

ITEM # 2.0

PRELIMINARY & FINAL PLAT APPROVAL:

Crystal Estates Phase IV Section 1 Subdivision
Being a 7.489-acre parcel of land, out of Lot 27-1,
West Addition to Sharyland
R-2
Developer: DG & GG Investments, LLC
Engineer: Ever Engineering, LLC

REVIEW DATA

PLAT DATA

The proposed subdivision is located east of Inspiration Rd. approximately 1,400' south of W. 2 Mile Road. – see **vicinity map**. The developer is proposing twenty-four (24) Duplex - Fourplex lots. - see plat for actual dimensions, square footages, and land uses.

VARIANCE

The developer is requesting to change the following street names:
Estevan St. to Britney St. / Gabriel St. to Bailey St.

Note:

Code of Ordinances / Chapter 98 - SUBDIVISIONS, Sec. 98-134. - Streets. (n) Street names.

Names of new streets shall not duplicate or cause confusion with the names of existing streets, unless the new streets are a continuation of or in alignment with existing streets, in which case names of existing streets shall be used, and shall conform to the existing street naming system.

WATER

The developer shall connect to an existing 12" water line located along the west side of Inspiration Rd. and extend into the subdivision. The water line will be a main 8" looped line providing water service for each lot. There are 2 proposed fire hydrants via direction of the Fire Marshal's office.
– see **utility plan**

SEWER

Sanitary sewer service for this subdivision will tie into a proposed manhole located within the Inspiration Rd. ROW. The sewer line will extend into the subdivision collect from each lot through a 6" stub out into the proposed 8" sewer main line. The Capital Sewer Recovery Fee has been paid and credited to the account.

STREETS & STORM DRAINAGE

The proposed internal street is a 32' back-to-back within a 50' Right of Way. Access will be from Inspiration Rd.

The development will utilize 2 proposed detention ponds to mitigate the increase in runoff for the 50-year development conditions to below the 10-year existing conditions. The development will add impervious cover to the site and increase flows. However, flow rates for runoff leaving the site will be less than existing conditions due to the proposed detention ponds. Therefore, the runoff resulting from the proposed development will not produce a significant adverse impact to other properties, habitable structures, or drainage infrastructure systems downstream. The City Engineer has reviewed and approved the drainage report.

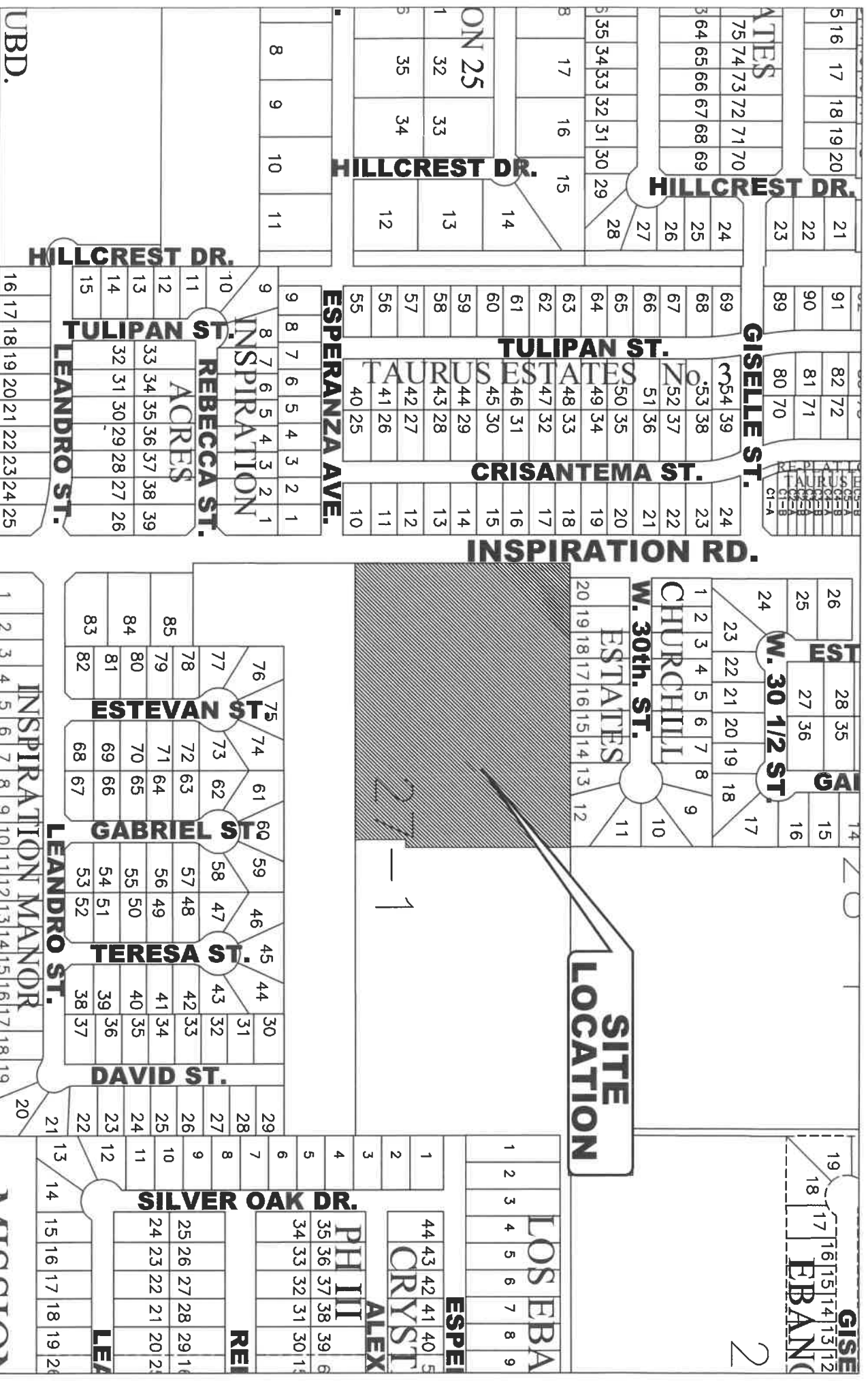
OTHER COMMENTS

- Installation of street lighting as per City Standards
- Park Fees have been paid and credited to the account
- Water District Exclusion
- Conveyance or Payment of Water Rights
- Must comply with all other format findings.

RECOMMENDATION

Staff recommends approval subject to:

1. Water District Exclusion
2. Conveyance or Payment of Water Rights/Fee
3. Denial of the requested variance to use suggested street names requested by the owner and keep the existing City's continued and aligned street names as noted on the Code of Ordinances / Chapter 98 - SUBDIVISIONS, Sec. 98-134. - Streets. (n) Street names.



**SITE
LOCATION**

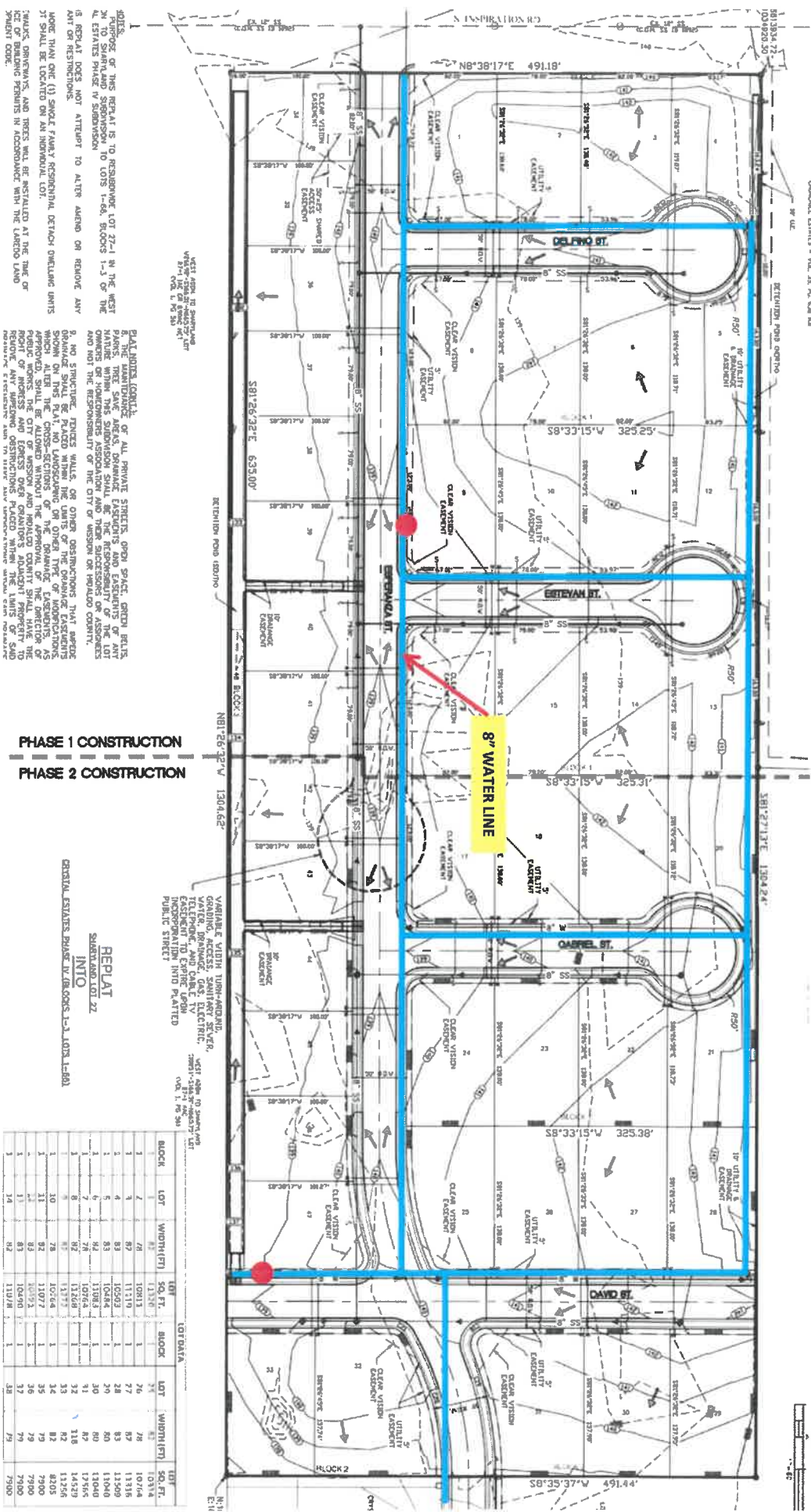
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CITY OF MISSION
 HIDALGO COUNTY, TEXAS
 1201 E. 8th Street
 MISSION, TX 78372
 PH: (956) 380-8672
 FAX: (956) 380-8680

No. _____



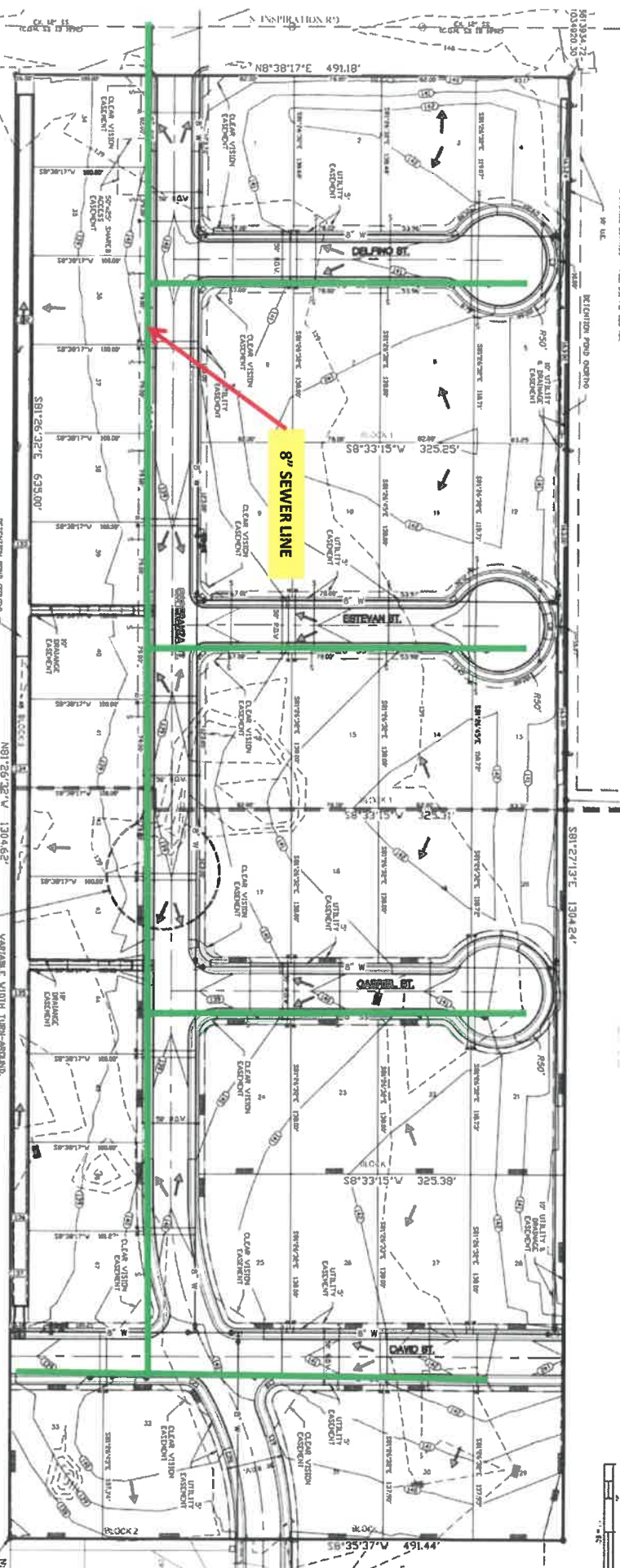


PHASE 1 CONSTRUCTION
PHASE 2 CONSTRUCTION

REPAIR
INTO
SUBSTANDARD Z
EXISTING UTILITIES PHASE IV (BLOCKS 1-3, LOTS 1-88)

BLOCK	LOT	WIDTH (FT)	SO. FT.	BLOCK	LOT	WIDTH (FT)	SO. FT.
1	1	78	10813	1	1	78	10813
1	2	87	11119	1	2	87	11119
1	3	83	10593	1	3	83	10593
1	4	83	10584	1	4	83	10584
1	5	83	10584	1	5	83	10584
1	6	83	10584	1	6	83	10584
1	7	83	10584	1	7	83	10584
1	8	83	10584	1	8	83	10584
1	9	83	10584	1	9	83	10584
1	10	83	10584	1	10	83	10584
1	11	82	11877	1	11	82	11877
1	12	83	10593	1	12	83	10593
1	13	83	10593	1	13	83	10593
1	14	82	11877	1	14	82	11877

NOTES:
 1. PURPOSE OF THIS REPAIR IS TO RECONSTRUCT LOT 22-1 IN THE WEST 24' TO SHARPLAND SUBDIVISION TO LOTS 1-68, BLOCKS 1-3 OF THE 24' ESTIMATES PHASE IV SUBDIVISION.
 2. REPAIR DOES NOT ATTEMPT TO ALTER MAJOR OR REMOVE ANY MAJOR OR RESTRICTIONS.
 3. MORE THAN ONE (1) SINGLE FAMILY RESIDENTIAL DETACH OVERLAPPING UNITS SHALL BE LOCATED ON AN INDIVIDUAL LOT.
 4. WALLS, DRIVEWAYS, AND TREES WILL BE INSTALLED AT THE TIME OF REPAIR AND SHALL BE IN ACCORDANCE WITH THE LARDO LAND USE ZONING CODE.
 5. NO STRUCTURE, FENCES, WALLS, OR OTHER OBSTRUCTIONS THAT WOULD OBSTRUCT THE VIEW OR INTERFERE WITH THE INSTALLATION OF UTILITIES SHALL BE PLACED ON THIS PLAT.
 6. THE RESPONSIBILITY OF THE CITY OF WESSEX OR HERALD COUNTY SHALL BE TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LOTS OF SAID SUBDIVISION.
 7. THE RESPONSIBILITY OF THE CITY OF WESSEX OR HERALD COUNTY SHALL BE TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LOTS OF SAID SUBDIVISION.
 8. THE RESPONSIBILITY OF THE CITY OF WESSEX OR HERALD COUNTY SHALL BE TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LOTS OF SAID SUBDIVISION.
 9. THE RESPONSIBILITY OF THE CITY OF WESSEX OR HERALD COUNTY SHALL BE TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LOTS OF SAID SUBDIVISION.
 10. THE RESPONSIBILITY OF THE CITY OF WESSEX OR HERALD COUNTY SHALL BE TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LOTS OF SAID SUBDIVISION.



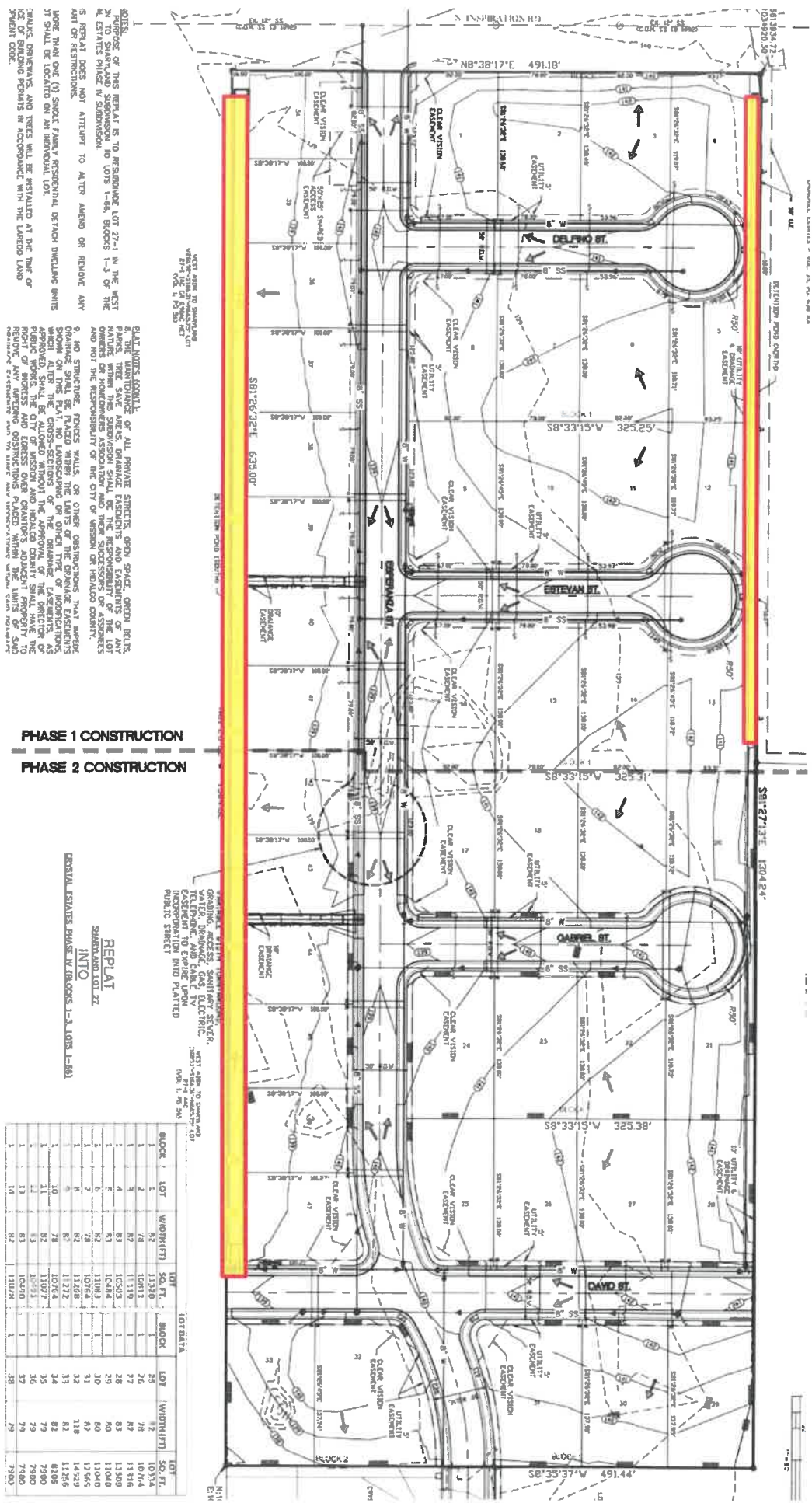
NOTES:

1. PURPOSE OF THIS REPAIR IS TO RESURFACE LOT 27-1 IN THE WEST 1/4 OF SHARLAND SUBDIVISION TO LOTS 1-66, BLOCKS 1-3 OF THE 1/4 SECTION 17, T20S08N, R10E03E.
2. REPAIR DOES NOT ATTEMPT TO ALTER AROUND OR REMOVE ANY AIR OR RESTRICTIONS.
3. NO STRUCTURE, FENCES, WALLS, OR OTHER OBSTRUCTIONS THAT IMPROVE OR DRAINAGE SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EXHIBITS SHOWN ON THIS PLAN AND LOTS 27-1 AND 27-2 OF SHARLAND SUBDIVISION. APPROVED SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS. THE CITY ENGINEER AND HOLIDAY COUNTY SHALL HAVE THE RIGHT TO REMOVE ANY IMPEDING OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EXHIBITS AND TO HAVE SAID OBSTRUCTIONS REMOVED WITHIN THE TIME FRAME.

PHASE 1 CONSTRUCTION
PHASE 2 CONSTRUCTION

REPAIR
INFORMATION
 CRISTAL ESTATES PHASE II (BLOCKS 1-3, LOTS 1-66)
 SUBDIVISION LOT 27

LOT	WIDTH (FT)	AREA (SQ. FT.)	BLOCK	LOT	WIDTH (FT)	AREA (SQ. FT.)
1	82	11920	1	25	78	10764
2	78	10818	1	26	78	10764
3	82	11920	1	27	78	10764
4	83	12043	1	28	83	12043
5	83	12043	1	29	83	12043
6	83	12043	1	30	83	12043
7	78	10818	1	31	82	12656
8	82	11920	1	32	118	14829
9	82	11920	1	33	82	12656
10	78	10764	1	34	82	12656
11	82	11920	1	35	78	10764
12	82	11920	1	36	78	10764
13	82	11920	1	37	78	10764
14	82	11920	1	38	78	10764



PHASE 1 CONSTRUCTION
PHASE 2 CONSTRUCTION

REPLAT
INTO
SECTIONS 22
INTO
SECTION 22

ESSENTIAL ESTATES PHASE 1 & 2 LOTS 1-88

BLOCK	LOT	WIDTH (FT)	AREA (SQ. FT.)	BLOCK	LOT	WIDTH (FT)	AREA (SQ. FT.)
1	1	82	11320	1	1	82	11320
1	2	78	10113	1	2	78	10113
1	3	82	11320	1	3	82	11320
1	4	82	11320	1	4	82	11320
1	5	82	11320	1	5	82	11320
1	6	82	11320	1	6	82	11320
1	7	82	11320	1	7	82	11320
1	8	82	11320	1	8	82	11320
1	9	82	11320	1	9	82	11320
1	10	78	10113	1	10	78	10113
1	11	82	11320	1	11	82	11320
1	12	82	11320	1	12	82	11320
1	13	82	11320	1	13	82	11320
1	14	82	11320	1	14	82	11320

REPLAT
INTO
SECTIONS 22
INTO
SECTION 22

Crystal Estates IV Stormwater Management Plan

SITE DESCRIPTION

The Crystal Estates IV site is currently undeveloped and located in Hidalgo County, within the limits of The City of Mission. The property is currently undeveloped and contains negligible existing impervious cover. The property can generally be described as open grassy area along with scattered trees. On-site natural ground slopes were found to be in the 0.5%-2% range. The proposed property is located approximately 1,400' south of the W 2 Mile Road and Inspiration Road intersection as shown on the attached location map (EXH 1). The 14.713-acre tract is bound by single-family residential development and undeveloped land with approximately 500ft of frontage along Inspiration Road.

The soils in this area are mostly fine sandy loam (25) with some sandy clay loam (28), these soils belong to hydrologic group B, which have a moderate infiltration rate when saturated. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission, (reference Exhibit 9).

PROPOSED PROJECT

The proposed project consists of eighteen (47) lots developed for multi-family use including dedicated right-of-way access and a lot dedicated for a proposed detention pond. It will be assumed that the entire site will be used as multi-family development for drainage calculations purposes. This report studies the onsite and offsite basins for the proposed property. This report will show that flows leaving the site for developed-conditions will be less than existing-condition flows with the aid of two proposed detention ponds (see Appendix C).

METHODOLOGY

This report will examine the change in runoff due to the development by utilizing the Rational and Modified Rational methods ($Q=CIA$). Times of concentration were determined through the TR-55 method for small, urban watersheds using the 2-year 24-hour period return and Manning's roughness coefficients from table 3-1. Watersheds were assigned a C-value based on the typical ranges for the land use types provided in Table 3-3 of the "City of McAllen Standard Design Guide for Public Infrastructure Improvements". IDF curves were determined using precipitation frequencies, volumes, and intensities as reflected in NOAA Atlas 14, Volume 11 (A14) for "Mission, Texas". This report models the storm runoff rates for the 10-year and 50-year rainfall events for existing and developed conditions. Runoff leaving the site will be less than or equal to the 10-year existing runoff rate for the 50-year developed condition with the aid of the proposed detention pond.

**Crystal Estates IV
Stormwater Management Plan**

EXISTING DRAINAGE PATTERNS

The site does not contain significant, existing impervious cover and generally drains in one direction, from north to south. A single watershed was defined to model the existing drainage patterns including onsite and offsite drainage. Watershed 1 (WS-1) is 20.10-acres and contains onsite and offsite area. Watershed 1 (WS-1) generally drains from north south onto our property and leaves across the southern property line of the site, as shown on (EXH 5) "Existing Conditions Map". Runoff leaving the site discharges directly to the adjacent undeveloped and single-family residential lots at a rate of **21.37 cfs** for the 10-year rainfall event. The existing watershed consist of single-family residential (C=0.50) and undeveloped land (C=0.15). A composite C-value of 0.19 was calculated to represent the entire watershed. The Watersheds boundary, time of concentration paths, and flow directions can be found on (EXH 5) "Existing Conditions Drainage Map". Detailed hydrologic calculations can be found in Appendix B. Below is a summary of the existing conditions calculations.

Watershed	Area	C	Tc	Flow (cfs)	
	(ac)	(unitless)	(min)	10	50
EXISTING					
WS-1	20.10	0.19	19	21.37	

DEVELOPED DRAINAGE PATTERNS

Watershed 1 (WS-1) will be split into thirteen (12) watersheds, WS-(1-12) to model onsite and offsite storm runoff for developed conditions. All Watershed information can be found on (EXH 6) "Developed Conditions Drainage Map", detailed calculations can be found in Appendix B. Drainage patterns will generally remain the same for developed conditions. Time of concentration paths will increase due to the nature of the development and associated grading. The developed watersheds consist of single-family residential (C=0.50), multi-family "attached" (0.65), and undeveloped land (C=0.15). Composite C-values were assigned where applicable. Flow rates will increase slightly due to the increase in impervious cover for this development. However, Detention Ponds North & South will mitigate the increase in flow rates and reduce the flows leaving the site below existing conditions.

WS (1, 3, 4, & 7) consist of onsite and offsite drainage areas. The watersheds will leave the site un-detained due to the nature of the development. Although the watersheds will see an increase in runoff from the 50-year developed to the 10-year existing runoff conditions, the detention pond will be "over-sized" to mitigate this increase and ultimately decrease the runoff leaving the property as a whole.

WS 2 consists of onsite and offsite drainage areas and will be routed to the proposed Detention Pond North via proposed grading.

**Crystal Estates IV
Stormwater Management Plan**

WS 6 & (8-12) consist entirely of onsite drainage areas and will be routed to the proposed Detention Pond South via curb & gutter and/or drainage channels. The watersheds were calculated at study points and cross-sections throughout the development to adequately design proposed drainage infrastructure. WS 6 & 8 were calculated at study point 1 (SP-1) to model the runoff within the proposed Delfino Street while watersheds 9, 11, & 12 were calculated to model the runoff within the proposed Estevan, Gabriel, and David Streets respectively. Study points (SP 2, 3, & 4) were calculated to adequately size the drainage channels used to convey runoff from the watersheds to the proposed detention pond. Additionally, the onsite watersheds were combined to design the proposed detention pond and will leave the pond at three different locations along the adjacent property line to mitigate the impact to the properties immediately downstream. Detailed calculations for the combined watershed including calculations for the combined watershed thru pond 1 can be found in Appendices B & C of this report. Below is a summary of the existing conditions calculations.

Watershed	Area (ac)	C (unitless)	Tc (min)	Flow (cfs)	
				10	50
DEVELOPED					
WS-1	0.25	0.65	17		1.31
WS-2	5.05	0.33	25		11.01
WS-3	1.97	0.25	25		3.25
WS-4	3.23	0.54	30		10.41
WS-5	0.77	0.65	19		3.86
WS-6	0.89	0.65	20		4.30
WS-7	0.26	0.65	14		1.48
WS-8	1.83	0.65	20		8.84
WS-9	0.96	0.65	20		4.64
WS-10	1.84	0.65	20		8.89
WS-11	0.72	0.65	17		3.77
WS-12	2.31	0.65	21		10.88
SP-1			20		7.94
SP-2 ("A-A")			20		21.42
SP-3 ("B-B")			20		12.00
SP-4 ("C-C")			21		10.88
POND WS COMB.			20		50.73
POND SOUTH			25		7.46
POND NORTH					5.28
TOTAL DEV. RUNOFF					18.78

Total runoff rate leaving the site w/o detention, (50-year developed conditions) = **50.73 cfs**

Total runoff rate leaving the site w/ detention, (50-year developed conditions) = **18.78 cfs**

Crystal Estates IV Stormwater Management Plan

DETENTION POND CHARACTERISTICS

Detention Pond South is a dry, earthen detention pond with modular block walls and a minimum of 0.5% sloped concrete pilot channel bottom. Flow from the combined Pond WS is conveyed to the pond. The pond bottom has a minimum elevation of 131.00 ft with a top of bank set at elevation 138.00 ft. Stage storage tables for Det. Pond South are provided on the Detention Pond Plan, Sheet C9.00, in Appendix C. The pond will utilize a single 12" orifice outfall structure located at the western end of the pond that will discharge directly into a City of Mission public storm sewer located on the west side of Inspiration Road.

Detention Pond North is a dry, earthen detention pond with modular block walls and a minimum of 0.3% sloped concrete pilot channel bottom. Flow from the WS 2 is conveyed to the pond. The pond bottom has a minimum elevation of 136.00 ft with a top of bank set at elevation 139.00 ft. Stage storage tables for Det. Pond North are provided on the Detention Pond Plan, Sheet C9.01, in Appendix C. The pond will utilize a single 12" orifice outfall structure located at the western end of the pond that will discharge directly into a City of Mission public storm Inlet (A-50) located on the east side of Inspiration Road.

The ponds are required to provide enough volume to detain the difference in the 10-year existing and 50-year developed runoff rates which is equivalent to **29.36 cfs (40,130 cf storage)**. The proposed ponds provide approximately **77,456 cf** of storage volume and a discharge rate of **12.47 cfs** combined to further mitigate flows that are allowed to leave the property un-detained. Detailed calculations for flow rates at each outfall structure can be found in the Pond Report within Appendix C. The proposed detention ponds are sized to mitigate the increase in runoff for its contributing watershed in addition to onsite watersheds not conveyed to the pond. All calculations including hydrographs for flows leaving the pond can be found in Appendix C.

FLOODPLAIN

The proposed property is not located within any FEMA 100-year effective floodplain zone. However, the City of Mission requires that all development within the FEMA Estimated Base Flood Elevation (estBFE) maps be designed so that no habitable structures are below the estimated base flood elevations. According to community panel No. 4803340400 (EXH 3), revised November 16, 1982, the property is not within flood hazard Zone A or similar zones. According to the FEMA BFE Map (EXH 10), the property is in a High risk (1% flood zone) and all structures on site shall have a finished floor elevation greater than 141.20 ft.


CONCLUSIONS

The 10-year existing conditions runoff rate is **21.37 cfs**, and the 50-year developed conditions runoff rate is **50.73 cfs** for the contributing watershed. However, the development will utilize two proposed detention ponds to mitigate the increase in runoff for the 50-year developed conditions

**Crystal Estates IV
Stormwater Management Plan**

to below the 10-year existing conditions, **(18.78 cfs)**. In general, the proposed development will add impervious cover to the site an increase flows. However, flow rates for runoff leaving the site will be less than existing conditions due to the proposed Detention Ponds. Therefore, the runoff resulting from the proposed development will not produce a significant adverse impact to other properties, habitable structures, or drainage infrastructure systems downstream.



<input type="checkbox"/> REJECTED	
<input checked="" type="checkbox"/> APPROVED FOR SUBMITTAL	
<input type="checkbox"/> TO H.C. PLANNING DEPT.	
<input checked="" type="checkbox"/> TO CITY	
<input checked="" type="checkbox"/> DISCHARGE PERMIT REQUIRED	
<input type="checkbox"/> DISTRICT FACILITY	
<input checked="" type="checkbox"/> CITY FACILITY	
<input type="checkbox"/> OTHER _____	
<u>Alexis lozano</u>	<u>6/5/23</u>
H.C.D.D. NO. 1	DATE

July 26, 2024

City of Mission Zoning Commission
1201 E. 8th Street
Mission, TX 78572

Members of the Zoning Board,

We are writing on behalf of Keystone Construction, the developer of the new subdivision known as Crystal Estates in Mission, Texas off Inspiration Road. We are requesting a variance to change the names of the streets within the subdivision.

The original names assigned to the streets are as follows:

- Estevan St.
- Gabriel St.
- Teresa St.
- David St.

We respectfully request the following changes to the street names:

- Estevan St. to Glenda St.
- Gabriel St. to Britany St.
- Teresa St. to Bailey St.
- David St. to Briley St.

We have conducted a brief search, and the names proposed do not seem to be in use within the city limits of Mission, Texas.

We kindly ask the Zoning Board to consider our request for this variance. We appreciate your time and attention to this matter and are available to provide any additional information or answer any questions you may have.

Thank you for your consideration.

Respectfully,

DG & GG INESTMENTS, LLC.
glendagaona@gmail.com
(956) 583-5334