

THE STATE OF TEXAS §
COUNTY OF BRAZORIA §
CITY OF MANVEL §

LARRY AKERY, COUNCIL PLACE 1
LORRAINE HEHN, COUNCIL PLACE 2
NICCOLE TYSON, COUNCIL PLACE 3
DAN DAVIS, COUNCIL PLACE 4
JASON ALBERT, COUNCIL PLACE 5
JEROME HUDSON, COUNCIL PLACE 6



DEBRA DAVISON, MAYOR
KYLE JUNG, CITY MANAGER
TAMMY BELL, CITY SECRETARY

**NOTICE OF A CITY COUNCIL MEETING
OF THE CITY OF MANVEL
March 7, 2022**

**NOTICE IS HEREBY GIVEN
7:00 P.M. REGULAR SESSION**

Pursuant to Chapter 551, Title 5 of the Texas Government Code, the Texas Open Meetings Act, notice is hereby given that the City of Manvel will convene a regular meeting at the Manvel City Hall, located at 20031 Hwy 6, Manvel Tx 77578 for the purpose of discussing and if appropriate, take action with respect to the following items:

NOTE: The City Council of the City of Manvel reserves the right to discuss any items in Closed Session whenever authorized under the Texas Open Meetings Act, Chapter 551, of the Texas Government Code. The City Council may discuss the items on this agenda in any order.

This facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpreter services must be made 48 hours prior to this meeting. Please contact the City Secretary at 281-489-0630 X6 for further information.

Regular Session

Call To Order

Inspirational Reading - Council Member Davis

Pledge

Pledge of Allegiance and Texas Pledge: "Honor the Texas flag; I pledge allegiance to thee Texas, one state under God, one and indivisible.

Citizen Comments: "Comment Card" Required

****Members of the public who wish to submit written comments on a listed agenda item must submit their comments via the Public Comment Request Form found on the city website www.cityofmanvel.com or by emailing thell@cityofmanvel.com or by calling 281-489-0630 x6 for staff assistance.*

City Manager Update

Update on current events and city issues.

Regular Agenda

1. Consideration and possible action to approve Final Plat for Brazoria County MUD No. 56 Water Plant Replat No. 1 and Extension;
BEING A SUBDIVISION OF 4.828 ACRES OUT OF THE OLIVER HALL SURVEY, ABSTRACT 203; AND ALSO, BEING A REPLAT OF BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT NO. 56 WATER PLANT, AS RECORDED IN BRAZORIA COUNTY PLAT RECORDS DOCUMENT NO. 2020047954, CITY OF MANVEL, BRAZORIA COUNTY, TEXAS.
(MOTION TO FORWARD WITH FAVORABLE RECOMMENDATION BY PD&Z **FAILED** 0/5)
2. Consideration and possible action to direct staff to provide Applicants written statements of the conditions for any conditional approvals, and the reasons for disapproval of any plans or plats that were not approved, per Texas Local Government Code §212.0091.
3. Consideration and possible action to approve the first of two readings of Ordinance 2022-O-08;
AN ORDINANCE AMENDING CHAPTER 44 "OFFENSES AND MISCELLANEOUS PROVISIONS" OF THE CODE OF ORDINANCES OF THE CITY OF MANVEL, TEXAS, BY AMENDING ARTICLE IX "NOISE REGULATION"; PROVIDING FOR EXEMPTIONS AND DEFENSES; REPEALING PROVISIONS IN CONFLICT THEREWITH; PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 PER DAY FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF; AND PROVIDING FOR SEVERABILITY.
4. Consideration and possible action to direct staff on foundation membership options for The Friends of the Manvel Public Library. (Requested by Mayor Davison)
5. Consideration and possible action to participate in the State of Texas' subsequent settlements with litigants in opioid litigation, and authorize the City Manager to execute the Endo Subdivision Release form and the Teva Subdivision Release Form, and any other paperwork needed to finalize the settlements.
6. Consideration and possible action to direct staff on the following items as requested by Council Member Albert;
 - a. Status of open positions and option to engage an outside recruitment agency to find Fire Marshals and or other open city positions.
 - b. Discussion on open police department positions and possible action to define recruit and retain police department recruiter(s) FTE(s) position(s).
 - c. Discussion and possible action on the effectiveness of HR and HR related activities.

- d. Discussion and possible action on multiple reports of staff failures to engage city customers, including but not limited to updates on Michael Johnson's repeated complaints of lack of enforcement actions.
 - e. Discussion and possible action on the status of the salary survey and employee engagement survey. (Direction was given to staff in September).
- (Agenda item tabled at the 2/22/22 City Council Meeting)

Consent Agenda

All Consent Agenda items listed are considered to be routine by the City Council and will be approved by one motion. There will be no separate discussion of these items unless a City Council Member so requests, in which event the item will be removed from the Consent Agenda and considered in sequence on the Agenda.

1. Approve Final Plat for Brazoria County MUD No. 57 Lift Station;
BEING A SUBDIVISION OF 0.1945 ACRES OUT OF THE OLIVER HALL SURVEY, ABSTRACT 203, CITY OF MANVEL, BRAZORIA COUNTY, TEXAS.
2. Approve Final Plat for Meridiana Pursley Boulevard Phase 7;
BEING A SUBDIVISION OF 0.8422 ACRES OUT OF THE H.T. & B.R.R. CO. SURVEY, SECTION 61, ABSTRACT 282, IN THE CITY OF MANVEL, BRAZORIA COUNTY, TEXAS.
3. Approve Final Plat for Meridiana Section 52;
BEING A SUBDIVISION OF 21.88 ACRES OUT OF THE H.T. & B.R.R. CO. SURVEY, SECTION 61, ABSTRACT 282, AND THE OLIVER HALL SURVEY, ABSTRACT 203, CITY OF MANVEL, BRAZORIA COUNTY, TEXAS.
4. Approve Preliminary Plat for Meridiana Section 54B;
BEING A SUBDIVISION OF 21.70 ACRES OUT OF THE OLIVER HALL SURVEY, A-203, CONSISTING OF 59 LOTS, 4 BLOCKS, AND 4 RESERVES, A PLAT OR MAP THEREOF RECORDED IN BRAZORIA COUNTY.
5. Approve second and final reading of Ordinance 2022-O-06;
AN ORDINANCE OF THE CITY OF MANVEL, TEXAS, AMENDING CHAPTER 50. *PLANNING AND DEVELOPMENT*, ARTICLE III. *COMPREHENSIVE PLAN*, BY APPROVING THE 2022 MASTER WATER PLAN UPDATE DOCUMENT AS THE 2022 MASTER WATER PLAN; AMENDING SECTION 50-54. *MASTER WATER PLAN* INTEGRATING THE CITY'S 2022 MASTER WATER PLAN INTO THE CITY'S COMPREHENSIVE PLANS; PROVIDING FOR CONFORMITY OF ALL REGULATIONS TO THE MASTER WATER PLAN; PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 PER DAY FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF; AND PROVIDING FOR SEVERABILITY; AND PROVIDING A SEVERANCE CLAUSE AND EFFECTIVE DATE.

6. Approve the meeting minutes to date.
7. Approve Preliminary Plat for Meridiana Detention Reserves L-2 and O-2;
BEING A SUBDIVISION OF 46.89 ACRES OUT OF THE OLIVER HALL
SURVEY, A-203, CONSISTING OF 1 BLOCK, AND 3 RESERVES, A PLAT OR
MAP THEREOF RECORDED IN BRAZORIA COUNTY.
(Motion forwarded with favorable recommendation by PD&Z 5/0)

Executive Session

City Council will convene into Executive Session pursuant to Texas Government Code, Sec. 551.074. "Personnel Matters - to deliberate the appointment, employment, evaluation, and duties of a public officer or employee".

Kyle J. Jung, City Manager

Mayor and Council Comments

Update on current events and city issues.

Additionally, pursuant to Texas Government Code § 551.0415, City Council Members and city staff may make a report about items of community interest during a meeting of the governing body without having given notice of the report.

Items of community interest include:

- Expressions of thanks, congratulations, or condolence;
- Information regarding holiday schedules;
- An honorary or salutary recognition of a public official, public employee, or other citizen, except that a discussion regarding a change in the status of a person's public office or public employment is not an honorary or salutary recognition for purposes of this subdivision;
- A reminder about an upcoming event organized or sponsored by the governing body;
- Information regarding a social, ceremonial, or community event organized or sponsored by an entity other than the governing body that was attended or is scheduled to be attended by a member of the governing body or an official or employee of the municipality; and
- Announcements involving an imminent threat to the public health and safety of people in the municipality that has arisen after the posting of the agenda.

Adjourn

CERTIFICATION

I, Tammy Bell, City Secretary for the City of Manvel, do hereby certify that the foregoing Agenda of the City of Manvel is true and correct; and that I posted such notice on the bulletin board at the Manvel City Hall. A place convenient and readily accessible to the public on 3/4/2022 in accordance with the Texas Open Meetings Act (Tex. Gov't. Code §551.001 et.seq). Said notice remained posted for at least 72 hours preceding the scheduled time of the meeting.


TAMMY BELL, CITY SECRETARY
CITY OF MANVEL, TEXAS



City of Manvel

P. O. Box 187
20025 HWY 6
Manvel, Texas 77578

(281) 489-0630
Fax (281) 489-0634

AGENDA REQUEST

REQUEST MUST BE MADE ACCORDING TO THE SUBMITTAL SCHEDULE

Meeting Requested: (Please check applicable meeting)

Planning, Development & Zoning	☐	City Council	☐	Both	☒
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Date of Request: February 28, 2022 PDZ & March 7, 2022 City Council

YOUR REQUEST WILL BE PLACED ON THE NEXT AVAILABLE MEETING DATE. MEETINGS ARE SECOND AND FOURTH MONDAYS FOR PLANNING, DEVELOPMENT & ZONING AND FIRST AND THIRD MONDAYS FOR CITY COUNCIL. THE AGENDAS ARE POSTED TO THE GENERAL PUBLIC AT MANVEL CITY HALL AND ON OUR WEBSITE AT www.cityofmanvel.com. THE AGENDA IS POSTED AND WILL REMAIN POSTED CONTINUOUSLY FOR AT LEAST 72 HOURS PRECEDING THE SCHEDULED TIME OF THE MEETING. PLEASE CHECK THE BOARD FOR YOUR MEETING SCHEDULE. WE STRONGLY ENCOURAGE YOU TO ATTEND THE MEETING FOR QUESTIONS AND ANSWERS. IF YOU ARE UNABLE TO ATTEND ACTION MAY BE TABLED UNTIL THE FOLLOWING MEETING.

Person to Speak: Jared Bowlin or Brad Sweitzer

Daytime Phone: 713-784-4500 Fax Number: 713-784-4577

E-mail Address: jbowlin@ehrainc.com or bsweitzer@ehrainc.com

Description of Request and Physical Address:

Consideration and possible action to forward with recommendation to City Council, Final Plat for Brazoria County MUD No. 56 Water Plant Replat No. 1 and Extension, being a subdivision of 4.828 acres out of the Oliver Hall Survey, Abstract 203; and also being a replat of Brazoria County Municipal Utility District No. 56 Water Plant, as recorded in Brazoria County Plat Records Document No. 2020047954, City of Manvel, Brazoria County, Texas.

Plats:

Preliminary _____

Final x

ALL DOCUMENTATION AND FEES ASSOCIATED WITH THIS AGENDA REQUEST MUST BE SUBMITTED ACCORDING TO THE MEETING SUBMITTAL SCHEDULE WHICH CAN BE FOUND ON OUR WEBSITE. BY SIGNING THIS AGENDA REQUEST FORM I ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS AGENDA REQUEST FORM.

Jessica Rodriguez Digitally signed by Jessica Rodriguez
Date: 2022.02.23 14:42:58 -06'00'

SIGNATURE

February 22, 2022

DATE

**DEVELOPMENT SERVICES DEPARTMENT**

20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Planning, Development and Zoning Commission Plat Report

Plat Name	Brazoria County MUD No. 56 Water Plant Replat No. 1 and Extension Final Plat
Applicant	Lacey Bell, EHRA, Inc.
PD&Z Meeting Date	February 28, 2022
Recommendation	Denial
Submitted By	Jessica Rodriguez, Director of Development Services

Staff Recommendation

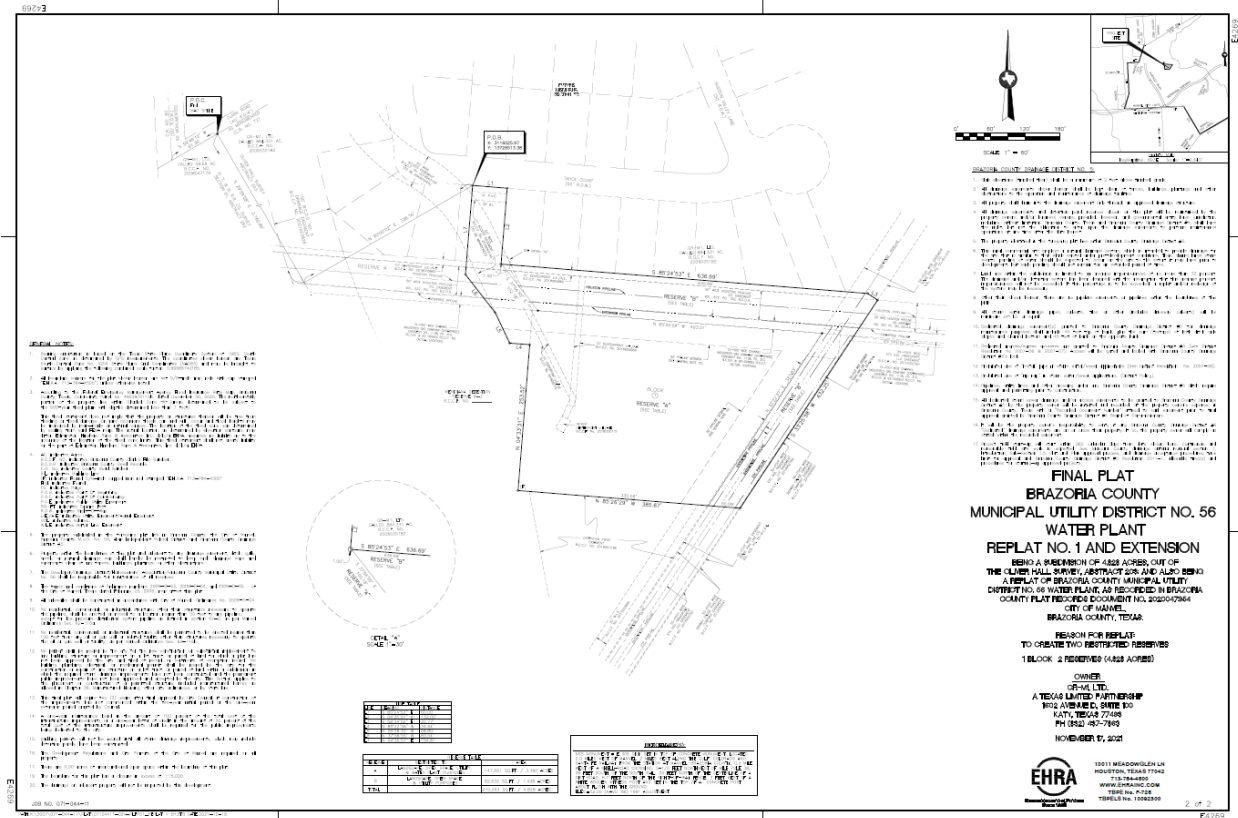
Staff recommends denial of the Brazoria County MUD No. 56 Water Plant Replat No. 1 and Extension Final Plat. This plat does not meet criteria in the subdivision ordinance and/or O-PUD.

1. Update the date in the Title Block (Section 62-41 (b) (2)).
2. Provide the land surveyor's signature (Section 62-41 (b) (5)).
3. This plat takes road access from Meridiana Section 53 Final Plat, but Meridiana Section 53 Final Plat has not been approved by City Council (Section 62-108 (b) (5)).
4. Provide drainage district's signature of approval (Section 62-41 (b) (20)).
5. Correct the typo in the lienholder's subordination document to state "MUD 56" (Section 62-41 (b) (7)).
6. Provide a signed, notarized lienholder's subordination document (Section 62-41 (b) (7)).

[illegible]



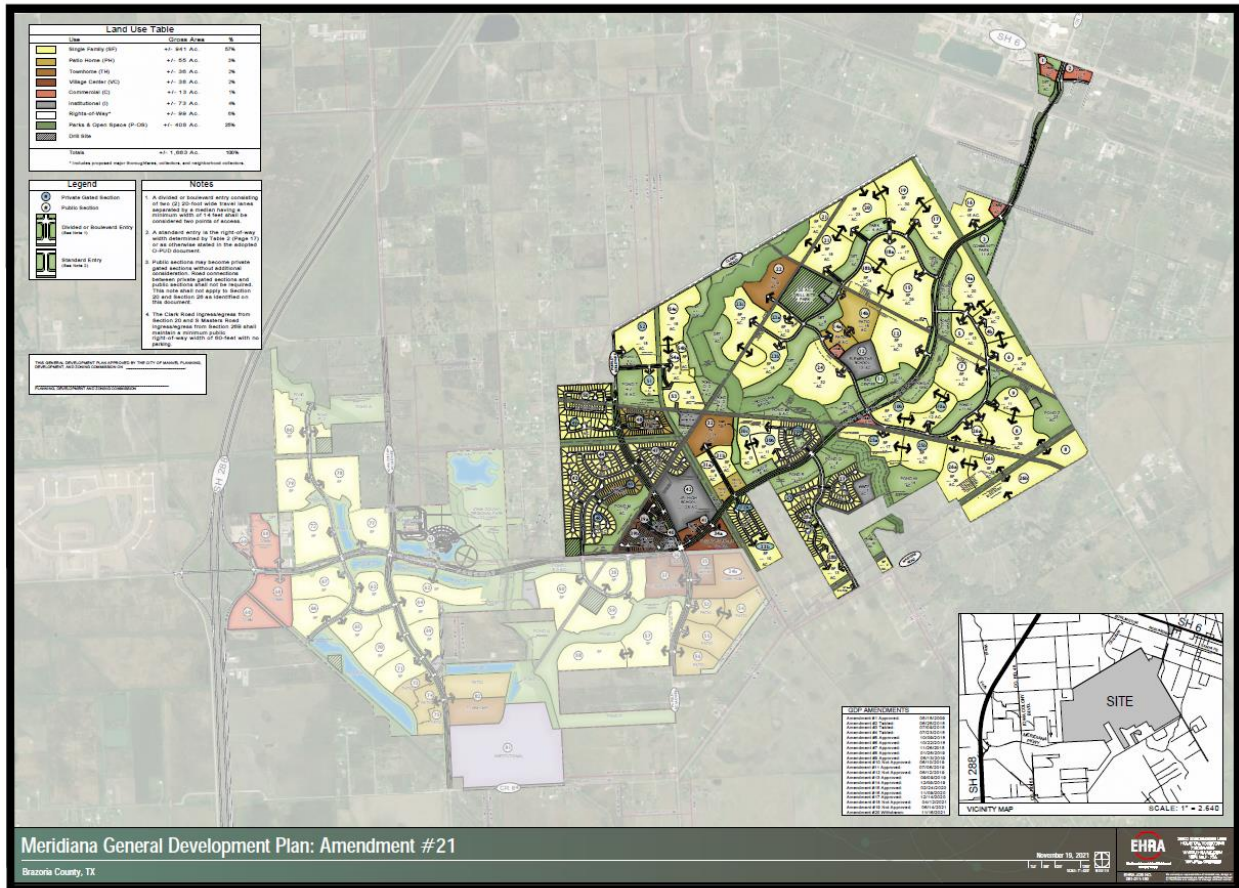
Plat Exhibit

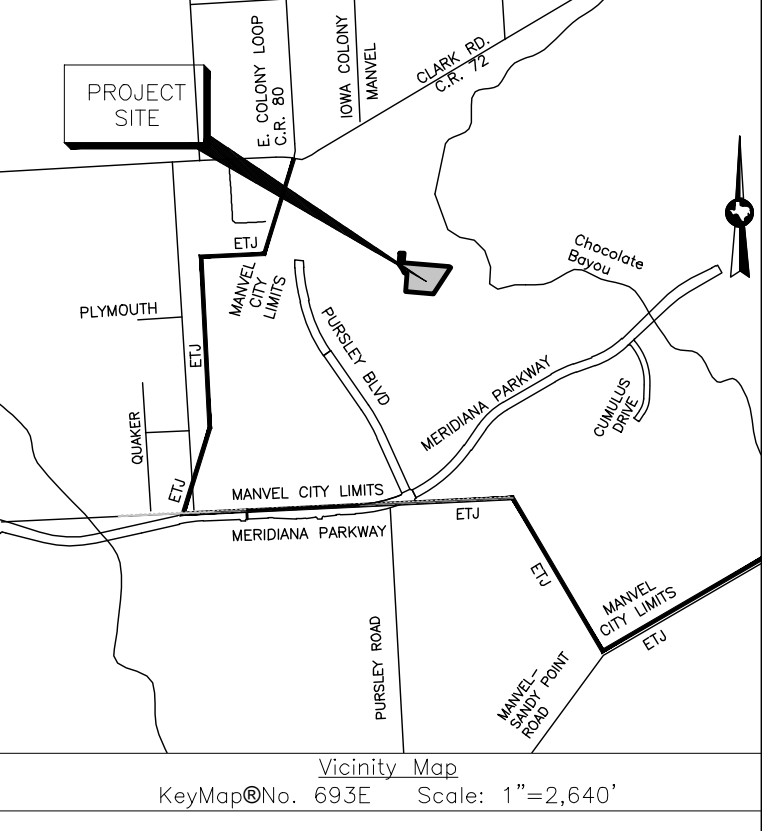
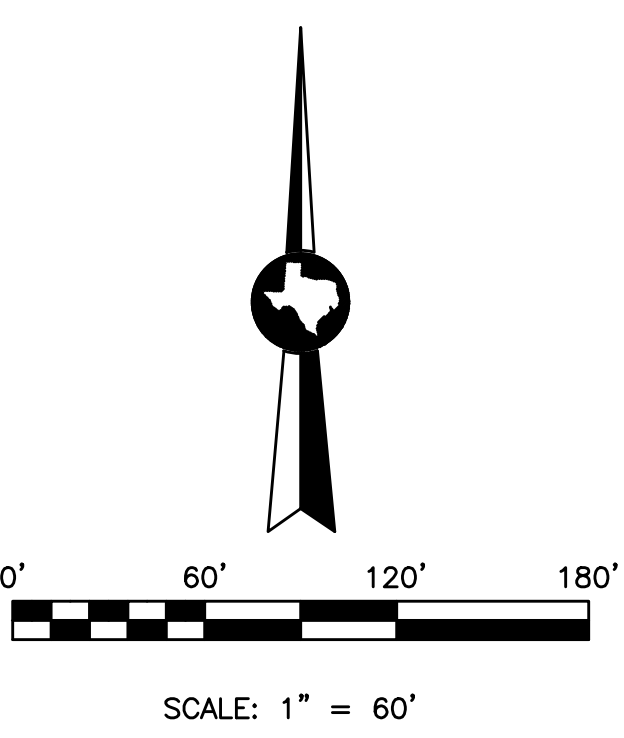
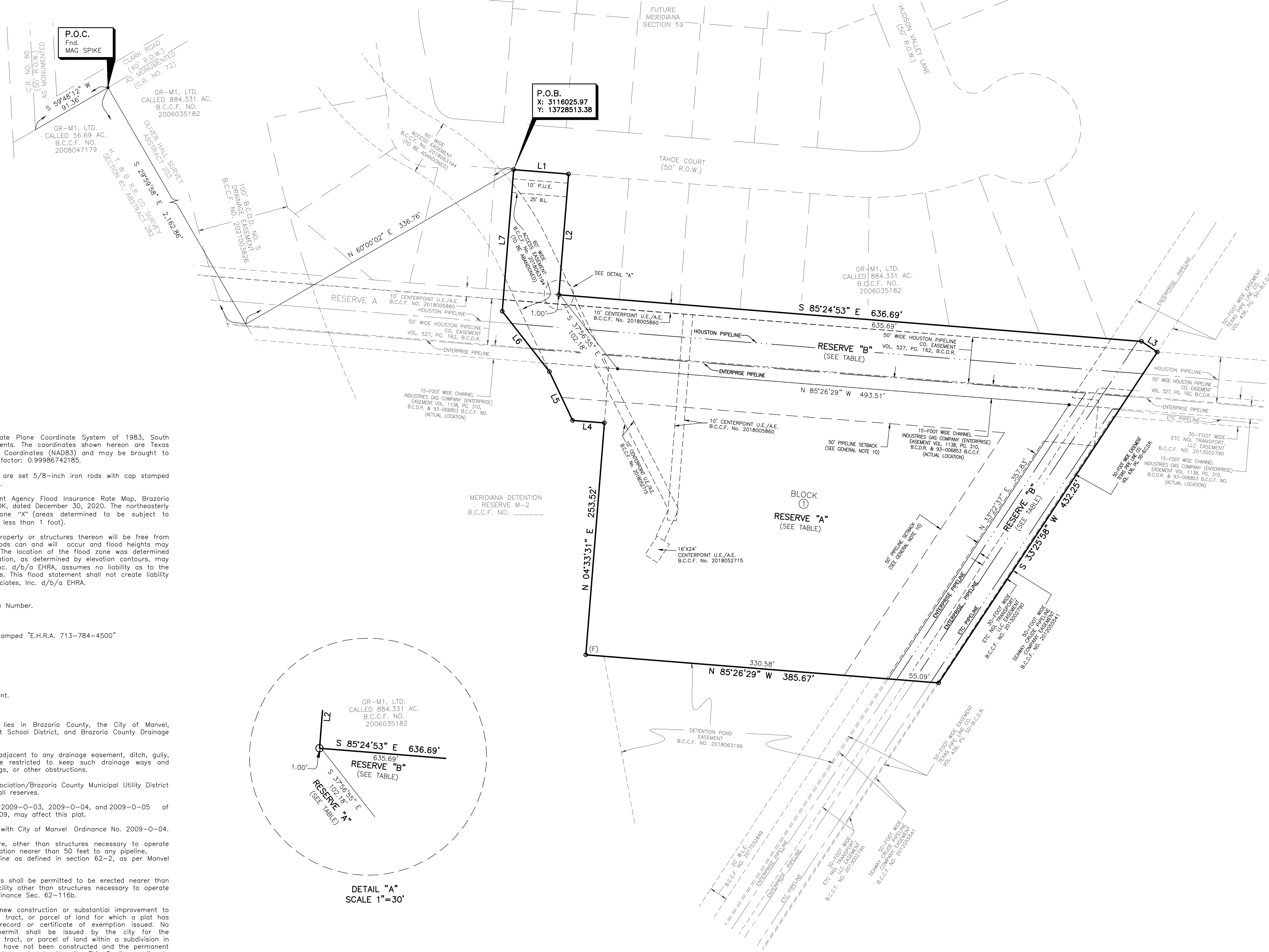




DEVELOPMENT SERVICES DEPARTMENT
20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Meridiana General Development Plan Amendment No. 21 (dated November 19, 2021)

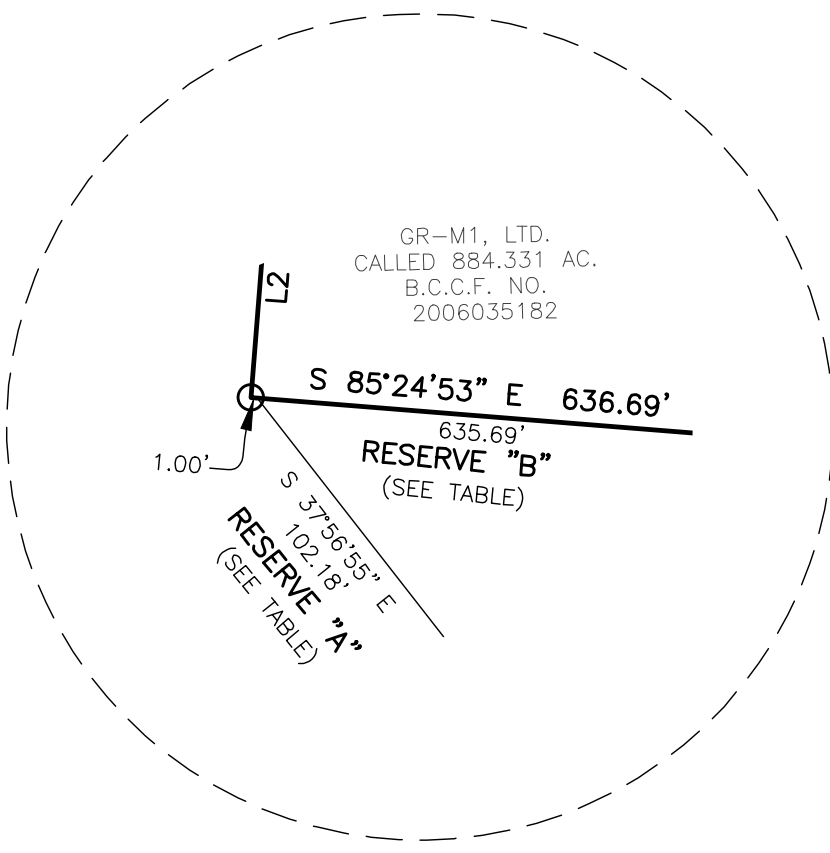




GENERAL NOTES:

- Bearing orientation is based on the Texas State Plane Coordinate System of 1983, South Central Zone as determined by GPS measurements. The coordinates shown hereon are Texas South Central Zone No. 4204 State Plane Grid Coordinates (NAD83) and may be brought to surface by applying the following combined scale factor: 0.99986742185.
- All boundary corners for the plat shown hereon are set 5/8-inch iron rods with cap stamped "E.H.R.A. 713-784-4500", unless otherwise noted.
- According to the Federal Emergency Management Agency Flood Insurance Rate Map, Brazoria County, Texas, Community Panel No. 48039C0110K, dated December 30, 2020, the northeastern portion of the property lies within Shaded Zone "X" (areas determined to be subject to the 500-year flood plain with depths determined less than 1 foot).

This flood statement does not imply that the property or structures thereon will be free from flooding or flood damage. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. The location of the flood zone was determined by scaling from said FEMA map. The actual location, as determined by elevation contours, may differ. Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA, assumes no liability as to the accuracy of the location of the flood zone limits. This flood statement shall not create liability on the part of Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA.
- AC. indicates Acres.
B.C.C.F. NO. indicates Brazoria County Clerk's File Number.
B.C.D.R. indicates Brazoria County Deed Records.
C.R. No. indicates County Road Number.
B.L. indicates Building Line
(F) indicates Found 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500"
Fnd. indicates Found.
Pg. indicates Page.
P.O.B. indicates Point Of Beginning.
P.O.C. indicates Point Of Commencing.
P.U.E. indicates Public Utility Easement.
SQ. FT. indicates Square Feet.
R.O.W. indicates Right-Of-Way.
U.E./A.E. indicates Utility Easement/Aerial Easement.
VOL. indicates Volume.
W.L.E. indicates Water Line Easement
- The property subdivided in the foregoing plat lies in Brazoria County, the City of Manvel, Brazoria County M.U.D. No. 56, Alvin Independent School District, and Brazoria County Drainage District #5.
- Property within the boundaries of this plat and adjacent to any drainage easement, ditch, gully, creek, or natural drainage way shall hereby be restricted to keep such drainage ways and easements clear of any fences, buildings, plantings, or other obstructions.
- The Developer/Drainage District/Homeowners' Association/Brazoria County Municipal Utility District No. 56 shall be responsible for maintenance of all reserves.
- The terms and conditions of Ordinance numbers 2009-0-03, 2009-0-04, and 2009-0-05 of the City of Manvel, Texas dated February 23, 2009, may affect this plat.
- All sidewalks shall be constructed in accordance with City of Manvel Ordinance No. 2009-0-04.
- No residential, commercial, or industrial structure, other than structures necessary to operate the pipeline, shall be erected or moved to a location nearer than 50 feet to any pipeline, except for low pressure distribution system pipeline as defined in section 62-2, as per Manvel Ordinance Sec. 62-116a.
- No residential, commercial, or industrial structures shall be permitted to be erected nearer than 150 feet from any oil or gas well or related facility other than structures necessary to operate the oil or gas well or facility, as per Manvel Ordinance Sec. 62-116b.
- No permit shall be issued by the city for the new construction or substantial improvement to any building, structure or improvement on a lot, tract, or parcel of land for which a plat has not been approved by the city and filed of record or certificate of exemption issued. No building, plumbing, electrical, or mechanical permit shall be issued by the city for the construction or repair of any structure on a lot, tract, or parcel of land within a subdivision in which the required storm drainage improvements have not been constructed and the permanent public improvements have not been approved and accepted by the city. This Section applies to the placement or construction of a permitted structure, including manufactured homes as allowed in Chapter 38, Manufactured Housing, other city ordinances, or by State law.
- This final plat will expire two (2) years after final approval by City Council, if construction of the improvements has not commenced within the two-year initial period or the one-year extension period granted by Council.
- A one-year maintenance bond in the amount of 100 percent of the total cost of the infrastructure improvements or a one-year letter of credit in the amount of 50 percent of the total cost of the infrastructure improvements shall be required for the public improvements being dedicated to the city.
- Building permits will not be issued until all storm drainage improvements, which may include detention ponds, have been constructed.
- The Development Regulations and City Permits of the City of Manvel are required on all property.
- There are 0.00 acres of unencumbered open space within the boundary of this plat.
- The boundary for this plat has a closure in excess of 1:15,000.
- The drainage on adjacent property will not be impacted by this development.



DETAIL "A"
SCALE 1"=30'

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 85°24'53" E	60.00'
L2	S 04°35'07" W	132.00'
L3	S 56°34'02" E	20.77'
L4	N 85°22'56" W	34.64'
L5	N 25°26'32" W	58.80'
L6	N 37°56'55" W	83.54'
L7	N 04°35'07" E	154.81'

RESERVE TABLE		
RESERVE	RESTRICTED TO	AREA
A	LANDSCAPE, OPEN SPACE, UTILITY, & WATER PLANT PURPOSES	147,661 SQ.FT. / 3.390 ACRES
B	LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	62,632 SQ.FT. / 1.438 ACRES
TOTAL		210,293 SQ.FT. / 4.828 ACRES

BENCHMARK(S):
NGS MONUMENT # E 306 DISK SET IN TOP OF CONCRETE MONUMENT, LOCATED 2.0 MILES WEST OF MANVEL, 2 MILES WEST ALONG THE GULF, COLORADO AND SANTA FE RAILWAY FROM THE STATION AT MANVEL, BRAZORIA COUNTY, 0.2 MILE WEST OF A SHELL-ROAD CROSSING, 5-1/2 FEET NORTHWEST OF MILE POLE 38, 39 FEET SOUTH OF THE SOUTH RAIL, 33 FEET NORTH OF THE CENTERLINE OF A DIRT ROAD, 6.7 FEET NORTH OF THE RIGHT-OF-WAY FENCE, 3 FEET WEST OF A WHITE WOODEN WITNESS POST AND SET IN THE TOP OF A CONCRETE POST ABOUT FLUSH WITH THE GROUND.
ELEV.=52.00 (NAVD '88) 1991 ADJUSTMENT

BRAZORIA COUNTY DRAINAGE DISTRICT NO. 5:

- Slab elevations (finished floor) shall be a minimum of 2 feet above finished grade.
- All drainage easements shown hereon shall be kept clear of fences, buildings, plantings and other obstructions to the operation and maintenance of drainage facilities.
- All property shall drain into the drainage easement only through an approved drainage structure.
- All drainage easements and detention pond reserves shown on this plat will be maintained by the property owners and/or business owners; provided, however, and governmental entity have jurisdiction, including, without limitation, Brazoria County, Texas and Brazoria County Drainage District #5, shall have the right, but not the obligation to enter upon the drainage easements to perform maintenance operations at any time after the date hereof.
- The property identified in the foregoing plat lies within Brazoria County Drainage District #5.
- This rural commercial site employs a natural drainage system, which is intended to provide drainage for the site that is similar to that which existed under pre-development conditions. Thus, during large storm events, ponding of water should be expected to occur on the site to the extent it may have prior to development, but such ponding should not remain for an extended period of time.
- Land use within the subdivision is limited to an average imperviousness of no more than 72 percent. The drainage and/or detention system has been designed with the assumption that this average percent, imperviousness will not be exceeded. If this percentage is to be exceeded, a replat and/or redesign of the system may be necessary.
- Other than shown hereon, there are no pipeline easements or pipelines within the boundaries of this plan.
- All storm water drainage pipes, culverts, tiles or other (includes driveway culverts) will be minimum 24" I.D. or equal.
- Dedicated drainage easement(s) granted to Brazoria County Drainage District #5 for drainage maintenance purposes shall include 45 feet top of bank, plus the sum (footage) of both ditch side slopes and channel bottom and 45 feet of bank on the opposite bank.
- Dedicated ingress/egress accesses are granted to Brazoria County Drainage District #5 (see District Resolution No 2007-06 & 2007-07). Access will be gated and locked with Brazoria County Drainage District #5's lock.
- Prohibited use of "metal" pipe in storm water/sewer applications (See District Resolution No. 2007-08).
- Prohibited use of "rip rap" in storm water/sewer applications. (District Policy).
- Pipelines, utility lines and other crossing under any Brazoria County Drainage District #5 ditch require approval and permitting prior to construction.
- All dedicated storm sewer drainage and/or access easements to be granted to Brazoria County Drainage District #5 by the property owner will be initiated and recorded, at the property owner's expense, in Brazoria County, Texas with a "Recorded Document Number" affixed to said easement prior to final approval granted by Brazoria County Drainage District #5 Board of Commissioners.
- It will be the property owner's responsibility to verify if any Brazoria County Drainage District #5 "Dedicated" drainage easements are on or cross their property. If so, the property owner will comply as stated within the recorded easement.
- Project field start-up will start within 365 calendar days from date shown here. Continuous and reasonable field site work is expected. See Brazoria County drainage criteria manual section 1, Introduction; Sub-Section 1.5, Plat and Plan approval process, and drainage acceptance procedures; time limit for approval and Brazoria County Drainage District #5 Resolution 2011-1, allowable time(s) and procedures for starting-up approved projects.

FINAL PLAT
BRAZORIA COUNTY
MUNICIPAL UTILITY DISTRICT NO. 56
WATER PLANT
REPLAT NO. 1 AND EXTENSION

BEING A SUBDIVISION OF 4.828 ACRES, OUT OF
THE OLIVER HALL SURVEY, ABSTRACT 203; AND ALSO BEING
A REPLAT OF BRAZORIA COUNTY MUNICIPAL UTILITY
DISTRICT NO. 56 WATER PLANT, AS RECORDED IN BRAZORIA
COUNTY PLAT RECORDS DOCUMENT NO. 2020047954
CITY OF MANVEL,
BRAZORIA COUNTY, TEXAS.

REASON FOR REPLAT:
TO CREATE TWO RESTRICTED RESERVES
1 BLOCK 2 RESERVES (4.828 ACRES)

OWNER
GR-MI, LTD.
A TEXAS LIMITED PARTNERSHIP
1602 AVENUE D, SUITE 100
KATY, TEXAS 77493
PH (832) 437-7863

NOVEMBER 17, 2021



10011 MEADOWGLEN LN
HOUSTON, TEXAS 77042
713-784-4500
WWW.EHRAINCO.COM
TBPE No. F-726
TBPCLS No. 10092300

Land Use Table		
Use	Gross Area	%
Single Family (SF)	+/- 941 Ac.	57%
Patio Home (PH)	+/- 55 Ac.	3%
Townhome (TH)	+/- 36 Ac.	2%
Village Center (VC)	+/- 38 Ac.	2%
Commercial (C)	+/- 13 Ac.	1%
Institutional (I)	+/- 73 Ac.	4%
Rights-of-Way*	+/- 99 Ac.	6%
Parks & Open Space (P-OS)	+/- 408 Ac.	25%
Drill Site		
Totals	+/- 1,663 Ac.	100%
* Includes proposed major thoroughfares, collectors, and neighborhood collectors.		

Legend

Private Gated Section

Public Section

Divided or Boulevard Entry
(See Note 1)

Standard Entry
(See Note 2)

- Notes**

1. A divided or boulevard entry consisting of two (2) 20-foot wide travel lanes separated by a median having a minimum width of 14 feet shall be considered two points of access.

2. A standard entry is the right-of-way width determined by Table 2 (Page 17) or as otherwise stated in the adopted O-PUD document.

3. Public sections may become private gated sections without additional consideration. Road connections between private gated sections and public sections shall not be required. This note shall not apply to Section 20 and Section 26 as identified on this document.

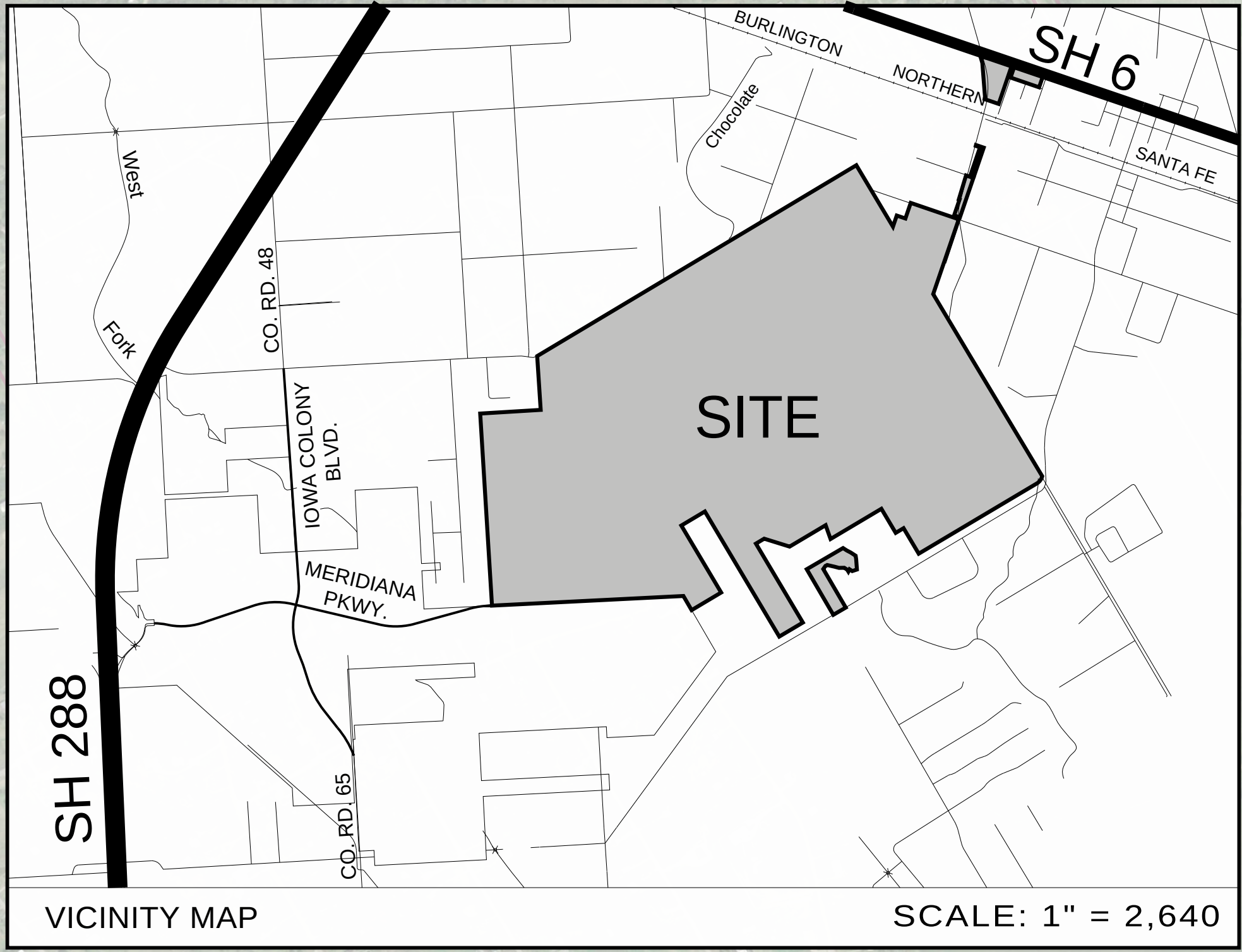
4. The Clark Road ingress/egress from Section 20 and S Masters Road ingress/egress from Section 26B shall maintain a minimum public right-of-way width of 60-feet with no parking.

THIS GENERAL DEVELOPMENT PLAN APPROVED BY THE CITY OF MANVEL PLANNING, DEVELOPMENT, AND ZONING COMMISSION ON _____

PLANNING, DEVELOPMENT AND ZONING COMMISSION



GDP AMENDMENTS	
Amendment #1 Approved:	05/18/2009
Amendment #2 Tabled:	06/25/2018
Amendment #3 Tabled:	07/09/2018
Amendment #4 Tabled:	07/23/2018
Amendment #5 Approved:	10/09/2018
Amendment #6 Approved:	10/22/2018
Amendment #7 Approved:	11/26/2018
Amendment #8 Approved:	01/28/2019
Amendment #9 Approved:	05/13/2019
Amendment #10 Not Approved:	06/10/2019
Amendment #11 Approved:	07/08/2019
Amendment #12 Not Approved:	08/12/2019
Amendment #13 Approved:	09/09/2019
Amendment #14 Approved:	12/09/2019
Amendment #15 Approved:	02/24/2020
Amendment #16 Approved:	11/09/2020
Amendment #17 Approved:	12/14/2020
Amendment #18 Not Approved:	04/12/2021
Amendment #19 Not Approved:	06/14/2021
Amendment #20 Withdrawn:	11/16/2021



ORDINANCE NO. 2022-O-08

AN ORDINANCE AMENDING CHAPTER 44 “OFFENSES AND MISCELLANEOUS PROVISIONS” OF THE CODE OF ORDINANCES OF THE CITY OF MANVEL, TEXAS, BY AMENDING ARTICLE IX “NOISE REGULATION”; PROVIDING FOR EXEMPTIONS AND DEFENSES; REPEALING PROVISIONS IN CONFLICT THEREWITH; PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 PER DAY FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF; AND PROVIDING FOR SEVERABILITY.

WHEREAS, the City Council of the City of Manvel, Texas, determines it in the best interest of the health, safety, and welfare of the citizens of the City to amend the City Code by amending the ordinance regulating nuisances related to noise; and

WHEREAS, this regulation is integral to maintaining the public peace and to support the vision of citizens and City Council of the City of Manvel; and

WHEREAS, the City Council finds that the adoption of this ordinance is in the best interest of the citizens of Manvel; now, therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS:

Section 1. The facts and matters set forth in the preamble of this Ordinance are hereby found to be true and correct.

Section 2. Chapter 44 of the Code of Ordinances of the City of Manvel is hereby amended by amending Article IX to read and provide as follows:

“Chapter 44 - OFFENSES AND MISCELLANEOUS PROVISIONS

. . . .

ARTICLE IX. – NOISE REGULATION

Sec. 44-160. - Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, unless the context of their usage clearly indicates another meaning:

Daytime hours means the hours between 7:00 a.m. on one day and 9:00 p.m. the same day.

dB(A) means the intensity of a sound expressed in decibels.

Emergency means any occurrence or set of circumstances involving actual or imminent physical trauma or property damage or loss that demands immediate action.

Emergency work means any work performed for the purpose of preventing or alleviating the physical trauma or property damage threatened or caused by an emergency, or which is otherwise necessary to restore property to a safe condition following a fire, accident or natural disaster, or which is required to protect persons or property from exposure to danger, or which is required to restore public utilities.

Nighttime hours means the hours between 9:00 p.m. on one day and 7:00 a.m. the following day.

Person means any individual, association, partnership, or corporation, governmental unit, or other legal entity.

Property line means the line along the ground surface, and its vertical extension, which separates the real property owned, leased or occupied by one person from that owned, leased or occupied by another person and the imaginary line which represents the legal limits of property of any person who owns, leases or otherwise occupies an apartment, condominium, hotel or motel room, office or any other type of occupancy.

Public right-of-way means any street, avenue, boulevard, highway, road, thoroughfare, sidewalk, alley or any other property that is owned or controlled by a governmental entity.

Sec. 44-161. – General Prohibition.

(a) It shall be unlawful for any person to make, assist in making, permit, continue, cause to be made or continued or permit the continuance of any sound which either exceeds the maximum permitted sound levels specified this ordinance or which otherwise unreasonably disturbs, injures or endangers the comfort, repose, health, peace or safety or others within the limits of the city, ~~after the person making the noise receives notice from a magistrate or peace officer that the noise is a public nuisance.~~

In determining whether a violation of this subsection occurs, the following may be considered:

(1) The level, frequency or duration of the noise;

(2) The proximity of the noise to the dwelling or business;

(3) The nature and zoning of the area within which the noise occurs; and

(4) The time of day or night the noise occurs

(b) It is unlawful for any person to operate any radio, speaker, musical instrument, sound amplifier, or other device used for producing or reproducing sound for entertainment purposes so as to be plainly audible within a dwelling, other than the dwelling where the sound-producing device is located, is prima facie evidence of a violation.

(c) It is unlawful for a person to operate any radio, speaker, sound amplifier or similar device located within or upon a motor vehicle at a volume that is audible at a distance of more than 50 feet from the vehicle. The fact that the sound is audible at a distance of 50 feet from the vehicle is prima facie evidence of a violation of this subsection.

(d) It is unlawful for any person operating a business that operates an outdoor playground as an accessory use if the playground is located within 500 feet of a dwelling, to intentionally or knowingly allow any person to make use of the playground between 10:00 p.m. and 6:00 a.m. of the following day.

(e) It is unlawful for any person to operate any horns or other signaling devices. The sounding of any horn or signaling device on any automobile or other vehicle on any street or public place of the city, except as a danger warning; the creation by means of any such signaling device of any unreasonably loud or harsh sound; and the sounding of any such device for an unnecessary and unreasonable period of time.

(f) It is unlawful for any person to allow the keeping of any animal or bird which by causing frequent or long-continued noise shall disturb the comfort or repose of any persons in the vicinity.

(g) It is unlawful for any person to allow the discharge into the open air of the exhaust of any steam engine, internal combustion engine or motor vehicle except through a muffler or other device which will effectively prevent loud or explosive noises therefrom.

(h) It is unlawful for any person to allow a defect in vehicle or load or load modification. The use of any automobile or other vehicle so out of repair, so loaded, so modified, or used in such a manner as to create loud and unnecessary grating, grinding, rattling or other noise.

(i) It is unlawful for any person to allow the creation of a loud and excessive noise in connection with loading or unloading any vehicle or the opening and destruction of bales, boxes, crates and containers.

(j) It is unlawful for any person to allow the erection (including excavating), demolition, alteration or repair of any building other than daytime hours on weekdays, except in case of an emergency or urgent necessity in the interest of public health and safety, and then only with

permission from the City of Manvel Building Inspector, which shall be granted for a period of time not to exceed the period in which the emergency continues.

(k) It is unlawful for any person to allow the creation of any excessive noise on any street adjacent to any school, church or court while the same are in use, or adjacent to any hospital, which unlawfully interferes with the workings of such institution or which disturbs or unduly annoys the patients in the hospital, provided conspicuous signs are displayed in such streets indicating that the same is a school, church, hospital or court street.

(l) It is unlawful for any person to allow the operation between the hours of 9:00 p.m. and 7:00 a.m. of any pile driver, steam shovel, pneumatic hammer, derrick or other appliance or machinery, the use of which is attended by loud or unusual noise.

(m) Exceptions to violations.

(1) It is a defense to prosecution under subsection (b) of this section that the noise was caused by an employee, contractor, or agent of any city, county, public school, or other governmental entity or of a public service utility in the performance of his or her duties.

(2) It is a defense to prosecution under subsections (b) or (c) of this section that the noise sound was created by persons lawfully using a public facility.

(3) It is a defense to prosecutions under paragraph (b), (c) or (d) of this section that the noise was caused by persons participating in a parade conducted on a public street pursuant to a parade permit.

Sec. 44-162. - Maximum permissible sound levels.

(a) General prohibition. No person shall conduct, permit or allow any activity or sound source to produce a sustained noise source that exceeds the following decibel levels:

(1) a decibel level of 65 dB(A) during daytime hours;

(2) a decibel level of 58 dB(A) during nighttime hours.

(b) Special areas (daytime). Notwithstanding the above, it is unlawful for a person to operate on a premises zoned HC, LC, HMU (non-residential use), or PUD (non-residential use) a sustained noise source that causes the noise level to exceed 70 dB(A) during the day.

(c) Noise level must be determined by measuring the dB(A) taken at the property line of the Premises from which the noise is emanating.

(d) A “sustained noise” source shall mean a noise that:

(1) Exceeds 5 dB(A) over the dB(A) allowed by Subsections (a) and (b), if the noise source operates at a sustained level for less than 15 minutes in any 1-hour period;

(2) Exceeds 10 dB(A) over the dB(A) allowed by Subsections (a) and (b), if the noise source operates at a sustained level for less than 6 minutes in any 1-hour period; or

(3) Exceeds 15 dB(A) over the dB(A) allowed by Subsections (a) and (b), if the noise source operates at a sustained level for less than 1.5 minutes in any 1-hour period;

and does not occur as part of the typical operation of the premises, including mowing, construction, tree trimming, and waste removal.

(e) The dB(A) levels set forth in this section apply to the property line of the Premises from which the noise is emanating ~~[property where the sound is being received]~~. Any sound that, when measured at the property line of the Premises from which the noise is emanating, ~~[property where the sound is being received]~~ exceeds the dB(A) levels set forth in this section is a violation of this ordinance.

(f) Evidence that an activity or sound source produces a sound that exceeds the dB(A) levels specified in this section, when measured at property line of the Premises from which the noise is emanating ~~[site where the sound is being received]~~, if available, shall be prima facie evidence of a sound nuisance which unreasonably disturbs, injures or endangers the comfort, repose, health, peace or safety of others within the limits of the city in violation of this chapter.

Sec. 44-163. – reserved ~~[General prohibitions.~~

~~In addition to the violation established by section 44 162, it shall be unlawful for any person to make, assist in making, permit, continue, cause to be made or continued or permit the continuance of any sound that substantially disturbs, injures or endangers the comfort, repose, health, peace or safety of others within the limits of the city~~

~~Any noise of such character, intensity and duration which substantially interferes with the peaceful and comfortable enjoyment of private homes or businesses by persons of ordinary sensibilities is hereby declared to be a nuisance and is hereby prohibited. The following acts, among others, are declared to be loud, disturbing and unnecessary noises in violation of this section, but said enumeration shall not be deemed to be exclusive:~~

~~(a) — *Horns or other signaling devices.* The sounding of any horn or signaling device on any automobile or other vehicle on any street or public place of the city, except as a danger warning; the creation by means of any such signaling device of any unreasonably loud or harsh sound; and the sounding of any such device for an unnecessary and unreasonable period of time.~~

~~(b) — *Animals, birds, etc.* The keeping of any animal or bird which by causing frequent or long-continued noise shall disturb the comfort or repose of any persons in the vicinity.~~

~~(c) — *Exhausts.* The discharge into the open air of the exhaust of any steam engine, internal combustion engine or motor vehicle except through a muffler or other device which will effectively prevent loud or explosive noises therefrom.~~

~~(d) — *Defect in vehicle or load or load modification.* The use of any automobile or other vehicle so out of repair, so loaded, so modified, or used in such a manner as to create loud and unnecessary grating, grinding, rattling or other noise.~~

~~(e) — *Loading and unloading vehicles, opening boxes.* The creation of a loud and excessive noise in connection with loading or unloading any vehicle or the opening and destruction of bales, boxes, crates and containers.~~

~~(f) — *Construction or repairing of buildings.* The erection (including excavating), demolition, alteration or repair of any building other than daytime hours on weekdays, except in case of an emergency or urgent necessity in the interest of public health and safety, and then only with permission from the City of Manvel building inspector, which shall be granted for a period of time not to exceed the period in which the emergency continues.~~

~~(g) — *Schools, courts, churches, hospitals.* The creation of any excessive noise on any street adjacent to any school, church or court while the same are in use, or adjacent to any hospital, which unlawfully interferes with the workings of such institution or which disturbs or unduly annoys the patients in the hospital, provided conspicuous signs are displayed in such streets indicating that the same is a school, church, hospital or court street.~~

~~(h) — *Pile drivers, hammers and other machinery.* The operation between the hours of 9:00 p.m. and 7:00 a.m. of any pile driver, steam shovel, pneumatic hammer, derrick or other appliance or machinery, the use of which is attended by loud or unusual noise.~~

~~(i) — *Vehicular sound amplification systems.* A sound amplifier which is part of or connected to a radio, stereo receiver, compact disc player, cassette tape player or other similar device within a motor vehicle operated at such a volume that it causes material distress, discomfort or injury to persons of ordinary sensibilities in the vicinity thereof. If the sound is audible at a distance of thirty (30) feet from the source or causes a person to be aware of or feel the vibration accompanying the sound at a distance of thirty (30) feet from the source, a prima facie case shall be established that the radio, stereo receiver, compact disc player, cassette player or other similar device is being operated at a volume that causes material distress, discomfort or injury to persons of ordinary sensibilities.]~~

Sec. 44-164. – Defenses

The following defenses shall apply to any offense established in this ordinance:

(a) The emission of any sound was for the purpose of alerting persons to the existence of an emergency, danger or attempted crime.

- (b) The sound was produced by an authorized emergency vehicle.
- (c) The sound was produced by emergency work necessary to restore public utilities, or to restore property to a safe condition, or to protect persons or property from imminent danger, following a fire, accident or natural disaster.
- (d) The sound was generated:
 - a. At a lawfully scheduled stadium event;
 - b. By a parade and spectators and participants on the parade route during a permitted parade;
 - c. By spectators and participants at lawfully scheduled amphitheater event;
 - d. By patrons and participants using cannons and gunfire during historical battle reenactments for which a pyrotechnic permit was obtained and the explosives were inspected by the fire marshal;
 - e. By a pyrotechnic display that was inspected and approved by the fire marshal;
 - f. By spectators and participants of any outdoor event, fun run, race, festival, fiesta, or concert which was sponsored, cosponsored, or permitted by the city, or
 - g. By any other otherwise lawful activity that constitutes protected expression pursuant to the First Amendment of the United States Constitution.
- (e) The sound was produced by aircraft in flight or in operation at an airport, or railroad equipment in operation on railroad rights-of-way.
- (f) The sound was produced by operating or permitting the operation of any mechanically powered saw, drill, sander, router, grinder, lawn or garden tool, lawnmower, or any other similar device used between the hours of 7:00 a.m. and 9:00 p.m. and which device did not produce a sound exceeding 85 dB(A) when measured from the nearest residential property where the sound is being received and was used for the maintenance or upkeep of the property on which it was used.
- (g) The sound was generated as authorized under the terms of a permit issued under section 44-166.
- (h) The sound was produced by the operation of any air conditioning unit which did not produce a sound exceeding 65 dB(A) when measured at or near 15 feet from the air conditioning unit producing the sound being measured.
- (i) The sound was produced by church bells or church chimes when used as part of a religious observance or service during daytime hours and which did not exceed five continuous minutes in duration in any one-hour period.

Sec. 44-165. – Methods of sound measurement.

(a) Whenever portions of this chapter prohibit sound over a certain decibel limit, measurement of said sound shall be made with a Type 1 or Type 2 calibrated sound level meter utilizing the A-weighting scale and the slow meter response as specified by the American National Standards Institute (ANSI S1.4-1984/85A).

(b) Noise levels shall be measured in decibels and A-weighted. The unit of measurement shall be designated as dB(A). Meters shall be maintained in calibration and good working order. Calibrations shall be employed which meet ANSI S1.40-1984 prior to and immediately after every sampling of sound. Measurements recorded shall be taken so as to provide a proper representation of the sound being measured. The microphone of said meter shall be positioned so as not to create any unnatural enhancement or diminution of the measured sound. A windscreen for said microphone shall be used. Measurements shall be taken at or near the nearest property line of the property where the sound is being received.

Sec. 44-166. – Permits.

(a) No person shall use or cause to be used any loudspeaker, loudspeaker system, sound amplifier or any other machine or device which produces, reproduces, or amplifies sound outside of buildings or other enclosed structures in a manner which exceeds the levels specified in this ordinance, when measured from the property where the sound is being received, without first obtaining a permit to do so. Such permit:

- (1) May be obtained by making application to the director of the city department so designated by the city manager.
- (2) Requires payment of a \$10.00 fee for the administrative costs of issuing the permit.
- (3) Is valid for one 14-hour period between the hours of 7:00 a.m. and 9:00 p.m.
- (4) Shall not be issued for the same location more than twice during any 30-day period.
- (5) Shall not authorize, allow, or otherwise permit the production, reproduction, or amplification of sound which exceeds 75 dB(A) when measured from the nearest receiving property.

(b) The use of any loudspeaker, loudspeaker system, sound amplifier or any other similar machine or device which is permitted pursuant to this section is subject to the following regulations:

- (1) The only sound permitted shall be either music or human speech or both.
- (2) The volume of the sound amplified pursuant to this section shall not exceed 75 dB(A) when measured from the nearest receiving property.

- (3) No equipment permitted pursuant to this section shall be operated during the hours between 9:00 p.m. and 7:00 a.m.
- (c) The application for the permit required to be filed pursuant to this section shall contain the following information:
- (1) The date of the application and the date and hours for which the permit is requested.
 - (2) The name and address of the applicant.
 - (3) The name and address of the person who will have charge of the sound amplifying equipment.
 - (4) The purpose for which the sound equipment will be used.
 - (5) The address and a description of the location where the sound equipment will be used.
 - (6) A description of the type of sound amplifying equipment to be used.
- (d) If an applicant for a permit under this section is unable to pay the full amount of the permit fee pursuant to subsection (a) of this section, the fee shall be reduced to that amount the applicant is able to pay, provided the applicant submits a sworn affidavit containing the following information:
- (1) A statement that the applicant and the group or organization, on whose behalf the applicant is making the application, are unable to pay the full amount of the permit fee.
 - (2) A statement that the applicant and the group or organization, on whose behalf the applicant is making the application, have made diligent efforts to raise money to pay the permit fee.
 - (3) A statement of the exact amount the applicant and the group or organization, on whose behalf he is making the application, is able to pay for the permit fee.”

Section 3. This Ordinance shall in no manner amend, change, supplement, or revise any provision of any ordinance of the City of Manvel, save and except the change described above.

Section 4. In the event any section, paragraph, subdivision, clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstance shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or

provision hereof other any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Manvel, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, or whether there be one or more parts.

Section 5. Any person who shall intentionally, knowingly, recklessly, or with criminal negligence violate any provision of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction, shall be fined in an amount not to exceed \$2,000.00. Each day of violation shall constitute a separate offense.

PASSED AND APPROVED on first reading this _____ day of _____, 2022.

PASSED, APPROVED, AND ADOPTED on second and final reading this _____ day of _____, 2022.

Debra Davison, Mayor

Attest:

Tammy Bell, City Secretary

APPROVED AS TO FORM:

Robert Gervais, City Attorney



Mayor Davison,
City Council,
City Staff

On behalf of The Friends of the Manvel Public Library, I am happy to extend an offer for the City of Manvel to become our inaugural Founders Level member. This relationship will be mutually beneficial in a number of ways.

With This highest level of membership, the City will:

- Be able to access and/or download all our current or 'B Roll' footage that can be used to promote the city of Manvel.
- Have access to those historic photos and documents that are permitted to be shared in accordance with our release agreement.
- Receive special recognition as a Founders Level sponsor on all videos produced by the friends.
- The City's logo will be prominently displayed on all advertising the Friends create, both physical and electronic, for in-person fund raising events such as craft shows or bake sales.

Unlike other membership levels that renew every year, this Founder's Membership is perpetual, it will never expire or need to be renewed.

As part of this membership level, the City will in turn give credit to our organization as the source for photos or stock video that are used in their own productions.

While I am thrilled by our City's rich past, I am now equally excited by our future. I know there are many great stories waiting to be told.

Brian Wilmer
President, Manvel Community Library Association



Mayor Davison, City Council, City Staff,

I am writing this letter on behalf of Manvel History.Com and the Friends of the Manvel Public Library.

I did not realize when I started this history collection project that it was actually two tasks. First: To record our city's history and Secondly: To make it publicly available.



Our first grant of \$10,000 from the HOT Tax Fund has helped to address this first task and was used to purchase basic recording equipment. We have had a great start to the project, not only with the collection of interviews, photographs, documents, and other historical materials, but also in the recording of history being made as our city, literally, grows around us. Without the generosity of the city, this project could not have progressed to its current level. While we have only begun to record our city's rich history, we were honored to be a small part of the recent State of the City Speech. We are hopeful that next year we can again participate in this and other city endeavors.



Now that we have begun to assemble a sizeable amount of historical information, it is time for us to tackle the second task, which is to make our work easily accessible by the public. We need to create and publish two websites, link one to AWS cloud data storage and link the other to a Member Management Software service. We are requesting a \$40,000 grant from the Hotel Occupancy Tax (HOT) Fund, the balance of which is approximately \$678,000.00 as of the end of the year.



This is basically like a Kickstarter grant that will allow us to create a solid digital platform to not only make our history available to the public, but to create the mechanism whereby citizens can join the organization online, with a credit card. The requested funds will cover the creation of two websites, three years of subscriptions to the software that we currently are paying for out of our own pockets, plus additional subscriptions that we will need to launch and maintain both the Manvel History website and the Friends of the Library website. This will ensure both organizations have a digital presence across all platforms and data that can be easily accessed anytime using safe, reliable cloud storage.

The grant will also address some much-needed equipment upgrades to both improve our video quality and speed the editing and publishing process. It also includes funds for a modest amount of time from a professional website developer.

We project that after three years our membership base will be large enough for us to be self-sufficient. This grant is to get us over the hump and into green pastures.

We continue to record the growth of our city and will make all of this footage, as well as any other contemporary images we collect, available to local businesses and non-profit organizations so they can promote their business and the great City of Manvel. We plan to collect not only historical interviews and old photographs, but to produce video segments that showcase our city's achievements and our rural lifestyle here in Manvel.



We are planning to film stories of our high school football and baseball teams that went to state tournaments, as well as segments showcasing our churches, parks, and community events. As our city center develops, we will be preserving this history in the making. In the past the library has had many community events, from a golf tournament to craft and bake sales. Soon the library will be aggressively hosting community events again and we will be able to promote these events through our new websites and social media.



This is exactly what the HOT tax is designed to do; to promote our city, to encourage people to come and stay in our city, and to spend money here.

Lastly, I never want to lose sight of our overall goal. Manvel History was created to help encourage membership in the Friends of the Library organization. A 100% volunteer organization that uses every penny they raise to support library programs for our children, elderly, and everyone in-between. This is a unique experiment in creating one non-profit solely to support another non-profit organization. We can preserve our history and support our library at the same time.

This project has been very rewarding and the stories that we have so far collected have been amazing. Every time we film another person, we learn something surprising and delightful about the city we live in. Our history is indeed a rich one.

Thank You for your time and your consideration,

Brian Wilmer
President MCLA

Exhibit A

TEXAS SUBDIVISION AND SPECIAL DISTRICT ELECTION AND RELEASE FORM

This Election and Release Form for Texas Participating Subdivisions¹ resolves opioid-related Claims against Endo/Par under the terms and conditions set forth in the Endo/Par Texas State-Wide Opioid Settlement Agreement between Endo/Par, the State of Texas, and the Counties of Dallas, Bexar, Harris and Tarrant (the “Agreement”), the provisions of which are here incorporated by reference in their entirety. Upon executing this Election and Release Form, a Participating Subdivision agrees that, in exchange for the consideration described in the Agreement, the Participating Subdivision is bound by all the terms and conditions of the Agreement, including but not limited to the Release found in Section VII of the Agreement and the provisions concerning participation by Subdivisions or Special Districts in Section VIII, and the Participating Subdivision and its signatories expressly represent and warrant on behalf of themselves that they have, or will have obtained on or before the Effective Date or on or before the execution of this Election and Release Form if executed after the Effective Date, the authority to settle and release, to the maximum extent of the Subdivision’s and Special District’s power, all Released Claims related to Covered Conduct. If this Election and Release Form is executed on or before the Initial Participation Date, the Participating Subdivision shall dismiss Endo/Par and all other Released Entities with prejudice from all pending cases in which the Participating Subdivision has asserted Covered Claims against Endo/Par or a Released Entity no later than the Initial Participation Date. If this Election and Release Form is executed after the Initial Participation Date, the Participating Subdivision shall dismiss Endo/Par and all other Released

¹ The Agreement defines a “Participating Subdivision” as a Subdivision or Special District that signs this Election and Release Form and meets the requirements for becoming a Participating Subdivision under subsection VIII.A. of the Agreement.

Entities with prejudice from all pending cases in which the Participating Subdivision has asserted Covered Claims against Endo/Par or a Released Entity concurrently with the execution of this form. By executing this Election and Release Form, the Participating Subdivision submits to the jurisdiction of the Honorable Robert Schaffer, *In Re: Texas Opioid Litigation*, MDL No. 18-0358, Master File No. 2018-63587, in the 152nd Judicial District Court, Harris County, Texas.

Dated: _____

Texas Subdivision Name: _____

By: _____

[NAME]

[TITLE]

[ADDRESS]

[TELEPHONE]

[EMAIL ADDRESS]

Exhibit B

TEXAS SUBDIVISION AND SPECIAL DISTRICT ELECTION AND RELEASE FORM

This Election and Release Form for Texas Participating Subdivisions¹ resolves opioid-related Claims against Teva under the terms and conditions set forth in the Teva Texas State-Wide Opioid Settlement Agreement between Teva, the State of Texas, and the Counties of Dallas, Bexar, Harris and Tarrant (the “Agreement”), the provisions of which are here incorporated by reference in their entirety. Upon executing this Election and Release Form, a Participating Subdivision agrees that, in exchange for the consideration described in the Agreement, the Participating Subdivision is bound by all the terms and conditions of the Agreement, including but not limited to the Release found in Section VII of the Agreement and the provisions concerning participation by Subdivisions or Special Districts in Section VIII, and the Participating Subdivision and its signatories expressly represent and warrant on behalf of themselves that they have, or will have obtained on or before the Effective Date or on or before the execution of this Election and Release Form if executed after the Effective Date, the authority to settle and release, to the maximum extent of the Subdivision’s and Special District’s power, all Released Claims related to Covered Conduct. If this Election and Release Form is executed on or before the Initial Participation Date, the Participating Subdivision shall dismiss the Released Claims with prejudice and sever Teva and all other Released Entities from all pending cases in which the Participating Subdivision has asserted Covered Claims against Teva or a Released Entity no later than the Initial Participation Date. If this Election and Release Form is executed after the Initial Participation Date, the Participating Subdivision shall dismiss the

¹ The Agreement defines a “Participating Subdivision” as a Subdivision or Special District that signs this Election and Release Form and meets the requirements for becoming a Participating Subdivision under subsection VIII.A. of the Agreement.

Released Claims with prejudice and sever Teva and all other Released Entities from all pending cases in which the Participating Subdivision has asserted Covered Claims against Teva or a Released Entity concurrently with the execution of this form. By executing this Election and Release Form, the Participating Subdivision submits to the jurisdiction of the Honorable Robert Schaffer, *In Re: Texas Opioid Litigation*, MDL No. 18-0358, Master File No. 2018-63587, in the 152nd Judicial District Court, Harris County, Texas.

Dated: _____

Texas Subdivision Name: _____

By: _____

[NAME]

[TITLE]

[ADDRESS]

[TELEPHONE]

[EMAIL ADDRESS]



City of Manvel

P. O. Box 187
20025 HWY 6
Manvel, Texas 77578

(281) 489-0630
Fax (281) 489-0634

AGENDA REQUEST

REQUEST MUST BE MADE ACCORDING TO THE SUBMITTAL SCHEDULE

Meeting Requested: (Please check applicable meeting)

Planning, Development & Zoning	☐	City Council	☐	Both	☒
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Date of Request: February 28, 2022 PDZ & March 7, 2022 City Council

YOUR REQUEST WILL BE PLACED ON THE NEXT AVAILABLE MEETING DATE. MEETINGS ARE SECOND AND FOURTH MONDAYS FOR PLANNING, DEVELOPMENT & ZONING AND FIRST AND THIRD MONDAYS FOR CITY COUNCIL. THE AGENDAS ARE POSTED TO THE GENERAL PUBLIC AT MANVEL CITY HALL AND ON OUR WEBSITE AT www.cityofmanvel.com. THE AGENDA IS POSTED AND WILL REMAIN POSTED CONTINUOUSLY FOR AT LEAST 72 HOURS PRECEDING THE SCHEDULED TIME OF THE MEETING. PLEASE CHECK THE BOARD FOR YOUR MEETING SCHEDULE. WE STRONGLY ENCOURAGE YOU TO ATTEND THE MEETING FOR QUESTIONS AND ANSWERS. IF YOU ARE UNABLE TO ATTEND ACTION MAY BE TABLED UNTIL THE FOLLOWING MEETING.

Person to Speak: Jared Bowlin or Brad Sweitzer

Daytime Phone: 713-784-4500 Fax Number: 713-784-4577

E-mail Address: jbowlin@ehrainc.com or bsweitzer@ehrainc.com

Description of Request and Physical Address:

Consideration and possible action to forward with recommendation to City Council,
Final Plat for Brazoria County MUD No. 57 Lift Station, being a subdivision of
0.1945 acres out of the Oliver Hall Survey, Abstract 203, City of Manvel, Brazoria
County, Texas.

Plats:

Preliminary _____

Final x

ALL DOCUMENTATION AND FEES ASSOCIATED WITH THIS AGENDA REQUEST MUST BE SUBMITTED ACCORDING TO THE MEETING SUBMITTAL SCHEDULE WHICH CAN BE FOUND ON OUR WEBSITE. BY SIGNING THIS AGENDA REQUEST FORM I ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS AGENDA REQUEST FORM.

Jessica Rodriguez Digitally signed by Jessica Rodriguez
Date: 2022.02.22 11:03:53 -06'00'

SIGNATURE

February 22, 2022

DATE



DEVELOPMENT SERVICES DEPARTMENT

20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Planning, Development and Zoning Commission Plat Report

Plat Name	Brazoria County MUD No. 57 Lift Station Final Plat
Applicant	Lacey Bell, EHRA, Inc.
PD&Z Meeting Date	February 28, 2022
Recommendation	Approval
Submitted By	Jessica Rodriguez, Director of Development Services

Staff Recommendation

Staff recommends approval of the Brazoria County MUD No. 57 Lift Station Final Plat.



DEVELOPMENT SERVICES DEPARTMENT
20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Plat Exhibit

29262

STATE OF TEXAS
COUNTY OF BRAZORIA

BEFORE ME, the undersigned authority, on this day personally appeared **MANVEL CITY**, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

My commission expires **04/01/2025**.

WITNESS MY HAND AND SEAL OF OFFICE, this **04/01/2025** day of **April**, 2025.

Robert L. Corles
Notary Public, Registered Professional Land Surveyor
Commission Expires 04/01/2025

APPROVED BY BRAZORIA COUNTY DISTRICT NO. 57
John P. P. 10/10
Notary Public
John P. P. 10/10
Notary Public

NOTES AND RECORDS INFORMATION
BRAZORIA COUNTY DISTRICT NO. 57
BOOK 100, PAGE 100, RECORD 100
THIS PLAT WAS RECORDED IN THE PUBLIC RECORDS OF BRAZORIA COUNTY, TEXAS, ON 04/01/2025, AT 10:10 AM, BY THE CLERK OF THE COUNTY CLERK'S OFFICE.

FINAL PLAT
BRAZORIA COUNTY
MUNICIPAL UTILITY DISTRICT No 57
LIFT STATION No 1

BEING A SUBDIVISION OF 0.945 ACRES OUT OF
THE OLIVER HALL SURVEY, ABSTRACT 203,
CITY OF MANVEL, BRAZORIA COUNTY, TEXAS.

1 BLOCK 1 RESERVE (0.945 ACRES)

OWNER
GR-M, LTD.
A TEXAS LIMITED PARTNERSHIP
1602 AVENUE D, SUITE 100
KATY, TEXAS 77450
PH (832) 437-7863

FEBRUARY 18, 2022
ENGINEER/SURVEYOR

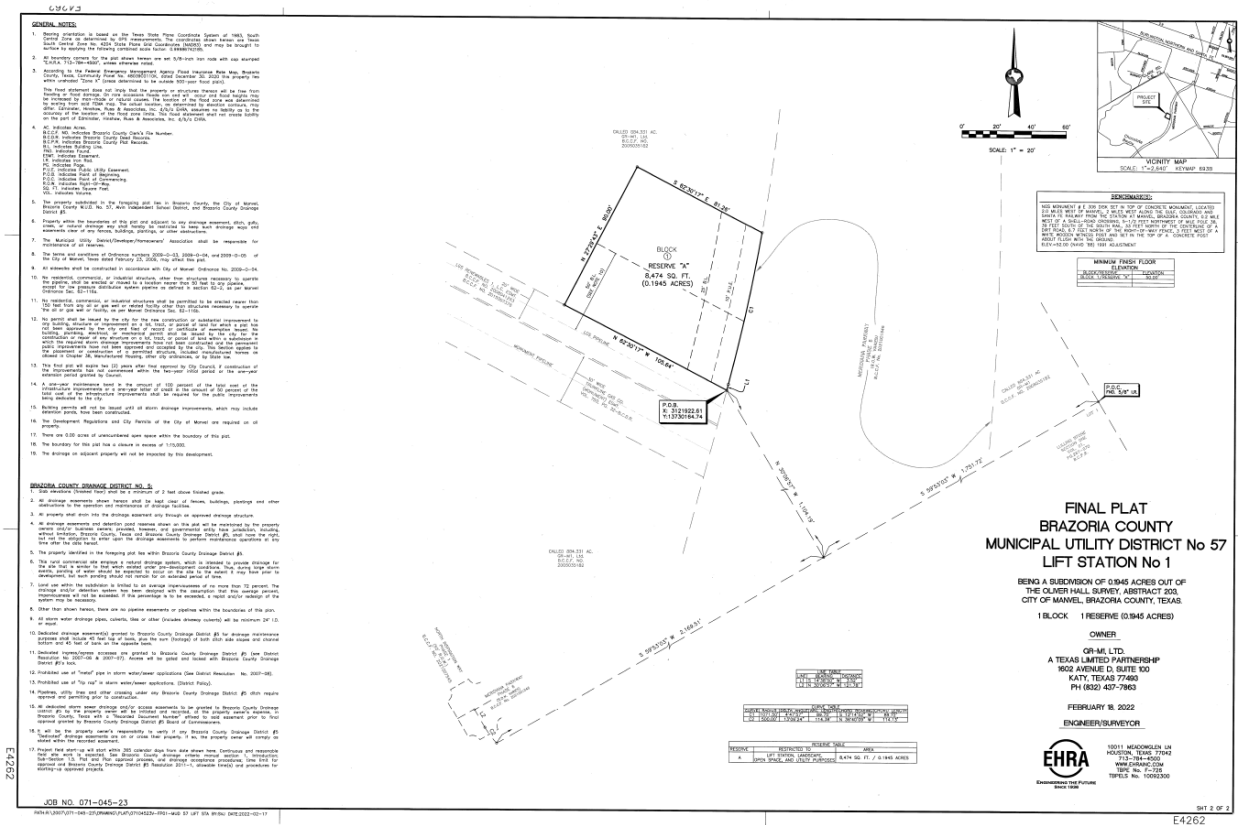
15011 MCARDLEMAN LN
HOUSTON, TEXAS 77058
713-784-8300
HARRIS COUNTY
REG. NO. 1-000
TIFILE NO. 10000000

EHRA
ENGINEERING & SURVEYING
SINCE 1988

SH 1 OF 2



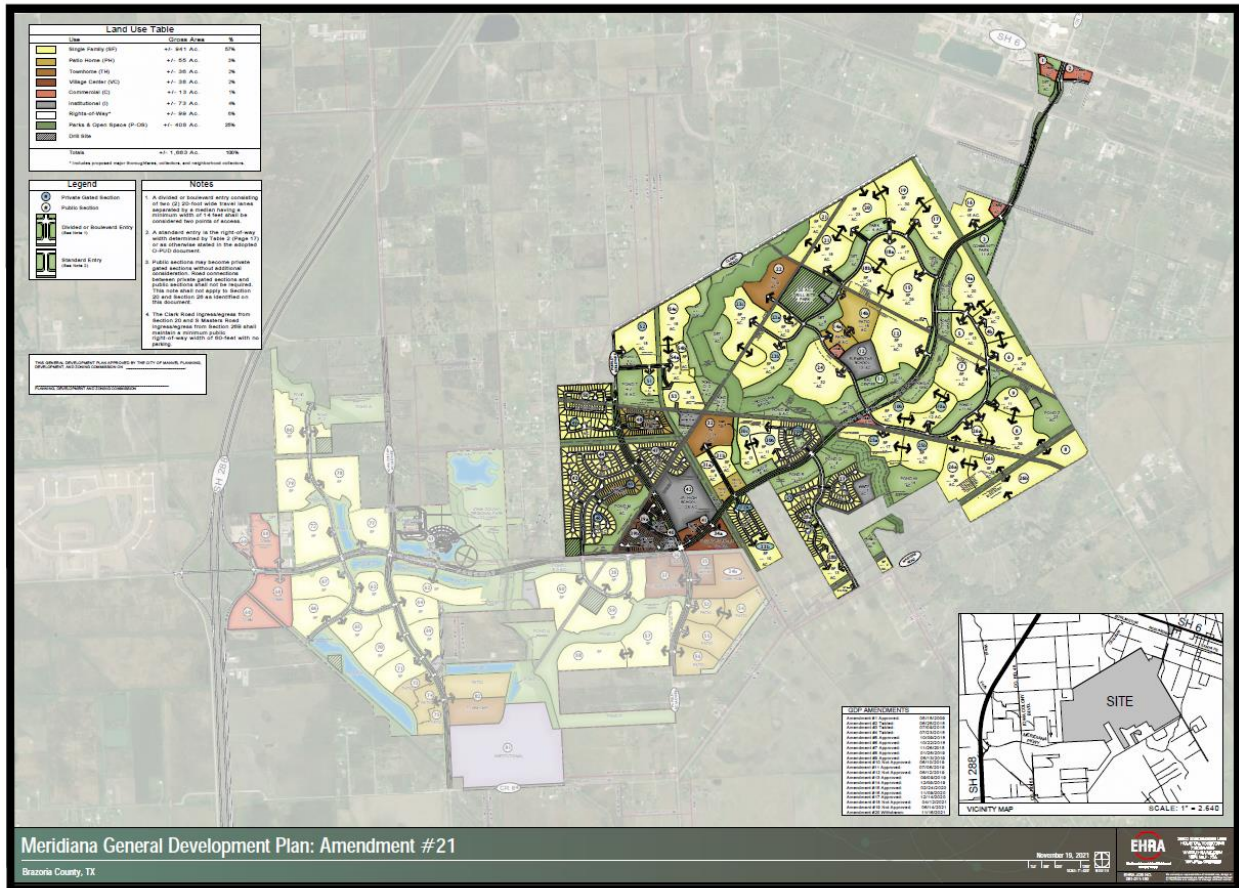
Plat Exhibit





DEVELOPMENT SERVICES DEPARTMENT
20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Meridiana General Development Plan Amendment No. 21 (dated November 19, 2021)



Land Use Table		
Use	Gross Area	%
Single Family (SF)	+/- 941 Ac.	57%
Patio Home (PH)	+/- 55 Ac.	3%
Townhome (TH)	+/- 36 Ac.	2%
Village Center (VC)	+/- 38 Ac.	2%
Commercial (C)	+/- 13 Ac.	1%
Institutional (I)	+/- 73 Ac.	4%
Rights-of-Way*	+/- 99 Ac.	6%
Parks & Open Space (P-OS)	+/- 408 Ac.	25%
Drill Site		
Totals	+/- 1,663 Ac.	100%
* Includes proposed major thoroughfares, collectors, and neighborhood collectors.		

Legend

Private Gated Section

Public Section

Divided or Boulevard Entry
(See Note 1)

Standard Entry
(See Note 2)

- Notes**
1. A divided or boulevard entry consisting of two (2) 20-foot wide travel lanes separated by a median having a minimum width of 14 feet shall be considered two points of access.

2. A standard entry is the right-of-way width determined by Table 2 (Page 17) or as otherwise stated in the adopted O-PUD document.

3. Public sections may become private gated sections without additional consideration. Road connections between private gated sections and public sections shall not be required. This note shall not apply to Section 20 and Section 26 as identified on this document.

4. The Clark Road ingress/egress from Section 20 and S Masters Road ingress/egress from Section 26B shall maintain a minimum public right-of-way width of 60-feet with no parking.

THIS GENERAL DEVELOPMENT PLAN APPROVED BY THE CITY OF MANVEL PLANNING, DEVELOPMENT, AND ZONING COMMISSION ON _____

PLANNING, DEVELOPMENT AND ZONING COMMISSION



GDP AMENDMENTS	
Amendment #1 Approved:	05/18/2009
Amendment #2 Tabled:	06/25/2018
Amendment #3 Tabled:	07/09/2018
Amendment #4 Tabled:	07/23/2018
Amendment #5 Approved:	10/09/2018
Amendment #6 Approved:	10/22/2018
Amendment #7 Approved:	11/26/2018
Amendment #8 Approved:	01/28/2019
Amendment #9 Approved:	05/13/2019
Amendment #10 Not Approved:	06/10/2019
Amendment #11 Approved:	07/08/2019
Amendment #12 Not Approved:	08/12/2019
Amendment #13 Approved:	09/09/2019
Amendment #14 Approved:	12/09/2019
Amendment #15 Approved:	02/24/2020
Amendment #16 Approved:	11/09/2020
Amendment #17 Approved:	12/14/2020
Amendment #18 Not Approved:	04/12/2021
Amendment #19 Not Approved:	06/14/2021
Amendment #20 Withdrawn:	11/16/2021



Meridiana General Development Plan: Amendment #21

Brazoria County, TX

November 19, 2021

SCALE: 1" = 600'



10211 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.368.4500
WWW.EHRAINC.COM
TYPE No. F-726
TGPL No. 10092300

EHRA JOB NO.
081-011-150

No warranty or representation of intended use, design or proposed improvements are made herein. All plans for land or facilities are subject to change without notice.

STATE OF TEXAS: I
COUNTY OF BRAZORIA: I

We, GR-M1, LTD., a Texas Limited Partnership, acting by and through Matt Lawson, President of Rise Communities, LLC, A Nevada Limited Liability Company, Authorized Agent for GR-M1, LTD., a Texas Limited Partnership, owner of the property subdivided in this plat, BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT No 57 LIFT STATION, do hereby make subdivision of said property for and on behalf of said GR-M1, LTD., a Texas Limited Partnership, according to the lines, lots, building lines, streets, alleys, parks and easements as shown hereon and dedicate for public use, the streets, alleys, parks and easements shown hereon forever, and do hereby waive all claims for damages occasioned by the establishment of grades as approved for the streets and drainage easements dedicated, or occasioned by the alteration of the surface, or any portion of the streets or drainage easements to conform to such grades, and do hereby bind ourselves, our heirs, successors and assigns to warrant and defend the title to the land so dedicated.

FURTHER, Owners do hereby certify that we are the owners of all property immediately adjacent to the boundaries of the above and foregoing subdivision of BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT No 57 LIFT STATION No 1 where building setback lines or public utility easements are to be established outside the boundaries of the above and foregoing subdivision and do hereby make and establish all building setback lines and dedicate to the use of the public, all public utility easements shown in said adjacent acreage.

IN TESTIMONY WHEREOF, GR-M1, LTD., a Texas limited partnership, has caused these presents to be signed by Matt Lawson, President of Rise Communities, LLC, a Nevada Limited Liability Company, Authorized Agent for GR-M1, LTD., a Texas Limited Partnership, thereunto authorized, this 9th day of December, 2021.

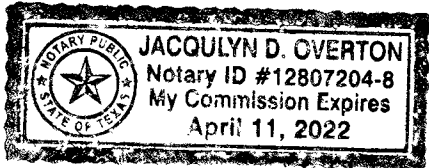
OWNER
GR-M1, LTD., A Texas Limited Partnership
By: Rise Communities, LLC,
A Nevada Limited Liability Company,
Authorized Agent

BY: Mt
Print Name: Matt Lawson
Title: President

STATE OF TEXAS I
COUNTY OF HARRIS I

BEFORE ME, the undersigned authority, on this day personally appeared Matt Lawson, President of Rise Communities, LLC, a Nevada Limited Liability Company, Authorized Agent for GR-M1, LTD., a Texas Limited Partnership, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein expressed, and as the act and deed of said limited liability company.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 9th day of December, 2021.



Jacquelyn Overton
Notary Public in and for the
State of Texas
My Notary Commission Expires April 11, 2022

This is to certify that the Planning, Development and Zoning Commission of the City of Manvel, Texas, has recommended approval of this plat of BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT No 57 LIFT STATION No 1 in conformance with laws of the State of Texas and the ordinances of the City of Manvel as shown hereon and authorizes the recording of this plat this day of 2022.

Planning, Development and Zoning Commission

This is to certify that the City Council of the City of Manvel, Texas, has approved this plat of BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT No 57 LIFT STATION No 1 in conformance with laws of the State of Texas and the ordinances of the City of Manvel as shown hereon and authorizes the recording of this plat this day of 2022.

City Council

APPROVED BY BRAZORIA COUNTY DRAINAGE DISTRICT NO. 5

Lee Walden, P.E. 12/6/21
Lee Walden, P.E., Date
President

Kerry L. Osburn 12/6/21
Kerry L. Osburn Date
Vice President

Brandon Middleton 12/6/21
Brandon Middleton Date
Secretary/Treasurer

Jarrod D. Aden, P.E., C.F.M. 12/6/21
Jarrod D. Aden, P.E., C.F.M. Date
District Engineer

Note: Project field startup will start within 365 calendar days from date here shown. Continuous and reasonable field site work is expected.

BCDD5 REF ID# B20006

METES AND BOUNDS DESCRIPTION
BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT No 57
LIFT STATION No 1
BEING 8,474 SQUARE FEET (0.1945 ACRES) OF LAND SITUATED IN THE
OLIVER HALL SURVEY, ABSTRACT 203,
BRAZORIA COUNTY, TEXAS

AN 8,474 SQUARE FOOT OR 0.1945 ACRE TRACT OF LAND SITUATED IN THE OLIVER HALL SURVEY, ABSTRACT NO. 203, BRAZORIA COUNTY, TEXAS, BEING OUT OF THAT CERTAIN TRACT CALLED 884.331 ACRES, CONVEYED TO GR-M1 IN THE BRAZORIA COUNTY CLERKS FILE NUMBER (B.C.C.F. NO.) 2006035182, SAID 8,474 SQUARE FOOT OR 0.1945 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS (BEARINGS BASED ON TEXAS STATE PLANE COORDINATE SYSTEM OF 1983, SOUTH CENTRAL ZONE 4204, AS DETERMINED BY GPS MEASUREMENTS):

COMMENCING at a 5/8-inch iron rod found at the original southeasterly corner of the said 884.331 acre tract, same being the northeasterly corner of Lot 1 of Luling Stone Section 1, a subdivision as per plat recorded in Volume 21, Page 267-270 of the Brazoria County Plat Records (B.C.P.R.);

THENCE, South 59°53'03" West, along the southerly line of said 884.331 acre tract, for a distance of 1,751.72 feet to a point for corner;

THENCE, North 30°06'57" West, for a distance of 1,104.19 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set in the northwesterly right-of-way line of Meridiano Parkway Phase 6 recorded under B.C.C.F. NO. 2021001846 and marking the southeasterly corner and POINT OF BEGINNING of the herein described tract;

1)THENCE, North 62°30'17" West, for a distance of 105.64 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set marking the westerly corner of the herein described tract of land;

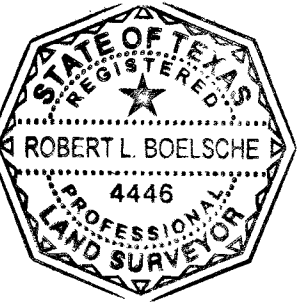
2)THENCE, North 27°29'43" East, for a distance of 90.00 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set marking the northerly corner of the herein described tract of land;

3)THENCE, South 62°30'17" East, for a distance of 81.26 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set in the northwesterly right-of-way line of said Meridiano Parkway Phase 6 being in the arc of a curve to the right;

4)THENCE, along the northwesterly right-of-way line of said Meridiano Parkway Phase 6, in a southwesterly direction and along the arc of said curve to the right having a radius of 1,071.50 feet, a central angle of 04°47'57", an arc length of 89.75 feet, and a chord bearing of South 12°14'52" West, for a distance of 89.72 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" found for tangency;

5)THENCE, South 14°38'50" West, continuing along the northwesterly right-of-way line of said Meridiano Parkway Phase 6 for a distance of 3.52 feet to the POINT OF BEGINNING and containing 8,474 square feet or 0.1945 acres of land.

I, Robert Boelsche, a Registered Professional Land Surveyor of the State of Texas, hereby certify that this subdivision is true and correct; was prepared from an actual boundary survey of the property made on the ground under my supervision according to the standards of practice of the Texas Board of Professional Land Surveyors; that the plat boundary corners have been tied to the nearest street intersection; that the boundary corners, angle points, points of curvature/tangency and interior corners of this subdivision were not set at the time this plat was signed by me and that these corners are to be set after construction of the public infrastructure and final lot grading within the subdivision; and that all previously existing property markers are sufficiently described on this document as found and all set markers are a minimum of 5/8-inch diameter iron rod with surveyor's cap.



Robert L. Boelsche
Robert Boelsche, Registered Professional Land Surveyor
Texas Registration No. 4446

FINAL PLAT BRAZORIA COUNTY MUNICIPAL UTILITY DISTRICT No 57 LIFT STATION No 1

BEING A SUBDIVISION OF 0.1945 ACRES OUT OF
THE OLIVER HALL SURVEY, ABSTRACT 203,
CITY OF MANVEL, BRAZORIA COUNTY, TEXAS.

1 BLOCK 1 RESERVE (0.1945 ACRES)

OWNER

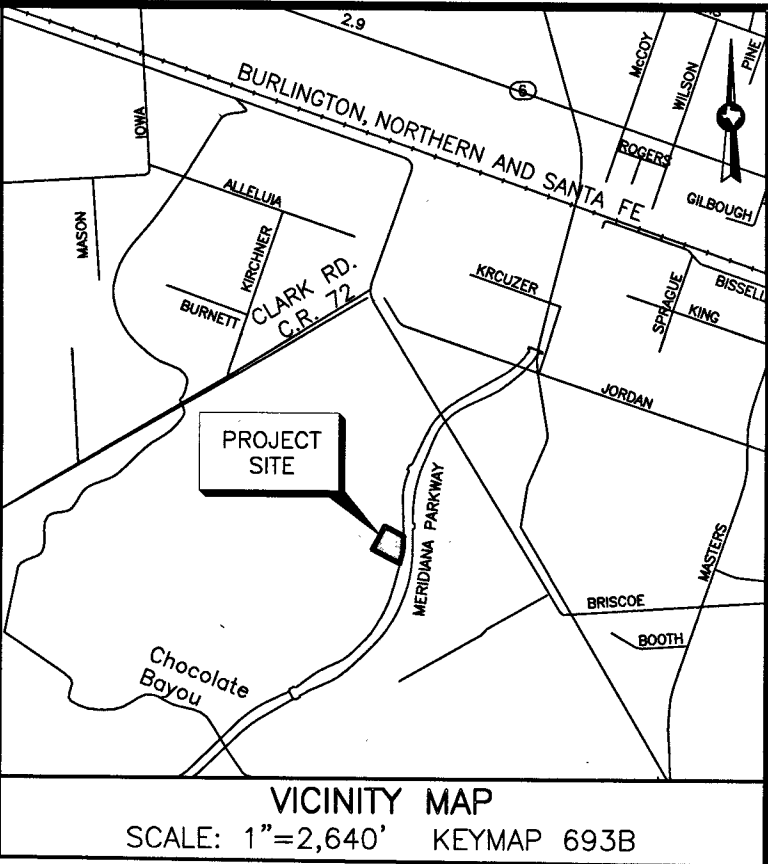
GR-M1, LTD.
A TEXAS LIMITED PARTNERSHIP
1602 AVENUE D, SUITE 100
KATY, TEXAS 77493
PH (832) 437-7863

FEBRUARY 18, 2022

ENGINEER/SURVEYOR



10011 MEADOWGLEN LN
HOUSTON, TEXAS 77042
713-784-4500
WWW.EHRAINCO.COM
TBPPE No. F-726
TBPPEL No. 10092300



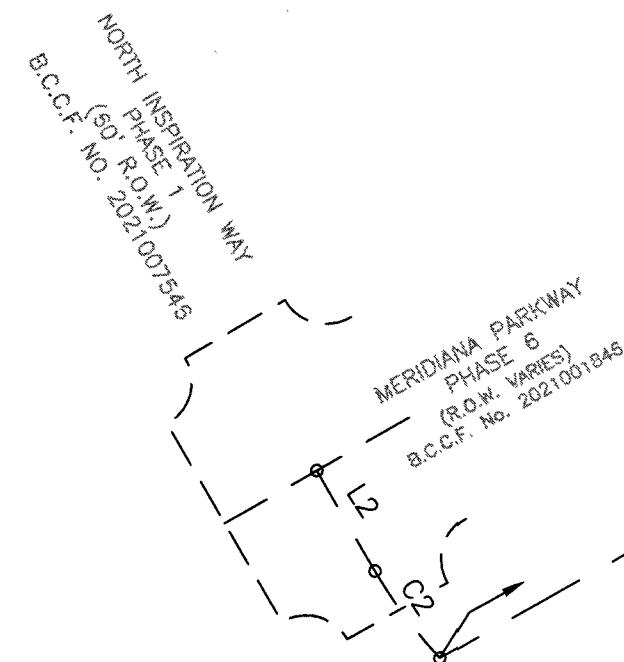
BENCHMARK(S):
NGS MONUMENT # E 306 DISK FOUND IN TOP OF CONCRETE MONUMENT, LOCATED 2.0 MILES WEST OF MANVEL, 2 MILES WEST ALONG THE GULF, COLORADO AND SANTA FE RAILWAY FROM THE STATION AT MANVEL, BRAZORIA COUNTY, 0.2 MILE WEST OF A SHELL-ROAD CROSSING, 5-1/2 FEET NORTHWEST OF MILE POLE 38, 39 FEET SOUTH OF THE SOUTH RAIL, 33 FEET NORTH OF THE CENTERLINE OF A DIRT ROAD, 6.7 FEET NORTH OF THE RIGHT-OF-WAY FENCE, 3 FEET WEST OF A WHITE WOODEN WITNESS POST AND SET IN THE TOP OF A CONCRETE POST ABOUT FLUSH WITH THE GROUND.
ELEV.=52.00 (NAVD '88) 1991 ADJUSTMENT

MINIMUM FINISH FLOOR ELEVATION	
BLOCK/RESERVE	ELEVATION
BLOCK 1/RESERVE "A"	50.00'

3. Bearing orientation is based on the Texas State Plane Coordinate System of 1983, South Central Zone as determined by GPS measurements. The coordinates shown herein are Texas State Plane Central Zone No. 4204 State Plane Grid Coordinates (NAD83) and may be brought to surface by applying the following combined scale factor: 0.99986742185.
4. All boundary corners for the plat shown herein are set 5/8-inch iron rods with cap stamped "E.H.R.A. 78-145" unless otherwise noted.
5. According to the Federal Emergency Management Agency Flood Insurance Rate Map, Brazoria County, Texas, Community Panel No. 48039C0110K, dated December 30, 2020 this property lies within unshaded "Zone X" (areas determined to be outside 500-year flood plain).

This flood statement does not imply that the property or structures thereon will be free from flooding or flood damage. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. The location of the flood zone was determined by scaling from said FEMA map. The actual location, as determined by elevation contours, may differ. Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EIRA, assumes no liability as to the accuracy of the location of the flood zone limits. This flood statement shall not create liability on the part of Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EIRA.
6. AC. Indicates Acres.
B.C.C.F. NO. Indicates Brazoria County Clerk's File Number.
B.C.D.R. Indicates Brazoria County Deed Records.
B.C.P.R. Indicates Brazoria County Plat Records.
B.L. Indicates Building Line.
F.N.D. Indicates Found.
E.S.M.T. Indicates Easement.
I.R. Indicates Iron Rod.
P.G. Indicates Page.
P.U.E. Indicates Public Utility Easement.
P.O.B. Indicates Point of Beginning.
P.O.C. Indicates Point of Commencing.
R.O.W. Indicates Right-Of-Way.
SQ. FT. Indicates Square Feet.
VOL. Indicates Volume.
7. The property subdivided in the foregoing plat lies in Brazoria County, the City of Manvel, Brazoria County M.U.D. No. 57, Alvin Independent School District, and Brazoria County Drainage District #5.
8. Property within the boundaries of this plat and adjacent to any drainage easement, ditch, gully, creek, or natural drainage way shall hereby be restricted to keep such drainage ways and easements clear of any fences, buildings, plantings, or other obstructions.
9. The Municipal Utility District/Developer/Homeowners' Association shall be responsible for maintenance of all reserves.
10. The terms and conditions of Ordinance numbers 2009-0-03, 2009-0-04, and 2009-0-05 of the City of Manvel, Texas dated February 23, 2009, may affect this plat.
11. All sidewalks shall be constructed in accordance with City of Manvel Ordinance No. 2009-0-04.
12. No residential, commercial, or industrial structure, other than structures necessary to operate the pipeline, shall be erected or moved to a location nearer than 50 feet to any pipeline, except for low pressure distribution system pipeline as defined in section 62-2, as per Manvel Ordinance Sec. 62-116a.
13. No residential, commercial, or industrial structures shall be permitted to be erected nearer than 150 feet from any oil or gas well or related facility other than structures necessary to operate the oil or gas well or facility, as per Manvel Ordinance Sec. 62-116b.
14. No permit shall be issued by the city for the new construction or substantial improvement to any building, structure or improvement on a lot, tract, or parcel of land for which a plat has not been approved by the City and filed of record or certificate of exemption issued. No building, plumbing, electrical, or mechanical permit shall be issued by the city for the construction or repair of any structure on a lot, tract, or parcel of land within a subdivision in which the required storm drainage improvements have not been constructed and the permanent public improvements have not been approved and accepted by the city. This Section applies to the placement or construction of a permitted structure, included manufactured homes as allowed in Chapter 38, Manufactured Housing, other city ordinances, or by State law.
15. This final plat will expire two (2) years after final approval by City Council, if construction of the improvements has not commenced within the two-year initial period or the one-year extension period granted by Council.
16. A one-year maintenance bond in the amount of 100 percent of the total cost of the infrastructure improvements shall be required for the public improvements shall be dedicated to the city.
17. Building permits will not be issued until all storm drainage improvements, which may include detention ponds, have been constructed.
18. The Development Regulations and City Permits of the City of Manvel are required on all property.
19. There are 0.00 acres of unencumbered open space within the boundary of this plat.
20. The boundary for this plat has a closure in excess of 1:15,000.
21. The drainage on adjacent property will not be impacted by this development.

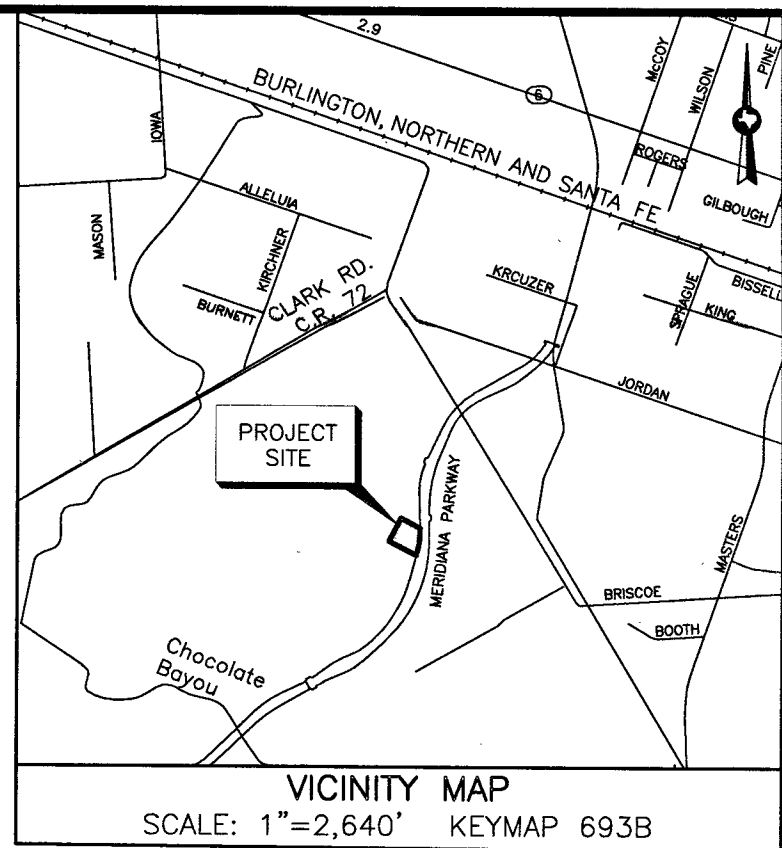
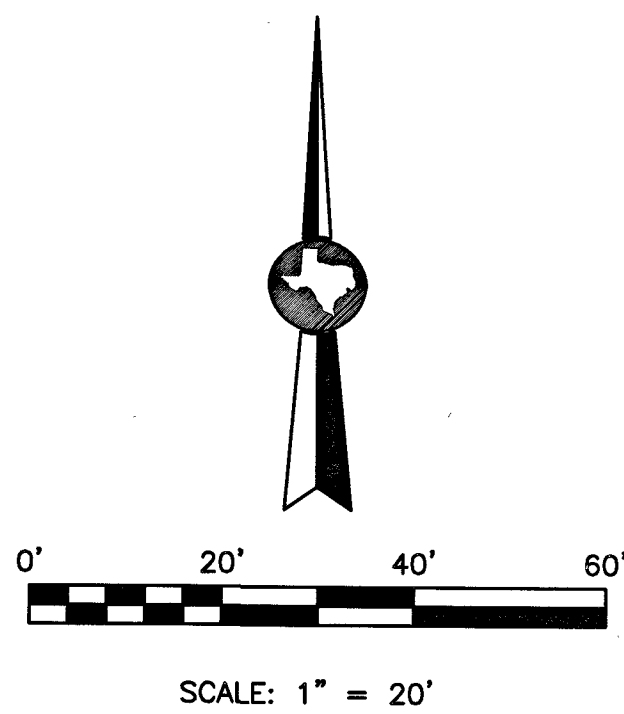
1. Slab elevations (finished floor) shall be a minimum of 2 feet above finished grade.
2. All drainage easements shown hereon shall be kept clear of fences, buildings, plantings and other obstructions to the operation and maintenance of drainage facilities.
3. All property shall drain into the drainage easement only through an approved drainage structure.
4. All drainage easements and detention pond reserves shown on this plat will be maintained by the property owners and/or business owners; provided, however, and governmental entity have jurisdiction, including, without limitation, Brazoria County, Texas and Brazoria County Drainage District #5, shall have the right, but not the obligation to enter upon the drainage easements to perform maintenance operations at any time after the date hereof.
5. The property identified in the foregoing plat lies within Brazoria County Drainage District #5.
6. This rural commercial site employs a natural drainage system, which is intended to provide drainage for the site that is similar to that which existed under pre-development conditions. Thus, during large storm events, ponding of water should be expected to occur on the site to the extent it may have prior to development, but such ponding should not remain for an extended period of time.
7. Land use within the subdivision is limited to an average imperviousness of no more than 72 percent. The drainage and/or detention system has been designed with the assumption that this average percent imperviousness will not be exceeded. If this percentage is to be exceeded, a replot and/or redesign of the system may be necessary.
8. Other than shown hereon, there are no pipeline easements or pipelines within the boundaries of this plan.
9. All storm water drainage pipes, culverts, tiles or other (includes driveway culverts) will be minimum 24" I.D. or equal.
10. Dedicated drainage easement(s) granted to Brazoria County Drainage District #5 for drainage maintenance purposes shall include 45 feet top of bank, plus the sum (footage) of both ditch side slopes and channel bottom and 45 feet of bank on the opposite bank.
11. Dedicated ingress/egress accesses are granted to Brazoria County Drainage District #5 (see District Resolution No 2007-06 & 2007-07). Access will be gated and locked with Brazoria County Drainage District #5's lock.
12. Prohibited use of "metal" pipe in storm water/sewer applications (See District Resolution No. 2007-08).
13. Prohibited use of "rip rap" in storm water/sewer applications. (District Policy).
14. Pipelines, utility lines and other crossing under any Brazoria County Drainage District #5 ditch require approval and permitting prior to construction.
15. All dedicated storm sewer drainage and/or access easements to be granted to Brazoria County Drainage District #5 by the property owner will be initiated and recorded, at the property owner's expense, in Brazoria County, Texas with a "Recorded Document Number" affixed to said easement prior to final approval granted by Brazoria County Drainage District #5 Board of Commissioners.
16. It will be the property owner's responsibility to verify if any Brazoria County Drainage District #5 "Dedicated" drainage easements are on or cross their property. If so, the property owner will comply as stated within the recorded easement.
17. Project field start-up will start within 365 calendar days from date shown here. Continuous and reasonable field site work is expected. See Brazoria County drainage criteria manual section 1, Introduction; Sub-Section 1.5, Plat and Plan approval process, and drainage acceptance procedures; time limit for approval; and Brazoria County Drainage District #5 Resolution 2011-1, allowable time(s) and procedures for starting-up approved projects.



LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 14°38'50" W	3.52'
L2	N 30°06'57" W	121.78'

CURVE TABLE				
CURVE	RADIUS	DELTA ANGLE	ARC LENGTH	CHORD BEARING\CHORD LENGTH
C1	1071.50'	4°47'57"	89.75'	S 12°14'52" W 89.72'
C2	500.00'	13°06'24"	114.38'	N 36°40'09" W 114.13'

RESERVE TABLE		
RESERVE	RESTRICTED TO	AREA
A	LIFT STATION, LANDSCAPE, OPEN SPACE, AND UTILITY PURPOSES	8,474 SQ. FT. / 0.1945 ACRES



NGS MONUMENT # E 306 DISK SET IN TOP OF CONCRETE MONUMENT, LOCATED 2.0 MILES WEST OF MANVEL, 2 MILES WEST ALONG THE GULF, COLORADO AND SANTA FE RAILWAY FROM THE STATION AT MANVEL, BRAZORIA COUNTY, 0.2 MILE WEST OF A SHELL-ROAD CROSSING, 5-1/2 FEET NORTHWEST OF MILE POLE 38, 1/2 FEET SOUTH OF THE SOUTH RAIL, 33 FEET NORTH OF THE CENTERLINE OF A DIRT ROAD, 1/2 MILE TO THE RIGHT-OF-WAY FENCE, 1/2 MILE WEST OF A WHITE WOODEN WITNESS POST AND SET IN THE TOP OF A CONCRETE POST ABOUT FLUSH WITH THE GROUND.

ELEV.=52.00 (NAVD '88) 1991 ADJUSTMENT

MINIMUM FINISH FLOOR ELEVATION	
BLOCK/RESERVE	ELEVATION
BLOCK 1/RESERVE "A"	50.00'

P.O.C.
FND. 5/8" I.R.

FINAL PLAT
BRAZORIA COUNTY
MUNICIPAL UTILITY DISTRICT No 57
LIFT STATION No 1

BEING A SUBDIVISION OF 0.1945 ACRES OUT OF
THE OLIVER HALL SURVEY, ABSTRACT 203,
CITY OF MANVEL, BRAZORIA COUNTY, TEXAS.

1 BLOCK 1 RESERVE (0.1945 ACRES)

OWNER

GR-M1, LTD.
A TEXAS LIMITED PARTNERSHIP
1602 AVENUE D, SUITE 100
KATY, TEXAS 77493
PH (832) 437-7863

FEBRUARY 18, 2022

ENGINEER/SURVEYOR



10011 MEADOWGLEN LN
HOUSTON, TEXAS 77042
713-784-4500
WWW.EHRAINCO.COM
TBPE No. F-726
TBPELS No. 10092300



City of Manvel

P. O. Box 187
20025 HWY 6
Manvel, Texas 77578

(281) 489-0630
Fax (281) 489-0634

AGENDA REQUEST

REQUEST MUST BE MADE ACCORDING TO THE SUBMITTAL SCHEDULE

Meeting Requested: (Please check applicable meeting)

Planning, Development & Zoning	☐	City Council	☐	Both	☒
--------------------------------	--------------------------	--------------	--------------------------	------	-------------------------------------

Date of Request: February 28, 2022 PDZ & March 7, 2022 City Council

YOUR REQUEST WILL BE PLACED ON THE NEXT AVAILABLE MEETING DATE. MEETINGS ARE SECOND AND FOURTH MONDAYS FOR PLANNING, DEVELOPMENT & ZONING AND FIRST AND THIRD MONDAYS FOR CITY COUNCIL. THE AGENDAS ARE POSTED TO THE GENERAL PUBLIC AT MANVEL CITY HALL AND ON OUR WEBSITE AT www.cityofmanvel.com. THE AGENDA IS POSTED AND WILL REMAIN POSTED CONTINUOUSLY FOR AT LEAST 72 HOURS PRECEDING THE SCHEDULED TIME OF THE MEETING. PLEASE CHECK THE BOARD FOR YOUR MEETING SCHEDULE. WE STRONGLY ENCOURAGE YOU TO ATTEND THE MEETING FOR QUESTIONS AND ANSWERS. IF YOU ARE UNABLE TO ATTEND ACTION MAY BE TABLED UNTIL THE FOLLOWING MEETING.

Person to Speak: Jared Bowlin or Brad Sweitzer

Daytime Phone: 713-784-4500 Fax Number: 713-784-4577

E-mail Address: jbowlin@ehrainc.com or bsweitzer@ehrainc.com

Description of Request and Physical Address:

Consideration and possible action to forward with recommendation to City Council,
Final Plat for Meridiana Pursley Boulevard Phase 7, being a subdivision of 0.8422 acres
out of the H.T. & B.R.R. Co. Survey, Section 61, Abstract 282, in the City of Manvel,
Brazoria County, Texas.

Plats:

Preliminary _____

Final x

ALL DOCUMENTATION AND FEES ASSOCIATED WITH THIS AGENDA REQUEST MUST BE SUBMITTED ACCORDING TO THE MEETING SUBMITTAL SCHEDULE WHICH CAN BE FOUND ON OUR WEBSITE. BY SIGNING THIS AGENDA REQUEST FORM I ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS AGENDA REQUEST FORM.

Jessica Rodriguez

Digitally signed by Jessica Rodriguez
Date: 2022.02.22 11:06:06 -06'00'

SIGNATURE

February 22, 2022

DATE



DEVELOPMENT SERVICES DEPARTMENT

20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Planning, Development and Zoning Commission Plat Report

Plat Name	Meridiana Pursley Boulevard Phase 7 Final Plat
Applicant	Lacey Bell, EHRA, Inc.
PD&Z Meeting Date	February 28, 2022
Recommendation	Approval
Submitted By	Jessica Rodriguez, Director of Development Services

Background

This final plat was previously heard at the January 10, 2022, Planning, Development and Zoning Commission meeting. The Commission did not recommend approval of the plat. This final plat was heard by the City Council on January 18, 2022. The City Council did not approve the plat.

Staff Recommendation

Staff recommends approval of the Meridiana Pursley Boulevard Phase 7 Final Plat.



EA276

FINAL PLAT
MERIDIANA
PURSLEY BOULEVARD
PHASE 7

SEND A SUBROSION OF 0842 ACRES CUT OF
M. T. & R. R. CO. SURVEY, SECTION 61, ABSTRACT 282
IN THE CITY OF MARVEL,
BRAZOS COUNTY, TEXAS.

OWNER

OF ME. LTD.
A XIAO LIMITED PARTNERSHIP*
1602 AVENUE D, SUITE 100
KATY, TEXAS 77450
PH (832) 407-7868

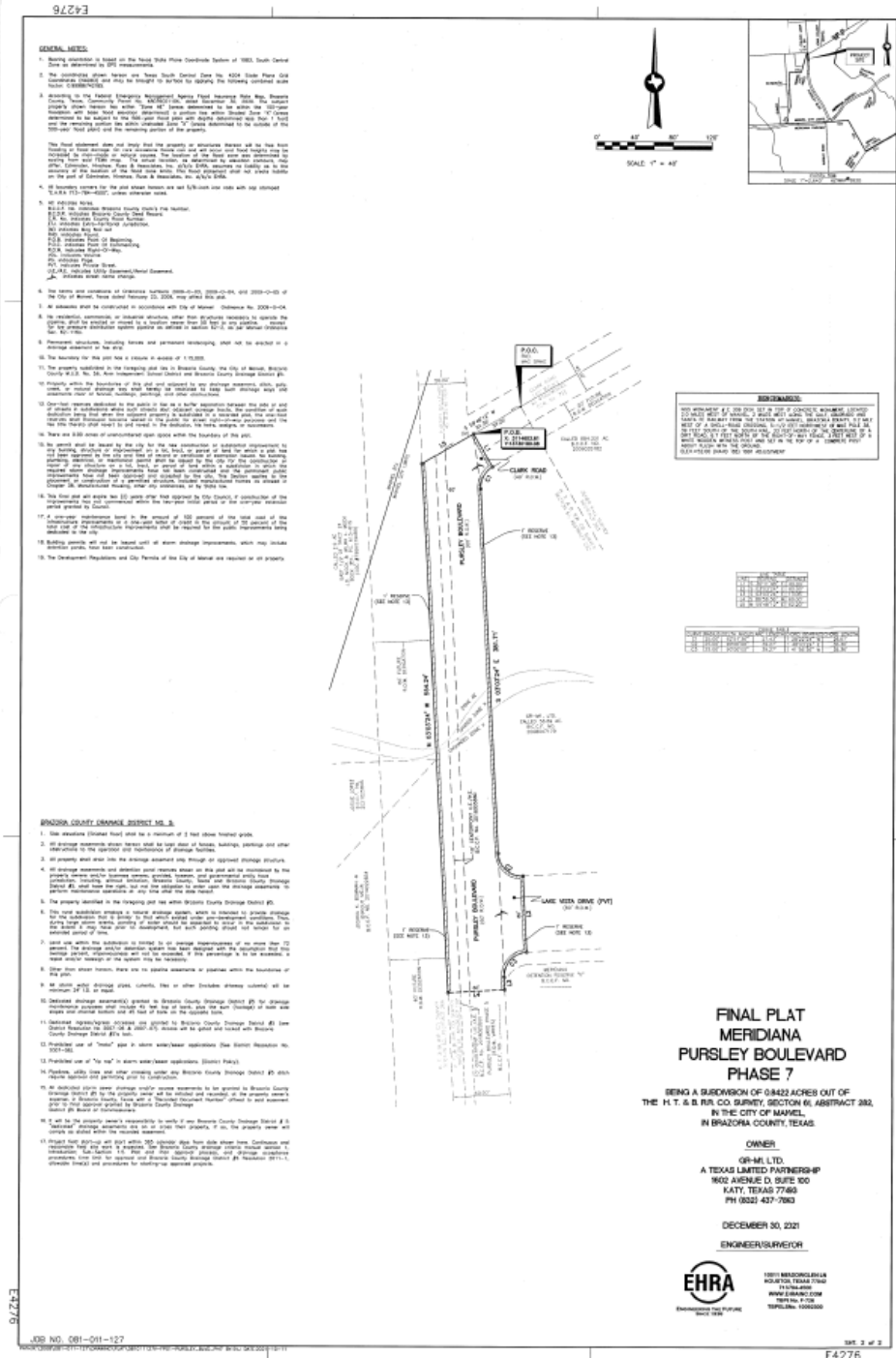
DECEMBER 30, 2021

ENGINEER/SURVIVOR

 10511 WINDINGWOOD DRIVE
HOUSTON, TEXAS 77036
713-558-0500
WWW.EHRA-USA.COM
EPA REG. # 7-125
NCEC REG. NO. 10052000

Engineering & Surveying

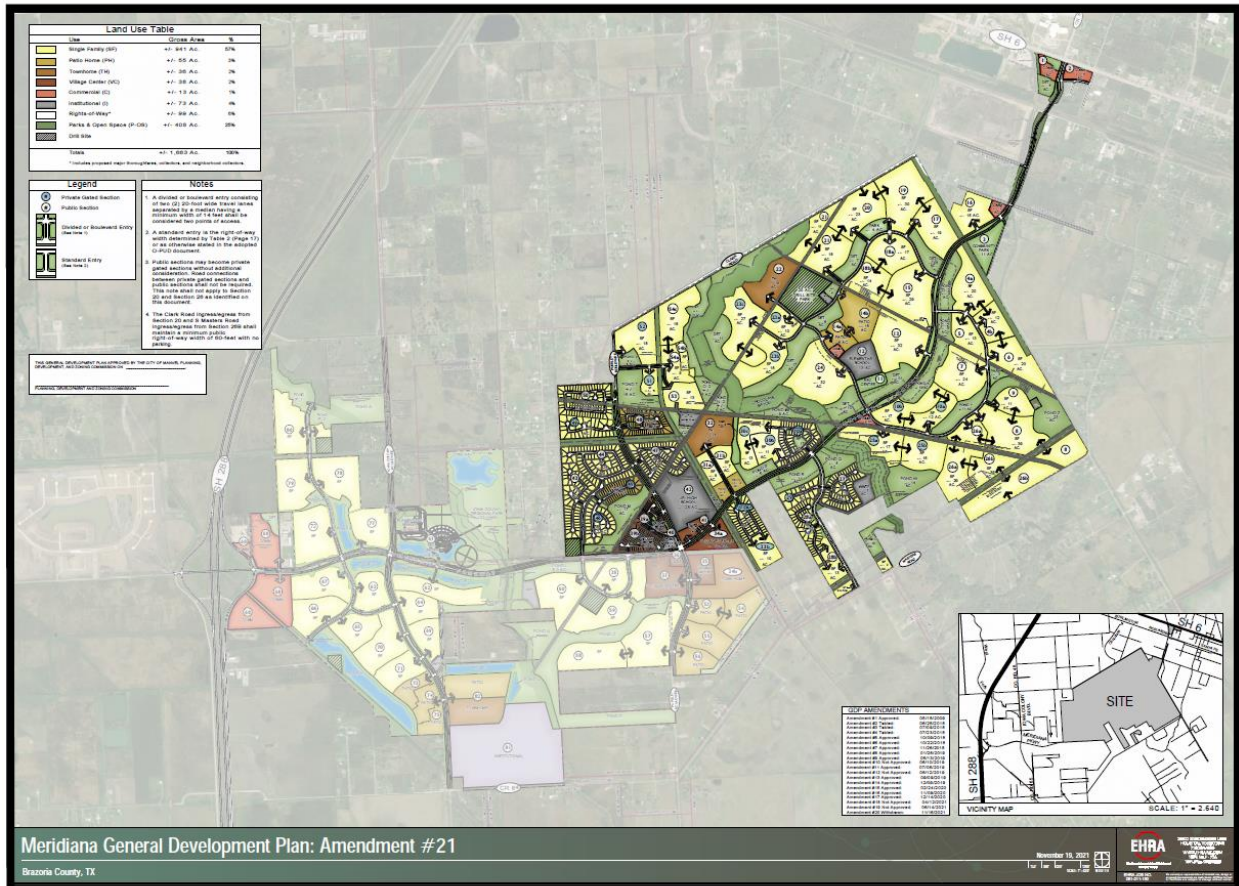
Plat Exhibit





DEVELOPMENT SERVICES DEPARTMENT
20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Meridiana General Development Plan Amendment No. 21 (dated November 19, 2021)



GENERAL NOTES:

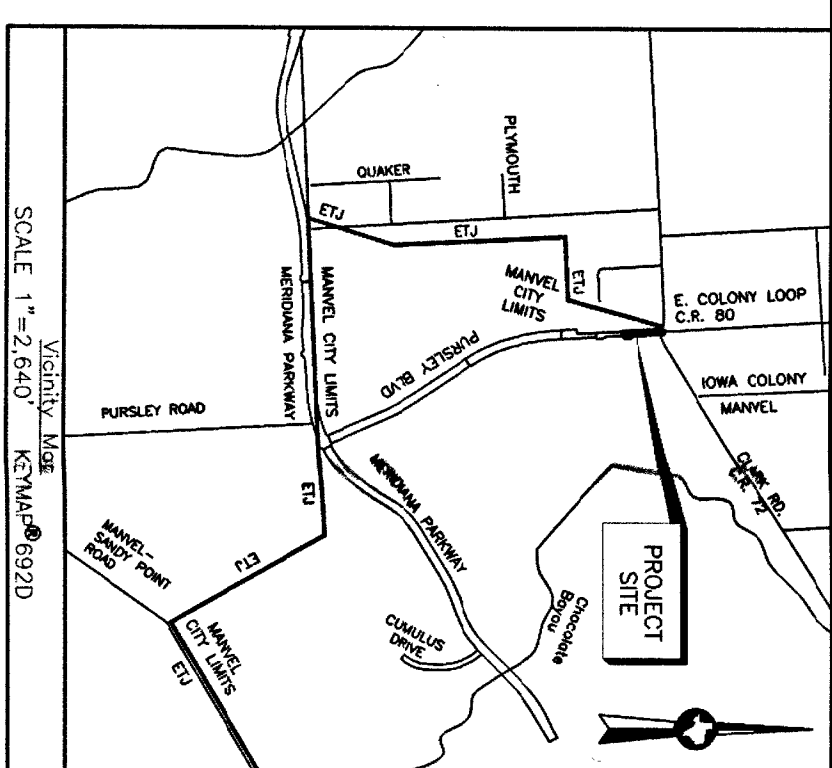
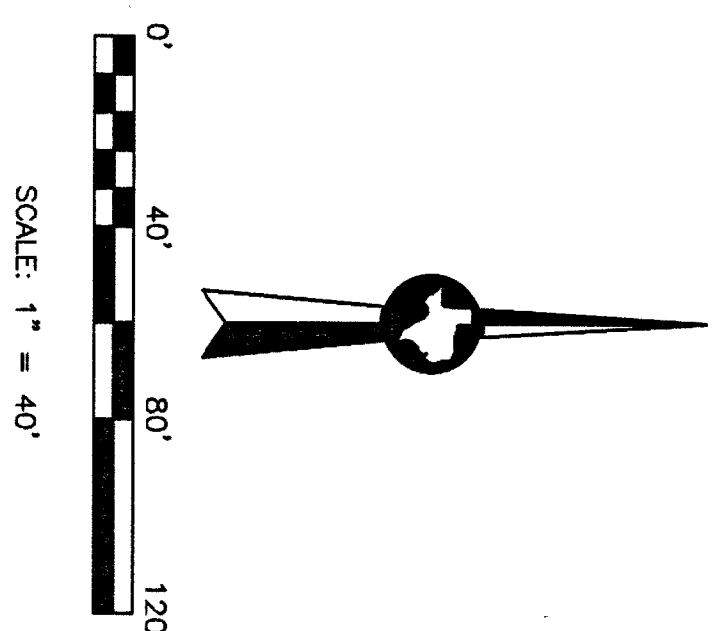
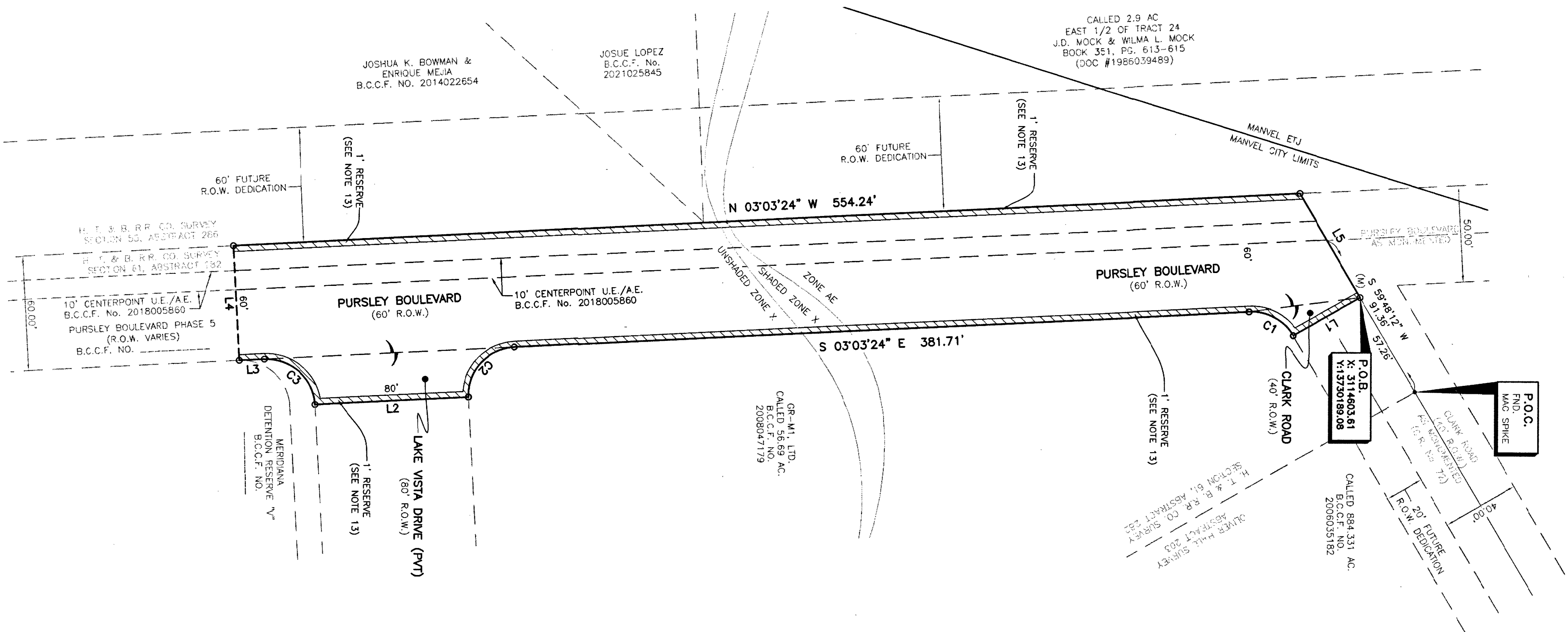
1. Bearing orientation is based on the Texas State Plane Coordinate System of 1983, South Central Zone.
2. The location of the boundary between the two zones is determined by GPS measurements.
3. The factor 0.99987242155 is used to convert the distance from the datum to the surface by applying the following combined scale factor: 0.99987242155 .

This flood slide net does not imply that the property or structures thereon will be free from flooding or flood damage. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. The location of the flood zone was determined by a scaling from said FEMA map. The actual location, as determined by elevation contours, may differ. Eminister, Hershaw, Russ & Associates, Inc. d/b/a EHR, assumes no liability as to the accuracy of the location of the flood zone limits. This flood statement shall not create liability on the part of Eminister, Hershaw, Russ & Associates, Inc. d/b/a EHR.

4. All boundary corners for the plot shown herein are set 5/8-inch from rods with cap stamped "E.H.R.A. 71-73-48-4500", unless otherwise noted.
5. AC indicates Acres.
6. B.C.C.F. No. indicates Brazoria County Clerk's File Number.
7. B.C.D.R. indicates Brazoria County Deed Record.
8. E.U. indicates Extra-Jurisdictional.
9. (A) indicates Acreage.
10. (M) indicates Map No. of Beginning.
11. P.O.C. indicates Point of Beginning.
12. P.O.C. indicates Point of Commencing.
13. R.O.W. indicates Right-of-Way.
14. S.D. indicates Storm Drainage.
15. P.R. indicates Private Street.
16. U.E./A. indicates Utility Easement/Arterial Easement.
17. ~~Indicates street name change.~~
18. The terms and conditions of Ordinance numbers 2009-0-03, 2009-0-04, and 2009-0-05 of the City of Manvel, Texas dated February 23, 2009, may affect this plot.
19. All sidewalks shall be constructed in accordance with City of Manvel Ordinance No. 2009-0-04.
20. No residential, commercial, or industrial structure, other than structures necessary to operate the drainage pressure distribution system, shall be constructed as defined in section 62.2, or per Manvel Ordinances 2009-0-160.
21. Permanent structures, including fences and permanent landscaping, shall not be erected in a drainage easement or fee strip.
22. The boundary for this plot has a closure in excess of 1:15,000.
23. The property, subdivided in the foregoing plot lies in Brazoria County, the City of Manvel, Brazoria County, M.U.D. No. 36, Adam Independent School District and Brazoria County Drainage District #3.
24. Property within the boundaries of this plot and subject to any drainage easement, ditch, gully, creek, or natural drainage way, shall hereby be restricted to keep such drainage ways and easements clear of fences, buildings, parking, and other obstructions.
25. One-foot reserves dedicated to the public in fee as a buffer separation between the side or rear lot dedication being when the dedicated property is subdivided in a recorded plat, the one-foot reserves shall thereupon become and remain in the public for street right-of-way purposes and the fee the thereto shall revert to and vest in the dedicator, his heirs, assigns, or successors.
26. There are 0.00 acres of unencumbered open space within the boundary of this plot.
27. No permit shall be issued by the city for the new construction or substantial improvement to any building, structure or improvement on a lot, tract, or parcel of land for which a plot has not been approved by the city and filed of record or certificate of exemption issued. No building, repair of any structure on a lot, tract, or parcel of land within a subdivision in which the required storm drainage improvements have not been constructed and the permanent public placement or construction of a permanent structure is required. This section applies to the placement or construction of a permanent structure on a subdivided lot, tract, or parcel of land. Chapter 38, Manufactured Housing, other city ordinances, or by State law.
28. This final plat will expire two (2) years after final approval by City Council, if construction of the improvements has not commenced within the two-year initial period or the one-year extension period granted by Council.
29. A one-year maintenance bond in the amount of 100 percent of the total cost of the dedicating improvements or a one-year letter of credit in the amount of 50 percent of the total cost of the dedicating improvements shall be required for the public improvements being dedicated to the city.
30. The Development Regulations and City Permits of the City of Manvel are required on all property.

BRAZORIA COUNTY DRAINAGE DISTRICT NO. 5:

1. Sloe elevated (finished floor) shall be a minimum of 2 feet above finished grade.
2. All drainage points (storm sewers) shall be kept clear of trees, shrubs, buildings, plantings and other obstructions to the operation and maintenance of drainage facilities.
3. All property shall drain into the drainage easement only through an approved drainage structure.
4. All drainage easements and detention pond reserves shown on this plat will be maintained by the property owner and/or business owners, provided, however, no governmental entity, have jurisdiction, including, without limitation, Brazoria County, Texas and Brazoria County Drainage District #5, shall be responsible for the maintenance of the drainage easements (to perform maintenance operations at any time other than the date herein).
5. The property identified in the foregoing plat lies within Brazoria County Drainage District #5.
6. This rural subdivision employs a natural drainage system, which is intended to provide drainage for the subdivision that is similar to that which existed under pre-development conditions. Thus, for the subdivision, the natural drainage system should be expected to occur, in the subdivision for the existing drainage system, based prior to development, but such existing should not remain for the extended period of time.
7. Land use within the subdivision is limited to an average imperviousness of no more than 77 percent. The drainage and/or detention system has been designed with the assumption that this average percent imperviousness will not be exceeded. If this percentage is to be exceeded, a report and/or redesign of the system may be necessary.
8. Other than shown herein, there are no pipeline easements or pipelines within the boundaries of this plan.
9. All storm water drainage pipes, culverts, tiles or other (includes driveway culverts) will be a minimum 24" ID, or equal.
10. Dedicated drainage easement(s) granted to Brazoria County Drainage District #5 for drainage of the subdivision shall be a minimum of 10 feet wide, shall be a minimum of 10 feet deep, shall be a minimum of 10 feet wide at the top, shall be a minimum of 10 feet deep at the bottom and 45 feet of both on the opposite ends.
11. Dedicated ingress/egress accesses are granted to Brazoria County Drainage District #5 (see District Resolution No. 2007-06 & 2007-07). Access will be gated and locked with Brazoria County Drainage District #5's lock.
12. Prohibited use of "manhole" pipe in storm water/sewer applications. (See District Resolution No. 2007-08).
13. Prohibited use of "no nap" in storm water/sewer applications. (District Policy)
14. Pipelines, utility lines and other crossing under any Brazoria County Drainage District #5 ditch(es) require approval and permitting prior to construction.
15. All dedicated storm sewer drainage and/or access easements to be granted to Brazoria County Drainage District #5 by the property owner will be initiated and recorded, at the property owner's expense, in Brazoria County, Texas with a Recorded Document Number affixed to said easement(s). District #5 Board of Commissioners.
16. It will be the property owner's responsibility to verify if any Brazoria County Drainage District #5 plat complies as stated within the recorded easement.
17. Project field stop(s) will start within 355 calendar days from date shown here. Continuous and/or intermittent, Sub-Section 1.5. Plat and Plan approval process, and drainage easements, drainage easements, line limit for approval and Brazoria County Drainage District #5 Resolution 2011-1-1 (allowable time(s) and procedures for starting-up approved projects).



LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 30°11'48" E	40.00'
L2	S 03°03'24" E	80.00'
L3	S 03°03'24" E	13.05'
L4	S 86°56'36" W	60.00'
L5	N 59°48'12" E	62.20'

CURVE TABLE					
CURVE	RADIUS	DELTA ANGLE	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	25.00'	62.51.36"	27.43'	S 28°22'24" W	26.07'
C2	25.00'	90°00'00"	39.27'	S 48°03'24" E	35.36'
C3	25.00'	90°00'00"	39.27'	S 41°56'36" W	35.36'

NOS MONUMENT # E 306 DISK SET IN TOP OF CONCRETE MONUMENT, LOCATED 2.8 MILES SOUTHWEST OF FRANKLIN, 2.7 MILES WEST ALONG THE OULU CANYON RD., 0.9 MILES WEST ON SHAW FRENCH, 0.5 MILES WEST ALONG THE WEST OF A RAILROAD CROSSING, 55 FEET NORTHWEST OF HILL POLE #8, 39 FEET SOUTH OF THE SOUTH RAIL, 53 FEET NORTH OF THE CENTERLINE OF A WHITE WOODS HIGHWAY, 10 FEET SOUTH OF THE CENTERLINE OF A WHITE WOODS HIGHWAY, AND SET IN THE TOP OF A CONCRETE POST THAT OVERLIES WITH THE GROUND.

ELEV.=52.00 (NAVD 83) 1991 ADJUSTMENT

**FINAL PLAT
MERIDIANA
PURSLEY BOULEVARD
PHASE 7**

BEING A SUBDIVISION OF 0.8422 ACRES OUT OF
THE H. T. & B. R.R. CO. SURVEY, SECTION 61, ABSTRACT 282,
IN THE CITY OF MANVEL,
IN BRAZORIA COUNTY, TEXAS.

OWNER

GR-M1, LTD.
A TEXAS LIMITED PARTNERSHIP
1602 AVENUE D, SUITE 100
KATY, TEXAS 77493
PH (832) 437-7863

DECEMBER 30, 2021

ENGINEER/SURVEYOR



EHRRA
ENGINEERING THE FUTURE

10011 MEADOWGLEN L
HOUSTON, TEXAS 77041
713.784.4500
WWW.EHRAINC.COM
TBPE No. F-726
TBPELS No. 100923000

Land Use Table		
Use	Gross Area	%
Single Family (SF)	+/- 941 Ac.	57%
Patio Home (PH)	+/- 55 Ac.	3%
Townhome (TH)	+/- 36 Ac.	2%
Village Center (VC)	+/- 38 Ac.	2%
Commercial (C)	+/- 13 Ac.	1%
Institutional (I)	+/- 73 Ac.	4%
Rights-of-Way*	+/- 99 Ac.	6%
Parks & Open Space (P-OS)	+/- 408 Ac.	25%
Drill Site		
Totals	+/- 1,663 Ac.	100%
* Includes proposed major thoroughfares, collectors, and neighborhood collectors.		

Legend

Private Gated Section

Public Section

Divided or Boulevard Entry
(See Note 1)

Standard Entry
(See Note 2)

- Notes**
1. A divided or boulevard entry consisting of two (2) 20-foot wide travel lanes separated by a median having a minimum width of 14 feet shall be considered two points of access.

2. A standard entry is the right-of-way width determined by Table 2 (Page 17) or as otherwise stated in the adopted O-PUD document.

3. Public sections may become private gated sections without additional consideration. Road connections between private gated sections and public sections shall not be required. This note shall not apply to Section 20 and Section 26 as identified on this document.

4. The Clark Road ingress/egress from Section 20 and S Masters Road ingress/egress from Section 26B shall maintain a minimum public right-of-way width of 60-feet with no parking.

THIS GENERAL DEVELOPMENT PLAN APPROVED BY THE CITY OF MANVEL PLANNING, DEVELOPMENT, AND ZONING COMMISSION ON _____

PLANNING, DEVELOPMENT AND ZONING COMMISSION



GDP AMENDMENTS	
Amendment #1 Approved:	05/18/2009
Amendment #2 Tabled:	06/25/2018
Amendment #3 Tabled:	07/09/2018
Amendment #4 Tabled:	07/23/2018
Amendment #5 Approved:	10/09/2018
Amendment #6 Approved:	10/22/2018
Amendment #7 Approved:	11/26/2018
Amendment #8 Approved:	01/28/2019
Amendment #9 Approved:	05/13/2019
Amendment #10 Not Approved:	06/10/2019
Amendment #11 Approved:	07/08/2019
Amendment #12 Not Approved:	08/12/2019
Amendment #13 Approved:	09/09/2019
Amendment #14 Approved:	12/09/2019
Amendment #15 Approved:	02/24/2020
Amendment #16 Approved:	11/09/2020
Amendment #17 Approved:	12/14/2020
Amendment #18 Not Approved:	04/12/2021
Amendment #19 Not Approved:	06/14/2021
Amendment #20 Withdrawn:	11/16/2021



Meridiana General Development Plan: Amendment #21

Brazoria County, TX

November 19, 2021

SCALE: 1" = 600'



10211 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.368.4500
WWW.EHRAINC.COM
TYPE No. F-726
TBP/LS No. 10092300

EHRA JOB NO.
081-011-150

No warranty or representation of intended use, design or proposed improvements are made herein. All plans for land or facilities are subject to change without notice.



City of Manvel

P. O. Box 187
20025 HWY 6
Manvel, Texas 77578

(281) 489-0630
Fax (281) 489-0634

AGENDA REQUEST

REQUEST MUST BE MADE ACCORDING TO THE SUBMITTAL SCHEDULE

Meeting Requested: (Please check applicable meeting)

Planning, Development & Zoning	☐	City Council	☐	Both	☒
--------------------------------	--------------------------	--------------	--------------------------	------	-------------------------------------

Date of Request: February 28, 2022 PDZ & March 7, 2022 City Council

YOUR REQUEST WILL BE PLACED ON THE NEXT AVAILABLE MEETING DATE. MEETINGS ARE SECOND AND FOURTH MONDAYS FOR PLANNING, DEVELOPMENT & ZONING AND FIRST AND THIRD MONDAYS FOR CITY COUNCIL. THE AGENDAS ARE POSTED TO THE GENERAL PUBLIC AT MANVEL CITY HALL AND ON OUR WEBSITE AT www.cityofmanvel.com. THE AGENDA IS POSTED AND WILL REMAIN POSTED CONTINUOUSLY FOR AT LEAST 72 HOURS PRECEDING THE SCHEDULED TIME OF THE MEETING. PLEASE CHECK THE BOARD FOR YOUR MEETING SCHEDULE. WE STRONGLY ENCOURAGE YOU TO ATTEND THE MEETING FOR QUESTIONS AND ANSWERS. IF YOU ARE UNABLE TO ATTEND ACTION MAY BE TABLED UNTIL THE FOLLOWING MEETING.

Person to Speak: Jared Bowlin or Brad Sweitzer

Daytime Phone: 713-784-4500 Fax Number: 713-784-4577

E-mail Address: jbowlin@ehrainc.com or bsweitzer@ehrainc.com

Description of Request and Physical Address:

Consideration and possible action to forward with recommendation to City Council,
Final Plat for Meridiana Section 52, being a subdivision of 21.88 acres out of the
H.T. & B.R.R. Co. Survey, Section 61, Abstract 282, and the Oliver Hall Survey,
Abstract 203, City of Manvel, Brazoria County, Texas.

Plats:

Preliminary _____

Final x

ALL DOCUMENTATION AND FEES ASSOCIATED WITH THIS AGENDA REQUEST MUST BE SUBMITTED ACCORDING TO THE MEETING SUBMITTAL SCHEDULE WHICH CAN BE FOUND ON OUR WEBSITE. BY SIGNING THIS AGENDA REQUEST FORM I ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS AGENDA REQUEST FORM.

Jessica Rodriguez Digitally signed by Jessica Rodriguez
Date: 2022.02.22 11:06:34 -06'00'

SIGNATURE

February 22, 2022

DATE

**DEVELOPMENT SERVICES DEPARTMENT**

20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Planning, Development and Zoning Commission Plat Report

Plat Name	Meridiana Section 52 Final Plat
Applicant	Lacey Bell, EHRA, Inc.
PD&Z Meeting Date	February 28, 2022
Recommendation	Approval
Submitted By	Jessica Rodriguez, Director of Development Services

Background

This final plat was previously heard at the January 24, 2022, Planning, Development and Zoning Commission meeting. The applicant made a request for a 30-day plat extension. The Commission did not recommend approval. This final plat was heard by the City Council on February 7, 2022. The City Council did not approve the plat.

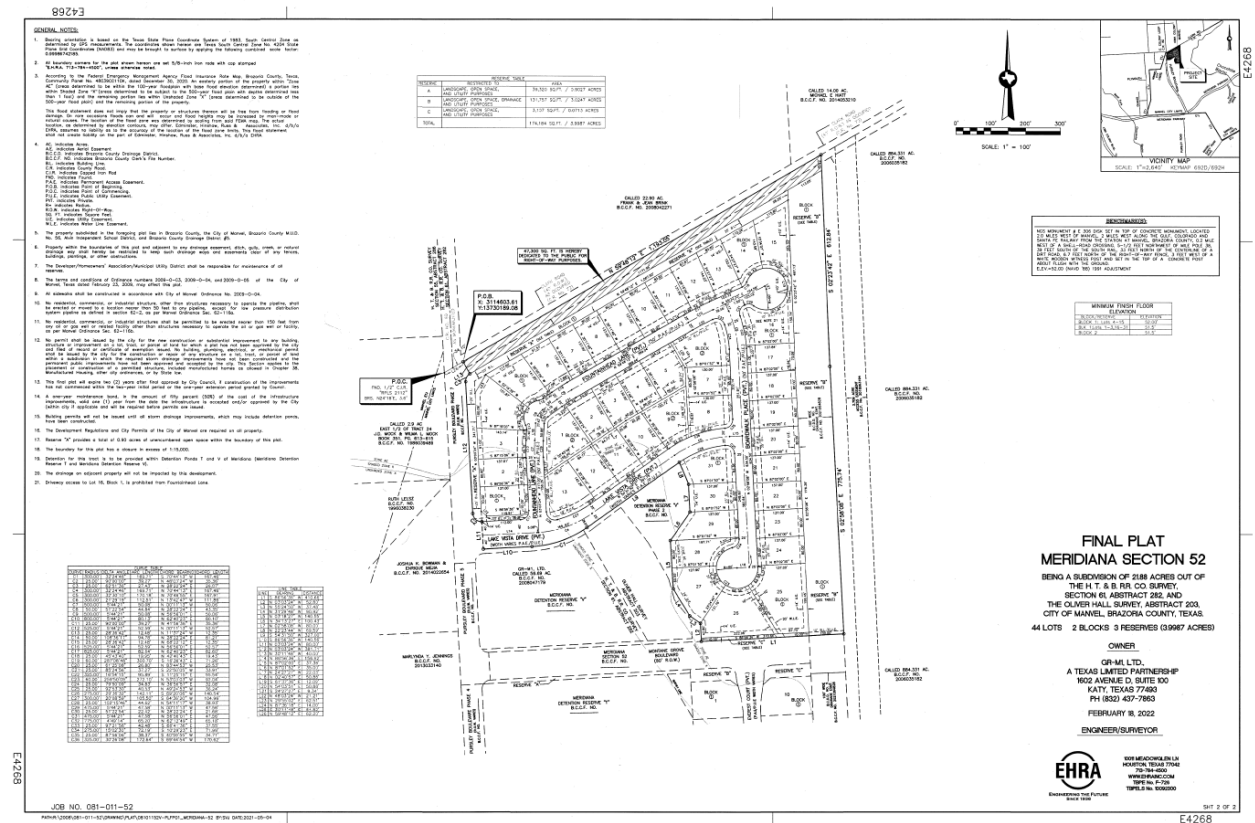
Staff Recommendation

Staff recommends approval of the Meridiana Section 52 Final Plat.

Plat Exhibit

8/23

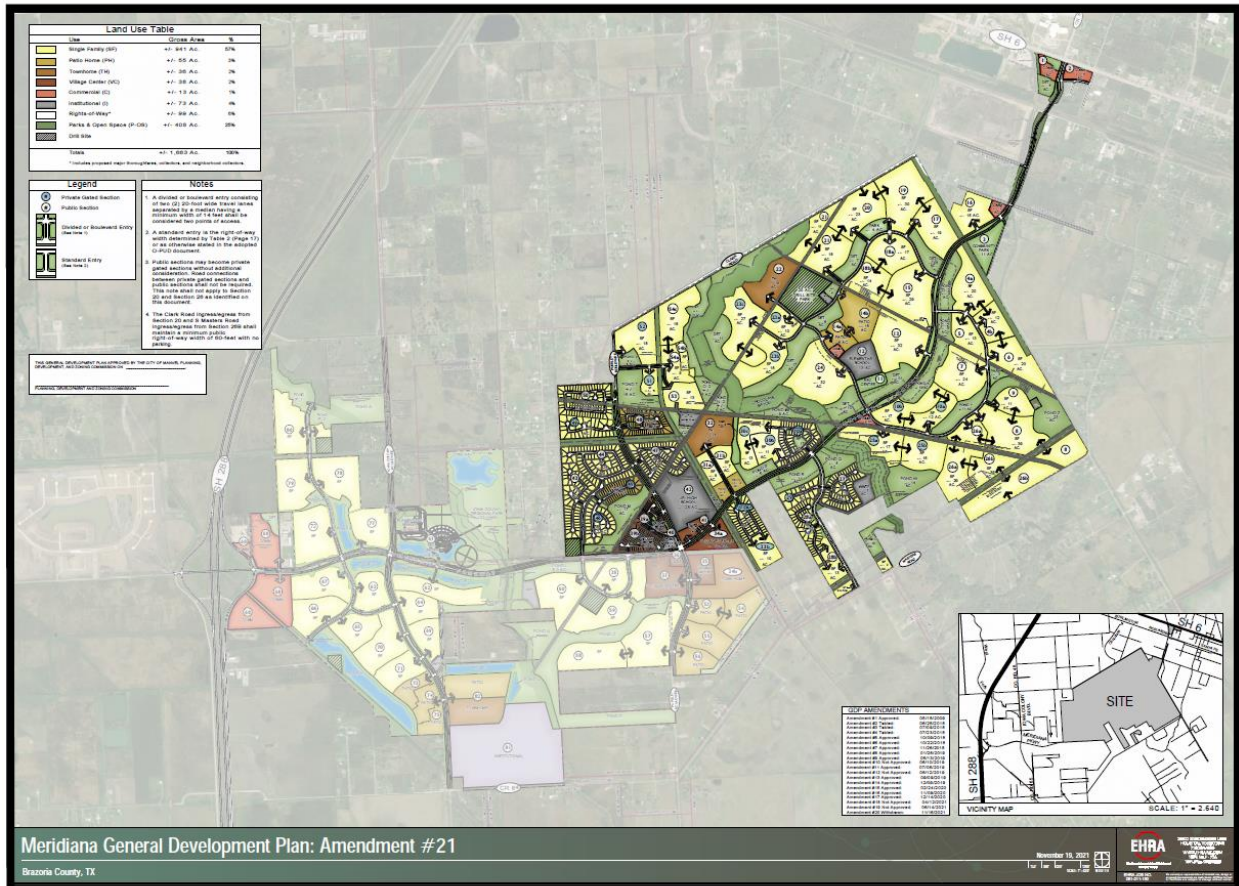
Plat Exhibit





DEVELOPMENT SERVICES DEPARTMENT
20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Meridiana General Development Plan Amendment No. 21 (dated November 19, 2021)



STATE OF TEXAS:
COUNTY OF BRAZORIA:

Wa, GR-M1, LTD., a Texas Limited Partnership, acting by and through Matt Lawson, President of Rise Communities, LLC, A Nevada Limited Liability Company, Authorized Agent for GR-M1, LTD., a Texas Limited Partnership, owner of the property subdivided in this plat, MERIDIANA SECTION 52, do hereby make subdivision of said property for and on behalf of said GR-M1, LTD., a Texas Limited Partnership, according to the lines, lots, building lines, streets, alleys, parks and easements as shown hereon and dedicate for public use, the streets, alleys, parks and easements shown hereon forever, and do hereby waive all claims for damages occasioned by the establishment of grades as approved for the streets and drainage easements dedicated, or occasioned by the alteration of the surface, or any portion of the streets or drainage easements to conform to such grades, and do hereby bind ourselves, our heirs, successors and assigns to warrant and defend the title to the land so dedicated.

FURTHER, Owners do hereby certify that we are the owners of all property immediately adjacent to the boundaries of the above and foregoing subdivision of MERIDIANA SECTION 52 where building setback lines or public utility easements are to be established outside the boundaries of the above and foregoing subdivision and do hereby make and establish all building setback lines and dedicate to the use of the public, all public utility easements shown in said adjacent acreage.

FURTHER, Owners have dedicated and by these presents do dedicate to the use of the public utility purposes forever unobstructed aerial easements. The aerial easements shall extend horizontally an additional eleven feet, six inches (11'-6") for ten feet (10'-0") perimeter easements or seven feet, six inches (7'-6") for fourteen feet (14'-0") perimeter easements or five feet, six inches (5'-6") for sixteen feet (16'-0") perimeter easements from a plane sixteen feet (16'-0") above the ground level upward, located adjacent to and adjoining said public utility easement that are designated with aerial easements (U.E. & A.E.) as indicated and depicted, hereon, whereby the aerial easement totals twenty one feet, six inches (21'-6") in width.

FURTHER, Owners have dedicated and by these presents do dedicate to the use of the public for public utility purpose forever unobstructed aerial easements. The aerial easements shall extend horizontally an additional ten feet (10'-0") for ten feet (10'-0") back-to-back easements, or eight feet (8'-0") for fourteen feet (14'-0") back-to-back easements or seven feet (7'-0") for sixteen feet (16'-0") back-to-back easements, from a plane sixteen feet (16'-0") above ground level upward, located adjacent to both sides and adjoining said public utility easements that are designated with aerial easements (U.E. & A.E.) as indicated and depicted hereon, whereby the aerial easement totals thirty feet (30'-0") in width.

IN TESTIMONY WHEREOF, GR-M1, LTD., a Texas limited partnership, has caused these presents to be signed by Matt Lawson, President of Rise Communities, LLC, a Nevada Limited Liability Company, Authorized Agent for GR-M1, LTD., a Texas Limited Partnership, thereunto authorized, this 9th day of December, 2021.

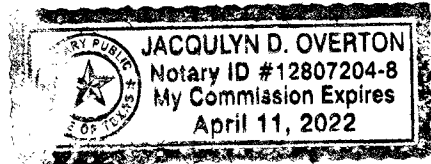
OWNER
GR-M1, LTD., A Texas Limited Partnership
By: Rise Communities, LLC,
A Nevada Limited Liability Company,
Authorized Agent

BY:
Print Name: Matt Lawson
Title: President

STATE OF TEXAS
COUNTY OF HARRIS

BEFORE ME, the undersigned authority, on this day personally appeared Matt Lawson, President of Rise Communities, LLC, a Nevada Limited Liability Company, Authorized Agent for GR-M1, LTD., a Texas Limited Partnership, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations therein expressed, and as the act and deed of said limited liability company.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 9th day of December, 2021.



Notary Public in and for the
State of Texas
My Notary Commission Expires April 11, 2022

APPROVED BY BRAZORIA COUNTY DRAINAGE DISTRICT NO. 5

Lee Walden, P.E. 12/6/21
Date
Lee Walden, P.E.,
President

Kerry L. Osburn 12/6/21
Date
Kerry L. Osburn
Vice President

Brandon Middleton 12/6/21
Date
Brandon Middleton
Secretary/Treasurer

Jarrod D. Aden, P.E., C.F.M. 12/6/21
Date
Jarrod D. Aden, P.E., C.F.M.
District Engineer

Note: Project field startup will start within 365 calendar days from date here shown. Continuous and reasonable field site work is expected.

BCDD5 REF ID# 210054

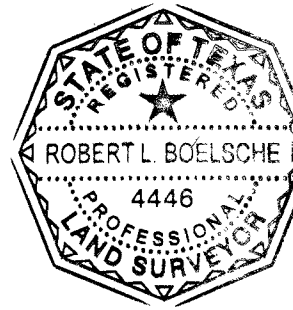
This is to certify that the Planning, Development and Zoning Commission of the City of Manvel, Texas, has recommended approval of this plat of MERIDIANA SECTION 52 in conformance with laws of the State of Texas and the ordinances of the City of Manvel as shown hereon and authorizes the recording of this plat this day of , 2022.

Planning, Development and Zoning Commission

This is to certify that the City Council of the City of Manvel, Texas, has approved this plat of MERIDIANA SECTION 52 in conformance with laws of the State of Texas and the ordinances of the City of Manvel as shown hereon and authorizes the recording of this plat this day of , 2022.

City Council

I, Robert Boelsche, a Registered Professional Land Surveyor of the State of Texas, hereby certify that this subdivision is true and correct; was prepared from an actual boundary survey of the property made on the ground under my supervision according to the standards of practice of the Texas Board of Professional Land Surveyors; that the plat boundary corners have been tied to the nearest street intersection; that the boundary corners, angle points, points of curvature/tangency and interior corners of this subdivision were not set at the time this plat was signed by me and that these corners are to be set after construction of the public infrastructure and final lot grading within the subdivision; and that all previously existing property markers are sufficiently described on this document as found and all set markers are a minimum of 5/8- inch diameter iron rod with surveyor's cap.



Robert L. Boelsche
Robert Boelsche, Registered Professional Land Surveyor
Texas Registration No. 4446

BRAZORIA COUNTY DRAINAGE DISTRICT NO. 5:

- Slab elevations (finished floor) shall be a minimum of 2 feet above finished grade.
- All drainage easements shown hereon shall be kept clear of fences, buildings, plantings and other obstructions to the operation and maintenance of drainage facilities.
- All property shall drain into the drainage easement only through an approved drainage structure.
- All drainage easements and detention pond reserves shown on this plat will be maintained by the property owners and/or business owners; provided, however, and governmental entity have jurisdiction, including, without limitation, Brazoria County, Texas and Brazoria County Drainage District #5, shall have the right, but not the obligation to enter upon the drainage easements to perform maintenance operations at any time after the date hereof.
- The property identified in the foregoing plat lies within Brazoria County Drainage District #5.
- This rural commercial site employs a natural drainage system, which is intended to provide drainage for the site that is similar to that which existed under pre-development conditions. Thus, during large storm events, ponding of water should be expected to occur on the site to the extent it may have prior to development, but such ponding should not remain for an extended period of time.
- Land use within the subdivision is limited to an average imperviousness of no more than 72 percent. The drainage and/or detention system has been designed with the assumption that this average percent, imperviousness will not be exceeded. If this percentage is to be exceeded, a replat and/or redesign of the system may be necessary.
- Other than shown hereon, there are no pipeline easements or pipelines within the boundaries of this plan.
- All storm water drainage pipes, culverts, tiles or other (includes driveway culverts) will be minimum 24" I.D. or equal.
- Dedicated drainage easement(s) granted to Brazoria County Drainage District #5 for drainage maintenance purposes shall include 45 feet top of bank, plus the sum (footage) of both ditch side slopes and channel bottom and 45 feet of bank on the opposite bank.
- Dedicated ingress/egress accesses are granted to Brazoria County Drainage District #5 (see District Resolution No 2007-06 & 2007-07). Access will be gated and locked with Brazoria County Drainage District #5's lock.
- Prohibited use of "metal" pipe in storm water/sewer applications (See District Resolution No. 2007-08).
- Prohibited use of "rip rap" in storm water/sewer applications. (District Policy).
- Pipelines, utility lines and other crossing under any Brazoria County Drainage District #5 ditch require approval and permitting prior to construction.
- All dedicated storm sewer drainage and/or access easements to be granted to Brazoria County Drainage District #5 by the property owner will be initiated and recorded, at the property owner's expense, in Brazoria County, Texas with a "Recorded Document Number" affixed to said easement prior to final approval granted by Brazoria County Drainage District #5 Board of Commissioners.
- It will be the property owner's responsibility to verify if any Brazoria County Drainage District #5 "Dedicated" drainage easements are on or cross their property. If so, the property owner will comply as stated within the recorded easement.
- Project field start-up will start within 365 calendar days from date shown here. Continuous and reasonable field site work is expected. See Brazoria County drainage criteria manual section 1, Introduction; Sub-Section 1.5. Plat and Plan approval process, and drainage acceptance procedures; time limit for approval and Brazoria County Drainage District #5 Resolution 2011-1, allowable time(s) and procedures for starting-up approved projects.

METES AND BOUNDS DESCRIPTION
MERIDIANA SECTION 52
BEING A 21.88 ACRE TRACT OF LAND SITUATED IN
THE H. T. & B. R.R. COMPANY SURVEY, SECTION 61, ABSTRACT 282
AND THE OLIVER HALL SURVEY, ABSTRACT 203
BRAZORIA COUNTY, TEXAS

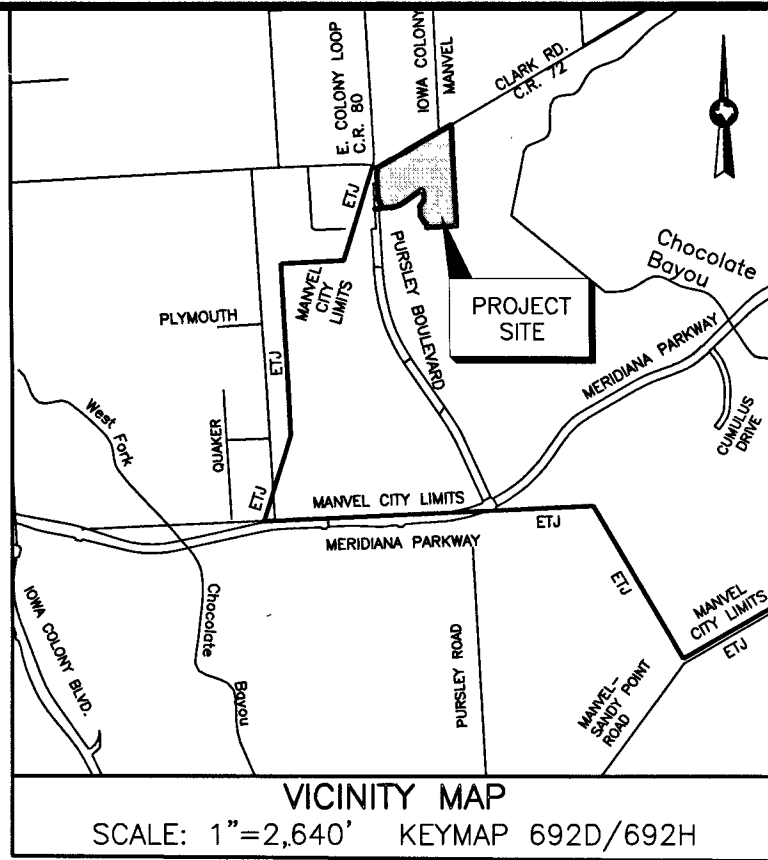
A DESCRIPTION OF A 21.88 ACRE TRACT OF LAND IN THE H. T. & B. R.R. COMPANY SURVEY, SECTION 61, ABSTRACT 282 AND THE OLIVER HALL SURVEY, ABSTRACT 203, BRAZORIA COUNTY, TEXAS, BEING OUT OF THOSE CERTAIN TRACTS CALLED 56.69 ACRES DESCRIBED IN DEED TO GR-M1, LTD. RECORDED UNDER BRAZORIA COUNTY CLERK'S FILE NUMBER (B.C.C.F. NO.) 2008047179, AND A CALLED 884.331 ACRES RECORDED UNDER B.C.C.F. NO. 2006035182; THE SAID 21.88 ACRE TRACT BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS (BEARINGS BASED ON TEXAS STATE PLANE COORDINATE SYSTEM OF 1983 SOUTH CENTRAL ZONE AS DETERMINED BY GPS MEASUREMENTS):

COMMENCING at the northwesterly corner of said 56.69 acre tract from which a 1/2-inch capped iron rod stamped "RPLS 2112" bears North 24°18' East, distance of 3.60 feet;

THENCE, North 59°48'12" East, along the common line of said 884.331 and said 56.69 acre tract, same being the common line of the Oliver Hall Survey and the H.T. & B. R.R. Co. Survey, for a distance of 766.29 feet to a point for corner;

THENCE, South 60°00'02" West, along the northerly line of said 56.69 acre tract a distance of 62.20 feet to a Mag nail set marking the northwesterly corner and the POINT OF BEGINNING of the herein described tract of land;

- THENCE, North 59°48'12" East, continuing along the northerly line of said 56.69 acre tract for a distance of 1,193.05 feet to a Mag nail set marking the northeasterly corner of the herein described tract of land;
- THENCE, South 02°23'42" East, for a distance of 612.84 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, South 02°58'08" East, for a distance of 775.74 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, South 86°56'36" West, for a distance of 410.66 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, North 03°03'24" West, for a distance of 52.80 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, North 55°24'50" West, for a distance of 37.48 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, North 31°29'48" West, for a distance of 90.92 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, North 03°18'27" West, for a distance of 140.55 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, North 34°13'27" East, for a distance of 100.43 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, North 02°58'08" West, for a distance of 80.00 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, North 22°23'44" West, for a distance of 69.59 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, South 54°31'50" West, for a distance of 327.00 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for curvature;
- THENCE, in a southwesterly direction along the arc of said curve to the right having a radius of 300.00 feet, a central angle of 32°24'48", an arc length of 169.71 feet, and a chord bearing of South 70°44'13" West, for a distance of 167.46 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for tangency;
- THENCE, South 86°56'36" West, for a distance of 140.56 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, North 03°03'24" West, for a distance of 80.00 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner in the arc of a curve to the right;
- THENCE, in a northwesterly direction along the arc of said curve to the right having a radius of 25.00 feet, a central angle of 90°00'00", an arc length of 39.27 feet, and a chord bearing of North 48°03'24" West, for a distance of 35.36 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for tangency;
- THENCE, North 03°03'24" West, for a distance of 381.71 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for curvature;
- THENCE, in a northeasterly direction along the arc of said curve to the right having a radius of 25.00 feet, a central angle of 62°51'36", an arc length of 27.43 feet, and a chord bearing of North 28°22'24" East, for a distance of 26.07 feet to a 5/8-inch capped iron rod stamped "E.H.R.A. 713-784-4500" set for corner;
- THENCE, North 30°11'48" West, for a distance of 40.00 feet to the POINT OF BEGINNING and containing 21.88 acres of land.



MINIMUM FINISH FLOOR ELEVATION	
BLOCK/RESERVE	ELEVATION
BLOCK 1	51.00'

BENCHMARK(S):

NCS MONUMENT # E 308 DISK FOUND IN TOP OF CONCRETE MONUMENT, LOCATED 2.0 MILES WEST OF MANVEL, 2 MILES WEST ALONG THE GULF, COLORADO AND SANTA FE RAILWAY FROM THE STATION AT MANVEL, BRAZORIA COUNTY, 0.2 MILE WEST OF A SHELL-ROAD CROSSING, 5-1/2 FEET NORTHWEST OF MILE POLE 38, 39 FEET SOUTH OF THE SOUTH RAIL, 33 FEET NORTH OF THE CENTERLINE OF A DIRT ROAD, 6.7 FEET NORTH OF THE RIGHT-OF-WAY FENCE, 3 FEET WEST OF A WHITE WOODEN WITNESS POST AND SET IN THE TOP OF A CONCRETE POST ABOUT FLUSH WITH THE GROUND. ELEV.=52.00' (NAVD '88) 1991 ADJUSTMENT

FINAL PLAT MERIDIANA SECTION 52

BEING A SUBDIVISION OF 21.88 ACRES OUT OF
THE H. T. & B. R.R. CO. SURVEY,
SECTION 61, ABSTRACT 282, AND
THE OLIVER HALL SURVEY, ABSTRACT 203,
CITY OF MANVEL, BRAZORIA COUNTY, TEXAS.

44 LOTS 2 BLOCKS 3 RESERVES (3.9987 ACRES)

OWNER

GR-M1, LTD.,
A TEXAS LIMITED PARTNERSHIP
1602 AVENUE D, SUITE 100
KATY, TEXAS 77493
PH (832) 437-7863

FEBRUARY 4, 2022

ENGINEER/SURVEYOR

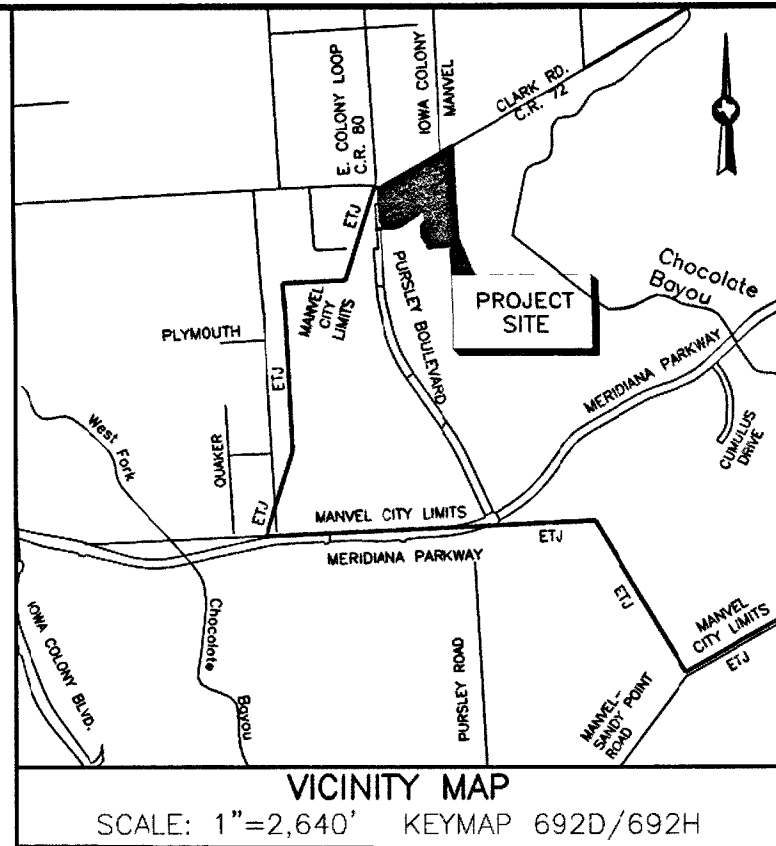
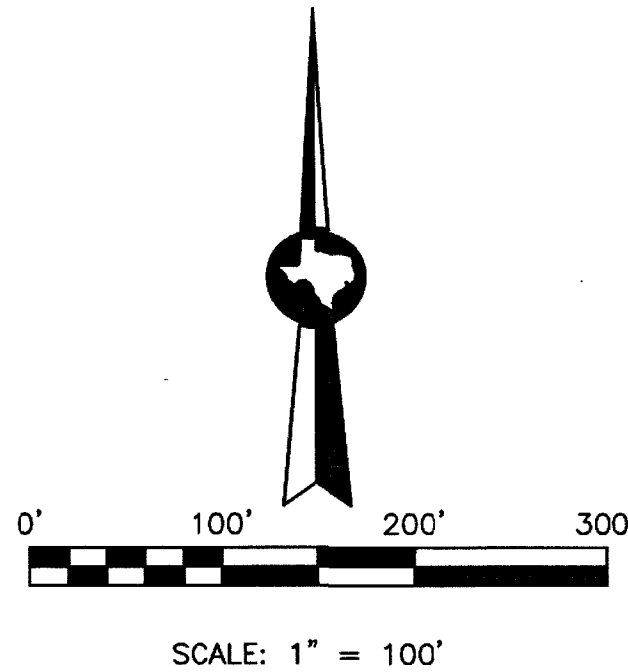


1001 MEADOWCLEN LN
HOUSTON, TEXAS 77042
713-784-4500
WWW.EHRAINCO.COM
TBPE No. F-726
TBPELS No. 10092300

GENERAL NOTES:

- Bearing orientation is based on the Texas State Plane Coordinate System of 1983, South Central Zone as determined by GPS measurements. The coordinates shown hereon are Texas South Central Zone No. 4204 State Plane Grid Coordinates (NAD83) and may be brought to surface by applying the following combined scale factor: 0.9998742185.
 - All boundary corners for the plot shown hereon are set 5/8-inch iron rods with cap stamped "E.H.R.A. 713-784-4500", unless otherwise noted.
 - According to the Federal Emergency Management Agency Flood Insurance Rate Map, Brazoria County, Texas, Community Panel No. 48030010K, dated December 30, 2020, An easterly portion of the property within "Zone AE" (areas determined to be within the 100-year floodplain with base flood elevation determined) a portion lies within Shaded Zone "X" (areas determined to be subject to the 500-year flood plain with depths determined less than 1 foot) and the remaining portion lies within Unshaded Zone "X" (areas determined to be outside of the 500-year flood plain) and the remaining portion of the property.
- This flood statement does not imply that the property or structures thereon will be free from flooding or flood damage. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. The location of the flood zone was determined by scaling from said FEMA map. The actual location, as determined by elevation contours, may differ. Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA assumes no liability as to the accuracy of the location of the flood zone limits. This flood statement shall not create liability on the part of Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA.
- AC, indicates Acres.
A.E., indicates Aerial Easement.
B.C.C.F., indicates Brazoria County Drainage District.
B.C.C.F. NO., indicates Brazoria County Clerk's File Number.
B.L., indicates Building Line.
C.R., indicates County Road.
C.I.R., indicates Capped Iron Rod.
F.N.D., indicates Found.
P.A.E., indicates Permanent Access Easement.
P.O.B., indicates Point of Beginning.
P.O.C., indicates Point of Commencing.
P.U.E., indicates Public Utility Easement.
P.V.T., indicates Private.
R., indicates Radius.
R.O.W., indicates Right-Of-Way.
SQ. FT., indicates Square Feet.
U.E., indicates Utility Easement.
W.L.E., indicates Water Line Easement.
 - The property subdivided in the foregoing plot lies in Brazoria County, the City of Manvel, Brazoria County M.U.D. No. 56, Alvin Independent School District, and Brazoria County Drainage District #5.
 - Property within the boundaries of this plot and adjacent to any drainage easement, ditch, gully, creek, or natural drainage way shall hereby be restricted to keep such drainage ways and easements clear of any fences, buildings, plantings, or other obstructions.
 - The Developer/Homeowners' Association/Municipal Utility District shall be responsible for maintenance of all reserves.
 - The terms and conditions of Ordinance numbers 2009-0-03, 2009-0-04, and 2009-0-05 of the City of Manvel, Texas dated February 23, 2009, may affect this plot.
 - All sidewalks shall be constructed in accordance with City of Manvel Ordinance No. 2009-0-04.
 - No residential, commercial, or industrial structure, other than structures necessary to operate the pipeline, shall be erected or moved to a location nearer than 50 feet to any pipeline, except for low pressure distribution system pipeline as defined in section 62-2, as per Manvel Ordinance Sec. 62-116a.
 - No residential, commercial, or industrial structures shall be permitted to be erected nearer than 150 feet from any oil or gas well or related facility other than structures necessary to operate the oil or gas well or facility, as per Manvel Ordinance Sec. 62-116b.
 - No permit shall be issued by the city for the new construction or substantial improvement to any building, structure or improvement on a lot, tract, or parcel of land for which a plot has not been approved by the city and filed of record or certificate of exemption issued. No building, plumbing, electrical, or mechanical permit shall be issued by the city for the construction or repair of any structure on a lot, tract, or parcel of land within a subdivision in which the required storm drainage improvements have not been constructed and the permanent public improvements have not been approved and accepted by the city. This Section applies to the placement or construction of a permitted structure including manufactured homes as allowed in Chapter 38, Manufactured Housing, other city ordinances, or by State law.
 - This final plat will expire two (2) years after final approval by City Council, if construction of the improvements has not commenced within the two-year initial period or the one-year extension period granted by Council.
 - A one-year maintenance bond, in the amount of fifty percent (50%) of the cost of the infrastructure improvements, valid one (1) year from the date the infrastructure is accepted and/or approved by the City (within city if applicable and will be required before permits are issued).
 - Building permits will not be issued until all storm drainage improvements, which may include detention ponds, have been constructed.
 - The Development Regulations and City Permits of the City of Manvel are required on all property.
 - Reserve "A" provides a total of 0.90 acres of unencumbered open space within the boundary of this plot.
 - The boundary for this plot has a closure in excess of 1:15,000.
 - Detention for this tract is to be provided within Detention Ponds T and V of Meridiana (Meridiana Detention Reserve T and Meridiana Detention Reserve V).
 - The drainage on adjacent property will not be impacted by this development.
 - Driveway access to Lot 16, Block 1, is prohibited from Fountainhead Lane.

RESERVE TABLE		
RESERVE	RESTRICTED TO	AREA
A	LANDSCAPE, OPEN SPACE, AND UTILITY PURPOSES	39,320 SQ. FT. / 0.9027 ACRES
B	LANDSCAPE, OPEN SPACE, DRAINAGE AND UTILITY PURPOSES	131,757 SQ. FT. / 3.0247 ACRES
C	LANDSCAPE, OPEN SPACE, AND UTILITY PURPOSES	3,107 SQ. FT. / 0.0713 ACRES
TOTAL		174,184 SQ. FT. / 3.9987 ACRES



BENCHMARK(S):

NGS MONUMENT # E 306 DISK SET IN TOP OF CONCRETE MONUMENT, LOCATED 2.0 MILES WEST OF MANVEL, 2 MILES WEST ALONG THE GULF, COLORADO AND SANTA FE RAILWAY FROM THE STATION AT MANVEL, BRAZORIA COUNTY, 0.2 MILE WEST OF A SHELL-ROAD CROSSING, 5-1/2 FEET NORTHWEST OF MILE POLE 38, 39 FEET SOUTH OF THE SOUTH RAIL, 33 FEET NORTH OF THE CENTERLINE OF A DIRT ROAD, 6.7 FEET NORTH OF THE RIGHT-OF-WAY FENCE, 3 FEET WEST OF A WHITE WOODEN WITNESS POST AND SET IN THE TOP OF A CONCRETE POST ABOUT FLUSH WITH THE GROUND.
ELEV.=52.00 (NAVD '88) 1991 ADJUSTMENT

MINIMUM FINISH FLOOR ELEVATION	
BLOCK/RESERVE	ELEVATION
BLOCK 1: Lots 4-15	52.00'
BLK 1-Lots 1-3, 16-31	51.5'
BLOCK 2	51.5'

FINAL PLAT MERIDIANA SECTION 52

BEING A SUBDIVISION OF 21.88 ACRES OUT OF
THE H. T. & B. R.R. CO. SURVEY,
SECTION 61, ABSTRACT 282, AND
THE OLIVER HALL SURVEY, ABSTRACT 203,
CITY OF MANVEL, BRAZORIA COUNTY, TEXAS.

44 LOTS 2 BLOCKS 3 RESERVES (3.9987 ACRES)

OWNER

GR-M1, LTD.,
A TEXAS LIMITED PARTNERSHIP
1602 AVENUE D, SUITE 100
KATY, TEXAS 77493
PH (832) 437-7863

FEBRUARY 4, 2022

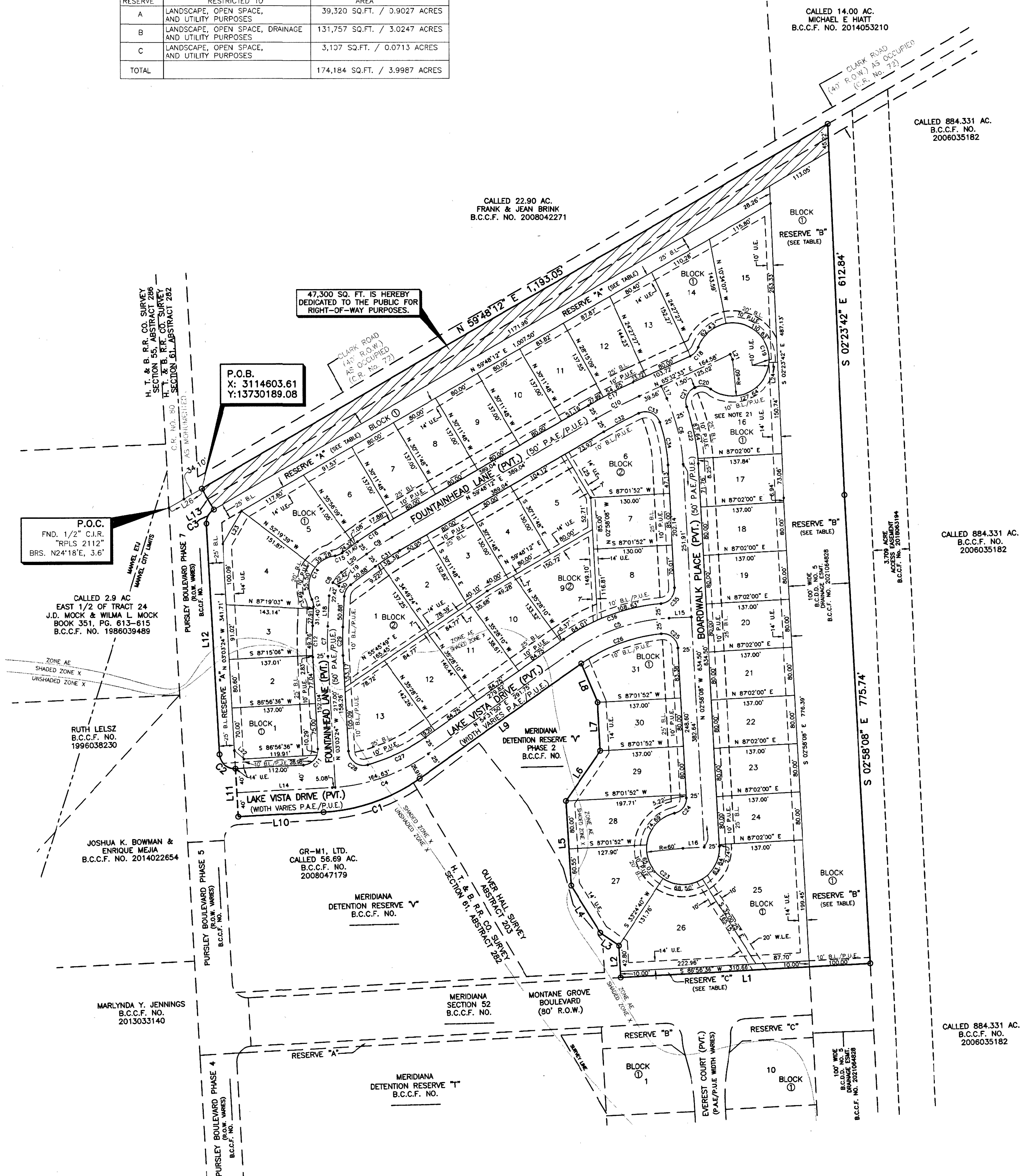
ENGINEER/SURVEYOR



1001 MEADOWGLEN LN
HOUSTON, TEXAS 77042
713-784-4500
WWW.EHRAINC.COM
TYPE NO. F-728
TBPELS NO. 100929300

CURVE TABLE					
CURVE	RADIUS	DELTA	ANGLE	CHORD	BEARING
C1	300.00	32.2446	169.71	S 70°44'13" W	167.48
C2	25.00	90°00'00"	39.27	N 48°03'24" W	35.36
C3	25.00	62°51'36"	27.43	N 28°22'24" E	26.07
C4	300.00	32.2446	169.71	N 70°44'13" E	167.48
C5	300.00	32.2446	169.71	N 70°44'13" E	167.48
C6	300.00	21°29'19"	112.51	N 13°42'47" W	111.86
C7	500.00	5°44'21"	50.08	N 00°11'13" W	50.06
C8	300.00	31°22'54"	44.81	N 28°22'24" E	43.59
C9	500.00	5°44'21"	50.08	N 58°58'01" E	50.06
C10	800.00	5°44'21"	80.13	N 62°40'23" E	80.10
C11	25.00	90°00'00"	39.27	N 41°56'36" E	35.36
C12	50.00	5°44'21"	50.08	N 00°11'13" W	50.06
C13	25.00	28°36'42"	12.48	N 11°37'24" W	12.35
C14	50.00	108°36'17"	94.78	N 28°22'24" E	81.21
C15	25.00	28°36'42"	12.48	N 68°22'12" E	12.35
C16	50.00	5°44'21"	50.08	N 58°58'01" E	50.06
C17	825.00	5°44'21"	82.64	N 62°40'23" E	82.60
C18	25.00	45°43'40"	19.95	N 42°40'43" E	19.43
C19	60.00	28°36'42"	30.00	S 16°36'43" W	25.53
C20	25.00	61°25'08"	26.80	N 8°44'53" W	25.53
C21	25.00	85°24'56"	37.27	S 22°50'05" W	33.91
C22	325.00	18°54'15"	95.89	S 11°29'15" E	95.84
C23	60.00	28°36'42"	27.21	N 53°03'03" W	92.04
C24	25.00	79°50'09"	34.83	N 36°56'57" E	32.08
C25	25.00	92°53'30"	40.53	N 49°24'53" W	36.24
C26	275.00	2°25'52"	142.11	S 89°20'52" W	140.54
C27	300.00	20°08'59"	105.50	S 64°36'20" W	104.96
C28	25.00	102°15'46"	44.82	N 54°11'17" W	38.93
C29	475.00	5°44'21"	47.58	N 00°11'13" W	47.56
C30	25.00	51°22'54"	22.42	N 28°22'24" E	21.68
C31	475.00	5°44'21"	47.58	N 56°58'01" E	47.56
C32	775.00	4°49'14"	65.20	N 62°12'49" E	65.18
C33	25.00	9°27'15"	42.48	S 66°41'36" E	37.55
C34	275.00	15°02'30"	72.19	S 10°29'23" E	71.99
C35	25.00	87°56'06"	38.37	S 40°59'55" W	34.71
C36	325.00	30°26'08"	172.64	S 89°44'54" W	170.62

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 86°56'36" W	410.66
L2	N 03°03'24" W	52.83
L3	N 59°24'50" W	37.48
L4	N 31°29'48" W	90.92
L5	N 03°18'27" W	140.55
L6	N 34°13'27" E	100.43
L7	N 02°58'08" W	80.03
L8	N 22°23'44" W	69.59
L9	S 64°31'50" W	327.00
L10	S 86°56'36" W	140.56
L11	N 03°03'24" W	80.00
L12	N 03°03'24" W	581.73
L13	N 30°11'48" W	40.00
L14	S 86°56'36" E	156.62
L15	N 87°02'00" E	37.35
L16	N 87°01'59" E	38.03
L17	N 24°27'27" W	22.03
L18	N 02°40'57" E	50.88
L19	S 61°33'56" E	12.09
L20	N 54°03'51" E	50.88
L21	S 24°27'27" E	9.34
L22	N 48°03'24" W	21.21
L23	N 28°50'02" E	62.51
L24	N 87°36'18" E	14.00
L25	S 30°11'48" E	84.82
L26	N 59°48'12" E	62.20



Land Use Table		
Use	Gross Area	%
Single Family (SF)	+/- 941 Ac.	57%
Patio Home (PH)	+/- 55 Ac.	3%
Townhome (TH)	+/- 36 Ac.	2%
Village Center (VC)	+/- 38 Ac.	2%
Commercial (C)	+/- 13 Ac.	1%
Institutional (I)	+/- 73 Ac.	4%
Rights-of-Way*	+/- 99 Ac.	6%
Parks & Open Space (P-OS)	+/- 408 Ac.	25%
Drill Site		
Totals	+/- 1,663 Ac.	100%
* Includes proposed major thoroughfares, collectors, and neighborhood collectors.		

Legend

Private Gated Section

Public Section

Divided or Boulevard Entry
(See Note 1)

Standard Entry
(See Note 2)

- Notes**

1. A divided or boulevard entry consisting of two (2) 20-foot wide travel lanes separated by a median having a minimum width of 14 feet shall be considered two points of access.

2. A standard entry is the right-of-way width determined by Table 2 (Page 17) or as otherwise stated in the adopted O-PUD document.

3. Public sections may become private gated sections without additional consideration. Road connections between private gated sections and public sections shall not be required. This note shall not apply to Section 20 and Section 26 as identified on this document.

4. The Clark Road ingress/egress from Section 20 and S Masters Road ingress/egress from Section 26B shall maintain a minimum public right-of-way width of 60-feet with no parking.

THIS GENERAL DEVELOPMENT PLAN APPROVED BY THE CITY OF MANVEL PLANNING, DEVELOPMENT, AND ZONING COMMISSION ON _____

PLANNING, DEVELOPMENT AND ZONING COMMISSION



GDP AMENDMENTS	
Amendment #1 Approved:	05/18/2009
Amendment #2 Tabled:	06/25/2018
Amendment #3 Tabled:	07/09/2018
Amendment #4 Tabled:	07/23/2018
Amendment #5 Approved:	10/09/2018
Amendment #6 Approved:	10/22/2018
Amendment #7 Approved:	11/26/2018
Amendment #8 Approved:	01/28/2019
Amendment #9 Approved:	05/13/2019
Amendment #10 Not Approved:	06/10/2019
Amendment #11 Approved:	07/08/2019
Amendment #12 Not Approved:	08/12/2019
Amendment #13 Approved:	09/09/2019
Amendment #14 Approved:	12/09/2019
Amendment #15 Approved:	02/24/2020
Amendment #16 Approved:	11/09/2020
Amendment #17 Approved:	12/14/2020
Amendment #18 Not Approved:	04/12/2021
Amendment #19 Not Approved:	06/14/2021
Amendment #20 Withdrawn:	11/16/2021



Meridiana General Development Plan: Amendment #21

Brazoria County, TX

November 19, 2021

SCALE: 1" = 600'



10211 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.368.4500
WWW.EHRAINC.COM
TYPE No. F-726
TGPL No. 10092300

ENGINEERING THE FUTURE

EHRA JOB NO.
081-011-150

No warranty or representation of intended use, design or proposed improvements are made herein. All plans for land or facilities are subject to change without notice.



City of Manvel

P. O. Box 187
20025 HWY 6
Manvel, Texas 77578

(281) 489-0630
Fax (281) 489-0634

AGENDA REQUEST

REQUEST MUST BE MADE ACCORDING TO THE SUBMITTAL SCHEDULE

Meeting Requested: (Please check applicable meeting)

Planning, Development & Zoning	☐	City Council	☐	Both	☒
--------------------------------	--------------------------	--------------	--------------------------	------	-------------------------------------

Date of Request: February 28, 2022 PDZ and March 7, 2022 City Council

YOUR REQUEST WILL BE PLACED ON THE NEXT AVAILABLE MEETING DATE. MEETINGS ARE SECOND AND FOURTH MONDAYS FOR PLANNING, DEVELOPMENT & ZONING AND FIRST AND THIRD MONDAYS FOR CITY COUNCIL. THE AGENDAS ARE POSTED TO THE GENERAL PUBLIC AT MANVEL CITY HALL AND ON OUR WEBSITE AT www.cityofmanvel.com. THE AGENDA IS POSTED AND WILL REMAIN POSTED CONTINUOUSLY FOR AT LEAST 72 HOURS PRECEDING THE SCHEDULED TIME OF THE MEETING. PLEASE CHECK THE BOARD FOR YOUR MEETING SCHEDULE. WE STRONGLY ENCOURAGE YOU TO ATTEND THE MEETING FOR QUESTIONS AND ANSWERS. IF YOU ARE UNABLE TO ATTEND ACTION MAY BE TABLED UNTIL THE FOLLOWING MEETING.

Person to Speak: Brad Sweitzer

Daytime Phone: 713-784-4500 Fax Number: N/A

E-mail Address: bsweitzer@ehrainc.com

Description of Request and Physical Address:

Consideration and possible action to approve and move forward with recommendation to City Council,
Preliminary Plat for Meridiana Section 54B, A Subdivision of 21.70 acres out of the Oliver Hall Survey,
A-203, consisting of 59 Lots, 4 Blocks, and 4 Reserves, a plat or map thereof recorded in Brazoria County.

Plats:

Preliminary X

Final _____

ALL DOCUMENTATION AND FEES ASSOCIATED WITH THIS AGENDA REQUEST MUST BE SUBMITTED ACCORDING TO THE MEETING SUBMITTAL SCHEDULE WHICH CAN BE FOUND ON OUR WEBSITE. BY SIGNING THIS AGENDA REQUEST FORM I ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS AGENDA REQUEST FORM.

Brad Sweitzer

SIGNATURE

1/31/2022

DATE



DEVELOPMENT SERVICES DEPARTMENT

20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Planning, Development and Zoning Commission Plat Report

Plat Name	Meridiana Section 54B Preliminary Plat
Applicant	Brad Sweitzer, EHRA, Inc.
PD&Z Meeting Date	February 28, 2022
Recommendation	Approval
Submitted By	Jessica Rodriguez, Director of Development Services

Staff Recommendation

Staff recommends approval of the Meridiana Section 54B Preliminary Plat.

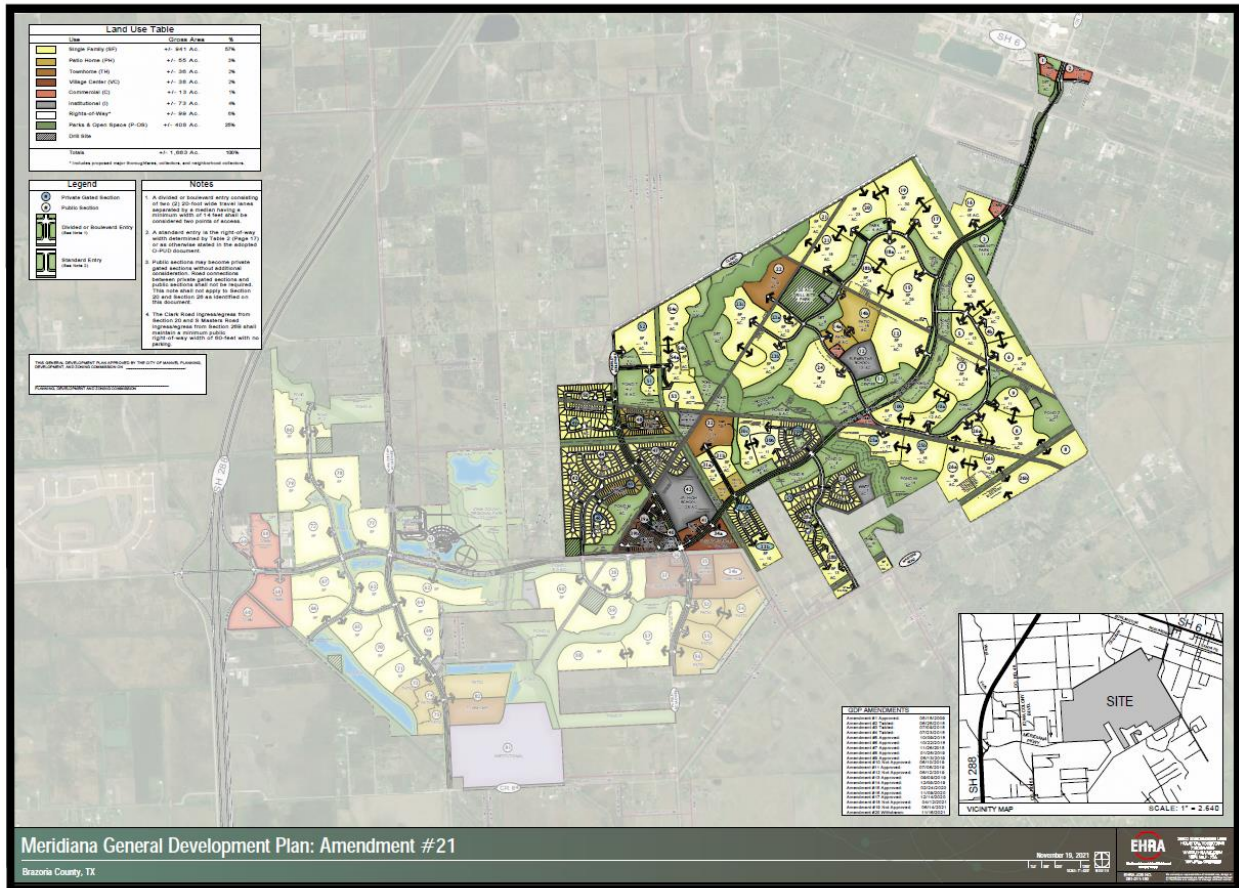
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January 31, 2022



DEVELOPMENT SERVICES DEPARTMENT
20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

Meridiana General Development Plan Amendment No. 21 (dated November 19, 2021)



GENERAL NOTES:

- Bearing orientation is based on the Texas State Plane Coordinate System of 1983, South Central Zone as determined by GPS measurements.
- The Coordinates shown herein are Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83) and may be brought to surface by applying the following scale factor: 0.99986742185.
- According to the Federal Emergency Management Agency Flood Insurance Rate Map, Brazoria County, Texas, Community Panel No. 480390110K, dated December 30, 2020, the property lies within Zone AE.
- This flood statement does not imply that the property or structures thereon will be free from flooding or flood damage. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. The location of the flood zone was determined by scaling from said FEMA map. The actual location, as determined by elevation contours, may differ. Edminster, Hinton, Russ & Associates, Inc. d/b/a E&A, assumes no liability as to the accuracy of the location of the flood zone limits. This flood statement shall not create liability on the part of Edminster, Hinton, Russ & Associates, Inc. d/b/a E&A.
- B.C.C.F. indicates Brazoria County Clerk's File.
B.L. indicates Building Line.
D.E. indicates Drainage Easement.
M.H. indicates Manhole.
P.O. indicates Right-of-Way.
P.A.E. indicates Permanent Access Easement.
P.O.B. indicates Point of Beginning.
P.U.E. indicates Public Utility Easement.
P.V.T. indicates Private.
R. indicates Radius.
R.O.W. indicates Right-Of-Way.
S.S.E. indicates Sanitary Sewer Easement.
S.T.M.S.E. indicates Storm Sewer Easement.
U.E. indicates Utility Easement.
V.O.L. indicates Volume.
W.L.E. indicates Water Line Easement.
X indicates change in street name.
- The property subdivided in the foregoing plat lies in Brazoria County, the City of Manvel, Brazoria County M.U.D. No. 56, Avon Independent School District, and Brazoria County Drainage District #5.
- Property within the boundaries of this plat and adjacent to any drainage easement, ditch, gully, creek, or natural drainage way shall hereby be restricted to keep such drainage ways and easements clear of fences buildings, plantings, and other obstructions.
- The Developer/Homeowners' Association/Municipal Utility District shall be responsible for maintenance of all reserves.
- The terms and conditions of Ordinance numbers 2009-0-03, 2009-0-04, and 2009-0-05 of the City of Manvel, Texas dated February 23, 2009, may affect this plat.
- All sidewalks shall be constructed in accordance with City of Manvel Ordinance No. 2009-0-04.
- Contour lines shown herein are based on the NGS Benchmark E 306 being noted herein.
- No residential, commercial, or industrial structure, other than structures necessary to operate the pipeline, shall be erected or moved to a location nearer than 50 feet to any pipeline, except for low pressure distribution system pipeline as defined in section 62-2, as per Manvel Ordinance Sec. 62-1165.
- Preliminary, this document shall not be recorded for any purpose and shall not be used or viewed or relied upon as a final survey document.
- Approval of the preliminary plat does not constitute acceptance of the subdivision, but is merely an authorization to proceed with the preparation of the final plat. Approval of the preliminary plat shall expire 12 months after council approval, unless the final plat has been submitted to council for final approval during that time. Upon written request of the subdivider, an extension of time may be given, at the discretion of the council, for a single extension period of six months, provided the subdivider has shown good faith in proceeding to complete the work necessary prior to filing the final plat.
- One foot reserve dedicated to the public in fee as a buffer separation between the side or ends of streets where such streets abut adjacent property, the condition of such dedication being that when the adjacent property is subdivided or re-subdivided in a record plat the one foot reserve shall hereupon become vested in the public for right-of-way purposes and the fee title there shall revert to and revert in the dedicators, his heirs, assigns, or successors.

BRAZORIA COUNTY DRAINAGE DISTRICT NO. 5 NOTES:

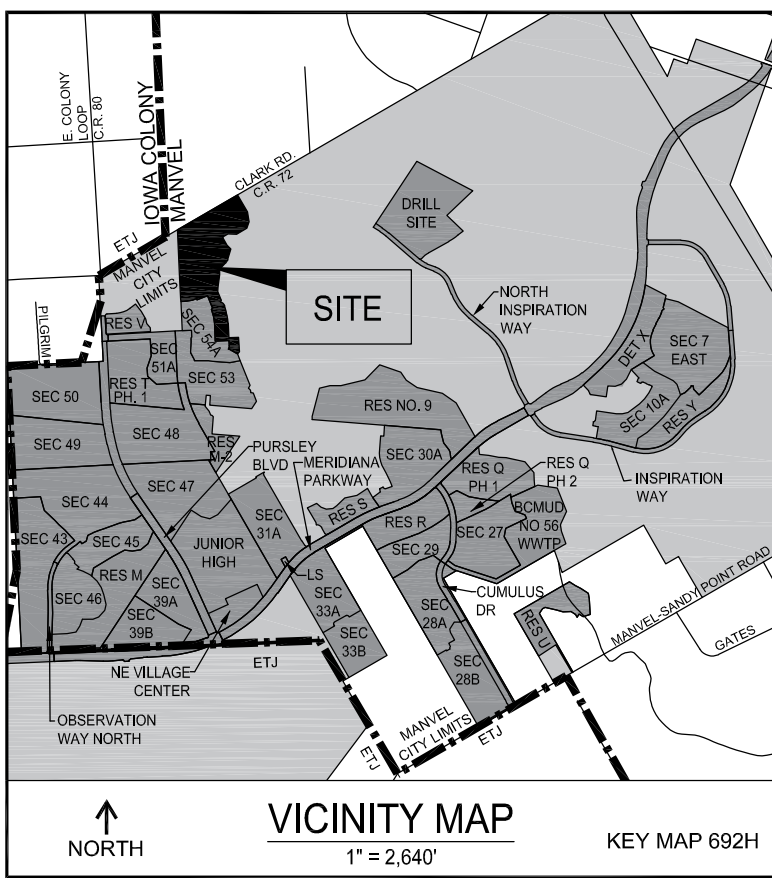
- Slab elevations (finished floor) shall be a minimum of 2 feet above finished grade.
- All drainage easements shown herein shall be kept clear of fences, buildings, plantings and other obstructions to the operation and maintenance of drainage facilities.
- All property shall drain into the drainage easement only through an approved drainage structure.
- All drainage easements and detention pond reserves shown on this plat, will be maintained by the property owners and/or business owners provided, however, and governmental entity have jurisdiction, including, without limitation, Brazoria County, Texas and Brazoria County Drainage District #5, shall have the right, but not the obligation to enter upon the drainage easements to perform maintenance operations at any time after the date hereof.
- The property identified in the foregoing plat lies within Brazoria County Drainage District #5.
- This rural subdivision employs a natural drainage system, which is intended to provide drainage for the subdivision that is similar to that which existed under pre-development conditions. Thus, during large storm events, ponding of water should be expected to occur in the subdivision to the extent it may have prior to development, but such ponding should not remain for an extended period of time.
- Land use within the subdivision is limited to an average imperviousness of no more than 72 percent. The drainage and/or detention system has been designed with the assumption that this average percent imperviousness will not be exceeded. If this percentage is to be exceeded, a replat and/or redesign of the system may be necessary.
- Other than shown herein, there are no pipeline easements or pipelines within the boundaries of this plat.
- All storm water drainage pipes, culverts, tiles or other (includes driveway culverts) will be minimum 24" I.D. or equal.
- Dedicated drainage easement(s) granted to Brazoria County Drainage District #5 for drainage maintenance purposes shall include 45 feet top of bank, plus the sum (footage) of both ditch side slopes and channel bottom and 45 feet of bank on the opposite bank.
- Dedicated ingress/egress accesses are granted to Brazoria County Drainage District #5 (see District Resolution No 2007-06 & 2007-07). Access will be gated and locked with Brazoria County Drainage District #5's lock.
- Prohibited use of "metal" pipe in storm water/sewer applications (See District Resolution No. 2007-08).
- Prohibited use of "rip rap" in storm water/sewer applications. (District Policy).
- Pipelines, utility lines and other crossing under any Brazoria County Drainage District #5 ditch require approval and permitting prior to construction.
- All dedicated storm water drainage and/or access easements to be granted to Brazoria County Drainage District #5 by the property owner will be initiated and recorded, at the property owner's expense, in Brazoria County, Texas with a "Recorded Document Number" affixed to said easement prior to final approval granted by Brazoria County Drainage District #5 Board of Commissioners.
- It will be the property owner's responsibility to verify if any Brazoria County Drainage District # 5 "Dedicated" drainage easements are on or cross their property. If so, the property owner will comply as stated within the recorded easement.
- Project field start-up will start within 365 calendar days from date shown here. Continuous and reasonable field site work is expected. See Brazoria County drainage criteria manual section 1, introduction; Sub-Section 1.5, Plot and Plan approval process, and drainage acceptance procedures; time limit for approval and Brazoria County Drainage District #5 Resolution 2011-1, allowable time(s) and procedures for starting-up approved projects.

THIS IS TO CERTIFY THAT THE PLANNING, DEVELOPMENT AND ZONING COMMISSION OF THE CITY OF MANVEL, TEXAS, HAS RECOMMENDED APPROVAL OF THIS PLAT OF MERIDIANA SECTION 54B IN CONFORMANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE ORDINANCES OF THE CITY OF MANVEL, AS SHOWN HEREON AND AUTHORIZES THE RECORDING OF THIS PLAT THIS _____ DAY OF _____, 2022.

PLANNING, DEVELOPMENT AND ZONING COMMISSION

THIS IS TO CERTIFY THAT THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS, HAS APPROVED THIS PLAT OF MERIDIANA SECTION 54B IN CONFORMANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE ORDINANCES OF THE CITY OF MANVEL, AS SHOWN HEREON AND AUTHORIZES THE RECORDING OF THIS PLAT THIS _____ DAY OF _____, 2022.

CITY COUNCIL



VICINITY MAP
1" = 2,640'
KEY MAP 692H

LOT SIZE TABLE

BLOCK NO.	LOT NO.	LOT AREA (SQ. FT.)	*LOT WIDTH (FEET)
1	1	12,183.37	85.32
	2	10,693.02	71.00
	3	9,835.78	71.00
	4	9,770.15	71.00
	5	9,500.91	71.00
	6	9,805.78	71.00
	7	9,786.25	71.00
	8	9,766.71	71.00
	9	9,747.18	71.00
	10	10,067.60	71.00
	11	10,898.57	71.00
	12	16,829.91	71.00
	13	9,973.35	70.50
	14	9,973.35	70.50
	15	9,658.50	70.50
	16	9,658.50	70.50
	17	9,658.50	70.50
	18	9,658.50	70.50
	19	9,658.50	70.50
	20	9,658.50	70.50
	21	9,658.50	70.50
	22	13,849.18	70.50
	23	18,555.80	70.50
	24	15,757.11	70.50
	25	15,515.91	70.50
	26	12,825.65	87.62
	27	11,210.73	70.00
	28	9,590.00	70.00
	29	9,386.45	70.00
	30	10,265.88	70.00
	31	10,914.30	70.00
	32	11,109.56	70.00
	33	14,145.83	68.75
	34	13,860.65	68.86
	35	10,910.83	71.04
	36	14,734.51	122.99
	37	16,274.54	112.21
	38	13,501.05	70.00
	39	15,379.54	70.00
	40	15,654.51	70.00
	41	14,224.41	70.00
	42	18,641.10	70.00
	43	11,417.52	70.00
	44	9,750.00	75.00
	45	9,409.44	72.64
2	1	12,260.18	89.95
	2	10,909.82	87.95
	3	10,665.17	84.74
	4	9,100.00	70.00
	5	9,100.00	70.00
	6	9,100.00	70.00
3	1	11,080.00	70.00
	2	15,075.49	80.19
4	1	12,824.13	65.08
	2	9,417.47	70.01
	3	9,781.11	65.00
	4	13,492.92	83.00
	5	11,105.57	85.43
	6	15,087.16	121.82

*LOT WIDTH MEASURED AT THE FRONT BUILDING SETBACK LINE.

RESERVE TABLE

RESERVE	RESTRICTIONS	SQ. FT	ACREAGE
A	LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	22,749.23	0.52
B	LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	2,796.19	0.06
C	LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	4,750.46	0.11
D	LANDSCAPE, OPEN SPACE, & UTILITY PURPOSES	1,430.23	0.03
TOTAL		31,726.11	0.73

LINE TABLE

LINE	ANGLE	DISTANCE
L1	N 02°55'52" W	25.21'
L2	S 17°15'53" E	95.67'
L3	N 87°46'17" W	120.48'
L4	S 59°48'12" W	77.80'
L5	S 25°57'24" E	99.27'
L6	S 20°59'30" E	83.63'
L7	S 08°21'30" E	73.84'
L8	S 15°42'36" W	70.49'
L9	S 31°59'10" W	60.30'
L10	S 46°09'36" E	40.23'
L11	S 21°41'39" E	85.62'
L12	S 01°35'53" E	61.18'
L13	S 17°30'56" W	82.63'
L14	S 12°48'25" W	25.00'
L15	S 04°59'54" E	80.06'
L16	S 00°36'57" E	76.93'
L17	S 23°42'42" W	70.75'
L18	N 02°51'03" W	68.88'
L19	N 02°51'03" W	242.14'
L20	N 07°40'16" W	96.26'
L21	N 16°42'51" W	109.14'
L22	N 68°09'06" E	21.84'
L23	N 21°50'54" W	190.00'
L24	S 68°09'06" W	155.00'
L25	N 21°50'54" W	4.31'
L26	S 69°45'46" W	60.00'
L27	S 81°42'01" W	80.21'
L28	S 87°04'08" W	81.04'

CURVE TABLE

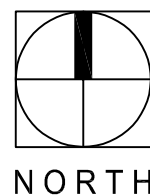
CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	85.28'	85.06'	S 48°31'01" E	81.58'
C2	830.00'	246.12'	S 11°20'45" E	245.23'
C3	85.00'	49.15'	N 13°43'00" E	48.47'
C4	470.00'	13.22'	N 21°02'34" W	13.22'

OWNER CONTACT INFORMATION

GR-M1, LTD., A TEXAS LIMITED PARTNERSHIP
1602 AVENUE D, STE. 100
KATY, TX 77493
832-916-2162

BENCHMARK(S):

NGS MONUMENT # E 306 DISK SET IN TOP OF CONCRETE MONUMENT, LOCATED 2.0 MILES WEST OF MANVEL, 2 MILES WEST ALONG THE GULF, COLORADO AND SANTA FE RAILWAY FROM THE STATION AT MANVEL, BRAZORIA COUNTY, 0.2 MILE WEST OF A CULVERT ROAD CROSSING, 5-1/2 FEET NORTHWEST OF MILE POLE 38, 39 FEET SOUTH OF THE SOUTH RAIL, 33 FEET NORTH OF THE CENTERLINE OF A DIRT ROAD, 6.7 FEET NORTH OF THE RIGHT-OF-WAY FENCE, 3 FEET WEST OF A WHITE WOODEN WITNESS POST AND SET IN THE TOP OF A CONCRETE POST ABOUT FLUSH WITH THE GROUND.
ELEV = 52.00 (NAVD '88) 1991 ADJUSTMENT



10' 150' 100' 1200'
SCALE: 1"=100'

Meridiana Section 54B Preliminary Plat

A Subdivision of 21.70 acres out of the Oliver Hall Survey, A-203, City of Manvel, Brazoria County, Texas.

59 Lots, 4 Blocks and 4 Reserves

Owner: GR-M1, LTD., a Texas Limited Partnership

January 31, 2022



ENGINEERING THE FUTURE SINCE 1936

EHRA JOB NO.
081-011-54-02

No warranty or representation of intended use, design or proposed improvements are made herein. All Plans for land or facilities are subject to change without notice.

10011 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.784.4500
WWW.EHRAINCO.COM
TBPE No. F - 726
TBPLS No. 10092300

Land Use Table		
Use	Gross Area	%
Single Family (SF)	+/- 941 Ac.	57%
Patio Home (PH)	+/- 55 Ac.	3%
Townhome (TH)	+/- 36 Ac.	2%
Village Center (VC)	+/- 38 Ac.	2%
Commercial (C)	+/- 13 Ac.	1%
Institutional (I)	+/- 73 Ac.	4%
Rights-of-Way*	+/- 99 Ac.	6%
Parks & Open Space (P-OS)	+/- 408 Ac.	25%
Drill Site		
Totals	+/- 1,663 Ac.	100%
* Includes proposed major thoroughfares, collectors, and neighborhood collectors.		

Legend

Private Gated Section

Public Section

Divided or Boulevard Entry
(See Note 1)

Standard Entry
(See Note 2)

- Notes**
1. A divided or boulevard entry consisting of two (2) 20-foot wide travel lanes separated by a median having a minimum width of 14 feet shall be considered two points of access.

2. A standard entry is the right-of-way width determined by Table 2 (Page 17) or as otherwise stated in the adopted O-PUD document.

3. Public sections may become private gated sections without additional consideration. Road connections between private gated sections and public sections shall not be required. This note shall not apply to Section 20 and Section 26 as identified on this document.

4. The Clark Road ingress/egress from Section 20 and S Masters Road ingress/egress from Section 26B shall maintain a minimum public right-of-way width of 60-feet with no parking.

THIS GENERAL DEVELOPMENT PLAN APPROVED BY THE CITY OF MANVEL PLANNING, DEVELOPMENT, AND ZONING COMMISSION ON _____

PLANNING, DEVELOPMENT AND ZONING COMMISSION



GDP AMENDMENTS	
Amendment #1 Approved:	05/18/2009
Amendment #2 Tabled:	06/25/2018
Amendment #3 Tabled:	07/09/2018
Amendment #4 Tabled:	07/23/2018
Amendment #5 Approved:	10/09/2018
Amendment #6 Approved:	10/22/2018
Amendment #7 Approved:	11/26/2018
Amendment #8 Approved:	01/28/2019
Amendment #9 Approved:	05/13/2019
Amendment #10 Not Approved:	06/10/2019
Amendment #11 Approved:	07/08/2019
Amendment #12 Not Approved:	08/12/2019
Amendment #13 Approved:	09/09/2019
Amendment #14 Approved:	12/09/2019
Amendment #15 Approved:	02/24/2020
Amendment #16 Approved:	11/09/2020
Amendment #17 Approved:	12/14/2020
Amendment #18 Not Approved:	04/12/2021
Amendment #19 Not Approved:	06/14/2021
Amendment #20 Withdrawn:	11/16/2021



Meridiana General Development Plan: Amendment #21

Brazoria County, TX

November 19, 2021

SCALE: 1" = 600'



10211 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.368.4500
WWW.EHRAINC.COM
TYPE No. F-726
TGPL No. 10092300

EHRA JOB NO.
081-011-150

No warranty or representation of intended use, design or proposed improvements are made herein. All plans for land or facilities are subject to change without notice.

ORDINANCE NO. 2022-O-06

AN ORDINANCE OF THE CITY OF MANVEL, TEXAS, AMENDING CHAPTER 50. *PLANNING AND DEVELOPMENT*, ARTICLE III. *COMPREHENSIVE PLAN*, BY APPROVING THE 2022 MASTER WATER PLAN UPDATE DOCUMENT AS THE 2022 MASTER WATER PLAN; AMENDING SECTION 50-54. *MASTER WATER PLAN* INTEGRATING THE CITY'S 2022 MASTER WATER PLAN INTO THE CITY'S COMPREHENSIVE PLANS; PROVIDING FOR CONFORMITY OF ALL REGULATIONS TO THE MASTER WATER PLAN; PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 PER DAY FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF; AND PROVIDING FOR SEVERABILITY; AND PROVIDING A SEVERANCE CLAUSE AND EFFECTIVE DATE.

WHEREAS, in 2017 the City of Manvel commissioned HDR, Inc. with the task of developing a master water plan for the city; and

WHEREAS, the 2017 Master Water Plan prepared by HDR, Inc. was approved by the City and adopted and integrated into Chapter 50 of The City Code as a plan and policy for the city; and

WHEREAS, in 2020 the city commissioned an updated master water plan to be prepared by HDR, Inc.; and

WHEREAS, the new 2022 Master Water Plan update is now in final form and has been presented to the City for adoption; and

WHEREAS, the City Council hereby adopts the new 2022 Master Water Plan and integrates it into Chapter 50 of The City Code as a plan and policy for the city; **now, therefore,**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS:

Section 1. Chapter 50 of the Code of Ordinances of the City of Manvel is hereby amended by adding a new section 50-54. *Master water plan* in Article III to read and provide as follows:

“CHAPTER 50. PLANNING AND DEVELOPMENT

...

ARTICLE III. COMPREHENSIVE PLAN

...

Sec. 50-54. Master water plan.

(a) The city council hereby adopts the [2017] **2022** Master Water Plan (“Master Water Plan”), a true and correct copy of which shall remain on file in the office of the city secretary. The Master Water Plan shall be the plan and policy for water matters within the city and, to the extent permitted by law, the extra-territorial jurisdiction of the City of Manvel.

(b) All water and related regulations and requirements of The City Code, including, but not limited to, Chapter 62. *Subdivisions*, shall conform to the Master Water Plan. If there is any conflict between an ordinance, rule or regulation of The City Code and the Master Water Plan, the Master Water Plan shall control.”

Section 2. **Penalty.** Any person who shall intentionally, knowingly, recklessly, or with criminal negligence violate any provision of this chapter shall be deemed guilty of a misdemeanor and, upon conviction, shall be fined in an amount not to exceed \$2,000.00. Each day of violation shall constitute a separate offense.

Section 3. **Repealer.** All ordinances or parts of ordinances inconsistent or in conflict herewith, are, to the extent of such inconsistency or conflict, hereby repealed.

Section 4. **Severability.** In the event any clause, phrase, provision, sentence, or part of this Ordinance or the application of the same to any person or circumstance shall for any reason be adjudged invalid or held unconstitutional by a court of competent jurisdiction, it shall not affect, impair, or invalidate this Ordinance as a whole or any part or provision hereof other than the part declared to be invalid or unconstitutional; and the City Council of the City of Manvel, Texas, declares that it would have passed each and every part of the same notwithstanding the omission of any such part thus declared to be invalid or unconstitutional, whether there be one or more parts.

PASSED AND APPROVED on first reading this _____ day of _____,
2022.

PASSED, APPROVED, AND ADOPTED on second and final reading this
_____, 2022.

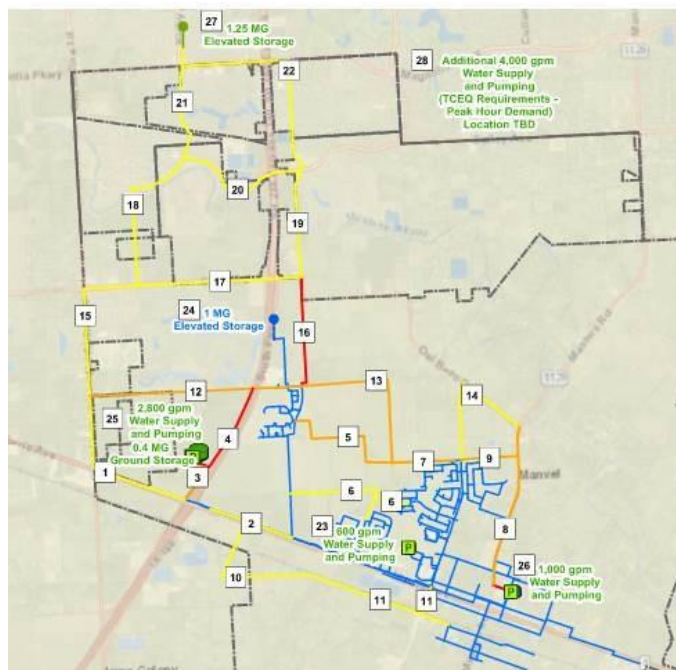
Debra Davison, Mayor

Attest:

Tammy Bell, City Secretary

APPROVED AS TO FORM:

Robert Gervais, City Attorney



City of Manvel

2022 Master Water Plan

City of Manvel, Texas
December 10, 2021
Updated February 3, 2022

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2022 Master Water Plan

Prepared for:



City of Manvel, Texas

Prepared by:



HDR Engineering, Inc.
TBPE Firm No. F-754

December 10, 2021
Updated February 3, 2022



February 3, 2022

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Acronyms/Abbreviations

acft/yr	acre-feet per year
BRA	Brazos River Authority
CIP	capital improvements plan
City	City of Manvel
ESFU	equivalent single-family unit
gal	gallons
gal/day or gpd	gallons per day
gpm	gallons per minute
HDR	HDR Engineering, Inc.
GCWA	Gulf Coast Water Authority
kgal	thousand gallons
mg	million gallons
mgd	million gallons per day
MUD	municipal utility district
O&M	operations and maintenance
TCEQ	Texas Commission on Environmental Quality
TWDB	Texas Water Development Board
UCM	Uniform Cost Model
yrs	years

1 Introduction

1.1 Background

HDR prepared a master water plan for the City of Manvel in 2017. Since that master plan, the City has experienced substantial growth and anticipates significant additional growth, through the connection of municipal utility districts (MUD) to the City's distribution system and organic growth through new developments.

1.2 Purpose and Goals

This master plan update includes:

- Evaluation of an appropriate equivalent single-family unit (ESFU) daily water demand factor,
- Update to the City's water distribution system hydraulic model,
- Forecast of demands expected through 2050,
- Review of current and future system capacities (supply, storage and booster pumping) with regard to TCEQ requirements,
- Review and update of capital projects recommended in the 2017 master water plan,
- Development of recommended future water supplies, and
- Recommendation of new CIP projects.

This master plan update is intended to serve as a roadmap for the City to use to anticipate improvements needed to the water distribution system, and the projected timing associated with the needs to serve future growth.

2 Existing System Summary

The City's current water distribution system primarily consists of the School Road Water Plant (which consists of two groundwater wells, ground storage tanks, hydropneumatic tanks, and booster pumps). The City has no elevated storage in the existing system but is pursuing design of a 1 million gallon (mg) elevated storage tank near the Del Bello development that is anticipated to be constructed in 2022.

The Manvel Town Center retail development is also under construction and will include new water production and distribution facilities, including new groundwater wells, ground storage tanks and booster pumps.

Manvel High School is currently served by an isolated distribution system, supplied by a dedicated groundwater supply (referred to as the Maverick water plant), which is owned and operated by the Alvin Independent School District. The City intends to acquire these water facilities and incorporate them into the City's overall water system.

3 Water Model Update and Analysis

3.1 Water Distribution System Updates

The City's existing water system hydraulic model was developed in the Innovyze InfoWater modeling platform¹, which was also utilized for this model update. This update included an update of the distribution pipeline network, water plants, and demand allocation based on updated customer billing data.

3.1.1 Network Update

The water distribution pipeline network was updated with current GIS information, which included the addition of the Del Bello and Bluewater developments. The model connectivity was evaluated and updated based on the location and intersection of water pipes included in the City's GIS database.

3.1.2 School Road Water Plant

The School Road Water Plant was updated in the model based on drawings and information provided by the City. The facilities at this plant include:

- Two groundwater wells with a combined capacity of 1,100 gallons per minute (gpm)²,
- Three ground storage tanks (211,000 gallons, 125,000 gallons and 125,000 gallons), and
- Three 1,000 gpm capacity booster pumps.

3.1.3 Maverick Water Plant

The Maverick Water Plant at Manvel High School was updated in the model based on GIS and information provided by the City. The water distribution facilities at this plant include:

- One 200 gpm groundwater well,
- Two 300 gpm booster pumps, and
- Two 66,000-gallon ground storage tanks.

3.1.4 Proposed Manvel Town Center Water Plant

The Manvel Town Center Water Plant was updated in the model based on drawings and information provided by the City. The facilities proposed for this plant include:

- One 1,200 gpm groundwater well,
- Two 1,000 gpm and one 500 gpm booster pumps, and
- One 244,000-gallon ground storage tank.

¹ <https://www.innovyze.com/en-us/products/infowater>

² Groundwater wells pump into ground storage tanks and are not included in the water system model.

3.2 Model Demand Allocation

3.2.1 Billing Information

The modeled demands were updated with City-provided monthly billing information from November 2016 to December 2019. The water billing data usage amounts were averaged to estimate the system average demand, and the addresses were used to spatially geolocate the accounts in the City's system. Spatial allocation tools within the modeling software were used to apply the average demands to the nearest junction in the modeled network.

3.2.2 Peaking Factors

For the purposes of estimating maximum-day demands, a peaking factor of 2.4 times the average-day demand was used. For estimating peak-hour demands, a peaking factor of 1.85 times the maximum-day demand was used. Once the Del Bello Lakes elevated storage tank is constructed, the required peak-hour demand peaking factor is reduced to 1.25 times the maximum-day demand. Both the maximum-day and peak-hour factors were based on TCEQ guidance in the absence of daily production data.

3.3 Model Analysis

The updated hydraulic model was utilized to analyze the City's water system under maximum-day demand conditions to identify potential deficiencies in the existing system.

Consistent with the hydraulic criteria developed in the 2017 master plan, these criteria were applied to establish the trigger point for when an asset is considered undersized. Distribution pipelines with model-predicted head losses greater than five feet per 1,000 feet of pipe were recommended for upsizing.

4 Equivalent Single-Family Unit (ESFU) Demand and Growth Projections

4.1 ESFU Demand Analysis

Manvel currently uses a value of 360 gallons/day per equivalent single family unit (ESFU) for water planning purposes, and currently serves approximately 2,000 ESFUs. To confirm the reasonableness of this demand factor, HDR identified planning numbers used by other cities and agencies in Texas, including Pearland, Missouri City, Angleton, and Houston, as shown in Table 4-1.

Manvel's planning value of 360 gallons/day per ESFU is consistent with the values utilized by other cities in Texas. For the purposes of this master plan update, this value is primarily used to assign demands within the model.

Table 4-1. ESFU Demand Comparison

City	ESFU Demand (gal/day)
Angleton	330
Houston	340
Pearland	350
Round Rock	450
Austin	500
Missouri City	520
Manvel	360

4.2 Municipal Utility District (MUD) ESFU Projections

Much of the growth anticipated in the next 20 years is generated from MUDs that currently have their own groundwater supply and water distribution systems, but anticipate connecting to the City's distribution system once they reach build-out.

The projections of when these MUDs will connect to the City, along with their anticipated ESFU count at the time of connection, are listed in Table 4-2.

Table 4-2. MUD ESFU Summary

MUD	Projected Connection Year	ESFU Count at Connection	ESFU Count in 2030	ESFU Count in 2040
Manvel Town Center (MUD 42)	2023	150	900	1,950
Presidio (MUD 30)	2025	143	858	2,145
Rodeo Palms (MUD 29)	2040	3,000	0	3,000
MUD 47	2040	600	0	600
Southfork (MUD 25)	2040	1,355	0	1,370
2030 & 2040 Total ESFU Count			1,758	9,065

By 2050, the MUDs listed below are anticipated to connect to the City's system based on the ESFU projections listed below. Because these MUDs will not be connected in 2040, their projected demands were not included in the 2040 analysis.

- Sedona Lakes (MUD 1): 1,313 ESFUs
- Meridiana (MUDs 55, 56 and 57): 3,500 ESFUs
- Pomona (MUD 39): 3,020 ESFUs

4.3 City Growth ESFU Projections

In coordination with City staff and another consultant that is developing the City's wastewater master plan update and impact fee study, 2030 and 2040 projections were developed for growth within the City that is not associated with a MUD-projected connection. This primarily includes growth in the City Center by 2030, plus additional growth in the City West, Central and East by 2040.

The City is projected to serve 12,729 ESFUs in 2030 and 22,785 ESFUs in 2040, in addition to the MUD ESFUs shown in Table 4-2.

4.4 Combined MUD and City ESFU Projections

The projected ESFUs from MUDs connecting to the City's system were added to the projected ESFUs for City growth to obtain the total projected ESFU count to develop future demand scenarios for modeling, and are summarized in Table 4-3.

Table 4-3. Average-Day and Maximum-Day Demands Based on Combined MUD and City ESFUs

Year	MUD ESFUs	City ESFUs	Total ESFUs	Average Day Demand (mgd) ¹	Maximum-Day Demand (mgd) ²
2030	1,758	12,729	14,487	5.22	12.52
2040 ³	9,065	22,785	31,850	11.47	27.53

1. Calculated based on 360 gal/day per ESFU.

2. Calculated based on Average-Day Demand x 2.4.

3. ESFUs represent total ESFUs in 2040, not incremental ESFUs added between 2030 and 2040.

These average and maximum-day demand projections were loaded into future condition hydraulic model scenarios. The future MUD demands were spatially distributed according to the MUD location. The future City demands were spatially distributed according to the locations of projected developments, as predicted for the wastewater master plan.

5 TCEQ Requirements

Chapter 290 of the Texas Administrative Code includes requirements for the supply and distribution of public water systems as regulated by the Texas Commission on Environmental Quality (TCEQ). These requirements are summarized in Table 5-1.

HDR compared the City's current storage and booster pumping capacity to the TCEQ requirements, as well as what will be required in 2030 and 2040 based on the connection and ESFU projections, as summarized in the following sections. ESFUs are calculated based on 1 ESFU per single family residential connection, and 5 ESFUs per commercial connection. A summary of ESFUs and connections is shown in Table 5-2.

Table 5-1. TCEQ Requirements for Public Water Systems

TCEQ Parameter	TCEQ Requirement
Total Storage (Combined Ground and Elevated Storage)	200 gallons per connection
Elevated Storage	For less than 2,500 connections: 100 gallons per connection, or hydropneumatics storage of 20 gallons per connection
	For more than 2,500 connections: 100 gallons per connection
Booster Pumping Capacity (if elevated storage is less than 200 gallons per connection)	The lesser of: • 2 gallons/minute per connection • Minimum of 1,000 gallons/minute and ability to meet peak-hour demands with the largest pump out of service¹

1. The peak-hour demand with the largest pump out of service criteria is less than 2 gallons/minute per connection, and is the controlling criteria used for projecting future booster pumping requirements.

Table 5-2. Total Projected ESFUs and Connections

Year	Connections	ESFUs
2020	1,104	1,584
2030	12,683	14,487
2040	28,240	31,850

5.1 Elevated Storage

The City currently has less than 2,500 connections and elevated storage is not required. The City does not currently have any elevated storage, but a 1 million gallon elevated storage tank near the Del Bello Lakes development is currently being designed. Table 5-3 summarizes the projected elevated storage needed to meet TCEQ requirements in 2030 and 2040.

By 2030, accounting for the 1 mg Del Bello tank, it is anticipated that an additional 268,342 gallons of elevated storage would be required to provide 100 gallons of elevated storage per connection. Because growth will continue after 2030, the analysis for subsequent years assumes that 1 mg of storage will be constructed to meet this requirement.

By 2040, in addition to the Del Bello tank and the 1 mg storage to be added by 2030, it is anticipated that an additional 532,200 gallons of elevated storage (total of 2,532,000 gallons) will be required to provide 100 gallons of elevated storage per connection. Similarly, it is assumed that a 1 mg elevated tank will be built to meet this requirement to accommodate additional growth in the years immediately following 2040.

Table 5-3. TCEQ Public Water System Requirements Based on Projected Connections – Elevated Storage

Year	Connections	Required Elevated Storage (gallons) ¹	Current Elevated Storage (gallons)	Elevated Storage Surplus/(Deficit) (gallons) ²	Recommended New Elevated Storage (gallons)
2020	1,104	0	0	0 ³	0
2030	12,683	1,268,400	1,000,000 ⁴	(268,400)	1,000,000
2040	28,240	2,824,000	2,000,000 ⁵	(824,000)	1,000,000

1. 100 gallons per connection.
2. Represents the minimum volume of total storage to add to the system to meet TCEQ requirements based on the total connections projected for that year.
3. Elevated storage is not required for systems with less than 2,500 connections.
4. Represents the elevated tank currently under design near Del Bello Lakes.
5. Represents the Del Bello Lakes tank and the tank projected to be added by 2030.

5.2 Total/Ground Storage

Once the City exceeds 2,500 connections and adds elevated storage to the system at a minimum of 100 gallons/connection, ground storage makes up the remainder of the total storage volume required by TCEQ, at 200 gallons/connection. It is anticipated that ground storage would be added in lieu of more expensive elevated storage to meet the total storage requirements.

The City's ground storage currently consists of 425,000 gallons at the School Road plant and 132,000 gallons at the Maverick Water Plant.

By 2030, the following MUDs will connect to the system and are expected to provide the following ground storage volumes:

- MUD 42 (Manvel Town Center): 644,000 gallons (first phase of 244,000 gallons)³,
- MUD 30 (Presidio): 429,000 gallons.

With the addition of these MUDs, by 2030, the City's ground storage tank volume is anticipated to be 1,630,000 gallons.

Three additional MUDs are forecasted to connect to the City's system between 2030 and 2040:

- MUD 29 (Rodeo Palms): 600,000⁴ gallons (currently 300,000⁵ gallons)
- MUD 25 (Southfork): 562,000 gallons⁶
- MUD 47

³ Source: Construction Plans titled "Manvel Town Center Water Plant", 4/2/2019. Volume of second ground storage tank not shown; assumed to be 400,000 gallons.

⁴ Source: TCEQ Drinking Water Watch Summary

⁵ Source: TCEQ Drinking Water Watch Summary

⁶ Source: TCEQ Drinking Water Watch Summary

In addition, approximately 10,600 new connections from new City developments are forecasted between 2030 and 2040. In addition to the 1,630,000 gallons of ground storage expected to be available in 2030, an additional 500,000 gallons of ground storage is anticipated to be needed by 2040 to serve these new connections. Table 5-4 summarizes the projected surplus in total storage to meet TCEQ requirements in 2030 and 2040.

Table 5-4. TCEQ Public Water System Requirements Based on Projected Connections – Ground Storage

Year	Connections	Required Total Storage (gallons)	Current Ground Storage (gallons)	Available Elevated Storage (gallons)	Total Available Storage (gallons)	Total Storage Surplus/ (Deficit), (gallons) ¹
2020	1,104	220,800 ²	557,000	0	557,000	336,200
2030	12,683	2,536,700	1,630,000 ³	2,000,000 ⁴	3,630,000	1,093,300
2040	28,240	5,648,000	2,792,000 ³	3,000,000 ⁴	5,792,000	144,000

1. Represents the volume of ground storage to add to the system to meet TCEQ requirements based on the total connections projected for that year.
2. 200 gallons per connection required with no elevated storage.
3. Includes 1,073,000 gallons of storage anticipated from connection of MUD systems by 2030.
4. Based on the recommended additional elevated storage described in Section 5.1.

5.3 Booster Pumping

Currently, the City has 3,000 gpm of total booster pumping capacity at the School Road water plant and 600 gpm of total booster pumping capacity at the Maverick water plant, which is sufficient to meet the estimated peak-hour demand of 1,759 gpm, based on the estimated average-day demand of 0.57 million gallons per day (mgd), maximum-day demand of 1.37 mgd and a peaking factor of 1.85 over maximum-day.

By 2030, the following MUDs will connect to the system and are expected to provide the following booster pumping capacity:

- MUD 42 (Manvel Town Center): 5,300 gpm (first phase of 2,500 gpm)⁷,
- MUD 30 (Presidio): 2,381 gpm⁸.

In addition, by 2030, the Maverick plant at Manvel High School is anticipated to be expanded from 600 gpm to 1,200 gpm.

By 2030, it is anticipated that an additional 4,000 gpm of booster pumping capacity, in addition to the booster pumping facilities added to the system through MUD connections, will be required to meet peak-hour demands of 10,866 gpm with the largest pump out of service. Table 5-5 summarizes the projected booster pumping needs to meet TCEQ requirements in 2030 and 2040.

⁷ Source: Construction Plans titled "Manvel Town Center Water Plant", 4/2/2019. Volume of second ground storage tank not shown; assumed to be 400,000 gallons.

⁸ Source: TCEQ Drinking Water Watch Summary

Three additional MUDs are forecasted to connect to the City's system between 2030 and 2040:

- MUD 29 (Rodeo Palms): 3,330 gpm (currently 2,400 gpm)
- MUD 25 (Southfork): 4,000 gpm
- MUD 47

In addition, approximately 10,600 new connections from new City developments are forecasted between 2030 and 2040. By 2040, it is anticipated that an additional 10,000 gpm of booster pumping capacity will be required to meet peak-hour demands of 23,888 gpm with the largest pump out of service.

Table 5-5. TCEQ Public Water System Requirements Based on Projected Connections – Booster Pumping

Year	Connections	Required Total Booster Pumping Capacity (gpm) ^{1,2}	Current Total Booster Pumping Capacity (gpm) ¹	Total Booster Pumping Capacity Surplus/ (Deficit) (gpm) ³
2020	1,104	1,759	3,600	1,841
2030	12,683	10,866	16,881 ⁴	(2,387)
2040	28,240	23,888	21,598 ⁴	(13,755)

1. Represents total booster pumping capacity. Firm capacity is calculated with the largest pump out of service.
2. Equivalent to peak-hour demand.
3. Represents the total booster pumping capacity to add to the system to meet TCEQ requirements based on the total connections projected for that year.
4. Includes 7,681 gpm of MUD booster pumping facilities (MUDs 30 and Manvel Town Center).
5. Includes 15,011 gpm of MUD booster pumping facilities (MUDs 25, 29, 30 and Manvel Town Center).

6 Water Supply Options

Growth within the City limits will occur within the service areas of the various MUDs, but also by development served by the City's water system. The City's current groundwater supplies combined with the supplies from the MUDs when the City takes over operations will be insufficient to meet future water demands and the City will need to develop additional sources of supply. The following section describes future annual water demands projected through 2070 for the City, describes current supplies, and presents projected supply shortages if current supplies are not supplemented with new supplies. Several alternatives were evaluated to address the City's future supply shortages.

Projected demands, supplies, and shortages were evaluated on the basis of both annual volumes and maximum-day requirements. In water supply planning annual demands and supplies are often expressed as volumes of acre-feet per year (acft/yr). An acre-foot is the volume of water required to cover an acre to one foot of depth. Annual volumes are equivalent to average-day demands and supplies when expressed in terms of mgd – one mgd equals 1,120 acft/y. For this report, annual water demands, supplies and shortages are expressed in average-day units of mgd.

Municipalities do not supply water only on an average-day basis and need to have supplies available at rates equivalent to their maximum-day demands, which are roughly twice average-day demands. This analysis includes both annual volumes (average-day demands) and maximum-day demands.

6.1 Water Demands

Future counts of ESFUs and associated average-day water demands are presented for years 2030 and 2040 in Section 4.4. These projections are expanded to include annual projections from 2022 through 2070, as shown in Figure 6-1. Consistent with the demands projected for the water system planning, an average-day water use value of 360 gallons per day (gpd), or 0.25 gpm, was assigned to each ESFU. This is based on TCEQ criteria of 0.6 gpd per connection for required pumping capacity for public water systems. This TCEQ criteria assumes that maximum-day demands are 2.4 times average-day demands ($0.6 \text{ gpm} \div 2.4 = 0.25 \text{ gpm}$). This value is conservative compared to the City's current value of roughly 187 gpd per ESFU, but as the City grows and its types of water users diversify, water use per ESFU is expected to increase. For purposes of projecting maximum-day water demands for water supply planning, a smaller factor of 2.0 is used to estimate maximum-day demands to closely approximate maximum-day demands for communities similar to Manvel.

6.2 Current and Future (MUD) Supplies

For water supply planning purposes, Table 6-1 presents the following supplies considered to be available currently to the City.

Table 6-1. Current City Supplies

Water Plant	Well Capacity (gpm)	Average-Day Supply (mgd)	Maximum-Day Supply (mgd)
School Road	1,100	0.79	1.58
Maverick	180	0.13	0.26
Town Center	1,200	0.86	1.73
Total	2,480	1.79	3.58

MUDs are anticipated to increase available supplies as the City acquires them upon each MUD reaching buildout conditions. Table 6-2 presents the MUD supplies and the year anticipated for build-out and City acquisition.

Table 6-2. Supplies Projected from MUDs Expected to Connect the City System

MUD	Projected Connection Year	Estimated Supply at Buildout – Average Day (mgd)	Estimated Supply at Buildout – Maximum-Day (mgd)
Presidio (MUD 30)	2025	0.77	1.54
Rodeo Palms (MUD 29) and MUD 47	2040	1.08	2.16
Southfork (MUD 25)	2040	1.45	2.89
Meridiana (MUD 55, 56, 57)	2050	1.26	2.52
Sedona Lakes (MUD 1)	2050	1.83	3.65
Pomona (MUD 39)	2050	1.09	2.18
Total Supplies from MUDs		7.47	14.94

The City has also contracted with the Brazos River Authority (BRA) for 3,100 acft/yr of supply from the BRA's Brazos River system of reservoirs. The BRA supply is not currently a potable supply.

6.3 Projected Shortages

Projected City and MUD demands and supplies are shown in Figure 6-1. This demonstrates the increases in supplies available to the City as each MUD is connected to the City over time. The difference between the water demands and total supplies

represents supply shortages for which new supplies need to be developed, as shown in Figure 6-2. Generally, MUD supplies are equal to the projected demands at buildout, but in some cases MUD supplies are projected to exceed the MUDs demands resulting in a decrease in average-day supply shortages when a MUD connects. Shortages are anticipated to begin as early as 2027, increasing to 2.66 mgd (2,977 acft/yr) in 2030, 6.38 mgd (7,149 acft/yr) in 2040, and 8.10 mgd (9,072 acft/yr) in 2049. In 2050, several MUDs are projected to be connected and supplies from those MUDs are anticipated to reduce shortages to 6.94 mgd (7,773 acft/yr) in 2050 through 2070.

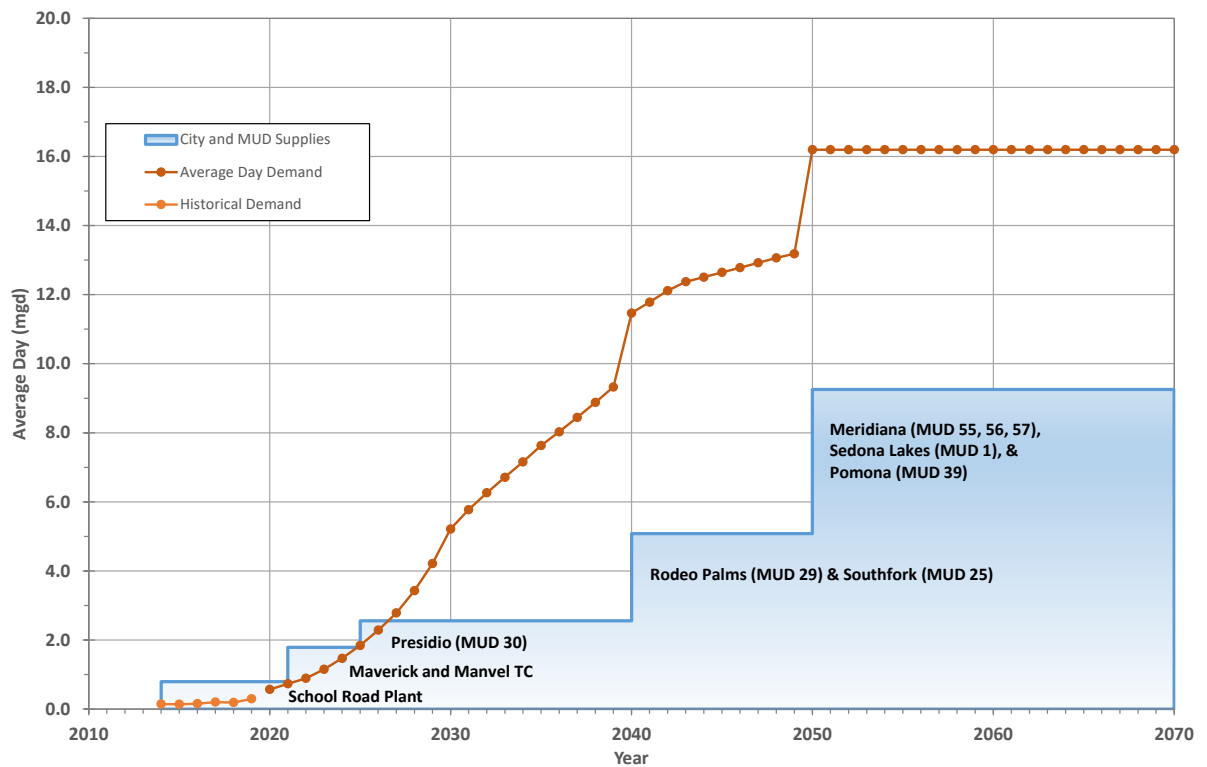


Figure 6-1. Average-Day Demands and Total Supplies for the City of Manvel

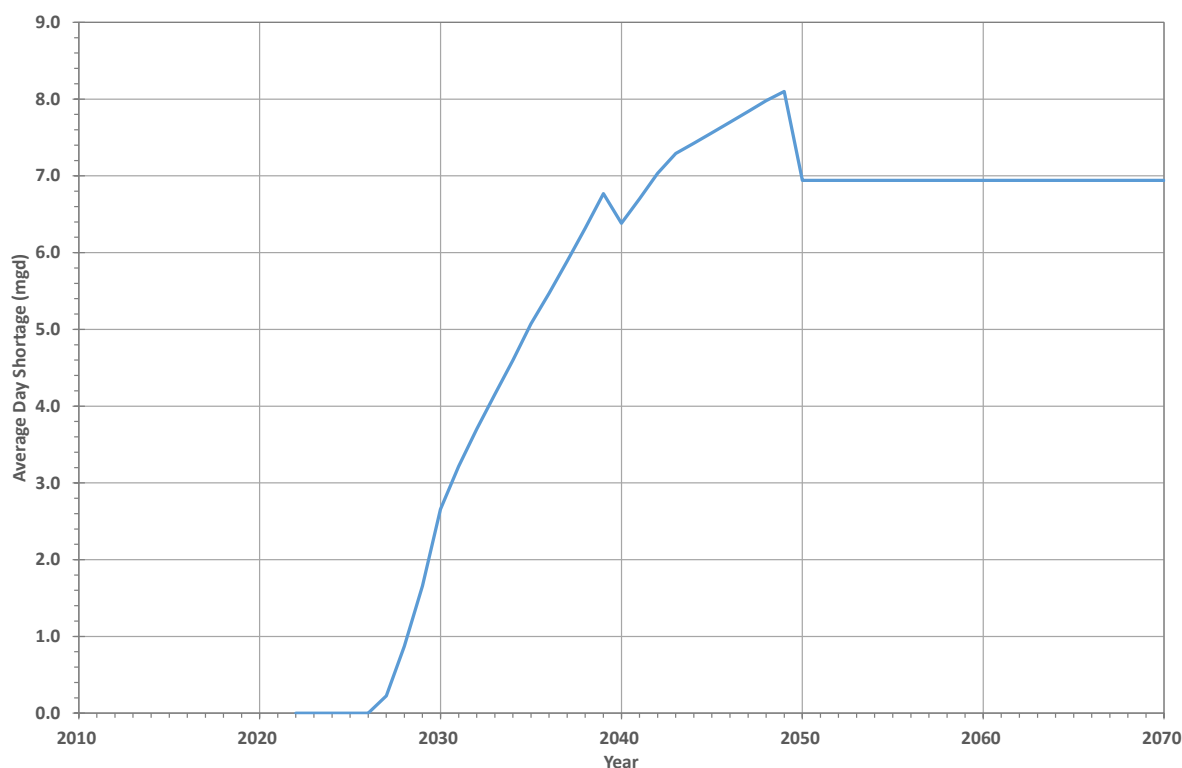


Figure 6-2. Supply Shortages Projected for the City of Manvel

6.4 Future Supply Options

During discussion with City staff, three primary water supply options were identified to consider for future water supplies: Groundwater and two surface water options. Reuse of the City's wastewater was also considered but is not considered economically viable at this time given the relatively small amount of wastewater currently available from a centrally located wastewater plant. However, reuse should be considered in the future as potential wastewater supplies increase.

6.4.1 Groundwater

Groundwater from the Gulf Coast Aquifer System has long been relied upon by municipalities in the area and can be developed relatively inexpensively to provide a long-term reliable water supply. An individual well is anticipated to yield approximately 1,200 gpm, providing 1.73 mgd of maximum-day supply. Assuming a well would be available 95% of the time (5% downtime for maintenance), this would provide roughly 0.82 mgd of average-day supply (920 acft/yr). In order to meet the projected water demands in 2030 (2.66 mgd) and 2040 (6.38 mgd), four new wells would be required by 2030 and eight new wells in 2040. That level of groundwater use concentrated in the Manvel area likely would result in substantial declines in groundwater levels which would reduce well yields and potentially accelerate subsidence. Although no subsidence regulations exist in the area, groundwater use should be increased judiciously to preserve the resource as long as possible.

Based on bids tabulated recently for the Manvel Town Center water plant, a new 1,200 gpm well, 250,000 gal GST, and booster pump would cost approximately \$4.1 million. Annual Operation and Maintenance (O&M) costs were estimated using data from the Uniform Cost Model (UCM) developed by the Texas Water Development Board (TWDB) for use in regional and state water planning. Financing is assumed to be 3.5% for 20 years.

Table 6-3. Estimated Costs for a new Groundwater Plant

Average-Day Capacity (mgd)	Cost (\$ million)	Debt Service (20 yrs @ 3.5%)	O&M (TWDB UCM)	Total Unit Cost (\$/kgal)
0.82	\$4.1	\$288,500	\$133,800	\$1.41

6.4.2 Surface Water

Purchase Supply from City of Pearland

The City of Pearland is nearing completion of a new water treatment plant that will be capable of treating 10 mgd of surface water obtained from the canal system operated by the Gulf Coast Water Authority (GCWA). Pearland has indicated a willingness to provide treated surface water supplies to neighboring utilities.

Pearland has indicated that the overall cost of the first phase of the surface water treatment plant project is \$137.4 million⁹, and is being financed at a discount rate of approximately 2 percent. Expansion of the project could occur in increments of 2 mgd up to an additional 10 mgd of capacity. No costs have been provided for this expansion, so total project costs are estimated to be 60 percent of the initial project costs. Table 6-4 summarizes costs expected for the project. Water would be purchased from Pearland on a “pay as you go” basis, and not a “take or pay.” Therefore, Manvel would only pay for water actually used at the estimated unit costs show in Table 6-4. Transmission and pumping costs from Pearland to Manvel would not be part of the Pearland contract, but would be identified as a separate item in Manvel’s water CIP.

Table 6-4. Estimated Costs for Treated Surface Water Supplies from City of Pearland

Phase	Capacity (mgd)	Cost (\$ million)	Debt Service (\$ million/yr) (20 yrs @ 2%)	O&M (5% of cap cost) (\$ million/yr)	GCWA Raw Water Cost (\$/kgal)	Total Unit Cost (\$/kgal)
1	10	\$137.4	\$8.40	\$6.87	\$0.25	\$4.43
2	10	\$82.4	\$5.80	\$4.12	\$0.25	\$2.97

⁹ Pearland has budgeted \$175 million for the entire water supply project, which includes the new water treatment plant, transmission lines to deliver the water within the City’s system, and a water meter change-out program. Based on conversations with Pearland during December 2021, the costs associated with the water treatment plant are expected to be \$137.4 million. (personal communication, Skipper Jones, City of Pearland, December 2, 2021)

Purchase Supply from Gulf Coast Water Authority (GCWA)

GCWA has indicated a willingness to construct and operate a water treatment plant utilizing surface water supplies delivered through GCWA's canal system. GCWA's supplies are a combination of GCWA-owned water rights in the Brazos and San Jacinto-Brazos Basins and contractual supplies from the BRA. GCWA has indicated that if Manvel were to contract with GCWA for supply that GCWA would incorporate into GCWA supplies Manvel's 3,731 acft/yr (2.77 mgd) of BRA supplies as a "30% backup" and leverage those supplies into a total supply of as much as 12,400 acft/yr (11.1 mgd). GCWA would take over payments to the BRA for the 3,731 acft/yr and Manvel would begin paying GCWA for supplies from the GCWA canal system. Costs from the GCWA canal system are shared among GCWA participants and the method to allocate costs to individual users is complex. For simplicity in evaluating this supply option, it is assumed that raw water costs from GCWA are \$0.25 per thousand gallons, or \$81.43/acft, consistent with values provided by Pearland for their purchase of raw water from GCWA.

Costs for a potential surface water supply from GCWA would include an intake from the GCWA "B Canal", a water treatment plant, and purchase of raw water. Transmission and pumping costs for the treated water would not be included in the GCWA contract but would be shown as a separate item in Manvel's water CIP. Costs estimated to be paid to GCWA for the treated water supply are summarized in Table 6-5. These costs were developed using the TWDB's UCM. Consistent with known GCWA policies, costs would be paid to GCWA on a "take or pay" basis for the full contractual supply. The supplies shown for Phase 1 and Phase 2 of the GCWA supply are based on the options presented in Section 6.5. Financing is assumed to be 3.5% for 20 years.

Table 6-5. Estimated Costs for Treated Surface Water Supplies from GCWA (7 mgd total average-day capacity)

Phase	Capacity (mgd)	Cost (\$ million)	Debt Service (\$ million/yr) (20 yrs @ 3.5%)	O&M (\$ million/yr)	GCWA Raw Water Cost (\$/kgal)	Total Unit Cost (\$/kgal)
1	8	\$64.2	\$4.52	\$3.31	Included ¹	\$5.36
2	6	\$105	\$7.39	\$5.25	included	\$3.09

1. The UCM includes raw water purchase costs in the annual O&M costs.

An alternative "Hybrid Supply" option was evaluated whereby 4 mgd of City of Pearland supplies are utilized first, followed by a supply of 3 mgd from GCWA starting around 2040. Table 6-6 presents costs for 3 mgd of treated water supplies from GCWA under the hybrid option.

Table 6-6. Estimated Costs for Treated Surface Water Supplies from GCWA (3 mgd average-day capacity)

Phase	Capacity (mgd)	Cost (\$ million)	Debt Service (\$ million/yr) (20 yrs @ 3.5%)	O&M (\$ million/yr)	GCWA Raw Water Cost (\$/kgal)	Total Unit Cost (\$/kgal)
1	6	\$48.3	\$3.40	\$2.57	Included ¹	\$5.45

1. The UCM includes raw water purchase costs in the annual O&M costs.

Note that GCWA could develop the water treatment plant as a regional facility to serve other utilities such as Iowa Colony, which would reduce overall costs to project participants. Those options have not been vetted for this study.

6.5 Alternative Plans for Future Supply

There exist many different combinations of future groundwater and surface water options that could be used to meet the future water demands for the City of Manvel. For this water supply plan, three primary optional supply plans were investigated.

Option 1. Balance groundwater and surface water. This option would initially expand groundwater supplies, then incorporate surface water. This option balances groundwater supplies with new surface water supplies, but does not specifically address any future subsidence regulations.

Option 2. Subsidence plan. This option addresses potential subsidence regulations by gradually limiting groundwater use to 40% of total supply.

Option 3. Surface water only. Develop surface water to meet future demands while maximizing use of current groundwater supplies. This option does not address any future subsidence regulations.

Common goals for each option included the following:

- Provide at least 10% annual supply surplus in every year.
- Surface water capacity would be increased at minimum increments of 2 mgd.
- Capacity increases should be sized to last at least 7 years before another capacity increase is required.
- Provide sufficient capacity to meet maximum-day demands. Projects are sized to meet maximum-day demands, but are considered to supply only average-day demands on an annual basis.
- For meeting potential subsidence regulations considered by Option 2, assume that the target groundwater use is phased in by decreasing groundwater use from 100 percent (current) by 6 percent per year starting in 2026, then by 10 percent per year starting in 2030 until a target goal of 40% is reached in 2033. After 2033, a constant target of 40% groundwater use is maintained. Options 1 and 3 do not consider potential limitations on groundwater use from future subsidence regulations.

Option 1 is presented in Table 6-7. This option calls for a new groundwater well to be constructed by each of years 2027, 2028, and 2029 to meet initial supply shortages. This will allow time develop contracts and infrastructure for a new 4 mgd surface water supply, that would be incorporated by 2030. The surface water supply would be expanded to 7 mgd by 2037 to maintain at least a 10 percent supply surplus.

Table 6-7. Option 1 Supply Plan – Balance Groundwater and Surface Water

Year	Average-Day Shortage (mgd)	New Groundwater Supplies (mgd)			Surface Water Supplies (mgd)	Surplus (mgd)	Surplus as % of Demand	% GW Used ¹
		1 st Well	2 nd Well	3 rd Well				
2021	0.00					1.05	143.29%	100%
2022	0.00					0.89	100.12%	100%
2023	0.00					0.63	55.16%	100%
2024	0.00					0.32	21.50%	100%
2025	0.00					0.71	38.74%	100%
2026	0.00					0.27	11.79%	100%
2027	0.23	0.82				0.59	21.34%	100%
2028	0.87	0.82	0.82			0.77	22.54%	100%
2029	1.66	0.82	0.82	0.82		0.81	19.13%	100%
2030	2.66	0.82	0.82	0.82	4.0	3.81	72.99%	23%
2031	3.22	0.82	0.82	0.82	4.0	3.25	56.27%	31%
2032	3.70	0.82	0.82	0.82	4.0	2.76	44.08%	36%
2033	4.15	0.82	0.82	0.82	4.0	2.31	34.44%	40%
2034	4.60	0.82	0.82	0.82	4.0	1.86	26.04%	44%
2035	5.07	0.82	0.82	0.82	4.0	1.39	18.27%	48%
2036	5.47	0.82	0.82	0.82	4.0	0.99	12.37%	50%
2037	5.89	0.82	0.82	0.82	7.0	3.58	42.37%	17%
2038	6.32	0.82	0.82	0.82	7.0	3.15	35.43%	21%
2039	6.77	0.82	0.82	0.82	7.0	2.70	28.91%	25%
2040	6.38	0.82	0.82	0.82	7.0	3.08	26.87%	39%
2041	6.70	0.82	0.82	0.82	7.0	2.76	23.45%	41%
2042	7.03	0.82	0.82	0.82	7.0	2.43	20.07%	42%
2043	7.29	0.82	0.82	0.82	7.0	2.17	17.57%	43%
2044	7.42	0.82	0.82	0.82	7.0	2.04	16.31%	44%
2045	7.56	0.82	0.82	0.82	7.0	1.90	15.06%	45%
2046	7.70	0.82	0.82	0.82	7.0	1.77	13.82%	45%
2047	7.84	0.82	0.82	0.82	7.0	1.63	12.59%	46%
2048	7.98	0.82	0.82	0.82	7.0	1.48	11.37%	46%
2049	8.10	0.82	0.82	0.82	7.0	1.36	10.35%	47%
2050	6.94	0.82	0.82	0.82	7.0	2.52	15.58%	57%

1. % groundwater used assumes surface water supplies are fully utilized.

Option 2 is presented in Table 6-8. This option assumes no new groundwater supplies will be developed and surface water will be incorporated to meet the percent groundwater supply targets in the assumed subsidence regulations. Under this option, maintaining a surplus supply of 10 percent typically controls the timing of the new supplies, except for the first new surface water supply which would be implemented to begin meeting subsidence targets. The ultimate surface water capacity of 10 mgd would only be needed in 2050 and later to meet the subsidence targets.

Table 6-8. Option 2 Supply Plan – Subsidence Plan

Year	Average-Day Shortage (mgd)	Groundwater Target (% of total supply)	Surface Water Needed to Meet Goal (mgd)	Surface Water Supplies (mgd)	Surplus (mgd)	Surplus as % of Demand	% GW Used ¹
2021	0.00	100%	0.00		1.05	143.29%	100.0%
2022	0.00	100%	0.00		0.89	100.12%	100.0%
2023	0.00	100%	0.00		0.63	55.16%	100.0%
2024	0.00	100%	0.00		0.32	21.50%	100.0%
2025	0.00	100%	0.00		0.71	38.74%	100.0%
2026	0.00	94%	0.14	5.0	5.27	230.30%	0.0%
2027	0.23	88%	0.33	5.0	4.77	171.39%	0.0%
2028	0.87	82%	0.62	5.0	4.13	120.48%	0.0%
2029	1.66	76%	1.01	5.0	3.34	79.27%	0.0%
2030	2.66	70%	1.56	5.0	2.34	44.91%	4.1%
2031	3.22	60%	2.31	5.0	1.78	30.90%	13.4%
2032	3.70	50%	3.13	5.0	1.30	20.70%	20.2%
2033	4.15	40%	4.03	8.0	3.85	57.32%	0.0%
2034	4.60	40%	4.29	8.0	3.40	47.49%	0.0%
2035	5.07	40%	4.58	8.0	2.93	38.40%	0.0%
2036	5.47	40%	4.82	8.0	2.53	31.50%	0.4%
2037	5.89	40%	5.07	8.0	2.11	25.03%	5.3%
2038	6.32	40%	5.33	8.0	1.68	18.94%	9.9%
2039	6.77	40%	5.60	8.0	1.23	13.21%	14.2%
2040	6.38	40%	6.88	8.0	1.62	14.10%	30.2%
2041	6.70	40%	7.07	8.0	1.30	11.02%	32.1%
2042	7.03	40%	7.27	10.0	2.97	24.50%	17.5%
2043	7.29	40%	7.42	10.0	2.71	21.90%	19.2%
2044	7.42	40%	7.50	10.0	2.58	20.59%	20.0%
2045	7.56	40%	7.59	10.0	2.44	19.30%	20.9%
2046	7.70	40%	7.67	10.0	2.30	18.01%	21.8%
2047	7.84	40%	7.75	10.0	2.16	16.73%	22.6%
2048	7.98	40%	7.84	10.0	2.02	15.47%	23.4%
2049	8.10	40%	7.91	10.0	1.90	14.41%	24.1%
2050	6.94	40%	9.72	10.0	3.06	18.89%	38.3%

1. % groundwater used assumes surface water supplies are fully utilized.

Option 3 is presented in Table 6-9. This option is similar to Option 2 except that the surface water supply can be delayed by a year because subsidence regulations are not a consideration, and the ultimate capacity of the surface water supply is 0.5 mgd less than Option 2.

Table 6-9. Option 3 Supply Plan – Surface Water Only

Year	Average-Day Shortage (mgd)	Surface Water Supplies (mgd)	Surplus (mgd)	Surplus as % of Demand	% GW Used ¹
2021	0.00		1.05	143.29%	100.0%
2022	0.00		0.89	100.12%	100.0%
2023	0.00		0.63	55.16%	100.0%
2024	0.00		0.32	21.50%	100.0%
2025	0.00		0.71	38.74%	100.0%
2026	0.00	5.0	0.27	11.79%	100.0%
2027	0.23	5.0	4.77	171.39%	0.0%
2028	0.87	5.0	4.13	120.48%	0.0%
2029	1.66	5.0	3.34	79.27%	0.0%
2030	2.66	5.0	2.34	44.91%	4.1%
2031	3.22	5.0	1.78	30.90%	13.4%
2032	3.70	5.0	1.30	20.70%	20.2%
2033	4.15	5.0	0.85	12.62%	25.5%
2034	4.60	8.0	3.40	47.49%	30.1%
2035	5.07	8.0	2.93	38.40%	0.0%
2036	5.47	8.0	2.53	31.50%	0.4%
2037	5.89	8.0	2.11	25.03%	5.3%
2038	6.32	8.0	1.68	18.94%	9.9%
2039	6.77	8.0	1.23	13.21%	14.2%
2040	6.38	8.0	1.62	14.10%	30.2%
2041	6.70	8.0	1.30	11.02%	32.1%
2042	7.03	9.5	2.43	20.07%	21.9%
2043	7.29	9.5	2.17	17.57%	23.5%
2044	7.42	9.5	2.04	16.31%	24.3%
2045	7.56	9.5	1.90	15.06%	25.1%
2046	7.70	9.5	1.77	13.82%	25.9%
2047	7.84	9.5	1.63	12.59%	26.8%
2048	7.98	9.5	1.48	11.37%	27.5%
2049	8.10	9.5	1.36	10.35%	28.2%
2050	6.94	9.5	2.52	15.58%	41.6%

1. % groundwater used assumes surface water supplies are fully utilized.

Water Supply Option 1 is recommended for the City to pursue. It is the most economical by providing cheaper groundwater supplies and reducing the quantity of more expensive surface water. It also provides for additional time to negotiate agreements and to plan and develop new surface water supplies. Finally, it provides the most flexibility because the timing can be adjusted easily if future demands do not develop as projected. Additionally, if subsidence considerations require the City to reduce the portion of their supply met by groundwater, the surface water supplies can be increased, and the additional groundwater supplies already developed can be kept in reserve to help meet

maximum-day water demands or provide a redundant supply if surface water supplies are temporarily interrupted.

Three alternative capital improvement plans were developed based on Water Supply Option 1 and whether new surface water supplies would be purchased from Pearland, from GCWA, or from both Pearland and GCWA (Hybrid Supply). Those are presented in the next section.

7 Capital Improvements Plan (CIP) and Opinion of Probable Construction Cost

HDR prepared 10- and 20-year water capital improvements plans (CIP) to serve as a roadmap of what storage and water supply/booster pumping expansion projects will be required to meet TCEQ requirements, as well as what piping improvements will be necessary to serve areas of growth and development.

It is recommended the City further prioritize these projects in accordance with other implementation needs so that a holistic infrastructure management plan is established to promote overall infrastructure efficiencies and minimize community disruption whenever possible. This process should be considered as an element of annual CIP planning to promote an adaptive infrastructure plan for the City.

Because the projects necessary to provide water service throughout the City's service territory will change depending on what surface water source is pursued (Pearland, GCWA, or both), base CIPs were developed for 2030 and 2040 consisting of projects that are necessary regardless of future water supply sources. Alternative CIPs were then developed considering the water supply sources that could be pursued by the City. A total of three plans were developed for 2030 and three plans for 2040 based on these alternatives.

Complete alternative CIPs are presented in Exhibits 1 through 6. The CIP maps in the exhibits reflect firm capacity of proposed new pumping capacity, but CIP costs include standby capacity that will be required per TCEQ regulations.

7.1 2030 Capital Improvements Plan

7.1.1 Base 2030 CIP

Base 2030 CIP water projects and their associated opinions of probable construction cost¹⁰ are presented in Exhibits 1 through 3. Because of high demand for materials and the high cost of oil, prices of plastic pipe have dramatically increased since 2020. The costs have been escalated to account for recent market trends and volatility, but have

¹⁰ *Any opinions of probable construction cost provided by HDR are made based on information available to HDR and based on the cost estimator's experience and qualifications and represents its judgment as an experienced and qualified professional engineer. HDR has no control over the cost of labor, materials, equipment, or services furnished by others, or over methods of determining prices, or over competitive bidding or market conditions. HDR does not guarantee that proposals, bids, or actual project or construction cost will not vary from opinions of probable cost prepared by HDR.

not been escalated beyond 2021 dollars. The total costs include a 25% contingency for unknowns and 15% for professional services (engineering and survey). The Base 2030 CIP includes expansion of supplies including the new wells and associated water plant improvements.

7.1.2 Additional 2030 CIP for Water Supply

Pearland Supply

If a surface water supply from the City of Pearland is pursued by Manvel, additional CIP projects necessary to utilize the Pearland supply include a 30-inch water line to transfer the supply from Pearland, a 500,000 gallon GST, and a booster pumping station having a combined capital cost of \$17,880,000, shown as project P-1 in Exhibit 1. Annual costs for the additional CIP items and costs to obtain supply from Pearland are summarized in Table 7-1. Costs shown are for Manvel to contract for an average-day supply of 4 mgd and a maximum-day supply of 8 mgd. Supply costs assume Manvel pays for 3.4 mgd (3,800 acft/yr) of supply, which is equivalent to the amount Manvel would need in 2035 assuming that Manvel maximizes its use of groundwater and only utilizes the amount needed to meet the projected shortages with a 10 percent overall supply surplus. Unit costs are based on the unit costs of Pearland supplies of \$4.43/1,000 gals (see Table 6-4) plus the annual costs to amortize the capital costs of the CIP over 20 years at 3.5% interest and estimated O&M costs equal to 5% of the capital cost.

Table 7-1. Annual 2030 CIP and Supply Costs for Pearland Supply (3.4 mgd average-day supply)

Cost Item	Unit Cost (\$/kgal)	Annual Cost
Treated Water Supply	\$4.43	\$5,498,000
CIP Project P-1	\$1.74	\$2,152,000
Total		\$7,650,000

GCWA Supply

If a surface water supply from GCWA is pursued, additional CIP projects necessary to utilize treated water from the proposed GCWA water treatment plant include one 30-inch transmission line that splits into two 24-inch lines, which reduce to 20-inch lines north of SH 6, a 500,000 gallon GST, and a booster pumping station with a combined capital cost of \$14,880,000, as shown in Exhibit 2. Annual costs to obtain the GCWA supply are summarized in Table 7-2. These costs assume a take or pay contract for 4 mgd of supply (8 mgd maximum-day). Unit costs are based on the unit costs for GCWA supplies \$5.36/1,000 gals (see Table 6-5), plus the annual costs to amortize the capital cost of the CIP over 20 years at 3.5% interest and O&M costs estimated by the TWDB's UCM.

Table 7-2. Annual 2030 CIP and Supply Costs for GCWA Supply (4 mgd take or pay contract)

Cost Item	Unit Cost (\$/kgal)	Annual Cost
Treated Water Supply	\$5.36	\$7,827,000
CIP Project G-1	\$1.19	\$1,743,000
Total		\$9,570,000

Hybrid Supply

If the City pursues surface water supplies from both Pearland and GCWA, it is assumed that the Pearland supply would be developed first, to take advantage of the Pearland water treatment plant nearing completion. The Additional 2030 CIP for the Hybrid Supply is identical to the 2030 Pearland supply, costs for which are shown in Table 7-1. The 2030 CIP for the Hybrid Supply is shown in Exhibit 3.

7.2 2040 Capital Improvements Plan

7.2.1 Base 2040 CIP

Base 2040 CIP water projects and their associated opinion of probable construction cost are presented in Exhibits 4 through 6. Because of high demand for materials and the high cost of oil, prices of plastic pipe have dramatically increased since 2020. The costs have been escalated to account for recent market trends and volatility, but have not been escalated beyond 2021 dollars. The total costs include a 25% contingency for unknowns and 15% for professional services (engineering and survey).

7.2.2 Additional 2040 CIP for Water Supply

Note that the projects and costs are shown as “2040” projects, but would appear to be needed by 2037 under the recommended Water Supply Option 1.

Pearland Water Supply

Additional 2040 CIP projects for the Pearland supply include additional 24-inch, 20-inch and 16-inch transmission lines, an additional 500,000 gallon GST, and a booster pumping station, located along the northwest side of the future Manvel system. These projects have a total capital cost of \$22,680,000 as shown for projects P-27, P-28, P-30, and P-31 in Exhibit 4. Annual costs are developed similarly as for the additional 2030 CIP and summarized in Table 7-3, assuming that the full 7 mgd average day supply is taken by 2045 (an additional 3.6 mgd).

Table 7-3. Annual 2040 CIP and Supply Costs for Pearland Supply (additional 3.6 mgd average-day supply)

Cost Item	Unit Cost (\$/kgal)	Annual Cost
Treated Water Supply	\$2.97	\$3,903,000
CIP Projects P-27, P-28, P-30, & P-31	\$2.08	\$2,730,000
Total		\$6,633,000

GCWA Water Supply

Additional 2040 CIP projects for the GCWA supply include multiple additional transmission lines to move water from the south to the north portion of the future Manvel system, an additional 500,000 gallon GST, and an expansion of the finished water booster station. These projects (G-2, G-3, G-4, G-23, G-24, G-25, G-27, G-40, and G-43) have a total combined capital cost of \$29,180,000 as shown in Exhibit 5. Annual costs are summarized in Table 7-4 assuming that an additional 3 mgd average-day supply is contracted for on a take or pay basis.

Table 7-4. Annual 2040 CIP and Supply Costs for GCWA Supply (additional 3 mgd take or pay contract)

Cost Item	Unit Cost (\$/kgal)	Annual Cost
Treated Water Supply	\$3.09	\$3,387,000
CIP Projects P-27, P-28, P-30, & P-31	\$3.21	\$3,512,000
Total		\$6,899,000

Hybrid Water Supply

Additional 2040 CIP projects for the Hybrid Supply option include additional pipeline projects to convey the additional supply throughout the Manvel system, a 500,000 gallon GST, and a booster pump station, as shown in Exhibit 6. These projects (H-2, H-23, H-27, H-40, H-42, and H-43) have a total capital cost of \$32,310,000. Costs for GCWA supplies under the Hybrid Supply option are as shown in Table 6-6. Total annual costs are shown in Table 7-5.

Table 7-5. Annual 2040 CIP and Supply Costs for Hybrid Supply (additional 3 mgd take or pay contract with GCWA)

Cost Item	Unit Cost (\$/kgal)	Annual Cost
Treated Water Supply	\$5.45	\$5,969,000
CIP Projects H-2, H-23, H-27, H-40, H-42 & H-43	\$3.55	\$3,889,000
Total		\$9,858,000

7.3 Recommendations

7.3.1 Adaptive Infrastructure Planning

The City's rapid growth is causing a highly dynamic development environment in which it is difficult to prioritize the large number of capital projects and efficiently utilize the City's capital resources. It is recommended the City further prioritize these projects in accordance with other implementation needs so that a holistic infrastructure management plan is established to promote efficient utilization of capital and minimize community disruption. Based on the rapidly changing development environment, the City should revisit this Master Water Plan at least annually so that the City can adaptively manage its capital investments.

7.3.2 Future Water Supply

It is recommended that the City pursue Water Supply Option 1, in which three additional groundwater wells would be constructed prior to 2030, followed by the incorporation of surface water supplies into the City's water supply portfolio about 2030. This approach will provide the City with flexibility in meeting future demands by allowing these first additional supplies to be delayed or expedited if water demands develop differently than projected.

Based on conversations with City staff the City should obtain surface water utilizing the Hybrid approach, whereby the City would obtain an initial surface water supply from the City of Pearland by 2030. The next increment of supply would be contracted from the GCWA sometime around 2040, depending on future growth. This Hybrid approach initially would take advantage of the relatively less expensive water from Pearland and take advantage of the shorter timeframe needed to obtain the supply. Then, as demands grow and the City has a better understanding of expected water demands, a new water treatment plant on the south side of the system would be developed with GCWA, which would also allow the City to utilize its water contracted from the BRA. This new plant would have the option of serving as a regional supply which would decrease the City's unit costs from those shown here, which assume only the City would be supplied from the new plant. This Hybrid approach also provides the City flexibility if additional supplies from Pearland or another water supplier are more advantageous in the future.

Exhibit 1. Base 2030 Capital Improvements Plan with Additional Pearland Water Supply CIP

LEGEND

Pearland Supply

Pearland Supply

2030 Pearland CIP Pipelines

2030 CIP Plants

Existing Plants

2030 CIP Tanks

EST

GST

Existing Tanks

EST

GST

2030 CIP Water Lines

8"

12"

16"

20"

Existing Water Lines

City Limits

0

Miles

1.5

N

2030 Proposed CIP and Pearland Supply Projects and Escalated OPCC					
CIP No.	Total*	Description			
1	\$ 2,010,000	12" Hwy 6 Water Line			
2	\$ 1,490,000	16" Parallel Manvel Town Center Discharge Line			
3	\$ 3,490,000	20" Manvel Town Center North Discharge Line			
4	\$ 630,600	Cemetery Road Waterline Loop - Phase 2			
5	\$ 3,640,000	16" Manvel City Center Interconnect			
6	\$ 3,620,000	12" Sowell Interconnect			
7	\$ 1,450,000	12" Dogwood Avenue - Phase 1			
8	\$ 4,850,000	20" and 16" Masters Road Water Line			
9	\$ 1,330,000	12" Dogwood Avenue - Phase 2			
10	\$ 3,990,000	12" Bissell Road Loop - Phase 1			
11	\$ 2,570,000	12" Bissell Road Loop - Phase 2			
12	\$ 1,510,000	20" Del Bello Boulevard Water Line Upsize			
13	\$ 4,510,000	16" Del Bello Interconnect			
14	\$ 5,240,000	16" and 12" Del Bello and Masters Road Loop			
15	\$ 1,170,000	Maverick Plant Improvements and 600 gpm pump station expansion			
16	\$ 5,590,000	Del Bello 1 MG EST (2022)			
17	\$ 7,510,000	Manvel Town Center Expansion (Wells, 0.4 MG GST & 2,800 gpm Pump Station)			
18	\$ 3,800,000	School Road Plant Improvements and 1,000 gpm pump station expansion			
19	\$ 7,120,000	1 MG EST (2029)			
P-1	\$ 17,880,000	30" Pearland Supply Transmission Line (including 0.5MG GST and Booster PS)			
	\$ 83,400,600				
*Cost includes 25% contingency and 15% for professional services, except for Del Bello EST (15% cont).					
All costs are shown in 2021 dollars and not inflated for future years costs.					
Costs have been escalated in light of recent material shortages and cost volatility, except					
Del Bello EST (already assumed escalated).					
Opinions of Probable Construction Cost are estimated for planning purposes.					
HDR cannot guarantee that proposals, bids, or actual construction costs will not vary.					

Source: Esri, Maxar, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA, USGS,
AeroGRID, IGN, and the GIS User Community,

CITY OF MANVEL

2022 MASTER WATER PLAN

2030 CIP PROJECTS AND PEARLAND SUPPLY

PATH: C:\USERS\SMABROUK\DOCUMENTS\MANVEL\SHAPEFILES\MASTERPLANUPDATE\WATER_SUPPLY\MANVEL WATER SYSTEM - 2030 PROJECT MAP.MXD - USER: SMABROUK - DATE: 9/30/2021

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Exhibit 2. Base 2030 Capital Improvements Plan with Additional GCWA Water Supply CIP

LEGEND

GCWA Supply

GCWA Supply

2030 GCWA CIP Pipelines

2030 CIP Plants

Existing Plants

2030 CIP Tanks

EST

GST

Existing Tanks

EST

GST

2030 CIP Water Lines

8"

12"

16"

20"

Existing Water Lines

City Limits

0

Miles

1.5

N

2030 Proposed CIP and GCWA Supply Projects and Escalated OPCC			
CIP No.	Total*	Description	
1	\$ 2,010,000	12" Hwy 6 Water Line	
2	\$ 1,490,000	16" Parallel Manvel Town Center Discharge Line	
3	\$ 3,490,000	20" Manvel Town Center North Discharge Line	
4	\$ 630,600	Cemetery Road Waterline Loop - Phase 2	
5	\$ 3,640,000	16" Manvel City Center Interconnect	
6	\$ 3,620,000	12" Sowell Interconnect	
7	\$ 1,450,000	12" Dogwood Avenue - Phase 1	
8	\$ 4,850,000	20" and 16" Masters Road Water Line	
9	\$ 1,330,000	12" Dogwood Avenue - Phase 2	
10	\$ 3,990,000	12" Bissell Road Loop - Phase 1	
11	\$ 1,910,000	12" Bissell Road Loop - Phase 2	
12	\$ 1,510,000	20" Del Bello Boulevard Water Line Upsize	
13	\$ 4,510,000	16" Del Bello Interconnect	
14	\$ 5,240,000	16" and 12" Del Bello and Masters Road Loop	
15	\$ 1,170,000	Maverick Plant Improvements and 600 gpm pump station expansion	
16	\$ 5,590,000	Del Bello 1 MG EST (2022)	
17	\$ 7,510,000	Manvel Town Center Expansion (Wells, 0.4 MG GST & 2,800 gpm Pump Station)	
18	\$ 3,800,000	School Road Plant Improvements and 1,000 gpm pump station expansion	
19	\$ 7,120,000	1 MG EST (2029)	
G-1	\$ 14,480,000	GCWA Supply Transmission Lines (including 0.5MG GST and Booster PS)	
	\$ 79,340,600		
*Cost includes 25% contingency and 15% for professional services, except for Del Bello EST (15% cont).			
All costs are shown in 2021 dollars and not inflated for future years costs.			
Costs have been escalated in light of recent material shortages and cost volatility, except			
Del Bello EST (already assumed escalated).			
Opinions of Probable Construction Cost are estimated for planning purposes.			
HDR cannot guarantee that proposals, bids, or actual construction costs will not vary.			

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community,

CITY OF MANVEL
2022 MASTER WATER PLAN
2030 CIP PROJECTS AND GCWA SUPPLY

PATH: C:\USERS\SMABROUK\DOCUMENTS\MANVEL\SHAPEFILES\MASTERPLANUPDATE\WATER_SUPPLY\MANVEL WATER SYSTEM - 2030 PROJECT MAP.MXD - USER: SMABROUK - DATE: 9/23/2021

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Exhibit 3. Base 2030 Capital Improvements Plan with Additional Hybrid Water Supply CIP

LEGEND

Pearland Supply

Pearland Supply

2030 Hybird CIP Pipelines

2030 CIP Plants

Existing Plants

2030 CIP Tanks

EST

GST

Existing Tanks

EST

GST

2030 CIP Water Lines

8"

12"

16"

20"

Existing Water Lines

City Limits

0

Miles

1.5

N

2030 Proposed CIP and Hybrid Supply Projects and Escalated OPCC			
CIP No.	Total*	Description	
1	\$ 2,010,000	12" Hwy 6 Water Line	
2	\$ 1,490,000	16" Parallel Manvel Town Center Discharge Line	
3	\$ 3,490,000	20" Manvel Town Center North Discharge Line	
4	\$ 630,600	Cemetery Road Waterline Loop - Phase 2	
5	\$ 3,640,000	16" Manvel City Center Interconnect	
6	\$ 3,620,000	12" Sowell Interconnect	
7	\$ 1,450,000	12" Dogwood Avenue - Phase 1	
8	\$ 4,850,000	20" and 16" Masters Road Water Line	
9	\$ 1,330,000	12" Dogwood Avenue - Phase 2	
10	\$ 3,990,000	12" Bissell Road Loop - Phase 1	
11	\$ 2,570,000	12" Bissell Road Loop - Phase 2	
12	\$ 1,510,000	20" Del Bello Boulevard Water Line Upsize	
13	\$ 4,510,000	16" Del Bello Interconnect	
14	\$ 5,240,000	16" and 12" Del Bello and Masters Road Loop	
15	\$ 1,170,000	Maverick Plant Improvements and 600 gpm pump station expansion	
16	\$ 5,590,000	Del Bello 1 MG EST (2022)	
17	\$ 7,510,000	Manvel Town Center Expansion (Wells, 0.4 MG GST & 2,800 gpm Pump Station)	
18	\$ 3,800,000	School Road Plant Improvements and 1,000 gpm pump station expansion	
19	\$ 7,120,000	1 MG EST (2029)	
H-1	\$ 17,880,000	30" Pearland Supply Transmission Line (including 0.5MG GST and Booster PS)	
	\$ 83,400,600		
*Cost includes 25% contingency and 15% for professional services, except for Del Bello EST (15% cont).			
All costs are shown in 2021 dollars and not inflated for future years costs.			
Costs have been escalated in light of recent material shortages and cost volatility, except			
Del Bello EST (already assumed escalated).			
Opinions of Probable Construction Cost are estimated for planning purposes.			
HDR cannot guarantee that proposals, bids, or actual construction costs will not vary.			

Source: Esri, Maxar, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA, USGS,
AeroGRID, IGN, and the GIS User Community,

CITY OF MANVEL

2022 MASTER WATER PLAN

2030 CIP PROJECTS AND HYBRID SUPPLY

PATH: C:\USERS\SMABROUK\DOCUMENTS\MANVEL\SHAPEFILES\MASTERPLANUPDATE\WATER_SUPPLY\MANVEL WATER SYSTEM - 2030 PROJECT MAP.MXD - USER: SMABROUK - DATE: 10/27/2021

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Exhibit 4. Base 2040 Capital Improvements Plan with Additional Pearland Water Supply CIP

LEGEND

-  Pearland Supply
-  Pearland Supply
-  2030 and 2040 Pearland CIP Pipelines
-  Existing and 2030 CIP Plants

2040 CIP Tanks

-  EST
-  GST

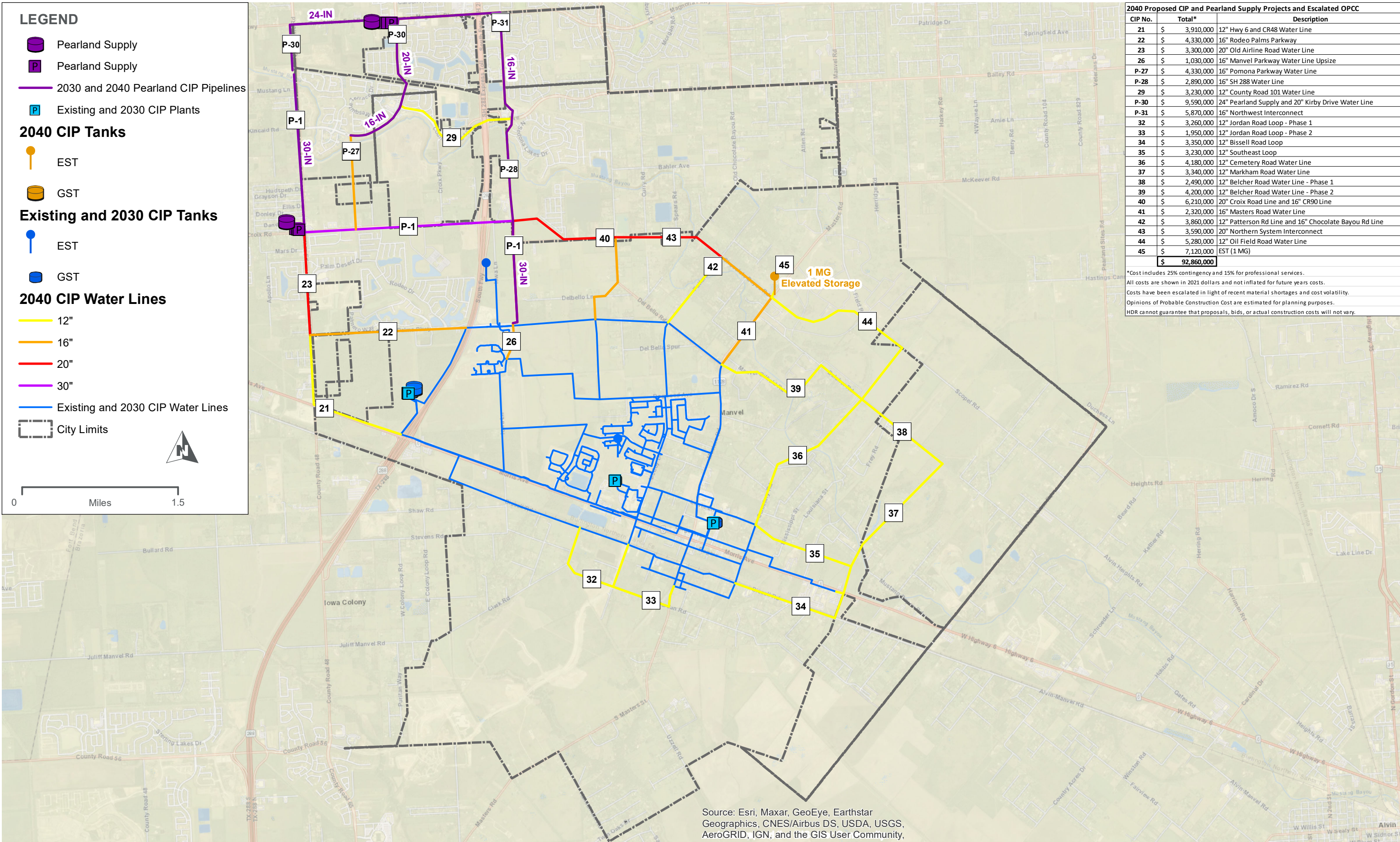
Existing and 2030 CIP Tanks

-  EST
-  GST

2040 CIP Water Lines

-  12"
-  16"
-  20"
-  30"
-  Existing and 2030 CIP Water Lines
-  City Limits



2040 Proposed CIP and Pearlard Supply Projects and Escalated OPCC		
CIP No.	Total*	Description
21	\$ 3,910,000	12" Hwy 6 and CR48 Water Line
22	\$ 4,330,000	16" Rodeo Palms Parkway
23	\$ 3,300,000	20" Old Airline Road Water Line
26	\$ 1,030,000	16" Manvel Parkway Water Line Upsize
P-27	\$ 4,330,000	16" Pomona Parkway Water Line
P-28	\$ 2,890,000	16" SH 288 Water Line
29	\$ 3,230,000	12" County Road 101 Water Line
P-30	\$ 9,590,000	24" Pearlard Supply and 20" Kirby Drive Water Line
P-31	\$ 5,870,000	16" Northwest Interconnect
32	\$ 3,260,000	12" Jordan Road Loop - Phase 1
33	\$ 1,950,000	12" Jordan Road Loop - Phase 2
34	\$ 3,350,000	12" Bissell Road Loop
35	\$ 3,230,000	12" Southeast Loop
36	\$ 4,180,000	12" Cemetery Road Water Line
37	\$ 3,340,000	12" Markham Road Water Line
38	\$ 2,490,000	12" Belcher Road Water Line - Phase 1
39	\$ 4,200,000	12" Belcher Road Water Line - Phase 2
40	\$ 6,210,000	20" Croix Road Line and 16" CR90 Line
41	\$ 2,320,000	16" Masters Road Water Line
42	\$ 3,860,000	12" Patterson Rd Line and 16" Chocolate Bayou Rd Line
43	\$ 3,590,000	20" Northern System Interconnect
44	\$ 5,280,000	12" Oil Field Road Water Line
45	\$ 7,120,000	EST (1 MG)
	\$ 92,860,000	

*Cost includes 25% contingency and 15% for professional services.

All costs are shown in 2021 dollars and not inflated for future years costs.

Costs have been escalated in light of recent material shortages and cost volatility.

Opinions of Probable Construction Cost are estimated for planning purposes.

HDR cannot guarantee that proposals, bids, or actual construction costs will not vary.

Exhibit 5. Base 2040 Capital Improvements Plan with Additional GCWA Water Supply CIP

LEGEND

GCWA Supply

GCWA Suuply

2030 and 2040 GCWA CIP Pipelines

Existing and 2030 CIP Plants

2040 CIP Tanks

EST

GST

Existing and 2030 CIP Tanks

EST

GST

2040 CIP Water Lines

12"

16"

20"

30"

Existing and 2030 CIP Water Lines

City Limits

0

1.5

Miles

N

2040 Proposed CIP and GCWA Supply Projects and Escalated OPCC		
CIP No.	Total*	Description
21	\$ 3,910,000	12" Hwy 6 and CR48 Water Line
22	\$ 4,330,000	16" Rodeo Palms Parkway
G-23	\$ 2,490,000	12" Old Airline Road Water Line
G-24	\$ 2,940,000	12" Iowa Lane Water Line
G-25	\$ 5,050,000	12" Croix Road Water Line
26	\$ 1,030,000	16" Manvel Parkway Water Line Upsize
G-27	\$ 3,770,000	12" Pomona Parkway Water Line
28	\$ 2,520,000	12" SH 288 Water Line
29	\$ 3,230,000	12" County Road 101 Water Line
30	\$ 2,200,000	12" Kirby Drive Water Line
31	\$ 5,120,000	12" Northwest Interconnect
32	\$ 3,260,000	12" Jordan Road Loop - Phase 1
33	\$ 1,950,000	12" Jordan Road Loop - Phase 2
34	\$ 3,350,000	12" Bissell Road Loop
35	\$ 3,230,000	12" Southeast Loop
36	\$ 4,180,000	12" Cemetery Road Water Line
37	\$ 3,340,000	12" Markham Road Water Line
38	\$ 2,490,000	12" Belcher Road Water Line - Phase 1
39	\$ 4,200,000	12" Belcher Road Water Line - Phase 2
G-40	\$ 5,350,000	12" Croix Road Line and 16" CR90 Line
41	\$ 2,320,000	16" Masters Road Water Line
42	\$ 3,860,000	12" Patterson Rd Line and 16" Chocolate Bayou Rd Line
G-43	\$ 2,710,000	12" Northern System Interconnect
44	\$ 5,280,000	12" Oil Field Road Water Line
45	\$ 7,120,000	EST (1 MG)
G-2	\$ 2,370,000	Additional GCWA Supply (including GST and booster PS)
G-3	\$ 2,100,000	20" Masters Road Water Line
G-4	\$ 2,400,000	20" Iowa Lane Water Line Upsize
\$ 96,100,000		
*Cost includes 25% contingency and 15% for professional services. All costs are shown in 2021 dollars and not inflated for future years costs. Costs have been escalated in light of recent material shortages and cost volatility. Opinions of Probable Construction Cost are estimated for planning purposes. HDR cannot guarantee that proposals, bids, or actual construction costs will not vary.		

Source: Esri, Maxar, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA, USGS,
AeroGRID, IGN, and the GIS User Community,

CITY OF MANVEL

2022 MASTER WATER PLAN

2040 CIP PROJECTS AND GCWA SUPPLY

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Exhibit 6. Base 2040 Capital Improvements Plan with Additional Hybrid Water Supply CIP

LEGEND

GCWA Supply

GCWA Suuply

Pearland Supply

Pearland Supply

2030 Hybrid CIP Pipelines

2040 Hybrid CIP Pipelines

Existing and 2030 CIP Plants

2040 CIP Tanks

EST

GST

Existing and 2030 CIP Tanks

EST

GST

2040 CIP Water Lines

12"

16"

20"

30"

Existing and 2030 CIP Water Lines

City Limits

Miles

1.5

2040 Proposed CIP and Hybrid Supply Projects and Escalated OPCC									
CIP No.	Total*	Description							
21	\$ 3,910,000	12" Hwy 6 and CR48 Water Line							
22	\$ 4,330,000	16" Rodeo Palms Parkway							
H-23	\$ 2,860,000	16" Old Airline Road Water Line							
26	\$ 1,030,000	16" Manvel Parkway Water Line Upsize							
H-27	\$ 3,770,000	12" Pomona Parkway Water Line							
28	\$ 2,520,000	12" SH 288 Water Line							
29	\$ 3,230,000	12" County Road 101 Water Line							
30	\$ 2,200,000	12" Kirby Drive Water Line							
31	\$ 5,120,000	12" Northwest Interconnect							
32	\$ 3,260,000	12" Jordan Road Loop - Phase 1							
33	\$ 1,950,000	12" Jordan Road Loop - Phase 2							
34	\$ 3,350,000	12" Bissell Road Loop							
35	\$ 3,230,000	12" Southeast Loop							
36	\$ 4,180,000	12" Cemetery Road Water Line							
37	\$ 3,340,000	12" Markham Road Water Line							
38	\$ 2,490,000	12" Belcher Road Water Line - Phase 1							
39	\$ 4,200,000	12" Belcher Road Water Line - Phase 2							
H-40	\$ 5,750,000	26" Croix Road Line and 16" CR90 Line							
41	\$ 2,320,000	16" Masters Road Water Line							
H-42	\$ 3,620,000	12" Patterson Rd Line and 12" Chocolate Bayou Rd Line							
H-43	\$ 2,710,000	12" Northern System Interconnect							
44	\$ 5,280,000	12" Oil Field Road Water Line							
45	\$ 7,120,000	EST (1 MG)							
H-2	\$ 13,600,000	GCWA Supply Transmission Lines (including 0.5MG GST and Booster PS)							
	\$ 95,370,000								
*Cost includes 25% contingency and 15% for professional services.									
All costs are shown in 2021 dollars and not inflated for future years costs.									
Costs have been escalated in light of recent material shortages and cost volatility.									
Opinions of Probable Construction Cost are estimated for planning purposes.									
HDR cannot guarantee that proposals, bids, or actual construction costs will not vary.									

Source: Esri, Maxar, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA, USGS,
AeroGRID, IGN, and the GIS User Community,

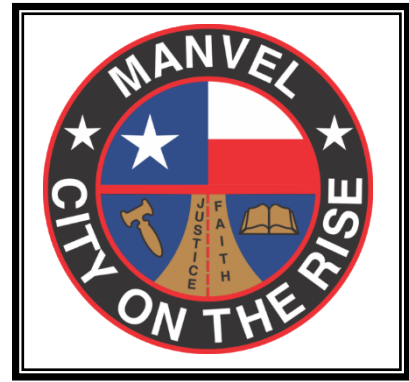
CITY OF MANVEL
2022 MASTER WATER PLAN
2040 CIP PROJECTS AND HYBRID SUPPLY

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THE STATE OF TEXAS §
COUNTY OF BRAZORIA §
CITY OF MANVEL §

LARRY AKERY, COUNCIL PLACE 1
LORRAINE HEHN, COUNCIL PLACE 2
NICCOLE TYSON, COUNCIL PLACE 3
DAN DAVIS, COUNCIL PLACE 4
JASON ALBERT, COUNCIL PLACE 5
JEROME HUDSON, COUNCIL PLACE 6



DEBRA DAVISON, MAYOR
KYLE JUNG, CITY MANAGER
TAMMY BELL, CITY SECRETARY

MINUTES 2/22/2022

Workshop Session

Lorraine Hehn called the workshop of the Manvel City Council to order at 6:02 p.m.
Those in attendance were:

Present: City Council Member Place 1 Larry Akery
City Council Member Place 2 Lorraine Hehn
City Council Member Place 3 Niccole Tyson
City Council Member Place 4 Dan Davis
City Council Member Place 6 Jerome Hudson

Absent: Mayor Debra Davison
City Council Member Place 5 Jason Albert

Also Present: Kyle Jung, City Manager
Robert Gervais, City Attorney
Dan Johnson, Asst City Manager/City Engineer
Tammy Bell, City Secretary
Keith Traylor, Chief of Police
Jessica Rodriguez, Director of Development Services
Chris Thomas, Director of Finance
Gilbert Salas, Director of Community Services
Chad Dumont, HR Manager

Presentation on the Master Drainage Plan

Presentation on the Master Drainage Plan update by Jarrod Aden of Lentz Engineering.
Lentz Engineering, LLC (Lentz) was retained by the City of Manvel (Manvel) to provide an update to the City of Manvel's Master Drainage Plan (MDP) prepared by Klotz Associates (Klotz) in 2014. Unlike the Klotz DP the scope of our services did not include hydrologic and hydraulic modeling and a high level of analysis. The purpose of this MDP addendum is to document changes of drainage significance which have occurred in the last several years and to identify some possible additional projects which provide opportunities for the City of Manvel to further improve drainage within their jurisdiction.

Discussion on any subject listed on the Agenda dated February 22, 2022.

Dan Davis -

Agenda items 1-3

Can something be done to stop these plats from having to move forward when they're not ready for approval

Agenda item 5

For subdivision variances, can we add a timeline to the agreement

Regular Session

Call To Order

Lorraine Hehn called the meeting of the Manvel City Council to order at 7:00 p.m.

Those in attendance were:

Present: City Council Member Place 1 Larry Akery
City Council Member Place 2 Lorraine Hehn
City Council Member Place 3 Niccole Tyson
City Council Member Place 4 Dan Davis
City Council Member Place 6 Jerome Hudson

Absent: Mayor Debra Davison
City Council Member Place 5 Jason Albert

Also Present: Kyle Jung, City Manager
Robert Gervais, City Attorney
Dan Johnson, Asst City Manager/City Engineer
Tammy Bell, City Secretary
Keith Traylor, Chief of Police
Jessica Rodriguez, Director of Development Services
Chris Thomas, Director of Finance
Gilbert Salas, Director of Community Services
Chad Dumont, HR Manager

Inspirational Reading - Council Member Jason Albert

Pledge

Citizen Comments: "Comment Card" Required

JW Washington - Pearland resident

Applauds the city on what they're doing to prepare for the growth with master drainage plan

Running for Drainage District #4 position

Katherine Jones - Lewis Ln

Requesting sewer on the right side of Lewis Ln

Has water but no sewer

Jason Black - Cameron Recycling

- Hired an engineering firm to monitor noise and provide a survey
- 1 piece of equipment in particular was responsible for the majority of the noise and they made some modifications to it to try to alleviate the noise it produces.
- Training operators on how to handle the metal, placing instead of dropping metal, which is a slower process but willing to do this if it helps.

Presentation

Proclamation

February 2022-Black History Month

Proclamation on Black History Month read by Council Member Jerome Hudson

Presentation on Black History Month by students Justice James and Chloe Lynch

City Manager Update

Extends thanks to staff in his absence the previous week.

Covid update:

6175 total, up 143 from last meeting

81 confirmed, down 291

probable 27, down 41

recovered 6022, up 473

45 deaths, up 2

New officer hired.

PIO starts next week.

Regular Agenda

3. Approve second and final reading of Ordinance 2022-O-03;
AN ORDINANCE OF THE CITY OF MANVEL, TEXAS, AMENDING THE ZONING ORDINANCE OF THE CITY, BY AMENDING THE ZONING CLASSIFICATION OF 21,000 SQUARE FEET LOCATED AT 7507 MASTERS ROAD, MANVEL, TEXAS, FROM LIGHT COMMERCIAL DISTRICT/STATE HIGHWAY 6 OVERLAY DISTRICT (LC/SH6) TO LIGHT COMMERCIAL DISTRICT/STATE HIGHWAY 6 OVERLAY DISTRICT WITH SPECIFIC USE PERMIT LC/SH6-SUP); PROVIDING FOR THE GRANTING OF A SPECIFIC USE PERMIT WITH CONDITIONS TO AUTHORIZE THE USE OF PROPERTY FOR NAICS USE 621111 "OFFICES OF PHYSICIANS (EXCEPT MENTAL HEALTH SPECIALISTS)"; PROVIDING FOR THE AMENDMENT OF THE CITY'S OFFICIAL ZONING MAP; PROVIDING SEVERABILITY; AND PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000 FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF. (Forwarded with favorable recommendation with conditions by PD&Z with a 4/1 vote)

Council Member Davis made the motion to remove item 3 from the Consent Agenda. Council Member Hudson seconded the motion.

Vote: 5/0

Yes: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 3 Niccole Tyson, City Council Member Place 4 Dan Davis, City Council Member Place 6 Jerome Hudson

No: None

Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert

Abstained: None

This item was removed from the consent agenda and voted on in the regular agenda.

Council Member Davis abstained from voting on this item.

Council Member Jerome Hudson made the motion to approve with an amendment to the SUP reflecting allowable operating hours from 7:30 a.m. to 10:00 p.m. Council Member Larry Akery seconded the motion.

The motion carried with a vote: 4/0

Yes: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 3 Niccole Tyson, City Council Member Place 6 Jerome Hudson

No: None

Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert

Abstained: City Council Member Place 4 Dan Davis

1. Consideration and possible action to approve Final Plat for Meridiana Section 52; Being a subdivision of 21.88 acres out of the H.T. & B.R.R. Company Survey, Section 61, Abstract 282, and the Oliver Hall Survey, Abstract 203, City of Manvel, Brazoria County, Texas. (Favorable recommendation by PD&Z FAILED 0/7).
2. Consideration and possible action to approve Final Plat for Meridiana Detention Reserve M-2; Being a subdivision of 4.644 acres out of the H.T. & B.R.R. Company Survey, Section 61, Abstract 282, and the Oliver Hall Survey, Abstract 203, City of Manvel, Brazoria County, Texas. (Favorable recommendation by PD&Z FAILED 0-7).
3. Consideration and possible action to approve Final Plat for Meridiana Detention Reserve N-2; Being a subdivision of 7.081 acres out of the H.T. & B.R.R. Company Survey, Section 61, Abstract 282, and the Oliver Hall Survey, Abstract 203, City of Manvel, Brazoria County, Texas. (Favorable recommendation by PD&Z FAILED 0-7)

Council Member Dan Davis made the motion to approve agenda items 1, 2, and 3. Council Member Niccole Tyson seconded the motion.

The motion FAILED with a vote: 2/3

Yes: City Council Member Place 3 Niccole Tyson, City Council Member Place 6 Jerome Hudson

No: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 4 Dan Davis

Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert

Abstained: None

4. Consideration and possible action to direct staff to provide Applicants written statements of the conditions for any conditional approvals, and the reasons for disapproval of any plans or plats that were not approved, per Texas Local Government Code §212.0091.

Council Member Dan Davis made the motion to approve. Council Member Jerome Hudson seconded the motion.

The motion carried with a vote: 5/0

Yes: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 3 Niccole Tyson, City Council

Member Place 4 Dan Davis, City Council Member Place 6 Jerome Hudson
No: None
Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert
Abstained: None

5. Consideration and possible action to approve a Subdivision variance request for property located at 6336 Del Bello Spur, seeking to vary Chapter 62, Section 62-111, Additional Street Requirements and authorize the Mayor to execute the Development Agreement.

Jessica Rodriguez, Director of Development Services shares the two conditions to the variance:
1) Subdivision variance will expire upon exchange of the use from Single Family Residential detached structure
2) Subdivision variance would expire when the property is replatted into more than one lot or reserve

Council Member Dan Davis made the motion to approve with conditions. Council Member Jerome Hudson seconded the motion.

The motion carried with a vote: 5/0

Yes: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 3 Niccole Tyson, City Council Member Place 4 Dan Davis, City Council Member Place 6 Jerome Hudson
No: None
Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert
Abstained: None

6. Consideration and possible action to approve the first of two readings of Ordinance 2022-O-06; AN ORDINANCE OF THE CITY OF MANVEL, TEXAS, AMENDING CHAPTER 50. *PLANNING AND DEVELOPMENT*, ARTICLE III. *COMPREHENSIVE PLAN*, BY APPROVING THE 2022 MASTER WATER PLAN UPDATE DOCUMENT AS THE 2022 MASTER WATER PLAN; AMENDING SECTION 50-54. *MASTER WATER PLAN* INTEGRATING THE CITY'S 2022 MASTER WATER PLAN INTO THE CITY'S COMPREHENSIVE PLANS; PROVIDING FOR CONFORMITY OF ALL REGULATIONS TO THE MASTER WATER PLAN; PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 PER DAY FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF; AND PROVIDING FOR SEVERABILITY; AND PROVIDING A SEVERANCE CLAUSE AND EFFECTIVE DATE.

Council Member Dan Davis made the motion to approve. Council Member Jerome Hudson seconded the motion.

The motion carried with a vote: 5/0

Yes: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 3 Niccole Tyson, City Council Member Place 4 Dan Davis, City Council Member Place 6 Jerome Hudson
No: None
Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert
Abstained: None

7. Consideration and possible action on the appointments of the Manvel Economic Development

Corporation Board positions #1, #2, and #3 with a term to expire in March 2024.

Council Member Larry Akery made the motion to put forward a slate of Angela Graham for Place 1; Lorraine Hehn for Place 2; and Donald Atkinson for Place 3. Council Member Jerome Hudson seconded the motion.

The motion carried with a vote: 5/0

Yes: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 3 Niccole Tyson, City Council Member Place 4 Dan Davis, City Council Member Place 6 Jerome Hudson

No: None

Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert

Abstained: None

8. Consideration and possible action on the appointments of the Manvel Planning Development and Zoning Commission positions #5, #6, and #7 with a term to expire in March 2024.

Council Member Lorraine Hehn made the motion to put forward a slate of reappointing current PDZ Members, Dorothy Wynne, Christy Kennard, and Muhammed Alam to their respective positions. Council Member Jerome Hudson seconded the motion.

The motion carried with a vote: 4/1

Yes: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 3 Niccole Tyson, City Council Member Place 6 Jerome Hudson

No: City Council Member Place 4 Dan Davis

Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert

Abstained: None

9. Consideration and possible action to direct staff on the proposed amendments to Code of Ordinances ARTICLE IX. NOISE REGULATION.

Chief Traylor -

Since the last meeting, he has researched other city's noise ordinances and came across the City of Sugarland's ordinance, which he feels meets what Council was wanting to see in the revision of our noise ordinance.

Dan Davis -

Asked for clarification of section 44-162 e in the draft ordinance.

Q: If a violation occurs, what tools do you have to enforce this?

A: Up to \$500 per citation and the judge/court would assess the amount

Q: 44-161 d; if business operates next to residence - can't operate between 10 p.m. to 6 a.m.

Would this not be applicable to churches?

A: Does not include churches

Q: 44-161 a; uses the word "may" - is there a specific reason this word was used compared to "shall"?

A: Chief would personally like to keep "may" because it leaves it at the officers' discretion, but this is something we can look at and possibly change since this is a draft.

Would be fine with this coming before Council for approval at next meeting after the necessary cleanup occurs.

No action taken.

10. Consideration and possible action to direct staff on the following items as requested by Council Member Albert;
 - a. Status of open positions and option to engage an outside recruitment agency to find Fire Marshals and or other open city positions.
 - b. Discussion on open police department positions and possible action to define recruit and retain police department recruiter(s) FTE(s) position(s).
 - c. Discussion and possible action on the effectiveness of HR and HR related activities.
 - d. Discussion and possible action on multiple reports of staff failures to engage city customers, including but not limited to updates on Michael Johnson's repeated complaints of lack of enforcement actions.
 - e. Discussion and possible action on the status of the salary survey and employee engagement survey. (Direction was given to staff in September).

Council Member Jerome Hudson made the motion to table. Council Member Larry Akery seconded the motion.

The motion carried with a vote: 5/0

Yes: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 3 Niccole Tyson, City Council Member Place 4 Dan Davis, City Council Member Place 6 Jerome Hudson

No: None

Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert

Abstained: None

Consent Agenda

1. Approve Final Plat for Meridiana Detention Reserve V Phase 2;
Being a subdivision of 1.074 acres out of the H.T. & B.R.R. Company Survey, Section 61, Abstract 282, and the Oliver Hall Survey, Abstract 203, City of Manvel, Brazoria County, Texas. (Favorable recommendation by PD&Z 7-0)
2. Approve Final Plat of Meridiana Elementary School Site No. 2;
Being a subdivision of 13.00 acres out the Oliver Hall Survey, Abstract 203, City of Manvel, Brazoria County, Texas. (Favorable recommendation by PD&Z 7-0)
4. Approve second and final reading of Ordinance 2022-O-05;
AN ORDINANCE OF THE CITY OF MANVEL, TEXAS, AMENDING CHAPTER 50. *PLANNING AND DEVELOPMENT*, ARTICLE III. *COMPREHENSIVE PLAN*, BY APPROVING THE 2022 MASTER WASTEWATER PLAN UPDATE DOCUMENT AS THE 2022 MASTER WASTEWATER PLAN; AMENDING SECTION 50-55. *MASTER WASTEWATER PLAN* INTEGRATING THE CITY'S 2022 MASTER WASTEWATER PLAN INTO THE CITY'S COMPREHENSIVE PLANS; PROVIDING FOR CONFORMITY OF ALL WASTEWATER REGULATIONS TO THE MASTER WASTEWATER PLAN; PROVIDING A PENALTY IN AN AMOUNT NOT TO EXCEED \$2,000.00 PER DAY FOR EACH DAY OF VIOLATION OF ANY PROVISION HEREOF; AND PROVIDING FOR SEVERABILITY; AND PROVIDING A SEVERANCE CLAUSE AND EFFECTIVE DATE.

5. Acceptance of the meeting minutes to date.

Council Member Jerome Hudson made the motion to approve Consent Agenda items 1, 2, 4, and 5. Council Member Niccole Tyson seconded the motion.

The motion carried with a vote: 5/0

Yes: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 3 Niccole Tyson, City Council Member Place 4 Dan Davis, City Council Member Place 6 Jerome Hudson

No: None

Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert

Abstained: None

Executive Session

No executive session.

City Council will convene into Executive Session pursuant to Texas Government Code, Sec. 551.074. "Personnel Matters - to deliberate the appointment, employment, evaluation, and duties of a public officer or employee".

Kyle J. Jung, City Manager

Mayor and Council Comments

Adjourn

Council Member Dan Davis made the motion to adjourn. Council Member Jerome Hudson seconded the motion.

The motion carried with a vote: 5/0

Yes: City Council Member Place 1 Larry Akery, City Council Member Place 2 Lorraine Hehn, City Council Member Place 3 Niccole Tyson, City Council Member Place 4 Dan Davis, City Council Member Place 6 Jerome Hudson

No: None

Absent: Mayor Debra Davison, City Council Member Place 5 Jason Albert

Abstained: None

The meeting adjourned at 7:58 p.m.

CERTIFICATION

TAMMY BELL, CITY SECRETARY
CITY OF MANVEL, TEXAS



City of Manvel

P. O. Box 187
20025 HWY 6
Manvel, Texas 77578

(281) 489-0630
Fax (281) 489-0634

AGENDA REQUEST

REQUEST MUST BE MADE ACCORDING TO THE SUBMITTAL SCHEDULE

Meeting Requested: (Please check applicable meeting)

Planning, Development & Zoning	☐	City Council	☐	Both	☒
--------------------------------	--------------------------	--------------	--------------------------	------	-------------------------------------

Date of Request: February 28, 2022 PDZ and March 7, 2022 City Council

YOUR REQUEST WILL BE PLACED ON THE NEXT AVAILABLE MEETING DATE. MEETINGS ARE SECOND AND FOURTH MONDAYS FOR PLANNING, DEVELOPMENT & ZONING AND FIRST AND THIRD MONDAYS FOR CITY COUNCIL. THE AGENDAS ARE POSTED TO THE GENERAL PUBLIC AT MANVEL CITY HALL AND ON OUR WEBSITE AT www.cityofmanvel.com. THE AGENDA IS POSTED AND WILL REMAIN POSTED CONTINUOUSLY FOR AT LEAST 72 HOURS PRECEDING THE SCHEDULED TIME OF THE MEETING. PLEASE CHECK THE BOARD FOR YOUR MEETING SCHEDULE. WE STRONGLY ENCOURAGE YOU TO ATTEND THE MEETING FOR QUESTIONS AND ANSWERS. IF YOU ARE UNABLE TO ATTEND ACTION MAY BE TABLED UNTIL THE FOLLOWING MEETING.

Person to Speak: Brad Sweitzer

Daytime Phone: 713-784-4500 Fax Number: N/A

E-mail Address: bsweitzer@ehrainc.com

Description of Request and Physical Address:

Consideration and possible action to approve and move forward with recommendation to City Council,

Preliminary Plat for Meridiana Detention Reserves L-2 and O-2, A Subdivision of 46.89 acres out of the Oliver Hall Survey,

A-203, consisting of 1 Block, and 3 Reserves, a plat or map thereof recorded in Brazoria County.

Plats:

Preliminary X

Final

ALL DOCUMENTATION AND FEES ASSOCIATED WITH THIS AGENDA REQUEST MUST BE SUBMITTED ACCORDING TO THE MEETING SUBMITTAL SCHEDULE WHICH CAN BE FOUND ON OUR WEBSITE. BY SIGNING THIS AGENDA REQUEST FORM I ACKNOWLEDGE THAT I HAVE READ AND UNDERSTAND THIS AGENDA REQUEST FORM.

Brad Sweitzer

SIGNATURE

1/31/2022

DATE



DEVELOPMENT SERVICES DEPARTMENT

20025 HIGHWAY 6
MANVEL, TX 77578
281-489-0630

City Council Plat Report

Plat Name	Meridiana Detention Reserves L-2 and O-2 Preliminary Plat
Applicant	Brad Sweitzer, EHRA, Inc.
PD&Z Meeting Date	March 7, 2022
Recommendation	Approval
Submitted By	Jessica Rodriguez, Director of Development Services

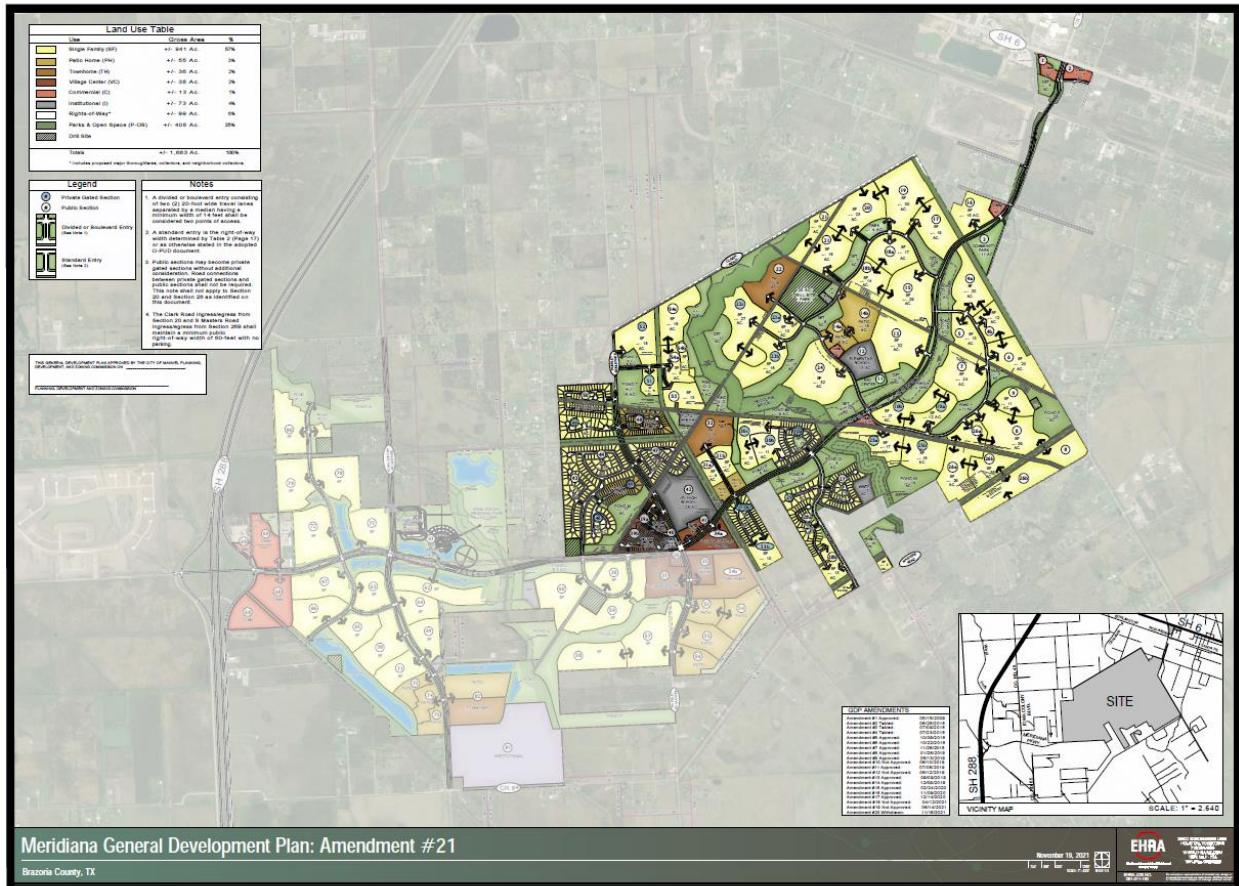
Planning, Development and Zoning Commission Recommendation

The Planning, Development and Zoning Commission recommended approval to City Council for the Meridiana Detention Reserves L-2 and O-2 Preliminary Plat.

Staff Recommendation

Staff recommends approval of the Meridiana Detention Reserves L-2 and O-2 Preliminary Plat.

Meridiana General Development Plan Amendment No. 21 (dated November 19, 2021)



GENERAL NOTES:

- Bearing orientation is based on the Texas State Plane Coordinate System of 1983, South Central Zone as determined by GPS measurements.
- The Coordinates shown hereon are Texas South Central Zone No. 4204 state plane grid coordinates (NAD 83) and may be brought to surface by applying the following scale factor: 0.99986742185.
- According to the Federal Emergency Management Agency Flood Insurance Rate Map, Brazoria County, Texas, Community Panel No. 48039C0110K, dated December 30, 2020, the property lies within Zone AE.

This flood statement does not imply that the property or structures thereon will be free from flooding or flood damage. On rare occasions floods can and will occur and flood heights may be increased by man-made or natural causes. The location of the flood zone was determined by scaling from said FEMA map. The actual location, as determined by elevation contours, may differ. Edminister, Hinshaw, Russ & Associates, Inc. d/b/a EHRA, assumes no liability as to the accuracy of the location of the flood zone limits. This flood statement shall not create liability on the part of Edminister, Hinshaw, Russ & Associates, Inc. d/b/a EHRA.
- B.C.C.F. indicates Brazoria County Clerk's File.
B.L. indicates Building Line.
C.R. indicates County Road.
D.E. indicates Drainage Easement.
M.H. indicates Manhole.
NO. indicates Number.
NTS. indicates Not to Scale.
PG. indicates Page.
P.A.E. indicates Permanent Access Easement.
P.O.B. indicates Point of Beginning.
P.U.E. indicates Public Utility Easement.
P.V.T. indicates Private.
R. indicates Radius.
RES. indicates Reserve.
R.O.W. indicates Right-Of-Way.
S.S.E. indicates Sanitary Sewer Easement.
STM.S.E. indicates Storm Sewer Easement.
U.E. indicates Utility Easement.
VOL. indicates Volume.
W.L.E. indicates Water Line Easement.
↗ indicates change in street name.
- The property subdivided in the foregoing plat lies in Brazoria County, the City of Manvel, Brazoria County M.U.D. No. 56 and 57, Alvin Independent School District, and Brazoria County Drainage District #5.
- Property within the boundaries of this plat and adjacent to any drainage easement, ditch, gully, creek, or natural drainage way shall hereby be restricted to keep such drainage ways and easements clear of fences buildings, plantings, and other obstructions.
- The Developer/Homeowners' Association/Municipal Utility District/Drainage District shall be responsible for maintenance of all reserves.
- The terms and conditions of Ordinance numbers 2009-O-03, 2009-O-04, and 2009-O-05 of the City of Manvel, Texas dated February 23, 2009, may affect this plat.
- All sidewalks shall be constructed in accordance with City of Manvel Ordinance No. 2009-O-04.
- Contour lines shown hereon are based on the NGS Benchmark E 306 being noted hereon.
- No residential, commercial, or industrial structure, other than structures necessary to operate the pipeline, shall be erected or moved to a location nearer than 50 feet to any pipeline, except for low pressure distribution system pipeline as defined in section 02-2, as per Manvel Ordinance Sec. 62-116a.
- Preliminary, this document shall not be recorded for any purpose and shall not be used or viewed or relied upon as a final survey document.
- Approval of the preliminary plat does not constitute acceptance of the subdivision, but is merely an authorization to proceed with the preparation of the final plat. Approval of the preliminary plat shall expire 12 months after council approval, unless the final plat has been submitted to council for final approval during that time. Upon written request of the subdivider, an extension of time may be given, at the discretion of the council, for a single extension period of six months, provided the subdivider has shown good faith in proceeding to complete the work necessary prior to filing the final plat.
- Reserve "L-2" and "O-2" provides a total of 5.18 acres of unencumbered open space within the boundary of this plat.

BRAZORIA COUNTY DRAINAGE DISTRICT NO. 5 NOTES:

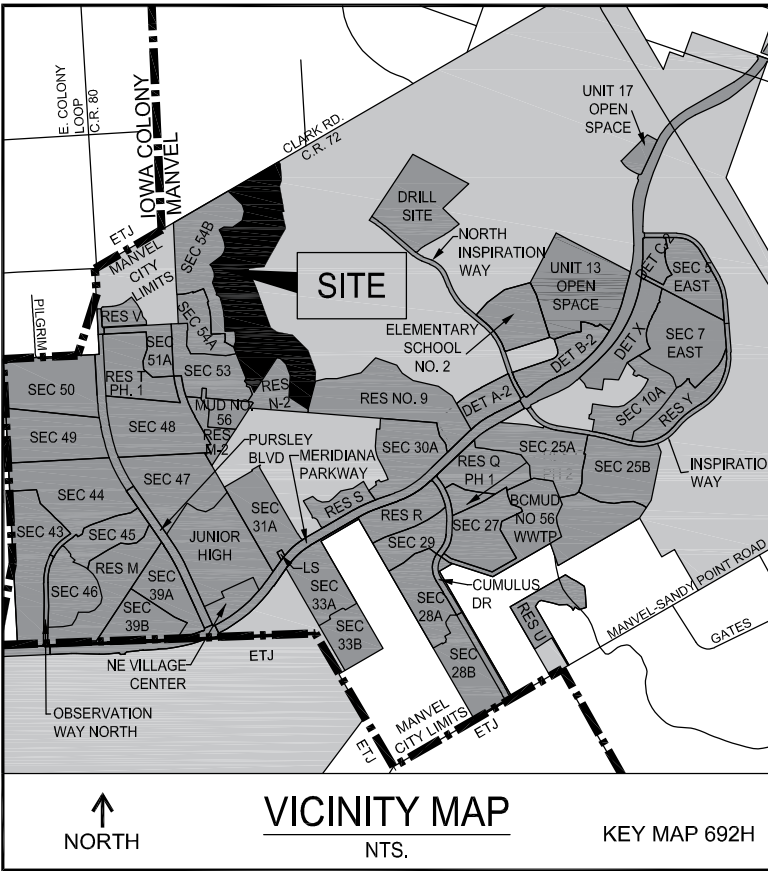
- Slab elevations (finished floor) shall be a minimum of 2 feet above finished grade.
- All drainage easements shown hereon shall be kept clear of fences, buildings, plantings and other obstructions to the operation and maintenance of drainage facilities.
- All property shall drain into the drainage easement only through an approved drainage structure.
- All drainage easements and detention pond reserves shown on this plat, will be maintained by the property owners and/or business owners; provided, however, and governmental entity have jurisdiction, including, without limitation, Brazoria County, Texas and Brazoria County Drainage District #5, shall have the right, but not the obligation to enter upon the drainage easements to perform maintenance operations at any time after the date hereof.
- The property identified in the foregoing plat lies within Brazoria County Drainage District #5.
- This rural subdivision employs a natural drainage system, which is intended to provide drainage for the subdivision that is similar to that which existed under pre-development conditions. Thus, during large storm events, ponding of water should be expected to occur in the subdivision to the extent it may have prior to development, but such ponding should not remain for an extended period of time.
- Land use within the subdivision is limited to an average imperviousness of no more than 72 percent. The drainage and/or detention system has been designed with the assumption that this average percent imperviousness will not be exceeded. If this percentage is to be exceeded, a replat and/or redesign of the system may be necessary.
- Other than shown hereon, there are no pipeline easements or pipelines within the boundaries of this plat.
- All storm water drainage pipes, culverts, tiles or other (includes driveway culverts) will be minimum 24" I.D., or equal.
- Dedicated drainage easement(s) granted to Brazoria County Drainage District #5 for drainage maintenance purposes shall include 45 feet top of bank, plus the sum (footage) of both ditch side slopes and channel bottom and 45 feet of bank on the opposite bank.
- Dedicated Ingress/Egress accesses are granted to Brazoria County Drainage District #5 (see District Resolution No 2007-06 & 2007-07). Access will be gated and locked with Brazoria County Drainage District #5's lock.
- Prohibited use of "metal" pipe in storm water/sewer applications (See District Resolution No. 2007-08).
- Prohibited use of "rip rap" in storm water/sewer applications. (District Policy).
- Pipelines, utility lines and other crossing under any Brazoria County Drainage District #5 ditch require approval and permitting prior to construction.
- All dedicated storm water drainage and/or access easements to be granted to Brazoria County Drainage District #5 by the property owner will be initiated and recorded, at the property owner's expense, in Brazoria County, Texas with a "Recorded Document Number" affixed to said easement prior to final approval granted by Brazoria County Drainage District #5 Board of Commissioners.
- It will be the property owner's responsibility to verify if any Brazoria County Drainage District #5 "Dedicated" drainage easements are on or cross their property. If so, the property owner will comply as stated within the recorded easement.
- Project field start-up will start within 365 calendar days from date shown here. Continuous and reasonable field site work is expected. See Brazoria County drainage criteria manual section 1. Introduction; Sub-Section 1.5. Plat and Plan approval process; and drainage acceptance procedures; time limit for approval and Brazoria County Drainage District #5 Resolution 2011-1, allowable time(s) and procedures for starting-up approved projects.

THIS IS TO CERTIFY THAT THE PLANNING, DEVELOPMENT AND ZONING COMMISSION OF THE CITY OF MANVEL, TEXAS, HAS RECOMMENDED APPROVAL OF THIS PLAT OF MERIDIANA DETENTION RESERVES L-2 AND O-2 IN CONFORMANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE ORDINANCES OF THE CITY OF MANVEL AS SHOWN HEREON AND AUTHORIZES THE RECORDING OF THIS PLAT THIS _____ DAY OF _____, 2022.

PLANNING, DEVELOPMENT AND ZONING COMMISSION

THIS IS TO CERTIFY THAT THE CITY COUNCIL OF THE CITY OF MANVEL, TEXAS, HAS APPROVED THIS PLAT OF MERIDIANA DETENTION RESERVES L-2 AND O-2 IN CONFORMANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE ORDINANCES OF THE CITY OF MANVEL AS SHOWN HEREON AND AUTHORIZES THE RECORDING OF THIS PLAT THIS _____ DAY OF _____, 2022.

CITY COUNCIL



LINE TABLE

LINE	ANGLE	DISTANCE
L1	S 30°11'48" E	40.00'
L2	S 18°04'22" W	85.30'
L3	S 79°12'38" W	26.91'
L4	S 12°01'24" E	232.68'
L5	S 83°04'01" W	207.90'
L6	S 20°16'39" W	22.70'
L7	S 24°21'18" E	246.87'
L8	S 55°51'54" E	102.02'
L9	S 79°01'02" E	218.61'
L10	S 03°18'59" W	130.98'
L11	N 19°47'56" W	163.34'
L12	N 45°22'14" W	112.12'
L13	N 79°01'02" W	51.34'
L14	N 21°50'54" W	97.32'
L15	N 71°26'51" W	63.48'
L16	N 26°00'39" E	44.33'
L17	N 23°42'42" E	70.75'
L18	N 00°36'57" W	76.93'
L19	N 04°59'54" W	80.06'
L20	S 87°08'57" W	137.00'
L21	N 02°51'03" W	207.11'
L22	N 12°48'25" E	25.00'
L23	N 21°45'58" W	154.62'
L24	N 17°30'56" E	82.63'
L25	N 01°35'53" W	61.18'
L26	N 21°41'39" W	85.62'
L27	N 46°09'36" W	40.23'
L28	N 53°26'02" E	200.76'
L29	N 31°59'10" E	60.30'
L30	N 15°42'36" E	70.49'
L31	N 08°21'30" W	73.84'
L32	N 21°00'32" W	83.52'
L33	N 25°37'24" W	98.98'
L34	N 59°48'12" E	81.84'
L35	S 86°42'40" E	117.09'
L36	N 54°50'48" E	159.84'
L37	N 12°25'32" E	133.73'
L38	N 17°15'53" W	95.67'
L39	N 46°32'47" W	269.03'

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	60.00'	55.02'	N 37°43'06" W	53.11'
C2	830.00'	246.13'	N 11°20'45" W	245.23'
C3	85.00'	85.06'	N 48°31'01" W	81.58'

RESERVE TABLE

RESERVE	RESTRICTIONS	SQ. FT.	ACREAGE
A	DRAINAGE, LANDSCAPE, OPEN SPACE, RECREATION, & UTILITY PURPOSES	1,322,344.04	30.36
L-2	DETENTION, LANDSCAPE, OPEN SPACE, RECREATION, & UTILITY PURPOSES	302,105.77	6.94
O-2	DETENTION, LANDSCAPE, OPEN SPACE, RECREATION, & UTILITY PURPOSES	386,039.23	8.86
TOTAL		2,010,489.04	46.16

OWNER CONTACT INFORMATION
GR-M1, LTD., A TEXAS LIMITED PARTNERSHIP
1602 AVENUE D, STE. 100
KATY, TX 77493
832-916-2162

BENCHMARK(S):

NGS MONUMENT # E 306 DISK SET IN TOP OF CONCRETE MONUMENT, LOCATED 2.0 MILES WEST OF MANVEL, 2 MILES WEST ALONG THE GULF, COLORADO AND SANTA FE RAILWAY FROM THE STATION AT MANVEL, BRAZORIA COUNTY, 0.2 MILE WEST OF A SHELL-ROAD CROSSING, 5-1/2 FEET NORTHWEST OF MILE POLE 38, 50 FEET SOUTH OF THE SOUTH RAIL, 33 FEET NORTH OF THE CENTERLINE OF A DIRT ROAD, 6.7 FEET NORTH OF THE RIGHT-OF-WAY FENCE, 3 FEET WEST OF A WHITE WOODEN WITNESS POST AND SET IN THE TOP OF A CONCRETE POST ABOUT FLUSH WITH THE GROUND.
ELEV.=52.00 (NAVD '88) 1991 ADJUSTMENT



10' 50' 100' 200'
SCALE: 1"=100'

Meridiana Detention Reserves 'L-2' and 'O-2' Preliminary Plat

A Subdivision of 46.89 acres out of the Oliver Hall Survey, A-203, City of Manvel, Brazoria County, Texas.

1 Block and 3 Reserves

Owner: GR-M1, LTD., a Texas Limited Partnership

Sheet 1 of 2

January 31, 2022



10011 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.784.4500
WWW.EHRAINCO.COM
TBPE No. F - 726
TBPLS No. 10092300

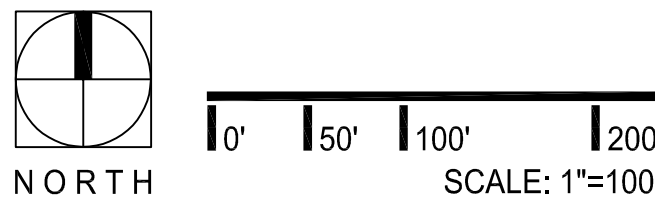
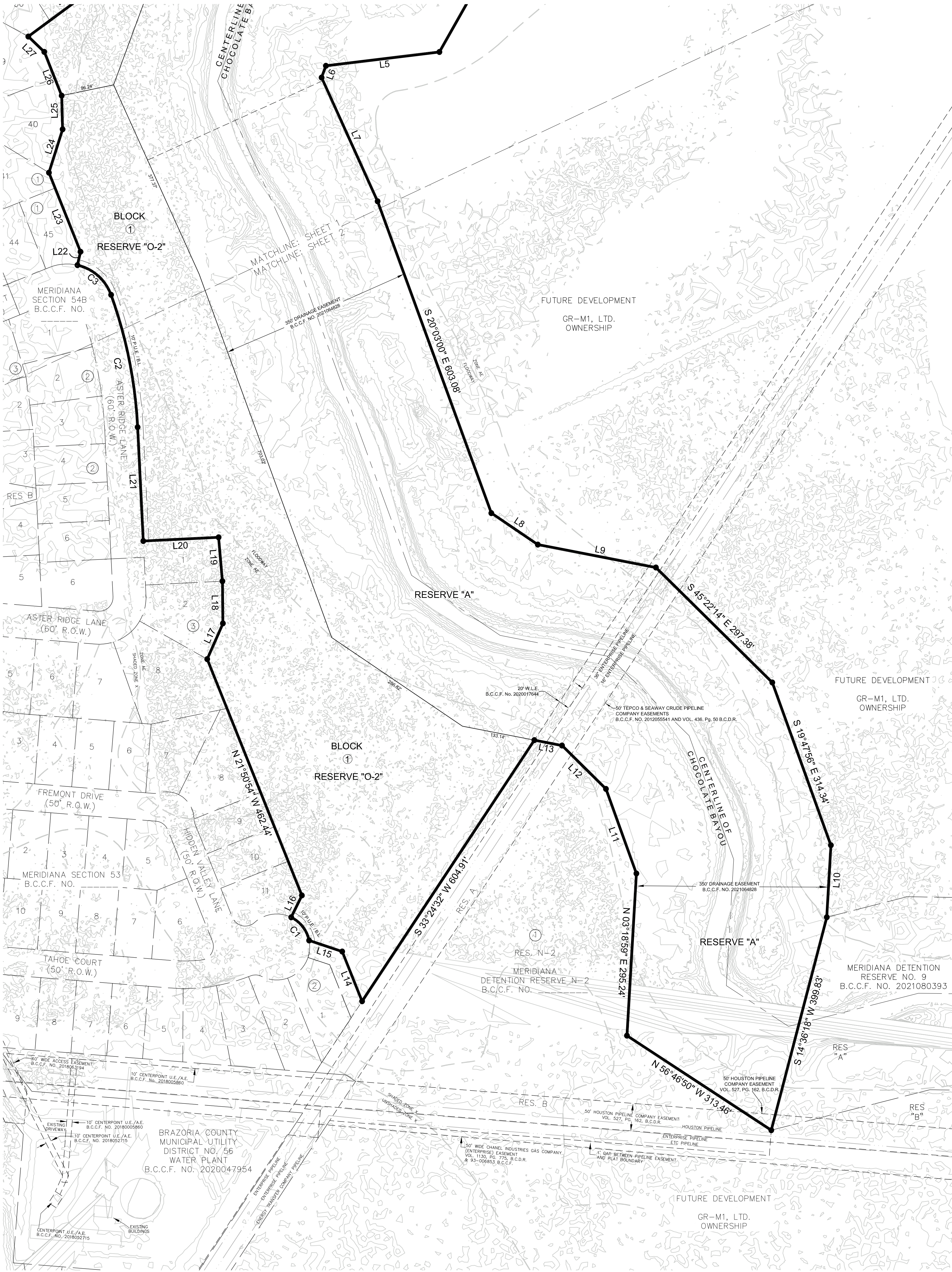
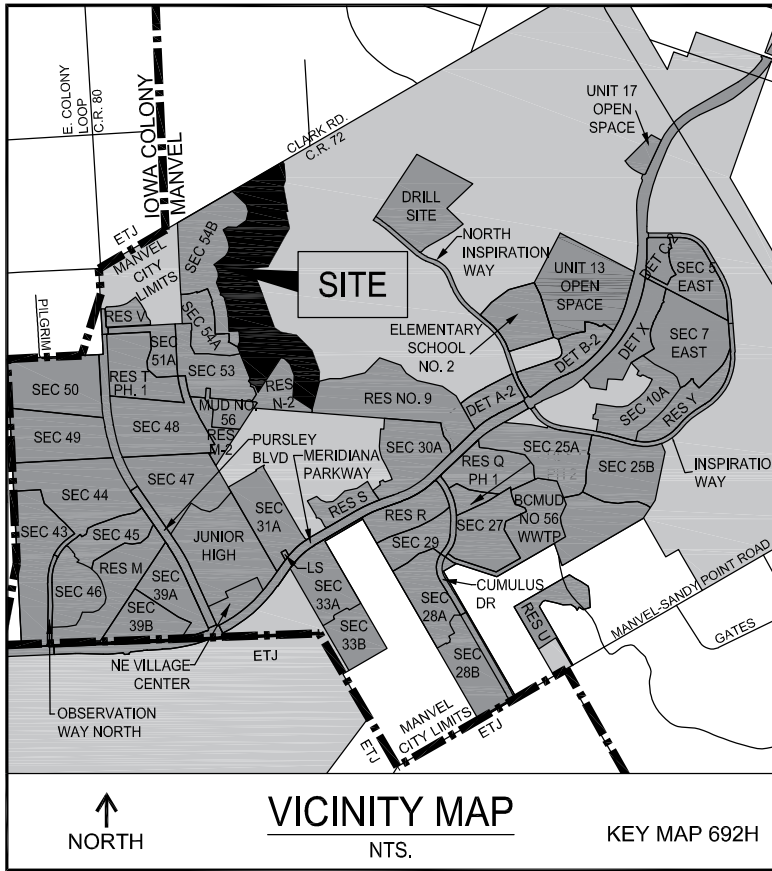
EHRA JOB NO.
081-011-209

No warranty or representation of intended use, design or proposed improvements are made herein. All plans for land or facilities are subject to change without notice.

LINE TABLE		
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TOTAL		2,010,489.04	46.16



Meridiana Detention Reserves 'L-2' and 'O-2' Preliminary Plat
A Subdivision of 46.89 acres out of the Oliver Hall Survey, A-203, City of Manvel, Brazoria County, Texas.

Sheet 2 of 2

1 Block and 3 Reserves
Owner: GR-M1, LTD., a Texas Limited Partnership

January 31, 2022



ENGINEERING THE FUTURE
SINCE 1936

10011 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.784.4500
WWW.EHRAINCO.COM
TBPE No. F - 726
TBPLS No. 10092300

EHRA JOB NO. 081-011-209 No warranty or representation of intended use, design or proposed improvements are made herein. All plans for land or facilities are subject to change without notice.

Land Use Table		
Use	Gross Area	%
Single Family (SF)	+/- 941 Ac.	57%
Patio Home (PH)	+/- 55 Ac.	3%
Townhome (TH)	+/- 36 Ac.	2%
Village Center (VC)	+/- 38 Ac.	2%
Commercial (C)	+/- 13 Ac.	1%
Institutional (I)	+/- 73 Ac.	4%
Rights-of-Way*	+/- 99 Ac.	6%
Parks & Open Space (P-OS)	+/- 408 Ac.	25%
Drill Site		
Totals	+/- 1,663 Ac.	100%
* Includes proposed major thoroughfares, collectors, and neighborhood collectors.		

Legend

Private Gated Section

Public Section

Divided or Boulevard Entry
(See Note 1)

Standard Entry
(See Note 2)

- Notes**

1. A divided or boulevard entry consisting of two (2) 20-foot wide travel lanes separated by a median having a minimum width of 14 feet shall be considered two points of access.

2. A standard entry is the right-of-way width determined by Table 2 (Page 17) or as otherwise stated in the adopted O-PUD document.

3. Public sections may become private gated sections without additional consideration. Road connections between private gated sections and public sections shall not be required. This note shall not apply to Section 20 and Section 26 as identified on this document.

4. The Clark Road ingress/egress from Section 20 and S Masters Road ingress/egress from Section 26B shall maintain a minimum public right-of-way width of 60-feet with no parking.

THIS GENERAL DEVELOPMENT PLAN APPROVED BY THE CITY OF MANVEL PLANNING, DEVELOPMENT, AND ZONING COMMISSION ON _____

PLANNING, DEVELOPMENT AND ZONING COMMISSION



GDP AMENDMENTS	
Amendment #1 Approved:	05/18/2009
Amendment #2 Tabled:	06/25/2018
Amendment #3 Tabled:	07/09/2018
Amendment #4 Tabled:	07/23/2018
Amendment #5 Approved:	10/09/2018
Amendment #6 Approved:	10/22/2018
Amendment #7 Approved:	11/26/2018
Amendment #8 Approved:	01/28/2019
Amendment #9 Approved:	05/13/2019
Amendment #10 Not Approved:	06/10/2019
Amendment #11 Approved:	07/08/2019
Amendment #12 Not Approved:	08/12/2019
Amendment #13 Approved:	09/09/2019
Amendment #14 Approved:	12/09/2019
Amendment #15 Approved:	02/24/2020
Amendment #16 Approved:	11/09/2020
Amendment #17 Approved:	12/14/2020
Amendment #18 Not Approved:	04/12/2021
Amendment #19 Not Approved:	06/14/2021
Amendment #20 Withdrawn:	11/16/2021



Meridiana General Development Plan: Amendment #21

Brazoria County, TX

November 19, 2021

SCALE: 1" = 600'



10211 MEADOWGLEN LANE
HOUSTON, TEXAS 77042
713.368.4500
WWW.EHRAINC.COM
TYPE No. F-726
TBP/LS No. 10092300

ENGINEERING THE FUTURE

EHRA JOB NO.
081-011-150

No warranty or representation of intended use, design or proposed improvements are made herein. All plans for land or facilities are subject to change without notice.