

## Public Notice

Notice, is hereby given that the Planning and Zoning Commission of the City of Mercedes, Texas will hold a meeting on Tuesday, September 27, 2022 at 5:45 P.M. in the City Commission Chambers located at 400 South Ohio, Mercedes, Texas to consider and take formal action regarding the following items:

1. Call to order.
2. Invocation.
3. Pledge of Allegiance.
4. Preliminary & Final Plat Approval  
TARS No. 1 Subdivision  
16.135 Acre (702,832 SF) tract of land out of lot 6, block 102 Campacuas Addition,  
ETJ  
Developer: Tars Development LLC
5. Other Business.
6. Adjournment.

THIS NOTICE IS GIVEN IN ACCORDANCE WITH V.T.C.A., GOVERNMENT CODE, SECTION 551.001 ET. Seq.

WITNESS MY HAND AND SEAL, THIS 23<sup>rd</sup> DAY OF SEPTEMBER, 2022 AT 7:05 P.M.

\_\_\_\_\_  
JAVIER A RAMIREZ, ASSISTANT CITY MANAGER

ATTEST:

\_\_\_\_\_  
JOSELYNN CASTILLO, CITY SECRETARY  
CITY OF MERCEDES, TEXAS

**AGENDA ITEM NO. \_\_\_\_\_**

**PRELIMINARY & FINAL PLAT APPROVAL:** Preliminary & Final Plat Approval  
TARS No. 1 Subdivision  
16.135 Acre (702832 Sq. Ft.) Tract of Land out of  
Lot 6, Block 102, Campacuas Addition  
Capisallo District Subdivision  
Developer: TARS Development LLC  
Engineer: S2 Engineering. PLLC

**REVIEW DATA**

**LOCATION:** The site is on the west side of Mile 1 ½ W and approximately 1320 ft South of Mile 9 N Road. The property is located outside Mercedes City limits and is within our 1 Mile ETJ.

**LOT SIZING, ETC.:** There will be 14 Lots. The square footage of the lots starts at 54387.72 SF (Lot 1) and decline in size going south with the last lot being 24572.18 SF (Lot 14).

**STREET SYSTEM:** Mile 1 1/2 West Rd is currently existing and will be the entrance to each lot of this subdivision

**WATER SERVICE:** The water system will consist of an 8" line that runs south along the east side of Mile 1 ½ W Rd through the North Alamo Water Supply Corporation exclusive easement and then shifting to the West side of said road with proposed 45° bends as shown in the plat. Said waterline will end on the valve on lot 14 located in the south side of the property. The proposed water line connects into the existing 6" NAWSC water line located on the south side of Mile 9 Rd. Each lot will be connected to the proposed 8" water waterline that runs west of Mile 1 ½ Rd.

**SANITARY SEWER SEWER SERVICE:** The subdivision will have on-site sewage facilities consisting of a standard design dual compartment septic tank and a drain field on each lot.

**STORM & DRAINAGE:** The existing runoff sheet flow overland in a southern direction towards an existing drain ditch owned by HCCID. Runoff will ultimately out fall into the existing drain ditch west to the property maintained by HCDD 1. Based on the Rational Method and the calculation in the drainage report, and existing 10-year storm event generates 5.61 cfs of runoff. The proposed runoff after development is 21.84 cfs or a 50-year storm event. The

proposed project will have an approximate increase of 16.23 cs to storm runoff for a 50-year storm event.

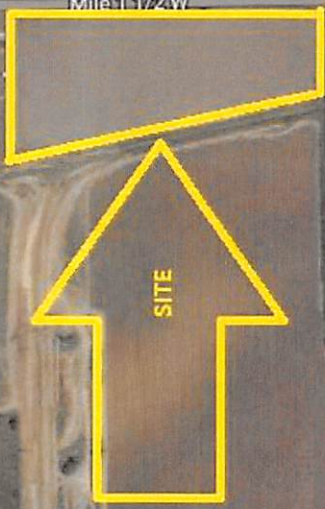
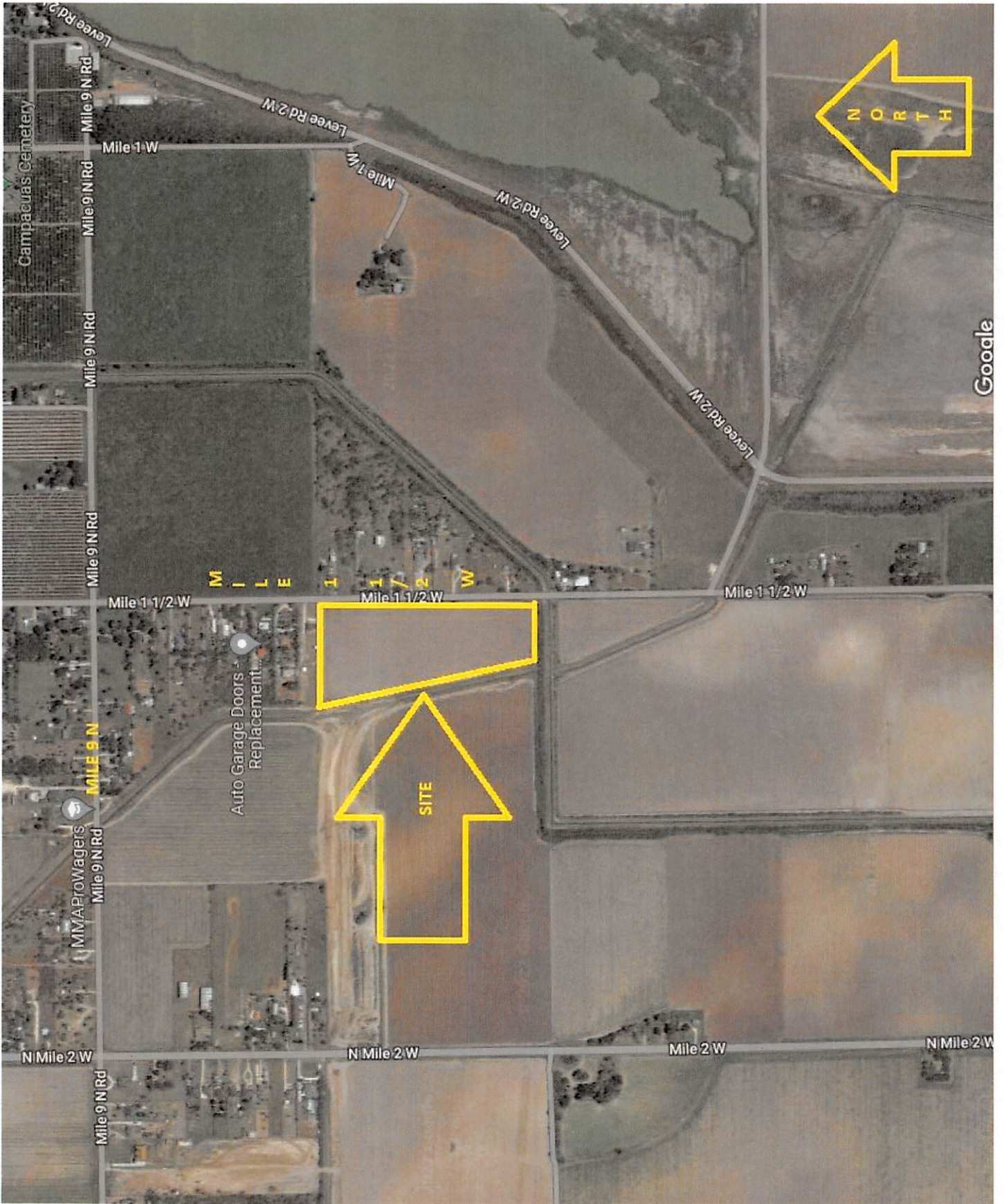
In accordance with the county of hidalgo's drainage requirements, 40,552 cubic feet (1,502 cubic yards) of runoff detention will need to be detained for a 50-year storm event. The total area that will be provided is 59,040 cubic feet. Runoff will be detained by widening the existing drainage ditch, west of the proposed subdivision. Runoff will not be increased during a 50-year storm event due to the proposed subdivision.

This will meet the requirements of the 50-yr storm policy requested by HCDD1. As of this writing, Staff has received the '*approved*' HCDD#1 drainage report.

**MISC:** Parkland Dedication Fee-500/dwelling will need to be paid by the developer.

**STAFF RECOMMENDATION:** Approval of the preliminary & final plat.

This item is now before you.



M I L E 1 1 / 2 W

M I L E 9 N

N Mile 2 W

N Mile 2 W

Mile 2 W

N Mile 2 W

Mile 9 N Rd

Mile 9 N Rd

Mile 1 1/2 W

Mile 1 1/2 W

Mile 1 1/2 W

Mile 1 W

Mile 9 N Rd

Levee Rd 2 W

Levee Rd 2 W

Mile 7/8

Levee Rd 2 W

Levee Rd 2 W

Campacuas Cemetery

Auto Garage Doors - Replacement...

MMA ProWagers

Google







PRELIMINARY

# TARS NO. 1 SUBDIVISION PROPOSED SUBDIVISION DRAINAGE AND PAVEMENT LAYOUT

2424 KINOSA ST  
MCKINNEY, TEXAS 75069  
S2 ENGINEERING, P.C.  
TEL: (956) 403-9787

SHEET NO. 3  
OF 3 SHEETS

## TARS NO. 1 SUBDIVISION MAP DRAINAGE AND PAVEMENT

BING A 16.135 ACRE (702832 SQ. FT.) TRACT OF LAND OUT OF LOT 6, BLOCK 102, CHAMPAGUS ADDITION, HIDALGO COUNTY, TEXAS, ACCORDING TO RECORDS OF HIDALGO COUNTY, TEXAS.

**PROJECT LOCATION:** PROPOSED MAP DRAINAGE AND PAVEMENT LAYOUT FOR THE SUBDIVISION OF THE TARS NO. 1 SUBDIVISION, TRACT OF LAND OUT OF LOT 6, BLOCK 102, CHAMPAGUS ADDITION, HIDALGO COUNTY, TEXAS, ACCORDING TO RECORDS OF HIDALGO COUNTY, TEXAS.

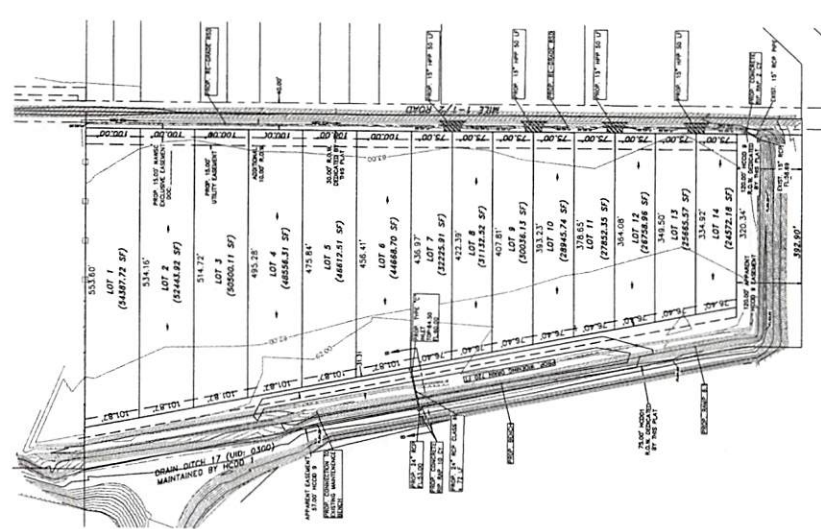
**PROJECT DESCRIPTION:** THE PROJECT CONSISTS OF THE PROPOSED MAP DRAINAGE AND PAVEMENT LAYOUT FOR THE SUBDIVISION OF THE TARS NO. 1 SUBDIVISION, TRACT OF LAND OUT OF LOT 6, BLOCK 102, CHAMPAGUS ADDITION, HIDALGO COUNTY, TEXAS, ACCORDING TO RECORDS OF HIDALGO COUNTY, TEXAS.

**EXISTING CONDITIONS:** THE EXISTING CONDITIONS AT THE PROJECT LOCATION ARE AS SHOWN ON THE ATTACHED MAPS AND AS NOTED ON THE MAP. THE EXISTING CONDITIONS ARE AS SHOWN ON THE ATTACHED MAPS AND AS NOTED ON THE MAP.

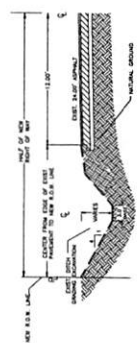
**PROPOSED CONDITIONS:** THE PROPOSED CONDITIONS AT THE PROJECT LOCATION ARE AS SHOWN ON THE ATTACHED MAPS AND AS NOTED ON THE MAP. THE PROPOSED CONDITIONS ARE AS SHOWN ON THE ATTACHED MAPS AND AS NOTED ON THE MAP.



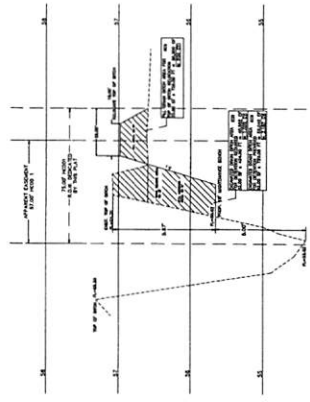
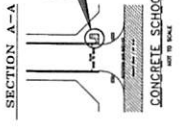
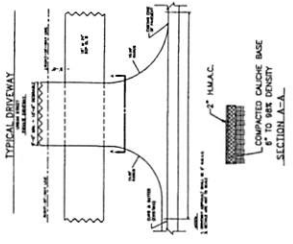
PRELIMINARY  
DATE: 11/15/2024



Drainage Layout  
SCALE: 1"=100'

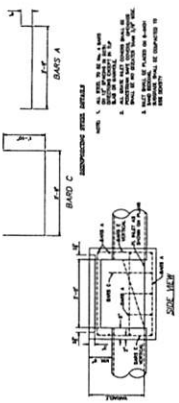


RECONSTRUCTION OF ROAD SIDE DITCH  
NOT TO SCALE



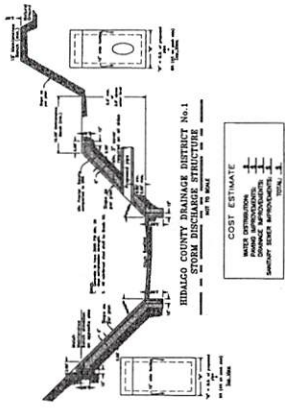
- NOTES:
1. CHECK ALL THE EXISTING CONDITIONS AT THE PROJECT LOCATION.
  2. THE EXISTING CONDITIONS AT THE PROJECT LOCATION ARE AS SHOWN ON THE ATTACHED MAPS AND AS NOTED ON THE MAP.
  3. THE PROPOSED CONDITIONS AT THE PROJECT LOCATION ARE AS SHOWN ON THE ATTACHED MAPS AND AS NOTED ON THE MAP.
  4. THE PROPOSED CONDITIONS AT THE PROJECT LOCATION ARE AS SHOWN ON THE ATTACHED MAPS AND AS NOTED ON THE MAP.
  5. THE PROPOSED CONDITIONS AT THE PROJECT LOCATION ARE AS SHOWN ON THE ATTACHED MAPS AND AS NOTED ON THE MAP.
  6. THE PROPOSED CONDITIONS AT THE PROJECT LOCATION ARE AS SHOWN ON THE ATTACHED MAPS AND AS NOTED ON THE MAP.

CONSTRUCTION  
INFORMATION  
SEDIMENT CONTROL  
TYPE 1



TYPE "C" GRATE INLET  
NOT TO SCALE

MADE TO ORDER  
FOR THE PROJECT ONLY



COST ESTIMATE  
MADE TO ORDER  
FOR THE PROJECT ONLY

# TARS No. 1 SUBDIVISION

## Drainage Report

**Prepared By:**

Jose Noe Saldivar, PE, CFM

S2 Engineering, PLLC

Firm Registration No.: 22858

2424 Mimosa Street

Mission, Texas 78574

Phone No.: (956) 403-9787

Email: s2engineering.ns@gmail.com

Date:

July 22nd, 2022



*Jose N. Saldivar*  
08/10 8/22



**S2 ENGINEERING, PLLC**  
CIVIL ENGINEERING - CONSTRUCTION MANAGEMENT - T&E - EIR



## INDEX

1. **Drainage Statement**
2. **Subdivision Location Map**
3. **Drainage Calculations**
6. **FEMA FIRMette**
7. **USDA NRCS Soil Survey Map and Report**
8. **USGS Topo Map**
9. **USGS National Hydrography Dataset**
10. **Preliminary Plat & Drainage Layout**

DRAINAGE STATEMENT

TARS No. 1 Subdivision

Mercedes, Texas



TARS NO. 1 SUBDIVISION is a proposed 14-lot single family subdivision within the Extraterritorial Jurisdiction of the City of Mercedes, Texas, on the west side of mile 1 1/2 w road and approximately 1320 ft South of Mile 9 N Road. Being a 16.135 Acre (702832 SQ. FT.) Tract of land out of lot 6, Block 102, Campacuas Addition, Hidalgo County, Texas according to the Map or Plat thereof recorded in Volume 1, Page 2 Map Records of Hidalgo County, Texas.

The proposed subdivision is in Zone "X" (shaded) according to the FEMA FIRM Community Panel No. 480334 0450 C, revised to reflect LOMR dated MAY 30, 2002, defined as areas of 500-year flood, areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and area protected by levees from a 100-year flood.

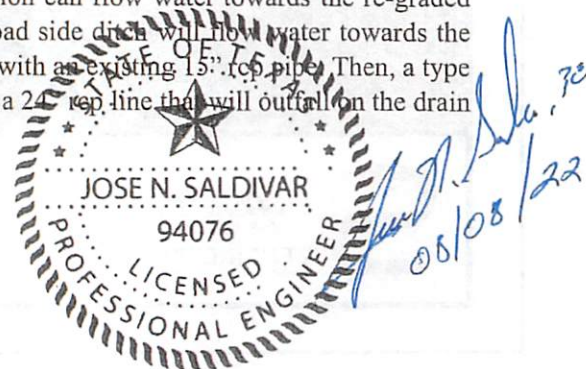
According to the Soil Survey Report prepared for Hidalgo County by the USDA Natural Resources Conservation Service, the site consists of Harlingen Clay (19). The soil is classified as Hydrologic Group "D" and moderately well drained with high runoff potential when thoroughly wet. The web soil survey is attached.

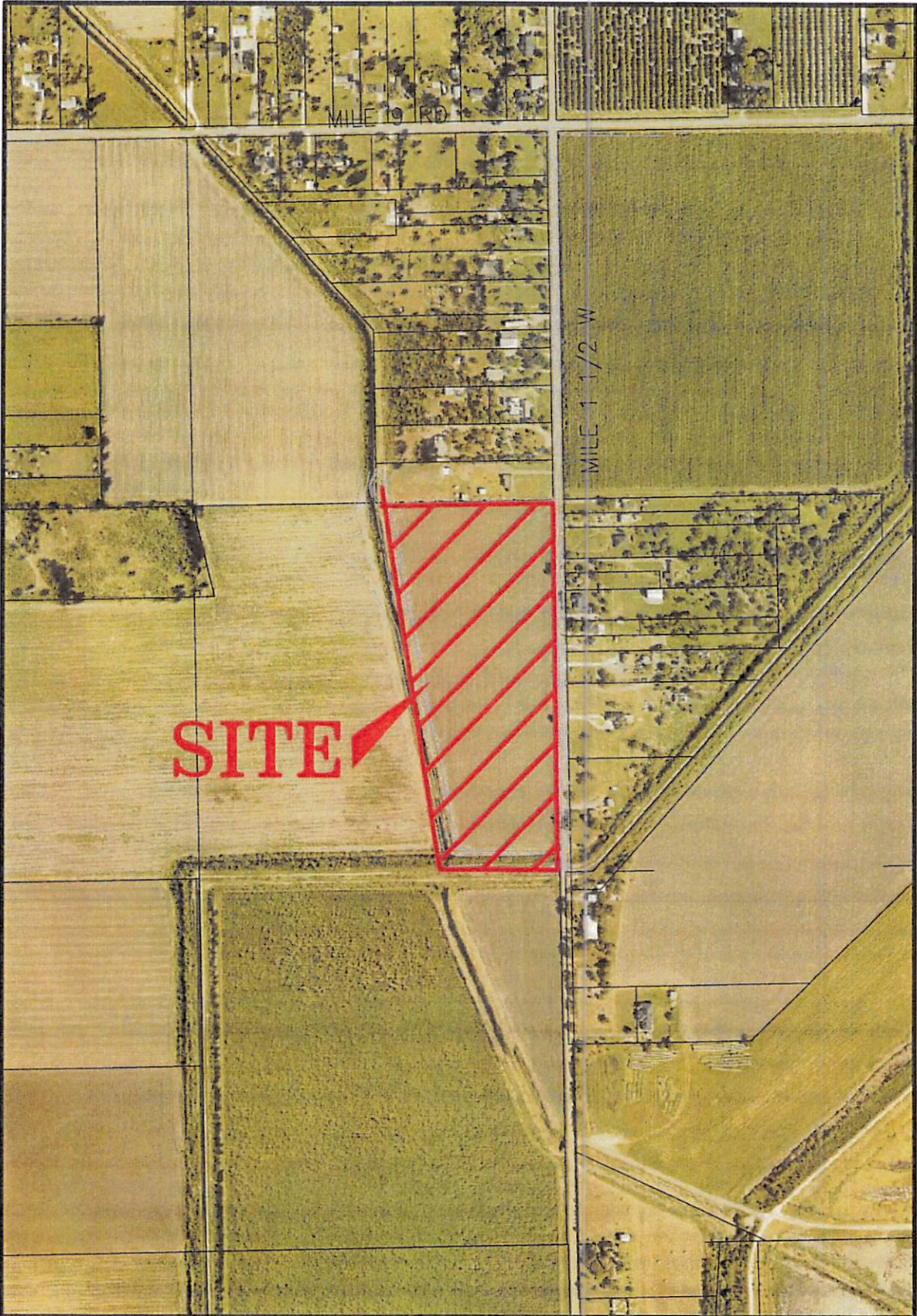
The existing runoff sheet flows overland in a southern direction towards and existing drain ditch (owned by HCCID 9). Said runoff will ultimately out fall into the existing drain ditch west to the property (UID: 0300) maintained by HCDD 1. Based on the Rational Method and the attached calculations, an existing 10-year storm event generates 5.61 cfs of runoff. The proposed runoff after development is 21.84 cfs for a 50-year storm event. The proposed project will have an approximate increase of 16.23 cfs of storm runoff for a 50-year storm event.

In accordance with the county of hidalgo's drainage requirements, 40,552 cubic feet (1,502 cubic yards) of runoff detention will need to be detained for a 50-year storm event. The total area that will be provided is 59,040 cubic feet (2,187 cy). Runoff will be detained by widening the existing drainage ditch, west of the proposed subdivision (see detail on attached drainage plan). Runoff will not be increased during a 50-year storm event due to the proposed subdivision.

The existing ground will be regraded so the proposed subdivision can flow water towards the re-graded road side ditch in the west side of Mile 1-1/2 W Road. Said road side ditch will flow water towards the south direction to the existing drain ditch (owned by HCCID 9) with an existing 15" rcp pipe. Then, a type "C" inlet is being proposed at the west side of the property with a 24" rep. line that will outfall on the drain ditch with the proposed widening.

<input type="checkbox"/> REJECTED	
<input checked="" type="checkbox"/> APPROVED FOR SUBMITTAL	
<input checked="" type="checkbox"/> TO H.C. PLANNING DEPT.	
<input type="checkbox"/> TO CITY	
<input checked="" type="checkbox"/> DISCHARGE PERMIT REQUIRED	
<input checked="" type="checkbox"/> DISTRICT FACILITY	
<input type="checkbox"/> CITY FACILITY	
<input type="checkbox"/> OTHER	
<u>Alexis Lozano</u>	<u>8/24/22</u>
H.C.D. NO. 1	DATE





**SITE**



2424 MINOSA ST  
MISSION TEXAS, 78574  
PHONE (956) 403-9787  
**S2 ENGINEERING, PLLC**  
CIVIL ENGINEERING - CONSTRUCTION MANAGER - (817) 411-2285

LOCATION MAP  
TARS No. 1 SUBDIVISION

PROJECT NO.	E-22-15
SCALE:	1"=150'
DRAWN BY:	L.M.
CHECKED BY:	N.S.
TOPO BY:	N.C.
SHEET:	
<b>SHEET 1 OF 1</b>	

# HCDD1 Runoff Detention - MRM & McAllen's NRCS Method

Average velocity (V):  $V = KkSp^{0.5}$  Peak flow (Q):  $Q = CiA$   
 k value for Nearly bare and untilled (overland flow): **0.213** Exist. Intensity (i):  $i = b/(tc+d)^e$   
 k value for paved area (shallow concentrated flow): **0.619** Prop. Time of concentration (tc): **NRCS Method**  
 $tc = L/60V$   
 tc = 10 min. minimum

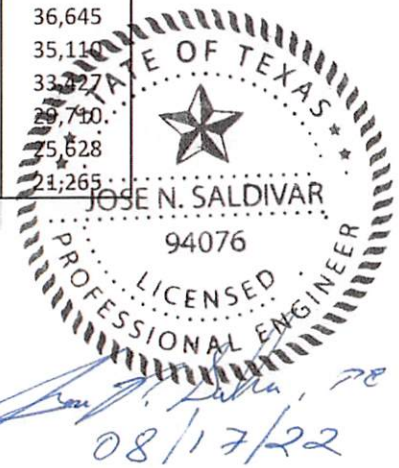
Ku constant:		<b>3.28</b>		Average velocity (V):	0.2420 ft/s (Exist.)
tc	92.28 min	existing			0.7033 ft/s (Prop.)
	31.75 min	proposed		Outflow limit:	5.61 cfs
Q	5.61 cfs	existing		Prop. 50yr i:	6.04 in/hr
	21.84 cfs	proposed			
"C" Value	0.22 Undeveloped	existing			
	0.30 Single-Family	proposed			
Area (A)	12.06 Acres				

Rainfall IDF Coefficients (NOAA Atlas 14)				
Annual Recurrence Interval (Years)	e	b	d	i (in/hr)
2	0.8317	66.6399	12.3570	1.39
5	0.8201	81.0003	12.2367	1.79
10	0.8117	93.1792	12.3404	2.14
25	0.8020	110.3530	12.6090	2.64
50	0.7951	123.6652	12.8624	3.05
100	0.7888	137.9853	13.3182	3.50

(A) Time (min)	(B) i (in/hr)	(C) Qin (cfs)	(D) Vin (cf)	(E) Qout (cfs)	(F) Vout (cf)	(G) Storage (cf)
10	10.27	37.16	22,296	5.61	7,028	15,268
20	7.70	27.85	33,417	5.61	8,711	24,706
30	6.23	22.55	40,581	5.61	10,394	30,187
40	5.27	19.08	45,799	5.61	12,077	33,721
50	4.60	16.63	49,881	5.61	13,760	36,121
60	4.09	14.79	53,228	5.61	15,444	37,785
70	3.69	13.35	56,063	5.61	17,127	38,937
80	3.37	12.19	58,523	5.61	18,810	39,713
90	3.11	11.24	60,697	5.61	20,493	40,204
100	2.89	10.44	62,645	5.61	22,176	40,469
110	2.70	9.76	64,411	5.61	23,859	40,552
120	2.53	9.17	66,029	5.61	25,542	40,486
130	2.39	8.66	67,520	5.61	27,226	40,295
140	2.27	8.20	68,906	5.61	28,909	39,997
150	2.16	7.80	70,200	5.61	30,592	39,609
160	2.06	7.44	71,415	5.61	32,275	39,140
170	1.97	7.11	72,561	5.61	33,958	38,602
180	1.88	6.82	73,644	5.61	35,641	38,003
200	1.74	6.30	75,653	5.61	39,008	36,645
220	1.62	5.87	77,484	5.61	42,374	35,110
240	1.52	5.50	79,167	5.61	45,740	33,271
280	1.35	4.89	82,183	5.61	52,473	29,710
320	1.22	4.42	84,833	5.61	59,205	25,628
360	1.12	4.04	87,203	5.61	65,938	21,265

**40,552 tion required (cf)**

0.93 Ac-ft  
1501.93 CY



*Table 2 - Intercept Coefficients*

<b>Land Cover/Flow System</b>	<b>k</b>
Forest with heavy ground litter, hay meadow (overland flow)	0.076
Trash fallow or minimum tillage cultivation; contour or strip cropped; woodland (overland flow)	0.152
Short grass pasture (overland flow)	0.213
Cultivated straight row (overland flow)	0.274
Nearly bare and untilled (overland flow); alluvial fans in western mountainous regions	0.305
Grassed waterway (shallow concentrated flow)	0.457
Unpaved (shallow concentrated flow)	0.491
Paved area (shallow concentrated flow); small upland gullies	0.619

*\*FHWA Urban Drainage Design Manual, 3rd Edition (2013)*

**Table 3 - Runoff Coefficients**

<b>Description</b>	<b>Runoff Coeff. (C)</b>
<b>Business:</b>	
Downtown Areas	0.70 - 0.95
Neighborhood Areas	0.50 - 0.70
<b>Residential:</b>	
Single-Family Areas	0.30 - 0.50
Multi-Units (detached)	0.40 - 0.60
Multi-Units (attached)	0.60 - 0.75
Suburban	0.25 - 0.40
Apartment Dwelling Areas	0.50 - 0.70
<b>Industrial:</b>	
Light Areas	0.50 - 0.80
Heavy Areas	0.60 - 0.90
Parks   Cemeteries	0.10 - 0.25
Playgrounds	0.20 - 0.40
Railroad Yard Areas	0.20 - 0.40
Unimproved Areas	0.10 - 0.30
<b>Lawns:</b>	
Sandy Soil (flat 2%)	0.05 - 0.10
Sandy Soil (average 2-7%)	0.10 - 0.15
Sandy Soil (steep 7%)	0.15 - 0.20
Heavy Soil (flat 2%)	0.13 - 0.17
Heavy Soil (average 2-7%)	0.18 - 0.22
Heavy Soil (steep 7%)	0.25 - 0.35
<b>Streets:</b>	
Asphaltic	0.70 - 0.95
Concrete	0.80 - 0.95
Brick	0.70 - 0.85
Drives and walks	0.75 - 0.85
Roofs	0.75 - 0.95

*\*FHWA Urban Drainage Design Manual, 3rd Edition (2013)*

# APPENDIX A

## LEGEND

- SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD
- ZONE A** Basic flood elevations determined
- ZONE AE** Flood depths of 1 to 3 feet (usually areas of ponding); basic flood elevations determined
- ZONE AH** Flood depths of 1 to 3 feet (usually sheet flow or stage-lag areas); average depths determined. For areas of sheet-flow flooding, velocities also determined
- ZONE AO** To be protected from 100-year flood by Federal flood protection system under construction; no basic flood elevations determined
- ZONE A99** Coastal flood with velocity hazard wave action; no basic flood elevations determined
- ZONE V** Coastal flood with velocity hazard wave action; basic flood elevations determined
- ZONE VE** Coastal flood with velocity hazard wave action; basic flood elevations determined
- FLOODWAY AREAS IN ZONE AE
- OTHER FLOOD AREAS
- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of 1 to 3 feet or with drainage areas less than 1 square mile, and area protected by levees from 100-year flood
- OTHER AREAS
- ZONE X** Areas determined to be outside 500-year floodplain
- ZONE D** Areas in which flood hazards are undetermined
- UNDEVELOPED COASTAL BARRIERS
- Coastal barrier areas are normally located within or adjacent to special flood hazard areas
- Floodplain boundary
- Floodway boundary
- Zone D boundary
- Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones
- Base Flood Elevation line, Elevation in Feet
- cross Section Line
- Base Flood Elevation in Feet (Other Uniform Within Zone #)
- Elevation Bench Mark (See notes below)
- River Mile
- Referenced to the National Geodetic Vertical Datum of 1929

## NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all drainage features outside Special Flood Hazard Areas. The community map repository should be consulted for more detailed data on DFELs, and for any information on floodway determinations, prior to use of this map for property purchase or construction purposes.

Areas of Special Flood Hazard (100-year flood) include Zones A, AE, AH, AO, AH, AO, A99, V, VE, and V99.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

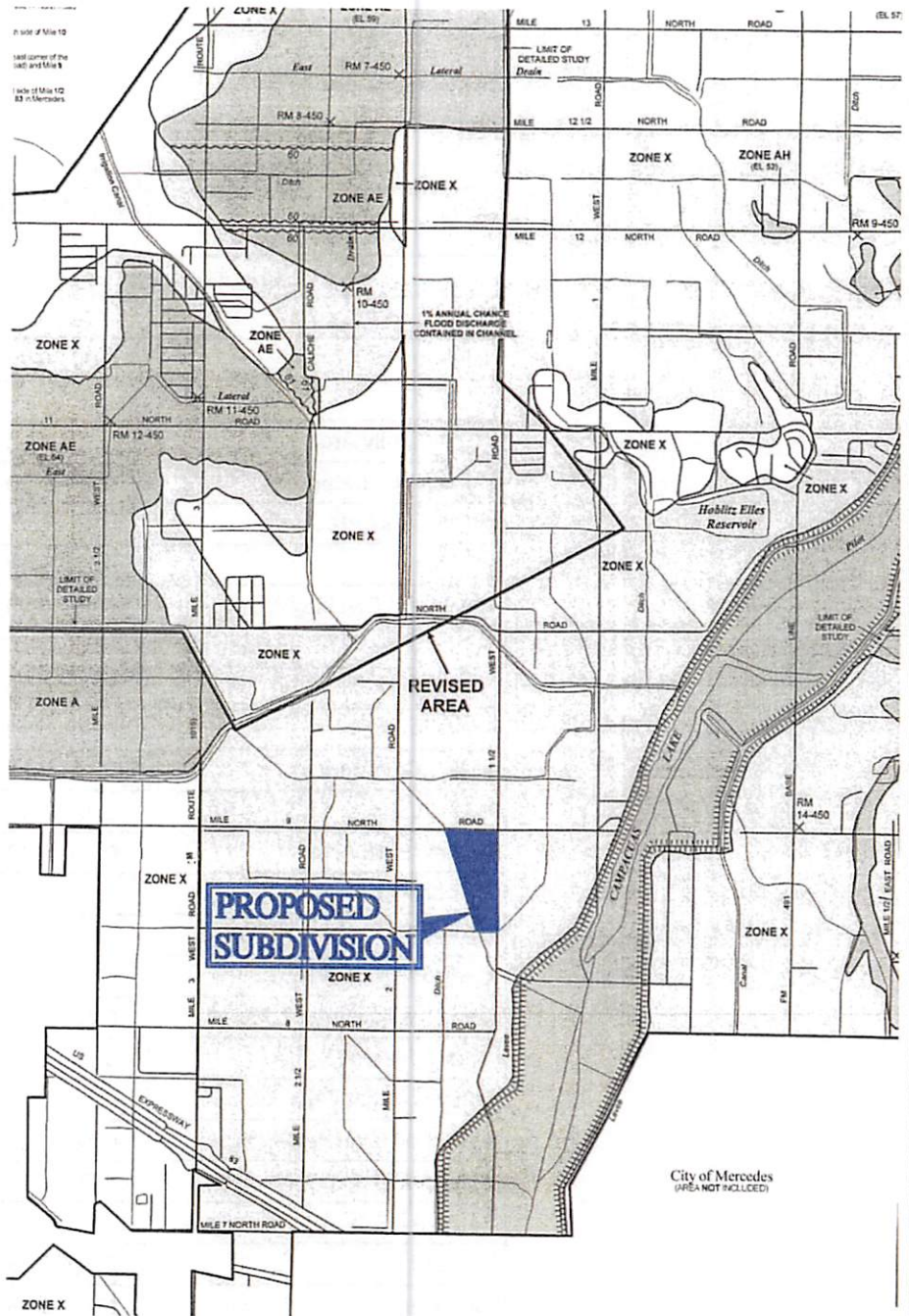
Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regards to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Refer to Floodway Data Table when floodway width is shown at 100-foot.

Coastal base flood elevations apply only to landward of 100' NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of this map.

For adjoining panels, see separately printed Map Index.



**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM**  
FLOOD INSURANCE RATE MAP

**HIDALGO COUNTY, TEXAS**  
(UNINCORPORATED AREAS)

(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER  
480334 0450 C  
MAP REVISED:  
JUNE 6, 2000

REVISED TO REFLECT LOMB  
DATE: 7-27-22

Federal Emergency Management Agency

## FEMA FIRM MAP

SCALE = NTS

S

2424 MINOSA ST  
MISSION TEXAS, 78574  
PHONE (956) 403-9787

**S2 ENGINEERING, PLLC**  
CIVIL ENGINEER/CONSTRUCTION MANAGER - TRF, F. 22158

LOCATION:	MERCEDAS, TEXAS	DESCRIPTION:	TARS NO.1 SUBDIVISION	
DATE:	7-27-22			
NO.	REVISION	DATE	APPROVED	
1				



United States  
Department of  
Agriculture

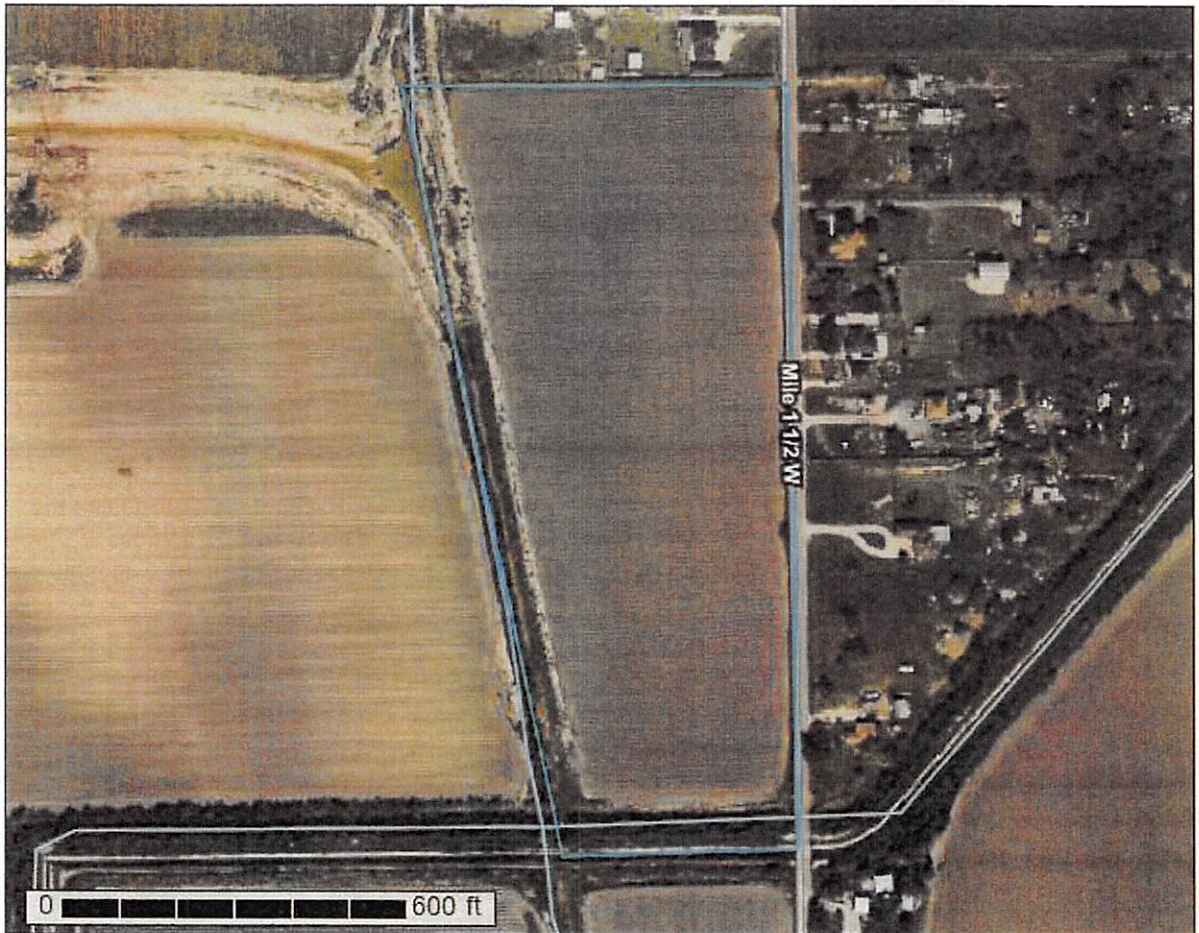
**NRCS**

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Hidalgo County, Texas

## TARS No. 1 SUBDIVISION





# Preface

---

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

---

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

---

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report  
Soil Map



Map Scale: 1:2,360 if printed on A portrait (8.5" x 11") sheet.







































Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 14N WGS84



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**MAP LEGEND**

<b>Area of Interest (AOI)</b>	 Area of Interest (AOI)	 Spoil Area
<b>Soils</b>	 Soil Map Unit Polygons	 Stony Spot
	 Soil Map Unit Lines	 Very Stony Spot
	 Soil Map Unit Points	 Wet Spot
<b>Special Point Features</b>	 Blowout	 Other
	 Borrow Pit	 Special Line Features
	 Clay Spot	<b>Water Features</b>
	 Closed Depression	 Streams and Canals
	 Gravel Pit	<b>Transportation</b>
	 Gravelly Spot	 Rails
	 Landfill	 Interstate Highways
	 Lava Flow	 US Routes
	 Marsh or swamp	 Major Roads
	 Mine or Quarry	 Local Roads
	 Miscellaneous Water	<b>Background</b>
	 Perennial Water	 Aerial Photography
	 Rock Outcrop	
	 Saline Spot	
	 Sandy Spot	
	 Severely Eroded Spot	
	 Sinkhole	
	 Slide or Slip	
	 Sodic Spot	

**MAP INFORMATION**

The soil surveys that comprise your AOI were mapped at 1:20,000.

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: Hidalgo County, Texas  
 Survey Area Data: Version 20, Sep 13, 2021

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

Date(s) aerial images were photographed: Dec 21, 2021—Mar 2, 2022

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
19	Harlingen clay	16.3	100.0%
Totals for Area of Interest		16.3	100.0%

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Hidalgo County, Texas

### 19—Harlingen clay

#### Map Unit Setting

*National map unit symbol:* dbkv  
*Elevation:* 20 to 120 feet  
*Mean annual precipitation:* 20 to 25 inches  
*Mean annual air temperature:* 73 degrees F  
*Frost-free period:* 325 to 345 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Harlingen and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Harlingen

##### Setting

*Landform:* Delta plains  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Calcareous clayey alluvium

##### Typical profile

*H1 - 0 to 8 inches:* clay  
*H2 - 8 to 35 inches:* clay  
*H3 - 35 to 72 inches:* clay

##### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 25 percent  
*Gypsum, maximum content:* 2 percent  
*Maximum salinity:* Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)  
*Sodium adsorption ratio, maximum:* 25.0  
*Available water supply, 0 to 60 inches:* Low (about 5.7 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3s  
*Land capability classification (nonirrigated):* 3s  
*Hydrologic Soil Group:* D  
*Ecological site:* R083DY009TX - Clayey Bottomland  
*Hydric soil rating:* No

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### Minor Components

#### Unnamed

*Percent of map unit: 15 percent*

*Hydric soil rating: No*

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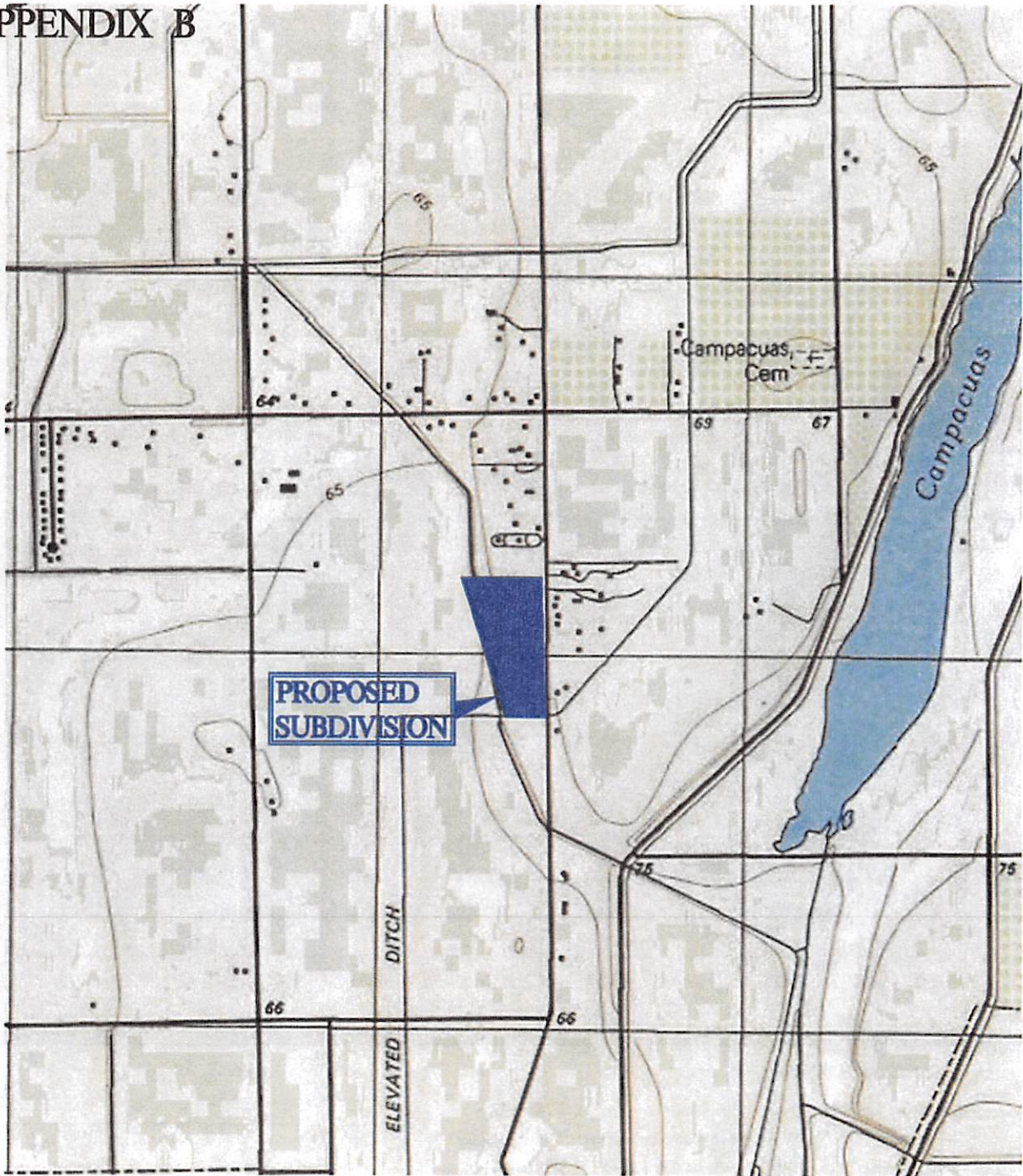
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United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

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# APPENDIX B



## USGS TOPOGRAPHIC MAP

SCALE=NTS

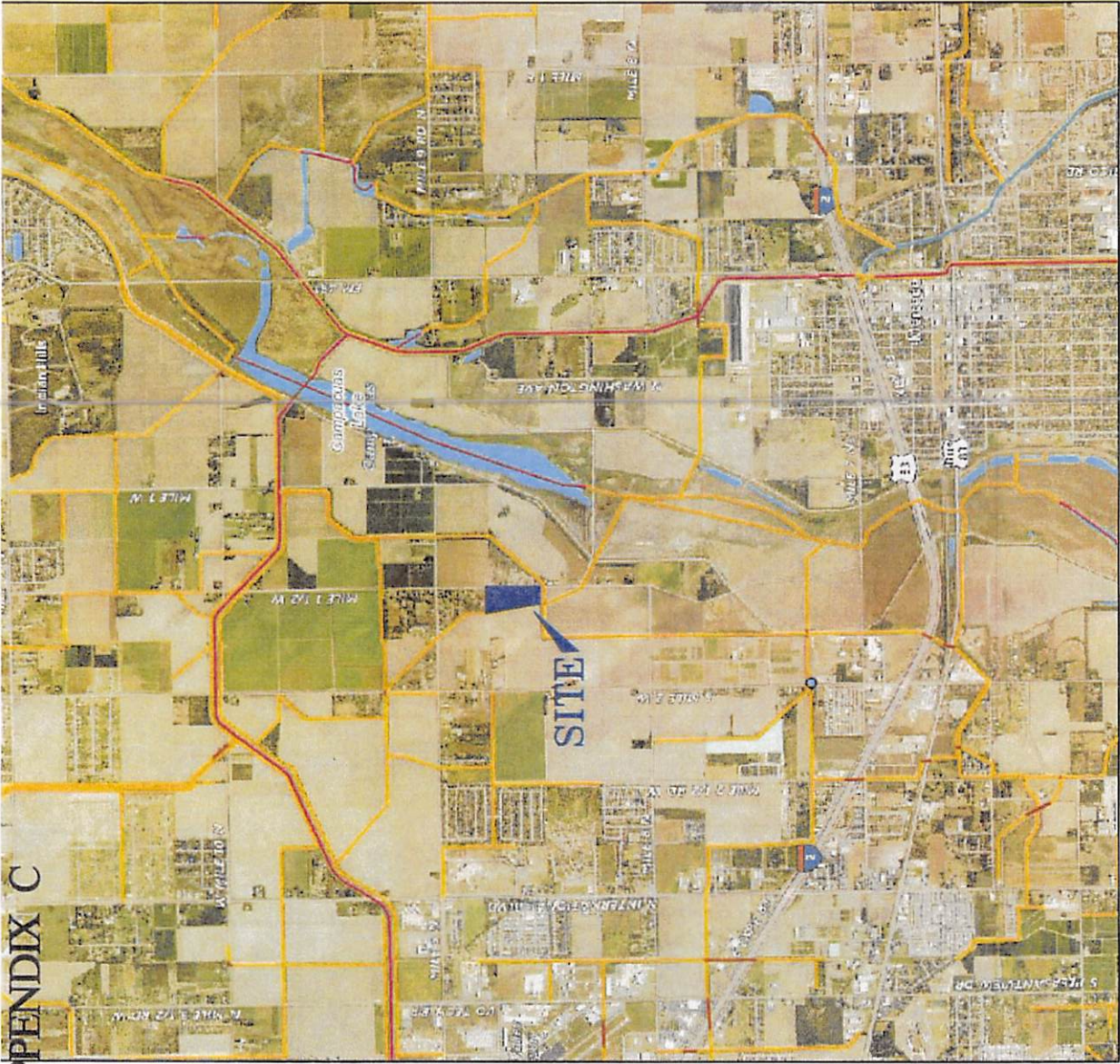


2424 MINOSA ST  
MISSION TEXAS, 78574  
PHONE (956) 403-9787  
**S2 ENGINEERING, PLLC**  
CIVIL ENGINEERING - CONSTRUCTION MANAGEMENT - TYPE F - 22184

LOCATION: MERCEDES, TEXAS		DESCRIPTION: TARS NO.1 SUBDIVISION	
DATE: 7-27-22			
NO.	REVISION	DATE	APPROVED
1			



# APPENDIX C



7/27/2022, 8:57:57 AM

Waterbody - Large Scale Area - Large Scale

- |  |             |  |                          |
|--|-------------|--|--------------------------|
|  | Estuary     |  | Filume                   |
|  | Ice Mass    |  | Foreshore                |
|  | Lake Pond   |  | Hazard Zone              |
|  | Playa       |  | Inundation Area          |
|  | Reservoir   |  | Lock Chamber             |
|  | Swamp Marsh |  | Rapids                   |
|  |             |  | SeaOcean                 |
|  |             |  | Area of Complex Channels |
|  |             |  | Area to be Submerged     |
|  |             |  | Bay/inlet                |
|  |             |  | Bridge                   |
|  |             |  | Canal/Ditch              |
|  |             |  | Dam/Weir                 |

1:48,149



2424 MINCOA ST  
MISSION TEXAS, 78574  
PHONE (956) 403-9787  
S2 ENGINEERING, PLLC  
101 LAKEWAY, SUITE 200, SAN ANTONIO, TEXAS 78216

LOCATION:	MERCEDES, TEXAS	DESCRIPTION:	TARS NO.1 SUBDIVISION
DATE:	7-27-22	REVISION	
NO.	1	DATE	APPROVED

# USGS HYDROGRAPHIC MAP

SCALE=NTS



PRELIMINARY

TARS NO. 1 SUBDIVISION  
PROPOSED SUBDIVISION  
DRAINAGE AND PAVEMENT LAYOUT

S2 ENGINEERING, PLLC  
CIVIL ENGINEER - CONSULTING ENGINEER  
TEL: (956) 403-9787  
F-22858  
2424 MMOSA ST  
MISSION TX, 78574

SHEET NO. 3  
OF 4 SHEETS

TARS NO. 1 SUBDIVISION  
MAP DRAINAGE AND PAVEMENT

BEING A 16.135 ACRE (702832 SQ. FT.) TRACT OF LAND OUT OF LOT 6, BLOCK 102, CAMPAQUAS ADDITIONAL, HISSOPS COUNTY, TEXAS ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN VOLUME 1, PAGE 2 MAP RECORDS OF HIDALGO COUNTY, TEXAS

PROJECT LOCATION: TARS NO. 1 SUBDIVISION IS A PROPOSED MAP DRAINAGE AND PAVEMENT WITHIN THE SUBDIVISION OF TARS NO. 1 SUBDIVISION, BEING A 16.135 ACRE TRACT OF LAND OUT OF LOT 6, BLOCK 102, CAMPAQUAS ADDITIONAL, HISSOPS COUNTY, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN VOLUME 1, PAGE 2 MAP RECORDS OF HIDALGO COUNTY, TEXAS.

PROPOSED PAVEMENT: THE PROPOSED PAVEMENT IS TO BE CONCRETE ON A 4" GRANULAR BASE ON A 6" GRANULAR SUBGRADE. THE PROPOSED PAVEMENT IS TO BE MAINTAINED BY THE OWNER OF THE TRACT.

PROPOSED DRAINAGE: THE PROPOSED DRAINAGE IS TO BE A 12" DIA. STAINLESS STEEL PIPE WITH A 0.005' PER FOOT SLOPE TO THE EXISTING DRAINAGE STRUCTURE. THE PROPOSED DRAINAGE IS TO BE MAINTAINED BY THE OWNER OF THE TRACT.

PROPOSED UTILITIES: THE PROPOSED UTILITIES ARE TO BE 6" DIA. WATER MAIN AND 4" DIA. SANITARY SEWER MAIN. THE PROPOSED UTILITIES ARE TO BE MAINTAINED BY THE OWNER OF THE TRACT.

PROPOSED EROSION CONTROL: THE PROPOSED EROSION CONTROL IS TO BE A 2' HIGH CONCRETE CURB WITH A 0.005' PER FOOT SLOPE TO THE EXISTING DRAINAGE STRUCTURE. THE PROPOSED EROSION CONTROL IS TO BE MAINTAINED BY THE OWNER OF THE TRACT.

PROPOSED SIGNAGE: THE PROPOSED SIGNAGE IS TO BE A 4' X 8' SIGN WITH THE FOLLOWING INFORMATION: TARS NO. 1 SUBDIVISION, MAP DRAINAGE AND PAVEMENT, HISSOPS COUNTY, TEXAS.

PROPOSED LIGHTING: THE PROPOSED LIGHTING IS TO BE 4' X 4' SQUARE LIGHT FIXTURES WITH 100 WATT BULBS. THE PROPOSED LIGHTING IS TO BE MAINTAINED BY THE OWNER OF THE TRACT.

PROPOSED FENCING: THE PROPOSED FENCING IS TO BE A 6' HIGH WOOD FENCE WITH A 0.005' PER FOOT SLOPE TO THE EXISTING DRAINAGE STRUCTURE. THE PROPOSED FENCING IS TO BE MAINTAINED BY THE OWNER OF THE TRACT.

PROPOSED LANDSCAPING: THE PROPOSED LANDSCAPING IS TO BE A 2' HIGH CONCRETE CURB WITH A 0.005' PER FOOT SLOPE TO THE EXISTING DRAINAGE STRUCTURE. THE PROPOSED LANDSCAPING IS TO BE MAINTAINED BY THE OWNER OF THE TRACT.

PROPOSED UTILITIES (CONT.): THE PROPOSED UTILITIES ARE TO BE 6" DIA. WATER MAIN AND 4" DIA. SANITARY SEWER MAIN. THE PROPOSED UTILITIES ARE TO BE MAINTAINED BY THE OWNER OF THE TRACT.

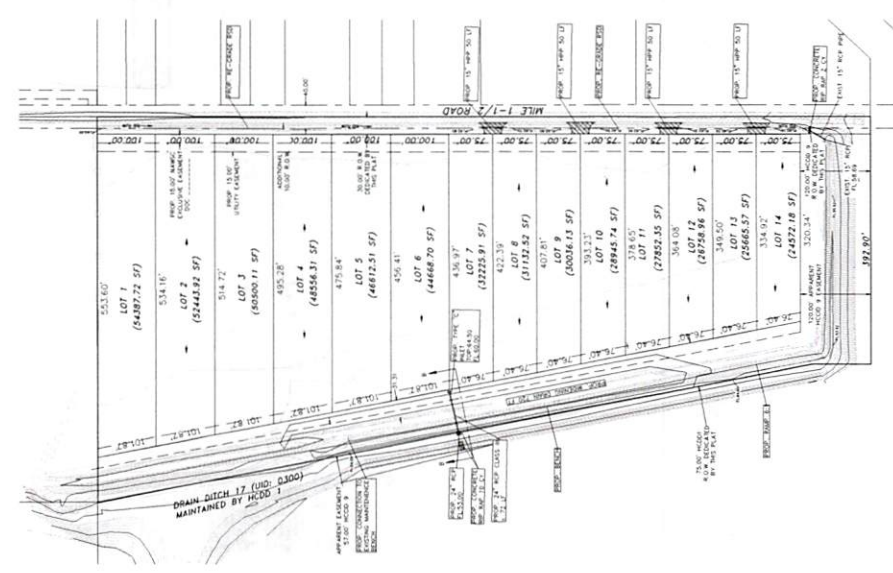
PROPOSED EROSION CONTROL (CONT.): THE PROPOSED EROSION CONTROL IS TO BE A 2' HIGH CONCRETE CURB WITH A 0.005' PER FOOT SLOPE TO THE EXISTING DRAINAGE STRUCTURE. THE PROPOSED EROSION CONTROL IS TO BE MAINTAINED BY THE OWNER OF THE TRACT.

PROPOSED SIGNAGE (CONT.): THE PROPOSED SIGNAGE IS TO BE A 4' X 8' SIGN WITH THE FOLLOWING INFORMATION: TARS NO. 1 SUBDIVISION, MAP DRAINAGE AND PAVEMENT, HISSOPS COUNTY, TEXAS.

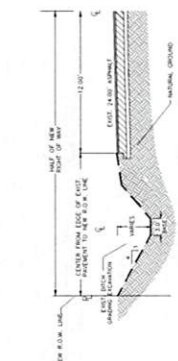
PROPOSED LIGHTING (CONT.): THE PROPOSED LIGHTING IS TO BE 4' X 4' SQUARE LIGHT FIXTURES WITH 100 WATT BULBS. THE PROPOSED LIGHTING IS TO BE MAINTAINED BY THE OWNER OF THE TRACT.

PROPOSED FENCING (CONT.): THE PROPOSED FENCING IS TO BE A 6' HIGH WOOD FENCE WITH A 0.005' PER FOOT SLOPE TO THE EXISTING DRAINAGE STRUCTURE. THE PROPOSED FENCING IS TO BE MAINTAINED BY THE OWNER OF THE TRACT.

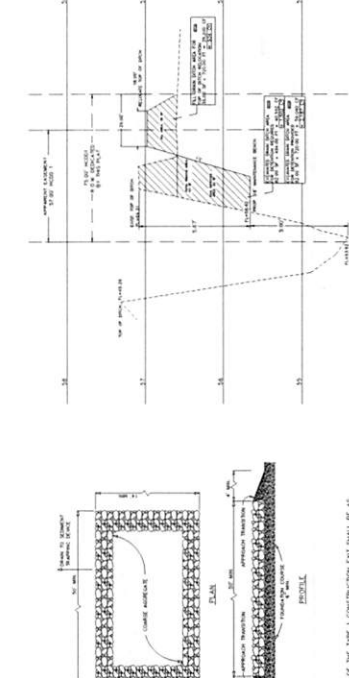
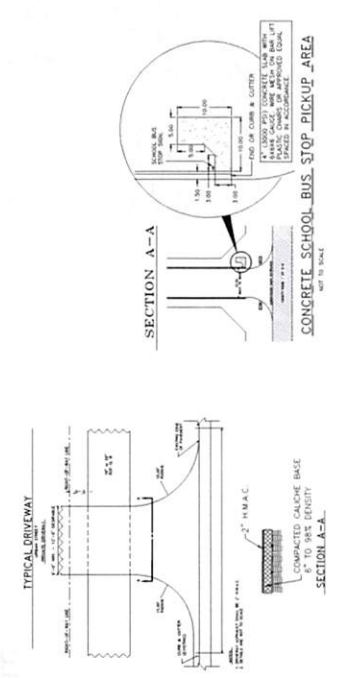
PROPOSED LANDSCAPING (CONT.): THE PROPOSED LANDSCAPING IS TO BE A 2' HIGH CONCRETE CURB WITH A 0.005' PER FOOT SLOPE TO THE EXISTING DRAINAGE STRUCTURE. THE PROPOSED LANDSCAPING IS TO BE MAINTAINED BY THE OWNER OF THE TRACT.



DRAINAGE LAYOUT  
SCALE: 1"=100'



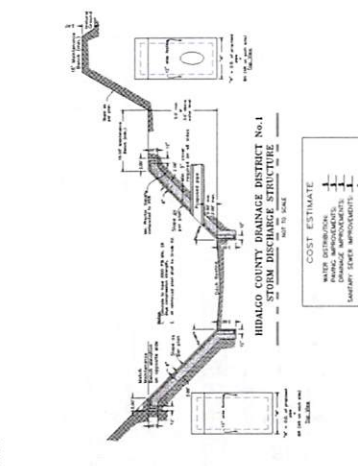
RECONSTRUCTION OF ROAD SIDE DITCH  
NOT TO SCALE



EXISTING & PROPOSED CROSS SECTION B-B  
VERTICAL ELEVATION: 10.00'

NOTES:  
1. ALL NOTES ON THE PLANS SHALL BE OBSERVED.  
2. ALL NOTES ON THE PLANS SHALL BE OBSERVED.  
3. ALL NOTES ON THE PLANS SHALL BE OBSERVED.  
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6. ALL NOTES ON THE PLANS SHALL BE OBSERVED.

CONSTRUCTION INGRESS/EGRESS SEDIMENT CONTROL TYPE 1



HIDALGO COUNTY DRAINAGE DISTRICT No. 1 STORM DISCHARGE STRUCTURE  
NOT TO SCALE

COST ESTIMATE  
WATER DISTRIBUTION: \$100.00  
SEWERAGE & SANITATION: \$100.00  
STORM SEWER IMPROVEMENTS: \$100.00  
TOTAL: \$300.00



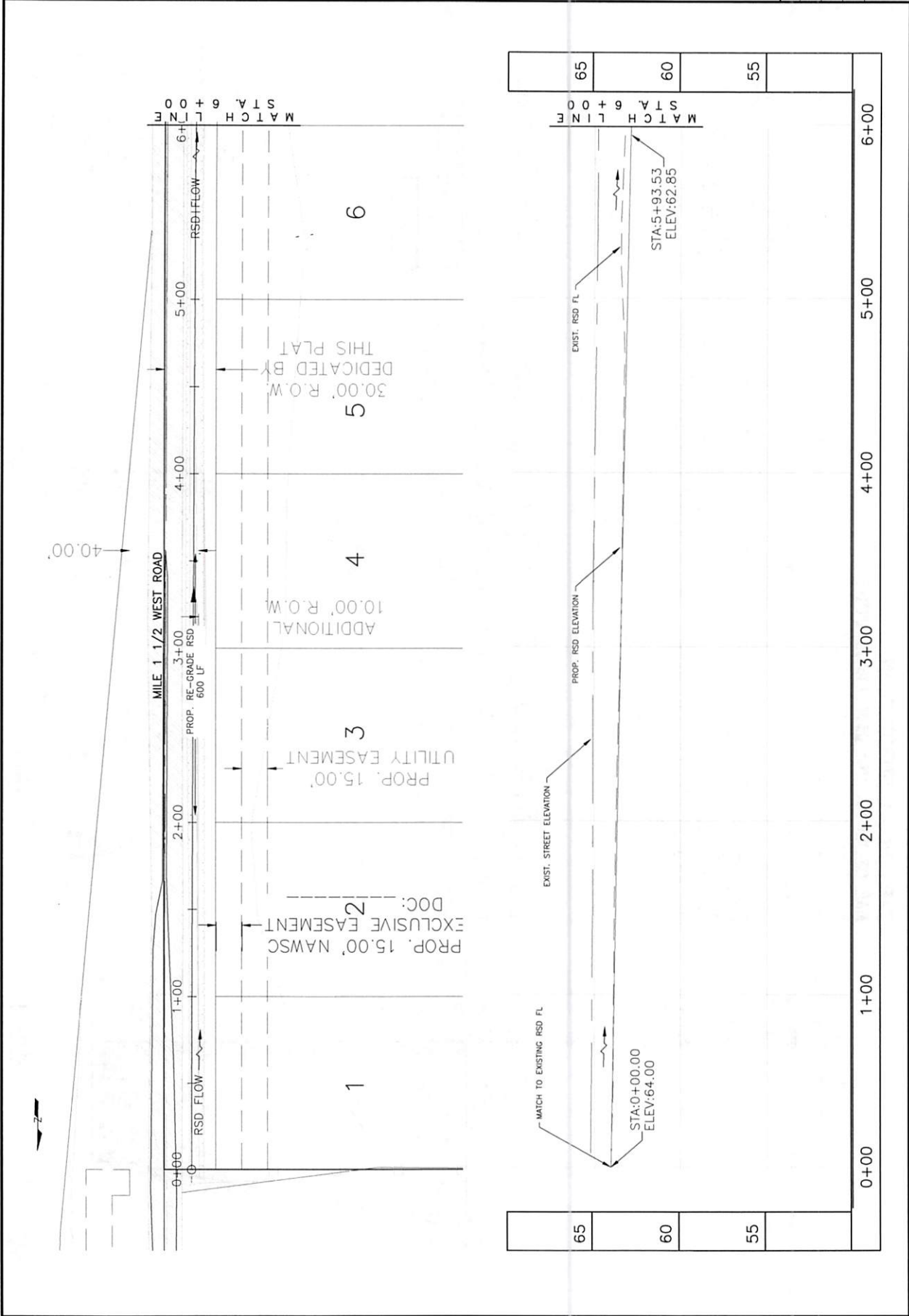


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**TARS NO. 1 SUBDIVISION  
PLAN AND PROFILE  
STA. 0+00 - STA. 6+00**

**S2 ENGINEERING, PLLC**  
CIVIL ENGINEERING - CONSTRUCTION ADMINISTRATION  
MISSION TX, 78574  
F-22858  
TEL: (956) 403-9787

SCALE: H:1"=50' / V:1"=5'  
DRAWN BY: L.M.  
CHECKED BY: N.S.  
TOPD BY: N.C.  
SHEET: C01-01



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DATE: 08/17/22

DESIGNED BY: JOSE N. SALDVAR P.E., CFM 94076 ON

CHECKED BY: L.M.

SCALE: H<sub>1</sub>=50' / V<sub>1</sub>=5'

MISSION TX, 78974

F-22858

S2 ENGINEERING, PLLC

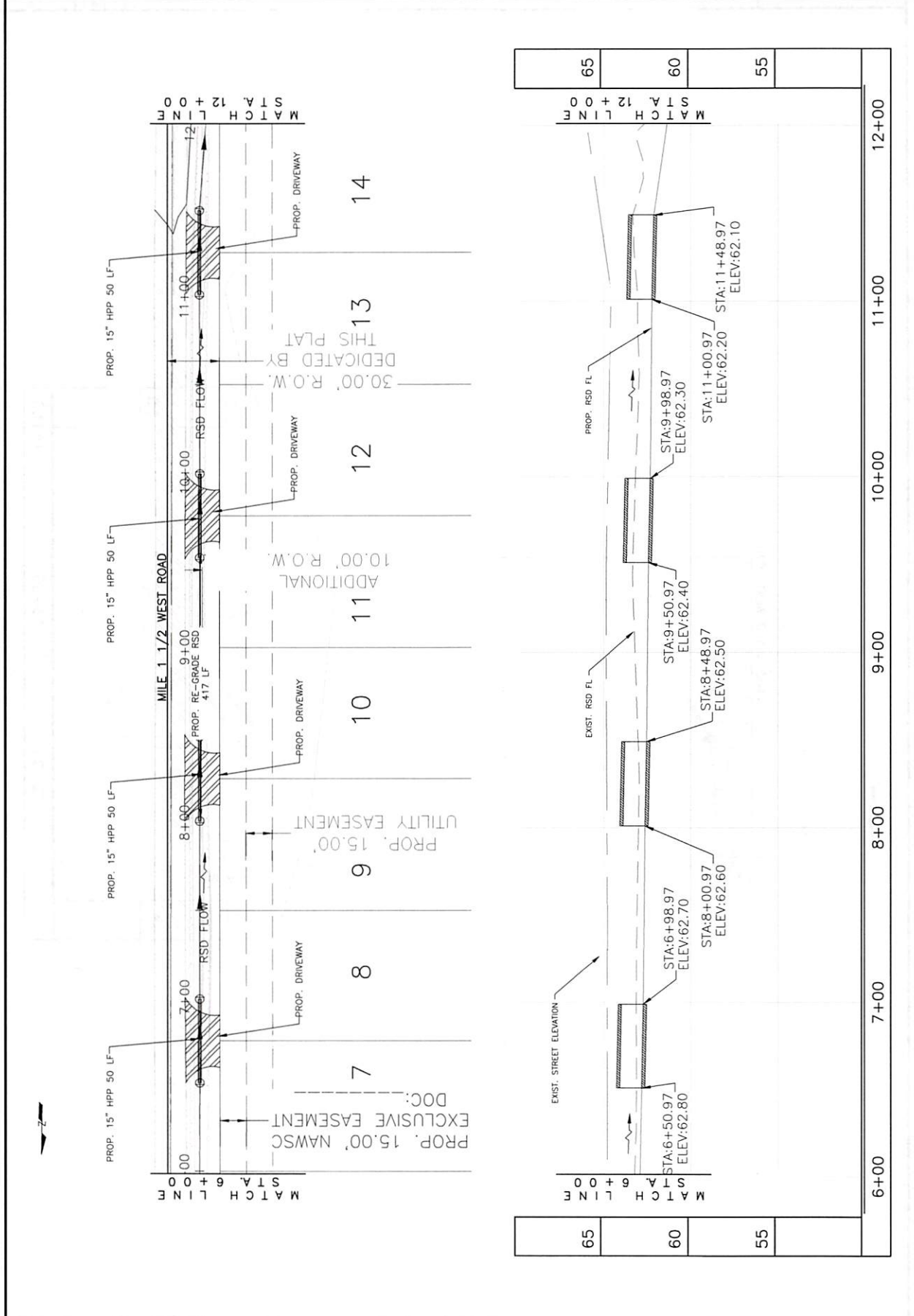
CIVIL ENGINEERING - CONSTRUCTION MANAGEMENT - TRAFFIC ENGINEERING

TEL: (956) 403-9787

**TARS NO. 1 SUBDIVISION**

**PLAN AND PROFILE**

**STA. 6+00 - STA. 12+00**



SHEET: C01-02

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**TARS NO. 1 SUBDIVISION**  
**PLAN AND PROFILE**  
STA. 11+50

**S2 ENGINEERING, PLLC**  
CIVIL ENGINEERING - CONSTRUCTION MANAGEMENT  
2424 MINOSA ST  
MISSION TX, 75574  
F-22896  
TEL. (958) 403-9787



SCALE: H<sub>1</sub>=50' / V<sub>1</sub>=5'  
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TOPD BY: N.C.  
SHEET: C01-03

