Mayor Oscar D. Montoya
Commissioner Joe Martinez
Commissioner Armando Garcia

Commissioner Rolando Garcia
Mayor Pro-Tem Dr. Ruben Saldana
Interim City Manager/Fire Chief Javier Campos

PLANNING & ZONING COMMISSION
SPECIAL MEETING
SEPTEMBER 9, 2026 – 5:00 P.M.
MERCEDES CITY HALL – COMMISSION CHAMBERS
400 S. OHIO AVE., MERCEDES, TX 78570

1. **Call Meeting to Order**
2. **Establish Quorum**
3. **Invocation**
4. **Pledge of Allegiance**
5. **Open Forum**
6. **Approval of Minutes for Meeting(s) held on July 30, 2026**
7. **Rezone Request for South Campacuas Addn Ft 132 8.53ac from "RMH" Mobile Home to Class "LI" Light Industrial District**
8. **Subdivision: Final Approval for Redstone Heights**
9. **Adjournment**

Notice is hereby given that the City Commissioners of the City of Mercedes, Texas will meet in a ***Special Meeting*** on Wednesday, September 9, 2026 at 5:00 P.M. Said meeting will be conducted in the Commission Chambers of the City Hall located at 400 S. Ohio, Mercedes, Texas for the purpose of considering and taking formal action regarding the items listed above. This notice is given in accordance with Vernon's Texas Codes Annotated, Texas Government Code, Section 551.001 et. Seq.

WITNESS MY HAND AND SEAL OF THE CITY THIS THE 2ND DAY OF SEPTEMBER, 2026.

Denisse Hernandez, Planning Director

ATTEST:

Joselynn Castillo, City Secretary

Minutes
Planning & Zoning Commission
July 30, 2026 @ 5:00 P.M.

Members Present:	**Leonardo Garcia Jr.**	**Chairman**
	Michael L. Rivera	**Board Member**
	Samuel Longoria Jr	**Board Member**
	Chris Desiga	**Board Member**
Members Absent:	**Nancy K. Garza**	**Vice-Chairman**
Staff:	**Denisse Hernandez**	**Planning Director**
	Giselle Garcia	**Planning Admin. Assistant**

1.) Call Meeting to Order.

Chairman Leonardo Garcia Jr. called the meeting to order at 5:02 p.m.

2.) Establish Quorum.

Quorum was established with 4 out of 5 members present. Vice-Chairman Nancy K. Garza was noted as absent.

3.) Invocation.

Chairman Leonardo Garcia led those present in a prayerful invocation.

4.) Pledge of Allegiance.

Board Member Samuel Longoria led those present in a reverent Pledge of Allegiance.

5.) Open Forum

Chairman Leonardo Garcia read the item.

As no one signed up to address the Board, the Chairman proceeded to the next item on the agenda.

6.) Approval of Minutes for Meeting(s) held on July 22, 2026

Chairman Leonardo Garcia read the item. After the board reviewed the minutes, Board Member Samuel Longoria made a motion to approve. Board Member Michael Rivera second the motion. The motion passed unanimously.

7.) Rezone Request for Capisallo District Lot 8 Block 65 from "N" Newly Annexed to Class "R-2" Duplex-Fourplex Residential District

Chairman Leonardo Garcia read the item. Mr. Garcia opened the Public Hearing at 5:06 PM. The Chairman closed the Public Hearing at 5:09 PM. Chairman Garcia requested the city's recommendation, Planning Director Denisse Hernandez stated that City staff recommends approval, subject to all standard City and engineering comments. A motion was made by Board Member Michael Rivera to approve the rezone request. The motion was seconded by Board Member Samuel Longoria. The motion passed unanimously.

7.) Rezone Request for Campacuas Addn Lot 13 Block 101 from "N" Newly Annexed to Class "C-1" Apartment District

Chairman Leonardo Garcia read the item. Mr. Garcia opened the Public Hearing at 5:12 PM. Sam Vargas, a resident that lives nearby, expressed concerns regarding drainage, the potential impact of agricultural dust on families, traffic, and access to his property via an existing dirt road near a canal. City staff clarified that the rezoning is only the initial step; the developer must undergo a subdivision plat process, environmental studies, and engineering reviews, which will address drainage, fire safety, and access regulations with the county and drainage district. The Chairman closed the Public Hearing at 5:22 PM. Chairman Garcia requested the city's recommendation, Planning Director Denisse Hernandez stated that City staff recommends approval, subject to all standard City and engineering comments. A motion was made by Board Member Michael Rivera to approve the rezone request. The motion was seconded by Board Member Samuel Longoria. The motion passed unanimously.

8.) Adjournment

Board Member Michael Rivera made a motion to adjourn. Board Member Samuel Longoria second the motion. The motion to adjourn was approved by unanimous vote at approximately 5:24 p.m.

_____

Leonardo Garcia Jr, Chairman

_____

Nancy K Garza, Vice-Chairman

_____

Michael Rivera, Member

_____

Samuel Longoria Jr, Member

Chris Desiga, Member

ATTEST:

Joselynn Castillo, City Secretary

AGENDA ITEM NO. 7

Ordinances/Resolution

DATE: September 9, 2026

FROM: Denisse Hernandez, Planning Director

ITEM: Rezone Request for South Campacuas Addn Ft 132 8.53ac from "RMH" Mobile Home to Class "LI" Light Industrial District

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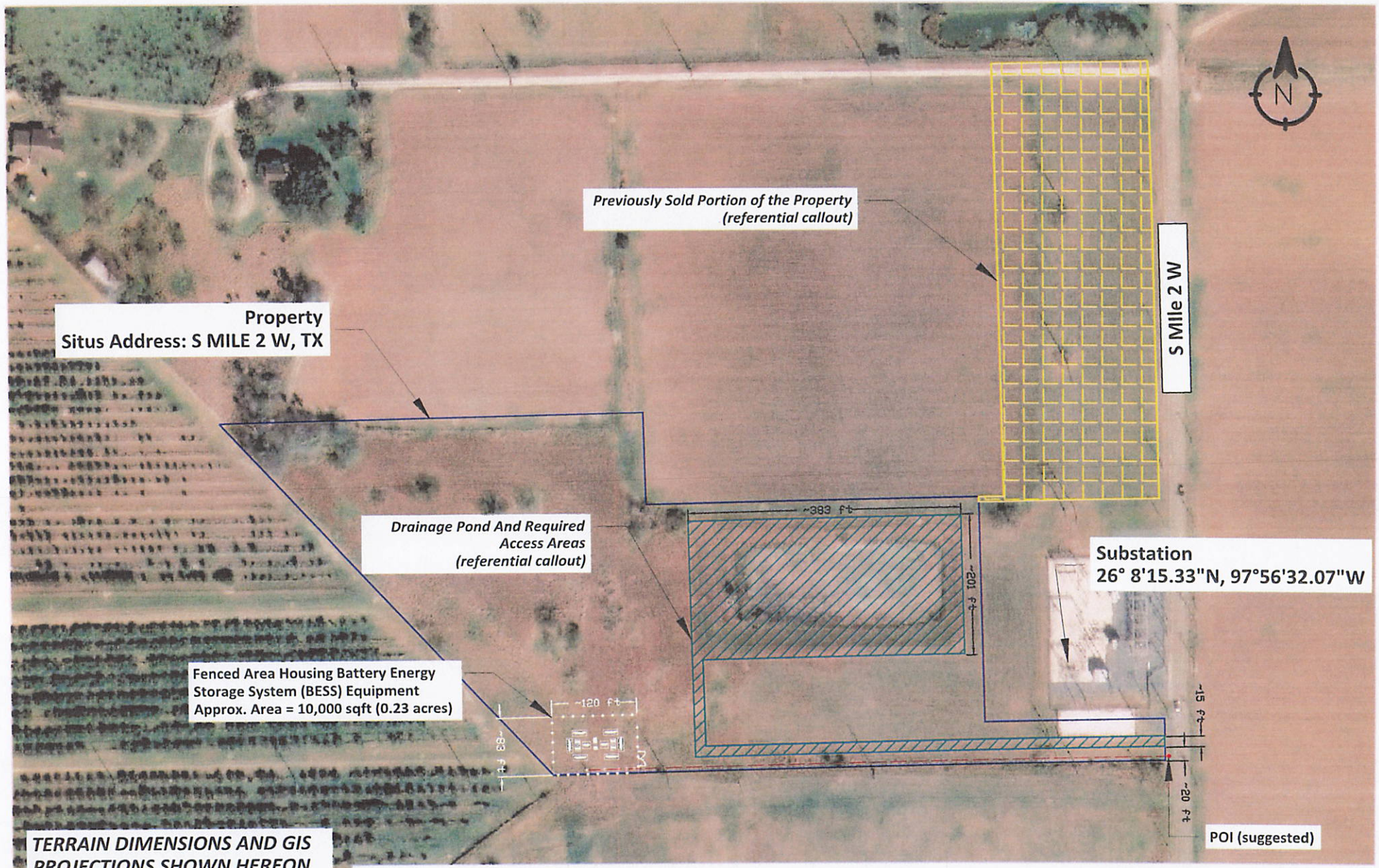
BACKGROUND INFORMATION:

- The applicant wants to change their zoning from Mobile Home to Light Industrial. Their goal is to build a 9.9 MW Battery Energy Storage System (BESS) that will connect to the nearby Wesmer Substation. As shown in the provided document, "WESM-001-01-A (1).pdf", the actual battery equipment will sit inside a small fenced area of about 10,000 square feet (or 0.23 acres).
- Even though this property is currently zoned for mobile homes, the surrounding area is already heavily institutional and industrial. More importantly, we set a precedent a few years ago when the City approved the exact same request for the property directly to the north (rezoning it to Light Industrial for a battery storage facility). Approving this request simply continues the existing trend for this street.
- Our Future Land Use Map (FLUM) officially lists this area as "Low Density Residential" (meaning single-family homes on 1/4 acre lots).
- However, zoning is allowed to differ from this map if the neighborhood has changed. Because the properties next door is already industrial and institutional, trying to force single-family homes in this specific spot no longer matches the reality of the neighborhood. Rezoning this to Light Industrial makes the most logical sense for how this area is actually developing.

ATTACHMENTS:

- Location Map
- 200ft Radius Map
- List of Residents Notified

Staff Recommendation: This item is being presented to the Planning and Zoning Board for review and determination. The Board is asked to evaluate the request based on the surrounding land uses, recent zoning precedents in the area, and the Future Land Use Map to determine the most appropriate zoning designation for the property.



TERRAIN DIMENSIONS AND GIS PROJECTIONS SHOWN HEREON ARE APPROXIMATE AND PROVIDED FOR PLANNING PURPOSES ONLY.

02 / 26 / 2026 1/16" = 1' - 0" 01 WESM-001

WESMER

Project Location

26° 8'13.40"N, 97°56'40.12"W

9.9 MW Project connecting to the Wesmer Substation

INITIAL DESIGN FP 02 / 26 / 26

1487737 BC LTD

1055 DUNSMUIR ST STE 3000

VANCOUVER BC V7X 1K8

PALLADIUM ENERGY STORAGE LLC

1360 POST OAK BLVD STE 400

HOUSTON TX 77056

HARRISON JOHN MARC

1248 S MILE 2 W

MERCEDES TX 78570-7410

TEXAS A & I UNIVERSITY

PO BOX 1238

KINGSVILLE TX 78364-1238

TEJAS BUILDING & DEVELOPMENT CO INC

2401 E EXPRESSWAY 83

WESLACO TX 78599-5512

LLANO GRANDE MHRV LLC

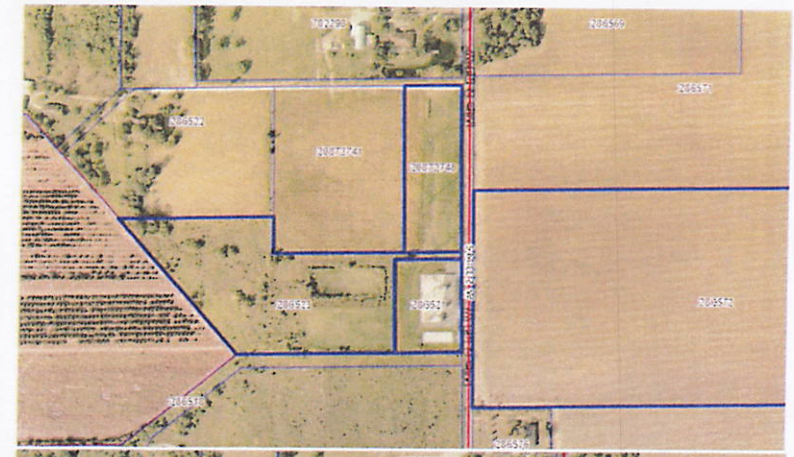
1910 TERRACINO DR

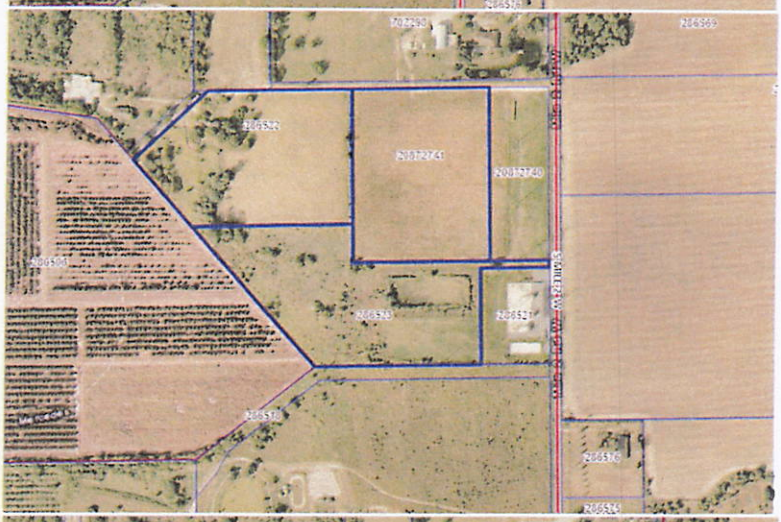
SACRAMENTO CA 95834-2454

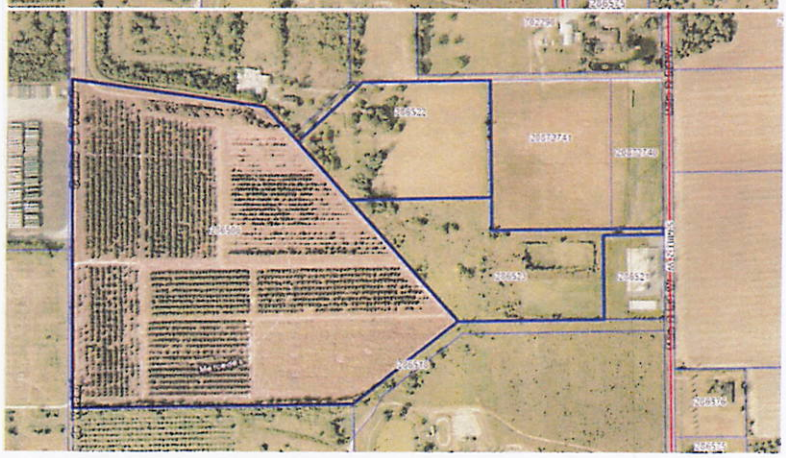
AEP TEXAS CENTRAL COMPANY

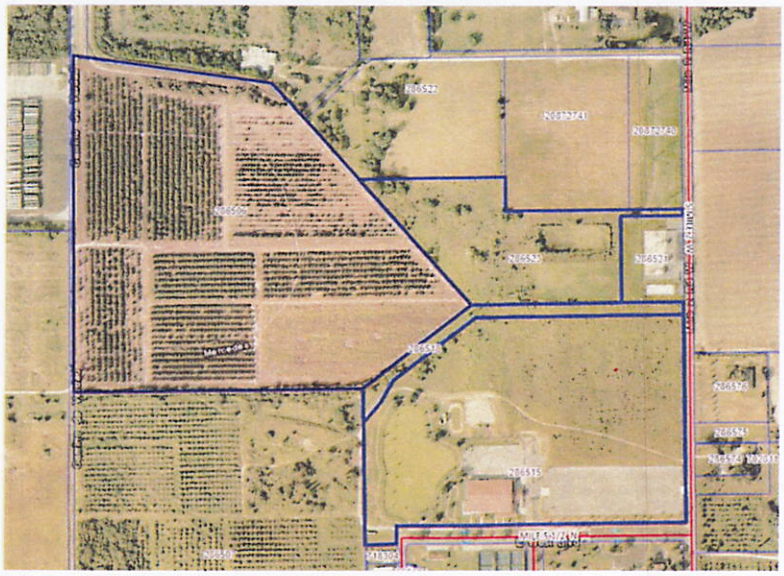
PO BOX 16428

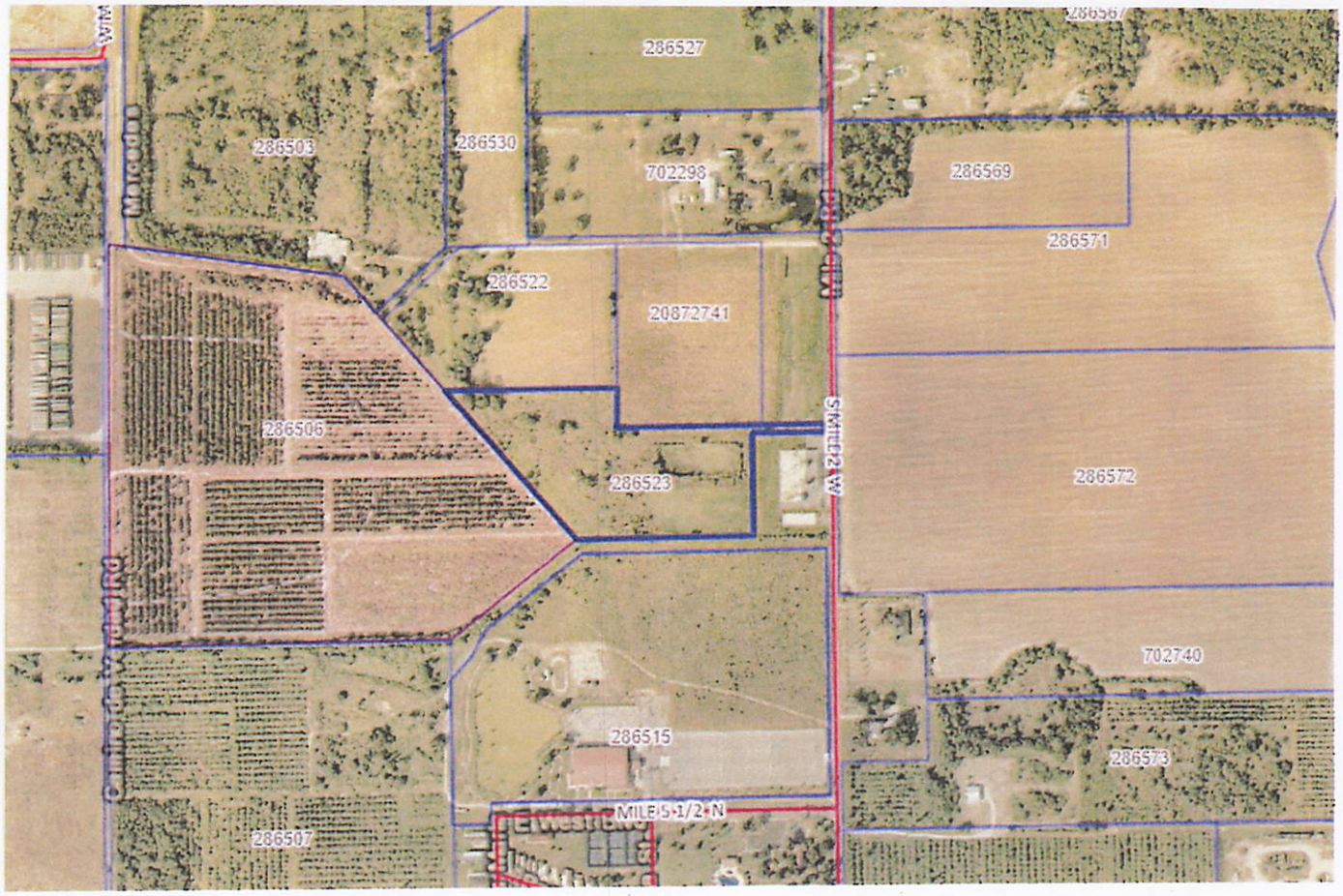
COLUMBUS OH 43216-6428










286527
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286515
286573
286507
MILE 5 1/2 N
S MILE 2 W

AGENDA ITEM NO. 8

Ordinances/Resolution

DATE: September 9, 2026

FROM: Denisse Hernandez, Planning Director

ITEM: Subdivision: Final Approval for Redstone Heights

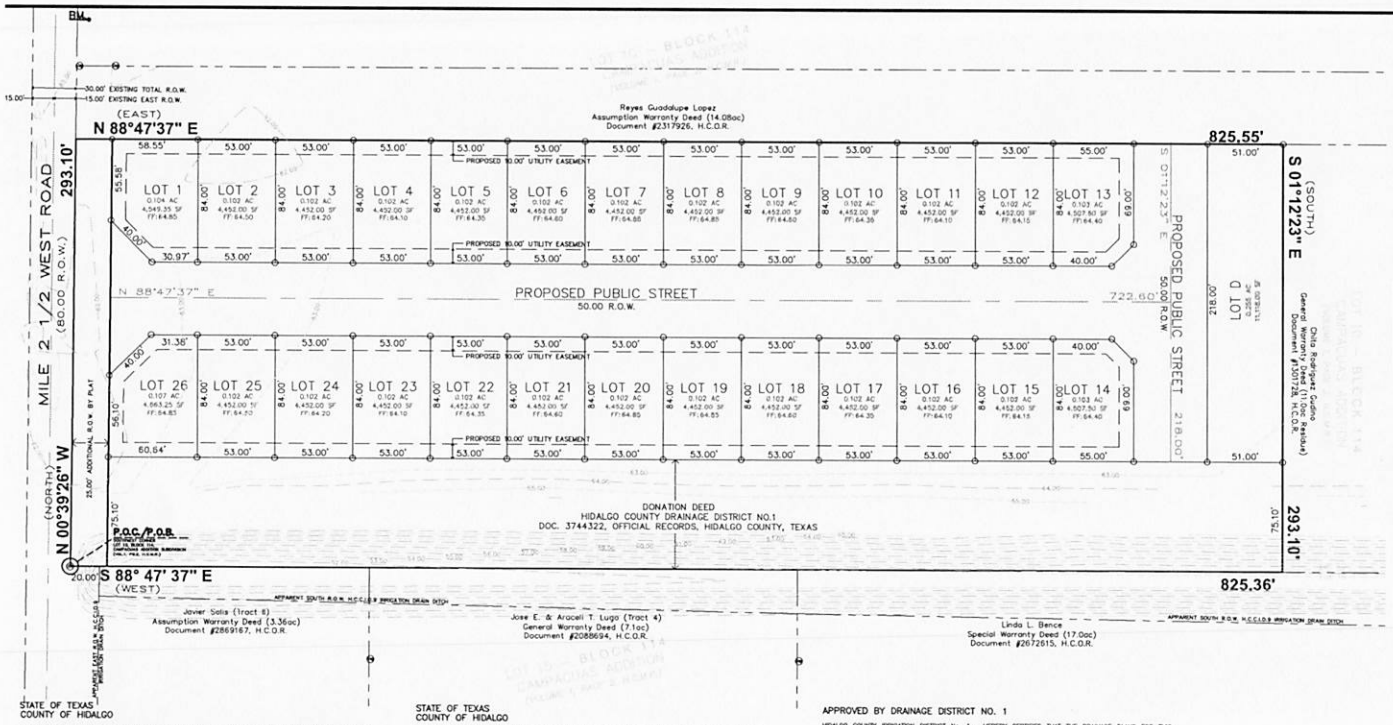
BACKGROUND INFORMATION:

- Redstone Heights is a 5.544-acre single-family residential subdivision containing 26 lots. The development is located off Mile 2 1/2, north of Expressway 83 in the City of Mercedes
- Preliminary plat and zoning reviews were conducted in late 2025. A variance request concerning the length of the dead-end street/cul-de-sac was approved by the Board of Adjustments on November 3, 2025.
- The City and the developer reached an agreement on a 37-foot back-to-back street width, as opposed to the developer's requested 32-foot width. Drainage plans were adjusted to shift detention ponds to the back of the property.
- A final site walkthrough was conducted on September 1, 2026, with the City Engineer and representatives from the Planning, Public Works, and Fire Departments. The project is substantially complete, with only a few minor punch-list items remaining:
    - Detention Fencing: The fence securing the detention area is still pending, but the developer is actively working on completing it.
    - Signage: Street signs have been ordered and are awaiting delivery/installation.
    - Streetlights: Light pole installations have been formally requested through AEP, and the developer is currently waiting on AEP's schedule to complete the installation.

ATTACHMENTS:

- Plat
- Drainage Report

Staff Recommendation: City Staff recommends approval subject to all city comments.

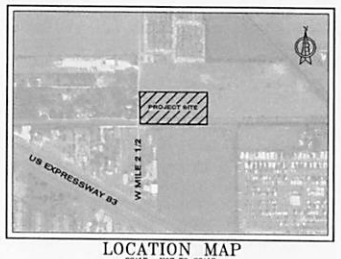


PLAT LEGEND

- FD. 1/2" IRON ROD
- SET 1/2" IRON ROD W/CAP
- SET 1/2" IRON ROD W/CAP STAMPED 2791
- R.O.W. RIGHT-OF-WAY
- H.C.M.R. HIDALGO COUNTY MAP RECORDS
- H.C.O.R. HIDALGO COUNTY OFFICIAL RECORDS
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT

Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	52.36	50.00	60.00	S58° 47' 37"W	50.00
C2	52.36	50.00	60.00	N61° 12' 23"W	50.00
C3	52.36	50.00	60.00	N58° 47' 37"E	50.00
C3	52.36	50.00	60.00	N61° 12' 23"W	50.00



LOCATION MAP
SCALE : NOT TO SCALE

METES AND BOUNDS

A 5.544-ACRE TRACT OF LAND, MORE OR LESS, OUT OF LOT 10, BLOCK 114, CAMPACUAS SUBDIVISION, AS PER MAP OR PLAT THEREOF RECORDED IN VOLUME 1, PAGES 2, MAP RECORDS, HIDALGO COUNTY, TEXAS, REFERENCES TO WHICH ARE HERE MADE FOR ALL PURPOSE, LOCATED ON THE EAST SIDE OF MILE 2 ½ WEST ROAD, APPROXIMATELY 1,036 FEET NORTH OF IH 2 (EXPRESSWAY 83), IS DESCRIBED BY METES AND BOUNDS AS FOLLOWS;

THE POINT OF COMMENCEMENT (P.O.C) BEING AT A NO. 4 REBAR FOUND ON THE APPARENT EXISTING EAST RIGHT-OF-WAY LINE OF SAID MILE 2 ½ WEST ROAD FOR THE APPARENT SOUTHWEST CORNER OF SAID LOT 10, BLOCK 114, AND OF SAID 5.544-ACRE TRACT, AND ALSO BEING THE POINT OF BEGINNING (P.O.B.) OF SAID 5.544-ACRE TRACT OF LAND HEREIN DESCRIBED;

THENCE, NORTH 00 DEGREES 39 MINUTES 26 SECONDS WEST (NORTH RECORDED), WITH THE APPARENT WEST LOT LINE OF SAID LOT 10, BLOCK 114, AND THE SAID MILE 2 ½ WEST ROAD EXISTING EAST RIGHT-OF-WAY LINE, AND BEING THE APPARENT WEST LOT LINE OF SAID 5.544-ACRE TRACT, A DISTANCE OF 55.00 FEET PAST A NO. 4 REBAR FOUND FOR AN OFFSET OF THE SAID SOUTHWEST CORNER, CONTINUING FOR A TOTAL DISTANCE OF 293.10 FEET TO A NO. 4 REBAR SET WITH PLASTIC CAP STAMPED 2791 FOR THE APPARENT NORTHWEST CORNER OF SAID 5.544-ACRE TRACT OF LAND HEREIN DESCRIBED;

THENCE, NORTH 88 DEGREES 47 MINUTES 37 SECONDS EAST (EAST RECORDED), PARALLEL TO THE APPARENT SOUTH LOT LINE OF SAID LOT 10, BLOCK 114, AND WITH THE APPARENT NORTH LOT LINE OF SAID 5.544-ACRE TRACT, A DISTANCE OF 825.72 FEET TO A NO. 4 REBAR SET WITH PLASTIC CAMP STAMPED 2791 FOR AN APPARENT INTERNAL CORNER OF A 11.0-ACRE TRACT OF LAND VESTED IN CHITA RODRIGUEZ GUDINO (DOCUMENT NO. 1301728, OFFICIAL RECORDS, HIDALGO COUNTY, TEXAS) AND THE NORTHEAST CORNER OF SAID 5.544-ACRE TRACT OF LAND HEREIN DESCRIBED;

THENCE, SOUTH 01 DEGREES 12 MINUTES 23 SECONDS EAST (SOUTH RECORDED), PARALLEL TO THE APPARENT EAST LOT LINE OF SAID LOT 10, BLOCK 114, AND WITH AN APPARENT WEST LOT LINE OF SAID 11.0-ACRE TRACT VESTED IN CHITA RODRIGUEZ GUDINO, AND THE EAST LOT LINE OF SAID 5.544-ACRE TRACT, A DISTANCE OF 238.10 FEET PAST A NO. 4 REBAR SET WITH PLASTIC CAP STAMPED 2791 FOR AN OFFSET REFERENCE TO THE APPARENT SOUTHEAST CORNER OF SAID 5.544-ACRE TRACT, CONTINUING FOR A TOTAL DISTANCE OF 293.10 FEET TO A POINT WITHIN AN EXISTING DRAINAGE DITCH BEING ON THE SAID SOUTH LOT LINE OF LOT 10, BLOCK 114, FOR THE APPARENT SOUTHWEST CORNER OF SAID 11.0-ACRE TRACT OF LAND VESTED IN CHITA RODRIGUEZ GUDINO, AND THE SOUTHEAST CORNER OF SAID 5.544-ACRE TRACT OF LAND HEREIN DESCRIBED;

THENCE, SOUTH 88 DEGREES 47 MINUTES 37 SECONDS EAST (WEST RECORDED), ALONG AND INSIDE SAID EXISTING DRAINAGE DITCH, AND WITH THE SAID SOUTH LOT LINE OF LOT 10, BLOCK 114, AND OF SAID 5.544-ACRE TRACT, A DISTANCE OF 825.72 FEET TO THE SAID NO. 4 REBAR FOUND FOR THE SOUTHWEST CORNER OF SAID 5.544-ACRE TRACT OF LAND HEREIN DESCRIBED, AND ALSO BEING THE POINT OF BEGINNING (P.O.B.), CONTAINING A GROSS OF 5.544 ACRES OF LAND, MORE OR LESS.

GENERAL SUBDIVISION PLAT NOTES

1. THIS SUBDIVISION IS LOCATED IN ZONE "X"
   FEMA FIRM PANEL No. 480334 0450 C
   MAP REVISED JUNE 6, 2000, REVISED TO REFLECT LOMR DATED MAY 30, 2002

   ZONE "X" ARE AREAS DEFINED OUTSIDE THE REGULATORY FLOOD PLAIN (NO SHADING)

2. BASIS OF BEARING – NAD 1983 STATE PLANE TEXAS SOUTH FIPS 4205 FEET.

3. THIS PROPERTY LIES INSIDE THE CITY LIMITS OF THE CITY OF MERCEDES

4. SETBACKS: TOWNHOME RESIDENCY (R-TH)
   FRONT: 10.00 FEET
   REAR: 10.00 FEET OR EASEMENT, WHICHEVER IS GREATER
   SIDE YARD INTERNAL LOT: 6.00 FEET OR EASEMENT, WHICHEVER IS GREATER
   SIDE YARD CORNER LOT: 10.00 FEET OR EASEMENT, WHICHEVER IS GREATER
   GARAGE: 18.00 FEET

5. THE MINIMUM FINISH FLOOR ELEVATION SHALL BE 18" ABOVE THE TOP OF CURB OF THE PROPOSED STREET.

6. ANY NEW CONSTRUCTION AND RELATED ACTIVITIES REQUIRE THE APPROVAL BY THE CITY OF MERCEDES IN ACCORDANCE WITH THE CITY'S CODE OF ORDINANCE.

7. NO MORE THAN ONE-SINGLE FAMILY DETACHED DWELLING SHALL BE LOCATED ON EACH LOT. THIS MUST BE STIPULATED ON ALL DEEDS AND CONTRACTS FOR DEEDS. APPLICATIONS FOR CONSTRUCTION ARE REQUIRED PRIOR TO OCCUPYING THE LOT.

8. NO STRUCTURE SHALL BE PERMITTED OVER ANY EASEMENT. EASEMENTS SHALL BE KEPT CLEAR OF BUILDINGS, SHEDS, SHRUBS TREES, AND OTHER PLANTINGS (EXCEPT LOW, LESS THAN 18 INCHES MATURE HEIGHT, GROUND COVER, GRASS, OR FLOWERS) AND OTHER OBSTRUCTIONS THAT WOULD INTERFERE WITH THE OPERATIONS AND MAINTENANCE OF THE EASEMENT.

9. IN ACCORDANCE WITH THE HIDALGO COUNTY DRAINAGE DISTRICT NO. 1 AND CITY OF MERCEDES REQUIREMENTS, THIS DEVELOPMENT WILL BE REQUIRED TO DETAIN A TOTAL OF 20.821 CUBIC-FEET (0.48 ACRE-FEET) OF STORM WATER RUNOFF. DRAINAGE RETENTION IN ACCORDANCE WITH THE LOCAL REQUIREMENTS WILL BE ACCOMPLISHED WITHIN PROPOSED LOT D OF THIS SUBDIVISION PRIOR DISCHARGING INTO PUBLIC SYSTEM.

10. 5 FOOT SIDEWALK ALONG ALL INTERIOR STREETS IS REQUIRED DURING BUILDING PERMIT STAGE AND PRIOR TO OCCUPANCY. THE DEVELOPER WILL PROVIDE THE 5' SIDEWALK ALONG THE ENTIRE STREET FRONT OF COMMON LOT A PRIOR TO PLAT RECORDATION (EITHER ESCROWED OR CONSTRUCTED).

11. **PROJECT BENCHMARK: RR NAIL SET ON POWER POLE APPROXIMATELY 80.00 FT NORTH AND 7.00 FT EAST OF NORTHWEST CORNER OF THIS TRACT (AS SHOWN)**
    N: 16584134.7300
    E: 1184773.1750
    TOP: 64.28'

12. ALL EASEMENTS TO BE MAINTAINED BY THE PROPERTY OWNERS AND THEIR SUCCESSORS.

13. NO. 4 REBARS WITH PLASTIC CAPS SHALL BE SET ON ALL CORNERS OF THIS SUBDIVISION WITH "YELLOW 2791" PLASTIC CAPS.

14. ALL CONSTRUCTION SHALL COMPLY WITH STORMWATER PREVENTION PLAN REQUIREMENTS.

15. DURING CONSTRUCTION, EROSION AND SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE CURRENT TEXAS POLLUTION DISCHARGE ELIMINATION SYSTEM.

16. COMMON LOT D FOR DETENTION PURPOSES ONLY WILL BE MAINTAINED BY THE HOA/PROPERTY OWNERS AND NOT THE CITY OF MERCEDES

17. COMMON LOT D IDENTIFIED AS DETENTION POND SHALL BE UTILIZED AND DESIGNATED AS STORM SEWER DETENTION AND NO BUILDING SHALL BE PROPOSED IN THIS LOT.

18. ALL FENCES ABUTTING DRAIN DITCH R.O.W. SHALL BE PLACED WITHIN INDIVIDUAL LOTS AS TO NOT IMPEDE WITH MAINTENANCE OF DRAIN DITCH.

STATE OF TEXAS
COUNTY OF HIDALGO

I, RICARDO ARIZMENDI, THE UNDERSIGNED, OWNER(S) OF THE LAND SHOWN ON THIS PLAT AND DESIGNATED HEREIN AS REDSTONE HEIGHTS SUBDIVISION, AN ADDITION TO THE CITY OF PALMVIEW, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, HEREBY DEDICATE TO THE USE OF THE PUBLIC FOREVER ALL STREETS, ALLEYS, PARKS, WATER COURSES, DRAIN EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED.

RICARDO ARIZMENDI, MANAGING MEMBER
BUENAVISTA DEVELOPERS LLC.
5901 N. DODGER STREET
PHARR, TEXAS 78577

DATE _____

STATE OF TEXAS
COUNTY OF HIDALGO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED RICARDO ARIZMENDI KNOWN TO ME TO BE THE PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE _____ DAY OF _____ 20____

NOTARY PUBLIC IN AND FOR THE
STATE OF TEXAS
MY COMMISSION EXPIRES_____

STATE OF TEXAS
COUNTY OF HIDALGO

I, RUBI GUAJARDO, THE UNDERSIGNED, OWNER(S) OF THE LAND SHOWN ON THIS PLAT AND DESIGNATED HEREIN AS REDSTONE HEIGHTS SUBDIVISION, AN ADDITION TO THE CITY OF PALMVIEW, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, HEREBY DEDICATE TO THE USE OF THE PUBLIC FOREVER ALL STREETS, ALLEYS, PARKS, WATER COURSES, DRAIN EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED.

RUBI GUAJARDO, MANAGING MEMBER
BUENAVISTA DEVELOPERS LLC.
5901 N. DODGER STREET
PHARR, TEXAS 78577

DATE _____

STATE OF TEXAS
COUNTY OF HIDALGO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED RUBI GUAJARDO KNOWN TO ME TO BE THE PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE _____ DAY OF _____ 20____

NOTARY PUBLIC IN AND FOR THE
STATE OF TEXAS
MY COMMISSION EXPIRES_____

STATE OF TEXAS
COUNTY OF HIDALGO

I, GERARDO BENAVIDES, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN GIVEN TO THIS PLAT.

DATED THIS THE ____ DAY OF _____ 20____

GERARDO BENAVIDES, P.E.
LICENSED PROFESSIONAL ENGINEER
No.140950 STATE OF TEXAS

STATE OF TEXAS
GERARDO BENAVIDES
140950
LICENSED
PROFESSIONAL ENGINEER

STATE OF TEXAS
COUNTY OF HIDALGO

I, HOMERO L. GUTIERREZ, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT AND DESCRIPTION OF THE REDSTONE HEIGHTS SUBDIVISION WAS PREPARED FROM A SURVEY OF THE PROPERTY MADE ON THE GROUND UNDER MY SUPERVISION.

DATED THIS THE ____ DAY OF _____ 20____

HOMERO L. GUTIERREZ, RPLS
REGISTERED PROFESSIONAL LAND SURVEYOR
No. 2791 STATE OF TEXAS

STATE OF TEXAS
HOMERO L. GUTIERREZ
2791
REGISTERED
PROFESSIONAL
LAND SURVEYOR

STATE OF TEXAS
COUNTY OF HIDALGO

CERTIFICATION OF HIDALGO AND CAMERON COUNTIES IRRIGATION DISTRICT No. 9

THIS PLAT IS APPROVED BY HIDALGO AND CAMERON COUNTIES DISTRICT No. 9 DATED THIS _____ DAY OF _____, 20____

1. NO IMPROVEMENTS OF ANY KIND SHALL BE PLACED UPON HIDALGO AND CAMERON COUNTIES IRRIGATION DISTRICT No. 9 RIGHT-OF-WAYS AND/OR EASEMENTS WITHOUT THE EXPRESSED WRITTEN PERMISSION OF H.C.C.I.D. #9.
2. IT IS UNDERSTOOD THAT THE RATE OF FLOW OF STORM WATER FOR THE DEVELOPMENT WILL BE NO GREATER THAN THE RATE OF FLOW OF STORM WATER WHEN THE LAND WAS IN AGRICULTURAL USE.
3. H.C.C.I.D. 9 WILL NOT BE RESPONSIBLE FOR THE STORM/DRAINAGE WATER SYSTEM TO ANY LOT WITHIN THIS SUBDIVISION, AS WELL, H.C.C.I.D. 9 WILL NOT BE RESPONSIBLE FOR THE DELIVERY OF WATER TO ANY LOT WITHIN THIS SUBDIVISION, IF DESIRED, THIS WILL NOT BE AT THE DISTRICTS EXPENSE.
4. H.C.C.I.D. 9, HAS NOT REVIEWED AND DOES NOT CERTIFY THAT THE STORM SEWER OR UTILITIES SYSTEMS DESCRIBED ARE APPROPRIATE FOR THE PARTICULAR SUBDIVISION, BASED ON GENERALLY ACCEPTED ENGINEERING CRITERIA. THE DEVELOPER AND HIS/HER ENGINEER ARE RESPONSIBLE FOR THE DETERMINATION.
5. H.C.C.I.D. 9 EXCLUSIVE EASEMENT SHALL BE KEPT CLEAR OF BUILDING, SHEDS, FENCES, SHRUBS, TREES, AND OTHER PLANTING AND OTHER OBSTRUCTIONS THAT WOULD INTERFERE WITH THE OPERATIONS AND MAINTENANCE OF THE EASEMENTS.

GENERAL MANAGER
HIDALGO & CAMERON COUNTIES IRRIGATION DISTRICT No. 9

APPROVED BY DRAINAGE DISTRICT NO. 1

HIDALGO COUNTY IRRIGATION DISTRICT No. 1, HEREBY CERTIFIES THAT THE DRAINAGE PLANS FOR THIS SUBDIVISION COMPLY WITH THE MINIMUM STANDARDS OF THE DISTRICT ADPTED UNDER TEX. WATER CODE 49.211(c). THE DISTRICT HAS NOT REVIEWED AND DOES NOT CERTIFU THAT THE DRAINAGE STRUCTURES DESCIBED ARE APPROPRIATE FOR THE SPECIFIC SUBDIVISION, BASED ON GENERALLY ACCEPTED ENGINEERING CRITERIA. IT IS THE REPOSIBILITY OF THE DEVELOPER OF THE SUBDIVISION AND ITS ENGINEER TO MAKE THESE DETERMINATIONS.

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1

APPROVED BY CITY OF MERCEDES

SIGNATURE: _____

PRINTED NAME: _____

TITLE OF CITY OFFICIAL: _____

DATE: _____

THE COUNTY OF HIDALGO
TEXAS

FILED FOR RECORD IN HIDALGO COUNTY
ARTURO GUAJARDO, JR, HIDALGO COUNTY CLERK

ON: _____ AT _____ AM / PM

INSTRUMENT NUMBER _____
OF MAP RECORDS OF HIDALGO COUNTY TEXAS

BY: _____ DEPUTY

DATE _____

PROPOSED PLAT OF REDSTONE HEIGHTS SUBDIVISION IN THE CITY OF MERCEDES

A 5.544-ACRE TRACT OF LAND, MORE OR LESS, OUT OF LOT 10, BLOCK 114, CAMPACUAS SUBDIVISION, AS PER MAP OR PLAT THEREOF RECORDED IN VOLUME 1, PAGES 2, MAP RECORDS, HIDALGO COUNTY, TEXAS,

BENAVIDES ENGINEERING
TEXAS REGISTRATION F-14855
P.O. Box 833 Alamo, TX 78516
jerry@benavidesengi.com
956.310.8373

PROJECT NUMBER 2024.035
DATE PREPARED 09/01/2025
DATE REVISED 08/27/2026

OWNER	BUENAVISTA DEVELOPERS LLC	RICARDO ARIZMENDI – RUBI GUAJARDO	5901 N. DODGER ST. PHARR TX 78577	
ENGINEER	BENAVIDES ENGINEERING, LLC	GERARDO BENAVIDES, P.E., CFM	P.O. BOX 833, ALAMO TX 78516	956-310-8373
SURVEYOR	HOMERO L. GUTIERREZ	HOMERO L. GUTIERREZ, RPLS	P.O. BOX 548, McALLEN TX 78505	956-369-0988

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Hidalgo County Drainage District No.1
Drainage Statement

Redstone Heights Subdivision

A Proposed 28 Lot Single Family Residential Subdivision
Mercedes, Hidalgo County, Texas

STATE OF TEXAS
GERARDO BENAVIDES
140950
LICENSED
PROFESSIONAL ENGINEER

REV06/01/2026

Gerardo Benavides, P.E., CFM

Benavides Engineering, LLC.
Texas Registered Firm F-22855

P.O. Box 832, Alamo TX 78516
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DRAINAGE STATEMENT
and
ENGINEERING CALCULATIONS

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Drainage Statement
Redstone Heights Subdivision
Mercedes, Hidalgo County, Texas

Project Description and Location

Redstone Heights Subdivision is a proposed 5.55-acre (Gross), 3.99-acre (Net) single family residential subdivision out of Lot 10, Block 114, Campacuas Subdivision, as per plat or map thereof recorded in Volume 1, Page 2, Map Records, Hidalgo County, Texas.

This proposed subdivision is located strictly within the City of Mercedes. It is located along the East Right-of-Way of West Mile 2 1/2 , approximately 1,000 feet North of US Expressway 83 intersection. The site currently vacant with agricultural rows and a small number of trees. The purpose of this subdivision is to keep the house within the proposed single lot and obtain adequate utility services.

Soil Description

The soils in this area are composed of 99.2% Mercedes Clay **(Soil 39)** with 0 to 1 percent slope, and Raymondville Clay Loam **(Soil 52)** with 0 to 1 percent slope. Mercedes Clay **(Soil 39)** belong to hydrologic **Group D** which have a very slow infiltration rate when thoroughly wet. Raymondville Clay Loam belongs to hydrologic **Group C** which has a slow infiltration rate when thoroughly wet. These soils have a very slow rate of water transmission. (See "USDA, NRCS Web Soil Survey Report" attached at the end of this report for other site-specific characteristics.)

Flood Zone

As per Federal Emergency Management Act (FEMA) Flood Insurance Rate Map (FIRM) Panel No. 480334 0450 C, map revised on June 6, 2000, this property is within Flood Zone "X". Areas on Flood Zone "X" are defined as areas to be outside the 100-year flood plain.

Existing Conditions (Pre-Development)

Existing surface stormwater runoff on this tract flows from the Western property to the Eastern property line along the East Right-of-Way of W Mile 2 1/2 , with an approximate slope of **0.15%.** The pre-development storm runoff is approximated to be **4.22** cubic feet per second based on the 10-year storm frequency, as per attached calculations.

Post-Development Conditions

The post-development surface storm runoff is approximated to be **18.23** cubic feet per second, based on the 50-year storm frequency, as per attached calculations, which is an increase of **14.01** cubic feet per second.

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Proposed Drainage Plan

The proposed storm drainage system this subdivision will consist of the surface stormwater runoff generated by each lot towards the proposed curb and gutter conveying the runoff to curb catch basins that will ultimately discharge into proposed detention areas further identified as Lot D on this subdivision plat. Stormwater will then convey via underground structures and outfall via 24" RCP to existing Hidalgo and Cameron County Irrigation District No.9 drain ditch which falls under an area donated to the Hidalgo County Drainage District No.1 as per document 3744322, Official Records, Hidalgo County, Texas.

Engineering Calculations

In accordance with the **City of Mercedes** and **Hidalgo County Drainage District No.1** policies, the site will retain the difference in volume between pre-development and post-development conditions based on a 10-year pre-development and a 50-year post development. Therefore, as per the attached calculations, the required detention of **20,821 cubic feet (0.48 acre-feet)** of storm runoff shall be stored with a proposed onsite drainage ponds that should have enough volume capacity for the difference between a 10-year pre and 50-year post development prior outfalling into said existing Hidalgo and Cameron County Irrigation District No.9 drain ditch.

Pre-Development Calculations (10-year)

Q= 4.22 cfs
I= 4.23 in/hour
Tc= 39.50 minutes

Post-Development Calculations (50-year)

Q= 18.23 cfs
I= 9.14 in/hour
Tc= 14.87 minutes

☐ REJECTED
☑ APPROVED FOR SUBMITTAL
☐ TO H.C. PLANNING DEPT.
☑ TO CITY
☑ DISCHARGE PERMIT REQUIRED
☑ DISTRICT FACILITY
☐ CITY FACILITY
☑ OTHER HCCID #9

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1

H.C.D.D. NO. 1 — DATE 06/02/26

STATE OF TEXAS
GERARDO BENAVIDES
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PROFESSIONAL ENGINEER

REV06/01/2026

Benavides Engineering, LLC
Gerardo Benavides, P.E., CFM
Principal Engineer
Jerry@Benavideseng.com

Redstone Heights Subdivision

County:	Hidalgo	City Limits:	Mercedes, Hidalgo TX
Project No:	2023.035	No.of lots:	24
Date:	9/17/2025		
Prepared/Submitted by:	Benavides Engineering, LLC P.O. Box 832 Alamo, Texas 78516	Phone: Email:	956-310-8373 jerry@benavideseng.com
	A Texas Registered Engineering Firm F-22855		

PRE DEVELOPMENT		
Total Area	3.990	ac (NET)
Intercept Coefficient - "k"	0.274	
"K_u"	3.28	
Overland Flow Length - "L"	825.00	ft
Overland Slope - "S_p"	0.15	%
Velocity - "V"	0.35	ft/s
Existing Time of Concentration - "T"	39.50	min.
Existing Runoff Coefficient - "C"	0.25	*(Existing - Unimproved Areas)*
Intensity of Rainfall - "I"	4.23	in/hr (10 year event)
Existing - "Q_{10yr}"	*4.22*	*ft^3/s*

ENGINEERS SEAL & SIGNATURE

STATE OF TEXAS
GERARDO BENAVIDES
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REV06/01/26

POST DEVELOPMENT		
Proposed Runoff Coefficient - "C"	0.50	*(Proposed - Single Family Residential)*
Proposed Time of Concentration - "T"	14.87	min.
Proposed Intensity - "I"	9.14	in/hr (50 year event)
Proposed - "$Q50_{yr}$"	*18.23*	*ft^3/s*

VOLUME INFORMATION

STORAGE REQUIRED	20,821 cu.ft.
STORAGE REQUIRED	0.48 ac-ft
w / RELEASE RATE OF	4.22 cu.ft / sec

Time		I_{50yr}	$Q50_{yr}$ in	V in	Q_{10yr} out	V out	Req'd V	Req'd V	
min	hr	in/hr	ft^3/s	ft^3	ft^3/s	ft^3	ft^3	ac-ft	
4.24	0.07	14.14	28.21	7177	4.22	2419	4758	0.11	
14.24	0.24	9.32	18.60	15891	4.22	3685	12206	0.28	
24.24	0.40	7.14	14.25	20729	4.22	4951	15779	0.36	
34.24	0.57	5.87	11.72	24070	4.22	6217	17854	0.41	
44.24	0.74	5.03	10.03	26630	4.22	7482	19148	0.44	
54.24	0.90	4.42	8.82	28713	4.22	8748	19965	0.46	
64.24	1.07	3.96	7.91	30476	4.22	10014	20461	0.47	
74.24	1.24	3.60	7.19	32008	4.22	11280	20728	0.48	
84.24	1.40	3.31	6.60	33367	4.22	12546	20821	0.48	High Point
94.24	1.57	3.07	6.12	34591	4.22	13812	20779	0.48	
104.24	1.74	2.86	5.71	35706	4.22	15077	20629	0.47	
114.24	1.90	2.69	5.36	36732	4.22	16343	20389	0.47	
124.24	2.07	2.53	5.06	37684	4.22	17609	20074	0.46	

PRE DEVELOPMENT - TIME OF CONCENTRATION						
Segment #	Ku (Constant)	Intercept Coefficient (k)	Average Slope	Velocity (ft/s)	Segment Length (ft)	Time of Concentration (min)
1 - Grass	3.28	0.274	0.15	0.348	825	39.50
					Total (ft) 825	**39.50**

POST DEVELOPMENT - TIME OF CONCENTRATION						
Segment #	Ku (Constant)	Intercept Coefficient (k)	Average Slope	Velocity (ft/s)	Segment Length (ft)	Time of Concentration (min)
1 - Conc Gutt	3.28	0.691	0.50	1.603	230	2.39
2- RCP 24"	3.28	0.691	0.18	0.962	720	12.48
					Total (ft) 950	**14.87**

Land Cover / Flow Regime	k
Forrest w/ 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 mountain 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

Land Use	C	Land Use	C
		Lawns:	
		Sandy soil, flat, 2%	0.05 - 0.10
		Sandy soil, avg., 2-7%	0.10 - 0.15
Business:		Sandy soil, steep, 7%	0.15 - 0.20
Downtown areas	0.70 - 0.95	Heavy soil, flat, 2%	0.13 - 0.17
Neighborhood areas	0.50 - 0.70	Heavy soil, avg., 2-7%	0.18 - 0.22
		Heavy soil, steep, 7%	0.25 - 0.35
		Agricultural land:	
		Bare packed soil	
		*Smooth	0.30 - 0.60
		*Rough	0.20 - 0.50
Residential:		*Cultivated rows*	
Single-family areas	0.30 - 0.50	*Heavy soil, no crop	0.30 - 0.60
Multi units, detached	0.40 - 0.60	*Heavy soil, with crop	0.20 - 0.50
Munti units, attached	0.60 - 0.75	*Sandy soil, no crop	0.20 - 0.40
Suburban	0.25 - 0.40	*Sandy soil, with crop	0.10 - 0.25
		Pasture	
		*Heavy soil	0.15 - 0.45
		*Sandy soil	0.05 - 0.25
		Woodlands	0.05 - 0.25
		Streets:	
Industrial:		Asphaltic	0.70 - 0.95
Light areas	0.50 - 0.80	Concrete	0.80 - 0.95
Heavy areas	0.60 - 0.90	Brick	0.70 - 0.85
Parks, cemeteries	0.10 - 0.25	Unimproved areas	0.10 - 0.30
Playgrounds	0.20 - 0.35	Drives and walks	0.75 - 0.85
Railroad yard areas	0.20 - 0.40	Roofs	0.75 - 0.95

Rainfall Intensity-Duration-Frequency Coefficients for Texas Counties

1. Select your county. 2. Enter the time of concentration

County
Hidalgo
Henderson
Hidalgo
Hill
Hockley
Hood
Hopkins
Houston
Howard
Hudspeth

Coefficient	2-year	5-year	10-year	25-year	50-year	100-year
e (in)	0.831	0.795	0.778	0.771	0.749	0.740
b	74	80	87	98	99	103
d (mins)	9.6	9.2	9.2	9.2	9.2	9.6
Intensity (in/hr)*	2.91	3.64	4.23	4.90	5.39	5.77

Coefficient	2-year	5-year	10-year	25-year	50-year	100-year
e (mm)	0.831	0.795	0.778	0.771	0.749	0.740
b	1880	2032	2210	2489	2515	2616
d (mins)	9.6	9.2	9.2	9.2	9.2	9.6
Intensity (mm/hr)*	73.9	92.5	107.51	124.4	136.9	146.6

* for time of Concentration = 39.5 mins

Rainfall Intensity-Duration-Frequency Coefficients for Texas Counties

1. Select your county. 2. Enter the time of concentration

County
Hidalgo
Henderson
Hidalgo
Hill
Hockley
Hood
Hopkins
Houston
Howard
Hudspeth

Coefficient	2-year	5-year	10-year	25-year	50-year	100-year
e (in)	0.831	0.795	0.778	0.771	0.749	0.740
b	74	80	87	98	99	103
d (mins)	9.6	9.2	9.2	9.2	9.2	9.6
Intensity (in/hr)*	5.19	6.38	7.32	8.44	9.14	9.67

Coefficient	2-year	5-year	10-year	25-year	50-year	100-year
e (mm)	0.831	0.795	0.778	0.771	0.749	0.740
b	1880	2032	2210	2489	2515	2616
d (mins)	9.6	9.2	9.2	9.2	9.2	9.6
Intensity (mm/hr)*	131.9	162.1	186.02	214.3	232.1	245.5

* for time of Concentration = 14.87 mins

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PROJECT LOCATION MAP

MEDRANO SERVICE DR
W MILE 2 1/2
MORELAND DR.
U.S. EXPRESSWAY 83
BUS. EXPRESSWAY 83

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FEMA FLOOD INSURANCE RATE MAP

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- **ZONE A** No base flood elevations determined.
- **ZONE AE** Base flood elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.
- **ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- **ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.

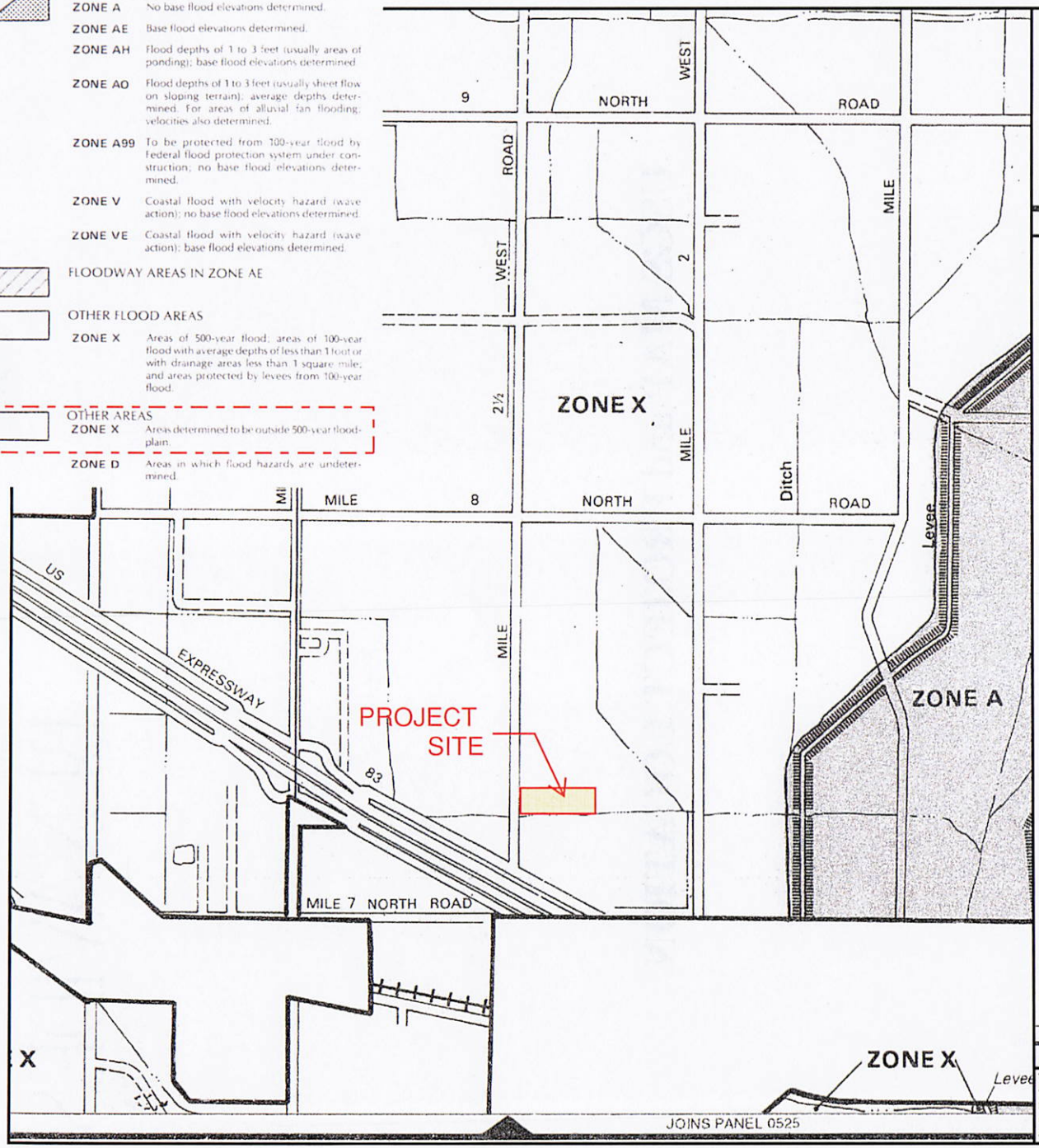
FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- **ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas 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.



APPROXIMATE SCALE

2000 0 2000 FEET

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

Federal Emergency Management Agency

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

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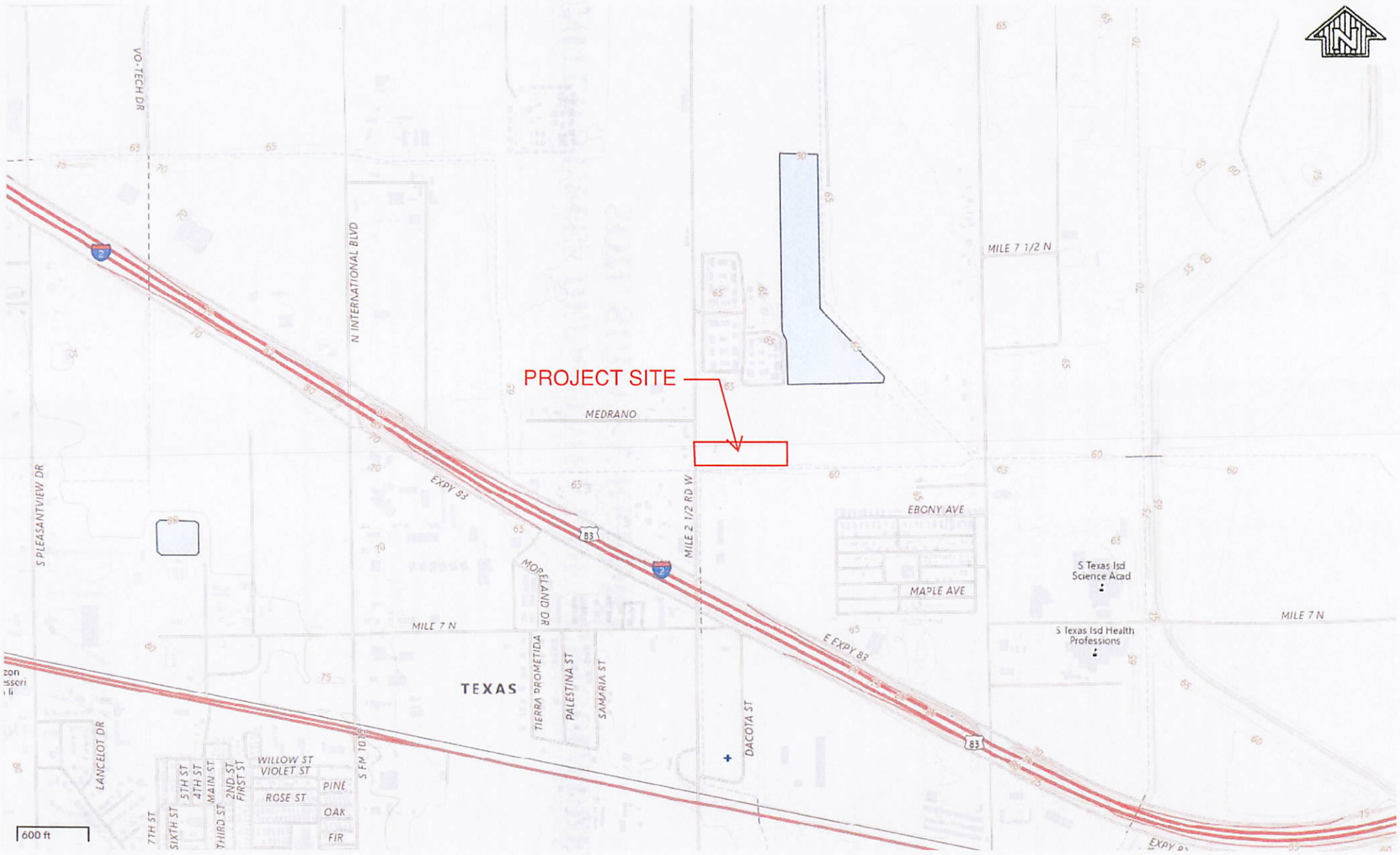
USGS MAP and PROJECT LOCATION


PROJECT SITE
MEDRANO
MILE 7 1/2 N
MILE 7 N
MILE 2 1/2 RD W
N INTERNATIONAL BLVD
S PLEASANTVIEW DR
VO-TECH DR
EXPY 83
E EXPY 83
EBONY AVE
MAPLE AVE
S Texas Isd Science Acad
S Texas Isd Health Professions
TEXAS
TIERRA PROMETIDA
PALESTINA ST
SAMARIA ST
DACOTA ST
MORELAND DR
LANCELOT DR
7TH ST
SIXTH ST
5TH ST
4TH ST
MAIN ST
THIRD ST
2ND ST
FIRST ST
WILLOW ST
VIOLET ST
ROSE ST
PINE
OAK
FIR
S FM 1016
600 ft

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UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL SURVEY REPORT

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

Redstone Heights Subdivision

September 15, 2025

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).

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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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Hydrologic Soil Group 13
Map Unit Name 17

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 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 1:20,000.

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 23, Aug 30, 2024

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
39	Mercedes clay, 0 to 1 percent slopes	5.8	99.2%
52	Raymondville clay loam, 0 to 1 percent slopes	0.0	0.8%
Totals for Area of Interest		**5.8**	**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.

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

39—Mercedes clay, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: dblk
Elevation: 10 to 150 feet
Mean annual precipitation: 24 to 34 inches
Mean annual air temperature: 73 to 75 degrees F
Frost-free period: 300 to 365 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Mercedes

Setting

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

Typical profile

H1 - 0 to 19 inches: clay
H2 - 19 to 57 inches: clay
H3 - 57 to 65 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: 5 percent
Gypsum, maximum content: 10 percent
Maximum salinity: Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 12.0
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: D
Ecological site: R083DY015TX - Saline Clay
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 15 percent
Hydric soil rating: No

52—Raymondville clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: dbm1
Elevation: 20 to 200 feet
Mean annual precipitation: 23 to 33 inches
Mean annual air temperature: 72 to 73 degrees F
Frost-free period: 300 to 340 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

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

Description of Raymondville

Setting

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

Typical profile

H1 - 0 to 15 inches: clay loam
H2 - 15 to 43 inches: clay loam
H3 - 43 to 65 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: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Moderate (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: R083DY025TX - Clay Loam
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 15 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

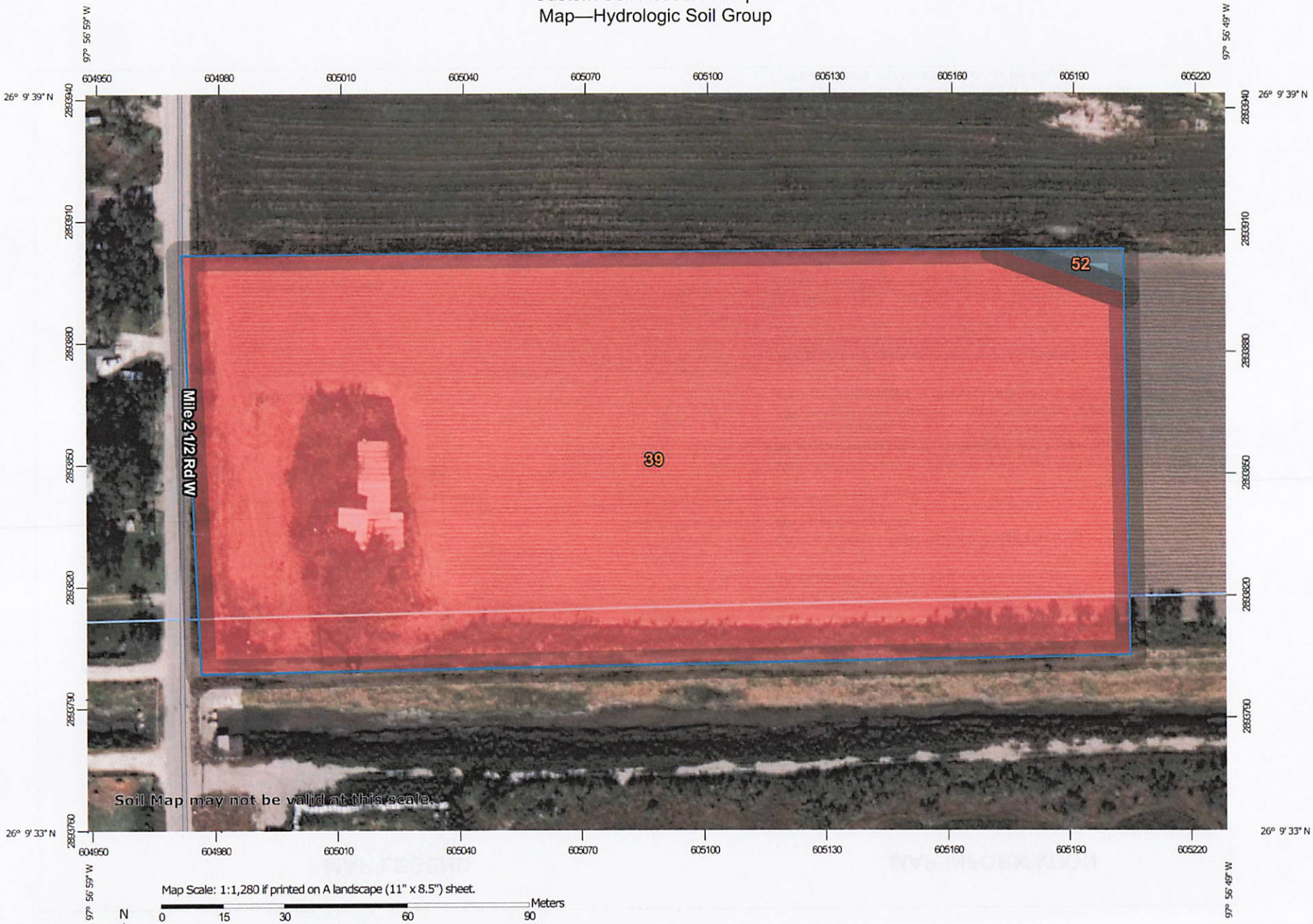
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group



Map Scale: 1:1,280 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

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 1:20,000.

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 23, Aug 30, 2024

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.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
39	Mercedes clay, 0 to 1 percent slopes	D	5.8	99.2%
52	Raymondville clay loam, 0 to 1 percent slopes	C	0.0	0.8%
Totals for Area of Interest			**5.8**	**100.0%**

Rating Options—Hydrologic Soil Group

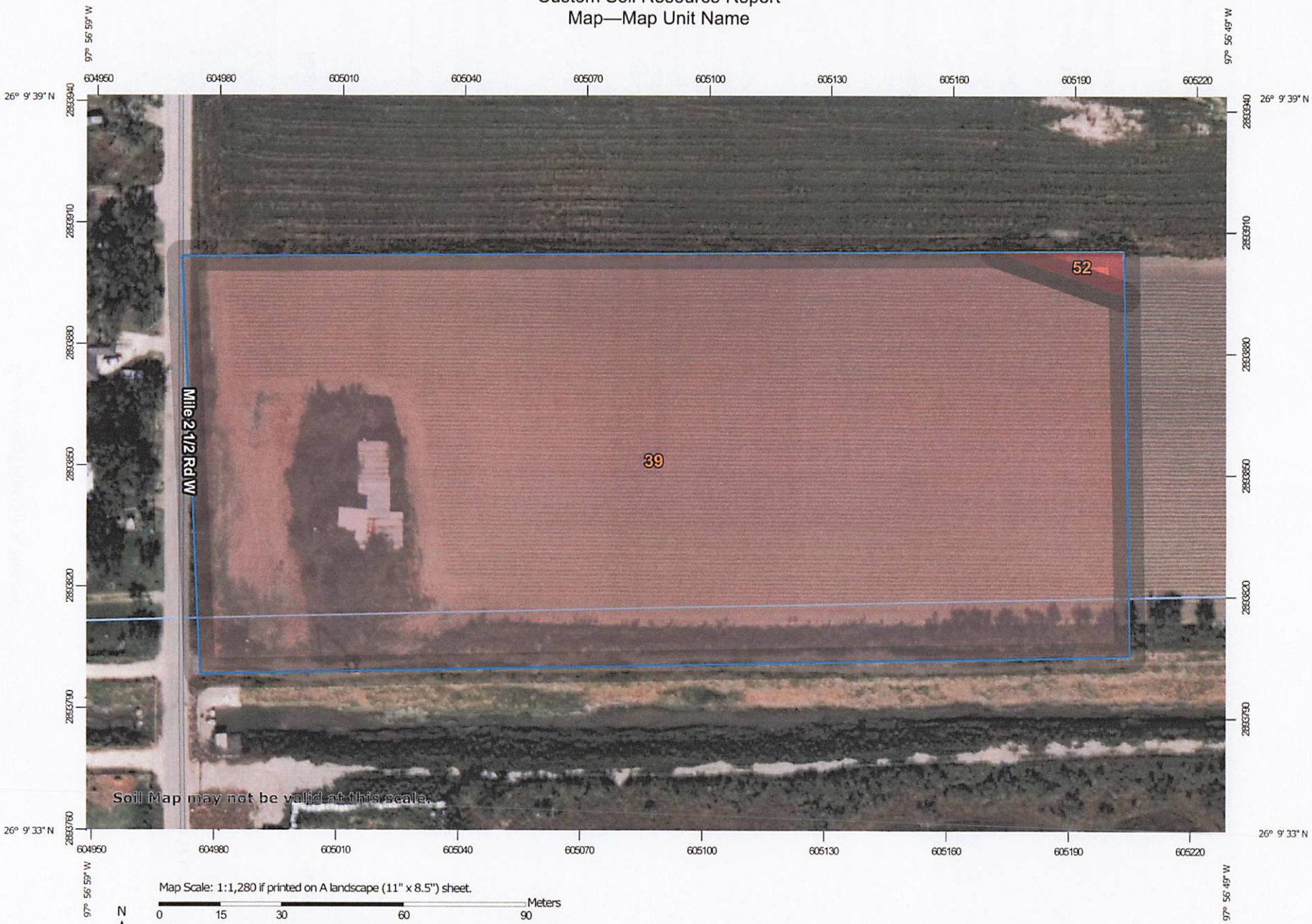
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Map Unit Name

A soil map unit is a collection of soil areas or nonsoil areas (miscellaneous areas) delineated in a soil survey. Each map unit is given a name that uniquely identifies the unit in a particular soil survey area.



Map Scale: 1:1,280 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

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

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Mercedes clay, 0 to 1 percent slopes
- Raymondville clay loam, 0 to 1 percent slopes
- Not rated or not available

Soil Rating Lines

- Mercedes clay, 0 to 1 percent slopes
- Raymondville clay loam, 0 to 1 percent slopes
- Not rated or not available

Soil Rating Points

- Mercedes clay, 0 to 1 percent slopes
- Raymondville clay loam, 0 to 1 percent slopes
- Not rated or not available

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 1:20,000.

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

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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 23, Aug 30, 2024

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

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Table—Map Unit Name

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52	Raymondville clay loam, 0 to 1 percent slopes	Raymondville clay loam, 0 to 1 percent slopes	0.0	0.8%
Totals for Area of Interest			**5.8**	**100.0%**

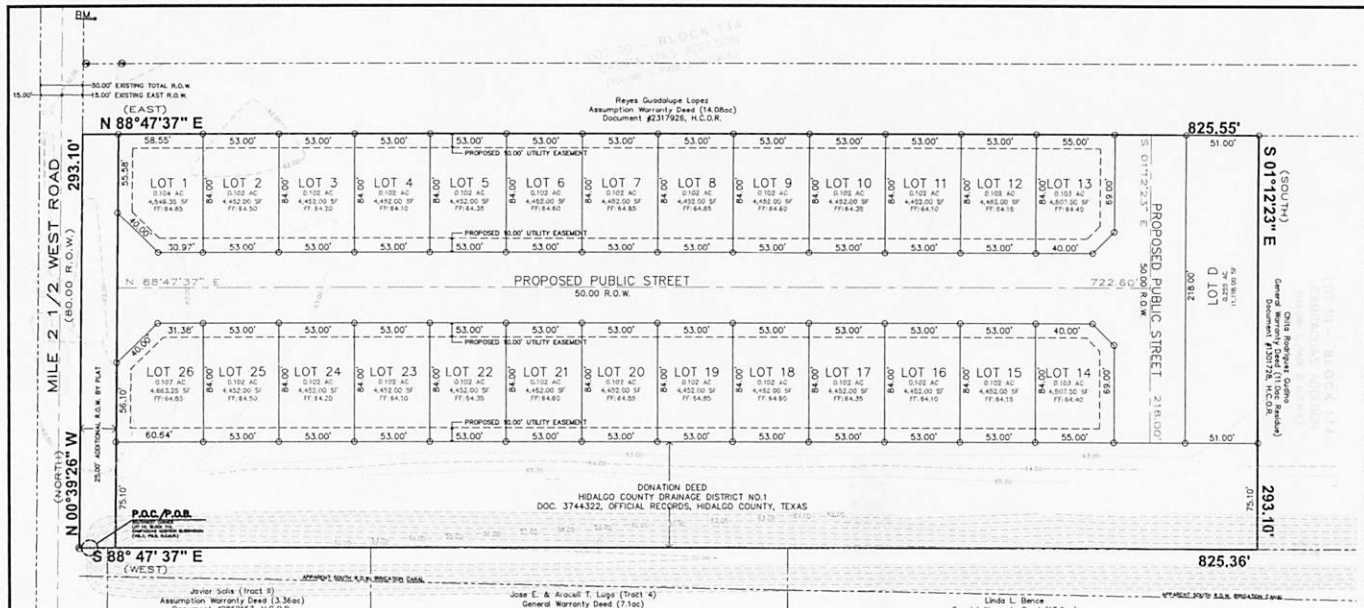
Rating Options—Map Unit Name

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

BENAVIDES
ENGINEERING

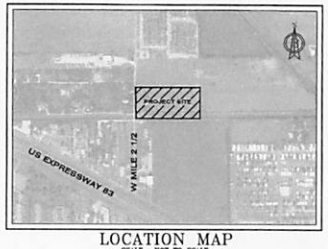
SET of PLANS



PLAT LEGEND

- (●) FD. 1/2" IRON ROD
- (●) SET 1/2" IRON ROD W/CAP
- (○) SET 1/2" IRON ROD W/CAP STAMPED 2791

R.O.W. RIGHT-OF-WAY
H.C.M.R. HIDALGO COUNTY MAP RECORDS
H.C.O.R. HIDALGO COUNTY OFFICIAL RECORDS
P.O.B. POINT OF BEGINNING
P.O.C. POINT OF COMMENCEMENT



LOCATION MAP
SCALE : NOT TO SCALE

Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	52.36	50.00	60.00	S58° 47' 37"W	50.00
C2	52.36	50.00	60.00	N61° 12' 23"W	50.00
C3	52.36	50.00	60.00	N58° 47' 37"E	50.00
C3	52.36	50.00	60.00	N61° 12' 23"W	50.00

METES AND BOUNDS

A 5.544-ACRE TRACT OF LAND, MORE OR LESS, OUT OF LOT 10, BLOCK 114, CAMPACUAS SUBDIVISION, AS PER MAP OR PLAT THEREOF RECORDED IN VOLUME 1, PAGES 2, MAP RECORDS, HIDALGO COUNTY, TEXAS, REFERENCES TO WHICH ARE HERE MADE FOR ALL PURPOSE, LOCATED ON THE EAST SIDE OF MILE 2 ½ WEST ROAD, APPROXIMATELY 1,036 FEET NORTH OF IH 2 (EXPRESSWAY 83), IS DESCRIBED BY METES AND BOUNDS AS FOLLOWS;

THE POINT OF COMMENCEMENT (P.O.C) BEING AT A NO. 4 REBAR FOUND ON THE APPARENT EXISTING EAST RIGHT-OF-WAY LINE OF SAID MILE 2 ½ WEST ROAD FOR THE APPARENT SOUTHWEST CORNER OF SAID LOT 10, BLOCK 114, AND OF SAID 5.544-ACRE TRACT, AND ALSO BEING THE POINT OF BEGINNING (P.O.B.) OF SAID 5.544-ACRE TRACT OF LAND HEREIN DESCRIBED;

THENCE, NORTH 00 DEGREES 39 MINUTES 26 SECONDS WEST (NORTH RECORDED), WITH THE APPARENT WEST LOT LINE OF SAID LOT 10, BLOCK 114, AND THE SAID MILE 2 ½ WEST ROAD EXISTING EAST RIGHT-OF-WAY LINE, AND BEING THE APPARENT WEST LOT LINE OF SAID 5.544-ACRE TRACT, A DISTANCE OF 55.00 FEET PAST A NO. 4 REBAR FOUND FOR AN OFFSET OF THE SAID SOUTHWEST CORNER, CONTINUING FOR A TOTAL DISTANCE OF 293.10 FEET TO A NO. 4 REBAR SET WITH PLASTIC CAP STAMPED 2791 FOR THE APPARENT NORTHWEST CORNER OF SAID 5.544-ACRE TRACT OF LAND HEREIN DESCRIBED;

THENCE, NORTH 88 DEGREES 47 MINUTES 37 SECONDS EAST (EAST RECORDED), PARALLEL TO THE APPARENT SOUTH LOT LINE OF SAID LOT 10, BLOCK 114, AND WITH THE APPARENT NORTH LOT LINE OF SAID 5.544-ACRE TRACT, A DISTANCE OF 825.72 FEET TO A NO. 4 REBAR SET WITH PLASTIC CAMP STAMPED 2791 FOR AN APPARENT INTERNAL CORNER OF A 11.0-ACRE TRACT OF LAND VESTED IN CHITA RODRIGUEZ GUDINO (DOCUMENT NO. 1301728, OFFICIAL RECORDS, HIDALGO COUNTY, TEXAS) AND THE NORTHEAST CORNER OF SAID 5.544-ACRE TRACT OF LAND HEREIN DESCRIBED;

THENCE, SOUTH 01 DEGREES 12 MINUTES 23 SECONDS EAST (SOUTH RECORDED), PARALLEL TO THE APPARENT EAST LOT LINE OF SAID LOT 10, BLOCK 114, AND WITH AN APPARENT WEST LOT LINE OF SAID 11.0-ACRE TRACT VESTED IN CHITA RODRIGUEZ GUDINO, AND THE EAST LOT LINE OF SAID 5.544-ACRE TRACT, A DISTANCE OF 238.10 FEET PAST A NO. 4 REBAR SET WITH PLASTIC CAP STAMPED 2791 FOR AN OFFSET REFERENCE TO THE APPARENT SOUTHEAST CORNER OF SAID 5.544-ACRE TRACT, CONTINUING FOR A TOTAL DISTANCE OF 293.10 FEET TO A POINT WITHIN AN EXISTING DRAINAGE DITCH BEING ON THE SAID SOUTH LOT LINE OF LOT 10, BLOCK 114, FOR THE APPARENT SOUTHWEST CORNER OF SAID 11.0-ACRE TRACT OF LAND VESTED IN CHITA RODRIGUEZ GUDINO, AND THE SOUTHEAST CORNER OF SAID 5.544-ACRE TRACT OF LAND HEREIN DESCRIBED;

THENCE, SOUTH 88 DEGREES 47 MINUTES 37 SECONDS EAST (WEST RECORDED), ALONG AND INSIDE SAID EXISTING DRAINAGE DITCH, AND WITH THE SAID SOUTH LOT LINE OF LOT 10, BLOCK 114, AND OF SAID 5.544-ACRE TRACT, A DISTANCE OF 825.72 FEET TO THE SAID NO. 4 REBAR FOUND FOR THE SOUTHWEST CORNER OF SAID 5.544-ACRE TRACT OF LAND HEREIN DESCRIBED, AND ALSO BEING THE POINT OF BEGINNING (P.O.B.), CONTAINING A GROSS OF 5.544 ACRES OF LAND, MORE OR LESS.

GENERAL SUBDIVISION PLAT NOTES

1. THIS SUBDIVISION IS LOCATED IN ZONE "X"
   FEMA FIRM PANEL No. 480334 0450 C
   MAP REVISED JUNE 6, 2000, REVISED TO REFLECT LOMR DATED MAY 30, 2002

   ZONE "X" ARE AREAS DEFINED OUTSIDE THE REGULATORY FLOOD PLAIN (NO SHADING)

2. BASIS OF BEARING – NAD 1983 STATE PLANE TEXAS SOUTH FIPS 4205 FEET.

3. THIS PROPERTY LIES INSIDE THE CITY LIMITS OF THE CITY OF MERCEDES

4. SETBACKS: TOWNHOME RESIDENCY (R-TH)
   FRONT: 10.00 FEET
   REAR: 10.00 FEET OR EASEMENT, WHICHEVER IS GREATER
   SIDE YARD INTERNAL LOT: 6.00 FEET OR EASEMENT, WHICHEVER IS GREATER
   SIDE YARD CORNER LOT: 10.00 FEET OR EASEMENT, WHICHEVER IS GREATER
   GARAGE: 18.00 FEET

5. THE MINIMUM FINISH FLOOR ELEVATION SHALL BE 18" ABOVE THE TOP OF CURB OF THE PROPOSED STREET.

6. ANY NEW CONSTRUCTION AND RELATED ACTIVITIES REQUIRE THE APPROVAL BY THE CITY OF MERCEDES IN ACCORDANCE WITH THE CITY'S CODE OF ORDINANCE.

7. NO MORE THAN ONE-SINGLE FAMILY DETACHED DWELLING SHALL BE LOCATED ON EACH LOT. THIS MUST BE STIPULATED ON ALL DEEDS AND CONTRACTS FOR DEEDS. APPLICATIONS FOR CONSTRUCTION ARE REQUIRED PRIOR TO OCCUPYING THE LOT.

8. NO STRUCTURE SHALL BE PERMITTED OVER ANY EASEMENT. EASEMENTS SHALL BE KEPT CLEAR OF BUILDINGS, SHEDS, SHRUBS TREES, AND OTHER PLANTINGS (EXCEPT LOW, LESS THAN 18 INCHES MATURE HEIGHT, GROUND COVER, GRASS, OR FLOWERS) AND OTHER OBSTRUCTIONS THAT WOULD INTERFERE WITH THE OPERATIONS AND MAINTENANCE OF THE EASEMENT.

9. IN ACCORDANCE WITH THE HIDALGO COUNTY DRAINAGE DISTRICT NO. 1 AND CITY OF MERCEDES REQUIREMENTS, THIS DEVELOPMENT WILL BE REQUIRED TO DETAIN A TOTAL OF 20,821 CUBIC-FEET (0.48 ACRE-FEET) OF STORM WATER RUNOFF. DRAINAGE RETENTION IN ACCORDANCE WITH THE LOCAL REQUIREMENTS WILL BE ACCOMPLISHED WITHIN PROPOSED LOT D OF THIS SUBDIVISION PRIOR DISCHARGING INTO PUBLIC SYSTEM.

10. 5 FOOT SIDEWALK ALONG ALL INTERIOR STREETS IS REQUIRED DURING BUILDING PERMIT STAGE AND PRIOR TO OCCUPANCY. THE DEVELOPER WILL PROVIDE THE 5' SIDEWALK ALONG THE ENTIRE STREET FRONTAGE OF COMMON LOT A PRIOR TO PLAT RECORDATION (EITHER ESCROWED OR CONSTRUCTED)

11. **PROJECT BENCHMARK: RR NAIL SET ON POWER POLE APPROXIMATELY 80.00 FT NORTH AND 7.00 FT EAST OF NORTHWEST CORNER OF THIS TRACT (AS SHOWN)**

    N: 16584134.7300
    E: 1184773.1750
    TOP: 64.26'

12. ALL EASEMENTS TO BE MAINTAINED BY THE PROPERTY OWNERS AND THEIR SUCCESSORS.

13. NO. 4 REBARS WITH PLASTIC CAPS SHALL BE SET ON ALL CORNERS OF THIS SUBDIVISION WITH "YELLOW 2791" PLASTIC CAPS.

14. ALL CONSTRUCTION SHALL COMPLY WITH STORMWATER PREVENTION PLAN REQUIREMENTS.

15. DURING CONSTRUCTION, EROSION AND SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE CURRENT TEXAS POLLUTION DISCHARGE ELIMINATION SYSTEM.

16. COMMON LOT D FOR DETENTION PURPOSES ONLY WILL BE MAINTAINED BY THE HOA/PROPERTY OWNERS AND NOT THE CITY OF MERCEDES

17. COMMON LOT D IDENTIFIED AS DETENTION POND SHALL BE UTILIZED AND DESIGNATED AS STORM SEWER DETENTION AND NO BUILDING SHALL BE PROPOSED IN THIS LOT.

18. ALL FENCES ABUTTING DRAIN DITCH R.O.W. SAHLL BE PLACED WITHIN INDIVIDUAL LOTS AS TO NOT IMPEDE WITH MAINTENANCE OF DRAIN DITCH.

STATE OF TEXAS
COUNTY OF HIDALGO

I, RICARDO ARIZMENDI, THE UNDERSIGNED, OWNER(S) OF THE LAND SHOWN ON THIS PLAT AND DESIGNATED HEREIN AS REDSTONE HEIGHTS SUBDIVISION, AN ADDITION TO THE CITY OF PALMVIEW, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, HEREBY DEDICATE TO THE USE OF THE PUBLIC FOREVER ALL STREETS, ALLEYS, PARKS, WATER COURSES, DRAIN EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED.

RICARDO ARIZMENDI, MANAGING MEMBER — DATE
BUENAVISTA DEVELOPERS LLC.
5901 N. DODGER STREET
PHARR, TEXAS 78577

STATE OF TEXAS
COUNTY OF HIDALGO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED RICARDO ARIZMENDI KNOWN TO ME TO BE THE PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE _____ DAY OF _____20____.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS
MY COMMISSION EXPIRES_____

STATE OF TEXAS
COUNTY OF HIDALGO

I, RUBI GUAJARDO, THE UNDERSIGNED, OWNER(S) OF THE LAND SHOWN ON THIS PLAT AND DESIGNATED HEREIN AS REDSTONE HEIGHTS SUBDIVISION, AN ADDITION TO THE CITY OF PALMVIEW, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, HEREBY DEDICATE TO THE USE OF THE PUBLIC FOREVER ALL STREETS, ALLEYS, PARKS, WATER COURSES, DRAIN EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED.

RUBI GUAJARDO, MANAGING MEMBER — DATE
BUENAVISTA DEVELOPERS LLC.
5901 N. DODGER STREET
PHARR, TEXAS 78577

STATE OF TEXAS
COUNTY OF HIDALGO

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED RUBI GUAJARDO KNOWN TO ME TO BE THE PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE _____ DAY OF _____20____.

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS
MY COMMISSION EXPIRES_____

STATE OF TEXAS
COUNTY OF HIDALGO

I, GERARDO BENAVIDES, A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, HEREBY CERTIFY THAT PROPER ENGINEERING CONSIDERATION HAS BEEN GIVEN TO THIS PLAT.

DATED THIS THE ____ DAY OF _____ 20___

GERARDO BENAVIDES, P.E.
LICENSED PROFESSIONAL ENGINEER
No.140950 STATE OF TEXAS

STATE OF TEXAS
GERARDO BENAVIDES
140950
LICENSED
PROFESSIONAL ENGINEER

STATE OF TEXAS
COUNTY OF HIDALGO

I, HOMERO L. GUTIERREZ, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, DO HEREBY CERTIFY THAT THIS PLAT AND DESCRIPTION OF THE REDSTONE HEIGHTS SUBDIVISION WAS PREPARED FROM A SURVEY OF THE PROPERTY MADE ON THE GROUND UNDER MY SUPERVISION.

DATED THIS THE ____ DAY OF _____ 20___

HOMERO L. GUTIERREZ, RPLS
REGISTERED PROFESSIONAL LAND SURVEYOR
No. 2791 STATE OF TEXAS

STATE OF TEXAS
HOMERO L. GUTIERREZ
2791
REGISTERED
PROFESSIONAL
LAND SURVEYOR

STATE OF TEXAS
COUNTY OF HIDALGO

CERTIFICATION OF HIDALGO AND CAMERON COUNTIES IRRIGATION DISTRICT No. 9

THIS PLAT IS APPROVED BY HIDALGO AND CAMERON COUNTIES DISTRICT No. 9 DATED THIS _____ DAY OF _____, 20____

1. NO IMPROVEMENTS OF ANY KIND SHALL BE PLACED UPON HIDALGO AND CAMERON COUNTIES IRRIGATION DISTRICT No. 9 RIGHT-OF-WAYS AND/OR EASEMENTS WITHOUT THE EXPRESSED WRITTEN PERMISSION OF H.C.C.I.D. #9.
2. IT IS UNDERSTOOD THAT THE RATE OF FLOW OF STORM WATER FOR THE DEVELOPMENT WILL BE NO GREATER THAN THE RATE OF FLOW OF STORM WATER WHEN THE LAND WAS IN AGRICULTURAL USE.
3. H.C.C.I.D. 9 WILL NOT BE RESPONSIBLE FOR THE STORM/DRAINAGE WATER SYSTEM TO ANY LOT WITHIN THIS SUBDIVISION. AS WELL, H.C.C.I.D. 9 WILL NOT BE RESPONSIBLE FOR THE DELIVERY OF WATER TO ANY LOT WITHIN THIS SUBDIVISION. IF DESIRED, THIS WILL NOT BE AT THE DISTRICTS EXPENSE.
4. H.C.C.I.D. 9, HAS NOT REVIEWED AND DOES NOT CERTIFY THAT THE STORM SEWER OR UTILITIES SYSTEMS DESCRIBED ARE APPROPRIATE FOR THE PARTICULAR SUBDIVISION, BASED ON GENERALLY ACCEPTED ENGINEERING CRITERIA. THE DEVELOPER AND HIS/HER ENGINEER ARE RESPONSIBLE FOR THIS DETERMINATION.
5. THE C.C.I.D. 9 EXCLUSIVE EASEMENT SHALL BE KEPT CLEAR OF BUILDINGS, SHEDS, FENCES, SHRUBS, TREES, AND OTHER PLANTING AND OTHER OBSTRUCTIONS THAT WOULD INTERFERE WITH THE OPERATIONS AND MAINTENANCE OF THE EASEMENTS.

GENERAL MANAGER
HIDALGO & CAMERON COUNTIES IRRIGATION DISTRICT No. 9

APPROVED BY DRAINAGE DISTRICT NO. 1

HIDALGO COUNTY IRRIGATION DISTRICT No. 1, HEREBY CERTIFIES THAT THE DRAINAGE PLANS FOR THIS SUBDIVISION COMPLY WITH THE MINIMUM STANDARDS OF THE DISTRICT ADPTED UNDER TEX. WATER CODE 49.211(c). THE DISTRICT HAS NOT REVIEWED AND DOES NOT CERTIFIU THAT THE DRAINAGE STRUCTURES DESCRIBED ARE APPROPRIATE FOR THE SPECIFIC SUBDIVISION, BASED ON GENERALLY ACCEPTED ENGINEERING CRITERIA. IT IS THE REPOSIBILITY OF THE DEVELOPER OF THE SUBDIVISION AND ITS ENGINEER TO MAKE THESE DETERMINATIONS.

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1

STATE OF TEXAS
COUNTY OF HIDALGO

I, THE UNDERSIGNED, CHAIRMAN OF THE PLANNING AND ZONING COMMISSION OF THE CITY OF MERCEDES, HEREBY CERTIFY THAT THIS SUBDIVISION PLAT CONFORMS TO ALL REQUIREMENTS OF THE SUBDIVISION REGULATIONS OF THIS CITY WHEREIN MY APPROVAL IS REQUIRED.

APPROVED THIS THE _____ DAY OF _____, 20____

CHAIRMAN, PLANNING AND ZONING COMMISSION — DATE
CITY OF MERCEDES

STATE OF TEXAS
COUNTY OF HIDALGO

I, THE UNDERSIGNED, MAYOR OF THE CITY OF MERCEDES, TEXAS, HEREBY CERTIFY THAT THIS SUBDIVISION PLAT CONFORMS TO ALL REQUIREMENTS OF THE SUBDIVISION REGULATIONS OF THIS CITY WHEREIN MY APPROVAL IS REQUIRED.

MAYOR, CITY OF MERCEDES — DATE

ATTEST CITY CLERK — DATE

APPROVED BY CITY OF MERCEDES

SIGNATURE: _____
PRINTED NAME: _____
TITLE OF CITY OFFICIAL: _____
DATE: _____

THE COUNTY OF HIDALGO TEXAS

FILED FOR RECORD IN HIDALGO COUNTY
ARTURO GUAJARDO, JR, HIDALGO COUNTY CLERK

ON: _____ AT _____ AM / PM
INSTRUMENT NUMBER
OF MAP RECORDS OF HIDALGO COUNTY TEXAS

BY: _____ DEPUTY — DATE

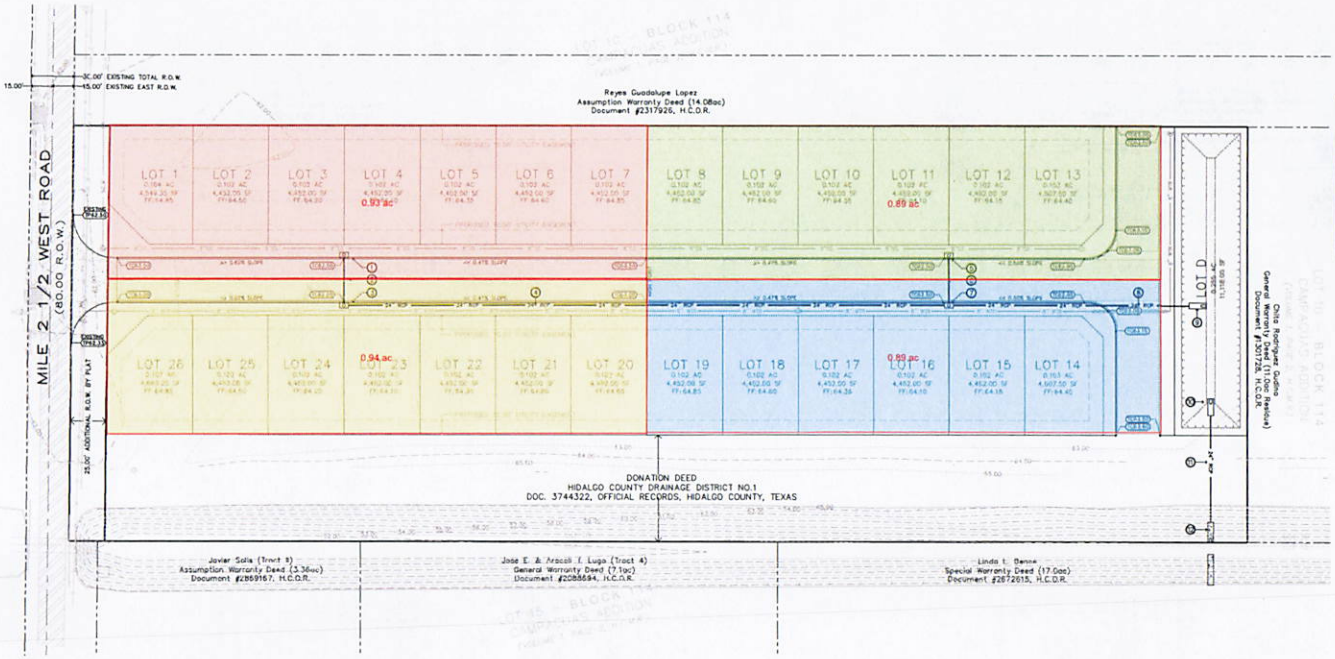
PROPOSED PLAT OF REDSTONE HEIGHTS SUBDIVISION IN THE CITY OF MERCEDES

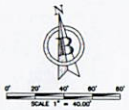
A 5.544-ACRE TRACT OF LAND, MORE OR LESS, OUT OF LOT 10, BLOCK 114, CAMPACUAS SUBDIVISON, AS PER MAP OR PLAT THEREOF RECORDED IN VOLUME 1, PAGES 2, MAP RECORDS, HIDALGO COUNTY, TEXAS.

BENAVIDES ENGINEERING
TEXAS REGISTRATION F-12893
P.O. Box 832 Alamo, TX 78516
jerry@benavidesengg.com
956.310.8373

PROJECT NUMBER 2024.035
DATE PREPARED 09/01/2025
DATE REVISED 05/05/2026

OWNER	BUENAVISTA DEVELOPERS LLC	RICARDO ARIZMENDI – RUBI GUAJARDO	5901 N. DODGER ST, PHARR TX 78577
ENGINEER	BENAVIDES ENGINEERING, LLC	GERARDO BENAVIDES, P.E., CFM	P.O. BOX 832, ALAMO, TX 78516 — 956-310-8373
SURVEYOR	HOMERO L. GUTIERREZ	HOMERO L. GUTIERREZ, RPLS	P.O. BOX 548, McALLEN, TX 78505 — 956-369-0988





PLAT LEGEND

- FD. 1/2" IRON ROD
- SET 1/2" IRON ROD W/CAP
- SET 1/2" IRON ROD W/CAP STAMPED 2791
- R.O.W. RIGHT-OF-WAY
- H.C.M.R. HIDALGO COUNTY MAP RECORDS
- H.C.O.R. HIDALGO COUNTY OFFICIAL RECORDS
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT

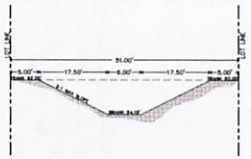
CALL BEFORE YOU DIG!
Texas811
Know what's below. Call before you dig.
PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, BORE, BLAST, STOP AND CAP CONSTRUCTION
811
THE LONE STAR NOTIFICATION COMPANY AT 1-800-669-8344

PAVING, GRADING, and DRAINAGE CONSTRUCTION KEYNOTES

1. PROPOSED TYPE "C" CURB INLET WITH A 2' MANHOLE LID – INLET '1'
   FC 62.50
   TP 62.00
   18" FL(N) 58.00
2. PROPOSED – 31 LF OF 18" RCP FOR STORM DRAIN MAIN @ 0.24%
3. PROPOSED TYPE "C" CURB INLET WITH A 2' MANHOLE LID – INLET '2'
   FC 62.50
   TP 62.00
   18" FL(N) 57.95
   24" FL(W) 55.28
4. PROPOSED – 424 LF OF 24" RCP FOR STORM DRAIN MAIN @ 0.17%
5. PROPOSED TYPE "C" CURB INLET WITH A 2' MANHOLE LID – INLET '3'
   FC 62.50
   TP 62.00
   18" FL(N) 58.00
6. PROPOSED – 31 LF OF 18" RCP FOR STORM DRAIN MAIN @ 0.24%
7. PROPOSED TYPE "C" CURB INLET WITH A 2' MANHOLE LID – INLET '4'
   FC 62.50
   TP 62.00
   18" FL(S) 57.90
   24" FL(E,W) 54.58
8. PROPOSED – 163 LF OF 24" RCP FOR STORM DRAIN MAIN @ 0.17%
9. PROPOSED SAFETY END TREATMENT AT BOTTOM OF DETENTION POND
   FL OF SAFETY END TREATMENT: 54.25
10. PROPOSED SAFETY END TREATMENT AT BOTTOM OF DETENTION POND
    FL OF SAFETY END TREATMENT: ~~54.25~~ 54.15
11. PROPOSED – 98 LF OF 24" RCP FOR STORM DRAIN MAIN @ 0.17%
12. PROPOSED STORMWATER OUTFALL CONNECTION TO EXISTING HIDALGO and CAMERON COUNTY IRRIGATION DISTRICT DITCH.

    OUTFALL STRUCTURE SHALL FOLLOW HIDALGO COUNTY DRAINAGE DISTRICT No.1 DETAILS and SPECIFICATIONS

    FL OF OUTFALL STRUCTURE: 54.00
    FL OF DRAINAGE DITCH: 52.00



CROSS-SECTION A-A
SCALE 1" = 10.00'

Design Criteria

Starting		Min Cover (ft)	2
HGL Elev. (ft)	56.00	Match C or F	F
		Min Tc (min)	
Hidalgo		Default n	0.013
Design Storm	10 yr	Junction K	0.3
b =	87.00	Peaking Factor	1.25
d =	9.20		
e =	0.7730		

Downstream MH/Inlet	Downstream Flowline	Upstream MH/Inlet	Upstream Flowline	Pipe Length (ft)	Round or Box	Pipe Rise (in or ft)	Pipe Span (ft)	No. of Pipes	Pipe Material	n	Min Slope (%)	C Post	i (10yr) (in/hr)	Area (Acres)	Roof Area (sf)	Branch Area (Acres)	Cum. Area (Acres)	Tc (50yr) (min)	Flow (cfs)	Roof Flow (cfs)	Branch Flow (cfs)	Cum. Flow (cfs)	Design Cap. (cfs)	Flow Velocity (ft/s)	Upstream TG (ft)	HGL (ft)
Outfall	54.00	POND (out)	54.15	98.5	Round	24		1	RCP	0.013	0.20%	0.5	5.02	0.00			3.66	29.06	0.00	0.00		10.01	10.14	3.19	62.00	56.24
POND (in)	54.25	INLET 4	54.58	165	Round	24		1	RCP	0.013	0.20%	0.5	5.11	0.89		2.89	3.66	29.06	2.27	0.00	2.49	10.01	10.14	3.19	62.00	56.61
INLET 4	54.58	INLET 2	55.33	418	Round	24		1	RCP	0.013	0.18%	0.5	5.59	0.94			1.98	24.89	2.63	0.00		5.26	9.62	1.67	62.00	57.33
INLET 2	55.28	INLET1	55.36	31	Round	18		1	RCP	0.013	0.24%	0.5	5.69	0.94			0.94	24.89	2.63	0.00		2.63	5.16	1.49	62.00	57.36
INLET 4	57.90	INLET 3	57.97	31	Round	18		1	RCP	0.013	0.24%	0.5	5.60	0.89			0.89	24.80	2.49	0.00		2.49	5.16	1.41	62.00	59.67

REVISION	DATE	DESCRIPTION	BY

STATE OF TEXAS
GERARDO BENAVIDES
140950
LICENSED
PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY GERARDO BENAVIDES, P.E. 140950, 09/04/2025

FOR CONSTRUCTION

ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE LAW.

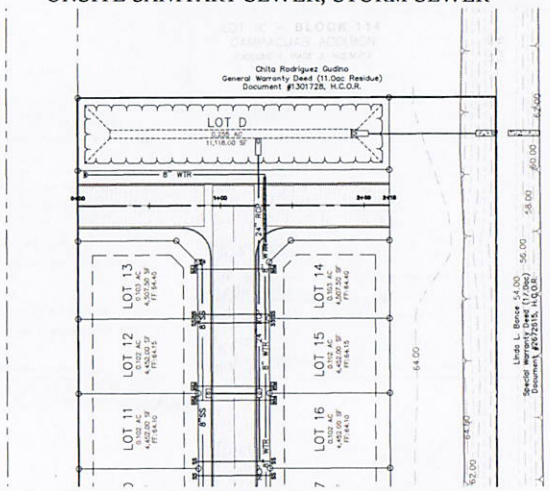
BENAVIDES ENGINEERING
TEXAS REGISTRATION # F-14876
P.O. Box 833 Alamo, TX 78516
jerry@benavidesengineering.com
956.783.1180

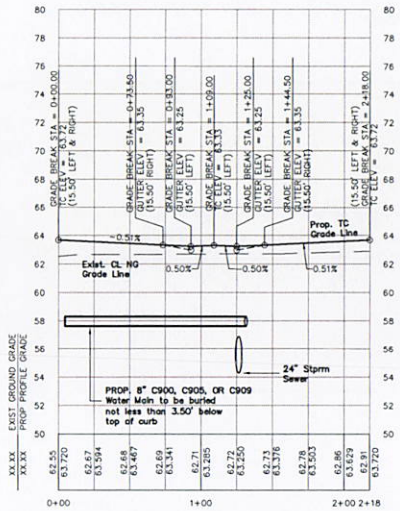
CLIENT:
BUENAVISTA DEVELOPERS LLC.
5801 N. DODGER STREET
PHARR, TEXAS 78577

PROJECT ADDRESS:
EAST R.O.W. of W. MILE 2½
1,100 LF NORTH OF F-2
MERCEDES, TEXAS

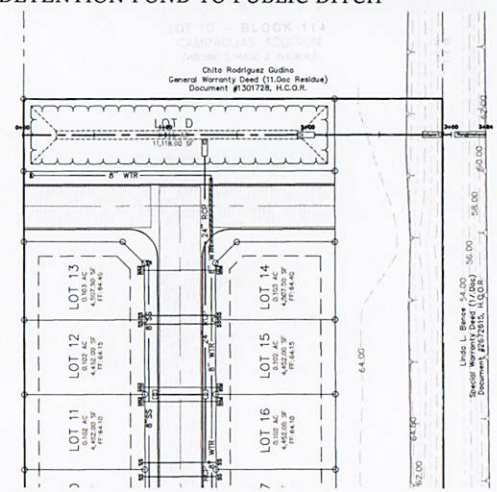
PREPARED DATE 09/26/25
DRAWN BY: E.H.C.
CHECKED BY: G.BENAVIDES, P.E.
PROJECT No. 2023.035
PAGE TITLE
PAVING, GRADING and DRAINAGE PLAN
SHEET NUMBER C-5

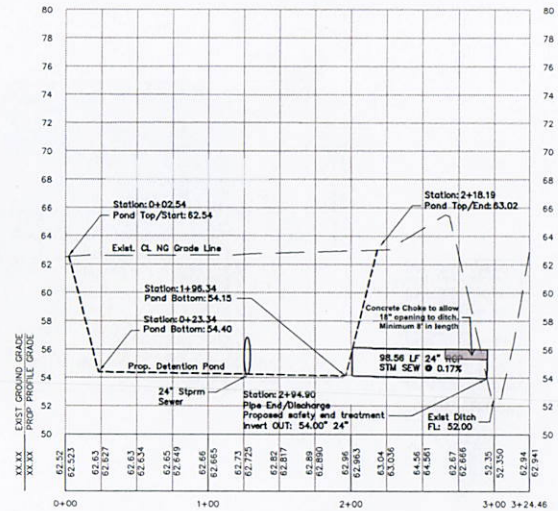
ONSITE SANITARY SEWER, STORM SEWER





DETENTION POND TO PUBLIC DITCH





TRENCH EXCAVATION PROTECTION REQUIRED FOR BURIALS 5 FEET IN DEPTH OR MORE

CALL BEFORE YOU DIG!
Texas811
Know what's below. Call before you dig. 811
PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST - STOP WORK UPON CONTACTING
THE LONE STAR NOTIFICATION COMPANY AT 1-800-669-8344

REVISION	DATE	DESCRIPTION	BY

STATE OF TEXAS
GERARDO BENAVIDES
142950
LICENSED
PROFESSIONAL ENGINEER

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BENAVIDES ENGINEERING
TEXAS REGISTRATION F-24893
P.O. Box 931 Alamo, TX 78516
info@benavidesengineering.com
956.330.8373

CLIENT:
BUENAVISTA DEVELOPERS LLC.
5901 N. DOBBER STREET
PHARR, TEXAS 78577

PROJECT ADDRESS:
EAST R.O.W. of W. MILE 2½
1,500 LF NORTH OF I-2
MERCEDES, TEXAS

PREPARED DATE:	09/26/25
DRAWN BY:	E.M.C.
CHECKED BY:	G.BENAVIDES, P.E.
PROJECT No.	2023.035

PAGE 17/17:R
PLAN & PROFILE SHEET
ONSITE STORM SEWER &
PROPOSED DETENTION POND

SHEET NUMBER C-12