

Ordinance authorizing Wastewater Collection Line Construction Reimbursement Agreement with Grangefield Development, LLC for a planned residential subdivision named Grange Park Unit 3 with completion within 18 months; transferring \$140,000 from the Water Arterial Transmission and Grid Main Trust Fund to the Sanitary Sewer Collection Line Trust Fund; and appropriating \$160,164.94 from the Sanitary Sewer Collection Line Trust Fund, to reimburse the developer per the agreement.

WHEREAS, under the UDC, the Developer is eligible for reimbursement of the Developer's costs for the construction of the sanitary sewer collection line;

WHEREAS, the Developer has submitted an application for reimbursement of the costs for installing the collection line; and

WHEREAS, it is to the best interest of the City that the wastewater collection line be constructed to its ultimate capacity under the City's applicable Master Plan;

WHEREAS, after a public hearing pursuant to UDC §8.5.2.I & §8.5.1.C.4, City Council finds the transfer of \$140,000 from the 4030-21805 Water Arterial Transmission and Grid Main Trust Fund to the No.4220-21801 Sanitary Sewer Collection Line Trust Fund is necessary to better carry out the purposes of this Unified Development Code.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CORPUS CHRISTI, TEXAS:

SECTION 1. The City Manager or designee is authorized to execute a Wastewater Collection Line Construction and Reimbursement Agreement attached hereto, with Grangefield Development, LLC for the construction and installation of a master planned collection line associated with the development of the platted property known as Grange Park Unit 3, Corpus Christi, Texas.

SECTION 2. Funding in the amount of \$140,000 is transferred from the No. 4030-21805 Water Arterial Transmission and Grid Main Trust to the No.4220-21801 Sanitary Sewer Collection Line Trust Fund.

SECTION 3. Funding in the amount of \$160,164.94 is appropriated from the No. 4220-21801 Sanitary Sewer Collection Line Trust Fund, to reimburse the Developer for the construction of a master planned wastewater collection line, and construction improvements in accordance with the Agreement.

That the foregoing ordinance was read for the first time and passed to its second reading on this the ____ day of _____, 2020, by the following vote:

Joe McComb _____

Michael Hunter _____

Roland Barrera _____

Ben Molina _____

Rudy Garza _____

Everett Roy _____

Paulette M. Guajardo _____

Greg Smith _____

Gil Hernandez _____

That the foregoing ordinance was read for the second time and passed finally on this the ____ day of _____ 2020, by the following vote:

Joe McComb _____

Michael Hunter _____

Roland Barrera _____

Ben Molina _____

Rudy Garza _____

Everett Roy _____

Paulette M. Guajardo _____

Greg Smith _____

Gil Hernandez _____

PASSED AND APPROVED on this the ____ day of _____, 2020.

ATTEST:

Rebecca Huerta
City Secretary

Joe McComb
Mayor

**WASTEWATER COLLECTION LINE EXTENSION CONSTRUCTION
AND REIMBURSEMENT AGREEMENT**

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This Wastewater Collection Line Extension Construction and Reimbursement Agreement ("Agreement") is entered into between the City of Corpus Christi ("City"), a Texas home-rule municipality, and Grangefield Development, LLC ("Developer/Owner"), a Texas Limited Liability Company

WHEREAS, the Developer/Owner, in compliance with the City's Unified Development Code ("UDC"), has a plat, approved by the Planning Commission on July 22, 2020 to develop a tract of land, to wit approximately 20.01 acres, known as Grange Park Unit 3, Corpus Christi Texas as shown in the attached **Exhibit 1**, the content of such exhibit being incorporated by reference into this Agreement;

WHEREAS, under the UDC, the Developer/Owner is responsible for construction of the wastewater collection line extension ("Collection Line");

WHEREAS, under the UDC, the Developer/Owner is eligible for reimbursement of the Developer/Owner's costs for the construction of Collection Line;

WHEREAS, it is to the best interest of the City that the Collection Line be constructed to its ultimate capacity under the City's applicable Master Plan;

WHEREAS, Section 8.5.2.E. of the UDC authorizes the acceptance of applications to be eligible for reimbursement in the future when funds become fully available in the Wastewater Collection Line Trust Fund and are appropriated by the City Council; and

WHEREAS, the Developer/Owner has submitted an application for reimbursement of the costs from the Wastewater Collection Line Trust Fund for installing the Collection Line, as shown in **Exhibit 2**, the content of such exhibit being incorporated by reference into this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained in this Agreement, the parties do covenant and agree as follows:

1. **TRUSTEE LIABILITY**. The City is executing this agreement as trustee of the Wastewater Trust Fund pursuant to UDC §8.5. The City is acting as trustee to further its governmental functions of providing water and sewer service. Texas Constitution Article 11, Section 3 prohibits the City from becoming a subscriber to the capital of any private corporation or association, or make any appropriation or donation to the same, or in anywise loan its credit. As such, the City's participation as Trustee does not create a loan of its credit. Execution of this agreement constitutes a promise to pay only to the extent that the assets and future assets of the trust are sufficient for such purpose and it is expressly agreed that any judgment will only be satisfied out of the assets of the trust and not out of the City's assets. The City is excluded from personal liability.

2. **REQUIRED CONSTRUCTION**. Developer/Owner shall construct the Collection Line in compliance with the City's UDC, the City's Infrastructure Design Manual, and all local, state and

federal laws, codes and regulations, in accordance with the plans and specifications submitted to the City's Development Services Department and reviewed and approved by the City's Development Services Engineer.

3. PLANS AND SPECIFICATIONS.

- a. Developer/Owner shall contract with a professional engineer licensed in the State of Texas and acceptable to the City's Development Services Engineer, to prepare plans and specifications for the Collection Line, as shown in the attached **Exhibit 3**, the content of such exhibit being incorporated by reference into this Agreement, with the following minimum requirements:

PART A - GENERAL			
A1	Mobilization	LS	1 00
A2	Payment and Performance Bond	LS	1 00
A2	Storm Water Pollution Prevention Plan	LS	1 00
A3	Construction Survey	LS	1 00
PART B - STORMWATER POLLUTION			
B1	Stabilized Construction Entrance & Exit	EA	1 00
B2	Reinforced Filter Fabric Fence	LF	100 00
B3	Concrete Washout Fence	EA	1 00
B4	Dewatering Fence	EA	1 00
PART C - SITE WORK			
C1	Site Preparation	AC	1 00
C2	Asphalt Repair	SY	14 00
C3	Site Grading	LS	1 00
PART D - WASTEWATER UTILITY			
D1	WW Utility 8" PVC SDR 26	LF	40 00
D2	WW Utility 10" PVC SDR 26	LF	850 00
D3	WW Utility 12" PVC SDR 26	LF	150 00
D4	WW Utility Embedment	LF	1,040 00
D3	WW Utility 4' Diameter Manhole - 12-14 ft	EA	1 00
D4	WW Utility 4' Diameter Manhole - 14-16 ft	EA	2 00
D5	WW Utility 5' Diameter Manhole - 16-18 ft	EA	2 00
D3	Sanitary Utility Trench Safety	LF	1,040 00
D4	Sanitary Utility Dewatering	LF	1,040 00
D6	Sanitary Utility - Tie to Existing	EA	1 00
D7	Sanitary Utility End Plug - 8"	EA	4 00
PART E - ADDITIONAL CONSTRUCTION			
E1	Additional Construction Items Allowance	AL	1 00

- b. The plan must be in compliance with the City's master plans.
- c. The plans and specifications must comply with the City's Wastewater Standards Detail Sheets and Standard Specifications.

- c. Before the Developer/Owner starts construction, the plans and specifications must be approved by the City's Development Services Engineer.

4. SITE IMPROVEMENTS. Prior to the start of construction of the Collection Line, Developer/Owner shall acquire and dedicate to the City the required additional public utility easements ("Easements"), if any, necessary for the completion of the Collection Line. If any of the property needed for the Easements is owned by a third party and the Developer/Owner is unable to acquire the Easements through reasonable efforts, then the City may use its powers of eminent domain to acquire the Easements. Developer will be responsible for cost of acquisition, payable from the reimbursement agreed to in this agreement.

5. PLATTING FEES. Developer/Owner shall pay to the City the required acreage fees and pro-rata fees as required by the UDC.

6. DEVELOPER/OWNER TO AWARD CONTRACT FOR IMPROVEMENTS. Developer/Owner shall award a contract and complete the Collection Line, under the approved plans and specifications, by April 30, 2022.

7. TIME IS OF THE ESSENCE. Time is of the essence in the performance of this contract.

8. PROMPT AND GOOD FAITH ACTIONS. The parties shall act promptly and in good faith in performing their duties and obligations under this Agreement. If this Agreement calls for review or inspections by the City, then the City's reviews or inspections must be completed thoroughly and promptly.

9. DEFAULT. The following events shall constitute default:

- a. Developer/Owner fails to engage a professional engineer for the preparation of plans and specifications by the 10th calendar day after the date of approval of this Agreement by the City Council.
- b. Developer/Owner's professional engineer fails to submit the plans and specifications to the City's Director of Engineering Services and to the Development Services Engineer by the 60th calendar day after the date of approval of this Agreement by the City Council.
- c. Developer/Owner fails to award a contract for the construction of the Collection Line, according to the approved plans and specifications, by the 90th calendar day after the date of approval of this Agreement by the City Council.
- d. Developer/Owner's contractor does not reasonably pursue construction of the Collection Line under the approved plans and specifications.
- e. Developer/Owner's contractor fails to complete construction of the Collection Line, under the approved plans and specifications, on or before April 30, 2022.
- f. Either the City or the Developer/Owner otherwise fails to comply with its duties or obligations under this Agreement.

10. NOTICE AND CURE.

- a. In the event of a default by either party under this Agreement, the non-defaulting party shall deliver notice of the default, in writing, to the defaulting party stating, in sufficient detail, the nature of the default and the requirements to cure such default.
- b. After delivery of the default notice, the defaulting party has 15 business days from the delivery of the default notice ("Cure Period") to cure the default.
- c. In the event the default is not cured by the defaulting party within the Cure Period, then the non-defaulting party may pursue its remedies in this section.
- d. Should the Developer/Owner fail to perform any obligation or duty of this Agreement, the City shall give notice to the Developer/Owner, at the address stated in section 12, of the need to perform the obligation or duty and, should the Developer/Owner fail to perform the required obligation or duty within 15 days of receipt of the notice, the City may perform the obligation or duty, charging the cost of such performance to the Developer/Owner by reducing the reimbursement amount due to the Developer/Owner.
- e. In the event of an uncured default by the Developer/Owner, after the appropriate notice and Cure Period, the City has all its common law remedies and the City may:
 1. Terminate this Agreement after the required notice and opportunity to cure the default;
 2. Refuse to record a related plat or issue any certificate of occupancy for any structure to be served by the project; and/or
 3. Perform any obligation or duty of the Developer/Owner under this Agreement and charge the cost of such performance to the Developer/Owner. The Developer/Owner shall pay to the City the reasonable and necessary cost of the performance within 30 days from the date the Developer/Owner receives notice of the cost of performance. In the event the Developer/Owner pays the City under the preceding sentence and is not otherwise in default under this Agreement, then the Agreement shall be considered in effect and no longer in default.
- f. In the event of an uncured default by the City after the appropriate notice and Cure Period, the Developer/Owner has all its remedies at law or in equity for such default.

11. FORCE MAJEURE.

- a. The term "force majeure" as employed in this Agreement means and refers to acts of God; strikes, lockouts, or other industrial disturbances; acts of public enemies; insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; washouts; droughts; arrests; civil disturbances; explosions; or other causes not reasonably within the control of the party claiming the inability.
- b. If, by reason of force majeure, either party is rendered wholly or partially unable to carry out its obligations under this Agreement, then the party claiming force majeure

shall give written notice of the full particulars of the force majeure to the other party within ten (10) business days after the occurrence or waive the right to claim it as a justifiable reason for delay. The obligations of the party giving the required notice, to the extent affected by the force majeure, are suspended during the continuance of the inability claimed but for no longer period, and the party shall endeavor to remove or overcome such inability with all reasonable dispatch.

12. NOTICES.

a. Any notice or other communication required or permitted to be given under this Agreement must be given to the other party in writing at the following address:

1. If to the Developer/Owner:

**Grangefield Development, LLC
P.O. Box 271996
Corpus Christi, Texas 78427**

2. If to the City:

City of Corpus Christi
Attn: Director, Development Services Department
2406 Leopard Street 78401
P. O. Box 9277
Corpus Christi, Texas 78469-9277

with a copy to:

City of Corpus Christi
Attn: Assistant City Manager, Business Support Services
1201 Leopard Street 78401
P. O. Box 9277
Corpus Christi, Texas 78469-9277

b. Notice must be made by United States Postal Service, First Class mail, certified, return receipt requested, postage prepaid; by a commercial delivery service that provides proof of delivery, delivery prepaid; or by personal delivery.

c. Either party may change the address for notices by giving notice of the change under the provisions of this section.

13. THIRD PARTY BENEFICIARY. Developer/Owner's contracts with the professional engineer for the preparation of the plans and specifications for the construction of the Collection Line, contracts for testing services, and contracts with the contractor for the construction of the Collection Line must provide that the City is a third-party beneficiary of each contract.

14. PERFORMANCE AND PAYMENT BONDS. Developer/Owner shall, before beginning the work that is the subject of this Agreement, furnish a performance bond payable to the City of Corpus Christi if the contract is in excess of \$100,000 and a payment bond if the contract is in excess of \$50,000. Bonds furnished must meet the requirements of Texas Insurance Code

3503, Texas Government Code 2253, and all other applicable laws and regulations. The performance or payment bond must name the City as an obligee. If the Developer/Owner is not an obligor, the Developer/Owner shall be named as a joint obligee. The bond must clearly and prominently display on the bond or on an attachment to the bond:

(1) the name, mailing address, physical address, and telephone number, including the area code, of the surety company to which any notice of claim should be sent; or

(2) the toll-free telephone number maintained by the Texas Department of Insurance under Subchapter B, Chapter 521, Insurance Code, and a statement that the address of the surety company to which any notice of claim should be sent may be obtained from the Texas Department of Insurance by calling the toll-free telephone number.

15. WARRANTY. Developer/Owner shall fully warranty the workmanship of and function of the Collection Line and the construction of the Collection Line for a period of one year from and after the date of acceptance of the facilities by the City's Director of Engineering Services.

16. REIMBURSEMENT.

- a. The cost for the Collection Line less \$31,435.71 lot/acreage fee credit is \$297,416.54 Subject to the conditions for reimbursement from the Wastewater Collection Line Trust Fund and the appropriation of funds, the City will reimburse the developer, the reasonable actual cost of the Wastewater Collection Line up to an amount not to exceed \$160,164.94 as shown in the attached **Exhibit 4**, the contents of such exhibit being incorporated by reference into this Agreement.
- b. The City agrees to reimburse the Developer/Owner on a monthly basis upon invoicing for work performed. The submitted invoice shall be deemed administratively complete by the City prior to payment. The reimbursement will be made no later than 30 days from the date of the City's administrative approval of the invoice. Developer/Owner shall submit all required performance bonds and proof of required insurance under the provisions of this Agreement.
- c. Cost-supporting documentation to be submitted shall include:
 1. Summary of Costs and Work Performed Form provided by the Development Services Department
 2. Contractor and professional services invoices detailing work performed
- d. The first reimbursement request requires submittal of invoices for work performed. Future disbursements shall provide evidence of payment by the developer/owner through a cancelled check or bank ACH for the previous submittal. The final reimbursement request shall require evidence that all invoices to date have been paid. To be eligible for reimbursement, the work must be constructed in a good and workmanlike manner and must have been inspected and accepted by the City. The City agrees to conduct periodic inspections and approve the progress of the work at key points during construction.

The final 5% of the total contract reimbursement amount will be held as retainage until such time the City issues acceptance of public infrastructure in accordance with Unified Development Code.

- e. In the event that this Agreement is terminated by the City as a result of an uncured default by the Developer/Owner and at a time when there has been a partial completion and/or partial payment for the improvements, then the City shall only reimburse the Developer/Owner for its costs that were legitimately incurred towards the completion of the improvements that have been inspected and accepted by the City up to the time that the uncured default occurred.

17. PAYMENTS, CREDITS AND DEFERRED REIMBURSEMENT. All payments, credits, priority of reimbursement, and deferred reimbursement shall be made in accordance with UDC §8.5. Developer/Owner understands and agrees that if funds are not available in the Wastewater Collection Line Trust Fund, that reimbursement will not be made until such funds are available, appropriated, and this Agreement has priority per UDC §8.5.2. E.

18. INDEMNIFICATION. Developer/Owner covenants to fully indemnify, save and hold harmless the City of Corpus Christi, its officers, employees, and agents, ("indemnitees") against any and all liability, damage, loss, claims, demands suits and causes of action of any nature whatsoever asserted against or recovered from city on account of injury or damage to person including, without limitation on the foregoing, workers compensation and death claims, or property loss or damage of any other kind whatsoever, to the extent any injury, damage, or loss may be incident to, arise out of, be caused by, or be in any way connected with, either proximately or remotely, wholly or in part, the Developer/Owner's failure to comply with its obligations under this agreement or to provide city wastewater service to the development, including injury, loss, or damage which arise out of or are in any manner connected with, or are claimed to arise out of or be in any manner connected with the construction, installation, existence, operation, use, maintenance, repair, restoration, or removal of the public improvements associated with the development described above, including the injury, loss or damage caused by the sole or contributory negligence of the indemnitees or any of them, regardless of whether the injury, damage, loss, violation, exercise of rights, act, or omission is caused or is claimed to be caused by the contributing or concurrent negligence of indemnitees, or any of them, but not if caused by the sole negligence of indemnitees, or any of them, unmixed with the fault of any other person or entity, and

including all expenses of litigation, court costs, and attorney's fees, which arise, or are claimed to arise, out of or in connection with the asserted or recovered incident.

This indemnity specifically includes all claims, damages, and liabilities of whatever nature, foreseen or unforeseen, under any hazardous substance laws, including but not limited to the following:

(a) all fees incurred in defending any action or proceeding brought by a public or private entity and arising from the presence, containment, use, manufacture, handling, creating, storage, treatment, discharge, release or burial on the property or the transportation to or from the property of any hazardous substance. The fees for which the developer/owner shall be responsible under this subparagraph shall include but shall not be limited to the fees charged by (i) attorneys, (ii) environmental consultants, (iii) engineers, (iv) surveyors, and (v) expert witnesses.

(b) any costs incurred attributable to (i) the breach of any warranty or representation made by Developer/Owner in this agreement, or (ii) any cleanup, detoxification, remediation, or other type of response action taken with respect to any hazardous substance on or under the property regardless of whether or not that action was mandated by the federal, state or local government.

This indemnity shall survive the expiration or earlier termination of the agreement.

19. ASSIGNMENT OF AGREEMENT. This Agreement or any rights under this Agreement may not be assigned by the Developer/Owner to another without the written approval and consent of the City's City Manager.

20. DISCLOSURE OF INTEREST. Developer/Owner agrees, in compliance with the Corpus Christi Code of Ordinance Sec. 2-349, to complete, as part of this Agreement, the Disclosure of Interest form attached to this Agreement as **Exhibit 5**.

21. EFFECTIVE DATE. This Agreement becomes effective and is binding upon and inures to the benefit of the City and the Developer/Owner and their respective heirs, successors, and assigns from and after the date of final execution by all parties.

22. DEDICATION OF COLLECTION LINE. Upon completion of the construction, dedication of Collection Line will be subject to City inspection and approval.

23. CERTIFICATE OF INTERESTED PARTIES. Developer/Owner agrees to comply with Texas Government Code section 2252.908 and complete Form 1295 Certificate of Interested Parties as part of this agreement.

Form 1295 requires disclosure of “interested parties” with respect to entities that enter contracts with cities. These interested parties include:

- (1) persons with a “controlling interest” in the entity, which includes:
 - a. an ownership interest or participating interest in a business entity by virtue of units, percentage, shares, stock or otherwise that exceeds 10 percent;
 - b. membership on the board of directors or other governing body of a business entity of which the board or other governing body is composed of not more than 10 members; or
 - c. service as an officer of a business entity that has four or fewer officers, or service as one of the four officers most highly compensated by a business entity that has more than four officers.
- (2) a person who actively participates in facilitating a contract or negotiating the terms of a contract with a governmental entity or state agency, including a broker, intermediary, adviser or attorney for the business entity.

Form 1295 must be electronically filed with the Texas Ethics Commission at https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm. The form must then be printed, signed, notarized and filed with the City. For more information, please review the Texas Ethics Commission Rules at <https://www.ethics.state.tx.us/legal/ch46.html>.

24. CONFLICT OF INTEREST Developer/Owner agrees to comply with Chapter 176 of the Texas Local Government Code and file Form CIQ with the City Secretary’s Office, if required. For more information and to determine if you need to file a Form CIQ, please review the information on the City Secretary’s website at <http://www.cctexas.com/government/city-secretary/conflict-disclosure/index>

25. AUTHORITY. All signatories signing this Agreement warrant and guarantee that they have the authority to act on behalf of the entity represented and make this Agreement binding and enforceable by their signature.

Remainder of page intentionally left blank; signature page to follow.

EXECUTED IN ONE ORIGINAL this _____ day of _____, 20____.

ATTEST:

CITY OF CORPUS CHRISTI

Rebecca Huerta
City Secretary

Al Raymond III, AIA, CBO
Director of Development Services
For City Manager

APPROVED AS TO LEGAL FORM:

Buck Brice (Date)
Assistant City Attorney
For City Attorney

Grangefield Development, LLC.

By: 
Jackie Azalli
President

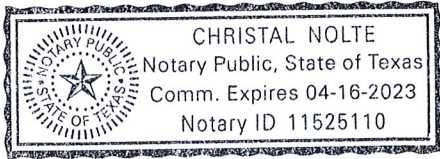
STATE OF TEXAS

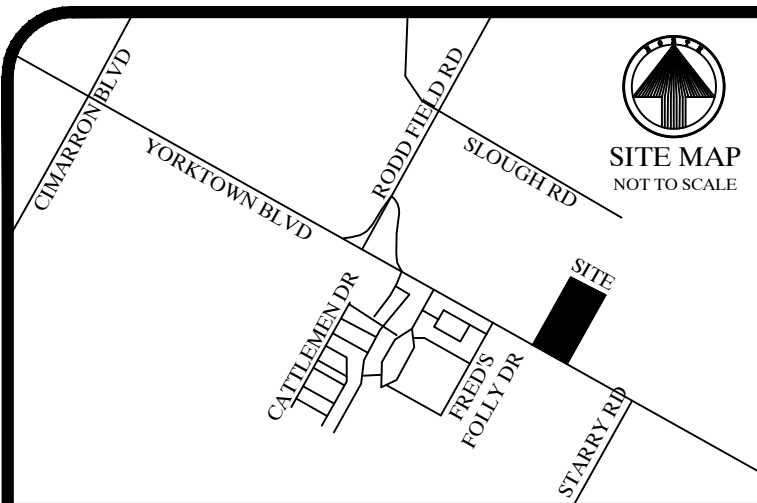
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COUNTY OF Nueces

This instrument was acknowledged before me on September 3, 2020, by Jackie Azalli, President, Grangefield Development, LLC, a Texas limited Liability Company, a Texas Corporation, on behalf of said corporation.


Notary Public's Signature





**FINAL PLAT OF
GRANGE PARK UNIT 3**

**APPROVED BY PLANNING
COMMISSION JULY 22, 2020**



Brisler Surveying
4455 South Padre Island Drive Suite 51
Corpus Christi, Texas 78411
Office 361-850-1800
Fax 361-850-1802
bristersurveying@corpus.twbc.com
Firm Registration No. 10072800

A 20.000 ACRE TRACT OUT OF LOT 6 AND LOT 11, SECTION 25, FLOUR BLUFF AND ENCINAL FARM AND GARDEN TRACTS, AS SHOWN ON A MAP RECORDED IN VOLUME "A", PAGES 41 - 43, MAP RECORDS NUECES COUNTY, TEXAS. SAID 20.00 ACRE TRACT ALSO BEING SHOWN IN A DEED RECORDED IN DOCUMENT NO. 2017042252, DEED RECORDS NUECES COUNTY, TEXAS.

Curve Table				
Curve #	Length	Radius	Delta	Chord
C1	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31
C2	31.38	20.000	089° 53' 50"	S16° 15' 27"E, 28.26
C3	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31
C4	31.38	20.000	089° 53' 50"	S16° 15' 27"E, 28.26
C5	31.45	20.000	090° 06' 10"	S73° 44' 33"W, 28.31
C6	31.38	20.000	089° 53' 50"	N16° 15' 27"W, 28.26
C7	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31
C8	31.38	20.000	089° 53' 50"	S16° 15' 27"E, 28.26
C9	31.45	20.000	090° 06' 10"	S73° 44' 33"W, 28.31
C10	31.38	20.000	089° 53' 50"	N16° 15' 27"W, 28.26
C11	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31
C12	8.73	10.000	049° 59' 41"	N03° 41' 38"E, 8.45
C13	21.59	60.000	020° 36' 57"	N10° 59' 44"W, 21.47
C14	54.00	60.000	051° 34' 05"	N25° 05' 47"E, 52.20
C15	40.74	60.000	038° 54' 20"	N70° 19' 59"E, 39.96
C16	48.28	60.000	046° 06' 06"	S67° 09' 48"E, 46.99
C17	34.45	60.000	032° 54' 04"	S27° 39' 42"E, 33.98
C18	8.73	10.000	049° 59' 41"	S36° 12' 31"E, 8.45
C19	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31
C20	29.63	70.000	024° 15' 11"	N40° 49' 04"E, 29.41
C21	80.45	70.000	034° 02' 47"	N85° 52' 00"E, 76.10
C23	31.45	20.000	090° 06' 10"	N73° 44' 33"E, 28.31
C24	31.38	20.000	089° 53' 50"	N16° 15' 27"W, 28.26
C25	31.42	20.000	090° 00' 44"	N73° 41' 50"E, 28.29
C26	31.38	20.000	089° 53' 50"	N16° 15' 27"W, 28.26

NOTES:

- 1.) THE SUBJECT SITE IS AND IS NOT LOCATED ON A 100-YEAR FLOOD PLAIN, IN A FLOOD WAY, IN AN IDENTIFIED "FLOOD PRONE AREA", AS DEFINED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, PURSUANT TO THE FLOOD DISASTER PROTECTION ACT OF 1973, AS AMENDED, OR AN AREA IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AS AN AREA HAVING SPECIAL FLOOD HAZARDS. THIS PROPERTY IS LOCATED IN FLOOD ZONE "B" AND FLOOD ZONE "A13" WITH A BASE FLOOD ELEVATION OF 10.0', AS INDICATED ON PANEL NUMBER 485494 0540 C, DATED MARCH 18, 1985, CITY OF CORPUS CHRISTI, TEXAS.
- 2.) BEARINGS ARE BASED ON GLOBAL POSITIONING SYSTEM, TEXAS STATE PLAIN NAD 83 (93), TEXAS SOUTH ZONE 4205.
- 3.) THE YARD REQUIREMENT, AS DEPICTED, IS A REQUIREMENT OF THE UNIFIED DEVELOPMENT CODE (UDC) AND IS SUBJECT TO CHANGE AS THE ZONING MAY CHANGE.
- 4.) SET 5/8" RE-BAR WITH CAPS STAMPED "BRISTER SURVEYING" UNLESS NOTED OTHERWISE.
- 5.) THE TOTAL PLATTED AREA IS 20.000 ACRES INCLUDING STREET DEDICATION.
- 6.) NO ACCESS ALLOWED TO BLOCK 4 LOT 41, BLOCK 4 LOT 42, BLOCK 3 LOT 29 AND BLOCK 3 LOT 30 TO JACK SHUFF DRIVE.
- 7.) NO ACCESS ALLOWED TO BLOCK 4 LOT 36, BLOCK 4 LOT 47, BLOCK 3 LOT 24 AND BLOCK 3 LOT 35 TO NADIA DRIVE.
- 8.) ALL DRIVEWAYS TO PUBLIC STREETS WITHIN THE SUBDIVISION SHALL CONFORM TO ACCESS MANAGEMENT STANDARDS OUTLINED IN ARTICLE 7 OF THE UDC.
- 9.) PUBLIC OPEN SPACE: IF LOTS 70-72 ARE DEVELOPED WITH RESIDENTIAL USES, COMPLIANCE WITH THE OPEN SPACE REGULATION WILL BE REQUIRED DURING THE BUILDING PERMIT PHASE.
- 10.) THE RECEIVING WATER FOR THE STORM WATER RUNOFF FROM THIS PROPERTY IS THE OSO BAY. THE TCEQ HAS CLASSIFIED THE AQUATIC LIFE USE FOR THE OSO BAY AS "EXCEPTIONAL" AND "OYSTER WATERS". TCEQ ALSO CATEGORIZED THE RECEIVING WATER AS "CONTACT RECREATION" USE.
- 11.) CROSS ACCESS SHALL NOT BE OBSTRUCTED BETWEEN LOTS 70 AND 71, BLOCK 5.

STATE OF TEXAS §
COUNTY OF NUECES §

WE, GRANGFIELD DEVELOPMENT, LLC., DO HEREBY CERTIFY THAT I AM THE OWNER OF THE LANDS EMBRACED WITHIN THE BOUNDARIES OF THE FOREGOING MAP; EASEMENTS SHOWN HEREON ARE HEREBY DEDICATED TO THE PUBLIC FOR THE INSTALLATION, OPERATION AND MAINTENANCE OF PUBLIC UTILITIES. THIS THE ____ DAY OF _____, 20__.

BY: _____
JACQUELINE MARIE AZALLI, MANAGER

BY: _____
ALYEH AZALI HATAMI-FARDY, MANAGER

STATE OF TEXAS §
COUNTY OF NUECES §

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME BY _____ PROVEN TO ME TO BE THE PERSON WHOSE SIGNATURE IS MADE ON THE FOREGOING INSTRUMENT OF WRITING, AND HE ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSE AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE ____ DAY OF _____, 20__.

NOTARY PUBLIC
MY COMMISSION EXPIRES: _____

STATE OF TEXAS §
COUNTY OF NUECES §

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME BY _____ PROVEN TO ME TO BE THE PERSON WHOSE SIGNATURE IS MADE ON THE FOREGOING INSTRUMENT OF WRITING, AND HE ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSE AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE ____ DAY OF _____, 20__.

NOTARY PUBLIC
MY COMMISSION EXPIRES: _____

STATE OF TEXAS §
COUNTY OF NUECES §

I, NICK BLACK, VP/BRANCH MANAGER FOR THE FIRST COMMUNITY BANK, DO HEREBY CERTIFY THAT WE ARE THE HOLDERS OF A LIEN ON THE LAND SHOWN ON THE FOREGOING MAP OF WHICH GRANGFIELD DEVELOPMENT, LLC., IS THE OWNER, AND WE APPROVE OF THE SUBDIVISION AND DEDICATION FOR THE PURPOSE AND CONSIDERATIONS THEREIN EXPRESSED. THIS THE ____ DAY OF _____, 20__.

BY: _____

STATE OF TEXAS §
COUNTY OF _____ §

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME BY _____ PROVEN TO ME TO BE THE PERSON WHOSE SIGNATURE IS MADE ON THE FOREGOING INSTRUMENT OF WRITING, AND HE ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSE AND CONSIDERATIONS THEREIN EXPRESSED AND IN THE CAPACITY STATED. GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS THE ____ DAY OF _____, 20__.

NOTARY PUBLIC
MY COMMISSION EXPIRES: _____

STATE OF TEXAS §
COUNTY OF NUECES §

THIS PLAT OF GRANGE PARK UNIT 3, APPROVED BY THE CITY OF CORPUS CHRISTI, TEXAS, THIS THE ____ DAY OF _____, 20__.

AL RAYMOND III, AIA SECRETARY

CARL CRULL, P.E. CHAIRMAN

STATE OF TEXAS §
COUNTY OF NUECES §

THIS GRANGE PARK UNIT 3, APPROVED BY THE DEPARTMENT OF DEVELOPMENT SERVICES OF THE CITY OF CORPUS CHRISTI, TEXAS, THIS THE ____ DAY OF _____, 20__.

JALAL SALEH, P.E.
DEVELOPMENT SERVICES ENGINEER

STATE OF TEXAS §
COUNTY OF NUECES §

I, KARA SANDS, CLERK OF THE COUNTY COURT IN AND FOR SAID NUECES COUNTY, TEXAS, HEREBY CERTIFY THAT THE FOREGOING MAP OF THE PLAT OF GRANGE PARK UNIT 3, DATED THE ____ DAY OF _____, 20__, WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORD IN MY OFFICE THIS THE ____ DAY OF _____, 20__, AT ____ O'CLOCK __.M. AND DULY RECORDED IN VOLUME _____, PAGE _____, MAP RECORDS OF NUECES COUNTY, TEXAS.

WITNESS MY HAND AND SEAL OF SAID COURT AT OFFICE IN CORPUS CHRISTI, TEXAS, THIS THE ____ DAY OF _____, 20__.

NO. _____

FILED FOR RECORD
AT ____ O'CLOCK __.M.
_____, 20__.

KARA SANDS
COUNTY CLERK
NUECES COUNTY, TEXAS

BY: _____
DEPUTY

STATE OF TEXAS §
COUNTY OF NUECES §

I, RONALD E. BRISTER, A REGISTERED PROFESSIONAL LAND SURVEYOR OF BRISTER SURVEYING, HEREBY CERTIFY THAT THIS SURVEY MAP WAS PREPARED FROM AN ACTUAL ON THE GROUND SURVEY MADE UNDER MY DIRECTION AND SUPERVISION, AND REPRESENTS THE FACTS FOUND AT THE TIME OF SURVEY, AND THAT THIS SURVEY COMPLIES WITH THE CURRENT STANDARDS ADOPTED BY THE TEXAS BOARD OF PROFESSIONAL LAND SURVEYING.

RONALD E BRISTER, RPLS
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 5407

DATE: _____

APPLICATION FOR WASTEWATER REIMBURSEMENT

We, Grangefield Development, LLC, P.O. Box 271996, Corpus Christi, Texas 78427, owners and developers of proposed Grange Park Unit 3, hereby request reimbursement of \$160,164.94 for the installation of the wastewater collection line in conjunction with said development, as provided for by City Ordinance No. 17396. \$328,852.25 is the construction cost, including 10% Engineering and Surveying, as shown by the cost supporting documents attached herewith.



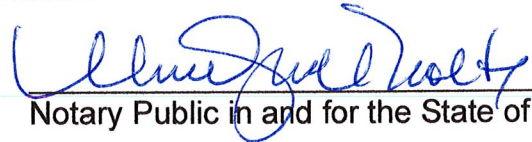
Jackie Azalli, President
Grangefield Development, LLC

9/3/2020

Date

THE STATE OF TEXAS §
 §
COUNTY OF Nueces §

This instrument was acknowledged before me on September 3, 2020, by Jackie Azalli, President, Grangefield Development, LLC, a Texas limited liability corporation, on behalf of the said corporation.



Notary Public in and for the State of Texas

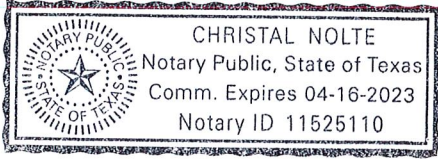


Exhibit 2

APPLICATION FOR WASTEWATER CREDIT

We, Grangefield Development, LLC, P.O. Box 271996, Corpus Christi, Texas 78427, owners and developers of proposed Grange Park Unit 3, hereby apply for \$31,435.71 credit towards the waste water acreage fee for the wastewater collection line in conjunction with said subdivision as provided for by City Ordinance No. 17396. \$328,852.25 is the construction cost, including 10% Engineering and Surveying, as shown by the cost supporting documents attached herewith.



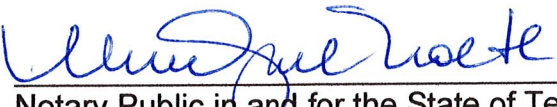
Jackie Azalli, President
Grangefield Development, LLC

9/3/2020

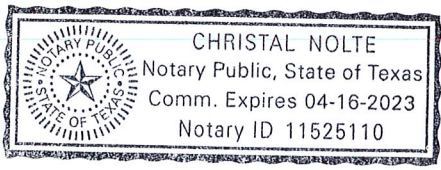
Date

THE STATE OF TEXAS §
 §
COUNTY OF Nueces §

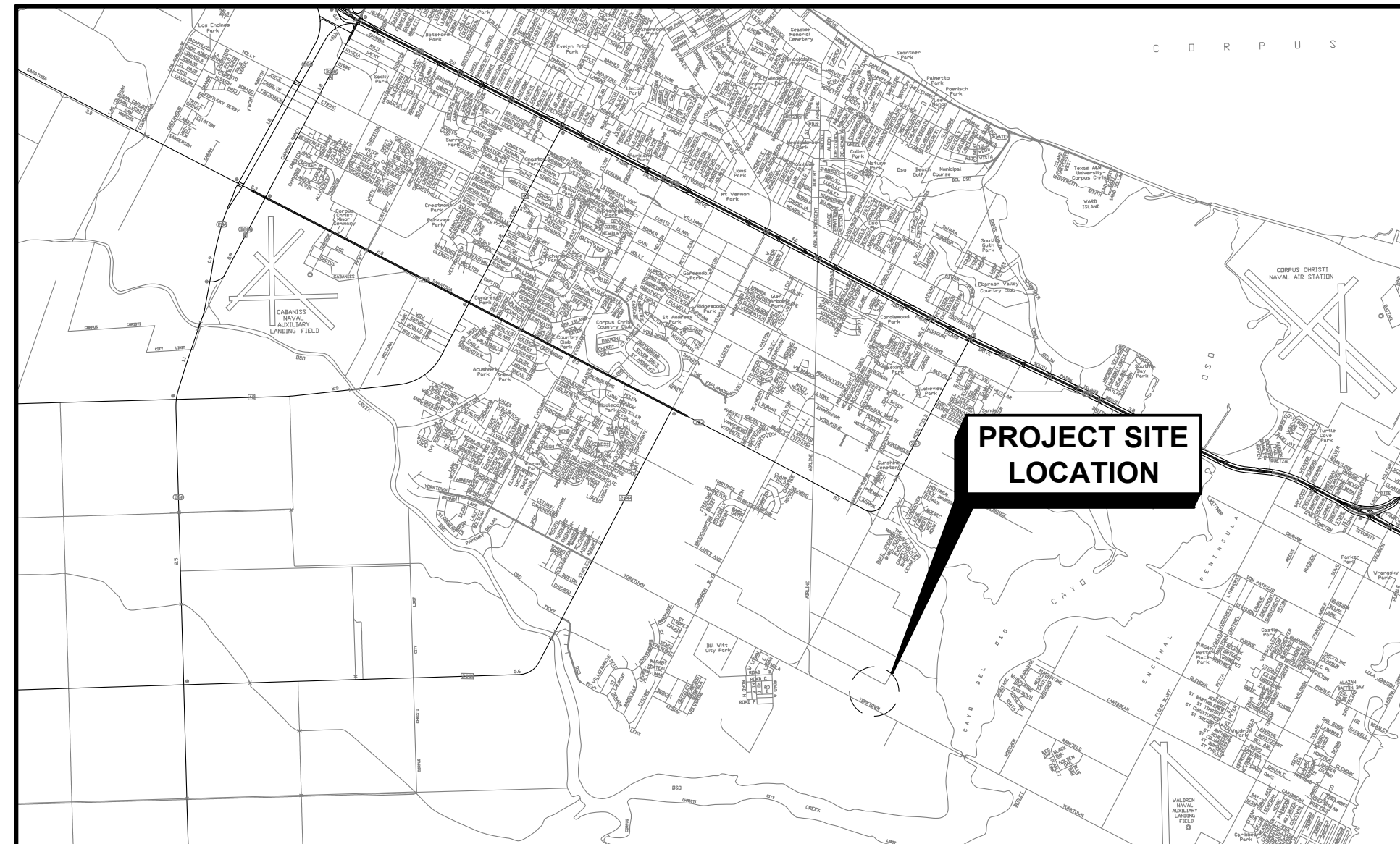
This instrument was acknowledged before me on September 3, 2020, by Jackie Azalli, President, Grangefield Development, LLC, a Texas limited liability corporation, on behalf of the said corporation.



Notary Public in and for the State of Texas



PROJECT LOCATION



1 VICINITY MAP
C001 SCALE: NTS



2 LOCATION MAP
C001 SCALE: NTS



CONSTRUCTION DRAWINGS FOR GRANGE PARK DEVELOPMENT UNIT 3

OFF-SITE PUBLIC IMPROVEMENTS CORPUS CHRISTI, NUECES COUNTY, TEXAS

PROJECT INFORMATION

SHEET INDEX

LOCATION

THIS PROJECT IS LOCATED IN CORPUS CHRISTI, NUECES COUNTY, TEXAS.

PROJECT OWNER

GRANGFIELD DEVELOPMENT, LLC

PROJECT ENGINEER

MUNOZ ENGINEERING, LLC

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE FOLLOWING, BUT NOT LIMITED TO, INSTALLATION OF WASTEWATER, AND ALL INCIDENTALS. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF CORPUS CHRISTI SPECIFICATIONS AND DETAILS AND ANY PERMITS THAT ARE REQUIRED.

A PERMIT IS REQUIRED FOR ANY EXCAVATION IN THE PUBLIC RIGHT-OF-WAY. EXCAVATION MEANS AN ACTIVITY THAT CUTS, PENETRATES, OR BORES UNDER ANY PORTION OF THE PUBLIC RIGHT-OF-WAY THAT HAS BEEN IMPROVED WITH A PAVED SURFACE FOR STREET, SIDEWALK, SURFACE DRAINAGE, OR RELATED PUBLIC TRANSPORTATION INFRASTRUCTURE PURPOSES. PERMITS WILL NOT BE ISSUED FOR EXCAVATION IN ANY PUBLIC RIGH-OF-WAY THAT HAS BEEN CONSTRUCTED, RECONSTRUCTED, REPAVED, OR RESURFACED IN THE PRECEDING FIVE (5) YEARS FROM THE DATE OF ACCEPTANCE BY THE PUBLIC WORKS CONSTRUCTION ENTITY.

PROJECT SITE LEGAL DESCRIPTION

A 20.000 ACRE TRACT OUT OF LOT 6 AND LOT 11, SECTION 25, FLOUR BLUFF AND ENCINAL FARM AND GARDEN TRACTS, AS SHOWN ON A MAP RECORDED IN VOLUME "A", PAGES 41 - 43, MAP RECORDS NUECES COUNTY, TEXAS. SAID 20.00 ACRE TRACT ALSO BEING SHOWN IN A DEED RECORDED IN DOCUMENT NO. 2017042252, DEED RECORDS NUECES COUNTY, TEXAS.

PROJECT DATUM

THE EXISTING CONDITIONS WERE SURVEYED BY: BRISTER SURVEYING OF CORPUS CHRISTI, TEXAS
THE PROJECT DATUM SHALL BE VERIFIED BY THE CONTRACTOR WITH THE SURVEYOR INDICATED ABOVE PRIOR TO COMMENCING ANY CONSTRUCTION.

PROJECT NOTIFICATION

THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTION DEPARTMENT AND THE ENGINEER AT LEAST THREE (3) WORKING DAYS (MONDAY - FRIDAY: 8:00AM TO 5:00PM) PRIOR TO COMMENCING CONSTRUCTION.

GENERAL CONTACT INFORMATION

EMERGENCY: 911
POLICE (NON-EMERGENCY) _____ 886-2600
FIRE (NON-EMERGENCY) _____ 826-3900
CITY OF CORPUS CHRISTI
CITY CALL CENTER _____ 826-2489
DEVELOPMENT SERVICES _____ 826-3240
ENGINEERING SERVICES _____ 826-3500
ENVIRONMENTAL SERVICES _____ 826-4066
GAS DEPARTMENT _____ 885-6900

OR 24HRS - 854-4369 / 885-6942
TRAFFIC ENGINEERING _____ 826-2489
UTILITIES DEPARTMENT _____ 826-2489
OR AFTER 7PM WEEKDAYS AND HOLIDAYS - 885-6942

SHEET NUMBER

C001
C010
C020
C030
C040
C050
CU110
CU200

SHEET TITLE

COVER SHEET
GENERAL NOTES (1 OF 3)
GENERAL NOTES (2 OF 3)
GENERAL NOTES (3 OF 3)
GENERAL TESTING REQUIREMENTS
GENERAL LEGEND & ABBREVIATIONS
WASTEWATER UTILITY PLAN
WASTEWATER UTILITY PROFILE

NOTICE

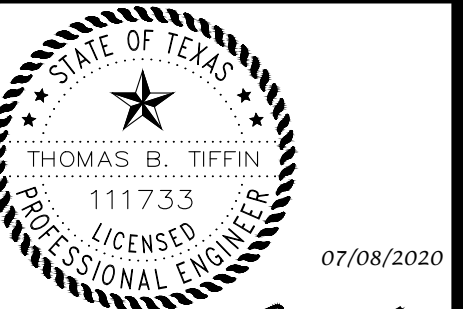
THE FOLLOWING CITY OF CORPUS CHRISTI STANDARD DETAILS ARE A PART OF THIS PROJECT:
WASTEWATER STANDARD DETAILS (SHEETS 1 THRU 4)

THE STANDARD DETAILS ARE TO BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION FROM THE FOLLOWING WEBSITE:
<http://www.cctexas.com/promo/standard-details>

REVISIONS

NO.	DESCRIPTION	BY	DATE

DRAWN BY: RR	CHK BY: TT	APP BY: TT	SCALE: AS NOTED	DATE: JULY 2020
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THOMAS B. TIFFIN, P.E. NO. 111733

GRANGE PARK SUBDIVISION UNIT 3 OFF-SITE PUBLIC IMPROVEMENTS

COVER SHEET

JOB NO.
190138

C001

NOTICE

• THE GENERAL CONTRACTOR AND ALL SUBCONTRACTOR(S) WHICH WILL BE PERFORMING ANY WORK INDICATED WITHIN THESE DRAWINGS WILL BE SOLELY RESPONSIBLE FOR CONTACTING TEXAS 811, LONE STAR 811, AND OTHER UTILITY LOCATING COMPANIES AS WELL AS ALL LOCAL UTILITIES (WASTEWATER, STORM, WATER, GAS, TRAFFIC, ETC.) BY ALL MEANS POSSIBLE FOR THE LOCATING AND MARKING OF UNDERGROUND AND ABOVE GROUND UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION.

• DAMAGES TO UTILITIES WILL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE GENERAL CONTRACTOR TO PROVIDE A REMEDY TO THE DAMAGE WITH THE UTILITY OWNER.

1-800-669-8344 OR www.lonestar811.com
 GIVE 4 WORKING DAYS (M-F) NOTICE

811 OR 1-800-344-8377 OR www.texas811.org
 GIVE 4 WORKING DAYS (M-F) NOTICE

NOTICE: THIS PAGE DOES NOT CONTAIN ALL PROJECT NOTES OR PROJECT REQUIREMENTS. THIS PAGE MAY CONTAIN NOTES THAT ARE NOT PERTINENT TO THE PROJECT BUT ARE INCLUDED FOR REFERENCE. IT WILL BE THE RESPONSIBILITY OF ALL CONTRACTORS WORKING ON THIS PROJECT TO BE KNOWLEDGEABLE WITH ALL PROJECT CONTRACT DOCUMENTS, WHICH INCLUDES BUT NOT LIMITED TO THE PROJECT GENERAL REQUIREMENTS, SPECIFICATIONS, AND DRAWINGS. ANY AND ALL COSTS RELATED TO THE CONTRACTOR FAILURE OF BEING KNOWLEDGEABLE WITH THE CONTRACT DOCUMENTS WILL BE AT THE SOLE EXPENSE OF THE CONTRACTOR.

EXISTING PAVEMENT REMOVAL AND REPAIR

- 1. ASPHALT PAVEMENT
1.1. PAVEMENT SHALL BE SAW-CUT FULL DEPTH WHERE EXISTING PAVEMENT IS BEING PARTIALLY REMOVED.
1.2. AT A MINIMUM, PAVEMENT REPAIR SHALL CONSIST OF TWO-INCH (2") HOT MIX ASPHALTIC CEMENT (HMAC) AND TWELVE-INCH (12") COMPACTED FLEXIBLE BASE IN ACCORDANCE WITH THE SPECIFICATIONS.
1.2.1. BASE SHALL BE COMPACTED TO A MINIMUM OF NINETY-EIGHT PERCENT (98%) MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D1557 AT MOISTURE CONTENT -1% TO +3% OF OPTIMUM.
1.2.2. IF THE EXISTING PAVEMENT SECTION IS FOUND TO BE THICKER, THE PAVEMENT REPAIR SECTION SHALL BE INCREASED TO MATCH THE EXISTING SECTION.
2. CONCRETE PAVEMENT
2.1. PAVEMENT SHALL BE SAW-CUT FULL DEPTH WHERE EXISTING PAVEMENT IS BEING PARTIALLY REMOVED.
2.2. AT A MINIMUM, PAVEMENT REPAIR SHALL CONSIST OF SIX-INCH (6") REINFORCED WITH #4 BARS ON TWELVE-INCH (12") ON-CENTERS WITH DOWELS INTO THE EXISTING PAVEMENT EVERY TWENTY-FOUR INCHES (24") OR EVENLY SPACED AND EIGHT-INCH (8") COMPACTED FLEXIBLE BASE IN ACCORDANCE WITH THE SPECIFICATIONS.
2.2.1. BASE SHALL BE COMPACTED TO A MINIMUM OF NINETY-EIGHT PERCENT (98%) MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D1557 AT MOISTURE CONTENT -1% TO +3% OF OPTIMUM.
2.2.2. IF THE EXISTING PAVEMENT SECTION IS FOUND TO BE THICKER, THE PAVEMENT REPAIR SECTION SHALL BE INCREASED TO MATCH THE EXISTING SECTION.

PAVEMENT CONSTRUCTION

- 1. PRIOR TO COMMENCING PAVING ACTIVITIES, ALL IMPROVEMENTS SHALL BE PROTECTED FROM DAMAGE.
1.1. IF ANY IMPROVEMENT IS DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE ITEM DAMAGED AT NO ADDITIONAL COST TO THE PROJECT.
2. THE CONTRACTOR SHALL CONSTRUCT PAVEMENT TO THE LINES, GRADES, AND ELEVATIONS AS REQUIRED BY THE SPECIFICATIONS AND AS INDICATED WITHIN THE DRAWINGS.
2.1. ANY ADJUSTMENTS TO THE LINES, GRADES, AND ELEVATIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL CONSTRUCT PAVEMENT SECTIONS AS INDICATED WITHIN THE DRAWINGS WITH MATERIALS MEETING OR EXCEEDING THE SPECIFICATIONS.
3.1. FLEXIBLE PAVEMENT SECTION
3.1.1. PUBLIC IMPROVEMENT AND PRIVATE IMPROVEMENT WITHIN PUBLIC ROW WITH CLAY SOILS
3.1.1.1. SUBGRADE SHALL BE LIME TREATED, WHEN INDICATED WITHIN THE DRAWINGS, IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
3.1.1.1.1. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE THEN AT A MINIMUM THE SUBGRADE MATERIAL SHALL BE IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 260 - LIME TREATMENT (ROAD-MIXED).
3.1.1.1.2. AT A MINIMUM THE SUBGRADE SHALL BE TREATED WITH LIME SLURRY TO RESULT IN A PLASTICITY INDEX (P.I.) BELOW TWENTY (20), IN NO CASE SHALL THE PERCENT LIME BE LESS THAN FIVE-PERCENT (5%).
3.1.1.2. BASE AND SUBGRADE REINFORCEMENT (GEOGRID), ONLY WHEN INDICATED WITHIN THE DRAWINGS, SHALL BE TENSAR TRIAX® TX5 GEOGRID OR APPROVED EQUAL (NOTE: EQUAL MUST INDICATE SAME OR BETTER TESTING RESULTS FROM THE SAME TESTS), INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
3.1.1.3. BASE MATERIAL SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
3.1.1.3.1. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE, THEN AT A MINIMUM THE BASE MATERIAL SHALL BE TYPE A GRADE 1-2 IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 247 - FLEXIBLE BASE.
3.1.1.4. HOT MIX ASPHALTIC CONCRETE (HMAC) SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
3.1.1.4.1. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE, THEN AT A MINIMUM THE HMAC SHALL BE TYPE D IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 341 - DENSE-GRADED HOT-MIX ASPHALT.
3.1.2. PRIVATE IMPROVEMENT WITHIN PRIVATE PROPERTY WITH CLAY SOILS
3.1.2.1. SUBGRADE SHALL BE LIME TREATED, WHEN INDICATED WITHIN THE DRAWINGS, IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 260 - LIME TREATMENT (ROAD-MIXED).
3.1.2.1.1. AT A MINIMUM THE SUBGRADE SHALL BE TREATED WITH LIME SLURRY TO RESULT IN A PLASTICITY INDEX (P.I.) BELOW TWENTY (20), IN NO CASE SHALL THE PERCENT LIME BE LESS THAN FIVE-PERCENT (5%).
3.1.2.2. BASE AND SUBGRADE REINFORCEMENT (GEOGRID), ONLY WHEN INDICATED WITHIN THE DRAWINGS, SHALL BE TENSAR TRIAX® TX5 GEOGRID OR APPROVED EQUAL (NOTE: EQUAL MUST INDICATE SAME OR BETTER TESTING RESULTS FROM THE SAME TESTS), INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.
3.1.2.3. BASE MATERIAL SHALL BE TYPE A GRADE 1-2, OR AS INDICATED WITHIN THE DRAWINGS, IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 247 - FLEXIBLE BASE.
3.1.2.4. HOT MIX ASPHALTIC CONCRETE (HMAC) SHALL BE TYPE D IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 341 - DENSE-GRADED HOT-MIX ASPHALT.
3.1.3. PUBLIC IMPROVEMENT OR PRIVATE IMPROVEMENT WITHIN PUBLIC ROW WITH SAND SOILS
3.1.3.2. SUBGRADE SHALL BE AS PER TYPE INDICATED WITHIN THE DRAWINGS AND IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
3.1.3.3. BASE MATERIAL SHALL BE AS PER TYPE AS INDICATED WITHIN THE DRAWINGS AND IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
3.1.3.3.1. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE, THEN AT A MINIMUM THE MATERIAL SHALL BE CEMENT STABILIZED BASE.
3.1.3.3.2. CEMENT STABILIZED BASE
3.1.3.3.2.1. AT A MINIMUM SHALL HAVE A PLASTICITY INDEX (P.I.) BELOW TWENTY (20) AND BE TREATED WITH ELEVEN-PERCENT (11%) CEMENT (CONTRACTOR MAY, AT HIS SOLE COST, HAVE THE SOIL TESTED BY THE TESTING COMPANY TO PROVIDE A RECOMMENDATION OF THE PERCENT CEMENT REQUIRED).
3.1.3.3.2.2. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE THEN AT A MINIMUM THE BASE MATERIAL SHALL BE IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 275 - CEMENT TREATMENT (ROAD-MIXED).
3.1.3.3.3. FLEXIBLE BASE
3.1.3.3.3.1. SHALL BE TYPE A GRADE 1-2, OR AS INDICATED WITHIN THE DRAWINGS, IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 247 - FLEXIBLE BASE.
3.1.1.4. HOT MIX ASPHALTIC CONCRETE (HMAC) SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
3.1.1.4.1. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE, THEN AT A MINIMUM THE HMAC SHALL BE TYPE D IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 341 - DENSE-GRADED HOT-MIX ASPHALT.
3.1.2. PRIVATE IMPROVEMENT WITHIN PRIVATE PROPERTY WITH SAND SOILS
3.1.3.2. SUBGRADE SHALL BE AS PER TYPE INDICATED WITHIN THE DRAWINGS.
3.1.3.3. BASE MATERIAL SHALL BE AS PER TYPE AS INDICATED WITHIN THE DRAWINGS.
3.1.3.3.1. CEMENT STABILIZED BASE
3.1.3.3.1.1. AT A MINIMUM SHALL HAVE A PLASTICITY INDEX (P.I.) BELOW TWENTY (20) AND BE TREATED WITH ELEVEN-PERCENT (11%) CEMENT (CONTRACTOR MAY, AT HIS SOLE COST, HAVE THE SOIL TESTED BY THE TESTING COMPANY TO PROVIDE A RECOMMENDATION OF THE PERCENT CEMENT REQUIRED) AND SHALL BE IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 275 - CEMENT TREATMENT (ROAD-MIXED).
3.1.3.3.2. FLEXIBLE BASE
3.1.3.3.2.1. SHALL BE TYPE A GRADE 1-2, OR AS INDICATED WITHIN THE DRAWINGS, IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 247 - FLEXIBLE BASE.
3.1.1.4. HOT MIX ASPHALTIC CONCRETE (HMAC) SHALL BE TYPE D IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 341 - DENSE-GRADED HOT-MIX ASPHALT.
3.2. RIGID PAVEMENT SECTION
3.2.1. PUBLIC IMPROVEMENT AND PRIVATE IMPROVEMENT WITHIN PUBLIC ROW WITH CLAY SOILS
3.2.1.1. SUBGRADE SHALL BE LIME TREATED IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
3.2.1.1.1. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE THEN AT A MINIMUM THE SUBGRADE MATERIAL SHALL BE IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 260 - LIME TREATMENT (ROAD-MIXED).
3.2.1.1.2. AT A MINIMUM THE SUBGRADE SHALL BE TREATED WITH LIME SLURRY TO RESULT IN A PLASTICITY INDEX (P.I.) BELOW TWENTY (20), IN NO CASE SHALL THE PERCENT LIME BE LESS THAN FIVE-PERCENT (5%).
3.2.1.2. BASE MATERIAL SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS.
3.2.1.2.1. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE, BASE SHALL BE AS INDICATED WITHIN THE DRAWINGS, WHEN INDICATED SHALL BE TYPE A GRADE 1-2 IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 247 - FLEXIBLE BASE.
3.2.1.3. CONCRETE SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING SPECIFICATIONS AND THE DRAWINGS.

- 3.2.1.3.1. IF LOCAL SPECIFICATIONS ARE NOT AVAILABLE, OR DO NOT INDICATE TYPE AND MATERIALS, THEN AT A MINIMUM THE CONCRETE SHALL BE IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 360 - CONCRETE PAVEMENT.
3.2.1.3.2. MATERIALS SHALL BE AT A MINIMUM THE FOLLOWING:
3.2.1.3.2.1. CONCRETE SHALL BE MINIMUM 4,000 PSI AT TWENTY-EIGHT (28) DAYS, UNLESS OTHERWISE NOTED.
3.2.1.3.2.2. REINFORCING STEEL SHALL BE MINIMUM ASTM A 615, GRADE 60.
3.2.1.3.2.3. MAXIMUM SIZE OF COARSE AGGREGATE SHALL BE ONE-ONE HALF INCH (1-1/2 INCH) AND FINE AGGREGATE SHALL BE CLEAN WITHOUT ANY CLAY PARTICLES.
3.2.1.3.2.4. ALL CONCRETE SHALL BE AIR ENTRAINED, CONFORMING TO ASTM C-260 MINIMUM AIR CONTENT, 6% ANY OTHER ADDITIVES SHALL BE SUBJECT TO PRIOR APPROVAL BY THE OWNER'S REPRESENTATIVE.
3.2.1.3.2.5. LAP AND SPLICES SHALL BE MINIMUM THIRTY (30) BAR DIAMETERS OF LARGER DIAMETER BAR AND STAGGER ADJACENT BAR SPLICES A MINIMUM OF TWENTY-FOUR INCHES (24-INCHES).
3.2.1.3.2.6. REINFORCEMENT SHALL BE SECURELY SUPPORTED TO PREVENT VERTICAL AND HORIZONTAL MOVEMENT DURING CONCRETE PLACEMENT.
3.2.1.3.2.7. PROVIDE EXPANSION JOINTS AND CONTROL JOINTS FOR CONCRETE FLATWORK AS INDICATED ON THE DRAWINGS. PROVIDE UNIFORM SLOPE FROM HIGH POINT TO LOW POINT AS INDICATED ON THE DRAWINGS, DO NOT POOL OR POCKET SURFACE WATER.
3.2.1.3.2.9. INSTALL PAVING JOINT FILLER BOARD AND EXPANSION JOINT CAPS PER MANUFACTURER'S RECOMMENDATIONS. APPLY A SINGLE BEAD OF EPOXY (GREENSTREAK 7300 GP EPOXY OR EQUAL) BETWEEN ALL ONE-SIDED RETROFIT PVC EXPANSION JOINT CAP SEALS (628 OR 632) AND EXISTING LAB, CURB OR FOUNDATION PRIOR TO PLACING NEW PAVING.
3.2.1.3.2.11. FLEXIBLE JOINT SEALANT COMPOUND (POLYSPEC 2235 SL POLY-SULFIDE POLYMER OR APPROVED EQUAL) USED ALONG WITH CELLULAR FOAM PACKING MATERIAL (BACKER ROD) MAY BE USED INSTEAD OF PVC PAVING CAP WITH FHR APPROVAL.
4. THE CONTRACTOR WILL BE REQUIRED TO HAVE THE SUBGRADE AND PROPOSED BASE MATERIALS TESTED BY AN OWNER'S REPRESENTATIVE APPROVED GEOTECHNICAL TESTING LABORATORY FOR THE ESTABLISHMENT OF AN OPTIMUM SOIL MOISTURE AND DENSITY PROCTOR.
4.1. REPORT COPIES SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY WORK REQUIRING THE MATERIALS.
5. IMPROVEMENTS WITHIN THE PAVEMENT AREA SHALL BE MARKED BY THE CONTRACTOR SO THAT AFTER PAVING ACTIVITIES ARE COMPLETE, THE IMPROVEMENTS CAN BE ADJUSTED TO WITHIN ONE-QUARTER INCH (1/4") OF THE FINAL SURFACE, UNLESS OTHERWISE REQUIRED BY OTHER DETAILS OR THE OWNER'S REPRESENTATIVE.
6. PRIOR TO PLACEMENT OF ANY PAVING IMPROVEMENTS, ALL UNDERGROUND IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: SANITARY SEWER UTILITIES, STORM SEWER UTILITIES, WATER UTILITIES, SLEEVES FOR ELECTRICAL UTILITIES, SLEEVES FOR IRRIGATION UTILITIES, SLEEVES FOR COMMUNICATION UTILITIES, AND OTHER UNDERGROUND IMPROVEMENTS THAT ARE REQUIRED AND ARE BENEATH AND ADJACENT TO THE PAVING IMPROVEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DRAWINGS AND INDUSTRY STANDARDS, VERIFIED BY THE CONTRACTOR, AND PASS ALL TESTING REQUIREMENTS.
6.1. THE CONTRACTOR MAY PROCEED SOLELY AT THE CONTRACTOR'S OWN RISK IN THE PLACEMENT OF PAVING IMPROVEMENTS PRIOR TO THE VERIFICATION AND FINAL TESTING OF UNDERGROUND IMPROVEMENTS WITH ANY COSTS RESULTING FROM THE VERIFICATION OR TESTING FAILURE BEING SOLELY AT THE CONTRACTOR'S EXPENSE.
6.2. IF IT IS DETERMINED THAT THE CONTRACTOR HAS FAILED TO PLACE THE UNDERGROUND IMPROVEMENTS AS INDICATED ON THE DRAWINGS AND/OR FAILED TO VERIFY THE LOCATION PRIOR TO THE PLACEMENT OF PAVING IMPROVEMENTS, THEN ANY COSTS RESULTING FROM ACTIVITIES TO REMEDY THE SITUATION SHALL BE SOLELY AT THE CONTRACTOR'S EXPENSE.
7. WHERE THE PROPOSED PAVEMENT IMPROVEMENTS MEET THE EXISTING PAVEMENTS, THE CONTRACTOR SHALL SAW CUT THE PAVEMENT IN A LINE THAT IS PARALLEL TO THE PROPOSED PAVEMENT EDGE TO A POINT THAT IS NOT DAMAGED AND AT A MINIMUM DISTANCE OF TWO-FOOT (2') BEYOND THE START OF THE PROPOSED PAVEMENT.

SIDEWALK AND ACCESSIBILITY RAMP CONSTRUCTION

- NOTE: ALL SIDEWALKS AND ACCESSIBILITY RAMPS (CURB RAMPS, RAMPS, ETC.) ON THIS PROJECT ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE TEXAS ACCESSIBILITY STANDARDS (TAS), LATEST EDITION; WHEN THE DETAILS AND NOTES AS SHOWN IN THE DRAWINGS ARE IN CONFLICT WITH THE TAS, THEN THE TAS REQUIREMENTS SHALL BE USED.
1. PRIOR TO COMMENCING PAVING ACTIVITIES, ALL IMPROVEMENTS SHALL BE PROTECTED FROM DAMAGE.
1.1. IF ANY IMPROVEMENT IS DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE ITEM DAMAGED AT NO ADDITIONAL COST TO THE PROJECT.
2. THE CONTRACTOR SHALL CONSTRUCT THE SIDEWALK TO THE LINES, GRADES, AND ELEVATIONS AS REQUIRED BY THE SPECIFICATIONS AND AS INDICATED WITHIN THE DRAWINGS.
2.1. ANY ADJUSTMENTS TO THE LINES, GRADES, AND ELEVATIONS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL CONSTRUCT, AS INDICATED WITHIN THE DRAWINGS, WITH MATERIALS MEETING OR EXCEEDING THE SPECIFICATIONS.
3.1. IN ANY CASE THE FOLLOWING SHALL BE USED AS A MINIMUM FOR MATERIALS:
3.1.1. EXPANSION BOARD SHALL BE 3/4" REDWOOD WITH APPROPRIATE GREENSTREAK PAVING CAP, UNLESS OTHERWISE INDICATED WITHIN THE DETAILS.
3.1.2. CONCRETE SHALL BE MINIMUM CLASS "A", 3,000 PSI CONCRETE IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 421 - HYDRAULIC CEMENT CONCRETE, UNLESS OTHERWISE INDICATED WITHIN THE DETAILS.
3.1.3. REINFORCEMENT SHALL BE IN ACCORDANCE WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES ITEM 440 - REINFORCEMENT FOR CONCRETE, UNLESS OTHERWISE INDICATED WITHIN THE DETAILS.
4. SURFACE FINISH SHALL BE A BROOM FINISH THAT IS PERPENDICULAR TO THE COMMON PEDESTRIAN PATH, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
4.1. SURFACE FINISH SHALL BE CONSISTENT THROUGHOUT THE PROJECT.
5. IMPROVEMENTS WITHIN THE SIDEWALK SURFACE SHALL BE ADJUSTED TO WITHIN PLUS OR MINUS ONE-QUARTER INCH (±1/4") OF THE FINAL SURFACE WITH THE EDGE BEING ROUNDED, UNLESS OTHERWISE REQUIRED BY OTHER DETAILS OR THE OWNER'S REPRESENTATIVE.
6. PRIOR TO THE PLACEMENT OF ANY SIDEWALK IMPROVEMENTS, ALL UNDERGROUND IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO: SANITARY SEWER UTILITIES, STORM SEWER UTILITIES, WATER UTILITIES, SLEEVES FOR ELECTRICAL UTILITIES, SLEEVES FOR IRRIGATION UTILITIES, SLEEVES FOR COMMUNICATION UTILITIES, AND OTHER UNDERGROUND IMPROVEMENTS THAT ARE REQUIRED AND ARE BENEATH AND ADJACENT TO THE SIDEWALK IMPROVEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DRAWINGS AND INDUSTRY STANDARDS, SHALL BE VERIFIED BY THE CONTRACTOR, AND PASS ALL TESTING REQUIREMENTS.
6.1. THE CONTRACTOR MAY PROCEED SOLELY AT THE CONTRACTOR'S OWN RISK IN THE PLACEMENT OF SIDEWALK IMPROVEMENTS PRIOR TO THE VERIFICATION AND FINAL TESTING OF UNDERGROUND IMPROVEMENTS WITH ANY COSTS RESULTING FROM THE VERIFICATION OR TESTING FAILURE BEING SOLELY AT THE CONTRACTOR'S EXPENSE.
6.2. IF IT IS DETERMINED THAT THE CONTRACTOR HAS FAILED TO PLACE THE UNDERGROUND IMPROVEMENTS AS INDICATED ON THE DRAWINGS AND/OR FAILED TO VERIFY THE LOCATION PRIOR TO PLACEMENT OF SIDEWALK IMPROVEMENTS, THEN ANY COSTS RESULTING FROM ACTIVITIES TO REMEDY THE SITUATION SHALL BE SOLELY AT THE CONTRACTOR'S EXPENSE.
7. WHERE THE PROPOSED SIDEWALK IMPROVEMENTS MEET THE EXISTING SIDEWALK, THE CONTRACTOR SHALL PERFORM THE FOLLOWING:
7.1. IF THE POINT OF THE EXISTING SIDEWALK EDGE WHERE THE PROPOSED IS TO ABUT TO IS DAMAGED, CRACKED, AND/OR IN A CONDITION THAT WILL NOT ALLOW FOR THE PROPOSED SIDEWALK TO PROPERLY TIE-INTO, THE CONTRACTOR SHALL PERFORM ONE OF THE FOLLOWING:
7.1.1. SAW CUT THE SIDEWALK AT A CONTROL JOINT WITH, AT ALL TIMES, LEAVING A MINIMUM OF TWO (2) CONTROL JOINT SECTIONS BETWEEN AN EXPANSION JOINT AND THE PROPOSED SIDEWALK.
7.1.2. BREAK OUT THE SIDEWALK AT AN EXPANSION JOINT IN A MANNER THAT WILL NOT DAMAGE THE EXISTING.
7.2. INSTALL TWELVE-INCH (12") DOWELS WITH SIX-INCHES (6") BEING WITHIN THE EXISTING SIDEWALK BY DRILLING AND USING EPOXY ADHESIVE ANCHOR (HILTI No. HIT HY150 OR OWNER'S REPRESENTATIVE APPROVED EQUAL) AND THE OTHER PORTION OF THE DOWEL WITHIN THE PROPOSED SIDEWALK.
7.3. IF THE SIDEWALK WIDTHS ARE DIFFERENT, THE CONTRACTOR SHALL PROVIDE A TRANSITIONAL AREA AS NOTED ON THE DRAWINGS OR AS REQUIRED BY THE OWNER'S REPRESENTATIVE.
8. WHEN THE ELEVATION CHANGES ABRUPTLY BETWEEN THE TOP OF SIDEWALK AND THAT OF THE NATURAL/PROPOSED GRADE, THE CONTRACTOR SHALL INSTALL A HEADER WALL ALONGSIDE THE SIDEWALK OF AN ADEQUATE HEIGHT TO MAINTAIN NO GREATER THAN 3:1 SLOPES OF THE NATURAL/PROPOSED GRADE, UNLESS OTHERWISE INDICATED BY THE OWNER'S REPRESENTATIVE.

SIGNS AND PAVEMENT MARKINGS

- 1. ALL REGULATORY SIGNS, WARNING SIGNS, OBJECT MARKERS, AND BARRICADES SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD).
2. THE CONTRACTOR SHALL INSTALL ALL REGULATORY SIGNS, WARNING SIGNS, OBJECT MARKERS, BARRICADES, AND PAVEMENT MARKINGS IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, AS INDICATED BY THE OWNER'S REPRESENTATIVE, AND MANUFACTURER'S RECOMMENDATIONS AS SOON AS PRACTICABLE AND PRIOR TO OPENING TO THE PUBLIC.
3. ALL CONNECTORS AND FASTENERS USED TO ATTACH THE SIGN TO THE POST SHALL BE GALVANIZED STEEL OR STAINLESS STEEL.
4. SIGN(S) SHALL BE INSTALLED AT TIME OF POST INSTALLATION TO ENSURE THE SIGN(S) WILL FACE THE CORRECT DIRECTION.
5. THE CONTRACTOR SHALL VERIFY LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO EXCAVATION.
6. ANY REGULATORY SIGNS, WARNING SIGNS, OBJECT MARKERS, AND BARRICADES DAMAGED PRIOR TO ACCEPTANCE SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

FINAL CLEAN-UP AND SITE PREPARATION

- 1. THE CONTRACTOR WILL BE REQUIRED TO REMOVE EXCESS MATERIALS AND CONSTRUCTION DEBRIS FROM THE PROJECT SITE, CLEAN ALL ROADS AND SIDEWALKS, CLEAR THE STORM SEWER OF SILT AND DEBRIS, CLEAR THE SANITARY SEWER OF DEBRIS, BRING ALL MANHOLES, VALVE BOX COVERS, FIRE HYDRANTS TO PROPER GRADE, AND CLEAR THE SITE OF ALL EQUIPMENT TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
2. MATERIALS LARGER THAN FOUR-INCHES (4") IN SIZE WITHIN THE CONSTRUCTION LIMITS AND NOT INCORPORATED INTO THE PROJECT SHALL

- BE REMOVED BY THE CONTRACTOR FROM THE PROJECT AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS, UNLESS OTHERWISE DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
3. EROSION AND POLLUTION CONTROL DEVICES SUCH AS, BUT NOT LIMITED TO, REINFORCED SILT FENCE, INLET PROTECTION, HAY BALES, AND OTHER DEVICES AS DIRECTED BY THE OWNER'S REPRESENTATIVE SHALL BE VERIFIED AND REMEDIED TO MEET THE REQUIREMENTS OF THE DEVICE AND OWNER'S REPRESENTATIVE.
3.1. THE CONSTRUCTION ENTRANCE SHALL BE REMOVED IN ITS ENTIRETY UNLESS OTHERWISE STATED BY THE ENGINEER.
3.2. ADDITIONAL EROSION AND POLLUTION CONTROL DEVICES MAY BE REQUIRED TO HAVE THE PROJECT SITE IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.
4. THE CONTRACTOR SHALL GRADE AND STABILIZE THE SITE TO PREPARE THE SITE FOR THE INTENDED USE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

PROJECT COMPLETION AND AS-BUILT DRAWINGS

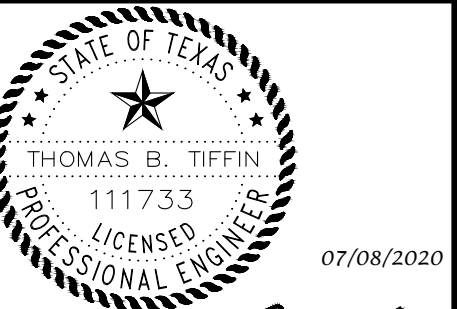
- 1. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING TWO (2) SETS OF "AS-BUILT" DRAWINGS SHOWING ILLUSTRATIONS AND/OR NOTES OF ALL FIELD CHANGES AND MODIFICATIONS TO THE DRAWINGS AS ISSUED FOR THE PROJECT.
1.1. AS-BUILT DRAWINGS SHALL BE SIGNED BY ALL CONTRACTOR DESIGNEE(S) AND INSPECTOR(S).
2. AT PROJECT COMPLETION, ALL SETS OF "AS-BUILT" DRAWINGS, COPIES OF ALL TESTING REPORTS, ALL APPROVALS AND/OR DISAPPROVALS FROM LOCAL AND STATE ENTITIES, FOUR (4) HARD COPIES AND ONE (1) DIGITAL COPY OF OPERATIONAL AND MAINTENANCE MANUALS, FOUR (4) COPIES OF WARRANTY INFORMATION, AND TWO (2) COPIES OF AFFIDAVITS OF BILLS PAID FROM EACH SUPPLIER MUST BE SUBMITTED TO THE OWNER'S REPRESENTATIVE PRIOR TO PROJECT FINAL ACCEPTANCE AND FINAL RELEASE OF ANY PAYMENTS.

PROJECT NOTES:

- 1. CONTRACTOR TO REFER TO THE CONSTRUCTION DRAWINGS FOR PUBLIC IMPROVEMENTS, GRANGE PARK SUBDIVISION UNIT 3 FOR CONSTRUCTION AND LOCATION OF OTHER PROPOSED IMPROVEMENTS.
2. CONTRACTOR TO ABIDE BY REQUIREMENTS OF CONSTRUCTION EASEMENT AGREEMENTS FOR ALL WORK ON DORSAL DEVELOPMENT PROPERTY. THE FOLLOWING IMPROVEMENTS ARE WITHIN WASTEWATER REIMBURSEMENT REQUEST: WASTEWATER MANHOLES A04, A05, A06, A07, AND WASTEWATER LINES A05, A06, A07.
3. CONSTRUCTION OF ALL ITEMS INDICATED WITHIN THESE CONSTRUCTION DRAWINGS ARE REIMBURSEMENTS THROUGH AN AGREEMENT WITH THE CITY OF CORPUS CHRISTI.

Table with columns: NO., DESCRIPTION, DATE, APPR., BY.

Table with columns: DRAWN BY: RR, CHK BY: TT, APP BY: TT, SCALE: AS NOTED, DATE: JULY 2020.



THOMAS B. TIFFIN, P.E. NO. 111733

GRANGE PARK SUBDIVISION UNIT 3 OFF-SITE PUBLIC IMPROVEMENTS GENERAL NOTES (3 OF 3)

JOB NO. 190138 C030

NOTICE: THE GENERAL CONTRACTOR AND ALL SUBCONTRACTOR(S) WHICH WILL BE PERFORMING ANY WORK INDICATED WITHIN THESE DRAWINGS WILL BE SOLELY RESPONSIBLE FOR CONTACTING TEXAS 811, LONE STAR 811, AND OTHER UTILITY LOCATING COMPANIES AS WELL AS ALL LOCAL UTILITIES... Know what's below. Call before you dig. Lone Star 811 logo and contact info.

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NOTICE: THIS PAGE DOES NOT CONTAIN ALL PROJECT NOTES OR PROJECT REQUIREMENTS. THIS PAGE MAY CONTAIN NOTES THAT ARE NOT PERTINENT TO THE PROJECT BUT ARE INCLUDED FOR REFERENCE. IT WILL BE THE RESPONSIBILITY OF ALL CONTRACTORS WORKING ON THIS PROJECT TO BE KNOWLEDGEABLE WITH ALL PROJECT CONTRACT DOCUMENTS, WHICH INCLUDES BUT NOT LIMITED TO THE PROJECT GENERAL REQUIREMENTS, SPECIFICATIONS, AND DRAWINGS. ANY AND ALL COSTS RELATED TO THE CONTRACTOR FAILURE OF BEING KNOWLEDGEABLE WITH THE CONTRACT DOCUMENTS WILL BE AT THE SOLE EXPENSE OF THE CONTRACTOR.

UTILITY BACKFILL TESTING REQUIREMENTS

1. GENERAL
 - 1.1. SHALL BE FOR ALL PUBLIC AND PRIVATE WASTEWATER UTILITY, STORM SEWER UTILITY, WATER UTILITY, AND ANY OTHER UTILITY THAT IS INSTALLED ON THE PROJECT SITE.
2. REQUIREMENT
 - 2.1. FREQUENCY OF TESTS SHALL NOT BE LESS THAN ONE (1) FOR ANY PIPE SECTION BETWEEN MAIN LINE VALVES AND EVERY ONE-HUNDRED LINEAR FEET (100') OF MAIN PIPE PER TWO-FOOT (2') VERTICAL OF BACKFILL MATERIAL TO TOP OF FINAL BACKFILL, NOT INCLUDING TOPSOIL BACKFILL MATERIAL, STARTING AT TWO-FOOT (2') ABOVE TOP OF PIPE, IN ACCORDANCE WITH ASTM D2922.
 - 2.2. IF COMPACTION OF THE FILL MATERIAL DOES NOT MEET OR EXCEED THE REQUIREMENTS, THAT PORTION OF FILL MATERIAL IS TO BE FURTHER COMPACTED AND RETESTED AT THE SOLE EXPENSE OF THE CONTRACTOR.

WASTEWATER UTILITY TESTING REQUIREMENTS

1. GENERAL
 - 1.1. TESTING SHALL BE DONE BY THE CONTRACTOR AND WITNESSED BY THE OWNER REPRESENTATIVE.
 - 1.2. THE CONTRACTOR MAY WISH TO CHECK PIPE IMMEDIATELY AFTER BACKFILLING FOR JOB CONTROL.
 - 1.3. HOWEVER, THIS SHALL NOT QUALIFY AS ACCEPTANCE TESTING.
 - 1.4. NO PIPE CAN BE TESTED FOR FORMAL ACCEPTANCE UNTIL IT HAS BEEN IN PLACE, COMPLETE WITH BACKFILL FOR AT LEAST THIRTY (30) DAYS.
 - 1.5. RETESTING
 - 1.5.1. ANY DEFECTIVE WORK OR MATERIALS SHALL BE CORRECTED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTORS SOLE EXPENSE, AND RETESTED.
 - 1.6. THIS SHALL BE REPEATED UNTIL ALL WORK AND MATERIALS ARE ACCEPTABLE.
 - 1.7. TESTING SHALL BE COMPLETED AND ALL WORK SHALL PASS THE REQUIRED TESTING PRIOR TO PLACEMENT OF PAVEMENT.
 - 1.7.1. CONTRACTOR MAY PROCEED WITH PLACEMENT OF PAVEMENT AND WILL INCUR ALL COSTS ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF PAVEMENT IF UTILITY FAILS TESTING AND NEEDS TO BE REPLACED.
2. PIPE
 - 2.1. LOW PRESSURE AIR TEST
 - 2.1.1. GENERAL
 - 2.1.1.A. REQUIRED FOR ALL PIPE
 - 2.1.1.B. EQUIPMENT FOR TEST SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
 - 2.1.1.C. THE CONTRACTOR SHALL TEST THE ENTIRE SANITARY SEWERAGE PIPING SYSTEM FOR LEAKS.
 - 2.1.1.D. THIS WORK SHALL BE WITNESSED BY THE OWNER REPRESENTATIVE OR A REPRESENTATIVE DESIGNATED BY THE OWNER REPRESENTATIVE.
 - 2.1.2. TESTING
 - 2.1.2.A. SHALL BE TESTED IN ACCORDANCE WITH UNI-BELL PLASTIC PIPE ASSOCIATION "RECOMMENDED PRACTICE FOR LOW PRESSURE AIR TEST OF INSTALLED SEWER PIPE" UNI-B-6, AND TEXAS ADMINISTRATION CODE.
 - 2.1.2.B. THE TEST SECTION SHALL BE PLUGGED AND SUBJECTED TO A TEST PRESSURE NOT IN EXCESS OF FIVE (5) PSI.
 - 2.1.2.C. THE TIME REQUIRED FOR A ONE (1) PSI PRESSURE DROP SHALL BE MEASURED AND BE A MINIMUM OF THE VALUE OBTAINED IN EQUATION A AND/OR SHOWN IN TABLE 1.

EQUATION A:			
$T = 0.0237D^2L$	WHERE: T = MINIMUM ALLOWABLE TIME (SECONDS) FOR A PRESSURE DROP OF ONE (1) PSI GAGE PRESSURE		
	D = NOMINAL PIPE DIAMETER (INCHES)		
	L = LENGTH OF PIPE RUN (FEET)		
MINIMUM TESTING TIMES FOR LOW PRESSURE AIR TEST			
PIPE DIAMETER INCH	MINIMUM TIME (SECONDS) FOR MINIMUM TIME	MAXIMUM LENGTH	ADDITIONAL TIME PER FOOT (SECONDS PER FOOT)
4	226	597	0.380
6	340	398	0.853
8	452	298	1.517
10	567	239	2.370
12	680	199	3.413

- 3.2.1. PLUG ALL PIPES ENTERING THE MANHOLE AND FILL THE MANHOLE COMPLETELY WITH WATER.
- 3.2.2. THE MINIMUM LENGTH OF THE TEST SHALL BE ONE (1) HOUR.
- 3.2.3. MAXIMUM LEAKAGE SHALL BE CALCULATED TO BE 0.025 GALLONS PER FOOT DIAMETER OF MANHOLE DEPTH PER HOUR.
4. VACUUM TESTING
 - 4.1. PLUG ALL LIFT HOLES AND EXTERIOR JOINTS BY APPROVED METHODS.
 - 4.2. PLUG ALL PIPES ENTERING THE MANHOLE.
 - 4.3. THE TEST HEAD SHALL BE PLACED AT THE TOP OF THE MANHOLE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
 - 4.4. A VACUUM OF TEN-INCHES (10-INCHES) OF MERCURY SHALL BE DRAWN ON THE MANHOLE, THE VALVE ON THE VACUUM LINE OF THE TEST HEAD CLOSED, AND THE VACUUM PUMP SHUT OFF.
 - 4.5. THE TIME OF THE TEST WILL START ONCE THE VACUUM PUMP IS SHUT OFF.
 - 4.6. THE MANHOLE SHALL PASS IF THE TIME FOR THE VACUUM READING TO DROP FROM TEN-INCHES (10-INCHES) OF MERCURY TO NINE-INCHES (9-INCHES) OF MERCURY EXCEEDS TWO (2) MINUTES.
 - 4.7. IF THE MANHOLE FAILS THE INITIAL TEST, NECESSARY REPAIRS SHALL BE MADE BY AN APPROVED METHOD AND THEN BE RETESTED UNTIL A SATISFACTORY TEST IS OBTAINED.
5. TESTING AND CERTIFICATION
 - 5.1. TESTING SHALL BE DONE BY THE CONTRACTOR AND WITNESSED BY THE UTILITY OWNER AND OWNERS OR HIS REPRESENTATIVE.
 - 5.2. ALL MANHOLES AND STRUCTURES SHALL BE TESTED AS FINISHED AND COMPLETED FOR FINAL ACCEPTANCE.
 - 5.3. ANY DEFECTIVE WORK OR MATERIALS SHALL BE CORRECTED OR REPLACED BY THE CONTRACTOR AND RETESTED.
 - 5.4. THIS SHALL BE REPEATED UNTIL ALL WORK AND MATERIALS ARE ACCEPTABLE.

WATER UTILITY TESTING REQUIREMENTS

1. BACKFILL
 - 1.1. GENERAL
 - 1.1.1. SHALL BE COMPACTED IN A MANNER AS TO NOT DAMAGE ANY UTILITY OR IMPROVEMENTS.
 - 1.2. SELECT BACKFILL MATERIAL
 - 1.2.1. COMPACTED BY USE OF INDUSTRY STANDARD EQUIPMENT AT ZERO TO FIVE-PERCENT (0-5%) OF OPTIMUM MOISTURE CONTENT TO NINETY-FIVE PERCENT (95%) OF MAXIMUM DRY DENSITY DETERMINED ACCORDING TO ASTM D698, OR AS REQUIRED BY THE DRAWINGS OR OWNER REPRESENTATIVE.
 - 1.3. NATIVE BACKFILL MATERIAL
 - 1.3.1. COMPACTED BY USE OF INDUSTRY STANDARD EQUIPMENT TO NINETY-PERCENT (90%) STANDARD PROCTOR, OR AS REQUIRED BY THE DRAWINGS OR OWNER REPRESENTATIVE.
 - 1.4. TOPSOIL BACKFILL MATERIAL
 - 1.4.1. COMPACTED BY USE OF INDUSTRY STANDARD EQUIPMENT TO A FIRM DENSITY, OR AS REQUIRED BY THE DRAWINGS OR OWNER REPRESENTATIVE.
2. HYDROSTATIC PRESSURE TEST
 - 2.1. GENERAL
 - 2.1.1. ALL PRODUCTS MUST COMPLY WITH NSF/ANSI STANDARD 61.
 - 2.1.2. TESTING IS NOT ALLOWED PRIOR TO COMPLETION OF BACKFILL.
 - 2.1.2.A. ANY LOCATION OF EXPOSED PIPING, FITTINGS, VALVES, HYDRANTS, AND JOINTS SHALL BE CAREFULLY EXAMINED AND IF FOUND LEAKING ALL TESTING SHALL STOP AND REPAIRS SHALL BE MADE.
 - 2.1.3. EACH SECTION OF PIPELINE SHALL BE SLOWLY FILLED WITH WATER AND THE SPECIFIED TEST PRESSURE, MEASURED AT THE POINT OF LOWEST ELEVATION, SHALL BE APPLIED.
 - 2.1.4. ALL REQUIRED TESTING OF THE WATER UTILITY SHALL BE PERFORMED AND PASS ALL REQUIREMENTS PRIOR TO PLACEMENT OF ANY PAVEMENT, INCLUDING, BUT NOT LIMITED TO: SUBGRADE, BASE, ASPHALT, CONCRETE, BRICK PAVERS, CURB AND GUTTER, VALLEY GUTTER, AND SIDEWALKS.
 - 2.1.5. TEST SHALL BE MADE BY CONTRACTOR AND WITNESSED BY THE INSPECTOR AND OWNER'S REPRESENTATIVE.
 - 2.2. TESTING
 - 2.2.1. ALL PIPES SHALL BE SUBJECTED TO TWO (2) HYDROSTATIC TESTS.
 - 2.2.2. THE FIRST HYDROSTATIC TEST SHALL BE A TWO (2) HOUR TEST AT A PRESSURE OF 150 P.S.I.
 - 2.2.2.A. DUCTILE IRON PIPE

THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE CALCULATED BY THE EQUATION AS FOLLOWS:

$L = S(D \cdot V) / 133,200$	$L = \text{MAXIMUM ALLOWABLE LEAKAGE (GAL./HR.)}$
OR	$S = \text{LENGTH OF PIPE TESTED (FEET)}$
$L = N(D \cdot V) / 7,400$	$N = \text{NUMBER OF JOINTS IN TESTED LINE (PIPE & FITTINGS)}$
	$D = \text{NOMINAL DIAMETER OF PIPE (IN.)}$
	$P = \text{AVERAGE TEST PRESSURE (P.S.I.)}$
 - 2.2.2.B. PLASTIC PIPE (PVC)

THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE CALCULATED BY THE EQUATION AS FOLLOWS:

$L = N(D \cdot V) / 7,400$	$L = \text{MAXIMUM ALLOWABLE LEAKAGE (GAL./HR.)}$
	$N = \text{NUMBER OF JOINTS IN TESTED LINE (PIPE & FITTINGS)}$
	$D = \text{NOMINAL DIAMETER OF PIPE (IN.)}$
	$P = \text{AVERAGE TEST PRESSURE (P.S.I.)}$
 - 2.2.2.C. THE SECOND HYDROSTATIC TEST SHALL BE FOR A 24-HOUR PERIOD AT CITY OPERATING PRESSURE FOR WATERLINES.
 - 2.2.2.D. THE SECOND TEST SHALL BE NO LESS THAN 48 HOURS AFTER SUCCESSFUL COMPLETION OF THE FIRST HYDROSTATIC TEST.
 - 2.2.2.E. THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE ZERO (0).
 - 2.2.3. IF THE PRESSURE SYSTEM FAILS TO MEET THE LEAKAGE REQUIREMENTS, THE CONTRACTOR SHALL MAKE THE REQUIRED REPAIRS TO THE SYSTEM AND THE SYSTEM SHALL BE RETESTED.
 - 2.2.4. THIS PROCEDURE SHALL BE REPEATED UNTIL THE SYSTEM COMPLIES WITH LEAKAGE REQUIREMENTS.
 - 2.3. STERILIZATION
 - 2.3.1. GENERAL
 - 2.3.1.A. WHERE SOIL OR OTHER SUBSTANCES HAVE COME IN CONTACT WITH THE WATER SURFACES OF THE PIPE AND ACCESSORIES, THE INTERIOR SHALL BE WASHED AND STERILIZED WITH A TWO-PERCENT (2%) SOLUTION OF CALCIUM HYPOCHLORITE.
 - 2.3.2. TEST
 - 2.3.2.A. AFTER PASSING THE HYDROSTATIC TEST, THE NEW LINE SHALL BE SLOWLY FILLED WITH A SOLUTION OF WATER AND A CONCENTRATED CALCIUM HYPOCHLORITE SOLUTION, AND ALLOWED TO STAND FOR 48 HOURS.
 - 2.3.2.B. AFTER STERILIZATION PERIOD IS COMPLETED, LINES SHALL BE FLUSHED BY THE CONTRACTOR UNDER THE DIRECT SUPERVISION OF A REPRESENTATIVE OF THE WATER UTILITY.
 - 2.3.2.C. THE CALCIUM HYPOCHLORITE WATER SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH TCEQ REGULATIONS.
 - 2.3.2.D. AFTER FLUSHING OF THE NEW MAIN, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A SAMPLE AND PERFORM ALL REQUIRED CITY AND TEXAS STATE HEALTH DEPARTMENT PURIFICATION STANDARDS TESTS.
 - 2.3.3.A. AFTER A 24 HOUR INCUBATION PERIOD THE RESULTS OF THE BACTERIOLOGICAL TEST SHALL BE OBTAINED.
 - 2.3.3.B. IF THE SAMPLE DOES NOT PASS TEXAS STATE HEALTH DEPARTMENT PURIFICATION STANDARDS, THE PROCEDURE SHALL BE REPEATED.
 - 2.3.3.C. TWO (2) SERIES OF TEST FAILURES SHALL REQUIRE THE CONTRACTOR TO "PIG" THE SYSTEM BEFORE ANY MORE BACTERIOLOGICAL SAMPLES CAN BE COLLECTED.
 - 2.3.4. THE ENTIRE PROCEDURE SHALL BE COORDINATED UNDER THE SUPERVISION OF THE WATER SUPERINTENDENT OR DESIGNATED AGENT AND OWNER REPRESENTATIVE.
 - 2.3.5. DURING STERILIZATION PROCESS, VALVES SHALL BE OPERATED ONLY UNDER THE SUPERVISION OF THE WATER SUPERINTENDENT OR DESIGNATED AGENT AND OWNER REPRESENTATIVE.

GENERAL TESTING REQUIREMENTS

1. THE OWNER WILL SECURE THE SERVICES OF A COMMERCIAL TESTING LABORATORY TO PERFORM CONSTRUCTION MATERIALS TESTING AND VISUAL INSPECTION SERVICES AS OUTLINED IN THE PROJECT SPECIFICATIONS AND AS LISTED BELOW AND WITHIN THE REQUIREMENTS.
 - 1.1. THE CONTRACTOR SHALL PERFORM ALL WORK REQUIRING TESTING IN A MANNER TO MINIMIZE THE QUANTITY OF TESTING REQUIRED.
 - 1.1.1. THE OWNER'S REPRESENTATIVE WILL REVIEW ALL TESTS QUANTITIES AGAINST THE ESTIMATED QUANTITY OF TESTING REQUIRED FOR THE PROJECT TO ENSURE TESTING IS PERFORMED AT A RESPONSIBLE RATE.
 - 1.2. THE OWNER WILL NOT BE PAYING FOR THE FEES ASSOCIATED WITH RETESTS, CANCELLATION, EXPEDITING, AND FEES DUE TO WAITING FOR THE CONTRACTOR TO PERFORM TESTS, AND TESTS THAT ARE DEEMED EXCESSIVE BY THE OWNER'S REPRESENTATIVE.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR SCHEDULING TESTING.
3. MOISTURE-DENSITY CURVES SHALL BE GENERATED FOR EACH TYPE OF SOIL MATERIAL USED ON THE PROJECT.
4. IN-PLACE COMPACTION DENSITIES SHALL BE TAKEN AT THE RATE DESCRIBED PER LIFT OF COMPACTED MATERIAL.
5. A MINIMUM OF THREE (3) TESTS SHALL BE TAKEN FOR ANY LIFT OF COMPACTED MATERIAL.
6. CONCRETE STRENGTH CYLINDERS SHALL BE MADE AT THE RATE DESCRIBED BELOW, HOWEVER, A MINIMUM OF ONE (1) SET OF CYLINDERS SHALL BE MADE FOR ANY CONCRETE PLACED IN ANY DAY.
 - 6.1. TEST SHALL BE EVALUATED IN ACCORDANCE WITH ACI 318.
 - 6.2. IF WORKMANSHIP IS FOUND TO BE BELOW THE REQUIREMENTS SET FORTH HEREIN, WITHIN THE DRAWINGS, OR IN THE SPECIFICATIONS AS A RESULT OF TESTING AND/OR VISUAL INSPECTION, THE CONTRACTOR SHALL CORRECT OR REPLACE MATERIALS AT NO ADDITIONAL COST TO THE OWNER.
 - 6.3. THE CONTRACTOR SHALL COOPERATE AND COORDINATE FULLY WITH THE TESTING LABORATORY AND PROJECT TESTING REQUIREMENTS.
 - 6.4. BELOW IS A GENERAL TESTING SCHEDULE FOR THIS PROJECT AND MAY NOT INDICATE ALL OF THE REQUIRED TESTING WHICH IS REQUIRED BY THE SPECIFICATIONS, CONTRACTOR SHALL SEE SPECIFICATIONS FOR ADDITIONAL TESTING REQUIREMENTS:
- 9.1. SOILS

STANDARD PROCTOR - TRENCH BACKFILL	PER MATERIAL SOURCE
STANDARD PROCTOR - SUBGRADE	PER STREET PER MATERIAL SOURCE
DENSITIES - TRENCH BACKFILL	PER 200 LINEAR FEET TRENCH PER LIFT
DENSITIES - SUBGRADE (ASPHALT STREET)	PER 100 LINEAR FEET PER LANE PER LIFT
DENSITIES - SUBGRADE (CONCRETE STREET)	PER 200 LINEAR FEET PER LANE PER LIFT
DENSITIES - SUBGRADE (DRIVEWAYS)	PER 2 DRIVEWAYS
DENSITIES - SUBGRADE (SIDEWALK)	PER 5,000 SQUARE FEET
DENSITIES - BEHIND CURB AND GUTTER	PER 200 LINEAR FEET
DENSITIES - BUILDING PAD SUBGRADE	PER 4,000 SQUARE FEET
DENSITIES - BUILDING PAD SELECT FILL	PER 4,000 SQUARE FEET PER 12" COMPACTED LIFT
- 9.2. FLEXIBLE BASE

SIEVE ANALYSIS	PER 3,000 CUBIC YARDS
ATTERBURG LIMITS	PER 3,000 CUBIC YARDS
MODIFIED PROCTOR	PER 3,000 CUBIC YARDS
L.A. ABRASION	PER 3,000 CUBIC YARDS
CBR (STANDARD)	PER MATERIAL SOURCE
WET BALL MILL TEST	PER MATERIAL SOURCE
TRIAxIAL TEST	PER MATERIAL SOURCE
DENSITIES OF COMPACTED BASE (ASPHALT STREET)	PER 100 LINEAR FEET PER LANE PER LIFT
DENSITIES OF COMPACTED BASE (CONCRETE STREET)	PER 200 LINEAR FEET PER LANE PER LIFT
DENSITIES OF COMPACTED BASE (CURB & GUTTER)	PER 200 LINEAR FEET
- 9.3. PAVEMENT
 - 9.3.1. HOT-MIX ASPHALT (HMA)

EXTRACTION, SIEVE ANALYSIS	PER 500 TONS OR IF LESS 1 PER DAY
LAB DENSITY & STABILITY	PER 500 TONS OR IF LESS 1 PER DAY
THEORETICAL DENSITY (RICE METHOD)	PER 500 TONS OR IF LESS 1 PER DAY
TEMPERATURE - DURING LAY-DOWN	CONTINUOUS AS NEEDED
THICKNESS - IN PLACE (CORE)	PER 1,000 LINEAR FEET OF STREET
% AIR VOIDS - IN PLACE (CORE)	PER 1,000 LINEAR FEET OF STREET
% THEORETICAL DENSITY - IN PLACE (CORE)	PER 1,000 LINEAR FEET OF STREET
 - 9.3.2. RIGID CONCRETE PAVEMENT

COMPRESSION STRENGTH - 7 DAY AND 28 DAY	1 SET PER 2,500 SQUARE YARDS OR IF LESS 1 SET PER DAY
FLEXURAL (BEAM) STRENGTH - 7 DAY AND 28 DAY	1 SET PER 2,500 SQUARE YARDS OR IF LESS 1 SET PER DAY
AIR CONTENT	1 SET PER 2,500 SQUARE YARDS OR IF LESS 1 SET PER DAY
SLUMP	1 SET PER 2,500 SQUARE YARDS OR IF LESS 1 SET PER DAY
- 9.4. CONCRETE

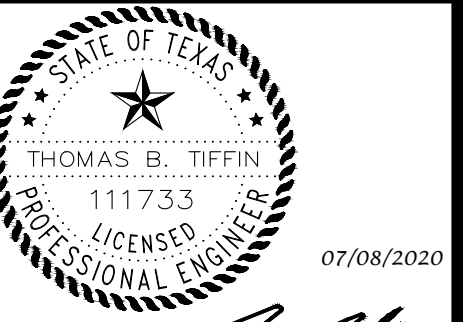
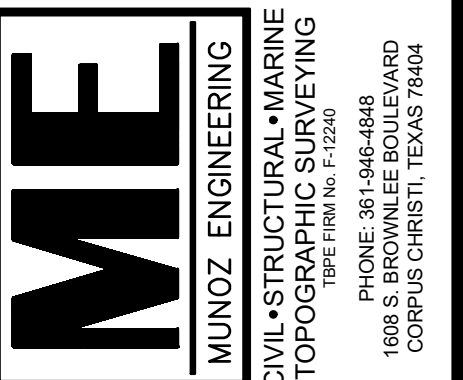
SHALL ALL BE UNCONFINED COMPRESSION - 7, 14, AND 28 DAY

CURB AND GUTTER / CURB	1 SET PER 500 LINEAR FEET OR LESS PER CURB AND GUTTER / CURB
SIDEWALKS AND CURB RAMPS	1 SET PER 4,000 SQUARE FEET OR IF LESS 1 SET PER DAY
DRIVEWAYS	1 SET PER 2,500 SQUARE FEET OR IF LESS 1 SET PER DAY
CURB, POST AND GRATE INLETS	1 SET PER 6 EACH OR IF LESS 1 SET PER DAY
STORM MANHOLES (CAST-IN-PLACE)	1 SET PER 2 EACH OR IF LESS 1 SET PER DAY
BOX CULVERTS (CAST-IN-PLACE)	1 SET PER 100 LINEAR FEET OR LESS FOR EACH BARREL
WINGWALLS	1 SET PER EACH
RIPRAP, APRONS, AND SAFETY END TREATMENTS (SET'S)	1 SET PER 4,000 SQUARE FEET
MANHOLE BASE / FOOTING	1 SET PER 10 EACH
TRASH DUMPSTER PAD	1 SET PER PAD
FOUNDATIONS	1 SET PER 50 CUBIC YARDS OR IF LESS 1 SET PER DAY
- 9.5. THE ABOVE TESTING RATES ARE MINIMUM GUIDELINES, THE ENGINEER OR LOCAL ENTITY MAY REQUIRE ADDITIONAL TESTING THEIR DISCRETION. RE-TEST FOR FAILURES ARE NOT INCLUDED.
- 9.6. MOISTURE CONTENTS TO BE INCLUDED WITH DENSITY TEST.
- 9.7. IN THE EVENT OF FAILURES, ADDITIONAL TESTS WILL BE REQUIRED. IF EXCESSIVE RAIN OR DRY PERIOD OCCURS ON A PREVIOUSLY TESTED SECTION, THE ENGINEER OR LOCAL ENTITY MAY ORDER RE-TESTS AS NECESSARY.

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DATE: JULY 2020			



THOMAS B. TIFIN, P.E. NO. 111733

GRANGE PARK SUBDIVISION UNIT 3 OFF-SITE PUBLIC IMPROVEMENTS

GENERAL TESTING REQUIREMENTS

JOB NO.
190138

C040

NOTICE

- THE GENERAL CONTRACTOR AND ALL SUBCONTRACTOR(S) WHICH WILL BE PERFORMING ANY WORK INDICATED WITHIN THESE DRAWINGS WILL BE SOLELY RESPONSIBLE FOR CONTACTING TEXAS 811, LONE STAR 811, AND OTHER UTILITY LOCATING COMPANIES AS WELL AS ALL LOCAL UTILITIES (WASTEWATER, STORM, WATER, GAS, TRAFFIC, ETC.) BY ALL MEANS POSSIBLE FOR THE LOCATING AND MARKING OF UNDERGROUND AND ABOVE GROUND UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION.
- DAMAGES TO UTILITIES WILL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE GENERAL CONTRACTOR TO PROVIDE A REMEDY TO THE DAMAGE WITH THE UTILITY OWNER.

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GIVE 4 WORKING DAYS (M-F) NOTICE

811 OR 1-800-344-8377 OR www.texas811.org
GIVE 4 WORKING DAYS (M-F) NOTICE

GENERAL LEGEND FOR SYMBOLS AND LINES WITHIN THE CONSTRUCTION DRAWINGS

THE FOLLOWING IS A GENERAL LEGEND OF THE SYMBOLS AND LINES THAT MAY BE FOUND WITHIN THE CIVIL PORTION OF CONSTRUCTION DRAWINGS. THE ACTUAL LINE WEIGHT, SIZE, COLOR, AND ACTUAL INFORMATION ON THE LINE MAY DIFFER FROM SHEET TO SHEET. WHEN LINE TYPE HAS NUMERAL(S) WITHIN THE SYMBOL IT IS INDICATING THE SIZE OF THE ITEM THAT IS BEING REPRESENTED. IF AT ANY POINT THAT AN SYMBOL AND/OR LINE IS NOT CLEAR FOR WHAT IT REPRESENTS IT WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO REQUEST CLARIFICATION FROM THE OWNER'S REPRESENTATIVE. ALL EXISTING ITEMS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.

●	IRON ROD FOUND	⊙	WASTEWATER UTILITY - EXISTING MANHOLE	— E SS —	WASTEWATER UTILITY - EXISTING PIPE
○	CALCULATED POINT	⊕	WASTEWATER UTILITY - PROPOSED MANHOLE	— SS —	WASTEWATER UTILITY - PROPOSED PIPE
⊕	60D NAIL REFERENCE POINT	—	WASTEWATER UTILITY - EXISTING SINGLE SERVICE CONNECTION	— F SS —	WASTEWATER UTILITY - FUTURE PIPE
+	CHISELED "X" IN CONCRETE	—	WASTEWATER UTILITY - PROPOSED SINGLE SERVICE CONNECTION	— F SS —	WASTEWATER UTILITY - EXISTING FORCEMAIN
○	SET 5/8" DIAMETER BY 2 FEET LONG IRON ROD WITH A RED PLASTIC CAP STAMPED "NAISMITH ENG. C.C., TX"	—	WASTEWATER UTILITY - EXISTING DOUBLE SERVICE CONNECTION	— F SS —	WASTEWATER UTILITY - PROPOSED FORCEMAIN
⊙	BLOCK IDENTIFICATION	—	WASTEWATER UTILITY - PROPOSED DOUBLE SERVICE CONNECTION	— E SSS —	WASTEWATER UTILITY - EXISTING SERVICE CONNECTION
→	STORMWATER / DRAINAGE FLOW DIRECTION - EXISTING	—	WASTEWATER UTILITY - EXISTING CLEAN OUT	— SSS —	WASTEWATER UTILITY - PROPOSED SERVICE CONNECTION
→	STORMWATER / DRAINAGE FLOW DIRECTION - PROPOSED	—	WASTEWATER UTILITY - PROPOSED CLEAN OUT	— E ST —	STORM WATER UTILITY - EXISTING GENERAL PIPE
→	CURB INLET PROTECTION BARRIER - CIPB	—	WASTEWATER UTILITY - EXISTING PIPE MARKER	— ST —	STORM WATER UTILITY - PROPOSED GENERAL PIPE
→	MANHOLE / GRATE INLET PROTECTION BARRIER - MGPB	—	WASTEWATER UTILITY - PROPOSED PIPE MARKER	— F ST —	STORM WATER UTILITY - FUTURE GENERAL PIPE
→	STABILIZED CONSTRUCTION ENTRANCE / EXIT - SCEE	—	WASTEWATER UTILITY - EXISTING FORCEMAIN MARKER	— E BOX ST —	STORM WATER UTILITY - EXISTING CONCRETE BOX
→	GRAVEL SURFACE - EXISTING	—	WASTEWATER UTILITY - PROPOSED FORCEMAIN MARKER	— BOX ST —	STORM WATER UTILITY - PROPOSED CONCRETE BOX
→	GRAVEL SURFACE - PROPOSED	—	STORM WATER UTILITY - EXISTING CURB INLET	— E FWF ST —	STORM WATER UTILITY - EXISTING CONCRETE BOX SIZE
→	HMAC SURFACE - EXISTING	—	STORM WATER UTILITY - PROPOSED CURB INLET	— FWF ST —	STORM WATER UTILITY - PROPOSED CONCRETE BOX SIZE
→	HMAC SURFACE - PROPOSED	—	STORM WATER UTILITY - EXISTING GRATE INLET	— E CMP ST —	STORM WATER UTILITY - EXISTING CMP PIPE
→	CONCRETE SURFACE - EXISTING	—	STORM WATER UTILITY - PROPOSED GRATE INLET	— CMP ST —	STORM WATER UTILITY - PROPOSED CMP PIPE
→	CONCRETE SURFACE - PROPOSED	—	STORM WATER UTILITY - EXISTING POST INLET	— E HDPE ST —	STORM WATER UTILITY - EXISTING HDPE PIPE
→	CURB AND GUTTER - EXISTING	—	STORM WATER UTILITY - PROPOSED POST INLET	— HDPE ST —	STORM WATER UTILITY - PROPOSED HDPE PIPE
→	CURB AND GUTTER - PROPOSED	—	STORM WATER UTILITY - EXISTING MANHOLE	— E HP ST —	STORM WATER UTILITY - EXISTING HP PIPE
→	SIDEWALK / HIKE AND BIKE WAY - EXISTING	—	STORM WATER UTILITY - PROPOSED MANHOLE	— HP ST —	STORM WATER UTILITY - PROPOSED HP PIPE
→	SIDEWALK / HIKE AND BIKE WAY - PROPOSED	—	STORM WATER UTILITY - EXISTING JUNCTION BOX	— E PVC ST —	STORM WATER UTILITY - EXISTING PVC PIPE
→	ADA CURB RAMP - EXISTING	—	STORM WATER UTILITY - PROPOSED JUNCTION BOX	— PVC ST —	STORM WATER UTILITY - PROPOSED PVC PIPE
→	ADA COMPLIANT CURB RAMP - PROPOSED (FIELD VERIFY)	—	STORM WATER UTILITY - EXISTING OUTFALL / OPEN END	— E RCP ST —	STORM WATER UTILITY - EXISTING RCP PIPE
→	TRAFFIC SIGN - EXISTING	—	STORM WATER UTILITY - PROPOSED OUTFALL / OPEN END	— RCP ST —	STORM WATER UTILITY - PROPOSED RCP PIPE
→	TRAFFIC SIGN - PROPOSED	—	STORM WATER UTILITY - EXISTING MARKER	— E DCL —	STORM WATER UTILITY - EXISTING DITCH CENTERLINE
→	GAS UTILITY - EXISTING METER	—	STORM WATER UTILITY - PROPOSED MARKER	— DCL —	STORM WATER UTILITY - PROPOSED DITCH CENTERLINE
→	GAS UTILITY - PROPOSED METER	—	WATER UTILITY - EXISTING VALVE	— E W —	WATER UTILITY - EXISTING GENERAL PIPE
→	GAS UTILITY - EXISTING MARKER	—	WATER UTILITY - PROPOSED VALVE	— W —	WATER UTILITY - PROPOSED GENERAL PIPE
→	GAS UTILITY - PROPOSED MARKER	—	WATER UTILITY - EXISTING FITTING	— F W —	WATER UTILITY - FUTURE GENERAL PIPE
→	ELECTRICAL UTILITY - EXISTING POWER POLE	—	WATER UTILITY - PROPOSED FITTING	— E AC W —	WATER UTILITY - EXISTING ASBESTOS COATED PIPE
→	ELECTRICAL UTILITY - PROPOSED POWER POLE	—	WATER UTILITY - EXISTING FIRE HYDRANT	— E W PVC —	WATER UTILITY - EXISTING PVC PIPE
→	ELECTRICAL UTILITY - EXISTING GUY WIRE TERMINATION	—	WATER UTILITY - PROPOSED FIRE HYDRANT	— W PVC —	WATER UTILITY - PROPOSED PVC PIPE
→	ELECTRICAL UTILITY - PROPOSED GUY WIRE TERMINATION	—	WATER UTILITY - EXISTING SINGLE SERVICE CONNECTION	— E WS —	WATER UTILITY - EXISTING SERVICE CONNECTION
→	ELECTRICAL UTILITY - EXISTING TRANSFORMER	—	WATER UTILITY - PROPOSED SINGLE SERVICE CONNECTION	— E RE —	WATER UTILITY - PROPOSED SERVICE CONNECTION
→	ELECTRICAL UTILITY - PROPOSED TRANSFORMER	—	WATER UTILITY - EXISTING DOUBLE SERVICE CONNECTION	— E RE —	WATER UTILITY - EXISTING REUSE
→	ELECTRICAL UTILITY - EXISTING PEDESTAL	—	WATER UTILITY - PROPOSED DOUBLE SERVICE CONNECTION	— RE —	WATER UTILITY - PROPOSED REUSE
→	ELECTRICAL UTILITY - PROPOSED PEDESTAL	—	WATER UTILITY - EXISTING MARKER	— F RE —	WATER UTILITY - FUTURE REUSE
→	ELECTRICAL UTILITY - EXISTING LIGHT	—	LIMITS OF CONSTRUCTION (LOC)	— E G —	GAS UTILITY - EXISTING GAS
→	ELECTRICAL UTILITY - PROPOSED LIGHT	—	PROPERTY BOUNDARY LINE	— G —	GAS UTILITY - PROPOSED GAS
→	ELECTRICAL UTILITY - EXISTING MARKER	—	ADJACENT BOUNDARY LINE	— E E —	ELECTRICAL UTILITY - EXISTING GENERAL LINE
→	ELECTRICAL UTILITY - PROPOSED MARKER	—	PROPERTY LINE	— E —	ELECTRICAL UTILITY - PROPOSED GENERAL LINE
→	COMM UTILITY - EXISTING TELEPHONE RISER	—	ADJACENT PROPERTY LINE	— F E —	ELECTRICAL UTILITY - FUTURE GENERAL LINE
→	COMM UTILITY - EXISTING TELEPHONE MARKER	—	ROAD CENTER LINE	— E OHE —	ELECTRICAL UTILITY - EXISTING OVERHEAD LINE
→	COMM UTILITY - EXISTING FIBER OPTIC MARKER	—	YARD REQUIREMENT	— OHE —	ELECTRICAL UTILITY - PROPOSED OVERHEAD LINE
→	COMM UTILITY - PROPOSED FIBER OPTIC MARKER	—	EASEMENT	— E UGE —	ELECTRICAL UTILITY - EXISTING UNDERGROUND LINE
→	COMM UTILITY - EXISTING TELEVISION RISER	—	FENCE - EXISTING (SEE DRAWING NOTE)	— UGE —	ELECTRICAL UTILITY - PROPOSED UNDERGROUND LINE
→	COMM UTILITY - EXISTING TELEVISION MARKER	—	FENCE - PROPOSED (SEE DRAWING NOTE)	— E EGW —	ELECTRICAL UTILITY - EXISTING GUY WIRE
→	OTHER UTILITY - EXISTING UNKNOWN MARKER	—	PROPOSED FIBER FILTRATION TUBE - FFT	— EGW —	ELECTRICAL UTILITY - PROPOSED GUY WIRE
→	PIPELINE - EXISTING PIPELINE MARKER	—	PROPOSED REINFORCED FILTER FABRIC FENCE - RFFF	— E T —	COMM UTILITY - EXISTING TELEPHONE GENERAL
→	PIPELINE - PROPOSED PIPELINE MARKER	—	ROCK FILTER - RF	— T —	COMM UTILITY - PROPOSED TELEPHONE GENERAL
		—	PROPOSED STRAW BALE - SB	— E OHT —	COMM UTILITY - EXISTING OVERHEAD TELEPHONE
		—	PROPOSED STRAW BALE FENCE - SBF	— OHT —	COMM UTILITY - PROPOSED OVERHEAD TELEPHONE
		—	ELEVATION - EXISTING	— E UGT —	COMM UTILITY - EXISTING UNDERGROUND TELEPHONE
		—	ELEVATION CONTOUR - EXISTING	— UGT —	COMM UTILITY - PROPOSED UNDERGROUND TELEPHONE
		—	ELEVATION CONTOUR - PROPOSED	— E FOC —	COMM UTILITY - EXISTING FIBEROPTIC
		—	DRAINAGE BASIN - EXISTING BASIN	— FOC —	COMM UTILITY - PROPOSED FIBEROPTIC
		—	DRAINAGE BASIN - EXISTING SUB-BASIN	— E OHTOC —	COMM UTILITY - EXISTING OVERHEAD FIBEROPTIC
		—	DRAINAGE BASIN - PROPOSED BASIN	— OHTOC —	COMM UTILITY - PROPOSED OVERHEAD FIBEROPTIC
		—	DRAINAGE BASIN - PROPOSED SUB-BASIN	— E UGFOC —	COMM UTILITY - EXISTING UNDERGROUND FIBEROPTIC
		—		— UGFOC —	COMM UTILITY - PROPOSED UNDERGROUND FIBEROPTIC
		—		— E OHTV —	COMM UTILITY - EXISTING OVERHEAD TELEVISION
		—		— OHTV —	COMM UTILITY - PROPOSED OVERHEAD TELEVISION
		—		— E UGTV —	COMM UTILITY - EXISTING UNDERGROUND TELEVISION
		—		— UGTV —	COMM UTILITY - PROPOSED UNDERGROUND TELEVISION
		—		— OHTK —	OTHER UTILITY - OVERHEAD UNKNOWN CABLE / PIPE
		—		— UGUK —	OTHER UTILITY - UNDERGROUND UNKNOWN CABLE / PIPE
		—		— E PIPELINE —	PIPELINE - EXISTING PIPELINE (SEE DRAWINGS FOR INFO.)

ABBREVIATION DEFINITIONS

THE FOLLOWING IS A GENERAL ABBREVIATION DEFINITION OF THE INFORMATION THAT MAY BE COMMONLY FOUND WITHIN THE CIVIL PORTION OF CONSTRUCTION DRAWINGS. IN SOME CASES A ABBREVIATION MAY HAVE MULTIPLE DEFINITIONS AND/OR IF AT ANY POINT THAT AN ABBREVIATION IS NOT CLEAR FOR WHAT IT REPRESENTS IT WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO REQUEST CLARIFICATION FROM THE OWNER'S REPRESENTATIVE.

A - AREA	COMM - COMMUNICATION	FC - FENCE CORNER	LF - LINEAR FEET	PC - POINT OF CURVATURE	SAN - SANITARY / WASTEWATER	TxDOT - TEXAS DEPARTMENT OF TRANSPORTATION
AC - ACRE	D - DRAINAGE / STORM	FD - FOUND	LOC - LIMITS OF CONSTRUCTION	PE - PRIVATE EASEMENT	SS - SANITARY / WASTEWATER	TY - TYPE
AC - ASBESTOS CEMENT	DBL - DOUBLE	FF - FINISHED FLOOR	LP - LOW POINT	PG - PAGE	SD - SOLID	TV - TELEVISION
ACP - ARCH CONCRETE PIPE	DE - DRAINAGE EASEMENT	FG - FINISH GRADE	LS - LUMP SUM	PG - PROPOSED GRADE	SE - SANITARY EASEMENT	TYP - TYPICAL
ADA - AMERICANS WITH DISABILITIES ACT	DI - DUCTILE IRON	FH - FIRE HYDRANT	LT - LEFT	PI - POINT OF INTERSECTION	SF - SQUARE FEET	TV - TELEVISION
AE - ACCESS EASEMENT	DR - DEED RECORDS	FL - FLOWLINE	MAX - MAXIMUM	PL - PROPERTY LINE	ST - STORM	UE - UTILITY EASEMENT
AEP - AMERICAN ELECTRIC POWER	DS - DOWN STREAM	FM - FORCEMAIN	MJ - MECHANICAL JOINT	PRO - PROPOSED	STA - STATION	US - UP STREAM
At - TOTAL AREA	E - ELECTRICAL	FOC - FIBER OPTIC CABLE	MH - MANHOLE	PROP - PROPOSED	STRM - STORM	VG - VALLEY GUTTER
BB - BACK OF CURB TO BACK OF CURB	ECP - ELLIPTICAL CONCRETE PIPE	FT - FEET	MJ - MECHANICAL JOINT	PT - POINT OF TANGENCY	STM - STORM	VOL - VOLUME
BC - BACK OF CURB	EE - ELECTRICAL EASEMENT	G - GAS	MIN - MINIMUM	PV - POINT OF VANGENCY	SW - SIDEWALK	W - WATER
BRK - BROKEN	EL - ELEVATION	GB - GRADE BREAK	MR - MAP RECORDS	PVC - POLYVINYL CHLORIDE	SY - SQUARE YARDS	W - WHITE
BL - BUILDING LINE	ELEC - ELECTRICAL	GI - GRATE INLET	NAVD - NORTH AMERICAN VERTICAL DATUM	Q - FLOW	T - TELEPHONE	WE - WATER EASEMENT
BM - BENCHMARK	ELEV - ELEVATION	GT - GUTTER	NG - NATURAL GROUND	Qt - TOTAL FLOW	TC - TOP OF CURB	WHT - WHITE
BW - BOTH WAYS	EJ - EXPANSION JOINT	GW - GUY WIRE	NGV - NATIONAL GEODETIC VERTICAL DATUM	RC - REINFORCED CONCRETE	TDLR - TEXAS DEPARTMENT OF LICENSING AND REGULATION	WL - WATER LINE
C - RUNOFF COEFFICIENT	EOR - EDGE OF RADIUS	HDPE - HIGH DENSITY POLYETHYLENE	HG - HYDRAULIC GRADE	RC - REINFORCED CONCRETE PIPE	REFL - REFLECTIVE	WTR - WATER
CI - CURB INLET	EP - EDGE OF PAVEMENT	HG - HYDRAULIC GRADE	HGL - HYDRAULIC GRADE LINE	ROW - RIGHT-OF-WAY	R.O.W. - RIGHT-OF-WAY	WV - WATER VALVE
CL - CENTERLINE	EW - EACH WAY	HP - HIGH POINT	HM - HIGH POINT	RT - RIGHT	S - SLOPE	Y - YELLOW
CJ - CONTROL JOINT	EX - EXISTING	HM - HIGH MIX ASPHALTIC CONCRETE	I - INTENSITY	S - SLOPE	S - SANITARY / WASTEWATER	YLW - YELLOW
CQ - CLEANOUT	EX - EXISTING	IR - IRON ROD	IR - IRON ROD	TS - TOP OF WALK	TS - TOP OF WALK	YR - YARD REQUIREMENT
CONC - CONCRETE	EXP - EXPANSION					
CMP - CORRUGATED METAL PIPE	F - FUTURE					

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MUNOZ ENGINEERING
CIVIL-STRUCTURAL-MARINE
TOPOGRAPHIC SURVEYING
PHONE: 981.646.4648
1608 S. BROWNLIE BOULEVARD
CORPUS CHRISTI, TEXAS 78404

STATE OF TEXAS
THOMAS B. TIFIN
111733
LICENSED PROFESSIONAL ENGINEER
07/08/2020

THOMAS B. TIFIN, P.E. NO. 111733

**GRANGE PARK SUBDIVISION UNIT 3
OFF-SITE PUBLIC IMPROVEMENTS**

GENERAL LEGEND & ABBREVIATIONS

JOB NO.
190138

C050

NOTICE

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DAMAGES TO UTILITIES WILL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE GENERAL CONTRACTOR TO PROVIDE A REMEDY TO THE DAMAGE WITH THE UTILITY OWNER.

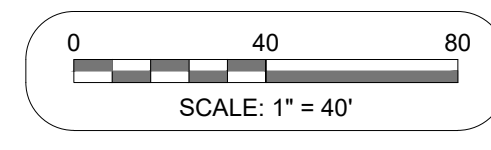
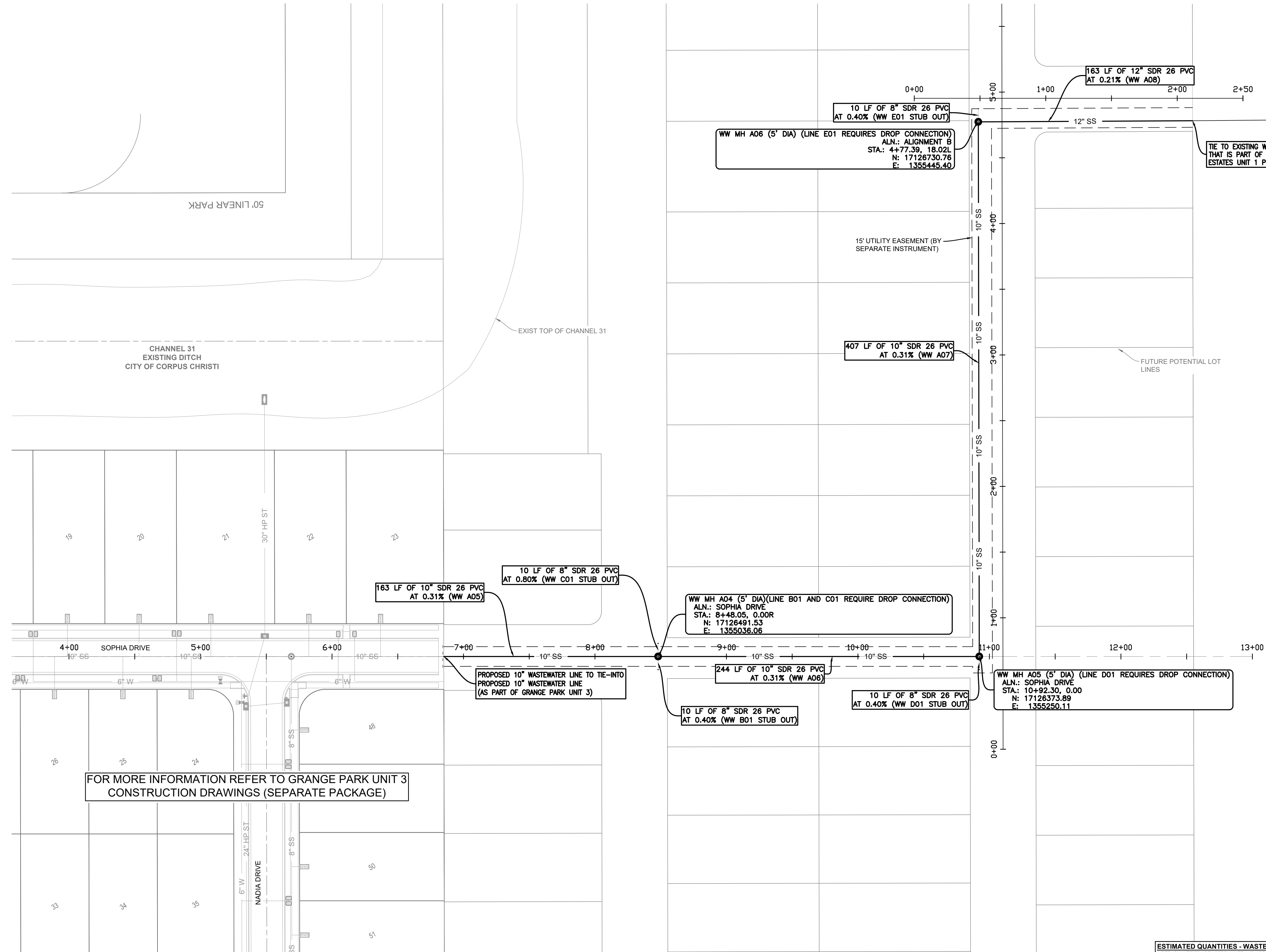
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THOMAS B. TIFFIN, P.E. NO. 111733

**GRANGE PARK SUBDIVISION UNIT 3
OFF-SITE PUBLIC IMPROVEMENTS**

WASTEWATER UTILITY PLAN

ESTIMATED QUANTITIES - WASTEWATER UTILITY PLAN
NOTE: QUANTITIES ARE APPROXIMATE AND NOT ALL REQUIRED MATERIALS MAY BE INDICATED. CONTRACTOR IS TO CONFIRM ALL QUANTITIES AND PROVIDE ALL MATERIALS REQUIRED TO COMPLETE WORK.

DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASUREMENT
8" WASTEWATER LINE	40	LF
10" WASTEWATER LINE	814	LF
12" WASTEWATER LINE	163	LF
WASTEWATER MANHOLE	03	EA

JOB NO.
190138

CU110

OPINION OF PROBABLE CONSTRUCTION COST

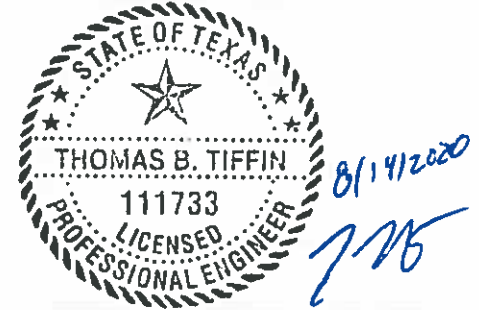
Project: GRANGE PARK UNIT 3
WASTEWATER OFF-SITE CONSTRUCTION

Estimate #: 01
Estimate Date: August 14, 2020

Owner: Grangefield Development, LLC
Contact: Jackie Azalli
Address: PO Box 271996
 Corpus Christi, Texas 78427

Engineer: Munoz Engineering, LLC *F12240*
Contact: Thomas Tiffin, PE
Address: 1608 S. Brownlee Blvd.
 Corpus Christi, Texas 78404
Phone: 3361-946-4848
E-Mail: ttiffin@munozengrg.com
Project #: 190138

Legend:
 AC = Acre
 EA = Each
 LF = Linear Feet
 LS = Lump Sum
 SF = Square Feet
 SY = Square Yards



Notice:
 This Opinion of Probable Construction Cost (OPCC) is based on the actual bid received by the Owner and contracts for professional services.

PUBLIC OFF-SITE IMPROVEMENTS

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	ESTIMATED UNIT PRICE	ESTIMATED TOTAL COST
PART A - GENERAL					
A1	Mobilization	LS	1.00	\$ 4,043.00	\$ 4,043.00
A2	Payment and Performance Bond	LS	1.00	\$ 4,659.34	\$ 4,659.34
A2	Storm Water Pollution Prevention Plan	LS	1.00	\$ 875.60	\$ 875.60
A3	Construction Survey	LS	1.00	\$ 3,750.00	\$ 3,750.00
PART B - STORMWATER POLLUTION					
B1	Stabilized Construction Entrance & Exit	EA	1.00	\$ 5,850.00	\$ 5,850.00
B2	Reinforced Filter Fabric Fence	LF	100.00	\$ 5.25	\$ 525.00
B3	Concrete Washout Fence	EA	1.00	\$ 3,125.00	\$ 3,125.00
B4	Dewatering Fence	EA	1.00	\$ 3,565.00	\$ 3,565.00
PART C - SITE WORK					
C1	Site Preparation	AC	1.00	\$ 1,500.00	\$ 1,500.00
C2	Asphalt Repair	SY	14.00	\$ 65.00	\$ 910.00
C3	Site Grading	LS	1.00	\$ 1,500.00	\$ 1,500.00
PART D - WASTEWATER UTILITY					
D1	WW Utility 8" PVC SDR 26	LF	40.00	\$ 99.76	\$ 3,990.40
D2	WW Utility 10" PVC SDR 26	LF	850.00	\$ 98.10	\$ 83,385.00
D3	WW Utility 12" PVC SDR 26	LF	150.00	\$ 141.60	\$ 21,240.00
D4	WW Utility Embedment	LF	1,040.00	\$ 16.30	\$ 16,952.00
D3	WW Utility 4' Diameter Manhole - 12-14 ft	EA	1.00	\$ 8,839.40	\$ 8,839.40
D4	WW Utility 4' Diameter Manhole - 14-16 ft	EA	2.00	\$ 9,237.40	\$ 18,474.80
D5	WW Utility 5' Diameter Manhole - 16-18 ft	EA	2.00	\$ 14,300.30	\$ 28,600.60
D3	Sanitary Utility Trench Safety	LF	1,040.00	\$ 3.50	\$ 3,640.00
D4	Sanitary Utility Dewatering	LF	1,040.00	\$ 57.10	\$ 59,384.00
D6	Sanitary Utility - Tie to Existing	EA	1.00	\$ 1,650.00	\$ 1,650.00
D7	Sanitary Utility End Plug - 8"	EA	4.00	\$ 125.50	\$ 502.00
PART E - ADDITIONAL CONSTRUCTION					
E1	Additional Construction Items Allowance	AL	1.00	\$ 12,850.00	\$ 12,850.00
PUBLIC OFF-SITE IMPROVEMENTS SUBTOTAL					\$ 289,811.14
PART F - PROFESSIONAL SERVICES					
F1	Engineering	LS	1.00	6.50% \$ 18,837.72	\$ 18,837.72
E2	Survey	LS	1.00	2.00% \$ 5,796.22	\$ 5,796.22
E3	Easement Documents	LS	1.00	\$ 10,060.00	\$ 10,060.00
E4	Construction Administration	LS	1.00	1.50% \$ 4,347.17	\$ 4,347.17
PART F - PROFESSIONAL SERVICES SUBTOTAL					\$ 39,041.11
PUBLIC OFF-SITE IMPROVEMENTS TOTAL					\$ 328,852.25



DISCLOSURE OF INTERESTS

City of Corpus Christi Ordinance 17112, as amended, requires all persons or firms seeking to do business with the City to provide the following information. Every question must be answered. If the question is not applicable, answer with "NA".

NAME: LEANNEFFIELD DEVELOPMENT
STREET: PO BOX CITY: Corpus Christi ZIP: 78427
FIRM is: Corporation Partnership Sole Owner Association Other _____

DISCLOSURE QUESTIONS

If additional space is necessary, please use the reverse side of this page or attach separate sheet.

1. State the names of each "employee" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm".

Name	Job Title and City Department (if known)
<u>None</u>	<u>—</u>
_____	_____

2. State the names of each "official" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm".

Name	Title
<u>None</u>	<u>—</u>
_____	_____

3. State the names of each "board member" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm".

Name	Board, Commission, or Committee
<u>None</u>	<u>—</u>
_____	_____

4. State the names of each employee or officer of a "consultant" for the City of Corpus Christi who worked on any matter related to the subject of this contract and has an "ownership interest" constituting 3% or more of the ownership in the above named "firm".

Name	Consultant
<u>None</u>	<u>—</u>
_____	_____

CERTIFICATE

I certify that all information provided is true and correct as of the date of this statement, that I have not knowingly withheld disclosure of any information requested; and that supplemental statements will be promptly submitted to the City of Corpus Christi, Texas as changes occur.

Certifying Person: JACKIE AZALE Title: PRESIDENT
(Print Name)

Signature of Certifying Person: [Signature] Date: 11/21/19



CITY OF CORPUS CHRISTI
DISCLOSURE OF INTERESTS

City of Corpus Christi ordinance 17112, as amended, requires all persons or firms seeking to do business with the City to provide the following information. Every question must be answered. If the question is not applicable, answer with "NA".

FIRST NAME: Munoz Engineering, LLC

STREET: 1608 S. Brownlee Blvd CITY: Corpus Chrsiti ZIP: 78404

FIRM IS: 1. Corporation 2. Partnership 3. Sole Owner 4. Association 5. Other _____

DISCLOSURE QUESTIONS

If additional space is necessary, please use the reverse side of this page or attach separate sheet.

1. State the names of each "employee" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm".

Name	Job Title and City Department (if known)
<u>None</u>	_____
_____	_____

2. State the names of each "official" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm".

Name	Title
<u>None</u>	_____
_____	_____

3. State the names of each "board member" of the City of Corpus Christi having an "ownership interest" constituting 3% or more of the ownership in the above named "firm".

Name	Board, Commission, or Committee
<u>Ramiro Munoz, III, PE</u>	<u>Building Code Board of Appeals</u>
_____	_____

4. State the names of each employee or officer of a "consultant" for the City of Corpus Christi who worked on any matter related to the subject of this contract and has an "ownership interest" constituting 35 or more of the ownership in the above named "firm".

Name	Consultant
<u>None</u>	_____
_____	_____

CERTIFICATE

I certify that all information provided is true and correct as of the date of this statement, that I have not knowingly withheld disclosure of any information requested; and that supplemental statements will be promptly submitted to the City of Corpus Christi, Texas as changes occur.

Certifying Person: Thomas Tiffin, PE
(Type or Print)

Title: Project Manager

Signature of Certifying Person: 

Date: 11/20/2019