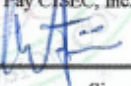

CISEC, Inc. Wallet Card

Name: Marco Aguero

Order Date January 2023

Below is your wallet card.

Please print this card and keep it in your wallet or your files.

		CISEC, Inc. Board of Directors certifies that Marco Aguero has demonstrated satisfactory evidence of sediment and erosion control inspection skills and successfully passed the certification examination and therefore, as required by CISEC, Inc., is authorized to use the title of <i>Certified Inspector of Sediment and Erosion Control</i> 3518  January 31, 2024		<i>As a CISEC Registrant, I agree to the following:</i> <ul style="list-style-type: none">At all times, strictly abide by the CISEC, Inc. Code of Ethics,Perform all services in a professional manner and uphold professional standards in relating to the public, to other CISEC, Inc. registrants and to other professionals within the industry,Earn at least 12 CDH's each year after becoming a CISEC registrant andPay CISEC, Inc. annual renewal fees. 		 CISEC, Inc. P.O. Box 188 Parker, CO 80134 720-235-2783 www.cisecinc.org	
CISEC #	CISEC, Inc.	Expiration Date	Signature (required)				
	President						

Storm Water Inspector Qualifications

Inspector's Name	
Training Received	Environmental Management Group, LLC 40 Hour SWP3 and Erosion & Sediment Control
Training Covered	TCEQ TXR150000 Construction General Permit ISWM Design Specification for Construction Controls
Education	
Storm Water Inspection Experience	



Ecopliant Environmental, Inc.

P.O. Box 188
Parker, CO 80134
Ph: (720) 235-2783
Fax: 720-600-2658
E-mail: contactus@ecopliant.org




Ecopliant Environmental, Inc. Ecopliant CISEC-IT Wallet Card

Name: Zachary Shaw

Order Date: April 2023

Below is your wallet card.

Please print this card and keep it in your wallet or your files.

 Ecopliant Environmental, Inc. Board of Directors certifies that Zachary Shaw <small>has demonstrated satisfactory evidence of sediment and erosion control inspection skills and successfully passed the certification examination and therefore, as required by Ecopliant Environmental, Inc. is authorized to use the title of</small> Certified Inspector of Sediment and Erosion Control In-Training 0655-IT  April 30, 2024 CISEC-IT # Ecopliant Environmental Expire Date President		<p>As a CISEC-IT Registrant, I agree to the following:</p> <ul style="list-style-type: none">▪ At all times, strictly abide by the Ecopliant CISEC Code of Ethics,▪ Perform all services in a professional manner and uphold professional standards in relating to the public, to other Ecopliant CISEC registrants and to other professionals within the industry, and▪ Pay the annual renewal fees. <p> Ecopliant ENVIRONMENTAL P.O. Box 188 Parker, CO 80134 720-235-2783 www.ecopliant.org</p>
<p>Signature (required) _____</p>		

Storm Water Inspector Qualifications

Inspector's Name	
Training Received	Environmental Management Group, LLC 40 Hour SWP3 and Erosion & Sediment Control
Training Covered	TCEQ TXR150000 Construction General Permit ISWM Design Specification for Construction Controls
Education	
Storm Water Inspection Experience	

Appendix "I" Delegation of Authority

A new Delegation of Signatory form must be submitted if the delegation changes to another individual or position.

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Kelly Keel, *Interim Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 7, 2023

Re: Confirmation of the Submission of the Construction Delegation of Signatories to Report

Dear Permittee,

This is an acknowledgement that you have successfully completed the application of Construction Delegation of Signatories to Report.

ER Account Number: ER091829

Application Reference Number: 578069

Delegation Application Contact: Matthew Martin

TPDES Permit(s) Number: TXR1590CS

Please be aware that TCEQ staff may contact your designated contact for any additional information.

If you have any questions, you may contact the Stormwater Processing Center by email at SWPERMIT@tceq.texas.gov or by telephone at (512) 239-3700.

Sincerely,
Stormwater Program
Water Quality Division

Texas Commission on Environmental Quality

Delegation of Signatories - CGP

multiple

Section 1# Site Information**Site Info#: 1**

Authorization Number, Site Name, Regulated Entity Number, Regulated
Entity Name, Physical Location

TXR1590CS|RUBY
CROSSING|RN111074217|RUBY
CROSSING|SOUTH OF THE
INTERSECTION OF CHARLES
WILLIAM ANDERSON LOOP AND
RED FOREST LANE, SAN ANTONIO,
TX, 78264

Customer (Applicant) Information

How is this applicant associated with this site?

Operator

What is the applicant's Customer Number (CN)?

CN602412207

Type of Customer

Corporation

Full legal name of the applicant:

Legal Name

Lennar Homes of Texas Land and
Construction, Ltd.

Texas SOS Filing Number

11452910

Federal Tax ID

752792018

State Franchise Tax ID

17527920189

State Sales Tax ID

Local Tax ID

DUNS Number

Number of Employees

21-100

Independently Owned and Operated?

No

Section 1# Delegated Information**Delegation#: 1**

1 Position

VP OF LAND DEVELOPMENT

2 Name

3 I certify that the person/title above is a duly authorized representative
described in 30 TAC 305.128.

Yes

Delegation#: 2

1 Position

DIRECTOR OF LAND
DEVELOPMENT

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Delegation#: 3

1 Position

LAND DEVELOPMENT MANAGER

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Delegation#: 4

1 Position

SR LAND DEVELOPMENT MANAGER

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Delegation#: 5

1 Position

DIVISION ENVIRONMENTAL MANAGER

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Delegation#: 6

1 Position

SAFETY AND ENVIRONMENTAL MANAGER

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Certification

1 I understand that this authorization does not extend to the signing of a Notice of Intent, Notice of Change, or Notice of Termination for obtaining coverage under a stormwater general permit.

Yes

Delegation Application Contact

Person TCEQ should contact for questions about this application:

1 Organization Name

EMG LLC

2 Prefix

3 First

MATTHEW

4 Middle

5 Last

MARTIN

6 Suffix

7 Credentials

8 Title

OWNER

Mailing Address

9 Address Type	Domestic
9.1 Mailing Address (include Suite or Bldg. here, if applicable)	2260 HIGHLAND VILLAGE RD SUITE 400
9.2 Routing (such as Mail Code, Dept., or Attn:)	
9.3 City	HIGHLAND VILLAGE
9.4 State	TX
9.5 ZIP	75077
10 Phone (###-###-####)	2149232086
11 Extension	
12 Alternate Phone (###-###-####)	
13 Fax (###-###-####)	
14 Email	INFO@EMG-LLC.NET

Certification

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

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

1. I am Brian Barron, the owner of the STEERS account ER051116.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Delegation of Signatories - CGP multiple.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OPERATOR Signature: Brian Barron OPERATOR

Customer Number:	CN602412207
Legal Name:	Lennar Homes of Texas Land and Construction, Ltd.
Account Number:	ER051116
Signature IP Address:	204.109.18.254
Signature Date:	2023-07-07
Signature Hash:	7478EA0501AC21C24BA381C95D8D6ED759B07B5EE8B196F18774E8D6D9DD614C

Form Hash Code at time of
Signature:

3D1AC50DDEF3C48B3F0B1F1A75C199F100762AE11F72F63FF7C84D08DC9BE972

Submission

Reference Number:

Submitted by:

Submitted Timestamp:

Submitted From:

Confirmation Number:

Steers Version:

The application reference number is 578069

The application was submitted by ER091829/Jana Kitts

The application was submitted on 2023-07-07 at 11:23:56 CDT

The application was submitted from IP address 68.203.79.133

The confirmation number is 478797

The STEERS version is 6.67

Additional Information

Application Creator: This account was created by Jana Kitts

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Erin E. Chancellor, *Interim Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 26, 2023

Re: Confirmation of the Submission of the Construction Delegation of Signatories to Report

Dear Permittee,

This is an acknowledgement that you have successfully completed the application of Construction Delegation of Signatories to Report.

ER Account Number: ER075896

Application Reference Number: 567773

Delegation Application Contact: Matthew Martin

TPDES Permit(s) Number: TXR1582GK, TXR1590CS, TXR1501DW, TXR1588HD, TXR1560HX, TXR1580EN, TXR15800W

Please be aware that TCEQ staff may contact your designated contact for any additional information.

If you have any questions, you may contact the Stormwater Processing Center by email at SWPERMIT@tceq.texas.gov or by telephone at (512) 239-3700.

Sincerely,
Stormwater Program
Water Quality Division

Texas Commission on Environmental Quality

Delegation of Signatories - CGP

multiple

Section 1# Site Information**Site Info#: 1**

Authorization Number, Site Name, Regulated Entity Number, Regulated Entity Name, Physical Location

TXR1582GK|ROSE VALLEY|RN111325577|ROSE VALLEY - PHASE 1A 2A & OFFSITE UTILITIES|GRAYTOWN ROAD AND FREUNBURG ROAD, CONVERSE, TX, 78109

Site Info#: 2

Authorization Number, Site Name, Regulated Entity Number, Regulated Entity Name, Physical Location

TXR1590CS|RUBY CROSSING|RN111074217|RUBY CROSSING|SOUTH OF THE INTERSECTION OF CHARLES WILLIAM ANDERSON LOOP AND RED FOREST LANE, SAN ANTONIO, TX 78264

Site Info#: 3

Authorization Number, Site Name, Regulated Entity Number, Regulated Entity Name, Physical Location

TXR1501DW|SAGE MEADOWS WEST|RN111141248|SAGE MEADOWS WEST|SAGE WAY AND FM 1518, ST HEDWIG, TX, 78152

Site Info#: 4

Authorization Number, Site Name, Regulated Entity Number, Regulated Entity Name, Physical Location

TXR1588HD|SAPPHIRE GROVE SUBDIVISION|RN111370029|SAPPHIRE GROVE - SUBDIVISION|0.25 MILES WEST FROM BECK RD AND NEW SULPHUR SPRINGS RD INTERSECTION, SAN ANTONIO, TX, 78263

Site Info#: 5

Authorization Number, Site Name, Regulated Entity Number, Regulated Entity Name, Physical Location

TXR1560HX|SOMERSET MEADOWS|RN111417200|SOMERSET MEADOWS|SOMERSET ROAD .15 MILES NORTH OF INTERSTATE 35 ACCESS ROAD, SAN ANTONIO, TX, 78221

Site Info#: 6

Authorization Number, Site Name, Regulated Entity Number, Regulated Entity Name, Physical Location

TXR1580EN|SPRING GROVE - UNIT 1 2 3|RN111194346|SPRING GROVE|ABBOTT ROAD 1.3 MILES NORTH OF N GRAYTON ROAD, ST HEDWIG, TX, 78152

Site Info#: 7

Authorization Number, Site Name, Regulated Entity Number, Regulated Entity Name, Physical Location

TXR15800W|SOUTHTON MEADOWS|RN110755295|SOUTHTON MEADOWS LD|WEST OF THE INTERSECTION OF IH-37 AND SOUTHTON ROAD, SAN ANTONIO, TX, 78223

Customer (Applicant) Information

How is this applicant associated with this site?

Operator

What is the applicant's Customer Number (CN)?

CN602412207

Type of Customer

Corporation

Full legal name of the applicant:

Legal Name

Lennar Homes of Texas Land and Construction, Ltd.

Texas SOS Filing Number

11452910

Federal Tax ID

752792018

State Franchise Tax ID

17527920189

State Sales Tax ID

Local Tax ID

DUNS Number

Number of Employees

21-100

Independently Owned and Operated?

No

Section 1# Delegated Information**Delegation#: 1**

1 Position

Owner

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Delegation#: 2

1 Position

Project Manager

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Delegation#: 3

1 Position

Director of Development

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Delegation#: 4

1 Position

Division Environmental Manager

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Delegation#: 5

1 Position

Reginal Environmental Manager

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Delegation#: 6

1 Position

Inspector Supervisor

2 Name

3 I certify that the person/title above is a duly authorized representative described in 30 TAC 305.128.

Yes

Certification

1 I understand that this authorization does not extend to the signing of a Notice of Intent, Notice of Change, or Notice of Termination for obtaining coverage under a stormwater general permit.

Yes

Delegation Application Contact

Person TCEQ should contact for questions about this application:

1 Organization Name	EMG LLC
2 Prefix	
3 First	MATTHEW
4 Middle	
5 Last	MARTIN
6 Suffix	
7 Credentials	
8 Title	OWNER

Mailing Address

9 Address Type	Domestic
9.1 Mailing Address (include Suite or Bldg. here, if applicable)	2260 HIGHLAND VILLAGE STE 400
9.2 Routing (such as Mail Code, Dept., or Attn:)	
9.3 City	HIGHLAND VILLAGE
9.4 State	TX
9.5 ZIP	75077
10 Phone (###-###-####)	2149232086
11 Extension	
12 Alternate Phone (###-###-####)	
13 Fax (###-###-####)	
14 Email	INFO@EMG-LLC.NET

Certification

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

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

1. I am Brian Barron, the owner of the STEERS account ER051116.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Delegation of Signatories - CGP multiple.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OPERATOR Signature: Brian Barron OPERATOR

Customer Number:

CN602412207

Legal Name:

Lennar Homes of Texas Land and Construction,

Ltd.
ER051116
204.109.18.254
2023-05-25
7478EA0501AC21C24BA381C95D8D6ED759B07B5EE8B196F18774E8D6D9DD614C
E825FD794BBD4B77A2C4104E97CC38C1793B88232E83EFC1AAABD515E5D17E5E

Account Number:
Signature IP Address:
Signature Date:
Signature Hash:
Form Hash Code at time
of Signature:

Submission

Reference Number: The application reference number is 567773
Submitted by: The application was submitted by ER075896/Kyle Sykes
Submitted Timestamp: The application was submitted on 2023-05-26 at 08:33:13 CDT
Submitted From: The application was submitted from IP address 75.128.180.183
Confirmation Number: The confirmation number is 469299
Steers Version: The STEERS version is 6.65

Additional Information

Application Creator: This account was created by Kyle Sykes

Appendix “J” Additional Information

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

Appendix “K” Correspondence

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

Appendix “L” Local Approval Letters / MS4 Stormwater Permits

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT



BEXAR COUNTY

STORM WATER QUALITY CONTROL MEASURES WORKSHEET

Project Name:

Ruby Crossing Unit 3A

MDP/Plat/Permit ID#:

LAND-PLAT-22-11800793

(if applicable)

Will Project disturb one (1) acre or more of land?

Yes

http://www.tceq.texas.gov/permitting/stormwater/TXR15_less_than_1_steps.html

Is Project part of a Common Plan of Development?

No

http://www.tceq.texas.gov/permitting/stormwater/common_plan_of_development_steps.html

Does plat have both residential and non-residential development?

No

Does the plat contain a Multi-Family, Commercial, or Industrial Use?

No

Please Enter Proposed Project Information

Is there a proposed site plan for Commercial development?

N/A

Master Stormwater Quality Permit #:

N/A

(if applicable)

Are you required to submit a WPAP or CZP to TCEQ?

No

Date Prepared:

March 2, 2023

WPAP or CZP TCEQ Permit Number:

N/A

EXISTING PROJECT INFORMATION			
Land Use	Project Area (Ac.)	Existing I.C. (s.f.)	Existing I.C. (%)
Existing Conditions	18.50	0	0.0%

PROPOSED PROJECT INFORMATION					
Land Use	Target I.C. %	Project Area (Ac.)	Proposed I.C. (s.f.)	Proposed I.C. (%)	Mitigation Required (Increase of I.C. % as compared to the greater of Target I.C. % or Existing I.C.)
Single-Family Residential	30%	18.50	380,334	47.2%	
Multi-Family Residential	50%			0.0%	
Commercial/Industrial	65%			0.0%	
Transportation	85%			0.0%	
Overall Project	30.0%	18.50	380,334	47.2%	17.2

NON-STRUCTURAL BMPS				
Non-Structural BMPs - See manual for options (Provide supporting documentation)				Points Achieved

Naturally Occurring Sensitive Features (Provide site plan)	% of Project Area Containing Sensitive Features	% of Features Preserved	Points Available	Points Achieved
Preservation of naturally occurring sensitive features (1 pt per 2.5% preserved area)	0.0%	0.0%	0-40	0.0
Landscaping & Tree Preservation (Provide plans & calculations)		% Post Construction Canopy	Points Available	Points Achieved
Post Construction Canopy Existing Preserved % (1 pt per 2% post construction canopy coverage)		0.0%	0-50	0.0
Post Construction Canopy Planted % (1 pt per 4% post construction canopy coverage)		36.6%	0-25	9.2
Stormwater Quantity Reduction (Provide fee calculation)		% of Project Area Paying into Stormwater Program	Points Available	Points Achieved
Payment or participation in a regional stormwater management program		100.0%	5	5.0

STRUCTURAL BMPs			
Structural BMPs (Provide plans & calculations)	% TSS Removed	Points Available	Points Achieved
Removal of TSS through structural BMPs (1 pt per 2% overall TSS treated)	0.0%	0-50	0.0
Stormwater Quantity Reduction (Provide plans & calculations)	% of Project Area Mitigating Runoff Quantity	Points Available	Points Achieved
Mitigate onsite stormwater increase to pre-development conditions	77.0%	15	11.6

STORM WATER MITIGATION FUND PARTICIPATION		
Payment of BMP Storm Water Mitigation Fund (50% of mitigation points)	Points Available	Points Achieved
Payment of storm water quality mitigation fund to substitute for permanent BMPs due to site restrictions	8.6	1.5

TOTAL MITIGATION POINTS PROVIDED POST PROJECT		27.2
* NOTE: This spreadsheet is to be used for projects in the unincorporated areas of Bexar County, as well as ETJ areas.	Required Points Remaining	0

STORM WATER MITIGATION FUND CALCULATION		Summary of Stormwater Permit Management Program Permits for this Project:
Impervious Cover over Target (sqft)	65441.20	This project requires a Storm Water Quality Permit and a Storm Water Quality Control Measures Permit Application to be obtained before any land disturbance activity begins on the site. The Storm Water Quality Permit Application will require planning materials and \$500 application fee to be submitted. Review materials detailing the storm water quality control measures identified on this worksheet will need to be submitted with the Storm Water Quality Control Measures Permit Application. The total Storm Water Quality Control Measure Permit Application fee will be \$250.
Storm Water Mitigation Fund Mitigation Points Available	8.6	
Total Calculated Fee:	\$ 9,816.18	
Storm Water Mitigation Fund to be Paid:	\$ 1,711.50	
* NOTE: Mitigation Fund to be Paid amount may be slightly higher due to rounding errors.		



Bexar County
Public Works
Environmental Services
233 N. Pecos - La Trinidad, Suite 420
San Antonio, Texas 78207
Voice: (210) 335-6700 Fax: (210) 335-6713

POST-CONSTRUCTION STORM WATER CONTROL MEASURE PERMIT

Owner Information	Contact Information
Name: Lennar Homes of Texas Land and Construction	Engineer: M.W. Cude Engineers
Agent :	Phone: (210) 681-2951
Address: 100 NE Loop 410, Suite 1155	Email: khudek@cudeengineers.com
San Antonio, Texas 78216	Contact Name: Kyle Hudek, P.E.
Phone: 210-403-6282	Phone:
Email: richard.mott@lennar.com	Email:

Site Information	
Name: Ruby Crossing Unit 3A	Project Type: Single Family Residential
Location: 2,000' west along Red Forest Lane from intersection of Loop 1604 and Red Forest Lane	Total Pervious Cover (SQFT): 425,351
	Total Impervious Cover (SQFT): 380,334
Number of Units: 1	Total Site (SQFT): 805,686
MDP #: 19-11100040	% of Impervious Cover: 47.2%
PLAT #: 22-1800793	Tree Permit Completed (Y/N): Y
BC SWQ #: FY20_1705	100 YR FEMA Floodplain (Y/N): N

Submittals	
Pre-Construction	Post-Construction
<input type="checkbox"/> Mitigation Scoring Sheet	<input checked="" type="checkbox"/> As Built Design
<input checked="" type="checkbox"/> BMP Calculations	<input checked="" type="checkbox"/> Engineer Certification
<input type="checkbox"/> BMP Design	<input type="checkbox"/> Maintenance Affidavit
<input type="checkbox"/> BMP Location Map	(Recorded in real property records)
<input type="checkbox"/> WPAP/CZP Approval Letter	<input type="checkbox"/> Certified Maintenance Provider
<input type="checkbox"/> Approved CoSA Tree Permit	
<input type="checkbox"/> Storm Water Mitigation Fund \$ _____	Name: Kyle Hudek, PE
FEE	Phone: 210-681-2951
<input type="checkbox"/> \$250 New Permit (Application + Review)	Email: khudek@cudeengineers.com
<input checked="" type="checkbox"/> \$50 Application	
<input type="checkbox"/> \$0 No Pay Permit	

↓ ADMINISTRATIVE USE ONLY ↓

Pre-Construction		Post- Construction Storm Water Control Measure Permit Number:
Reviewed By: _____	Date: _____	
Approval: _____ Accepted _____ Denied _____		To remit Post-Construction Storm Water Control Measure Permit fee, please make checks payable to: Bexar County Clerk 233 N. Pecos-La Trinidad, Ste. 420 San Antonio, TX 78207
Post-Construction		
Reviewed By: _____	Date: _____	
Approval: _____ Accepted _____ Denied _____		
Page 1 of 2		

Notice:

The permit is not complete until both Pre-Construction and Post-Construction portions of the permit have been approved. Failure to complete either or both sections will result in an incomplete permit and can be enforced through Section VIII of the "Bexar County Regulations for Storm Water Pollution Prevention" Court Order which may include civil penalties of up to \$1,000 a day for each violation.

The Permittee/ Owner agrees they SHALL:

1. Comply with the "Bexar County Regulations for Storm Water Pollution Prevention" Court Order
2. Comply with the "Bexar County Water Quality and Maintenance Manual"
3. Obtain other necessary permits from Bexar County for construction
4. Ensure that proper temporary storm water quality control measures are in place during construction and removed upon final stabilization
5. Record a maintenance affidavit with Bexar County
6. After construction, provide an engineer certification of ALL post construction storm water quality control measures permitted
7. After construction, maintain ALL post construction storm water control measures in working condition through a certified maintenance provider
8. Provide Bexar County with quarterly maintenance reports

**OTHER PERMITS MAYBE REQUIRED FROM BEXAR COUNTY DEVELOPMENTAL SERVICES,
ENVIRONMENTAL SERVICES, OR FIRE MARSHAL BEFORE CONSTRUCTION CAN BEGIN. THIS
PERMIT IS NOT A SITE DEVELOPMENT PERMIT.**

*I understand and agree that the holder of this permit expressly grants to Bexar County a right of entry to the property to inspect and verify maintenance of those Post Construction Storm Water Control Measures covered by this permit. Furthermore, I understand and agree that if ownership should change, the new owner shall be made aware of the requirement to obtain a renewal permit and the resulting continuation of maintenance and documentation required by the Bexar County Storm Water Pollution Prevention Court Order.

Owner/ Authorized Agent (Print Name)

Richard Mott

Signature**Title****Date**

↓ ADMINISTRATIVE USE ONLY ↓

MASTER PERMIT

Number	Site Name	Unit #s
--------	-----------	---------

SUB PERMIT(S)

Number	Site Name	Unit #s



Bexar County Public Works Department

DEVELOPMENT SERVICES DIVISION

1948 Probandt

San Antonio, Texas 78214-1240

E-mail: swq@bexar.org

210.335.6700 (voice) 210.335.6713 (fax)

STORM WATER QUALITY SITE DEVELOPMENT PERMIT APPLICATION

TYPE: ☒ New Project (\$500 Application Fee) ☐ Major Amendment (\$250 Application Fee) ☐ Minor Amendment (No Fee)

PROJECT INFORMATION

Project Name: Ruby Crossing Unit 3A		Anticipated Work Start Date: 06/01/2023	
Location: Intersection of Red Hill & Red Forest Lane		Anticipated Work Stop Date: 06/01/2025	
Application Date: 03/02/2023		Total Project Area (acres): 18.496	Total Disturbance Area (acres): 18.496
Obtained Tree Permit? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	ESA Survey Completed? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	Project Limits Contain Floodplain: No	

CONTACT INFORMATION

Property Owner/Developer: Lennar Homes of Texas Land and construction, LTD.		Consulting Firm: Cude Engineers, LLC	
Contact Name: Richard Mott	Contact Phone: 210-403-6200	Contact Name: Kyle Hudek, PS	Contact Phone: 210-681-2951
Address: 100 NE Loop 410, Ste 1155, San Antonio, TX. 78261		Address: 4122 Pond Hill Rd., Ste. 101, San Antonio, TX. 78231	
Contact E-mail: richard.mott@lennar.com		Contact E-mail: khudek@cudeengineers.com	
Site Clearing Contractor:		Vertical Construction Contractor:	
Contact Name:	Contact Phone:	Contact Name:	Contact Phone:
Address:		Address:	
Contact E-mail:		Contact E-mail:	
Sitework On-Site Inspection Company:		Vertical Construction On-Site Inspection Company:	
Inspector Name:		Inspector Name:	
Inspector E-mail:		Inspector E-mail:	

WORK ACTIVITIES (Check all that apply)

<input checked="" type="checkbox"/> Clearing & Grading	<input checked="" type="checkbox"/> Street and Drain Construction	<input type="checkbox"/> Home Building
<input checked="" type="checkbox"/> Fill	<input checked="" type="checkbox"/> Detention Pond	<input type="checkbox"/> Amenity Center
<input type="checkbox"/> Demolition	<input type="checkbox"/> Parking Lot	Non-Single Family Vertical Construction, specify:
<input checked="" type="checkbox"/> Wet Utility (Sewer, Water)	<input type="checkbox"/> OSSF (Septic System) Permit #: _____	<input type="checkbox"/> _____
<input checked="" type="checkbox"/> Dry Utility (Electric, Fiber, Cable, Gas)	<input type="checkbox"/> Other, specify: _____	(eg, Shell building, Retail, Office, Multi-family, etc)
<input type="checkbox"/> Offsite Utility (<input type="checkbox"/> Wet <input type="checkbox"/> Dry)		

AMENDMENT TYPE (Check all that apply) SWQ# _____ (Required)

MINOR (E-mail Inspector/Storm Water Engineer Assistant)	MAJOR
<input type="checkbox"/> Change of Contractor/Inspector Contact Information/Project Name <input type="checkbox"/> Minor Field Modification (ex. Change of BMP Type) <input type="checkbox"/> Providing Offsite Utility Storm Water Permit Number(s) <input type="checkbox"/> Schedule Change	<input type="checkbox"/> Change of Project Limits <input type="checkbox"/> Major Field Modification (ex. Increased Disturbance Area) <input type="checkbox"/> Increased Impervious cover

NOTE: Change of Owner Requires a New Permit

Submittal Requirements

<input checked="" type="checkbox"/> One (1) paper set and one (1) PDF of Storm Water Pollution Prevention Plan.	Questions? E-mail swq@bexar.org or call 210-335-6700, press 5 followed by 6
<input checked="" type="checkbox"/> Narrative identifying items noted in Section 5.04.4 A-E of the Bexar County Regulations for Storm Water Pollution Prevention Court Order	Submit application and supporting materials to: 1948 Probandt, San Antonio, Texas, 78214-1240
<input checked="" type="checkbox"/> Detailed site plan identifying items noted in Section 5.04.4 F of the Bexar County Regulations for Storm Water Pollution Prevention Court Order	
<input type="checkbox"/> Potential Water Of The U.S. (WOTUS) Acknowledgment Form https://www.bexar.org/2059/Stormwater-Quality-Site-Development-Perm	
<input type="checkbox"/> De-watering Plan (if applicable)	ADMINISTRATIVE USE ONLY
<input type="checkbox"/> Copy of TCEQ Notice of Intent (NOI) Number (if applicable, New Permit Only)	Site Development Permit Number: _____
<input type="checkbox"/> Copy of TCEQ Notice of Change (NOC) (if applicable, Amendment (Major/Minor) Only)	Reviewed By: _____
<input checked="" type="checkbox"/> Application Fee (Checks payable to: Bexar County Clerk)	Determination: _____ Issue Permit _____ Denied _____ Date: _____
	Application Submitted: _____

NOTICE

It is the obligation of the Owner/Operator to ensure that erosion/sediment control measures SHALL be in place prior to commencement of grading, or stockpiling and shall be maintained throughout construction as per plan. The Owner expressly grants the County a right of entry during construction to enter the site described in this application, to inspect the property, and provide direction for necessary sediment/erosion control if the Permittee fails to do so. Failure to properly install sediment/erosion control will result in Stop Work Order, re-inspection and/or further penalties from County to include a \$1,000 fine or lien.

PERMITTEE AND THEIR CONTRACTORS SHALL:

- 1 Comply with the "Bexar County Regulations for Storm Water Pollution Prevention" Court Order.
- 2 Notify Bexar County Storm Water Quality Inspector identified on the issued permit by text or e-mail at least two (2) working days before starting construction.
- 3 Install erosion and sediment control BMPs before beginning work on site.
- 4 Implement the approved plans throughout the site development.
- 5 If BMPs need maintenance, repair or replacement; then perform task as soon as possible within time limit set by Bexar County inspector or Stop Work Order may be issued until task is completed and re-inspected by Bexar County Inspector.
- 6 Install additional measures at the direction of the County due to changed site conditions, BMP ineffectiveness or BMP failure as soon as possible within time limit set by County Inspector or Stop Work Order may be issued until task is completed and re-inspected by County Inspector.
- 7 Revise the Storm Water Pollution Prevention Plan and site map when changes are made on site.
- 8 Send inspection reports to Bexar County Storm Water Program at least bi-monthly via e-mail (swq@bexar.org) or fax (210-335-6713).
- 9 Within fourteen (14) days of cease of construction operations, temporary stabilization needs to be in place.
- 10 Within twenty one (21) days of cease of construction operations, final stabilization needs to be in place.
- 11 Remove all temporary BMPs prior to Site Development permit being terminated.
- 12 Send Notice Of Termination of the Bexar County Site Development Permit with any supporting materials (e.g., Dention Pond Conformance Letter, Private Street and/or Drain Conformance, etc) to County when site reaches permanent stabilization.
- 13 Permit will not be terminated until Bexar County Inspector inspects site and approves the termination of permit.


This permit is issued to the permittee for a specific operation and location identified in the Storm Water Pollution Prevention plan submitted with this application. It cannot be reassigned, transferred or sold to a new user, different premises or a new or changed operation by a new owner unless the new owner or designee obtains a separate Site Development Permit.

** I certify under penalty of law that I have read and understand the terms and conditions of the Texas Pollutant Discharge Elimination System (TPDES) General Permit for Storm Water Discharges for Construction Activities that authorizes the storm water discharges associated to activities from the construction site identified as part of this certification. Further, by my signature, I understand that I am fully responsible, along with all other contractors and sub-contractors who are performing work activities under this contract to comply with all provisions and requirements of the TPDES General Permit for Storm Water Discharges from Construction Activities and this Site Development Permit Application for Storm Water Quality.*

Other permits may be required from Bexar County Public Works or from the Bexar County Fire Marshall for site development to begin.

NOTE: A signed Building Permit Authorization is not a Site Development Permit Issued by the Fire Marshall Office.

24 Hour Emergency Contact Phone Number:

Authorized Agent (Print Name): Richard Mott	Signature:  904C110AE8D14AE
Title: VP of Land Development	Date: 3/2/2023

Appendix “M” Local Regulations / MS4 Construction Stormwater Discharge Regulations

The following local regulations, ordinances and requirements have been included for reference and are not intended to be enforceable by federal governments but may be enforceable by state governments. (Local Qualified or State Delegated Programs). The local requirements are provided herein to assist in maintaining the SWPPPs consistency with local requirements for soil and erosion control and stormwater management. These local requirements will be updated to include changes or additional requirements during the period of coverage under the CGP.

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT



BEXAR COUNTY COMMISSIONERS COURT

PUBLIC WORKS DEPARTMENT Environmental Services

COURT ORDER

ORDER authorizing approval to revise two Commissioner's Court Orders to include new Federal and State regulatory requirements:

- 1) "Bexar County Regulations for Storm Water Pollution Prevention" replacing the October 23, 2007 Commissioner's Court Order implementing recent changes required by the Texas Commission on Environmental Quality (TCEQ) to the Storm Water Pollution Prevention Program and
- 2) "An Order of the Bexar County Commissioners Court Assessing Reasonable Fees to Fund the Storm Water Pollution Prevention Program" replacing the September 2, 2008 Commissioner's Court Order with no fee increase and providing a discount for amended permits.

PASSED THIS 17th DAY OF March, 2015.



 **ORIGINAL**

BEXAR COUNTY REGULATIONS FOR STORM WATER POLLUTION PREVENTION

SECTION I: GENERAL PROVISIONS

- 1.01 Authority
- 1.02 Purpose
- 1.03 Area of Jurisdiction
- 1.04 Effective Date
- 1.05 Fees
- 1.06 Construction, Precedence, and Interpretation
- 1.07 Severability

SECTION II: DEFINITIONS

SECTION III: PUBLIC EDUCATION, OUTREACH AND INVOLVEMENT

SECTION IV: ILLICIT DISCHARGE DETECTION AND ELIMINATION

- 4.01 Purpose
- 4.02 Prohibition of Illicit Discharges
- 4.03 Prohibition of Illicit Connections
- 4.04 Suspension of MS4 Access
- 4.05 Monitoring and Detection of Illicit Discharges and Connections

SECTION V: CONSTRUCTION PERMITTING AND INSPECTION

- 5.01 Purpose
- 5.02 Site Development Permit
- 5.03 Exempt Activity
- 5.04 Application Requirements
- 5.05 Modifications and Termination
- 5.06 Construction Inspection Program
- 5.07 Industrial Storm Water Sites

SECTION VI: POST-CONSTRUCTION STORM WATER MANAGEMENT

- 6.01 Purpose
- 6.02 Applicability
- 6.03 Compliance
- 6.04 Permanent On-Site Facilities
- 6.05 Inspections
- 6.06 Incorporation by Reference

**SECTION VII: POLLUTION PREVENTION AND GOOD HOUSEKEEPING
FOR BEXAR COUNTY FACILITIES**

- 7.01 Purpose
- 7.02 Good Housekeeping and Best Management Practices
- 7.03 Training
- 7.04 Waste Disposal
- 7.05 Special Applications

SECTION VIII: ENFORCEMENT

- 8.01 Purpose
- 8.02 Administrative Enforcement
- 8.03 Criminal Penalties
- 8.04 Enforcement of State Statutes
- 8.05 Civil Enforcement

SECTION IX: RECORDKEEPING AND ANNUAL REPORTING

- 9.01 Purpose
- 9.02 Recordkeeping
- 9.03 Annual Reporting

SECTION I: GENERAL PROVISIONS

1.01 AUTHORITY: These regulations are adopted by the Commissioners Court of Bexar County, Texas, acting in its capacity as the governing body of Bexar County. Bexar County adopts these Regulations under the authority of Texas Local Government Code, Section 573. These Regulations are necessary to comply with the requirements of Texas Pollutant Discharge Elimination System (TPDES) General Permit TXR040000. These Regulations may be amended at any time by a majority of Commissioners Court.

1.02 PURPOSE: The purpose of these regulations is to prevent storm water pollution by developing, implementing and enforcing storm water management guidelines and controls to reduce the discharge of pollutants from any conveyance or system of conveyance owned or operated by the County that is designed for collecting and conveying storm water.

1.03 AREA OF JURISDICTION: These Regulations apply in all unincorporated areas of Bexar County, Texas.

1.04 EFFECTIVE DATE: These Regulations shall be in full force and effect from and after their passage and approval by Bexar County Commissioners Court.

1.05 FEES: Under a separate Order, Bexar County Commissioners Court shall set reasonable fees to defray the cost of administering and enforcing these Regulations including, but not limited to, a Storm Water Utility Fund Fee and a Site Development Permit Fee. Properties that are exempt from ad valorem taxation are also exempt from this fee.

1.06 CONSTRUCTION, PRECEDENCE, AND INTERPRETATION

1.06.1 These Regulations shall be construed liberally to accomplish their purpose and intent.

1.06.2 In the event of any conflict between these Regulations and any order, resolution, or rule adopted by the Texas Commission on Environmental Quality, whichever imposes the more stringent standards or restrictions will prevail.

1.06.3 Bexar County Commissioners Court delegates appropriate authority to the Environmental Services Department to develop the necessary procedures and processes to administer the implementation of the Regulations.

1.06.4 The Director of Public Works or the Director's Designated Representative shall, within the purpose of these Regulations, resolve any question regarding any interpretation of these Regulations, standards or restrictions.

1.07 SEVERABILITY: If any provision of these Regulations or the application thereof to any person or circumstance is held invalid, the validity of the remainder of these Regulations and the application thereof to other persons and circumstances shall not be affected.

SECTION II: DEFINITIONS

Best Management Practices (“BMPs”): Schedules of activities, prohibitions of practices, general good house-keeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to storm water, receiving waters, or storm water conveyance systems. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Clean Water Act: The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.

Clearing: Activity that removes the vegetative surface cover of a 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 plans, 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 ¼ mile or more apart, and the areas 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.

Community Association: A group of property owners or residents including, but not limited to, home owner associations or neighborhood associations that were identified as the responsible party for on-going maintenance of the permanent BMPs once final stabilization of the developed site has been completed.

Construction Activity: Activities subject to TPDES Construction Permit TXR150000 and Bexar County Storm Water Permit. Such activities include but are not limited to clearing and grubbing, grading, excavating, fill, and demolition.

Construction Site Operator: The operator associated with a construction project that meets the following criteria: (a) the operator has operational control over construction plans and specifications to the extent necessary to meet the requirements and conditions

of the TPDES Construction Permit TXR150000 and the Bexar County Storm Water Permit; and (b) the operator has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a storm water pollution prevention plan (SWP3) for the site or other permit conditions (i.e., they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

Control Measure: Any BMP or other method used to prevent or reduce the discharge of pollutants.

Conveyance: Curbs, gutters, man-made channels and ditches, drains, pipes, and other features designed or used for flood control or to otherwise transport storm water runoff.

CZP: (Contributing Zone Plan) A plan that outlines best management practices that will be implemented in order to protect water quality when a regulated activity is conducted in the contributing zone of the Edwards Aquifer.

Discharge: Includes to deposit, conduct, drain, emit, throw, run, allow to seep, or otherwise release or dispose of, or to allow, permit, or suffer any of these acts or omissions. TWC 26.001(20); when used without a qualifier, refers to the discharge of storm water runoff or certain non-storm water discharges as allowed under the authorization of TPDES General Permit TXR040000.

Drainage Way: Any channel, man-made or natural that conveys surface runoff.

Erosion Control: A measure that prevents erosion.

Erosion and Sediment Controls: A set of BMPs prepared by or under the direction of a licensed professional engineer or other approved professional indicating the specific measures and sequencing to be used to control sediment and erosion on a development site during and after construction.

FEMA: Federal Emergency Management Agency

Field Correction Notice (FCN): A notice issued by Bexar County Environmental Services informing the operator, owner, entity, or community association of non-compliance with these regulations and requiring immediate mitigation or correction. .

Final Stabilization: A construction site status where either of the following two conditions are met:

- (a) All soil disturbing activities at the site have been completed and a uniform (i.e., evenly distributed, without large, bare areas) perennial vegetative cover with a density of 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, gabions, or geotextiles) 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 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 BMP's, 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 storm water pollution prevention plan (SWP3).
- (c) For construction projects on land used for agricultural purposes (e.g. pipelines across range or crop 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 a surface water and areas that are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of (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.

FLOOD PLAIN OR FLOOD-PRONE AREA: Means any land area susceptible to being inundated by water from any source in accordance with FEMA approved flood map (see definition of flooding)

FLOOD OR FLOODING: Means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (a) The overflow of inland or tidal waters.
- (b) The unusual and rapid accumulation or runoff of surface waters from any source.

Grading: Excavation or fill of material, including the resulting conditions thereof.

Hazardous Materials: Any material, including any substance, waste, or combination thereof that because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Illicit Discharge: An unauthorized discharge; any discharge to a municipal separate storm sewer system that is not entirely composed of storm water, except discharges pursuant to this general permit or a separate authorization and discharges resulting from emergency fire-fighting activities,(direct quote from TXR40000), except as exempted in Section V of these regulations,

Illicit Connections: An unauthorized connection: An illicit connection is defined as either of the following: Any drain or conveyance, whether on the surface or subsurface, which allows an illicit discharge to enter the MS4 including but not limited to any conveyances which allow any non-storm water discharge including sewage, process wastewater, and wash water to enter the MS4 and any connections to the MS4 from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency or, any drain or conveyance connected from a commercial or industrial land use to the MS4 which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

Industrial Site: any site that is described under the requirements of TCEQ Multi-Sector General Permit for Storm Water – TXR050000.

Infiltration: Water other than wastewater that enters a sewer system, including sewer service connections and foundations drains, from the ground through a means such as defective pipes, pipe joints, connections, or manholes.

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, and original purpose of a ditch, channel, or other similar storm water conveyance.

Outfall: That point where a discharge exits a pipe, channel, or other conveyance.

Maximum Extent Practicable (“MEP”): The technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in storm water discharges that was established by CWA article 402(p). A discussion of MEP as it applies to small MS4s is found at 40 CFR 122.34.

MS4: See Small Municipal Separate Storm Sewer Systems.

MS4 Operator: Entity that is responsible for the management and operation of the municipal separate storm sewer system, and is subject to the provisions of TPDES Construction Permit TXR150000 and General Permit TXR040000.

National Pollutant Discharge Elimination System (“NPDES”), Storm Water Discharge Permit: Means the National Pollutant Discharge Elimination System under which the Administrator of the United States Environmental Protection Agency can delegate permitting authority to the State of Texas in accordance with Section 402(b) of the Federal Water Pollution Control Act. TWC 26.001(23)

Non-Storm Water Discharge: Any discharge to the MS4 that is not composed entirely of storm water.

Notice of Change (“NOC”): A written submission to the executive director from a discharger authorized under permit, providing changes to information that was previously provided in the notice of intent form.

Notice of Intent (“NOI”): A written submission to the executive director from an applicant requesting coverage under TPDES Construction Permit TXR150000 and General Permit TXR040000.

Notice of Termination (“NOT”): A written submission to the executive director and Bexar County Storm Water Quality program director from a discharger authorized under a general permit and a Bexar County Permit requesting termination of coverage. Bexar County will accept termination only once a final inspection has been conducted and approval for termination is issued.

Notice of Violation (“NOV”): A written letter from Bexar County informing the operator, owner, entity, or community association of non-compliance with these Regulations.

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 a large or small construction activity that meets either of the following two criteria:

- (a) The person or persons that 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 that have day to day operational control of those activities at a construction site that are necessary to ensure compliance with a Storm Water Pollution Prevention Plan (SWPPP) 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 SWPPP 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 the 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 SWPPP or participate in a shared SWPPP that covers the areas of the construction site where they have control over the 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 the primary operators.

Permittee: The owner/operator authorized under Bexar County's Site Development Permit, TPDES Construction Permit TXR150000 and/or General Permit TXR040000.

Person: Means any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

Perimeter Control: A barrier that prevents sediment from leaving a site by filtering sediment-laden runoff or diverting it to a sediment trap or basin.

Phasing: Clearing a parcel of land in distinct phases, with the stabilization of each phase completed before the clearing of the next.

Point source: Means 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, or vessel or other floating craft, from which pollutants or wastes are or may be discharged into or adjacent to any water in the state. TWC 26.001(21)

Pollutant: Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, paints, varnishes, and solvents; rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind; biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into or adjacent to any water in the state. The term:

(a) Includes:

- (1) Tail water or runoff water from irrigation associated with an animal feeding operation or concentrated animal feeding operation that is located in a major sole source impairment zone as defined by TWC Section 26.502; or
- (2) Rainwater runoff from the confinement area of an animal feeding operation or concentrated animal feeding operation that is located in a major sole source impairment zone, as defined by TWC Section 26.502; and

(b) Does not include tail water or runoff water from irrigation or rainwater runoff from other cultivated or uncultivated rangeland, pastureland, and farmland or rainwater runoff from an area of land located in a major sole source impairment zone, as defined by TWC Section 26.502, that is not owned or controlled by an operator of an animal feeding operation or concentrated animal feeding operation on which agricultural waste is applied.

Pollutant(s) of Concern: Include biochemical oxygen demand (“BOD”), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from and MS4. (Definition from 40 CFR Section 122.32(e)(3)).

Pollution: Means the alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any 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. TWC Chapter 26.001(14)

Premises: Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

Natural riparian habitat: The land along the banks of rivers, creeks and streams that plays a significant role in soil conservation and provides essential habitat for birds, fish, and wildlife

Redevelopment: Alterations of a property that changes the “footprint” of a site or building in such a way that there is a disturbance of equal to or greater than 1 acre of land. This term does not include such activities as exterior remodeling.

Sediment Control: Measures that prevent eroded sediment from leaving the site.

Site: A parcel of land or a contiguous combination thereof, where grading work is performed as a single unified operation.

Site Development Permit: A Storm Water Quality permit issued by the County for the construction or alteration of ground improvements and structures for the control of erosion, runoff, and grading.

Small Construction Activity: Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than (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, and original purpose of a ditch, channel, or other similar storm water conveyance.

Small Municipal Separate Storm Sewer Systems (“MS4 Phase II”): A conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains: (i) Owned or operated by the United States, a state, city, town, borough, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA; (ii) Designed or used for collecting or conveying storm water; (iii) That is not a combined sewer; and (iv) That is not part of a publicly owned treatment works (“POTW”) (as defined at 40 CFR Section 122.2; (v) That was not previously authorized under a NPDES or TPDES individual permit as a medium or large municipal separate storm sewer system; and (vi) That does not include very discrete systems such as those serving individual buildings.

Stabilization: The use of best management practices that prevent exposed soil from eroding.

Start of Construction: The delivery of equipment and/or materials to a site, the first land-disturbing activity associated with a development, including land preparation such as clearing, grading, filling; installation of streets and walkways; excavation for basements, footings, piers, or foundations; erection of temporary forms; and installation of accessory buildings such as garages.

Stop Work Order (“SWO”): A notice issued by Bexar County Environmental Services informing the operator, owner, entity, or community association of non-compliance with these Regulations and requiring immediate cessation of all activity except that which is necessary to bring the site into compliance.

Storm Drainage System: Also referred to as the MS4. Publicly-owned facilities by which storm water is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

Storm Water: Any surface flow, runoff, or drainage consisting entirely of water from any form of natural precipitation, or resulting from such precipitation.

Storm Water Associated with Construction Activity: Storm water runoff from an area where there is either a large or a small construction activity.

Storm Water Management Program (“SWMP”): A comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system.

Storm Water Pollution Prevention Plan (“SWP3”): A document which describes the Best Management Practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to the MS4, and/or receiving waters to the Maximum Extent Practicable.

TCEQ: Texas Commission on Environmental Quality.

Total Maximum Daily Load (“TMDL”): The maximum amount of a pollutant that a lake, river, stream, or estuary can receive and still maintain Texas Surface Water Quality Standards.

Unified Development Code (“UDC”) Chapter 35, Section 35-504: The City of San Antonio Development Code entitled Storm Water Management.

Urbanized Area (“UA”): An area of high population density that may include multiple MS4’s as defined and used by the U.S. Census Bureau in the 2000 and 2010 Decennial census.

Water or Water in the state: Means groundwater, percolating or otherwise, 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, 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 watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state. (TWC Chapter 26.001)(5)

Waters of the United States: Waters of the United States or waters of the U.S. are defined by 40 CFR section 122.2 and all later amendments.

WPAP: (Water Pollution Abatement Plan) A detailed plan that outlines best management practices that will be implemented in order to protect water quality when a regulated activity is conducted in the Edwards Aquifer recharge zone.

SECTION III: PUBLIC EDUCATION, OUTREACH AND INVOLVEMENT

Bexar County will implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges and the steps that the public can take to reduce pollutants in storm water runoff. Bexar County will identify and implement a public involvement and participation program which will include provisions to allow opportunities for

constituents within the MS4 area to participate in storm water management program development and participation.

SECTION IV: ILLICIT DISCHARGE DETECTION AND ELIMINATION

4.01 PURPOSE: The purpose of this section is to provide for the health, safety, and general welfare of the citizens in the unincorporated area of Bexar County through the regulation of non-storm water discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This section establishes methods for controlling the introduction of pollutants into an MS4 in order to comply with requirements of the Texas Pollutant Discharge Elimination System ("TPDES"). This section is applicable to all water entering the MS4 generated on any developed and undeveloped lands unless explicitly exempted by Bexar County. The objectives of this section are:

- 4.01.1 To regulate the contribution of pollutants to the municipal separate storm sewer system by storm water discharges by any user.
- 4.01.2 To prohibit Illicit Connections and Discharges to the municipal separate storm sewer system.
- 4.01.3 To establish legal authority to carry out all inspection, surveillance and monitoring procedures necessary to ensure compliance with these regulations.
- 4.01.4 To establish the legal authority to register, inspect and enforce Storm Water regulations and illicit discharges from non-construction industrial sites per the Multi-Sector Industrial General Permit (TXR050000) for Storm Water.

4.02 PROHIBITION OF ILLICIT DISCHARGES: No person shall discharge or cause to be discharged into the MS4 or watercourses any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standards, other than storm water. The commencement, conduct or continuance of any illicit discharge to the storm drain system is prohibited except as described as follows:

- 4.02.1 The following discharges are exempt from discharge prohibitions established by these Regulations: water line flushing or other potable water sources, landscape irrigation or lawn watering, diverted stream flows, rising ground water, ground water infiltration to storm drains, uncontaminated pumped ground water, foundation or footing drains (not including active groundwater dewatering systems), crawl space pumps, air conditioning condensation, springs, non-commercial washing of vehicles, natural riparian habitat or wet-land flows, swimming pools (if de-chlorinated - typically less than one PPM chlorine), fire-fighting activities, and any other water source not containing pollutants.
- 4.02.2 Discharges specified in writing by Bexar County as being necessary to protect public health and safety.
- 4.02.3 Dye testing is an allowable discharge, but requires a written notification to Bexar County Environmental Services Department prior to the time of the test.
- 4.02.4 The prohibition shall not apply to any non-storm water discharge permitted under an TPDES permit, waiver, or waste discharge order issued to the discharger

and administered under the authority of the Texas Commission on Environmental Quality, provided that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided that written approval has been granted for any discharge to the storm drain system.

4.03 PROHIBITION OF ILLICIT CONNECTIONS: The construction, use, maintenance or continued existence of illicit connections to the MS4 is prohibited.

4.03.1 This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection (No grandfather clause).

4.03.2 A person is considered to be in violation of these Regulations if the person connects a line conveying non approved discharges to the MS4, or allows such a connection to continue.

4.04 SUSPENSION OF MS4 ACCESS: Bexar County may suspend access to the MS4 under the following conditions. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of Bexar County.

4.04.1 Suspension due to Illicit Discharges in Emergency Situations: Bexar County may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or Waters of the United States. If the violator fails to comply with a suspension order issued, Bexar County may take emergency steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the State, or to minimize danger to persons.

4.04.2 Suspension due to the Detection of Illicit Discharge. Any person discharging to the MS4 in violation of this ordinance may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. Bexar County will notify a violator of the proposed termination of its MS4 access. The violator may petition Bexar County for a reconsideration and hearing.

4.05 MONITORING AND DETECTION OF ILLICIT DISCHARGES AND CONNECTIONS: Bexar County shall monitor and track illicit discharges using the following programs:

4.05.1 Environmental Services Storm Water Quality Program

4.05.2 Environmental Services On-Site Sewage Facilities Program

4.05.3 Environmental Services Nuisance Abatement Program

4.05.4 Environmental Law Enforcement

4.05.5 Public Works Road and Bridge Maintenance Program

SECTION V: CONSTRUCTION PERMITTING AND INSPECTION

5.01 PURPOSE: The purpose of this section is to develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the MS4 from construction

activities that result in a land disturbance of one (1) or more acres or if that construction activity is part of a larger common plan of development or sale that would disturb one (1) or more acres.

5.02 SITE DEVELOPMENT PERMIT: A Storm Water Quality Site Development Permit from Bexar County is required for any activity that would entail the uncovering of one (1) or more acres or is less than one (1) acre but part of a larger common plan of development. No person shall be granted a Site Development Permit for land-disturbing activity without the approval of a Storm Water Pollution Prevention Plan (SWP3) by Bexar County Environmental Services Department. A permit issued will only apply to that scope of work that is described by the site plan and details that are submitted for review.

5.02.1 If the scope of the project increases, or major revisions are made to the original project, an amendment to the original permit may be obtained. The scope of the additional project must be contiguous to the original scope of work and the application must include site plan and details for the additional work to obtain amendment approval.

5.02.2 Projects that are located over the Edwards Aquifer Recharge Zone and the Edwards Aquifer Contributing Zone must submit the applicable approval documents such as the "Water Pollution Abatement Plan" or the Contributing Zone Plan required by TCEQ as part the permit or amendment application.

5.02.03 Flood Plain Permit: Any activity that either constitutes soil disturbance or fill that is to occur in the flood plain will require a Flood Plain Permit issued by Bexar County Development Services. A person commits an offense if the person violates any portion of this rule and is a class C Misdemeanor. Each act of dumping will be considered a separate offense. Each day the illegal fill is not removed will constitute a separate offense. An offense is not limited to the landowner, but extends to any person working in the flood plain. A person that is convicted of a flood plain violation shall be required to remove all material brought in and return the site to its original elevation.

5.02.04 Required inspections of permitted sites must be performed by personnel with Bexar County approved certification.

5.03 EXEMPT ACTIVITY: No Site Development Permit is required for the following activities:

5.03.1 Any emergency activity that is immediately necessary for the protection of life, property, or natural resources.

5.03.2 Existing nursery and agricultural operations conducted as a main or accessory use.

5.04 APPLICATION REQUIREMENTS

5.04.1 Each Site Development Permit application shall bear the name(s) and address(es) of the owner or developer of the site and of any consulting firm retained

by the applicant together with the name of the applicant's principal contact at such firm and shall be accompanied by a Site Development Permit Fee.

5.04.2 Each application shall include a copy of the Construction Site Notice or Notice of Intent, whichever is applicable, filed with the TCEQ in accordance with TPDES Construction Permit TX150000.

5.04.3 Each application shall include a statement that any land clearing, construction, or development involving the movement of earth shall be in accordance with the SWP3 and that a qualified construction site operator shall be on site on all days when construction or grading activity takes place. Along with submitted inspection schedule, acknowledgement that person doing the inspection is certified and competent to perform storm water inspections. Falsification of inspection records is an offense under Penal Code Chapters 32.21 and 37.10, and subject to the penalties described.

5.04.4 Each application shall include a SWP3 containing the following:

- A. A description of the nature of the construction activity, potential pollutants, and sources.
- B. A description of the intended schedule, with an estimated start date, or sequence of major activities that will disturb soils for major portions of the site. The description must identify the general timing of sequence for implementation of the BMPs.
- C. The number of acres of the entire construction site property and the total number of acres of the site where construction activities will occur, including off-site material storage areas, overburden and stockpiles of dirt, and borrow areas.
- D. An estimate of the runoff coefficient of the site for both the pre-construction and post-construction conditions, data describing the soil type, and quality of any discharge from the site.
- E. A map showing the general location of the site.
- F. A detailed site map indicating the following:
 - 1. Pre and post construction drainage patterns and approximate slopes anticipated after major grading activities;
 - 2. Areas where soil disturbance will occur;
 - 3. Areas which will not be disturbed;
 - 4. Locations of all major structural controls either planned or in place;
 - 5. Locations where stabilization practices are expected to be used;
 - 6. Locations of off-site material, waste, borrow or equipment storage areas;
 - 7. Surface waters (including wetlands) either adjacent or in close proximity; and
 - 8. Locations where storm water discharges from the site directly to a surface water body.
 - 9. Location of any flood plain in accordance with current FEMA maps, to be marked on both the site plan and in the field.

10. Initial location of a concrete washout pit, all pits to be lined with minimum 10 mil plastic, or other approved containment.
11. Details of each BMP specified showing typical construction and/or installation. The SWP3 must describe the structural and non-structural controls or BMPs that will be used to minimize pollution in runoff during and post construction and to include the following components:
 1. Erosion and sediment controls planned for use to retain sediment on-site to the maximum extent practicable with consideration for topography, with a schedule for maintenance to ensure BMPs are functioning properly;
 2. Description of the interim and permanent stabilization practices for the site, including a schedule of when the practices will be implemented.
 3. Description of any structural control practices used to divert flows away from exposed soils, to limit the contact of runoff with disturbed areas or to lessen the off-site transport of eroded soils; and
 4. Description of other controls, including but not limited to: controls to minimize off-site vehicle tracking of sediments and generation of dust; A description or plan of how site generated wastes will be controlled, such as discarded building materials, concrete truck washout water, chemicals, litter, and sanitary waste at the construction site which may cause pollution to the MS4.
 5. Description of methods to be used to contain all blow-able and floatable trash and debris to include container type and method used to prevent escape of material from the container.

H. The SWP3 must include a description of any measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. Permittees are responsible for the installation and maintenance of storm water management measures prior to final stabilization of the site and prior to submission of the Notice of Termination (NOT).

I. The SWP3 will include a description of methods to be utilized to achieve final stabilization, and call for the removal of all temporary BMP's as a requirement for approval.

5.05 MODIFICATIONS AND TERMINATION: Modifications to the SWP3 shall be processed and approved or disapproved in the same manner as Section V of this regulation, may be authorized by Bexar County by written authorization to the permittee, and shall include: major amendments of the SWP3, and field modifications of a minor nature. Materials must include if applicable, a copy of the Notice of Change (NOC) submitted to the TCEQ and a copy of the approval letter for the WPAP or CZP. Upon completion of final stabilization, the permittee shall submit a copy of the NOT to Bexar County and call Bexar County for a final inspection to verify final stabilization and removal of temporary BMP's.

5.06 CONSTRUCTION INSPECTION PROGRAM: Bexar County or its designated agent is authorized to make periodic inspections throughout the duration of construction or land clearing activity, and shall notify the Site Development permittee when the work or site conditions fail to comply with the SWP3 as approved.

5.06.1 Bexar County or its designated agent shall inspect storm water BMPs as outlined in the SWP3, on a regular basis.

5.06.2 Bexar County or its designated agent may enter at reasonable times to conduct on-site inspections.

5.06.3 – Before construction begins, the Bexar County Storm Water Quality Site Development Permit Approval Letter along with a contact name and number must be posted on site. If not on site, a copy of the SWPPP must be located within ten minutes of the site, and will be brought to the site at the request of the inspector.

5.06.4 Before construction commences, a Flood Plain Permit will be required if any flood plain exists on the site, and the flood plain will be marked on the site plan and on the site. A copy of the flood plain permit will be posted at the site.

5.06.5 The SWP3 shall be maintained at the site during the progress of the work. The permittee shall notify Bexar County or its designated agent at least two working days before the following:

- (A) Start of construction
- (B) Installation of sediment and erosion control BMPs
- (C) Completion of site clearing
- (D) Completion of final grading
- (E) Close of the construction
- (F) Completion of final stabilization or landscaping

5.07 INDUSTRIAL STORM WATER SITES: Bexar County may register, set up permitting procedure, inspect, and enforce Storm Water Regulations for discharges for non-construction industrial sites as required by TCEQ's Multi-Sector General Permit (TXR050000).

SECTION VI: POST-CONSTRUCTION STORM WATER MANAGEMENT

6.01 PURPOSE: The purpose of this section is to develop and enforce a program to address storm water runoff from new development and re-development projects that disturb one (1) acre or more, including projects that disturb less than one acre that are part of a larger common plan of development or sale. To address the placement and maintenance of permanent BMPs to reduce pollutants from storm water runoff. Bexar County Environmental Services will establish a permit program to track and enforce the compliance and maintenance of all post construction BMP's.

6.02 APPLICABILITY: The provisions of this Section shall apply to any application for Subdivision Plat or Master Development Plan approval, or other Structure or improvement, except as otherwise provided by this Chapter. Owners and operators (permittee) of new development and redeveloped sites shall be required to design, permit, install, implement, maintain and submit quarterly reports for a combination of structural

and non-structural BMP's appropriate for the community and that protects the water quality. In addition, the permittee must identify the operator, owner, entity, or community association responsible for on-going maintenance of the permanent BMP once final stabilization has been completed. If the construction of permanent structures is not feasible due to space limitations, health and safety concerns, cost effectiveness, or highway construction codes, the permittee may propose an alternative approach for review.

(a) Post Construction Storm Water Permit: Before occupancy, a Permit for Post Construction Permanent BMP's will be required and to include:

1. A site plan showing permanent BMP's and a maintenance plan to be filed in the real property records of the county in which the property is located;
2. A Long-Term Maintenance Schedule for Post-Construction Storm Water Control Measures implementation through one or both of the following approaches:
 - a. Maintenance performed by the Permittee. Permittee will have to demonstrate adequate knowledge required to perform and monitor required maintenance and documentation for review by Bexar County.
 - b. Maintenance performed by the owner or operator of a new development or redeveloped site under a maintenance plan to be executed by an approved third party maintenance provider. The owner or operator of any new development or redeveloped site shall be required to develop and implement a maintenance plan addressing maintenance requirements for any structural control measures installed onsite. It shall be required that operation and maintenance performed by the approved provider is documented and retained on site and submitted quarterly to Bexar County and/or its agents.
 - c. If quarterly reports are not provided as required, then the permit will be considered expired, and it will require a qualified engineer's certification to renew the permit.
3. A site that is less than one acre but part of a common area of development, the owner or operator of the development will be responsible for the permitting and maintenance of the post construction BMP's.

6.03 COMPLIANCE: compliance with this section will include adherence to the Rules and requirements in the "Bexar County Water Quality and Maintenance Manual" for all of Bexar County. These rules and practices in this manual will be the basic requirements for all Post Construction Permanent BMP's

6.04 PERMANENT ON-SITE FACILITIES: On-site detention facilities that are constructed as a requirement of “Bexar County Water Quality and Maintenance Manual,” must be privately owned and shall be maintained by the community association or property owner and will be required to be permitted per this section.

6.05 INSPECTIONS: Bexar County will have the right to do periodic inspections of privately owned and maintained Post Construction BMP’s and detention\retention facilities to ensure that the maintenance schedule is being implemented. Bexar County will make periodic unannounced inspections of the facilities to insure compliance. If deficiencies are observed, a Notice of Violation will be sent to the community association or property owner responsible for maintenance.

6.06 INCORPORATION BY REFERENCE: All requirements of UDC35, Section 35-504 and all future amendments thereto are incorporated by reference and are thus made part of these Regulations.

SECTION VII: POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR BEXAR COUNTY FACILITIES

7.01 PURPOSE: The purpose of this section is to establish an operation and maintenance program with the ultimate goal of identifying methods and practices for conducting county operations in a manner to prevent pollution in storm water runoff.

7.02 GOOD HOUSEKEEPING AND BEST MANAGEMENT PRACTICES: Bexar County will review the following facilities and or operations to determine compliance with the requirements of TPDES General Permit #TX040000:

- 7.02.1 Park and open space maintenance
- 7.02.2 Street, road and bridge maintenance
- 7.02.3 Fleet, building, and service center maintenance
- 7.02.4 Storm water system (MS4) maintenance
- 7.02.5 Parking garages and facilities

7.03 TRAINING: Bexar County will develop a training program for all employees responsible for County operations subject to the pollution prevention/good housekeeping program. The training program will include materials directed at preventing and reducing storm water pollution from County operations.

7.04 WASTE DISPOSAL: Waste removed from the MS4, from structural controls or collected as a result of County operations and maintenance activities will be properly disposed of in an authorized landfill.

7.05 SPECIAL APPLICATIONS: all personnel handling pesticides will be trained and certified in their proper use and disposal. All special contracts with vendors will include clean up and adherence to Storm Water Regulations.

SECTION VIII: ENFORCEMENT

8.01 PURPOSE: The purpose of this Section is to establish a process for Environmental Services or its authorized agent to enforce these regulations.

8.02 ADMINISTRATIVE ENFORCEMENT

1. **Stop Work Order:** If work starts before the Site Development Permit or Flood Plain Permit has been issued, or work is in progress and the required permit is not posted, a STOP WORK ORDER may be issued, to be in effect until the permit has been issued or posted. Bexar County or its agent may restrict access to a site in violation of this rule until compliance is achieved.
2. **Field Correction Notice:** Upon periodic inspection, a Field Correction Notice may be issued noting any deficiencies and a time frame to have them addressed. The operator will be responsible for correcting the deficiencies in the allotted time frame; however, an appeal may be made, and if good cause can be shown that the deficiency will need more time to correct, then the additional time may be granted. Ignoring or failure to address the Field Correction Notice may result in a STOP WORK ORDER.
3. **Notice of Violation:** A failure to secure a permit, or to maintain a post construction permanent BMP, or to maintain the proper documentation may result in a Notice of Violation being sent to the Permittee.

8.03 CRIMINAL PENALTIES: Failure to heed a Stop Work Order is an offense and is a Class C Misdemeanor with a Fine of \$500.00. Each day work is done while the Stop Work Order is in effect shall constitute a separate offense. Failure to take appropriate corrective action in the allotted time required by a Field Correction Notice or Notice of Violation is an offense and is a Class C misdemeanor with a minimum fine of \$200.00 to \$500.00. Each day that corrective action is not taken will constitute a separate offense.

8.03.1 Criminal Penalty – Unless otherwise stated, a person commits an offense if the person

- (a)
 - (1) Violates a provision of Section 4.02
 - (2) Violates a provision of Section 4.03, 4.03.1, 4.03.2
 - (3) Violates a provision of Section 5.02, 5.02.1, 5.02.2, 5.05, 5.06.3, 5.06.4, 5.06.5, 5.07
 - (4) Violates a provision of Section 6.02, 6.02(a) 6.04
- (b) An offense under subsection (a) is a Class C Misdemeanor.
- (c) If it is shown at trial of the of the defendant that the defendant has been convicted of an offense under subsection (a) within a year before the date on which the offense being tried occurred, the subsequent offense under subsection (a) is a class B misdemeanor.
- (d) Each day of a continuing violation is a separate offense.

8.04: ENFORCEMENT OF STATE STATUTES: Bexar County may enforce the applicable provisions and penalties of the Texas Water Code, Health and Safety Code and the Texas Administrative Code.

8.05: CIVIL ENFORCEMENT: If any person violates any section dealing with Illicit Discharge Detection and Elimination, Construction Permitting and Inspection, and Post Construction Storm Water Management; the District Attorney may take whatever action is necessary to remedy the violation, including but not limited to filing a suit for civil penalties up to \$1000 a day for each violation, and to enjoin the violation. Each day the violation continues is considered a separate violation for the purposes of assessing the civil penalty.

SECTION IX: RECORD KEEPING AND ANNUAL REPORTING


9.01 PURPOSE: The purpose of this Section is to establish evaluation/assessment reporting efforts and recordkeeping.

9.02 RECORDKEEPING: This program will track those activities that: reduce the discharge of pollutants to MEP; protect water quality; and satisfy the appropriate requirements of the Clean Water Act and the TPDES program for a period of three years.

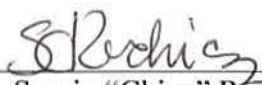
9.03 ANNUAL REPORTING: Bexar County will submit a concise annual report to the TCEQ for each year as required under the TPDES General Permit TXR040000. The report will include:

- 9.03.1 Status of compliance with permit conditions and an assessment of the progress towards reducing the discharge of pollutants to the MEP.
- 9.03.2 Measurable goals for five control measures required under TPDES General Permit TXR040000: Public Education, Outreach, and Involvement; Illicit Discharge Detection and Elimination; Construction Permitting and Inspection; Post Construction Storm Water Management; and Pollution Prevention and Good Housekeeping for Bexar County Facilities.
- 9.03.3 Activities initiated or implemented that satisfy the five control measures as stated in 10.03.2 (if any).
- 9.03.4 A summary of the information collected during the reporting period.
- 9.03.5 A summary of storm water activities to be implemented during the next reporting cycle (if any).
- 9.03.6 Proposed changes to Bexar County's Storm Water Management Program including changes to any of the measurable goals defined in 10.03.2 (if any).
- 9.03.7 The number of construction activities and total number of acres disturbed authorized by these Regulations.
- 9.03.8 Notification if any portion of these Regulations is being enforced by a designated authority or agent for Bexar County.

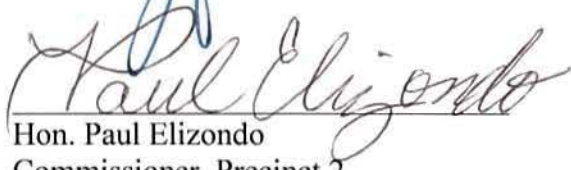
NOW, THEREFORE, BE IT ORDERED BY THE COMMISSIONERS COURT OF BEXAR COUNTY, TEXAS THAT: The Storm Water Pollution Prevention regulations proposed are hereby adopted this 17th day of March 2015.



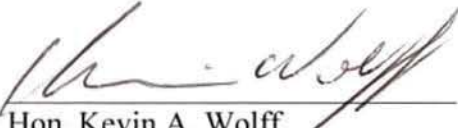
Hon. Nelson W. Wolff, Bexar County Judge



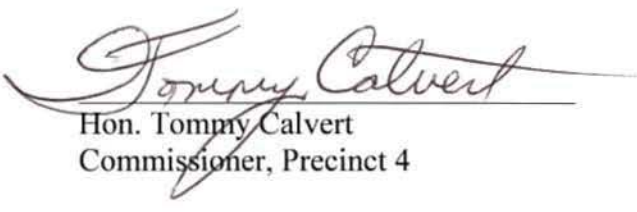
Hon. Sergio "Chico" Rodriguez
Commissioner, Precinct 1



Hon. Paul Elizondo
Commissioner, Precinct 2



Hon. Kevin A. Wolff
Commissioner, Precinct 3



Hon. Tommy Calvert
Commissioner, Precinct 4

Appendix "N" Spill Reporting Forms

In the event of a hazardous substance spill or release, immediately take the measures listed in **Section 3** to keep the spill from entering sewer or storm drains, spreading off-site, or affecting public health. In all cases caution and common sense must be maintained with the primary goal being to prevent and/or limit personal injury.

Spill Report:

Blank Spill Report Forms are located behind this page. Document the following information and include in the SWPPP using a Spill Report Form.

- a. The date and time of the spill or release.
- b. The identity or chemical name of any material released or spilled.
- c. An estimate of the quantity of material released or spilled and the time or duration of the event.
- d. The exact location of the spill.
- e. The extent of actual and potential water pollution.
- f. The actions that caused the spill and the source of the spilled material.
- g. The name, address, and phone number of the party in charge of, or responsible for, the spill.
- h. The steps were taken to clean up the spill and any precautions taken to minimize impacts.
- i. Possible hazards to the environment (air, soil, water, wildlife, etc.).
- j. The identities of any representatives responding at the scene.
- k. The identities of the party responsible for removal and disposal of any cleanup materials.
- l. Include a disposal manifest or receipt from the disposal facility and retain for records retention.

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

SPILL REPORT FORM

Project Name: _____ Location: _____

Date and time of spill: _____

Time incident was contained: _____

Spill location and events leading up to the spill: _____

Material spilled: _____

Source of spill: _____

Approximate amount spilled: _____

Approximate amount spilled to a waterway: _____

Surface area impacted in Sq Ft: _____

Type of media (soil or pavement): _____

Corrective action taken: _____

Action taken to prevent future spills: _____

Agencies notified (if any): _____

Modifications to SWPPP: _____

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision with a system designed to assure that qualified personnel 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 information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possibility of fine and imprisonment for knowing violations."

Signature of Reporter: _____ Date: _____

Print Name/Title: _____

SPILL REPORT FORM

Project Name: _____ Location: _____

Date and time of spill: _____

Time incident was contained: _____

Spill location and events leading up to the spill: _____

Material spilled: _____

Source of spill: _____

Approximate amount spilled: _____

Approximate amount spilled to a waterway: _____

Surface area impacted in Sq Ft: _____

Type of media (soil or pavement): _____

Corrective action taken: _____

Action taken to prevent future spills: _____

Agencies notified (if any): _____

Modifications to SWPPP: _____

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision with a system designed to assure that qualified personnel 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 information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possibility of fine and imprisonment for knowing violations."

Signature of Reporter: _____ Date: _____

Print Name/Title: _____

SPILL REPORT FORM

Project Name: _____ Location: _____

Date and time of spill: _____

Time incident was contained: _____

Spill location and events leading up to the spill: _____

Material spilled: _____

Source of spill: _____

Approximate amount spilled: _____

Approximate amount spilled to a waterway: _____

Surface area impacted in Sq Ft: _____

Type of media (soil or pavement): _____

Corrective action taken: _____

Action taken to prevent future spills: _____

Agencies notified (if any): _____

Modifications to SWPPP: _____

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision with a system designed to assure that qualified personnel 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 information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possibility of fine and imprisonment for knowing violations."

Signature of Reporter: _____ Date: _____

Print Name/Title: _____

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

Appendix "O" Pages Removed by SWPPP Amendment

This section contains pages of the SWPPP that have been updated or replaced through amendments.

These pages are not current and are included for reference only.

Stormwater Pollution Prevention Plan (SWPPP)
Lennar Homes of Texas Land and Construction, Ltd.
Ruby Crossing, LAND DEVELOPMENT

1/25/2023
Construction Stormwater Management Suite - SAN ANTONIO -

LAST NAME	FIRST NAME	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING	REFRESHER & LIVE TRAINING
Cardenas	Matthew	2/11/2022	1/25/2023				
Castro	Melissa	10/15/2021	1/25/2023				
Johnson	Ryan	5/3/2016	6/7/2017	12/5/2018	2/12/2020	7/14/2021	1/25/2023
Koszuta	Jimena	9/6/2022	1/25/2023				
Larsen	Erik	1/23/2020	1/25/2023				
Mott	Richard	5/3/2016	6/7/2017				
Olivarez Jr	Rogelio	4/11/2018	2/12/2020	7/14/2021	1/25/2023		
Scates	Josh	4/9/2021	3/9/2023				
Stavinoha	Derrick	2/11/2022	1/25/2023				
Walters	Marcus	4/11/2018	1/25/2023				

