WASTEWATER TRUST FUND
REIMBURSEMENT AGREEMENT

This Wastewater Trust Fund Reimbursement Agreement ("Agreement") is entered into between the City of Corpus Christi (“City”), a Texas home-rule municipality, and **Mostaghasi George Development, LLC**, (“Developer”), a Limited Liability Company of the State of Texas.

WHEREAS, the Developer, in compliance with the City’s Unified Development Code (“UDC”), has a plat, approved by the Planning Commission on **April 1, 2022** to develop a tract of land, to wit approximately **99.52** acres known as **Kaspian Subdivision** as shown in the attached **Exhibit 1**, the content of such exhibit being incorporated by reference into this Agreement;

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

WHEREAS, under the UDC, the Developer is responsible for construction of the wastewater trunk line, trunk force main, and/or collection lines (“Wastewater Improvements”);

WHEREAS, under the UDC, the Developer is eligible for reimbursement of the Developer's costs for the construction of Wastewater Improvements; and

WHEREAS, it is in the best interest of the City that the Wastewater Improvements be constructed to its ultimate capacity under the City’s applicable Master Plan.

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.

   a. 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 wastewater service. Texas Constitution Article 11, Section 3 prohibits the City from becoming a subscriber to the capital of any private corporation or association, or making any appropriation or donation to the same, or in any way loaning 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.

   b. The Wastewater Trust Fund was established by Ordinance No. 17396 to encourage the orderly development of subdivisions within and surrounding the City of Corpus Christi, Texas, and continues pursuant to Texas Local Government Code §395.001(4)(C). The revenue generated for funding and continuing the Wastewater Trust Fund is subject to the laws of the State of Texas and the City of Corpus Christi. Nothing in this agreement guarantees either the continuation or future revenues of the Wastewater Trust Fund. The City is not liable for modification or termination of the Wastewater Trust Fund. The Developer agrees that any modification or termination of the Wastewater Trust Fund by legislative action does not

constitute a breach of trust, an act of bad faith, an intentional or reckless indifference to the interest of a beneficiary, or a profit derived by the trustee from a breach of trust.

2. CONSTRUCTION OF WASTEWATER IMPROVEMENTS.

a. Developer shall construct Wastewater Improvements in accordance with City-approved public improvement plans, as attached as **Exhibit 3**.

b. Developer shall construct the Wastewater Improvements in compliance with the City's UDC, the City's Infrastructure Design Manual, and all local, state, and federal laws, codes, and regulations.

c. Developer shall award a contract and complete the Wastewater Improvements under the approved plans and specifications within **12 months** from the date of City Council approval of this agreement.

3. REIMBURSEMENT.

a. Subject to the conditions for reimbursement from the Wastewater Trust Fund and the availability of funds, the City will reimburse the Developer for the reasonable actual cost of the Wastewater Improvements up to an amount not to exceed **$2,280,573.90** as shown in the Itemized Cost Estimate attached as **Exhibit 4**, the contents of such exhibit being incorporated by reference into this Agreement. Reimbursement for wastewater collection lines will be limited to 50% of the off-site extension cost.

b. Subject to the conditions for reimbursement from the Wastewater Trust Fund per the UDC and this agreement and the availability of funds, the City agrees to reimburse the Developer by a lump sum upon completion of the wastewater infrastructure.

c. 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.

d. Prior to payment or granting of credit, Developer must submit cost supporting documentation, including:

1. Summary of Costs and Work Performed on Form provided by the Development Services Department.

2. Contractor and professional services invoices detailing work performed.

3. Evidence that all invoices to date have been paid.

e. Prior to payment or granting of credit, the Developer shall certify:

1. that there are no known liens or bond claims outstanding as of the date of the reimbursement request;

2. all due and payable bills with respect to the installed Wastewater Improvements have been paid to date or are included in the amount requested in the current reimbursement request;

3. except for such bills not paid but so included, there is no known basis for the filing of any liens or bond claims relating to the installed Wastewater Improvements; and

4. releases from all developer's contractors, subcontractors, and materialmen have been obtained in such form as to constitute an effective release of lien or claim under the laws of the State of Texas covering all Wastewater Improvements installed.

Provided that any of the foregoing is not true and cannot be certified, Developer shall certify as appropriate and identify all exceptions to the requested certification.

4. PAYMENTS AND CREDITS.

a. All payments and credits shall be made in accordance with UDC §8.5. Developer understands and agrees that if funds are not available in the Wastewater Trust Fund, reimbursement will not be made until such funds are available, and Developer has priority per UDC §8.5.2.C.

b. Payments may be made when monies are available and appropriated in the Wastewater Trust Fund, and the Developer has priority in accordance with UDC §8.5.2. C. Priority for available funding is First in Time, First in Right, based on the date the City Council approved the reimbursement agreement or the date the reimbursement agreement was extended. In the event of a tie, priority will be given to the contract with the earliest application date.

c. Where monies are not fully available and appropriated from the Wastewater Trust Fund, the Developer may receive trust fund credits for outstanding reimbursement owed.

d. Trust fund credits may be used for payment of water and/or wastewater lot and/or acreage fees, pro-rata fees, and surcharge fees.

e. Trust fund credits are fully assignable with the written consent of the Director of Development Services.

f. Trust fund credits may be used to receive payment when wastewater trust funds are available. The priority for payment of available funds will be determined in accordance with UDC 8.5.2.C.

5. SITE IMPROVEMENTS. Prior to the start of construction of the Wastewater Improvements, Developer shall acquire and dedicate to the City the required additional public utility easements (“Easements”), if any, necessary for the completion of the Wastewater Improvements. If any of the property needed for the Easements is owned by a third party and the Developer is unable to acquire the Easements through reasonable efforts, then the City may use its powers of eminent domain to acquire the Easements. The Developer will be responsible for the cost of acquisition.

6. PLATTING FEES. Developer shall pay to the City the required acreage fees and pro-rata fees as required by the UDC for the Final Plat identified herein.

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

8. THIRD-PARTY BENEFICIARY. Developer’s contracts for the construction of the Wastewater Improvements and contracts for testing services for the Wastewater Improvements must provide that the City is a third-party beneficiary of each contract.

9. PROMPT AND GOOD FAITH ACTIONS. The parties shall act promptly and in good faith in performing their duties and obligations under this Agreement.

10. DEFAULT. The following events shall constitute default:

a. Developer's contractor does not reasonably pursue construction of the Wastewater Improvements under the approved plans and specifications.

b. Developer's contractor fails to complete construction of the Wastewater Improvements, under the approved plans and specifications, on or before the time specified in Section 2 of this Agreement.

c. Either the City or the Developer otherwise fails to comply with its duties or obligations under this Agreement.

11. 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 30 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. In the event of an uncured default by the Developer, 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 under this Agreement and charge the cost of such performance to the Developer. The Developer shall pay to the City the reasonable and necessary cost of the performance within 30 days from the date the Developer receives notice of the cost of performance. In the event the Developer 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 has all its remedies at law or in equity for such default.

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:

   Mostaghasi George Development, LLC
   Attn: George Mostaghasi
   5626 Ocean Drive
   Corpus Christi, Texas 78412

2. If to the City:

   City of Corpus Christi
   Attn: Director, Development Services Department
   2406 Leopard Street
   Corpus Christi, Texas 78401

with a copy to:

   City of Corpus Christi
   Attn: Assistant City Manager of Development Services
   1201 Leopard Street
   Corpus Christi, Texas 78401

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. 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.

14. INDEMNIFICATION. Developer 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'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 attorneys' 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 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; and

(b) any costs incurred attributable to (i) the breach of any warranty or representation made by Developer 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.

15. NO WAIVER OF GOVERNMENTAL IMMUNITY. The parties expressly agree that nothing in this Agreement shall be deemed or construed as a waiver of the City's governmental immunity or sovereign immunity under the Constitution and laws of the State of Texas. The City retains all immunities and defenses available to it at law or in equity.

16. DEDICATION OF WASTEWATER IMPROVEMENTS. Upon completion of the construction, the dedication of the Wastewater Improvements will be subject to City inspection and approval.

17. WARRANTY. Developer shall fully warrant the workmanship and function of the Wastewater Improvements and the construction thereof for a period of one year from and after the date of acceptance of the facilities by the City's Director of Engineering Services.

18. CONTRACT EXTENSION.

    a. In the event that the Developer fails to complete the Wastewater Improvements in accordance with the city-approved plans and specifications, on or before the time specified in Section 2 of this Agreement, the Agreement may be extended for an additional 12 months.

        i. The Director of Development Services may extend the Agreement for an additional 12 months if project completion is greater than 50%.

        ii. The Assistant City Manager of Development Services may extend the Agreement for an additional 12 months if project completion is less than 50%.

        If the Director or Assistant City Manager does not grant the extension, a request for City Council consideration may be made.

    b. Priority of reimbursement will be based on the date the agreement extending the reimbursement agreement was fully executed.

19. ASSIGNMENT OF AGREEMENT. The Developer may not assign this Agreement to another without the written approval and consent of the City's City Manager.

20. DISCLOSURE OF INTEREST. Developer 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. CONFLICT OF INTEREST. Developer 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.

22. CERTIFICATE OF INTERESTED PARTIES. Developer 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 into contracts with cities. These interested parties include:

a. persons with a "controlling interest" in the entity, which includes:

1. an ownership interest or participating interest in a business entity by virtue of units, percentage, shares, stock, or otherwise that exceeds 10 percent;

2. 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

3. 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.

b. 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/filinginfo/1295/. 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/resources/FAQs/FAQ_Form1295.php.

23. 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.

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

Attached and incorporated by reference into this Agreement:

Exhibit 1 – Final Plat
Exhibit 2 – Application for Trust Fund Reimbursement
Exhibit 3 – City-approved Public Improvement Plans
Exhibit 4 – Itemized Cost Estimate
Exhibit 5 – Disclosure of Interest Form

EXECUTED IN ONE ORIGINAL this _____ day of _____, 20____.
(*day of final execution by the last signing party*)

DEVELOPER: Mostaghasi George Development, LLC, a Limited Liability Company of the State of Texas.

By: _____
George Mostaghasi
President

CITY OF CORPUS CHRISTI

By: _____
Yvette Wallace
Interim Director of Development Services

APPROVED AS TO LEGAL FORM:

_____
Buck Brice (Date)
Deputy City Attorney
For City Attorney

EXHIBIT 1

KASPIAN SUBDIVISION
PRELIMINARY PLAT

LEGAL DESCRIPTION:
A 99.517 ACRE TRACT OF LAND BEING OUT OF A 284.6048 ACRE TRACT OF LAND, MORE OR LESS, COMPRISING THE SOUTH ONE-HALF OF SECTION NO. SIX (6) OF THE LAURELES FARM TRACTS, AS SURVEYED BY FRENCH AND HABERER SURVEYORS, AND BEING OUT OF A LARGER GRANT OF LAND KNOWN AS "EL RINCON DE CORPUS CHRISTI GRANT", AS SHOWN BY MAP OF SAID SUBDIVISION OF RECORD IN VOLUME 3, PAGE 15 OF THE MAP RECORDS OF NUECES COUNTY, TEXAS. SAID 284.6048 ACRE TRACT ALSO BEING DESCRIBED IN THE SPECIAL WARRANTY DEED WITH VENDOR'S LIEN CONVEYING PROPERTY FROM BENJAMIN C. TISDALE, III AND WIFE, VERONICA DAWN TISDALE, TO JOHN C. TAMEZ AS RECORDED UNDER DOCUMENT NO. 2002021903 OF THE OFFICIAL PUBLIC RECORDS OF NUECES COUNTY, TEXAS.

GRAPHIC SCALE
100 0 100
Scale: 1" = 100 feet

OWNERS:
MISTAGHASI GEORGE DEVELOPMENT, LLC
5626 OCEAN DRIVE
Corpus Christi, TX 78412

THE MISTAGHASI INVESTMENT TRUST
5626 OCEAN DRIVE
Corpus Christi, TX 78412

ENGINEER:
J. PERALES CIVIL ENGINEERING & PLANNING SERVICES
5866 S. STAPLES ST. - #315
Corpus Christi, TX 78413

SURVEYOR:
HAYDEN SURVEYING INC.
905 DELTA DR.
Corpus Christi, TX 78412

VICINITY MAP — NOT TO SCALE

✱ NOTE:
NO UNIT 1 CONSTRUCTION ACTIVITIES WILL TAKE PLACE WITHIN THE 100 YEAR FLOOD PLAIN

GENERAL NOTES:
1. TOTAL PLATTED AREA CONTAINS 99.517 ACRES OF LAND, INCLUDING STREET DEDICATION.
2. THE RECEIVING WATER BODY FOR THE STORM WATER RUNOFF FROM THIS PROPERTY IS THE OSO CREEK. THE TCEQ HAS NOT CLASSIFIED THE AQUATIC LIFE FOR THE OSO CREEK, BUT IT IS RECOGNIZED AS AN ENVIRONMENTALLY SENSITIVE AREA. THE OSO CREEK DRAINS DIRECTLY INTO THE OSO BAY. THE TCEQ HAS CLADDIFIED THE AQUATIC LIFE USE FOR THE OSO BAY AS "EXCEPTIONAL" AND "OYSTER WATERS" AND HAS CATEGORIZED THE RECEIVING WATERS AS "CONTACT RECREATION" USE.
3. GRID BEARINGS AND DISTANCES SHOWN HEREON ARE REFERENCED TO THE TEXAS STATE PLANE COORDINATE SYSTEM OF 1983, TEXAS SOUTH ZONE 4205, AND ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (2011) EPOCH 2010.00.
4. PER FLOOD INSURANCE RATE MAP NUMBER 48355C0520G, DATED OCTOBER 13, 2022. 2.5 ACRES OF LAND AT THE NORTHEAST CORNER OF THE PROPERTY FALLS WITHIN SPECIAL FLOOD HAZARD AREA AE WITH A MAXIMUM BASE FLOOD ELEVATION OF 17.8. ANY CONSTRUCTION WITHIN THIS AREA WILL BE IN ACCORDANCE WITH APPLICABLE FEMA REGULATIONS AND CITY OF CORPUS CHRISTI ORDINANCES. THIS FLOODING STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR OR ENGINEER.
5. YARD REQUIREMENTS AS DEPICTED ARE A REQUIREMENT OF THE UNIFIED DEVELOPMENT CODE AND ARE SUBJECT TO CHANGE AS THE ZONING MAY CHANGE.
6. IF ANY LOTS ARE DEVELOPED WITH RESIDENTIAL USES, COMPLIANCE WITH THE PUBLIC OPEN SPACE REGULATIONS WILL BE REQUIRED DURING BUILDING PERMITTING.
7. THE PROPERTY DOES NOT LIE WITHIN ANY DEFINED WETLANDS NOR DOES IT SUPPLY REFUGE TO ANY ENDANGERED SPECIES ACCORDING TO THE U.S. FISH AND WILDLIFE SERVICE.
8. THE PROPERTY DOES NOT LIE WITHIN ANY SPECIFIED CRITICAL DUNE AREAS.
9. THE PROPERTY DOES NOT LIE WITHIN ANY IDENTIFIED AIR INSTALLATION COMPATIBLE USE ZONES (AICUZ).
10. THERE ARE NO AREAS WITHIN THE PROPERTY PREVIOUSLY USED AS SANITARY LANDFILLS, SHOOTING RANGES, OR OTHER USES OF ENVIRONMENTAL CONCERN.
11. THERE ARE NO EXISTING PERMANENT WATER BODIES OR INTERMITTENT OR PERENNIAL STREAMS LOCATED ON THE PROPERTY.
12. THIS PROPERTY IS CURRENTLY LOCATED WITHIN THE CORPUS CHRISTI CITY LIMITS AND IS ZONED FOR SINGLE FAMILY RESIDENTIAL USE UNDER THE RS-4.5 ZONING DISTRICT.
13. THE PROPOSED DEVELOPMENT IS IN GENERAL COMPLIANCE WITH THE CITY OF CORPUS CHRISTI LONDON AREA DEVELOPMENT PLAN AND ASSOCIATED COMPONENTS OF THE CITY OF CORPUS CHRISTI COMPREHENSIVE MASTER PLAN, PER UDC SECTION 3.7.
14. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ENSURING THAT ANY PROPOSED CONSTRUCTION OCCURING ON THE PROPERTY WILL COMPLY WITH TITLE 14 PART 77 OF THE CODE OF FEDERAL REGULATIONS (CFR). THE PROPERTY OWNER SHALL ENSURE ALL DEVELOPMENT IS WITHIN ALL LAND COMPATIBILITY USE REGULATIONS PER TITLE 14 PART 150 OF THE CFR.
15. PROPOSED DRIVEWAY ACCESS FOR BOTH THE DEVELOPMENT AS A WHOLE AND INDIVIDUAL LOTS WITHIN THE DEVELOPMENT CONNECTING TO PUBLIC CITY STREETS SHALL CONFORM TO THE ACCESS MANAGEMENT STANDARDS OUTLINED IN ARTICLE 7 OF THE UNIFIED DEVELOPMENT CODE (SECTION 7.1.7).
16. NO PRIVATE DRIVEWAY ACCESS SHALL BE ALLOWED ONTO CR 43, KASPIAN SEA ROAD, OSO PARKWAY, OR ARANSAS RIVER ROAD.

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@peralesengineering.com
5866 S. Staples - #315
Corpus Christi, Texas 78426
Tel: (361) 728-7188

EXHIBIT 2

CITY OF CORPUS CHRISTI
DEVELOPMENT SERVICES

2406 Leopard St. Corpus Christi, TX 78408 | Phone: 361.826.3240 | contractsandagreements@corpuschristitx.gov

Reimbursement Agreement Application

Date of Application: 05/04/2026

Approved Plat Name: Kaspian Unit 1

Approved Plat Number: PL9049

Public Improvements Number: 22PI1053

Approved Public Improvement Plans: Y [X] N [ ]

Cost Estimate for Public Improvements: $2,280,574

Ownership and authorized signatories to enter into the agreement:

Mostaghasi George Development, LLC
George Mostaghasi, Manager/President

Contact Information

Name: George Mostaghasi

E-mail address: mostaghasig@hotmail.com

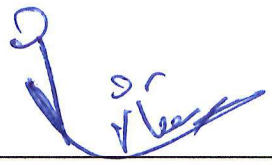
Phone Number: (361)765-4422

Preferred Method of Contact: Email [X] Phone [ ] Other [ ]

If other, provide detail:

Company Name entering into the agreement: Company Mostaghasi George Development, LLC

Address: 5626 Ocean Drive, Corpus Christi, TX 78412



George Mostaghasi, Manager/President

Applicant's Signature & Title

Submit Application Electronically to: contractsandagreements@corpuschristitx.gov

Mail to:
Development Services
Attn: Contract & Funds Administrator
2406 Leopard St. Suite 100
Corpus Christi, Texas 78408

EXHIBIT 3

PUBLIC IMPROVEMENT PLANS
for
KASPIAN SUBDIVISION – UNIT 1
CORPUS CHRISTI , TEXAS

REFERENCE DESIGN DOCUMENTS:
CITY OF CORPUS CHRISTI INFRASTRUCTURE DESIGN MANUAL
CITY OF CORPUS CHRISTI URBAN TRANSPORTATION PLAN
CITY OF CORPUS CHRISTI WATER MASTER PLAN
CITY OF CORPUS CHRISTI WASTEWATER MASTER PLAN
CITY OF CORPUS CHRISTI STORMWATER MASTER PLAN
NUECES COUNTY SUBDIVISION REGULATIONS AND PLATTING REQUIREMENTS

GENERAL DESIGN CRITERIA:

CALCULATED WASTEWATER FLOW GENERATION:
UNIT 1 INCLUDES 64 SINGLE FAMILY RESIDENTIAL LOTS
64 LOTS X 3.5 CAPITA PER LOT = 224 RESIDENTS
PER 30 TAC 217.32(a)(3) TABLE B.1, MAXIMUM ESTIMATED WASTEWATER FLOW PER PERSON = 100 GPD
TOTAL AVERAGE DAILY WASTEWATER FLOW FOR UNIT 1 = 22,400 GPD

CALCULATED WATER DISTRIBUTION SYSTEM CAPACITY:
THE CAPACITY OF THE PROPOSED PUBLIC WATER DISTRIBUTION SYSTEM WILL MEET OR EXCEED THE REQUIREMENTS OF 30 TAC 290.44(d) FOR FLOW AND PRESSURE.

AS THE SUBJECT PROPERTY IS BEING SERVED VIA A PUBLIC WASTEWATER LIFT STATION, ONCE THE LIFT STATION REACHES 75% CAPACITY, NO FURTHER HOMES MAY BE CONSRUCTED UNTIL PERMANENT IMPROVEMENTS TO INCREASE LIFT STATION CAPACITY HAVE BEEN CONSTRUCTED.

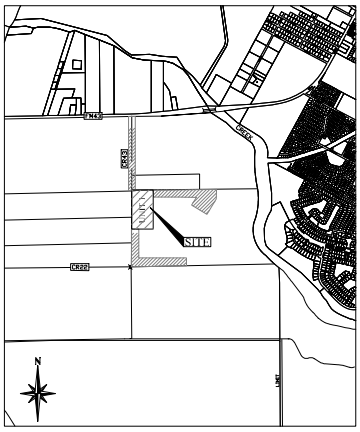
COUNTY ROAD 43 MUST BE IMPROVED TO A MINIMUM OF A 24 FOOT PAVEMENT WIDTH. ONCE 50% OF THE DENSITY OF THE SUBDIVISION IS PLATTED VIA FINAL PLAT, COUNTY ROAD 43 MUST BE BUILT TO THE REQUIRED CITY OF CORPUS CHRISTI URBAN TRANSPORTATION PLAN STANDARD.

DEVELOPER INFORMATION

THE MOSTAGHASI INVESTMENT TRUST
5626 OCEAN DRIVE
CORPUS CHRISTI, TX. 78412

Texas 811
Know what's below.
CALL before you dig.

CALL BEFORE YOU DIG!
DIG TESS PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST – STOP AND CALL
DIG TESS 1.800.344.8377
VERIZON DIG ALERT AT 1.800.483.6279
THE LONE STAR NOTIFICATION COMPANY AT 1.800.669.8344



VICINITY MAP
SCALE: N.T.S.

DRAWING INDEX:

RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction plans will expire based on the the conditions stated in UDC 3.8.5.F.

Bria A. Whitmire, P.E., CFM, CPM
Digitally signed by Bria A. Whitmire, P.E., CFM, CPM
Date: 2023.12.04 18:20:14 -06'00'

CITY OF CORPUS CHRISTI STANDARD DETAIL SHEETS:

DRAWN BY: RT
SCALE: SHOWN
APPROVED BY: JP
DATE: 11-10-23
DRAWING #: 210237
PAGE: 1 OF: 68

LUIS PERALES JR. 66458 LICENSED PROFESSIONAL ENGINEER
Luis Perales Jr., P.E. 11/10/2023

TITLE SHEET

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
joeriles@jperalesengineering.com
5866 S. Staples St. # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

LEGEND:

EXISTING FIELD ENTITIES:
ALUMINUM LIGHT POLE
ALUMINUM POWER POLE
BOLLARD/POST
BOREHOLE LOCATION
BBNK BOTTOM OF BANK
CHAINLINK FENCE
CLEANOUT
CONCRETE INLET
CONCRETE POWER POLE
26 CONTOUR
ELECTRICAL BOX
26.0 EXISTING ELEVATION
FIRE HYDRANT
FOOTING
GAS PIPELINE MARKER
GAS METER
GAS VALVE
GRATE INLET
GRATE INLET
HOSE BIB
LIGHT POLE
MANHOLE COVER
26.0 NATURAL GRADE
POST STORM INLET
POSTAL MAILBOX
POWER POLE
POWER POLE, DOWN GUY
PROPERTY/ROW LINE
RTA PEDESTRIAN BENCH
2+00 STATIONING & BASELINE
STORM MANHOLE/CONC INLET
STORM MANHOLE
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELE UNDERGROUND MARKER
TBNK TOP OF BANK
TRAFFIC SIGN
TRAFFIC SIGNAL BOX
TRAFFIC SIGNAL LIGHT
WASTEWATER MANHOLE
WATER METER
WATER VALVE
WOOD FENCE
CENTER LINE R.O.W.
UTILITY EASEMENT
BUILDING LINE/YR

VEGETATION:
BUSH OR SHRUB

TREE AND PALM

B-VILLEA BOUGAINVILLEA
C-BERRY CHINABERRY
C-TALLOW CHINESETALLOW
C-WOOD COTTONWOOD
H-BERRY HACKBERRY
K-QUAT KUMQUAT
O-MENTAL ORNAMENTAL
S-AMORE SYCAMORE

CURVE DATA: D=DELTA, R=RADIUS
T=TANGENT, L=ARC LENGTH
C=CHORD DISTANCE

ABBREVIATIONS:

ACP	ASBESTOS CEMENT PIPE	JT	JOINT
AEP	AMERICAN ELECTRIC POWER	LF	LINEAR FEET
AGMT	AGREEMENT	LT	LEFT
ARV	AIR RELEASE VALVE	MAX	MAXIMUM
ASPH	ASPHALT	MCD	MULTI-CONDUCTOR DUCT
AVE	AVENUE	MH	MANHOLE
B-B	BACK TO BACK (CURB)	MIN	MINIMUM
BBNK	BOTTOM OF BANK	MJ	MECHANICAL JOINT
BDRY	BOUNDARY	MON	MONUMENT
BL	BUILDING LINE	MRNCT	MAP RECORDS
BLK	BLOCK		NUECES COUNTY TEXAS
BLVD	BOULEVARD	NO	NUMBER
BM	BENCHMARK	OHE	OVERHEAD ELECTRIC
BOC	BACK OF CURB	OHS	OVERHEAD SECONDARY
BSL	BASELINE	OPRNCT	OFFICIAL PUBLIC RECORDS
BY SI	BY SEPARATE INSTRUMENT		NUECES COUNTY TEXAS
CATV	CABLE TV	PBM	PROJECT BENCHMARK
CIP	CAST IRON PIPE	PC	POINT OF CURVE
CL	CENTERLINE	PG	PAGE
CMP	CORRUGATED METAL PIPE	PSI	POUNDS SQUARE INCH
CO	CLEANOUT	PT	POINT OF TANGENCY
CONC	CONCRETE	PVC	POLYVINYL CHLORIDE
COP	CORRUGATED POLY PIPE	PVMT	PAVEMENT
CPL	CENTRAL POWER LIGHT	RCB	REINFORCED CONCRETE BOX
DE	DRAINAGE EASEMENT	RCP	REINFORCED CONCRETE PIPE
DH	DRILL HOLE	REQ'D	REQUIRED
DIA	DIAMETER	ROW	RIGHT-OF-WAY
DIP	DUCTILE IRON PIPE	RT	RIGHT
DR	DRIVE/DRIVEWAY	SCH	SCHEDULE
DRNCT	DEED RECORDS	SF	SQUARE FEET
	NUECES COUNTY TEXAS	SR	STEEL ROD
EL	ELEVATION	ST	STREET
ELEV	ELEVATION	STA	STATION/STATIONING
EOA	EDGE OF ASPHALT	STO	STORM
EOC	EDGE OF CONCRETE	SWB	SOUTHWESTERN BELL
EOP	EDGE OF PAVEMENT	SWMH	STORM WATER MANHOLE
EOR	EDGE OF ROAD	TBM	TEMPORARY BENCHMARK
ESMT	EASEMENT	TBNK	TOP OF BANK
ESP	EXTRA STRENGHT PIPE	TC	TOP OF CURB
EX	EXISTING	TCE	TEMPORARY CONSTRUCTION ESMT
EXIST	EXISTING	TELE DUCT	TELEPHONE DUCT
FD	FOUND	TP	TOP OF PIPE
FE	FENCE EASEMENT	TPED	TELEPHONE PEDESTAL
FF	FINISHED FLOOR	TSB	TRAFFIC SIGNAL BOX
FH	FIRE HYDRANT	TSL	TRAFFIC SIGNAL LIGHT
FL	FLOWLINE	TSM	TRAFFIC SIGNAL MAST
FM	FORCE MAIN	TSN	TRAFFIC SIGN
FOC	FIBER OPTIC CABLE	TUM	TELE UNDERGROUND MARKER
GAS	GAS LINE	TYP	TYPICAL
GB	GRADE BREAK	UE	UTILITY EASEMENT
GPM	GAS PIPELINE MARKER	UGE	UNDERGROUND ELECTRIC
GR	GROUND/GRADE	UGL	UNDERGROUND LINE
GV	GAS VALVE	UGT	UNDERGROUND TELEPHONE
HC	BARRIER FREE RAMP (ADA)	VCP	VITRIFIED CLAY PIPE
HDPE	HIGH DENSITY POLY PIPE	VERT	VERTICAL
HORZ	HORIZONTAL	VG	VALLEY GUTTER
HPG	HIGH PRESSURE GAS	VOL	VOLUME
INV	INVERT	VPI	VERTICAL POINT INFLECTION
IP	IRON PIPE	WTR	WATER
IR	IRON ROD	WV	WATER VALVE
		WWMH	WASTEWATER MANHOLE
		WWTR	WASTEWATER LINE
		X	MARK IN CONCRETE (MON)
		YR	YARD REQUIREMENT

CITY STANDARD SPECIFICATIONS:

CONSTRUCT ALL IMPROVEMENTS ON THIS PROJECT IN ACCORDANCE WITH CITY OF CORPUS CHRISTI, DEPARTMENT OF ENGINEERING SERVICES, STANDARD SPECIFICATIONS AS LISTED BELOW. THE WORD "ENGINEER" AS USED IN SAID CITY STANDARD SPECIFICATIONS SHALL REFER TO CITY ENGINEER. CONTRACTOR SHALL OBTAIN A COPY OF THESE SPECIFICATIONS PRIOR TO BIDDING THE PROJECT AND PRIOR TO CONSTRUCTION.

021020	SITE CLEARING AND STRIPPING
021040	SITE GRADING
022020	EXCAVATION AND BACKFILL FOR UTILITIES AND SEWERS
022022	TRENCH SAFETY FOR EXCAVATIONS
022040	STREET EXCAVATION
022080	EMBANKMENT
022420	SILT FENCE
023020	JACKING, BORING & TUNNELING
025210	LIME STABILIZATION
025220	FLEXIBLE BASE CALICHE
025404	ASPHALTS, OILS AND EMULSIONS
025412	PRIME COAT
025424	HOT MIX ASPHALTIC CONCRETE PAVEMENT
025610	CONCRETE CURB AND GUTTER
025612	CONCRETE SIDEWALKS AND DRIVEWAYS
025614	CONCRETE CURB RAMPS
025802	TEMPORARY TRAFFIC CONTROLS DURING CONSTRUCTION
026201	WATER LINE RISER ASSEMBLY
026202	HYDROSTATIC TESTING OF PRESSURE SYSTEMS
026206	DUCTILE IRON PIPE AND FITTINGS
026210	PVC PIPE-AWWA C-900 AND C-905
026402	INSTALLATION OF WATER LINES
026404	WATER SERVICES
026411	GATE VALVES FOR WATER LINES
026416	FIRE HYDRANTS
027202	MANHOLES
027203	VACUUM TESTING OF SANITARY SEWER MANHOLES AND STRUCTURES
027205	FIBERGLASS MANHOLES
027402	REINFORCED CONCRETE PIPE CULVERTS
027602	GRAVITY SANITARY SEWERS
027606	SANITARY SERVICE LINES
030020	PORTLAND CEMENT CONCRETE
032020	REINFORCING STEEL
038000	CONCRETE STEEL
055420	FRAMES, GRATES, RINGS AND COVERS

CONSTRUCTION NOTES:

GENERAL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS TO COMPLETE THE PROPOSED CONSTRUCTION. NO SEPARATE PAYMENT WILL BE MADE FOR SUCH PERMITS.
2. ALL CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CITY OF CORPUS CHRISTI STANDARD DETAILS AND SPECIFICATIONS. ANY DEVIATION OF THESE PLANS AND SPECIFICATIONS FROM SUCH STANDARDS THAT WILL AFFECT THE CONTRACT PRICE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AT LEAST 10 DAYS PRIOR TO THE BID SUBMISSION DATE FOR REVIEW AND ACTION.
3. ALL WATER AND SEWER MAINS AND MANHOLES ARE TO BE LOCATED IN THE R.O.W. UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE CITY OF CORPUS CHRISTI DEPARTMENT OF DEVELOPMENT SERVICES TO OBTAIN ENGINEERING PERMITS, UTILITY TAP APPLICATIONS AND PAYING ALL APPLICABLE FEES PRIOR TO COMMENCING CONSTRUCTION.
5. CONTRACTOR IS REQUIRED TO GIVE A 72 HOUR ADVANCE NOTIFICATION TO CITY'S CONSTRACTION INSPECTION ACTIVITY PRIOR TO COMMENCING WORK. THE CONTACT NUMBER IS 361-826-1738.
6. RIGHT OF WAY PERMITS ARE REQUIRED PRIOR TO COMMENCING WORK WITHIN PUBLIC RIGHT OF WAY OR A CITY EASEMENT. THE CONTRACTOR SHALL CONTACT ENGINEERING SERVICES (TRAFFIC ENGINEERING) TO DETERMINE ALL APPLICABLE REQUIREMENTS (PERMITS, TRAFFIC CONTROL PLAN, FEE, ETC.). A 72 HOUR ADVANCE NOTICE IS REQUIRED FOR PUBLIC NOTIFICATION.

EXISTING UTILITIES & STRUCTURES:

1. THE UTILITIES SHOWN ON THESE PLANS WERE LOCATED BASED ON AS-BUILT CONSTRUCTION PLANS FROM THE CITY OF CORPUS CHRISTI AS WELL AS AN ON THE GROUND SURVEY PERFORMED BY TEXAS GEO-TECH. ALL INFORMATION SHOWN IS INTENDED TO AID THE CONTRACTOR IN ESTABLISHING THE APPROXIMATE LOCATIONS OF EXISTING UTILITIES. ALL UTILITIES MAY NOT BE SHOWN OR ACCURATELY LOCATED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL THE LOCAL UTILITY COMPANIES OF THE PROPOSED CONSTRUCTION AND REQUEST EXACT LOCATIONS OF ALL AFFECTED UTILITIES PRIOR TO CONSTRUCTION.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL UTILITIES AND PRIVATE OR PUBLIC PROPERTY ON OR NEAR THE PROJECT FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES AND PRIVATE OR PUBLIC PROPERTY SHALL BE REMEDIED AND PAID FOR IN WHOLE BY THE CONTRACTOR.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE OR OTHERWISE PROVIDE FOR THE ADJUSTMENT OR RELOCATION OF ANY UTILITIES AS REQUIRED TO COMPLETE THE PROPOSED CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES AS NECESSARY TO IMPLEMENT THE PROPOSED CONSTRUCTION. NO SEPARATE PAYMENT WILL BE MADE FOR ANY SUCH ADJUSTMENTS OR RELOCATIONS, FORESEEN OR UNFORESEEN.
4. CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION:
   LONE STAR > 1-800-669-8344
   SOUTHWESTERN BELL TELEPHONE > 1-800-395-0440
   1-800-DIG-TESS
   TEXAS EXCAVATION SAFETY SYSTEM 1-600-344-8377

SAFETY:

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY OF HIS EMPLOYEES AND THE PUBLIC DURING ALL PHASES OF THE CONSTRUCTION. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY REGULATIONS.
2. THE ENGINEER OR ENGINEER'S REPRESENTATIVE SHALL BE AT THE SITE SOLELY FOR THE PURPOSE OF PROVIDING SURVEY CONTROL FOR CONSTRUCTION, GENERAL OBSERVATION OF THE CONTRACTOR'S COMPLIANCE WITH THE DESIGN, PROGRESS REVIEW AND DESIGN PROBLEM RESOLUTION. THE ENGINEER SHALL NOT SUPERVISE THE CONSTRUCTION OR BE RESPONSIBLE FOR SAFETY PRECAUTIONS OR COMPLIANCE.
3. TRAFFIC CONTROL SHALL BE THE RESPONSABILITY OF THE CONTRACTOR AND SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. TRAFFIC CONTROL PLANS SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI-318 BUILDING CODE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED.
3. ALL REINFORCING STEEL MATERIAL TO BE A615-GRADE 60.
4. ALL REINFORCING STEEL PLACEMENT AND SPLICING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI-318 BUILDING CODE.
5. ALL BARS ARE TO BE SUPPORTED IN THE FORMS AND SLAB WITH CHAIRS AND TIED AT EVERY OTHER INTERSECTION.
6. ALL CONDUIT, GROUND WIRES, DRAINS ETC., ARE TO BE IN PLACE PRIOR TO POURING CONCRETE.
7. ALL REINFORCING STEEL SHALL HAVE 3" MIN. CLEAR COVER UNLESS NOTED OTHERWISE.
8. VEHICLES SUCH AS READY MIX CONCRETE OR DUMP TRUCKS AND OTHER CONSTRUCTION EQUIPMENT SHALL NOT BE WASHED AT LOCATIONS WHERE THE RUNOFF WILL FLOW DIRECTLY INTO A WATERCOURSE OR STORM WATER CONVEYANCE SYSTEM. SPECIAL AREAS SHALL BE DESIGNATED FOR WASHING VEHICLES. THESE AREAS SHALL BE LOCATED WHERE THE RUNOFF CAN BE COLLECTED IN A TEMPORARY HOLDING BASIN.

STORM SEWER:

1. ALL EXCAVATION FOR STORM SEWER CONSTRUCTION SHALL BE WITHIN THE LIMITS OF THE PLATTED DRAINAGE EASEMENT OR PUBLIC RIGHT-OF-WAY. NO EXCAVATION SHALL BE ALLOWED BEYOND THE DRAINAGE EASEMENT, OR RIGHT OF WAY.
2. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY IN LIFTS NOT TO EXCEED 6 INCHES.

PAVING:

1. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO PROVIDE ADEQUATELY SIZED PVC SLEEVES UNDER THE STREETS TO SERVE EACH UTILITIES NEEDS WITHOUT ANY ROAD BORINGS OR CROSSINGS.
2. ALL SLOPES SHOWN FOR CURB AND GUTTER INDICATE A SMOOTH, STRAIGHT AND UNIFORMLY SLOPED STRUCTURE WITH NO LOW OR HIGH SPOTS BETWEEN EACH OF THE TOP OF CURB (TC) ELEVATIONS SHOWN; WITH SLOPE AS INDICATED ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SLOPE OF 0.3% ON ALL CURB AND GUTTER.
3. SIDEWALKS SHALL BE CONSTRUCTED WITH THE TOP LEVEL WITH FINISHED GRADES AS INDICATED FOR THE GROUND SURFACE ON THE PLANS. A 2.0% CROSS-SLOPE SHALL BE PROVIDED ON ALL SIDEWALKS TOWARD THE STREET.
4. PUBLIC PRDESTRIAN ACCESS ROUTES SHALL COMPLY WITH THE CURRENTLY ADOPTED VERSION OF THE TEXAS ACCESSIBILTY STANDARDS.

GRADING AND EARTHWORK:

1. ALL EXCESS EXCAVATED MATERIALS TO BE SPREAD IN AREA SHOWN ON GRADING PLAN OR POLUTION PREVENTION PLAN. IF SUCH AREAS ARE NOT SHOWN IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOING THE MATERIALS FROM THE JOB SITE.
2. AREAS THAT RECEIVE MORE THAN 12" OF FILL MATERIAL SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% OF THE STANDARD PROCTOR DENSITY PER ASTM D-698 AND A MOISTURE CONTENT WITHIN +3% TO -1% OF OPTIMUM. FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 6" ON UNDISTURBED SOIL FREE OF DEBRIS AND ORGANIC MATERIALS. TEST REPORTS FOR COMPACTED FILL SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

WATER NOTES:

1. JOINT RESTRAINT - FIRE HYDRANTS & RELATED FITTINGS INCLUDING TEE IN MAIN, 90° EL, NIPPLES, VALVE & FIRE HYDRANT, SHALL HAVE FULLY RESTRAINED JOINTS. THE 90° EL FITTING AND CAP FITTING ON PROP. 6" MAIN SHALL BE FULLY RESTRAINED AT THE JOINT TO ADJACENT PIPE AND A MINIMUM OF 4 JOINTS OF PIPE (72 LF) SHALL BE RESTRAINED TOGETHER IN EACH DIRECTION FROM 90° EL AND IN ONE DIRECTION FROM CAP. RESTRAINING DEVICES SHALL BE MANUFACTURED BY EBAA IRON FOR PVC PIPE AND DUCTILE IRON FITTINGS.
2. PROVIDE CAST IRON BOXES AND PVC PIPE EXTENSIONS WITH CONCRETE AT GATE VALVES PURSUANT TO DETAILS AS SHOWN.
3. CONSTRUCT WATER SERVICE LINES AND CONNECTIONS PURSUANT TO THE NOTES AND DETAILS AS SHOWN.
4. ALL WATER MAINS SHALL BE C900 & C905 DR18 PVC WITH DUCTILE IRON MECHANICAL JOINT FITTINGS AND SHALL BE BEDDED IN (ENCASED IN) SAND TO 6" ALL AROUND PIPE.
5. PROVIDE MINIMUM CLEARANCE BETWEEN WATER AND SANITARY SEWER LINE AND/OR MANHOLES AS REQUIRED BY THE TEXAS ADMINISTRATIVE CODE 317-3, APPENDIX "E" SEPARATION DISTANCE (AS REQUIRED BY TEXAS STATE WATER HYGIENE LAW).
6. ALL WATER SERVICE LINES SHALL BE 2" DIAMETER, UNLESS OTHERWISE NOTED ON THE PLANS.
7. MATERIALS AND INSTALLATION OF WATER DISTRIBUTION SYSTEM IMPROVMENTS SHALL MEET ALL REQUIREMENTS OF 30 TAC 290.

WASTEWATER CONSTRUCTION NOTES:

1. SET ENDS OF SERVICE LINES MID LOT FRONTAGE UNLESS SHOWN OTHERWISE ON THE PLANS.
2. ALL SANITARY SEWER MANHOLES SHALL BE FIBERGLASS, 48" MINIMUM DIAMETER 0.5" (MINIMUM) WALL AND CONSTRUCTED IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS.
3. ALL GRAVITY SEWER PIPES 6" AND LARGER SHALL BE GREEN PVC, SDR 26 AND SHALL BE ACCORDANCE WITH ASTM D3034 AND THE BEDDED IN SAND WITH PI LESS THAN 10, TO 6" BELOW AND 6" TO SIDES OF PIPE (FULL HEIGHT OF PIPE). IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS. BED 4" AND SMALLER PIPES IN EARTH FROM THE EXCAVATION.
4. CONTRACTOR WILL PROVIDE TESTING SCHEDULES AND RESULTS TO ENGINEERING SERVICES/ CONSTRUCTION INSPECTION, WASTEWATER DEPARTMENT, AND DEVELOPMENT SERVICES/ SPECIAL SERVICES.
5. MATERIALS AND INSTALLATION OF ALL WASTEWATER COLLECTION SYSTEM IMPROVMENTS SHALL MEET THE REQUIREMENTS OF 30 TAC 217.

RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

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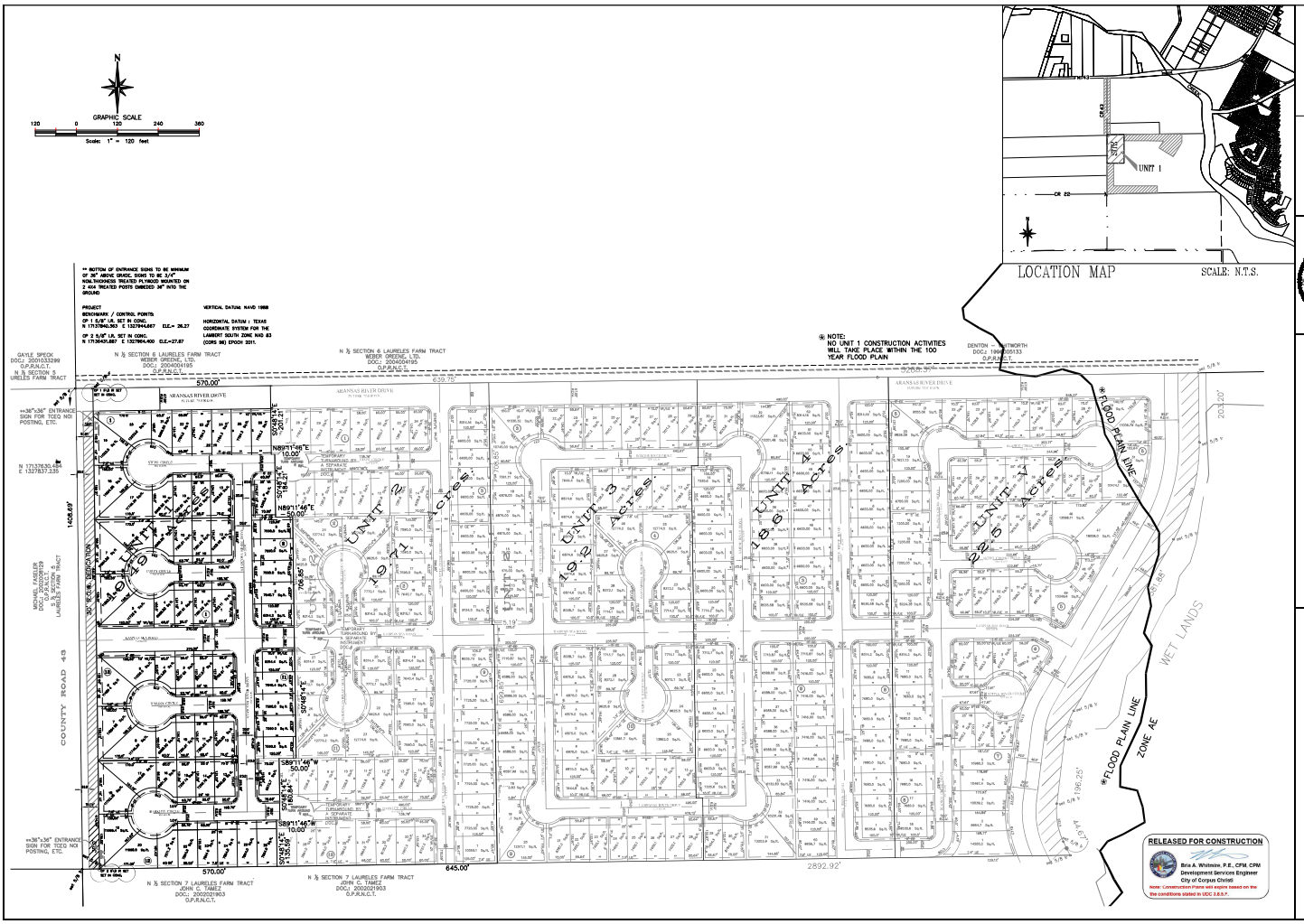
GENERAL NOTES

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

STATE OF TEXAS — JUAN PERALES, JR. — 66652 — REGISTERED PROFESSIONAL ENGINEER
Juan Perales Jr., P.E. 11/10/2023

APPROVED BY:	JP	DRAWN BY:	RT
DATE:	11-10-23	SCALE:	SHOWN
DRAWING #:	210237		
PAGE:	2	OF:	68



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DRAWN BY: RT
DATE: 11-10-23
SCALE: SHOWN
DRAWING #: 218237
PAGE: 3 OF: 68

JOHN PERALES, JR. 68655 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

SITE PLAN

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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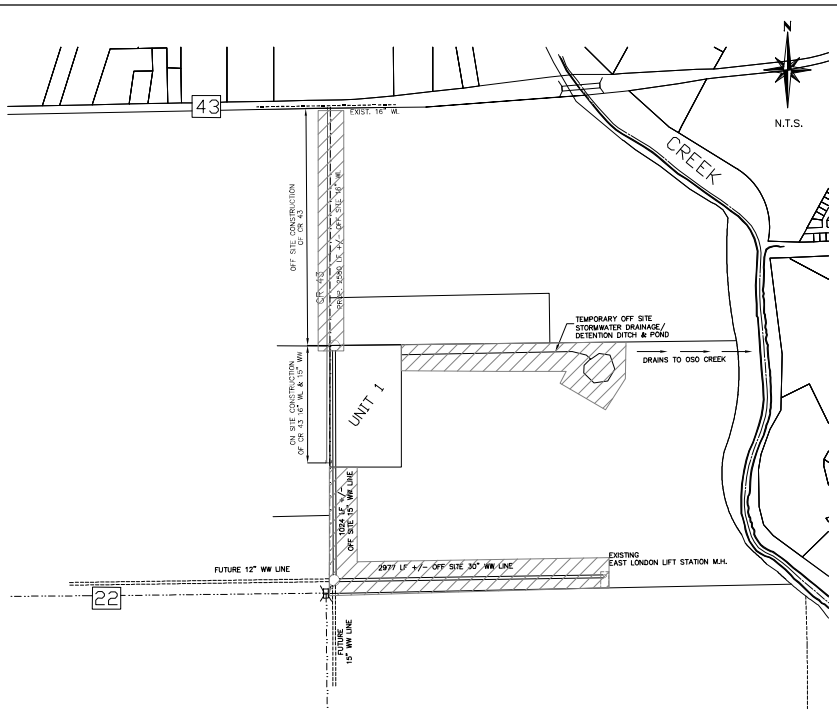


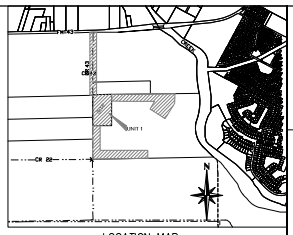
NOTES:
THE PROPOSED 16" WATERLINE EXTENSION IS IN ACCORDANCE WITH THE CITY OF CORPUS CHRISTI WATER MASTER PLAN.

THE PROPOSED 15" AND 30" WASTEWATER LINE EXTENSIONS ARE IN ACCORDANCE WITH THE CITY OF CORPUS CHRISTI WASTEWATER MASTER PLAN.

THE PROPOSED CONSTRUCTION OF CR 43 IS IN ACCORDANCE WITH THE CITY OF CORPUS CHRISTI TRANSPORTATION MASTER PLAN COMPONENTS PROVIDED FOR IN THE APPROVED PRELIMINARY PLAT DOCUMENTS FOR THE KASPIAN SUBDIVISION.

PROPOSED TEMPORARY OFF SITE STORMWATER DRAINAGE/DETENTION FACILITIES COMPLY WITH THE CITY OF CORPUS CHRISTI DRAFT STORMWATER MASTER PLAN AND STORMWATER MANAGEMENT PLAN INCLUDED WITH THE APPROVED PRELIMINARY PLAT FOR THE KASPIAN SUBDIVISION.

NO CONSTRUCTION IS PROPOSED WITHIN ANY DELINEATED JURISDICTIONAL WETLAND AREAS.



LOCATION MAP
SCALE: N.T.S.

RELEASED FOR CONSTRUCTION
Bria A. Wiminin, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

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OF:	68

JAN PERALES, JR. 66628 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

OFF SITE IMPROVEMENT SITE PLAN

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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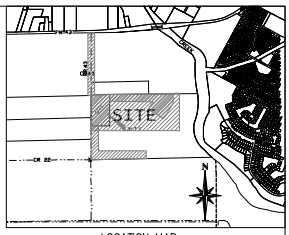
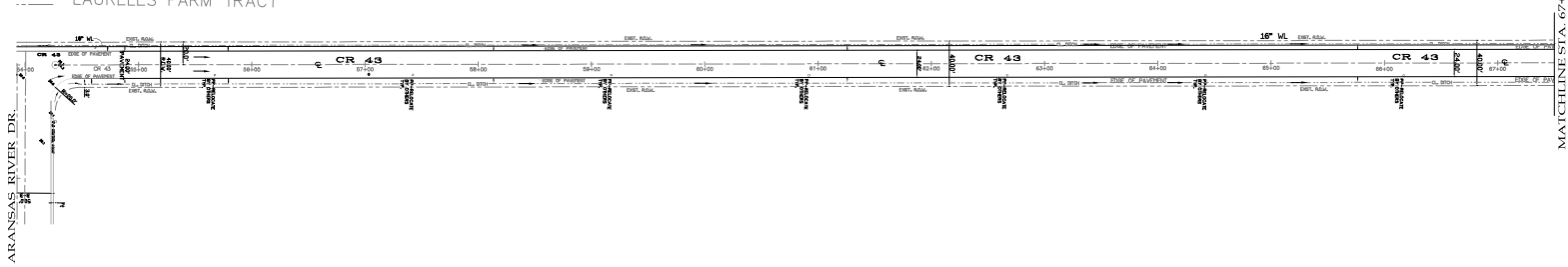
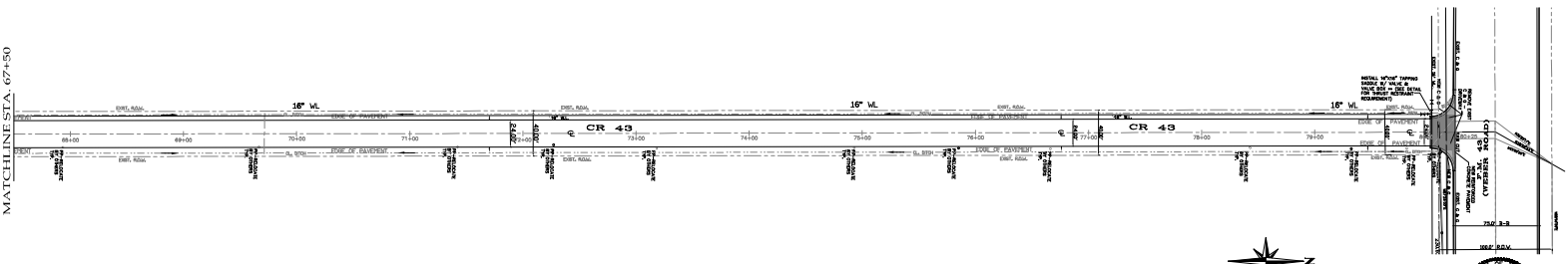
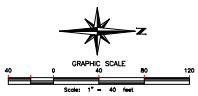
GAYLE SPECK
DOC.: 2001033299
O.P.R.N.C.T.
N ½ SECTION 5
LAURELES FARM TRACT



LOCATION MAP
SCALE: N.T.S.







STATE OF TEXAS
JUAN PERALES, JR.
66620
REGISTERED
PROFESSIONAL ENGINEER

Juan Perales Jr., P.E.
11/13/2023

KASPIAN SUBDIVISION
COUNTY ROAD 43 - IMPROVEMENT
OFFSITE 16" WATER GRID MAIN EXTENSION

RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CPM, CFM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

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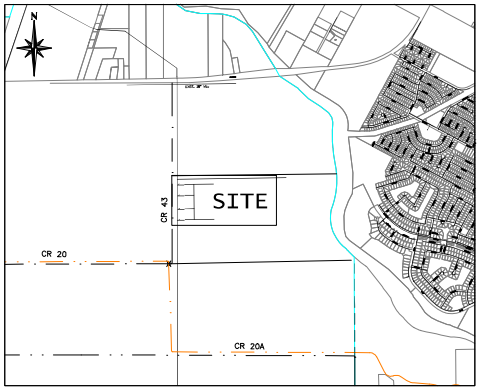
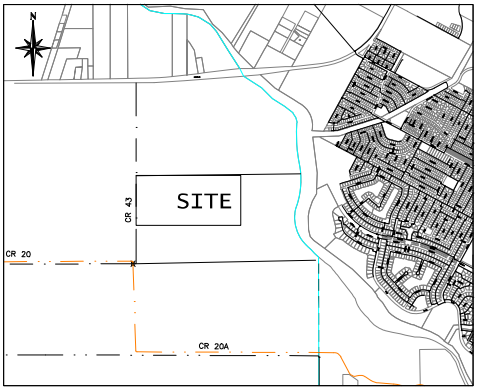
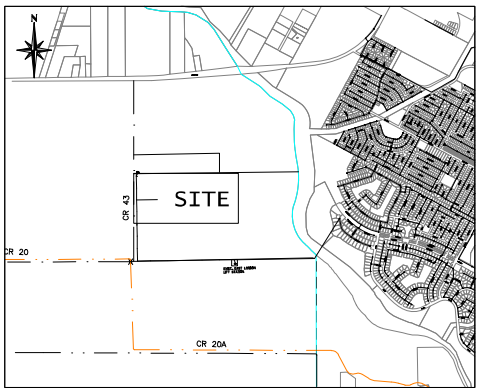


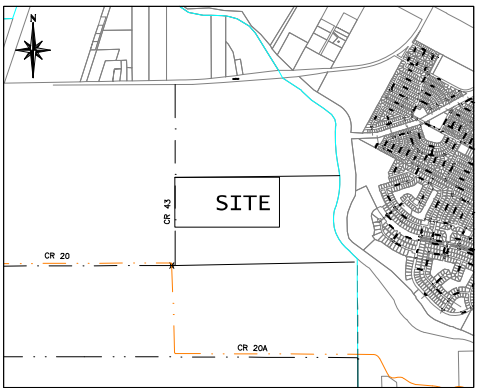
WATER MAP



GAS MAP



WASTEWATER MAP



STORM MAP

RELEASED FOR CONSTRUCTION

Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

Note: Construction Plans and expire based on the the conditions stated in UDC 3.8.5 F.

CITY BASE MAPS

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

APPROVED BY: JP
DATE: 11-10-23
DRAWING #: 210237
PAGE: 4
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SCALE: SHOWN
OF: 68

JAN PERALES, JR. 66452 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

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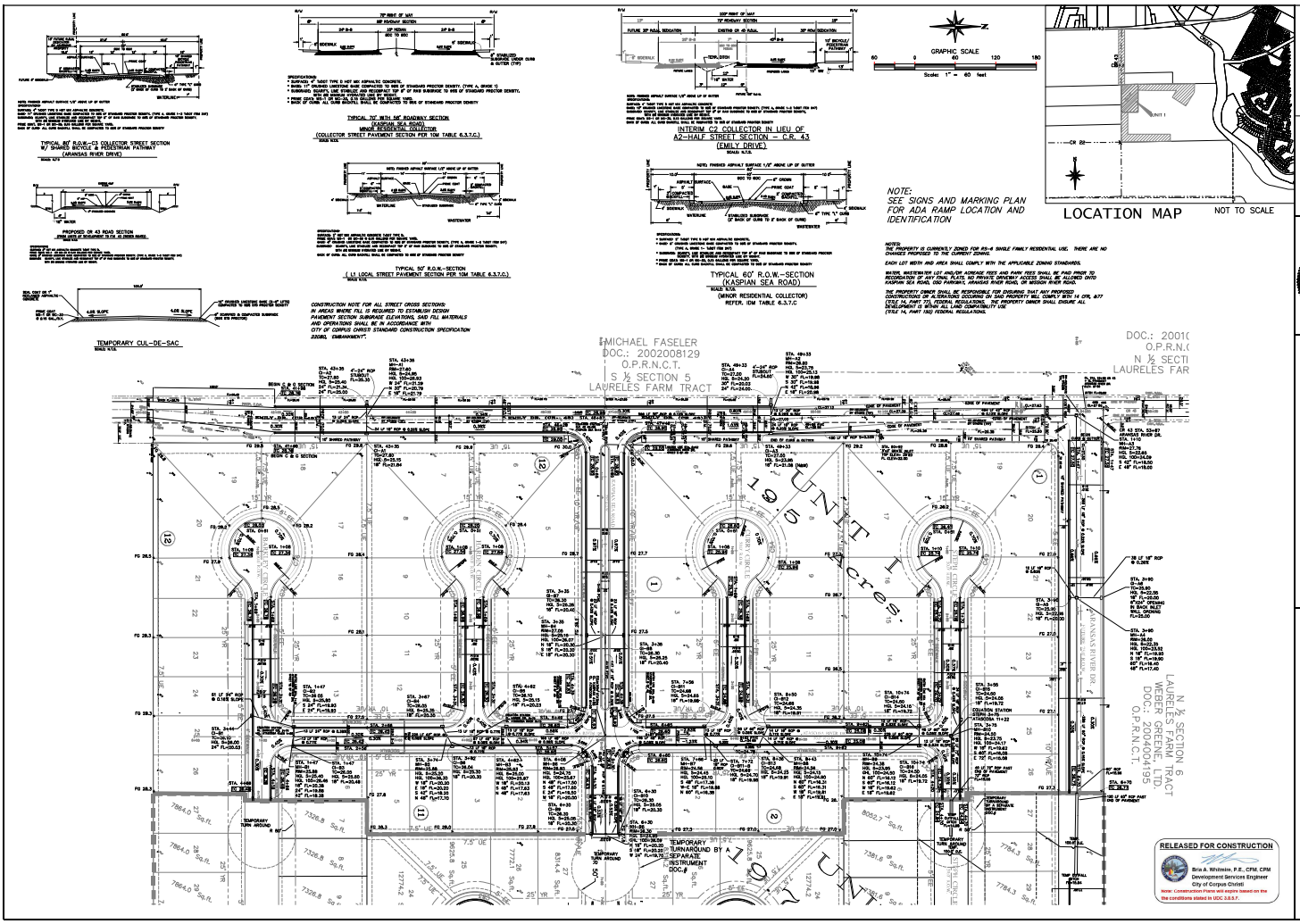
Corpus Christi, Texas 78411
Tel: (361) 728-7188



APPROVED BY:	JP
DRAWN BY:	RT
DATE:	11-10-23
SCALE:	SHOWN
DRAWING #:	210237
PAGE:	5
OF:	68

JAN PERALES, JR. 66626 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
Jan Perales, Jr., P.E. 11/10/2023

PAVING & GRADING PLAN UNIT 1

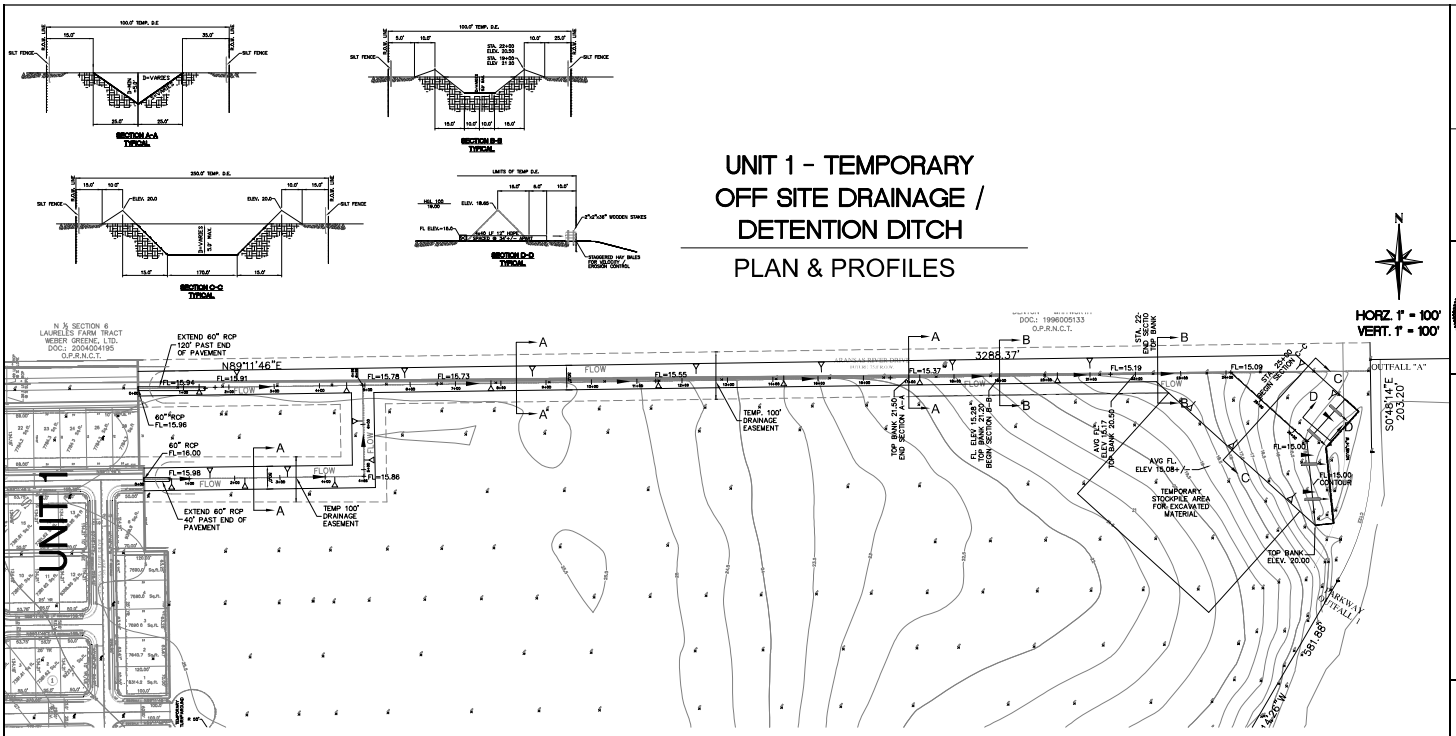
KASPIAN SUBDIVISION UNIT 1

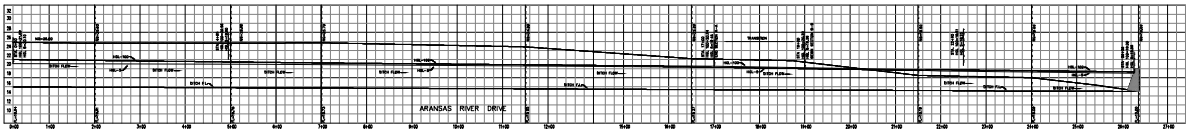
CORPUS CHRISTI, TEXAS

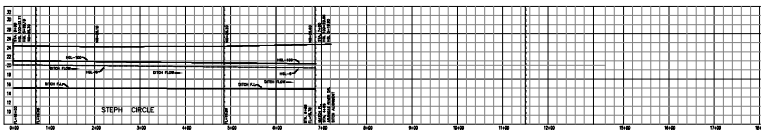
J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

UNIT 1 – TEMPORARY OFF SITE DRAINAGE / DETENTION DITCH

PLAN & PROFILES







RELEASED FOR CONSTRUCTION

Bria A. Whitmire P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.3.F.

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DATE:	11-10-23
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PAGE:	5A
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OF:	68

JAN PERALES, JR. 66628 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

TEMPORARY OFF-SITE
DRAINAGE / DETENTION DITCH

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. # 315
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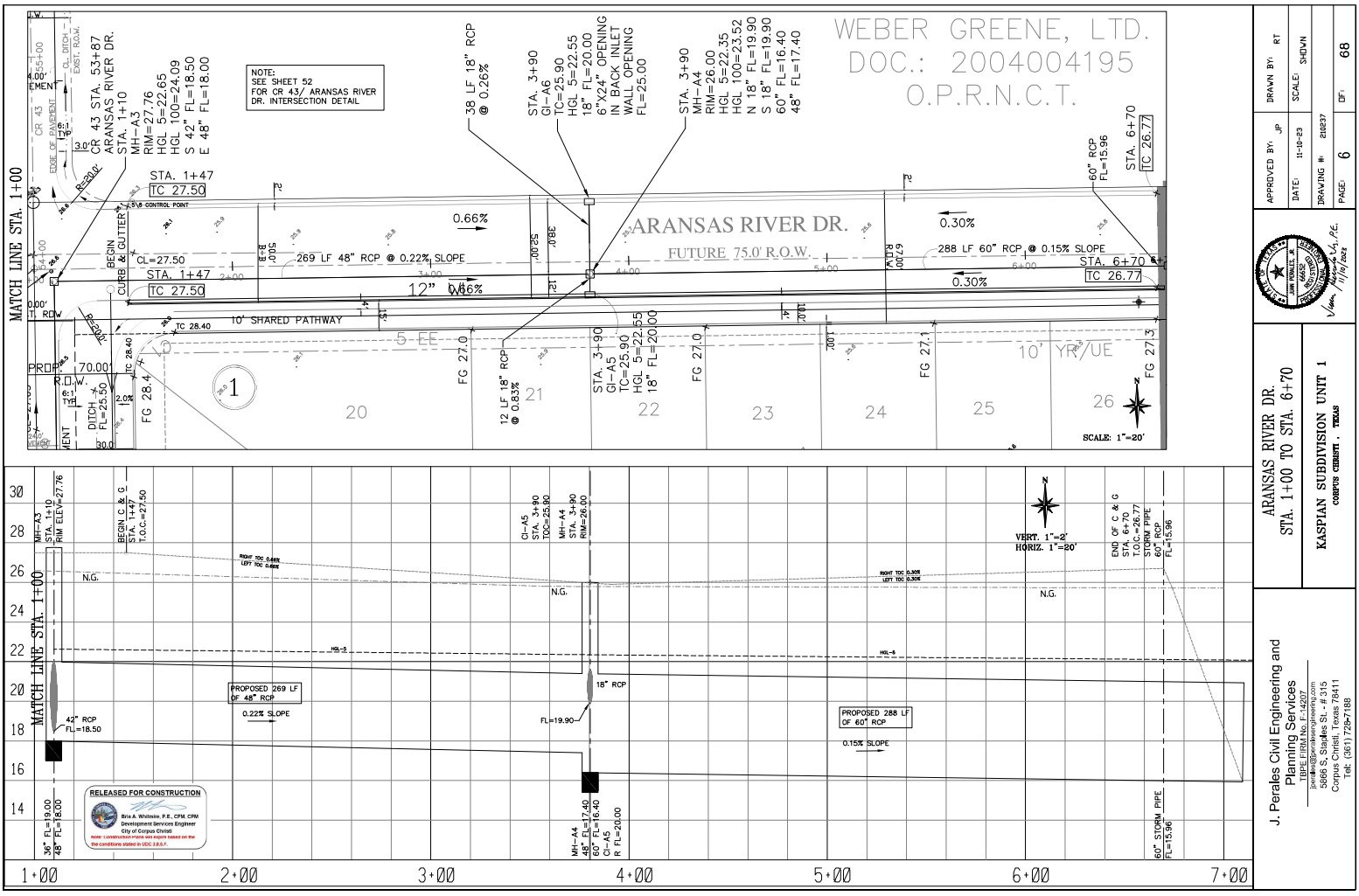
Tel: (361) 728-7188



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DATE: 11-10-23
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DRAWING #: 218237
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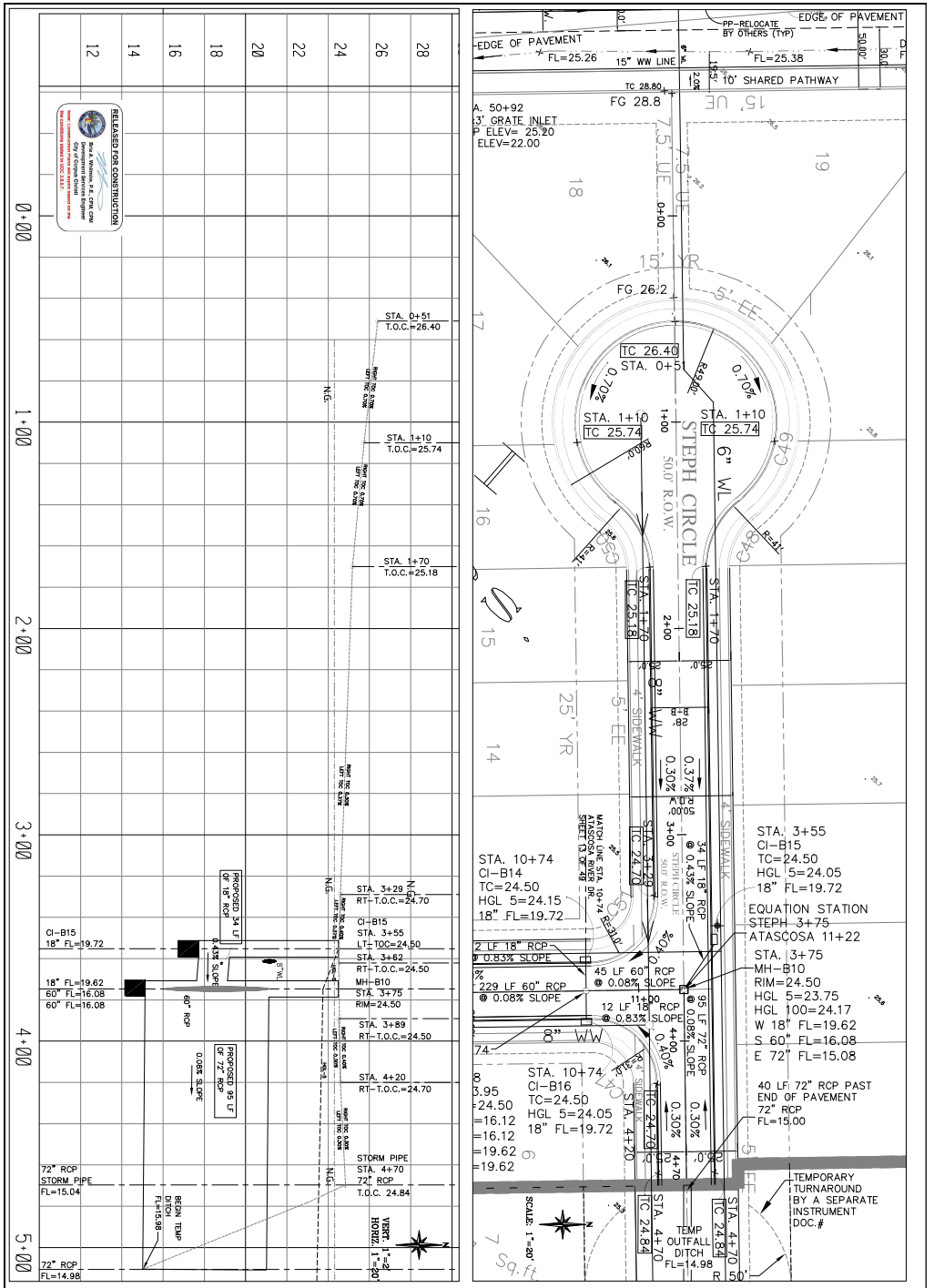
ARANSAS RIVER DR.
STA. 1+00 TO STA. 6+70

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE F1804 No. F-14207
Jose Perales, P.E., CFM
5866 S. Staples St., # 315
Corpus Christi, Texas 78411
Tel: (361) 729-7188



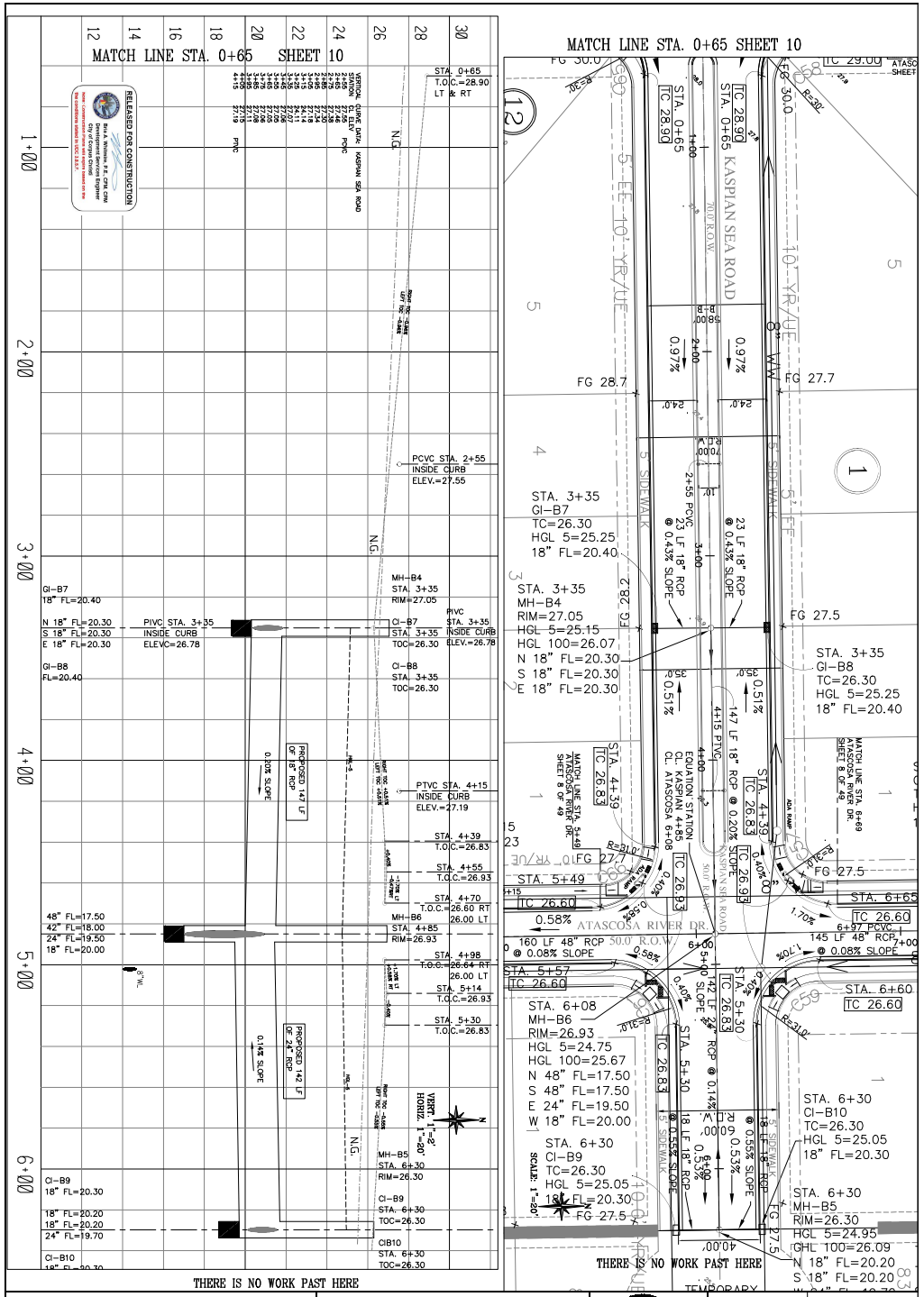
J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@peralesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

STEPH CIRCLE
STA. 0+51 TO STA. 5+20

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

JUAN PERALES, JR. 66652 REGISTERED PROFESSIONAL ENGINEER
11/10/2023

APPROVED BY: JP	DRAWN BY: RT
DATE: 11-10-23	SCALE: SHOWN
DRAWING #: 210237	
PAGE: 7	OF: 68



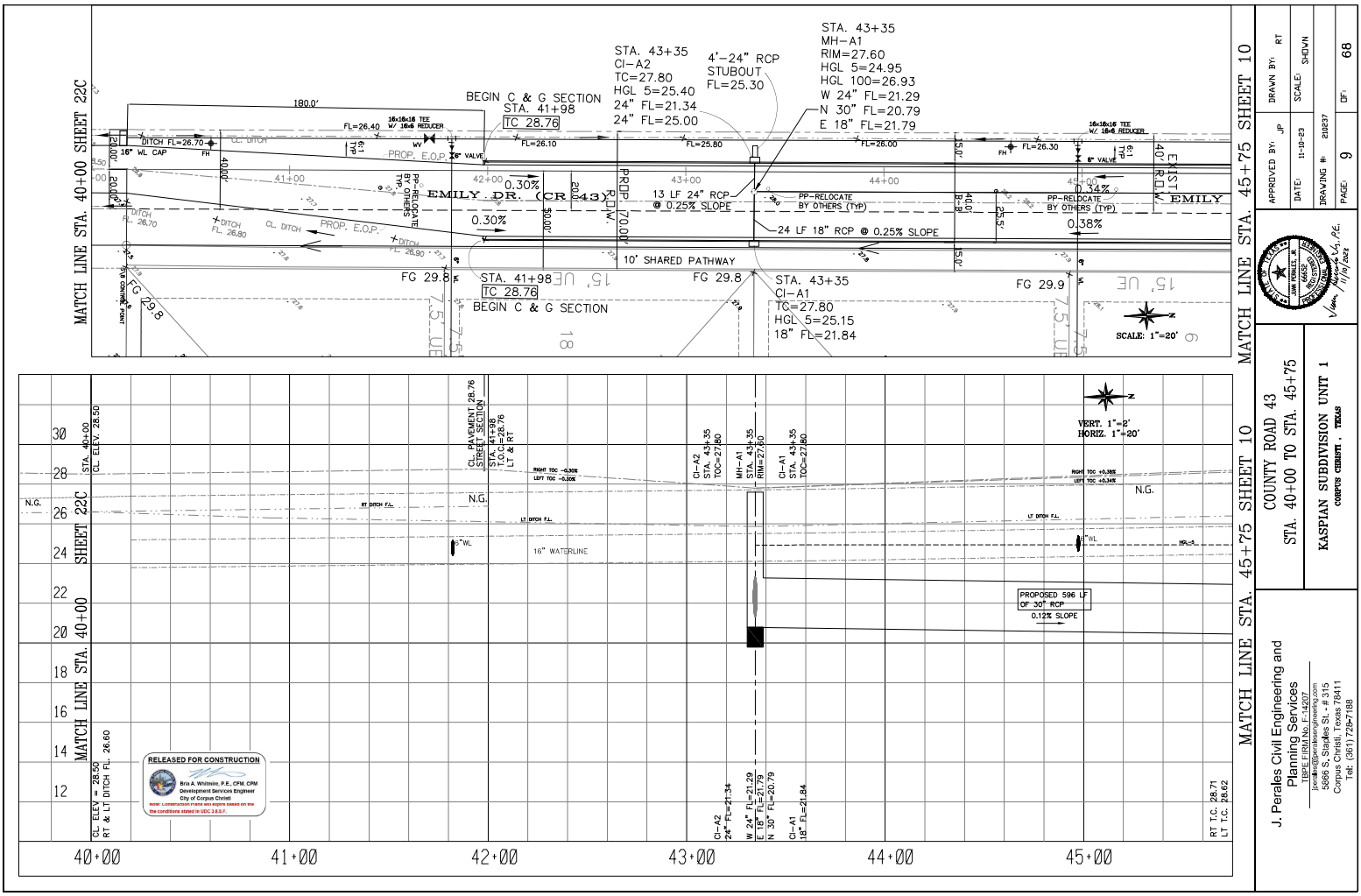
J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

KASPIAN SEA RD.
STA. 0+65 TO STA. 6+30

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

JUAN PERALES, JR. 66652 REGISTERED PROFESSIONAL ENGINEER
11/10/2023

APPROVED BY: JP	DRAWN BY: RT
DATE: 11-10-23	SCALE: SHOWN
DRAWING #: 210237	
PAGE: 8	OF: 68



RELEASED FOR CONSTRUCTION
Brian A. Whitmire, P.E., CPM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction must not expire based on the the conditions stated in UDC 3.8.5.F.

APPROVED BY:	JP
DRAWN BY:	RT
DATE:	11-10-23
SCALE:	SHOWN
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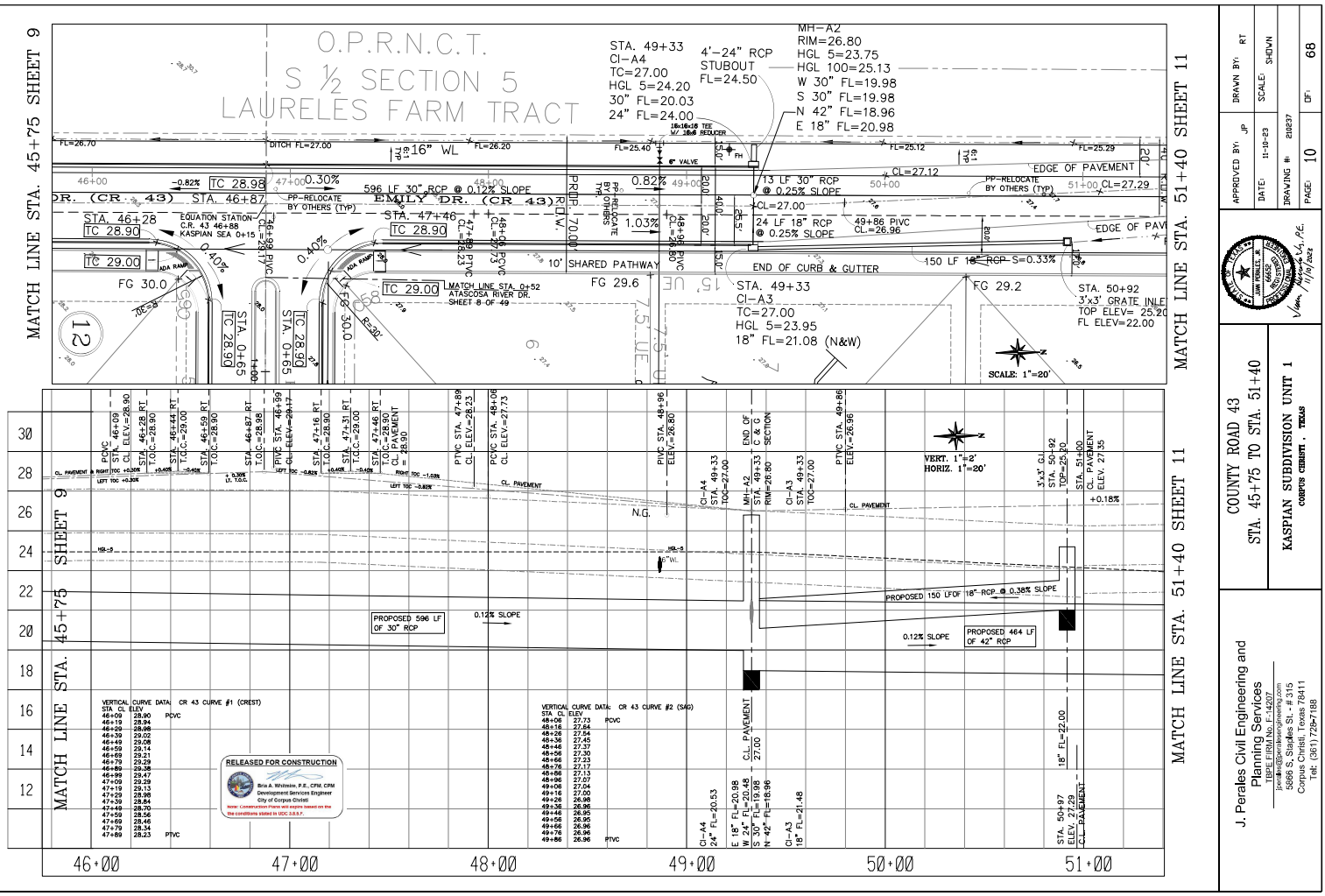
COUNTY ROAD 43
STA. 40+00 TO STA. 45+75

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE F1804 No. F-14207
Jose A. Perales, P.E., CPM
5866 S. Staples St., # 315
Corpus Christi, Texas 78411
Tel: (361) 729-7188



COUNTY ROAD 43
STA. 45+75 TO STA. 51+40

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

APPROVED BY: JP
DRAWN BY: RT
DATE: 11-10-23
SCALE: SHOWN
DRAWING #: 210237
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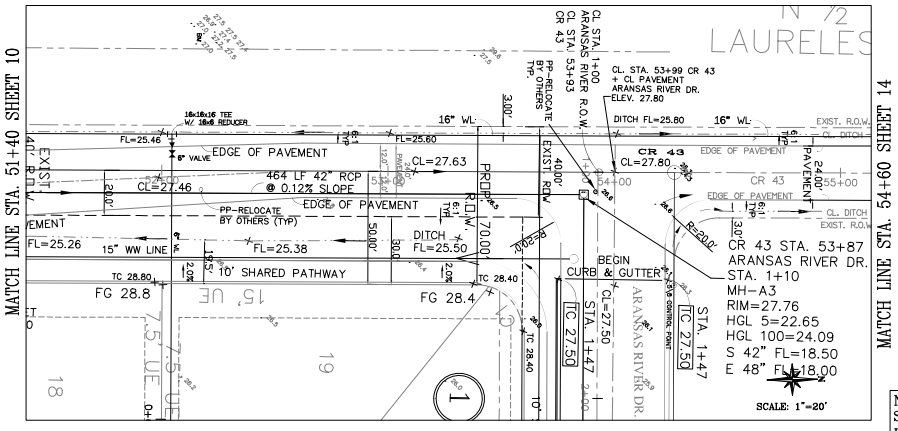
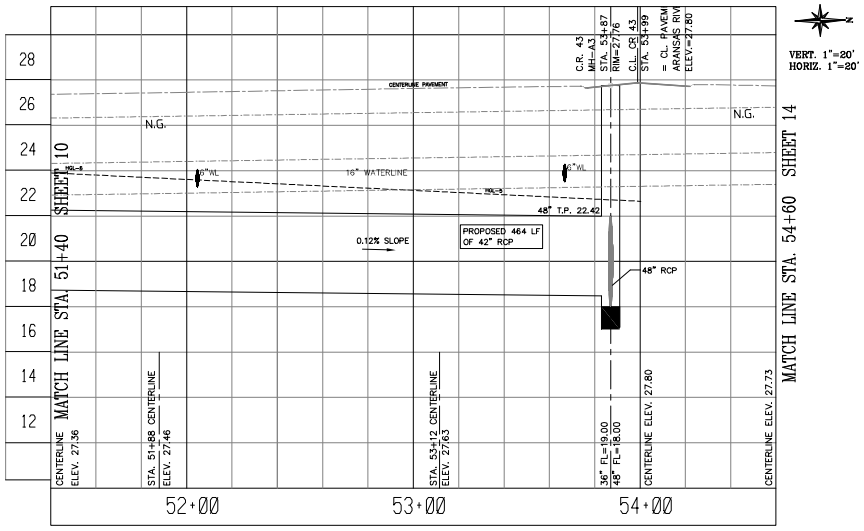
J. Perales Civil Engineering and Planning Services
TBPE F1804 No. F-14207
Jose Perales, P.E., CFM
5666 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 729-7188



NOTE:
SEE SHEET 52
FOR CR 43 / ARANSAS RIVER DR.
INTERSECTION DETAILS



VERT. 1"=20'
HORIZ. 1"=20'

RELEASED FOR CONSTRUCTION
Bris A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
NOTE: Construction may not expire based on the the conditions stated in UDC 3.8.5.F.

J. Perales Civil Engineering and Planning Services
TBPE F1804 No. F-14207
Jose A. Perales, P.E., CFM
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Tel: (361) 729-7188

COUNTY ROAD 43
STA. 51+40 TO 54+60

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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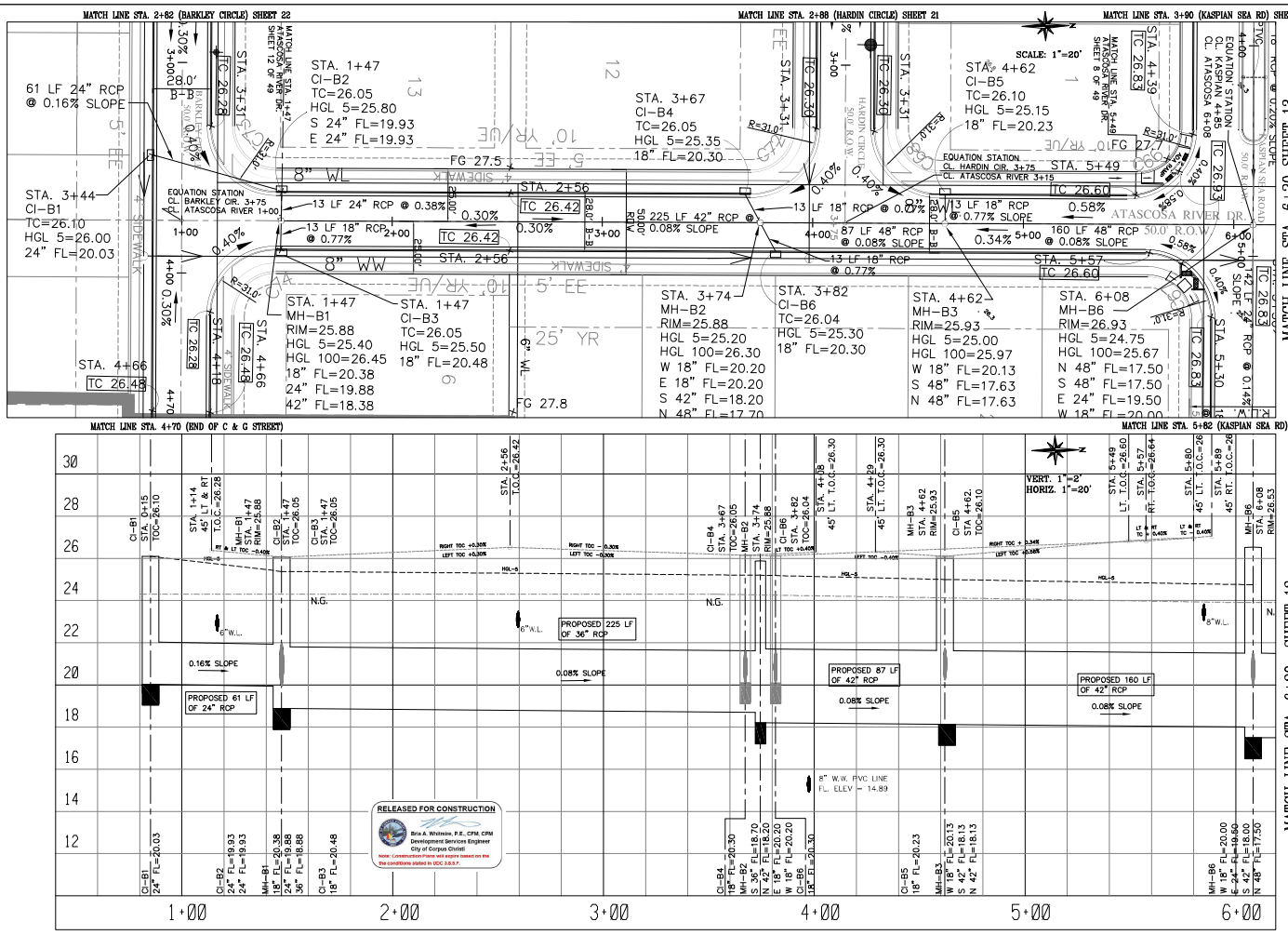
SCALE: SHOWN
DRAWING #: 210237
PAGE: 11
OF: 68

JOSE PERALES, JR. 86655 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023



ATASCOSA RIVER DR.
STA. 0+15 TO STA. 6+20

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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SCALE:	SHOWN
DRAWING #:	210237
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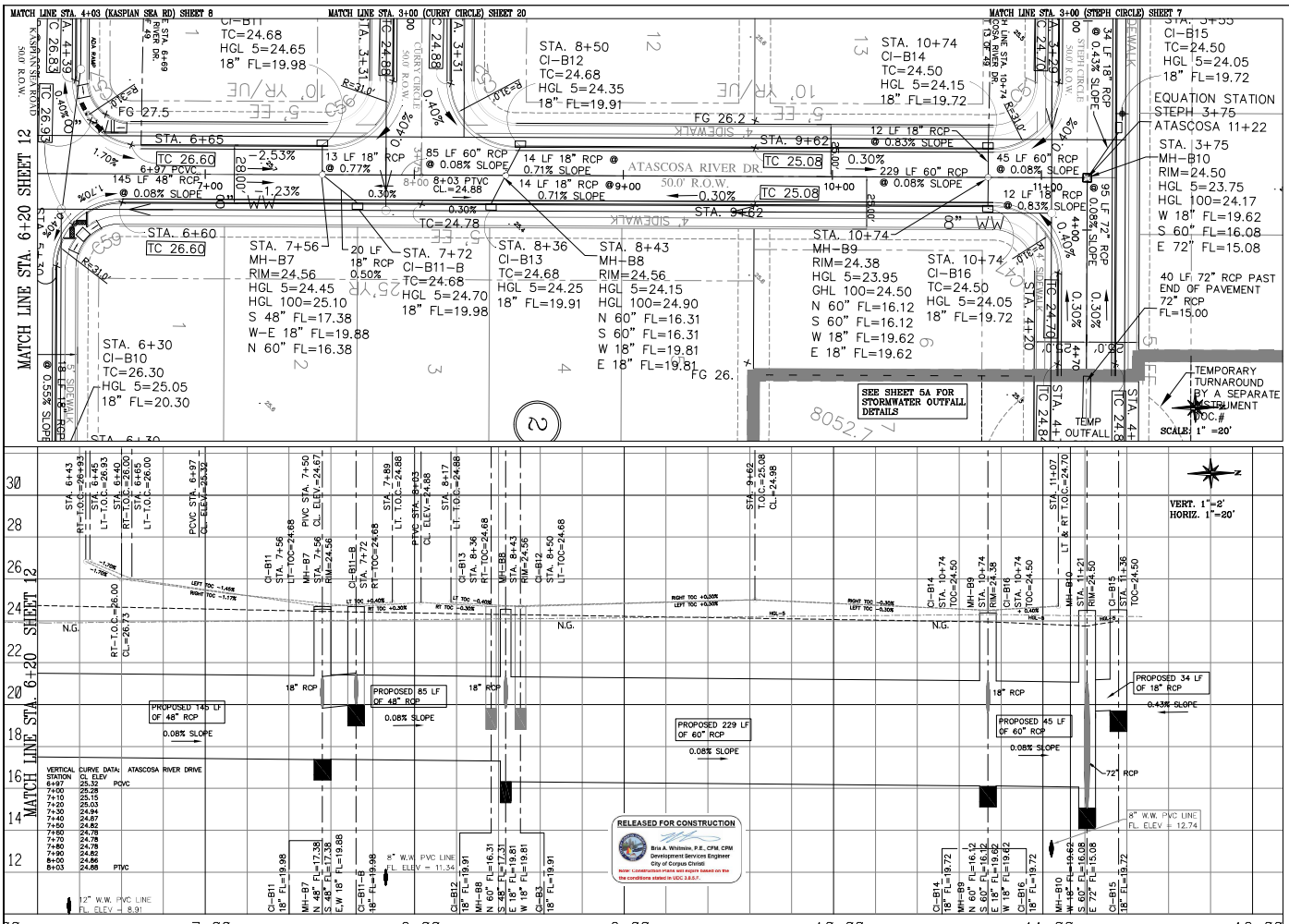
OF:	68

JOHN PERALES, JR. 68655 LICENSED PROFESSIONAL ENGINEER
11/16/2023

J. Perales Civil Engineering and Planning Services
TBPE F1RM No. F-14207
Jperales@Peralesengineering.com
5866 S. Staples St., # 315
Corpus Christi, Texas 78411
Tel: (361) 729-7188



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DATE: 11-10-23
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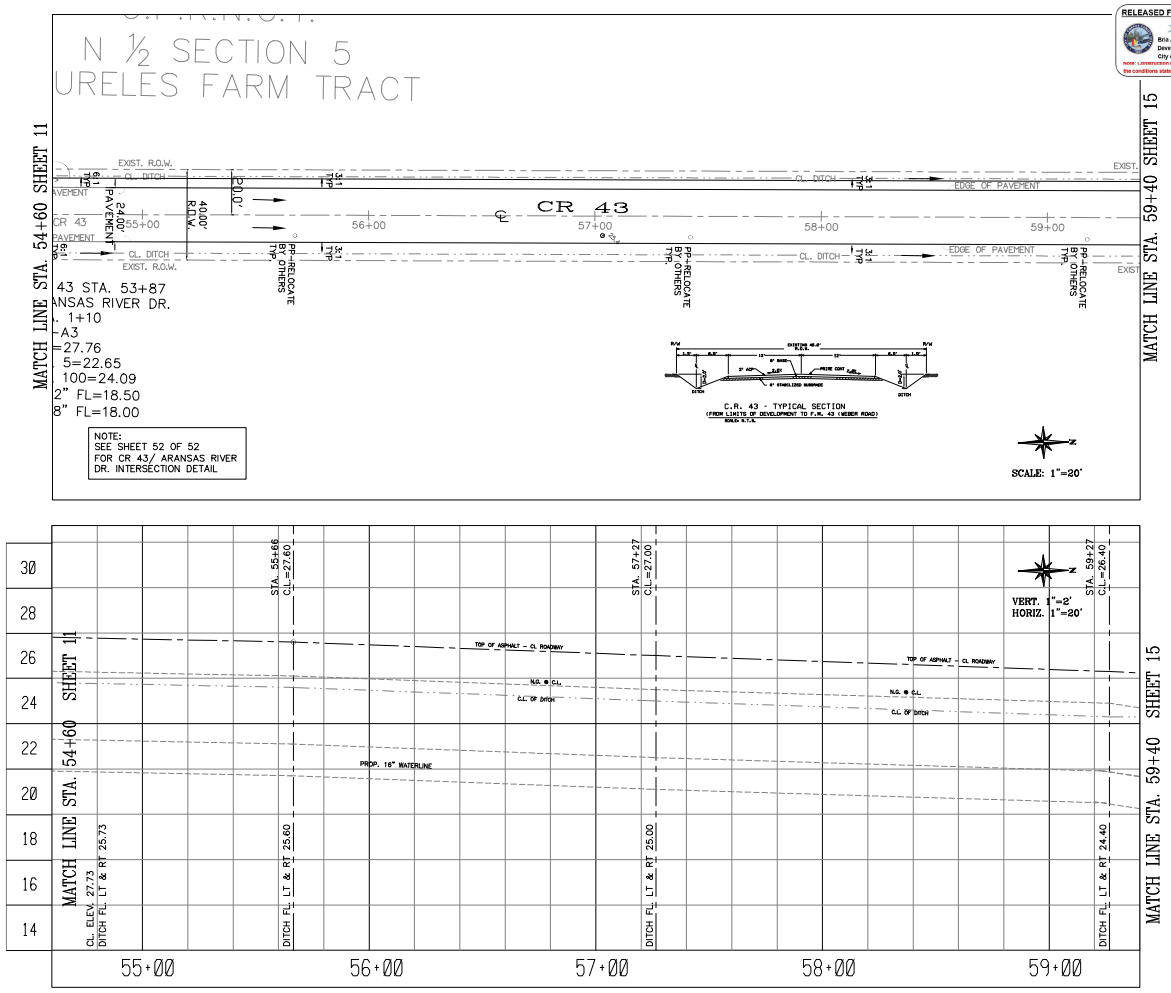
ATASCOSA RIVER DR.
STA. 6+20 TO STA. 12+00

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalescivil.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 729-7188



APPROVED BY: JP
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DATE: 11-10-23
SCALE: SHOWN
DRAWING #: 218237
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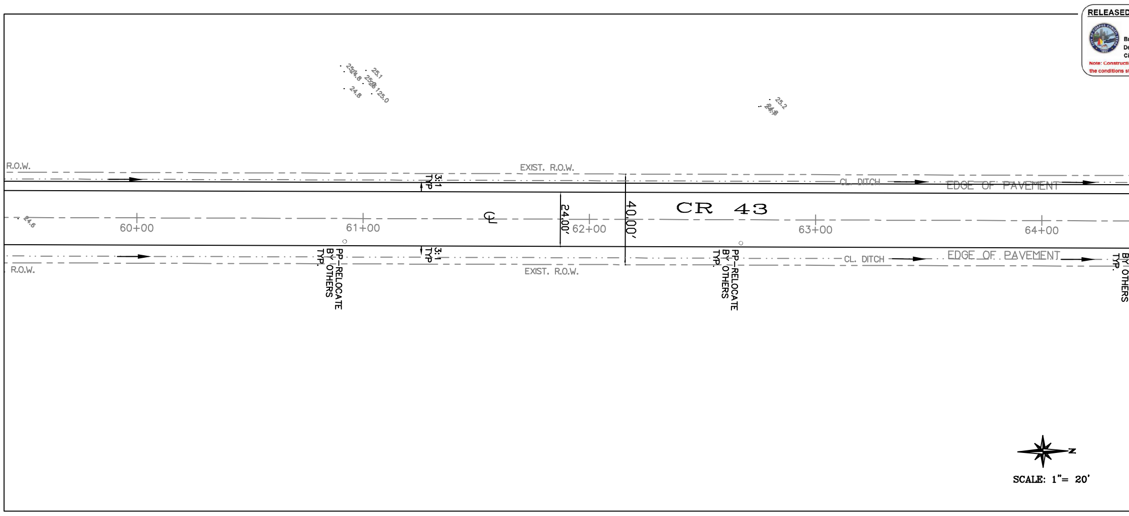
COUNTY ROAD 43
STA. 54+60 TO STA. 59+40

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

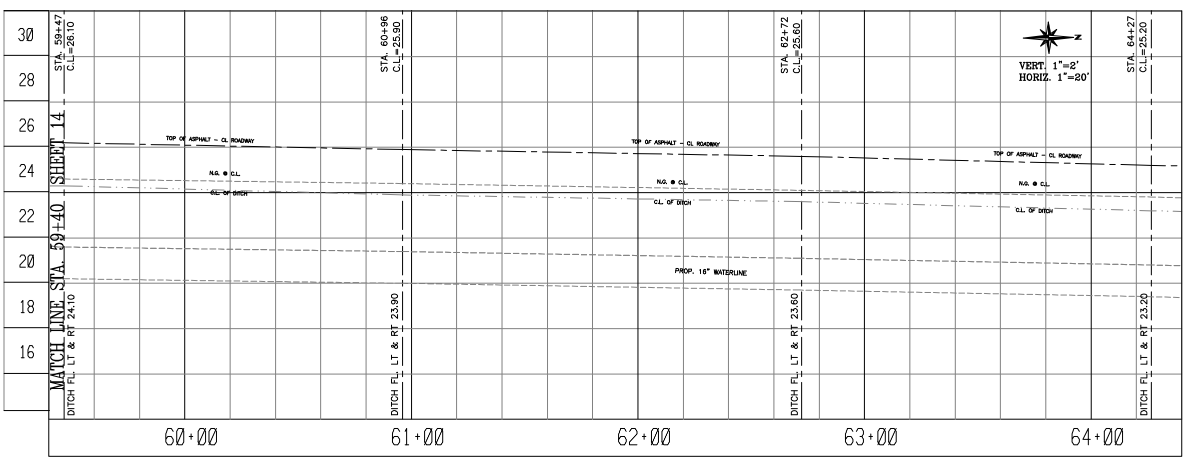
J. Perales Civil Engineering and Planning Services
TBPE F1RM No. F-14207
Jose A. Perales, P.E., CFM
5866 S. Staples St., # 315
Corpus Christi, Texas 78411
Tel: (361) 729-7188

MATCH LINE STA. 59+40 SHEET 14



RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.
R.O.W.
EXIST. R.O.W.
CL DITCH
EDGE OF PAVEMENT
CR 43
60+00
61+00
62+00
63+00
64+00
24.00'
40.00'
3:1 TYP.
PP-RELOCATE BY OTHERS TYP.
SCALE: 1"= 20'

MATCH LINE STA. 64+40 SHEET 16



MATCH LINE STA. 59+40 SHEET 14
MATCH LINE STA. 64+40 SHEET 16
30
28
26
24
22
20
18
16
STA. 59+47 C.L.=26.10
STA. 60+96 C.L.=25.90
STA. 62+72 C.L.=25.60
STA. 64+27 C.L.=25.20
VERT. 1"=2'
HORIZ. 1"=20'
TOP OF ASPHALT - CL ROADWAY
N.G. @ C.L.
C.L. OF DITCH
PROP. 16" WATERLINE
DITCH FL LT & RT 24.10
DITCH FL LT & RT 23.90
DITCH FL LT & RT 23.60
DITCH FL LT & RT 23.20
60+00
61+00
62+00
63+00
64+00

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DRAWN BY: RT
DATE: 11-10-23
SCALE: SHOWN
DRAWING #: 210237
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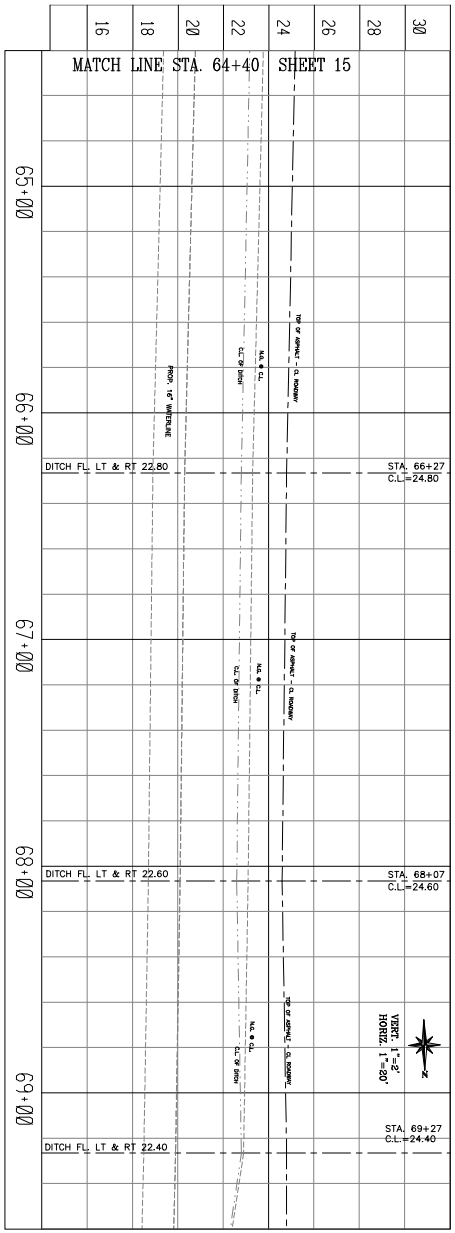
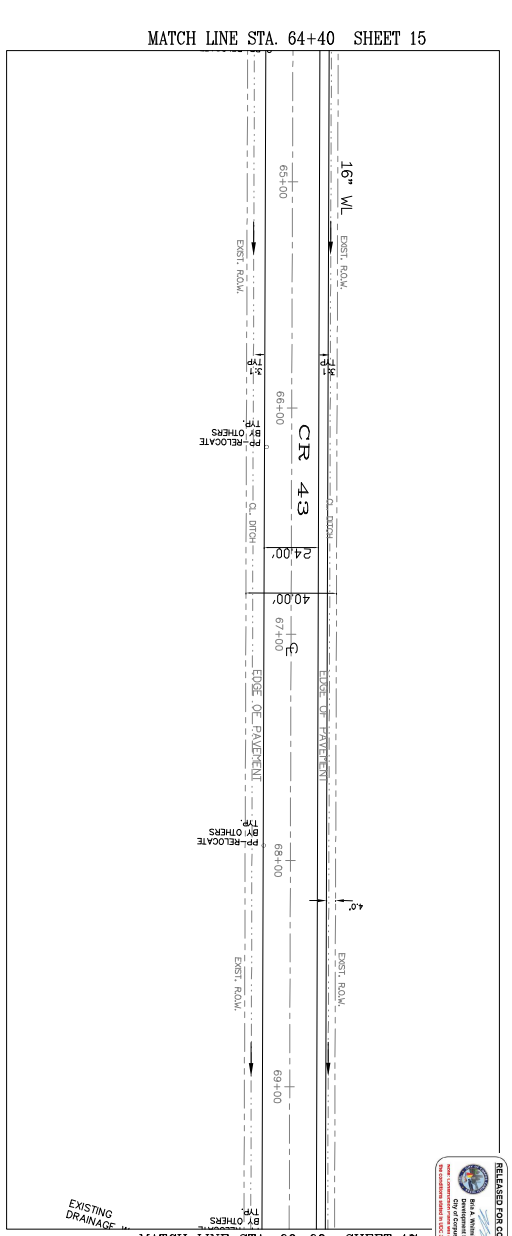
JUAN PERALES, JR. 66652 REGISTERED PROFESSIONAL ENGINEER
11/10/2023

COUNTY ROAD 43
STA. 59+40 TO STA. 64+40

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@peralesengineering.com
5866 S. Staples St. # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188





RELEASED FOR CONSTRUCTION
Eric A. Whitney, P.E., CFM, CPM
Development Services Engineer
www.cctexas.com/development-services

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

COUNTY ROAD 43
STA. 64+40 TO STA. 69+60

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

JUAN PERALES, JR. 66652 REGISTERED PROFESSIONAL ENGINEER
Juan Perales Jr., P.E.
11/10/2023

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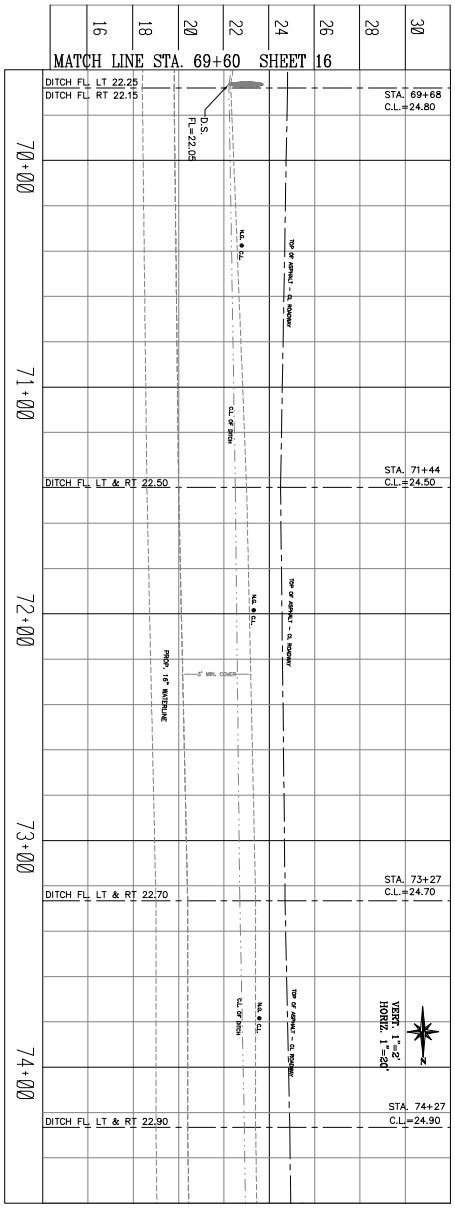
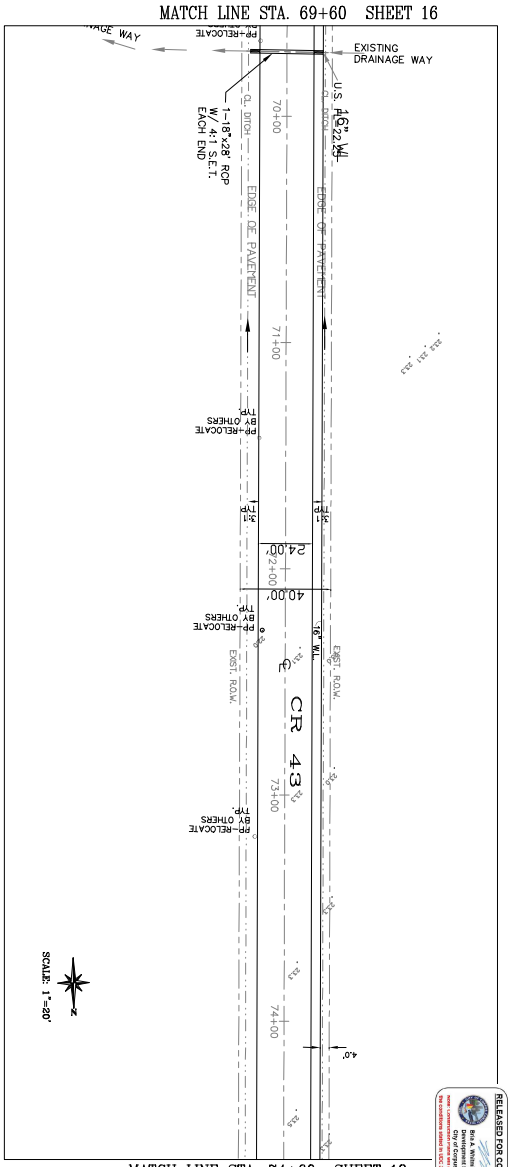
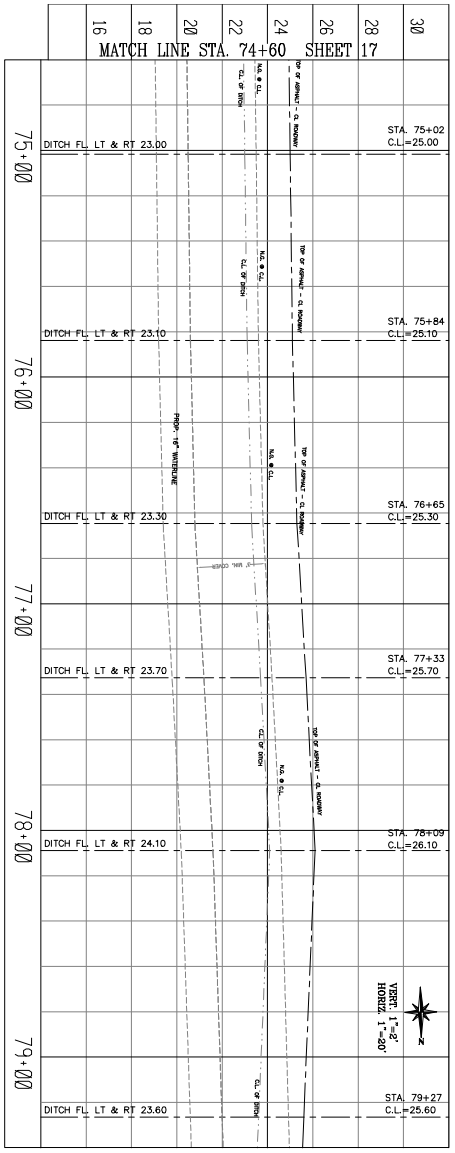
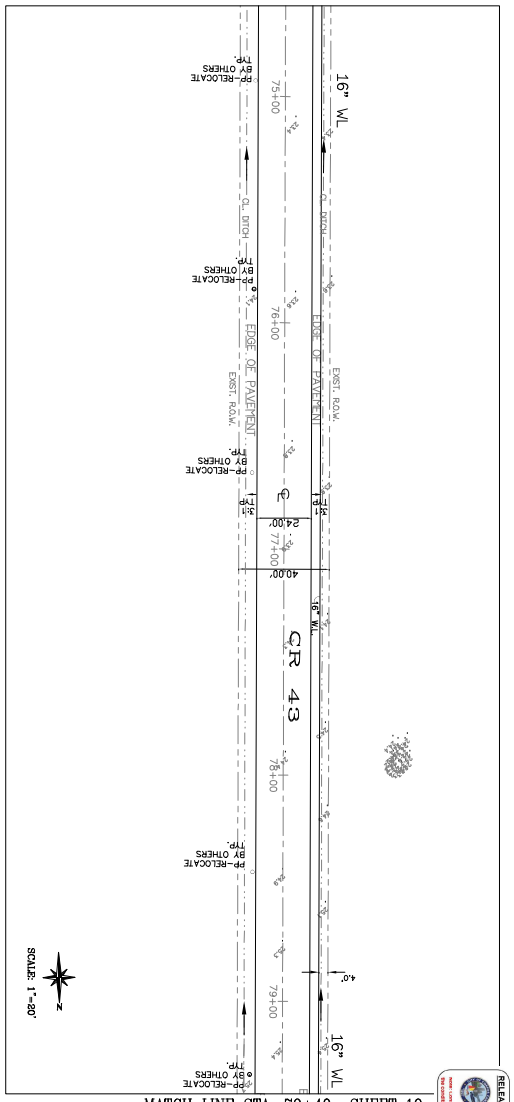




RELEASED FOR CONSTRUCTION
Eric A. Watkins, P.E., CFM, CPM
Development Services Engineer
www.cctexas.com/development-services

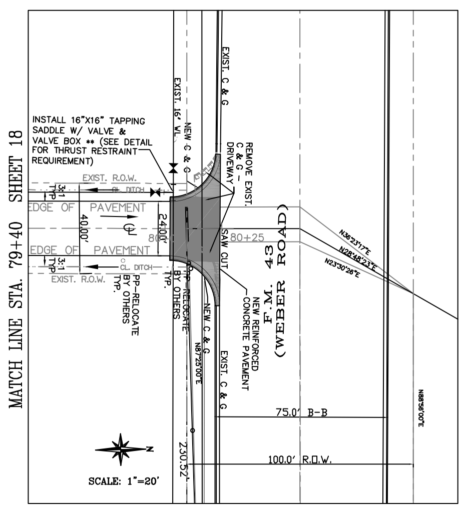
J. Perales Civil Engineering and Planning Services TBPE FIRM No. F-14207 jperales@jperalesengineering.com 5866 S. Staples St. - # 315 Corpus Christi, Texas 78411 Tel: (361) 728-7188	COUNTY ROAD 43 STA. 69+60 TO STA. 74+60 KASPIAN SUBDIVISION UNIT 1 CORPUS CHRISTI , TEXAS	STATE OF TEXAS JUAN PERALES, JR. 66652 REGISTERED PROFESSIONAL ENGINEER Juan Perales Jr., P.E. 11/10/2023	APPROVED BY: JP DRAWN BY: RT DATE: 11-10-23 SCALE: SHOWN DRAWING #: 210237 PAGE: 17 OF: 68



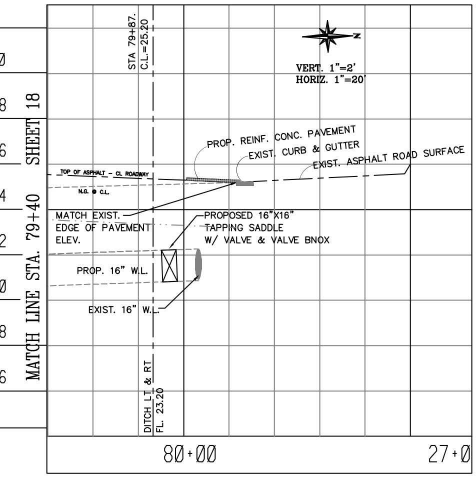


RELEASED FOR CONSTRUCTION
Eric A. Williams, P.E. CFM, CPM
Development Services Engineer

J. Perales Civil Engineering and Planning Services TBPE FIRM No. F-14207 jperales@jperalesengineering.com 5866 S. Staples St. - # 315 Corpus Christi, Texas 78411 Tel: (361) 728-7188	COUNTY ROAD 43 STA. 74+60 TO STA. 79+40 KASPIAN SUBDIVISION UNIT 1 CORPUS CHRISTI , TEXAS
JUAN PERALES, JR. 66652 REGISTERED PROFESSIONAL ENGINEER Juan Perales, P.E. 11/10/2022	APPROVED BY: JP / DRAWN BY: RT DATE: 11-10-23 / SCALE: SHOWN DRAWING #: 210237 PAGE: 18 / OF: 68



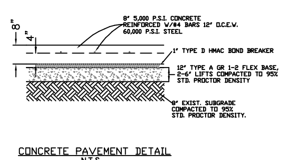
INSTALL 16"X16" TAPPING SADDLE W/ VALVE & VALVE BOX ** (SEE DETAIL FOR THRUST RESTRAINT REQUIREMENT)
MATCH LINE STA. 79+40 SHEET 18
EXIST. C & G
EXIST. 16" WL.
NEW C & G
REMOVE EXIST. C & G - DRIVEWAY
EXIST. R.O.W.
CL. DITCH
3:1 TYP
EDGE OF PAVEMENT
40.00'
24.00'
80+25
SAW CUT
F.M. 43 (WEBER ROAD)
N36°23'17"E
N28°48'23"E
N23°30'26"E
PP-RELOCATE BY OTHERS TYP.
NEW REINFORCED CONCRETE PAVEMENT
N87°25'00"E
N88°58'00"E
75.0' B-B
100.0' R.O.W.
230.52'
SCALE: 1"=20'



30
28
26
24
22
20
18
16
MATCH LINE STA. 79+40 SHEET 18
STA 79+87. C.L.=25.20
VERT. 1"=2'
HORIZ. 1"=20'
PROP. REINF. CONC. PAVEMENT
EXIST. CURB & GUTTER
EXIST. ASPHALT ROAD SURFACE
TOP OF ASPHALT - CL ROADWAY
N.G. @ C.L.
MATCH EXIST. EDGE OF PAVEMENT ELEV.
PROPOSED 16"X16" TAPPING SADDLE W/ VALVE & VALVE BNOX
PROP. 16" W.L.
EXIST. 16" W.L.
DITCH LT & RT FL. 23.20
80+00
27+0

GENERAL NOTES FOR CONCRETE PAVEMENT

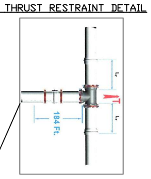
1. ALL REINFORCING STEEL LAPS SHALL BE 30 BAR DIAMETERS. BAR LENGTHS SHALL BE SUCH TO PROVIDE A CLEARANCE OF AT LEAST 2" ALONG PAVEMENT EDGES AND AT JOINTS WHERE THE REINFORCING STEEL IS NOT TO BE CONTINUOUS.
2. EXPANSION JOINT FILLER SHALL BE REDWOOD JOINT SEAL COMPOUND SHALL BE VULKEM 245/255 OR EQUAL, TWO PART POLYURETHANE JOINT SEALANT. IT SHALL MEET THE REQUIREMENTS OF A.S.T.M. C920-87 TYPE M, GRADE P, CLASS 25; USE T, M, A AND O.
3. CONCRETE PAVEMENT SHALL BE 5000 P.S.I. MIN.
4. REINFORCING STEEL SHALL BE SUPPORTED DURING CONSTRUCTION TO MAINTAIN NOT LESS THAN 4 INCHES AND NOT GREATER THAN 5 INCHES COVER FROM TOP OF SLAB.

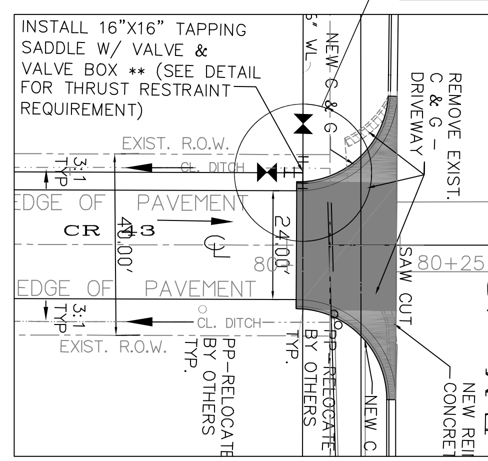


CONCRETE PAVEMENT DETAIL
N.T.S.

RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

** THRUST RESTRAINT DETAIL





INSTALL 16"X16" TAPPING SADDLE W/ VALVE & VALVE BOX ** (SEE DETAIL FOR THRUST RESTRAINT REQUIREMENT)
NEW C & G
REMOVE EXIST. C & G - DRIVEWAY
EXIST. R.O.W.
CL. DITCH
3:1 TYP
EDGE OF PAVEMENT
CR 43
40.00'
24.00'
80+25
SAW CUT
F.M. 43 (WEBER RD.)
PP-RELOCATE BY OTHERS TYP.
NEW REINFORCED CONCRETE

PROPOSED 16 INCH WATERLINE TIE IN THRUST RESTRAINT SUMMARY
PIPE MATERIAL = PVC
NOMINAL SIZE = 16 INCH
TRENCH TYPE = 5
DEPTH OF BURY = 3.0 FT.
TEST PRESSURE = 150 PSI
SOIL TYPE = CH WITH GRANULAR TRENCH BACKFILL
SAFETY FACTOR = 2.0
ASSUMED RESTRAINED PIPE RUN LENGTH, LEFT AND RIGHT = 0 FT.
CALCULATED MINIMUM RESTRAINED PIPE BRANCH LENGTH = 184 FT.

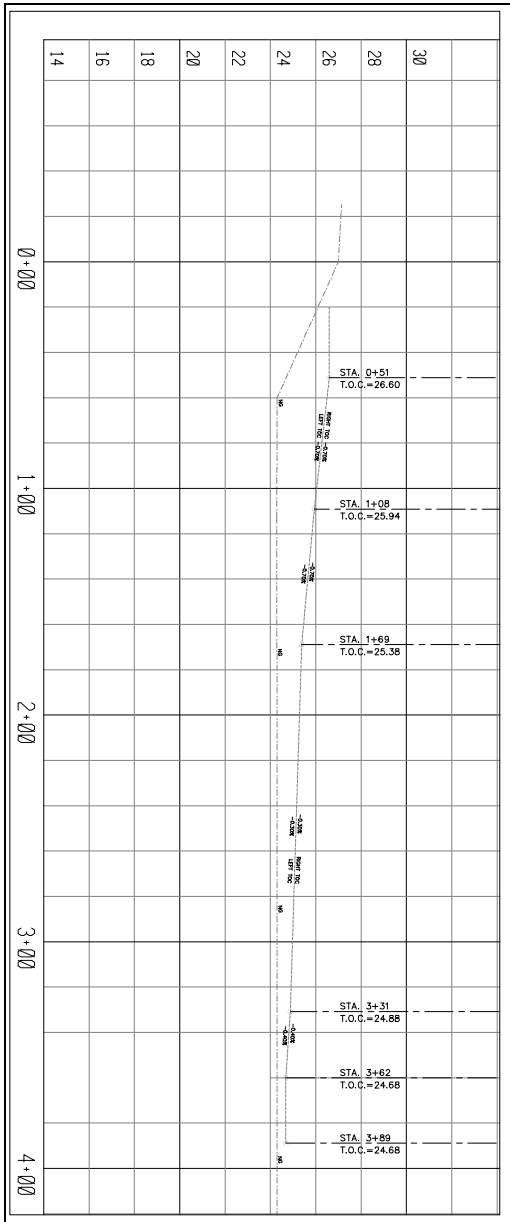
J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

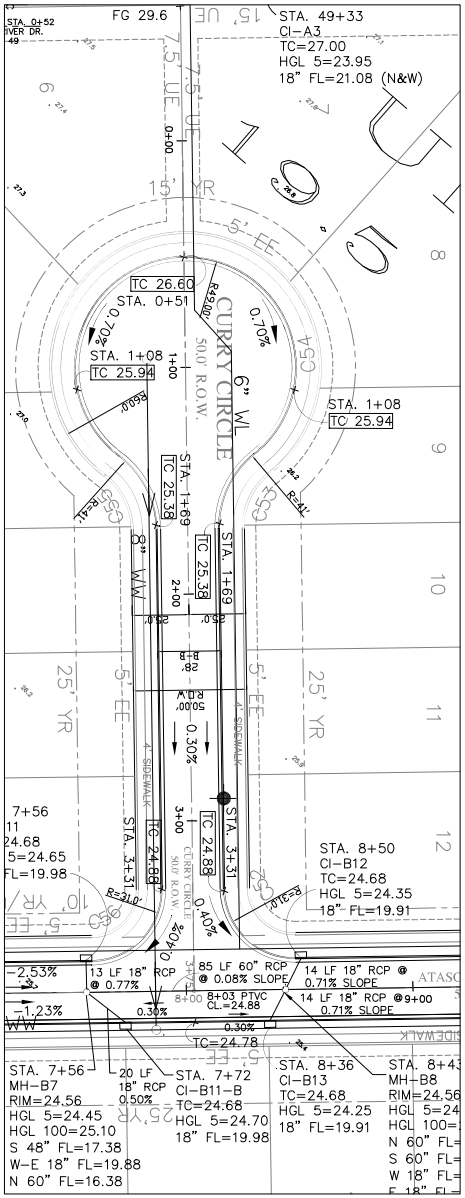
COUNTY ROAD 43
STA. 79+40 TO STA. 80+25

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

STATE OF TEXAS
JUAN PERALES, JR.
66652
LICENSED PROFESSIONAL ENGINEER
11/10/2023

APPROVED BY: JP	DRAWN BY: RT
DATE: 11-10-23	SCALE: SHOWN
DRAWING #: 210237	
PAGE: 19	OF: 68





RELEASED FOR CONSTRUCTION
Brian A. Wittmann, P.E., CFM, CPM
City of Corpus Christi Engineer
NOT RELEASED FOR CONSTRUCTION UNTIL ALL COMMENTS HAVE BEEN ADDRESSED AND PLANS SIGNED AND SEALED

J. Perales Civil Engineering and Planning Services
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jperales@peralesengineering.com
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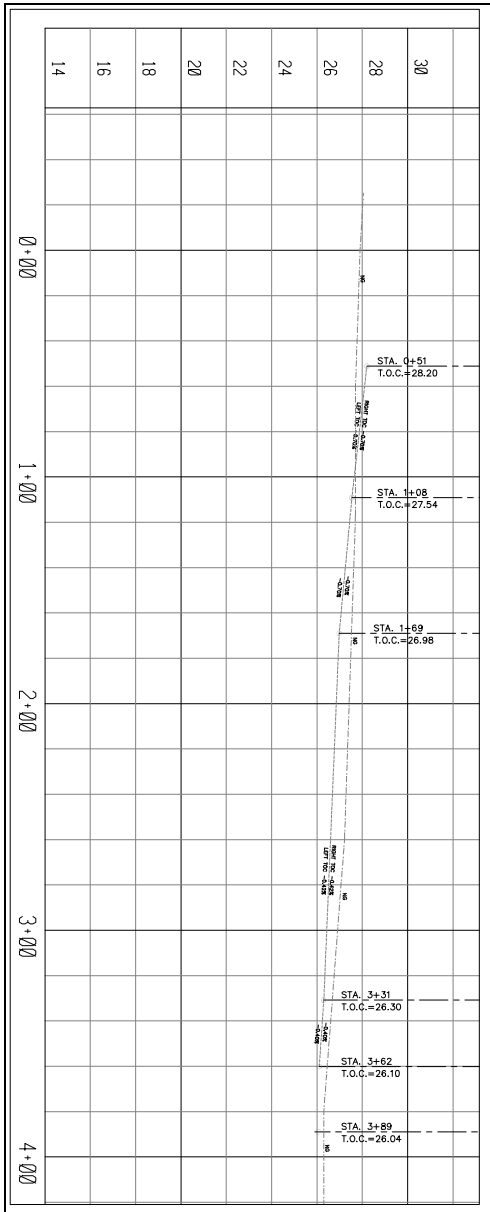
Corpus Christi, Texas 78411
Tel: (361) 728-7188

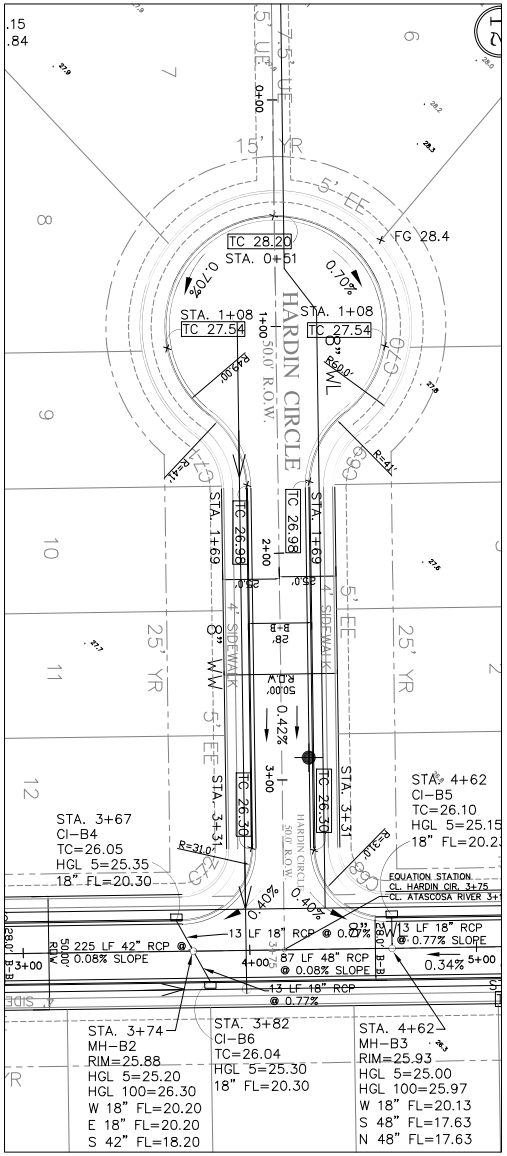
CURRY CIRCLE
STA. 0+00 TO STA. 4+00

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

STATE OF TEXAS
JUAN PERALES, JR.
66652
REGISTERED
PROFESSIONAL ENGINEER
Juan Perales, P.E.
11/10/2023

APPROVED BY: JP	DRAWN BY: RT
DATE: 11-10-23	SCALE: SHOWN
DRAWING #: 210237	
PAGE: 20	OF: 68





RELEASED FOR CONSTRUCTION
Brian A. Wittmer, P.E., CFM, CPM
City of Corpus Christi
Principal Engineer

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

HARDIN CIRCLE
STA. 0+00 TO STA. 4+00

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

STATE OF TEXAS
JUAN PERALES, JR.
66652
REGISTERED
PROFESSIONAL ENGINEER
11/10/2023

APPROVED BY: JP	DRAWN BY: RT
DATE: 11-10-23	SCALE: SHOWN
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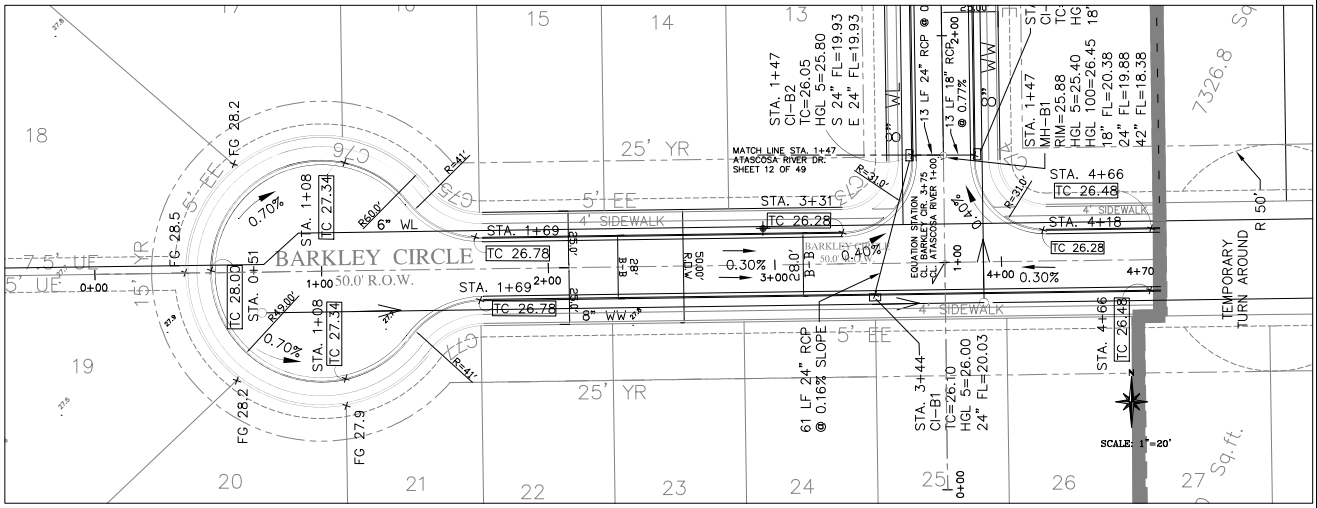
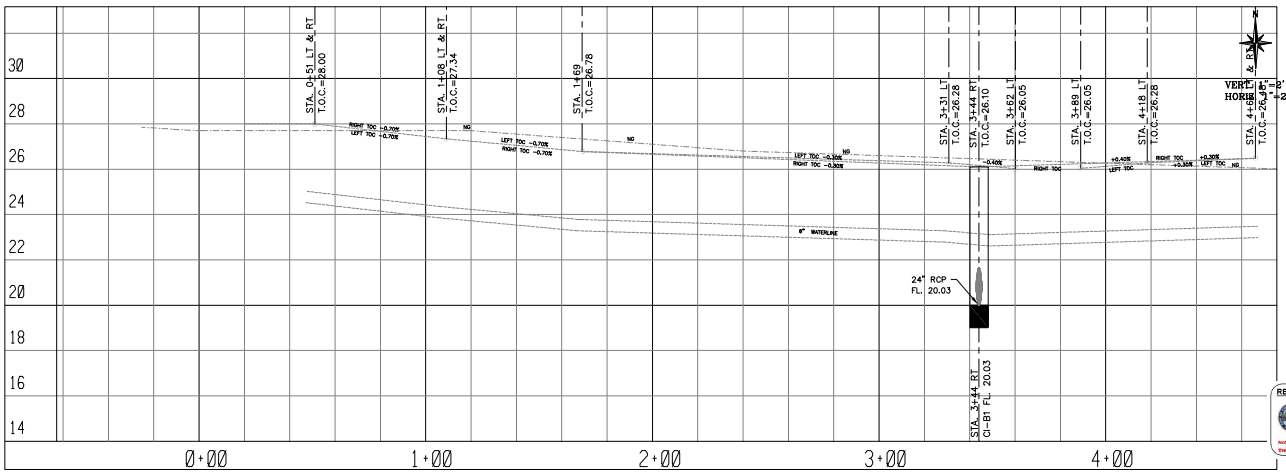
PAGE: 21	OF: 68





RELEASED FOR CONSTRUCTION

Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

NOTE: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

BARKLEY CIRCLE
STA. 0+00 TO STA. 4+70

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

APPROVED BY:	JP	DRAWN BY:	RT
DATE:	11-10-23	SCALE:	SHOWN
DRAWING #:	210237		
PAGE:	22	OF:	68

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jperales@jperalesengineering.com
5866 S. Staples St. - # 315
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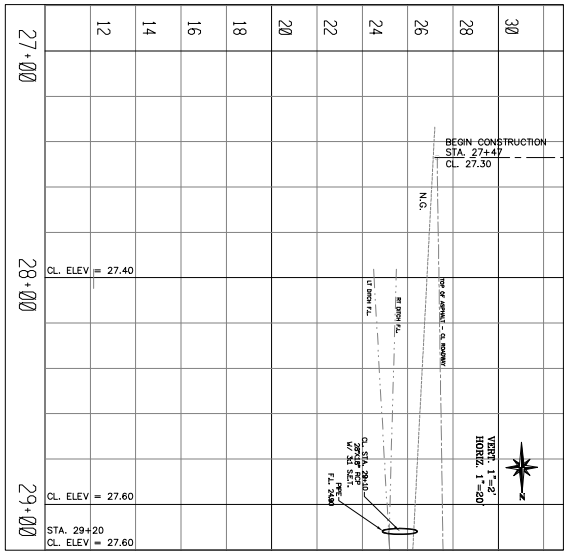
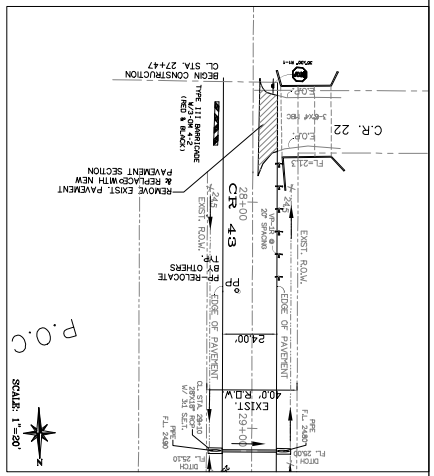
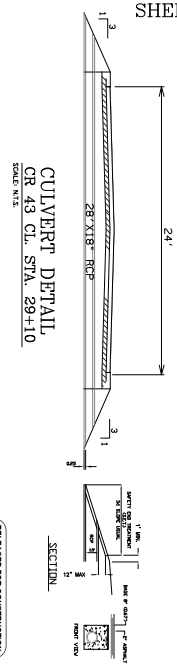
Tel: (361) 728-7188



MATCH LINE STA. 29+20
SHEET 22B



MATCH LINE STA. 29+20
SHEET 22B



CULVERT DETAIL
CR 43 CL. STA. 29+10
SCALE: N.T.S.

RELEASED FOR CONSTRUCTION
Brian A. Wilkinson, P.E., CFM, CPM
City of Corpus Christi Principal Engineer
Date: 12/20/2023
NOTE: CONSTRUCTION PLANS ARE VALID FOR 2 YEARS

J. Perales Civil Engineering and
Planning Services
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COUNTY ROAD 43
STA. 27+47 TO STA. 29+20

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

STATE OF TEXAS
JUAN PERALES, JR.
66652
REGISTERED
PROFESSIONAL ENGINEER
Juan Perales, P.E.
11/10/2023

APPROVED BY: JP	DRAWN BY: RT
DATE: 11-10-23	SCALE: SHOWN
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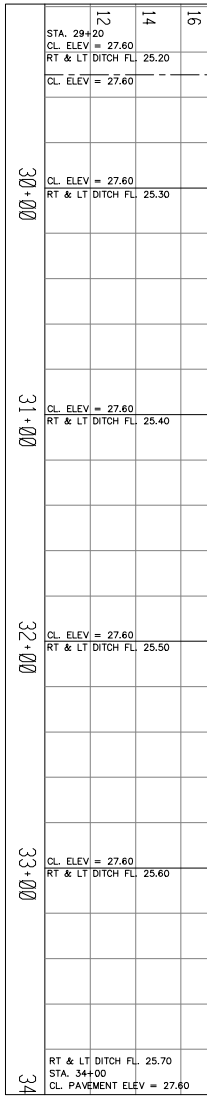
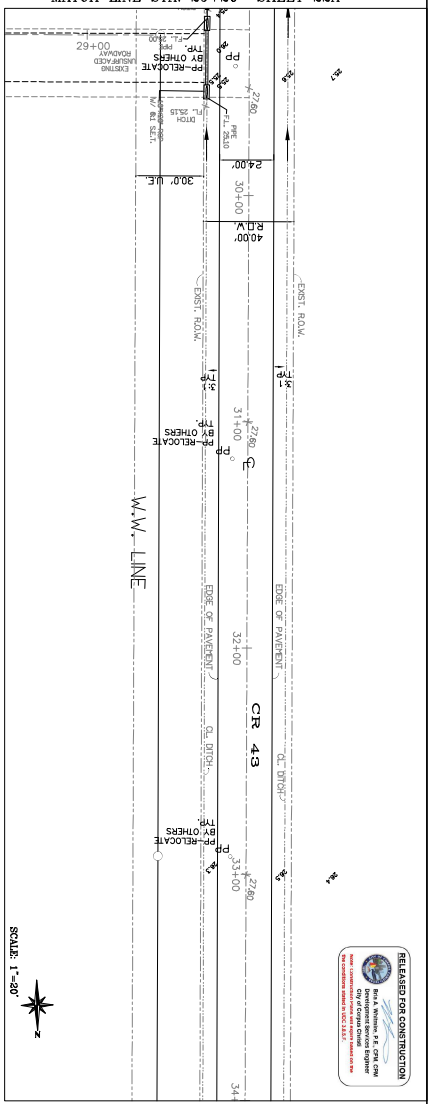
MATCH LINE STA. 29+20 SHEET 22A



MATCH LINE STA. 34+00 SHEET 22C

MATCH LINE STA. 29+20 SHEET 22A



MATCH LINE STA. 34+00 SHEET 22C

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@peralesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

COUNTY ROAD 43
STA. 29+20 TO STA. 34+00

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

JUAN PERALES, JR. 66658 REGISTERED PROFESSIONAL ENGINEER
11/10/2023

APPROVED BY: JP	DRAWN BY: RT
DATE: 11-10-23	SCALE: SHOWN
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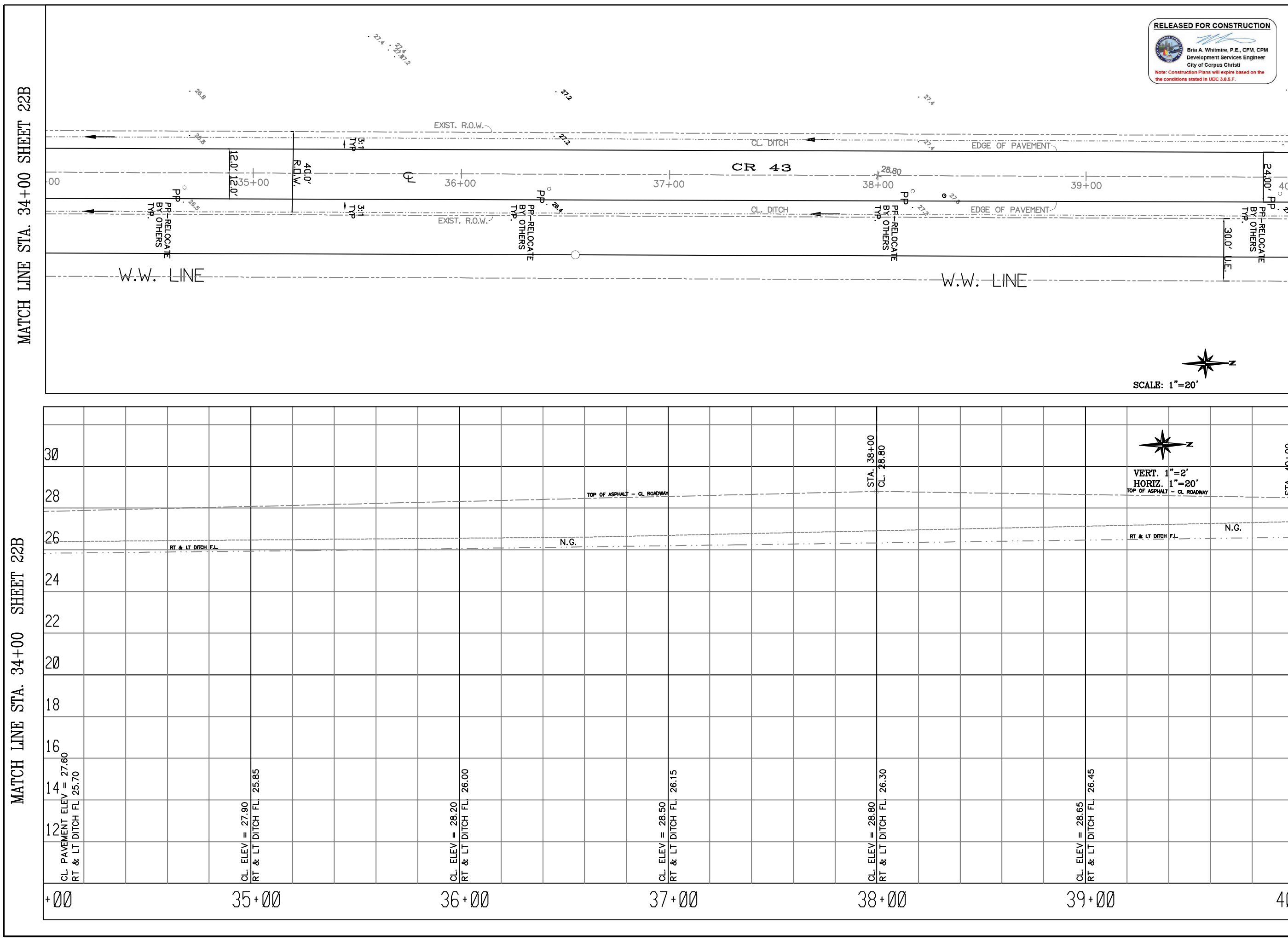

MATCH LINE STA. 34+00 SHEET 22B
MATCH LINE STA. 40+00 SHEET 9
RELEASED FOR CONSTRUCTION
CR 43
EXIST. R.O.W.
CL. DITCH
EDGE OF PAVEMENT
W.W. LINE
PP
PP-RELOCATE BY OTHERS TYP.
40.0' R.O.W.
12.0'
3:1 TYP.
24.00'
30.0' U.E.
35+00
36+00
37+00
38+00
39+00
SCALE: 1"=20'
TOP OF ASPHALT - CL ROADWAY
N.G.
RT & LT DITCH F.L.
VERT. 1"=2'
HORIZ. 1"=20'
STA. 38+00 CL. 28.80
STA. 40+00
CL. PAVEMENT ELEV = 27.60 RT & LT DITCH FL 25.70
CL. ELEV = 27.90 RT & LT DITCH FL 25.85
CL. ELEV = 28.20 RT & LT DITCH FL 26.00
CL. ELEV = 28.50 RT & LT DITCH FL 26.15
CL. ELEV = 28.80 RT & LT DITCH FL 26.30
CL. ELEV = 28.65 RT & LT DITCH FL 26.45
30
28
26
24
22
20
18
16
14
12
+00
35+00
36+00
37+00
38+00
39+00
40

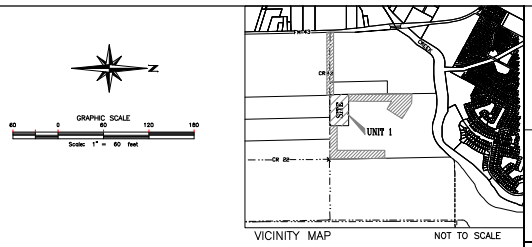
DRAWN BY: RT
APPROVED BY: JP
SCALE: SHOWN
DATE: 11-10-23
DRAWING #: 210237
PAGE: 22C
OF: 68

COUNTY ROAD 43
STA. 34+00 TO STA. 40+00

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@peralesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

NOTES:
UNIT 1 INCLUDES 64 SINGLE FAMILY RESIDENTIAL LOTS
64 LOTS X 3.5 CAPITA PER LOT = 224
ESTIMATED AVERAGE DAILY FLOW = 22,400 GAL PER DAY
ESTIMATED PEAK HOURLY FLOW = 62 GAL PER MINUTE



VICINITY MAP NOT TO SCALE

GRAPHIC SCALE
60 0 60 120 180
Scale: 1" = 60 feet

LIMITS OF UNIT 1
BEGIN OFF SITE WATERLINE EXTENSION

MICHAEL FASELER
DOC.: 2002008129
O.P.R.N.C.T.
S ½ SECTION 5
LAURELES FARM TRACT

DOC.: 2001033299
O.P.R.N.C.T.
N ½ SECTION 5
LAURELES FARM TRACT

N ½ SECTION 6
LAURELES FARM TRACT
WEBER GERMAN RD.
DOC.: 2004004195
O.P.R.N.C.T.

CR 43

WWMH-A9
STA. 40+18
RIM=29.16
FL= 6.42
(N&S)

345 LF 15" WW LINE @ 0.19% SLOPE
354 LF 15" WW LINE @ 0.19% SLOPE
331 LF 15" WW LINE @ 0.19% SLOPE
363 LF 15" WW LINE @ 0.19% SLOPE

ARANSAS RIVER DR.

RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

APPROVED BY: JP	DRAWN BY: RT
DATE: 11-10-23	SCALE: SHOWN
DRAWING #: 210237	
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JAN PERALES, JR. 66628 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
Jan Perales, Jr., P.E.
11/10/2023

UTILITY PLAN

KASPIAN SUBDIVISION UNIT 1

CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
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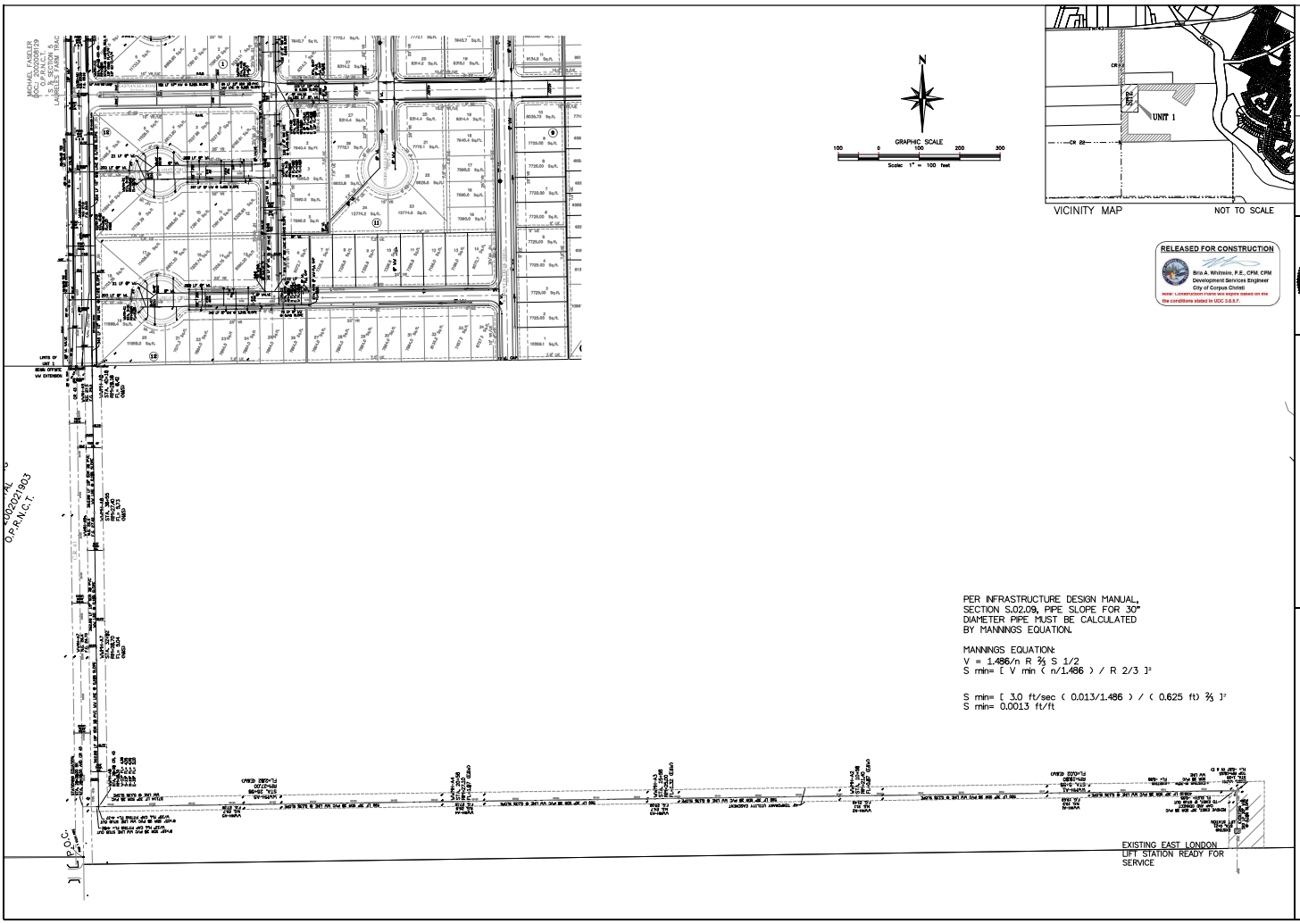


RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
NOTE: CONSTRUCTION PLANS ARE SUBJECT TO COMPLIANCE WITH
the conditions stated in UDC 3.8.5.F.

PER INFRASTRUCTURE DESIGN MANUAL, SECTION S.02.09, PIPE SLOPE FOR 30" DIAMETER PIPE MUST BE CALCULATED BY MANNINGS EQUATION.

MANNINGS EQUATION:
$V = 1.486/n\ R^{2/3}\ S^{1/2}$
$S_{min} = [\ V_{min}\ (\ n/1.486\ )\ /\ R^{2/3}\ ]^2$

$S_{min} = [\ 3.0\ ft/sec\ (\ 0.013/1.486\ )\ /\ (\ 0.625\ ft)^{2/3}\ ]^2$
$S_{min} = 0.0013\ ft/ft$

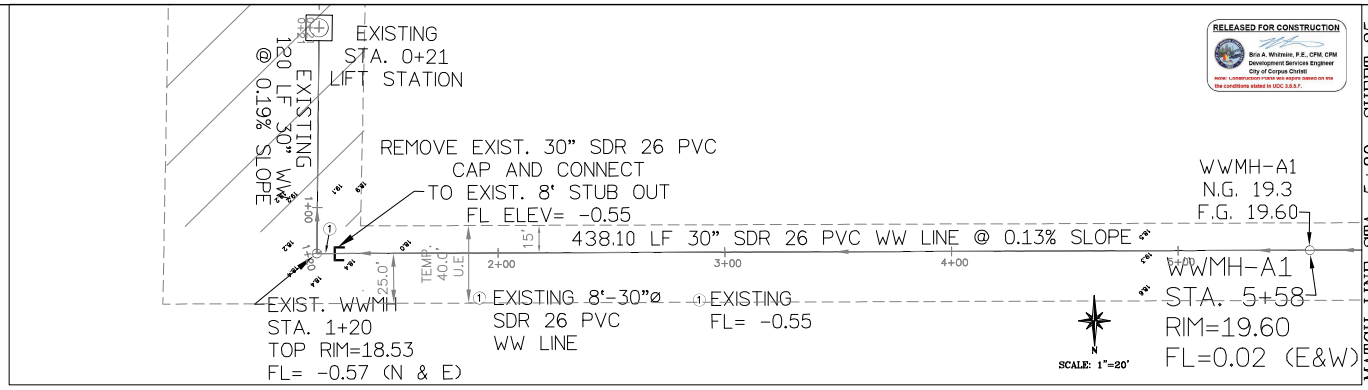
APPROVED BY:	JP
DATE:	11-10-23
DRAWING #:	210237
PAGE:	23A
DRAWN BY:	RT
SCALE:	SHOWN
OF:	68

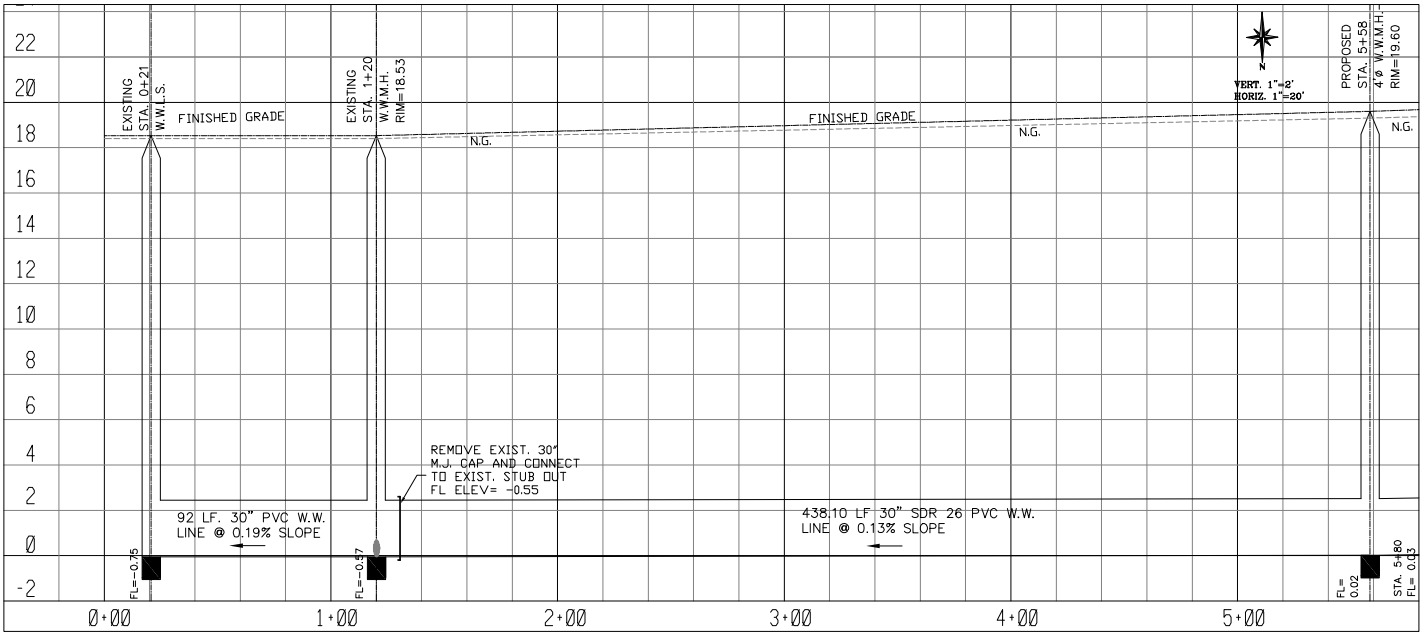
JAN PERALES, JR. 66628 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

UTILITY PLAN
OFFSITE WASTEWATER SYSTEM

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. • #315
Corpus Christi, Texas 78411
Tel: (361) 728-7188





MATCH LINE STA. 5+80

MATCH LINE STA. 5+80 SHEET 25

APPROVED BY: JP | DRAWN BY: RT
DATE: 11-10-23 | SCALE: SHOWN
DRAWING #: 210237
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OFFSITE W.W. PLAN & PROFILE
STA. 0+00 TO STA. 5+80

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
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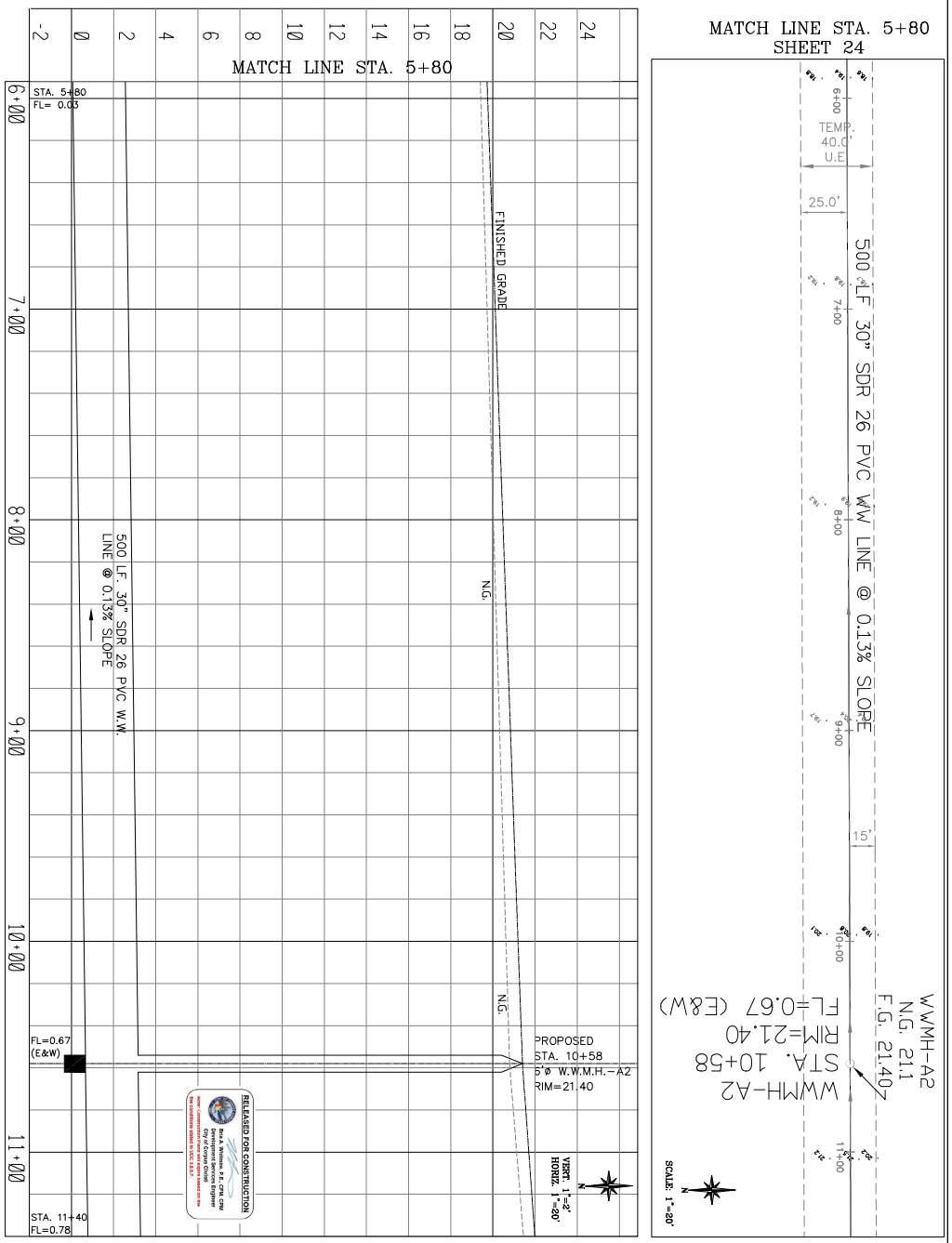

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jperales@peralesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

OFFSITE W.W. PLAN & PROFILE
STA. 5+80 TO STA. 11+40

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

STATE OF TEXAS
JUAN PERALES, JR.
66652
REGISTERED
PROFESSIONAL ENGINEER
11/10/2023

APPROVED BY:	JP	DRAWN BY:	RT
DATE:	11-10-23	SCALE:	SHOWN
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PAGE:	25	OF:	68

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SCALE: SHOWN
DATE: 11-10-23
DRAWING #: 210237
PAGE: 26 OF: 68

JOHN PERALES, JR. 66082 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

OFFSITE W.W. PLAN & PROFILE
STA. 11+40 TO STA. 17+00

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

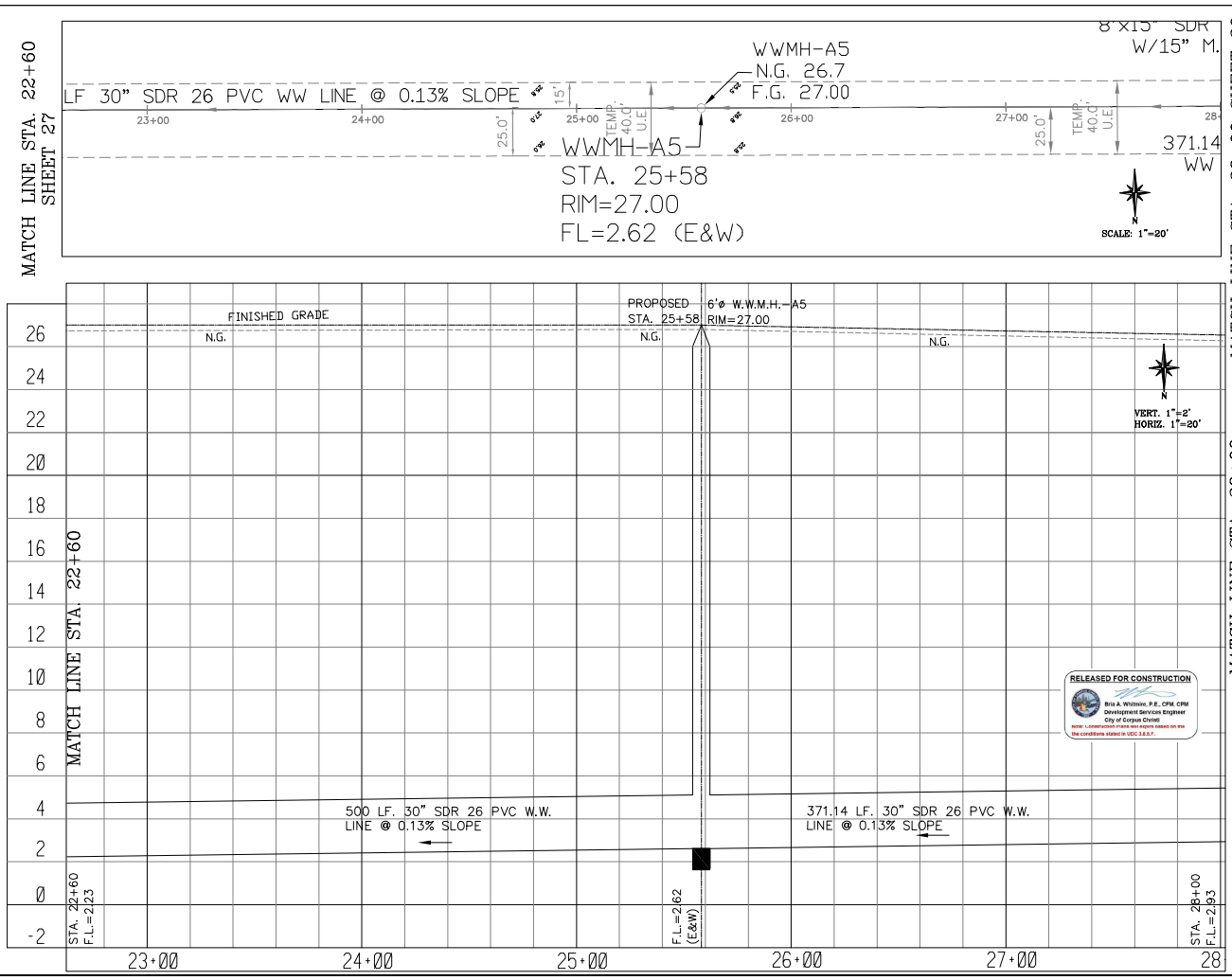
J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

OFFSITE W.W. PLAN & PROFILE
STA. 17+00 TO STA. 22+60

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

APPROVED BY:	JP	DRAWN BY:	RT
DATE:	11-10-23	SCALE:	SHOWN
DRAWING #:	210237		
PAGE:	27	OF:	68

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188



APPROVED BY: JP | DRAWN BY: RT
DATE: 11-10-23 | SCALE: SHOWN
DRAWING #: 210237
PAGE: 28 | OF: 68

JOHN PERALES, JR. 66068 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

OFFSITE W.W. PLAN & PROFILE
STA. 22+60 TO STA. 28+00

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

RELEASED FOR CONSTRUCTION

Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

NOTE: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

OFFSITE W.W. PLAN & PROFILE
STA. 28+00 TO STA. 29+29

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

JAIME PERALES, JR. 66062 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

APPROVED BY:	JP
DATE:	11-10-23
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PAGE:	29
DRAWN BY:	RT
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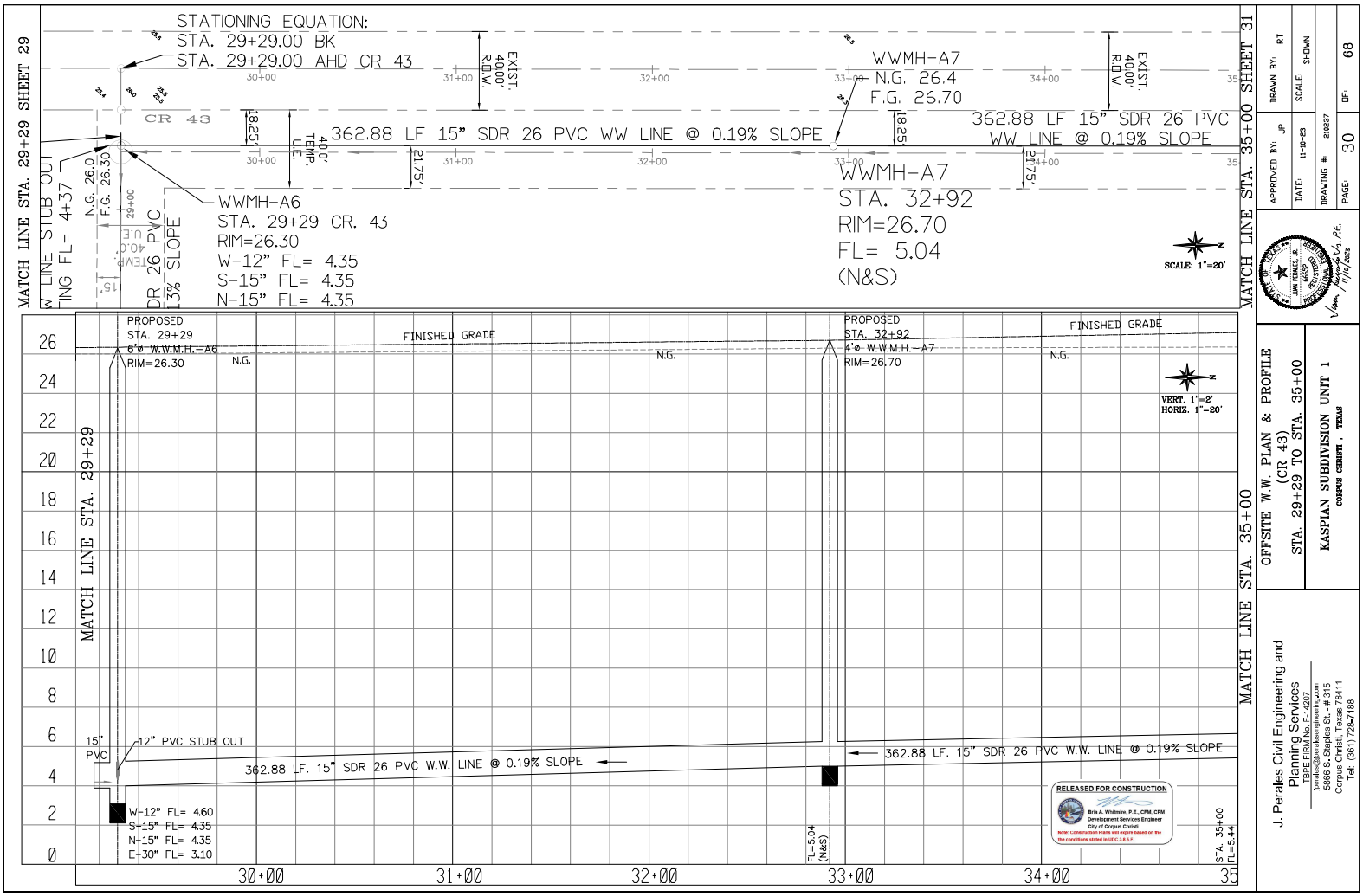
OF:	68



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APPROVED BY: JP
SCALE: SHOWN
DATE: 11-10-23
DRAWING #: 210237
PAGE: 30 OF: 68

JOE RENALE, JR. 66052 LICENSED PROFESSIONAL ENGINEER
11/10/2023

OFFSITE W.W. PLAN & PROFILE
(CR 43)
STA. 29+29 TO STA. 35+00

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
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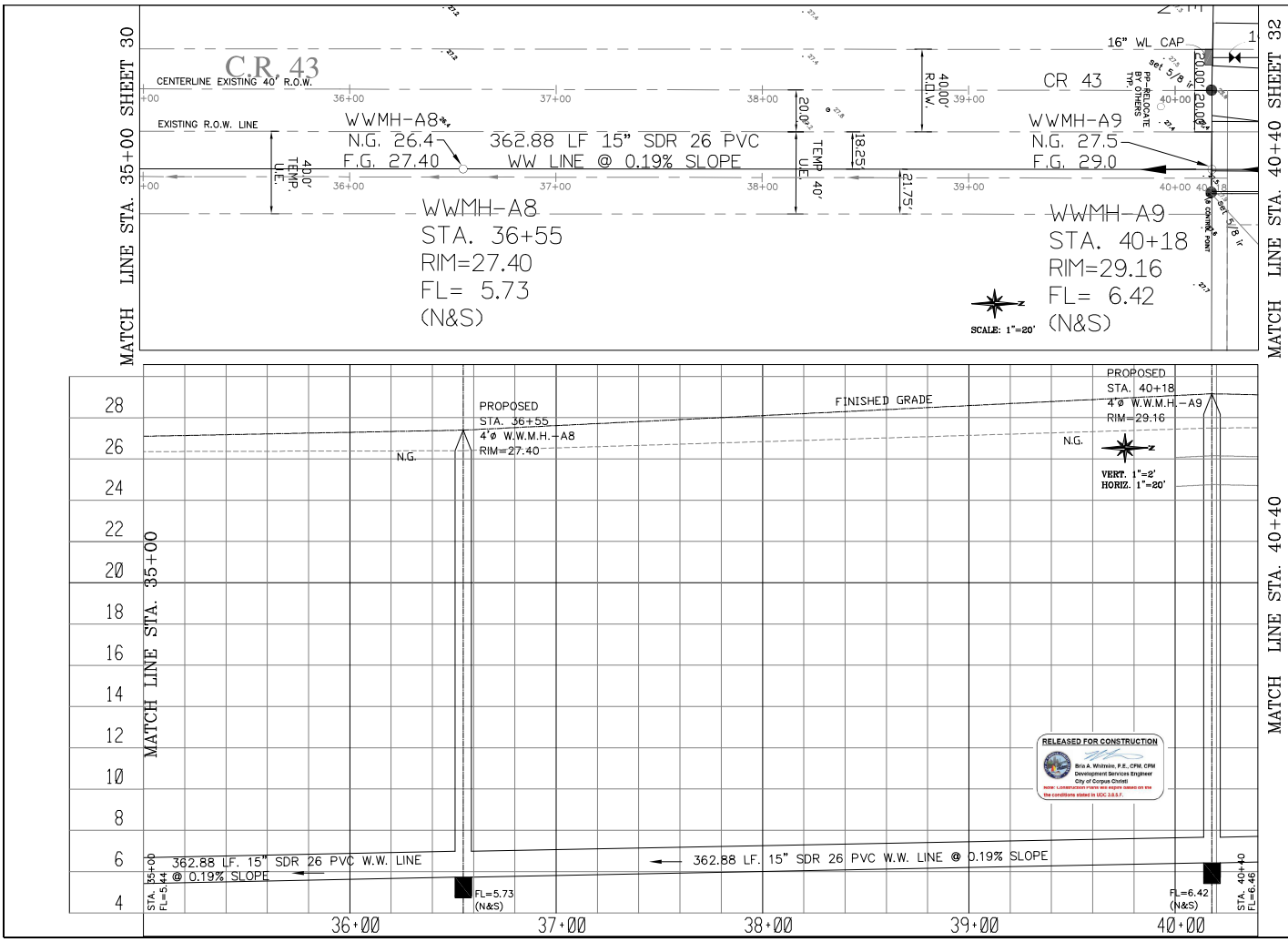

APPROVED BY: JP | DRAWN BY: RT
DATE: 11-10-23 | SCALE: SHOWN
DRAWING #: 210237
PAGE: 31 | OF: 68

JOE RENALE, JR. 66052 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS
Joe Renale, Jr., P.E. 11/10/2023

OFFSITE W.W. PLAN & PROFILE
(CR 43)
STA. 35+00 TO STA. 40+40

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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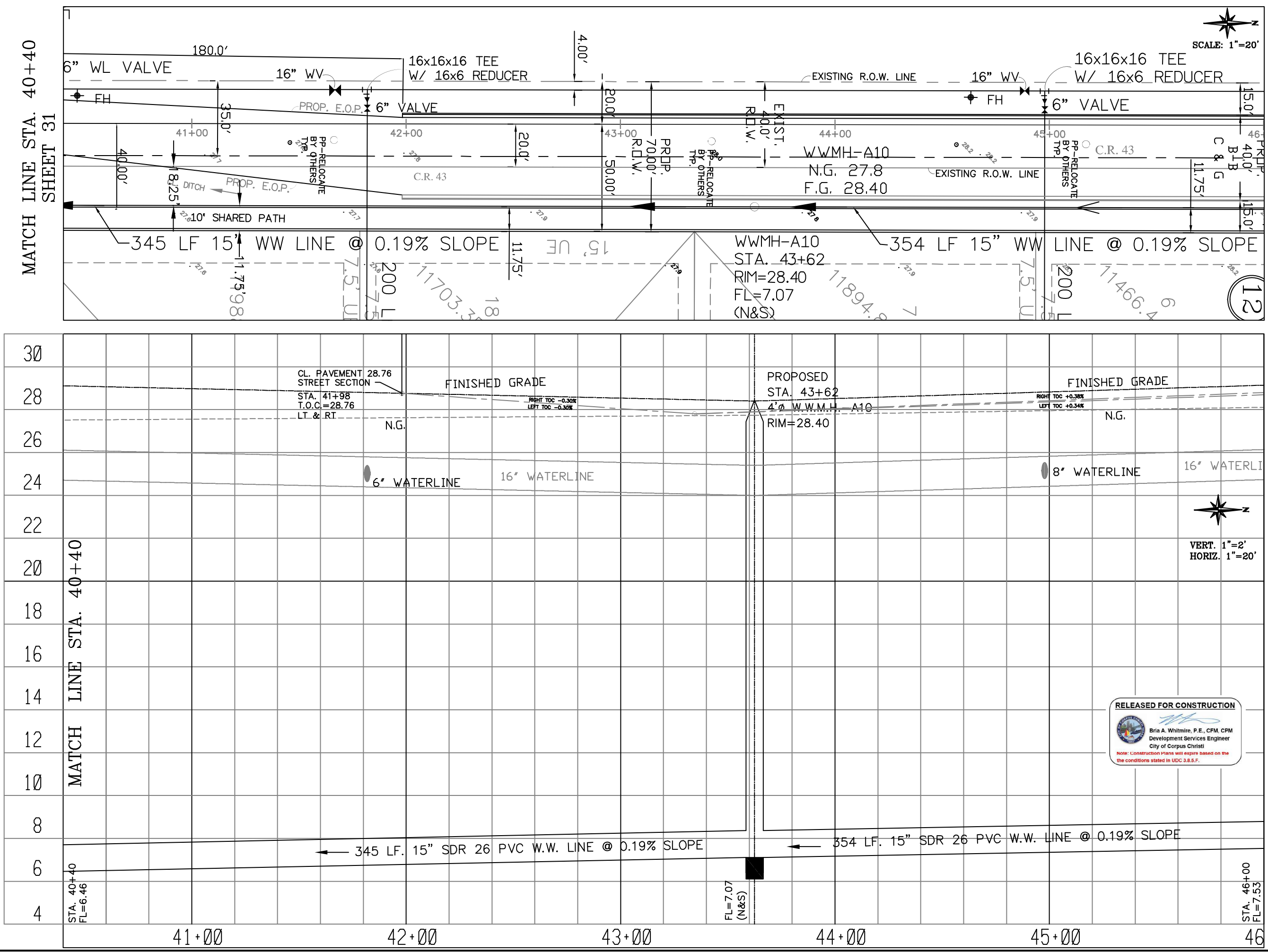
MATCH LINE STA. 40+40 SHEET 31
MATCH LINE STA. 46+00 SHEET 33
SCALE: 1"=20'
6" WL VALVE
180.0'
16" WV
16x16x16 TEE W/ 16x6 REDUCER
4.00'
EXISTING R.O.W. LINE
FH
6" VALVE
PROP. E.O.P.
35.0'
20.0'
41+00
42+00
43+00
44+00
45+00
PP-RELOCATE BY OTHERS TYP.
PROP. 70.00' R.O.W.
EXIST. 40.0' R.O.W.
WWMH-A10
N.G. 27.8
F.G. 28.40
C.R. 43
C & G B-B
PROP. 40.0'
11.75'
40.00'
18.25'
DITCH
50.00'
10' SHARED PATH
15.0'
345 LF 15" WW LINE @ 0.19% SLOPE
354 LF 15" WW LINE @ 0.19% SLOPE
15' UE
WWMH-A10
STA. 43+62
RIM=28.40
FL=7.07
(N&S)
CL. PAVEMENT 28.76
STREET SECTION
STA. 41+98
T.O.C.=28.76
LT & RT
FINISHED GRADE
N.G.
PROPOSED
STA. 43+62
4'ø W.W.M.H. A10
RIM=28.40
6' WATERLINE
16' WATERLINE
8' WATERLINE
VERT. 1"=2'
HORIZ. 1"=20'
RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the conditions stated in UDC 3.8.5.F.
345 LF. 15" SDR 26 PVC W.W. LINE @ 0.19% SLOPE
354 LF. 15" SDR 26 PVC W.W. LINE @ 0.19% SLOPE
STA. 40+40 FL=6.46
FL=7.07 (N&S)
STA. 46+00 FL=7.53
41+00
42+00
43+00
44+00
45+00
46

DRAWN BY: RT

APPROVED BY: JP

SCALE: SHOWN

DATE: 11-10-23

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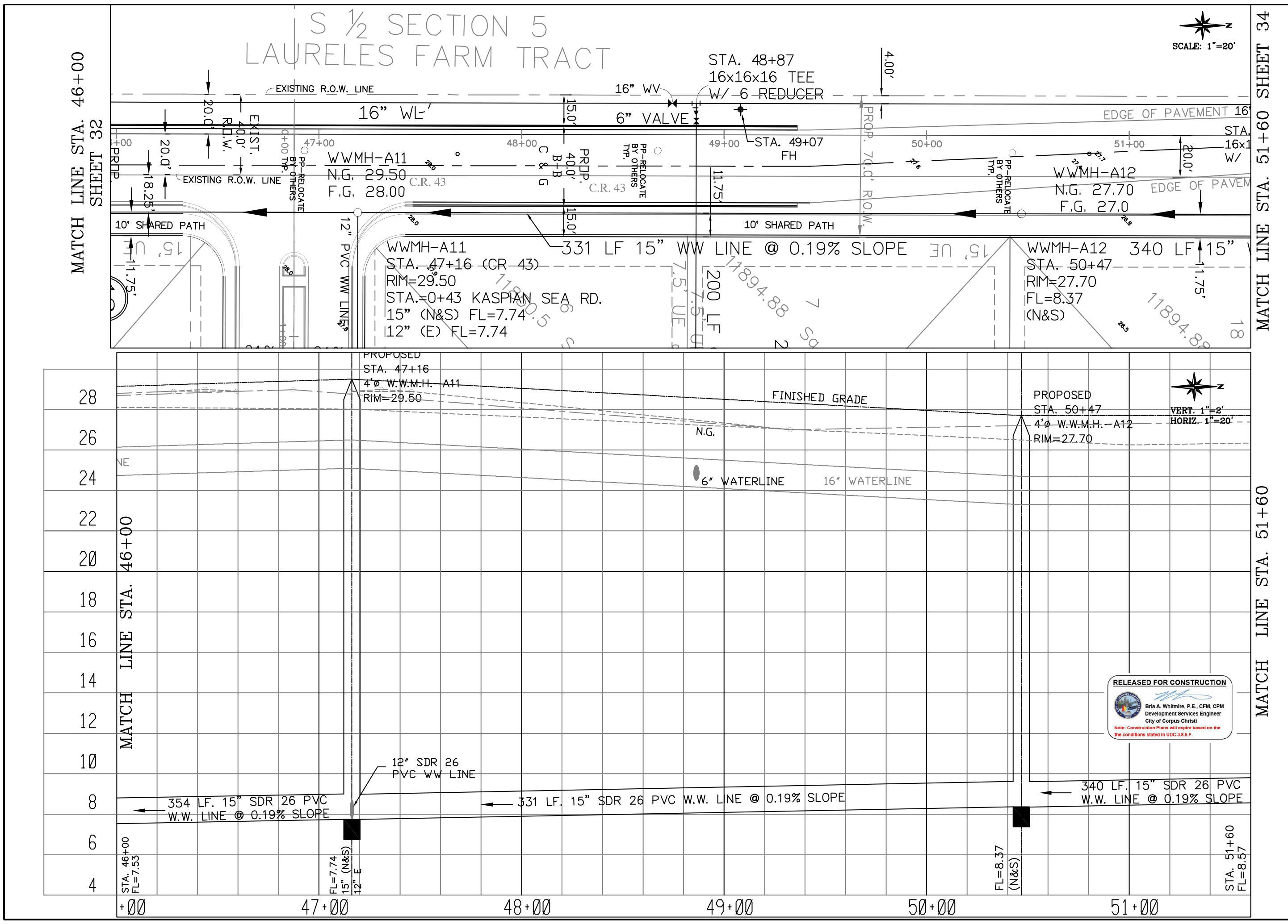
STATE OF TEXAS
JUAN PERALES, JR.
66652
REGISTERED PROFESSIONAL ENGINEER

C.R. 43 W.W. PLAN & PROFILE STA. 40+40 TO STA. 46+00

KASPIAN SUBDIVISION UNIT 1

CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St., # 315
Corpus Christi, Texas 78411
Tel: (361) 726-7188


S ½ SECTION 5
LAURELES FARM TRACT
SCALE: 1"=20'
MATCH LINE STA. 46+00 SHEET 32
MATCH LINE STA. 51+60 SHEET 34
EXISTING R.O.W. LINE
16" WL
16" WV
6" VALVE
STA. 48+87
16x16x16 TEE
W/ 6 REDUCER
STA. 49+07
FH
EDGE OF PAVEMENT
EXIST. 40.0' R.O.W.
PROP. 40.0' B-B C & G
PROP. 70.0' R.O.W.
PP-RELOCATE BY OTHERS TYP.
WWMH-A11
N.G. 29.50
F.G. 28.00
WWMH-A12
N.G. 27.70
F.G. 27.0
C.R. 43
10' SHARED PATH
12" PVC WW LINE
WWMH-A11
STA. 47+16 (CR 43)
RIM=29.50
STA.=0+43 KASPIAN SEA RD.
15" (N&S) FL=7.74
12" (E) FL=7.74
331 LF 15" WW LINE @ 0.19% SLOPE
15' UE
200 LF
WWMH-A12
STA. 50+47
RIM=27.70
FL=8.37
(N&S)
340 LF 15"
PROPOSED
STA. 47+16
4'ø W.W.M.H. A11
RIM=29.50
FINISHED GRADE
N.G.
PROPOSED
STA. 50+47
4'ø W.W.M.H.-A12
RIM=27.70
VERT. 1"=2'
HORIZ. 1"=20'
6' WATERLINE
16' WATERLINE
MATCH LINE STA. 46+00
MATCH LINE STA. 51+60
12" SDR 26
PVC WW LINE
354 LF. 15" SDR 26 PVC
W.W. LINE @ 0.19% SLOPE
331 LF. 15" SDR 26 PVC W.W. LINE @ 0.19% SLOPE
340 LF. 15" SDR 26 PVC
W.W. LINE @ 0.19% SLOPE
STA. 46+00
FL=7.53
FL=7.74
15" (N&S)
12" E
FL=8.37
(N&S)
STA. 51+60
FL=8.57
28
26
24
22
20
18
16
14
12
10
8
6
4
46+00
47+00
48+00
49+00
50+00
51+00
RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the conditions stated in UDC 3.8.5.F.

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C.R. 43 W.W. PLAN & PROFILE
STA. 46+00 TO STA. 51+60

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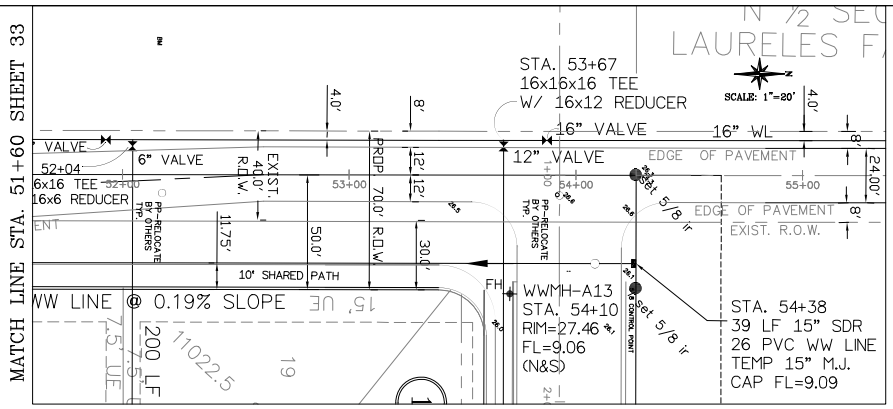

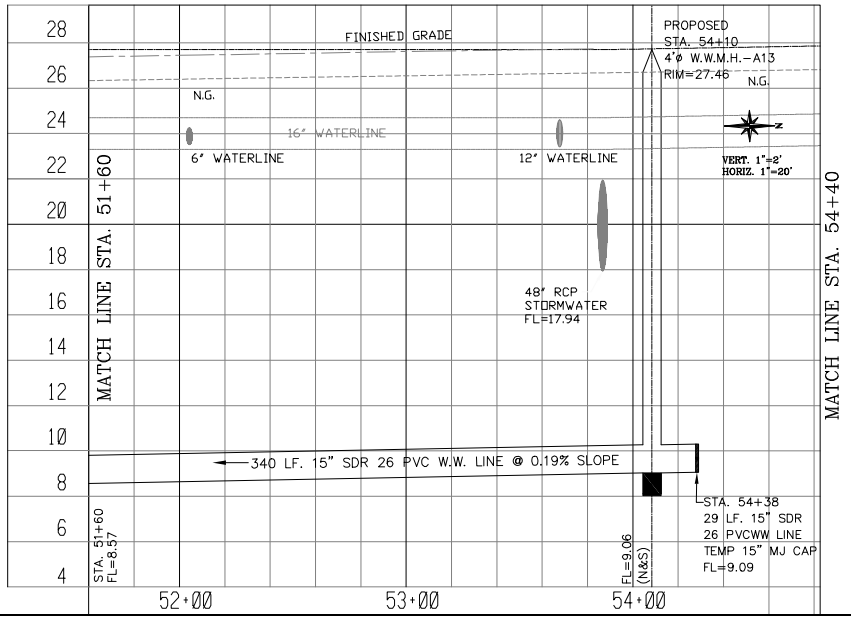

RELEASED FOR CONSTRUCTION
Brin A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
NOTE: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

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JOHN PERALES, JR. 66062 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS
John Perales Jr., P.E. 11/10/2023

C.R. 43 W.W. PLAN & PROFILE
STA. 51+60 TO STA. 54+40

KASPIAN SUBDIVISION UNIT 1
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jperales@jperalesengineering.com
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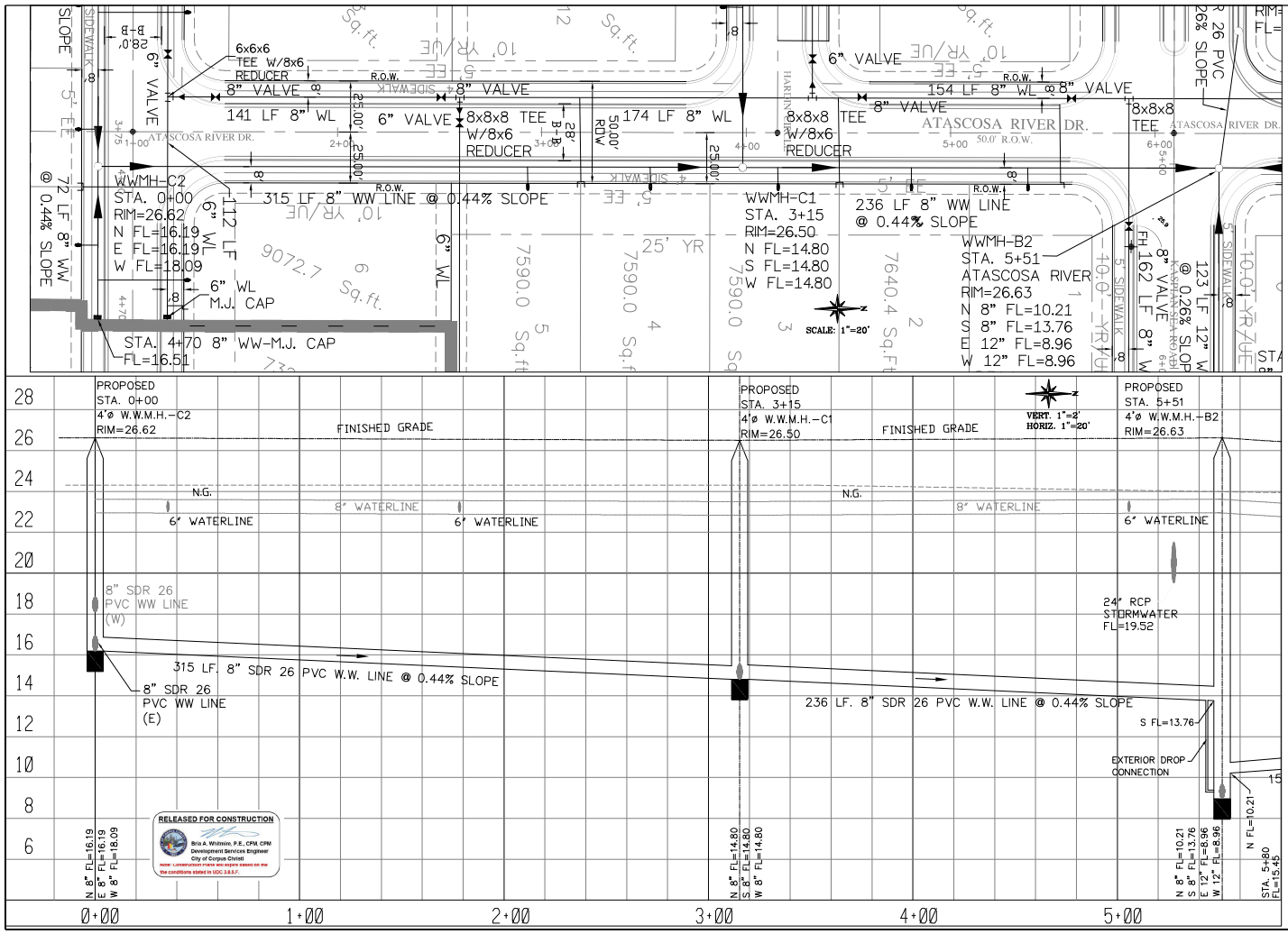
Corpus Christi, Texas 78411
Tel: (361) 728-7188



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APPROVED BY: JP
DATE: 11-10-23
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JAMES PERALES, JR. 66652 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS
James Perales, Jr., P.E. 11/10/2023

ATASCOSA RIVER DR.
W.W. PLAN & PROFILE
STA. 0+00 TO STA. 5+80

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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jperales@jperalesengineering.com
5866 S. Staples St., # 315
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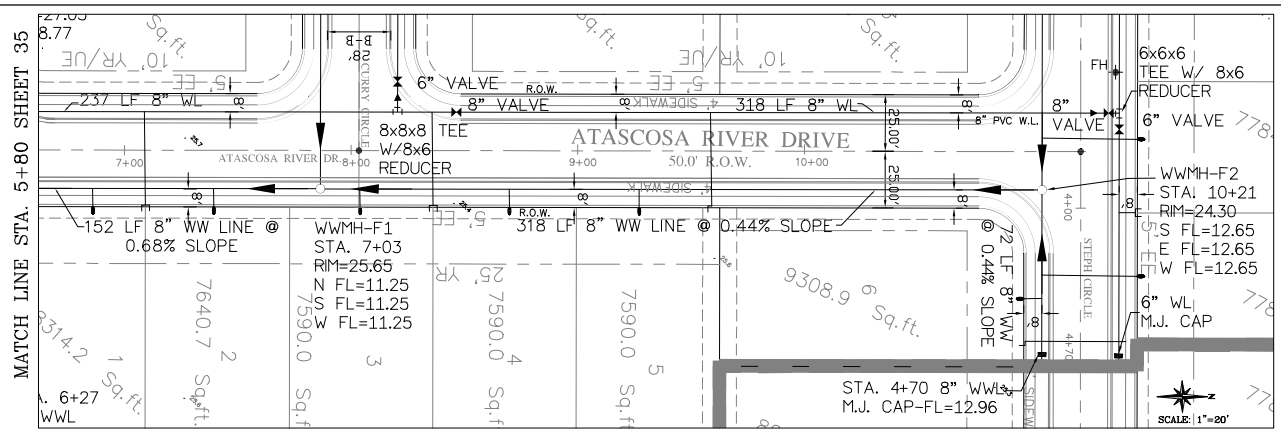
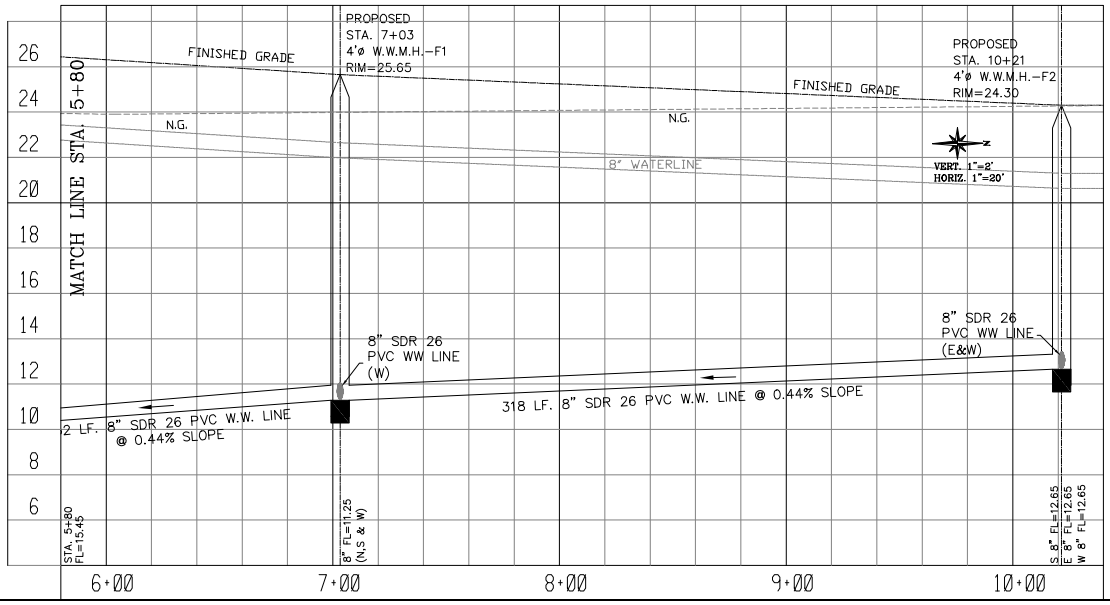
Tel: (361) 728-7188





RELEASED FOR CONSTRUCTION
Bris A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

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LAN PERALES JR. 66682 LICENSED PROFESSIONAL ENGINEER
J. Perales, Jr., P.E. 11/10/2023

ATASCOSA RIVER DR.
W.W. PLAN & PROFILE
STA. 5+80 TO STA. 10+40

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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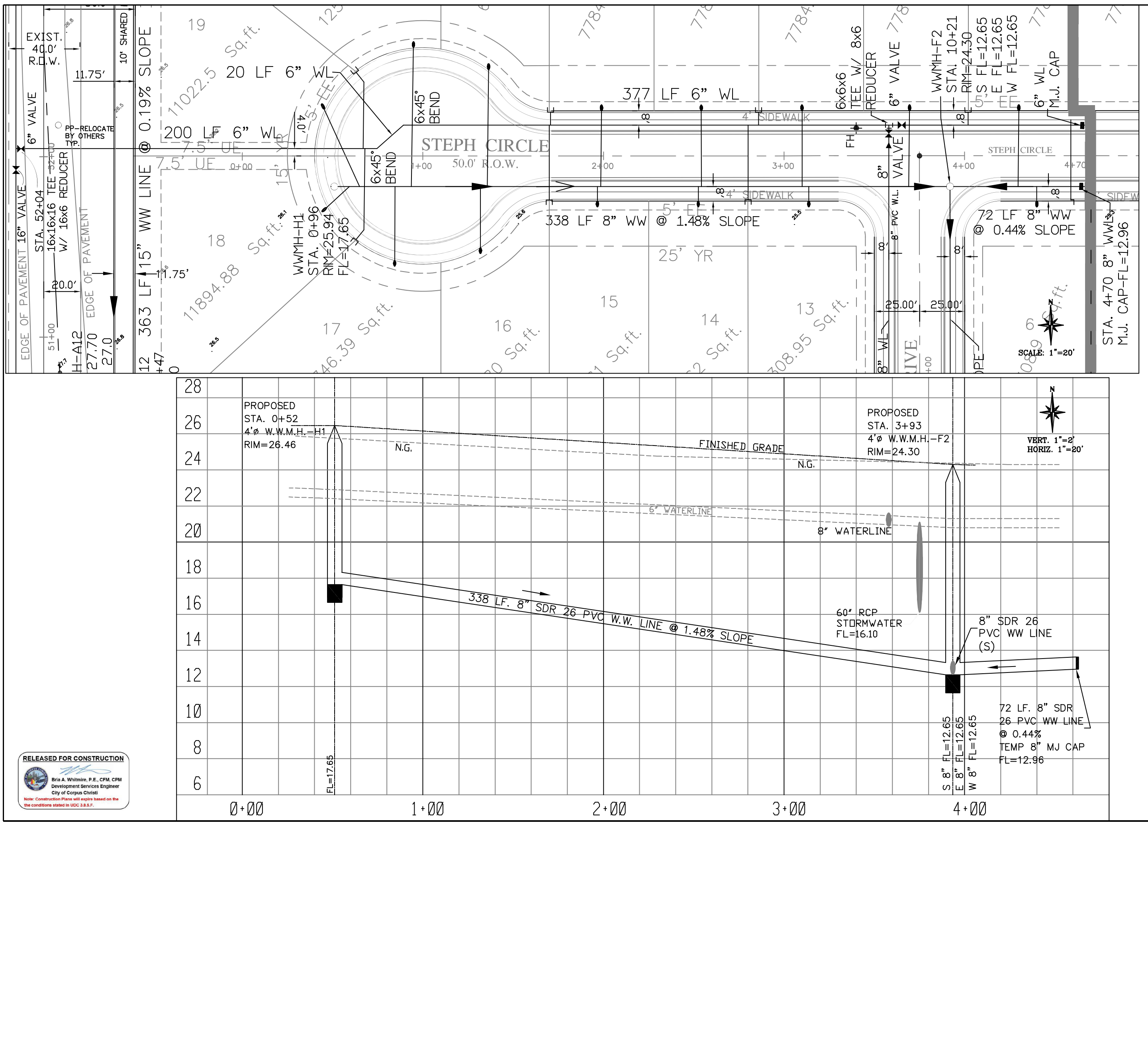

EXIST. 40.0' R.O.W.
11.75'
10' SHARED
6" VALVE
EDGE OF PAVEMENT 16" VALVE
STA. 52+04
16x16x16 TEE
W/ 16x6 REDUCER
20.0'
PP-RELOCATE BY OTHERS TYP.
EDGE OF PAVEMENT
363 LF 15" WW LINE @ 0.19% SLOPE
200 LF 6" WL
20 LF 6" WL
7.5' UE
19
11022.5 Sq.ft.
18
11894.88 Sq.ft.
17
16
15
14
13
WWMH-H1
STA. 0+96
RIM=25.94
FL=17.65
6x45° BEND
STEPH CIRCLE
50.0' R.O.W.
377 LF 6" WL
4' SIDEWALK
5' EE
25' YR
338 LF 8" WW @ 1.48% SLOPE
FH
6x6x6 TEE W/ 8x6 REDUCER
6" VALVE
8" VALVE
8" PVC W.L.
WWMH-F2
STA. 10+21
RIM=24.30
S FL=12.65
E FL=12.65
W FL=12.65
6" WL M.J. CAP
72 LF 8" WW @ 0.44% SLOPE
25.00'
25.00'
STA. 4+70 8" WW
M.J. CAP-FL=12.96
SCALE: 1"=20'
PROPOSED
STA. 0+52
4'ø W.W.M.H.-H1
RIM=26.46
N.G.
FINISHED GRADE
PROPOSED
STA. 3+93
4'ø W.W.M.H.-F2
RIM=24.30
VERT. 1"=2'
HORIZ. 1"=20'
6" WATERLINE
8" WATERLINE
338 LF. 8" SDR 26 PVC W.W. LINE @ 1.48% SLOPE
60" RCP
STORMWATER
FL=16.10
8" SDR 26
PVC WW LINE
(S)
72 LF. 8" SDR
26 PVC WW LINE
@ 0.44%
TEMP 8" MJ CAP
FL=12.96
FL=17.65
S 8" FL=12.65
E 8" FL=12.65
W 8" FL=12.65
28
26
24
22
20
18
16
14
12
10
8
6
0+00
1+00
2+00
3+00
4+00
RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
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STATE OF TEXAS
JUAN PERALES, JR.
66652
REGISTERED PROFESSIONAL ENGINEER
11/10/2023

STEPH CIRCLE
W.W. PLAN & PROFILE
STA. 1+00 TO STA. 4+70

KASPIAN SUBDIVISION UNIT 1
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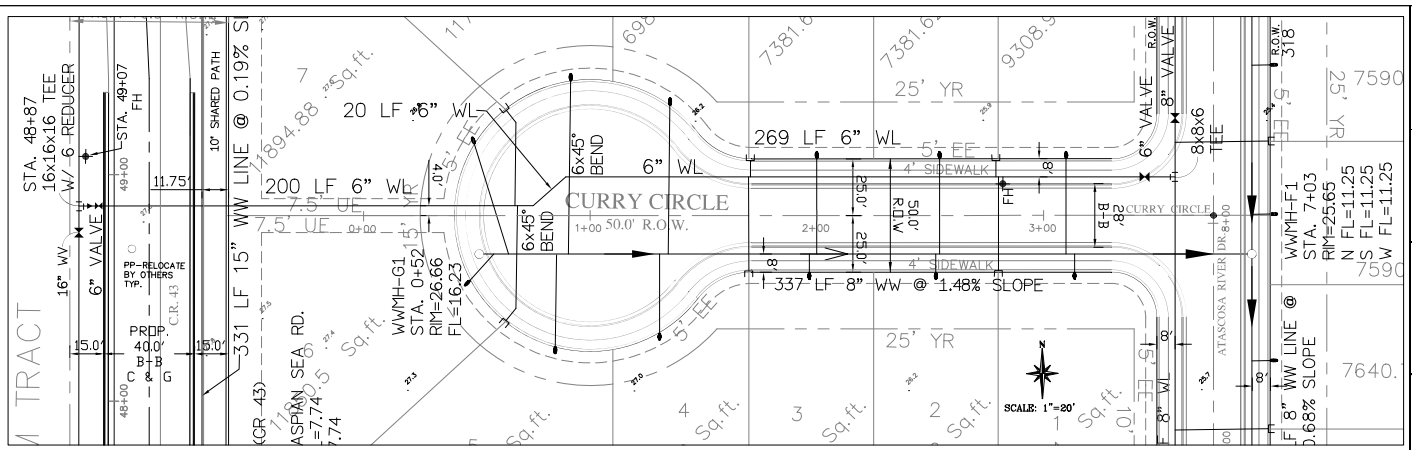

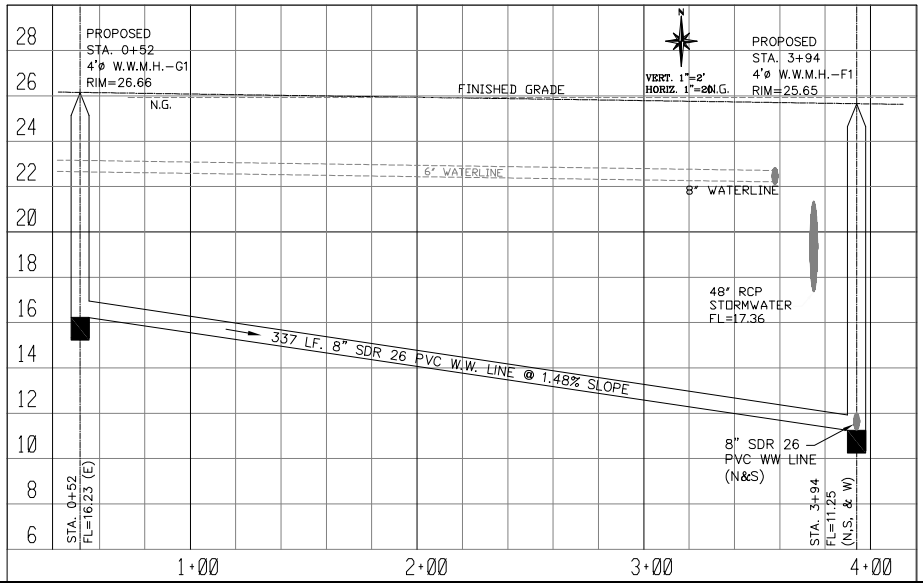

RELEASED FOR CONSTRUCTION
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Development Services Engineer
City of Corpus Christi
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JOHN PERALES, JR. 66682 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS
11/9/2023

CURRY CIRCLE
W.W. PLAN & PROFILE
STA. 1+00 TO STA. 4+00

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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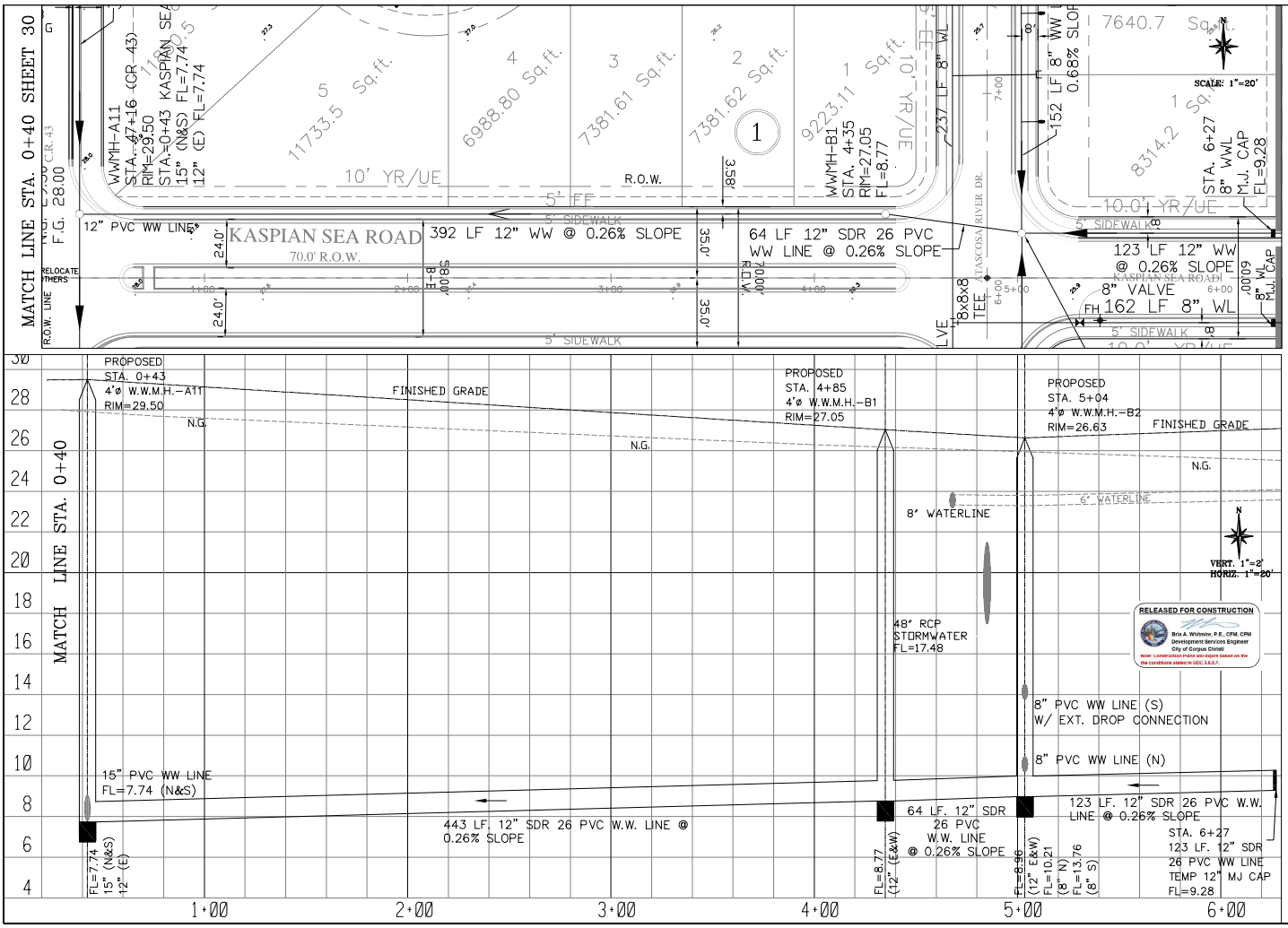

KASPIAN SEA ROAD
W.W. PLAN & PROFILE
STA. 0+20 TO STA. 6+27

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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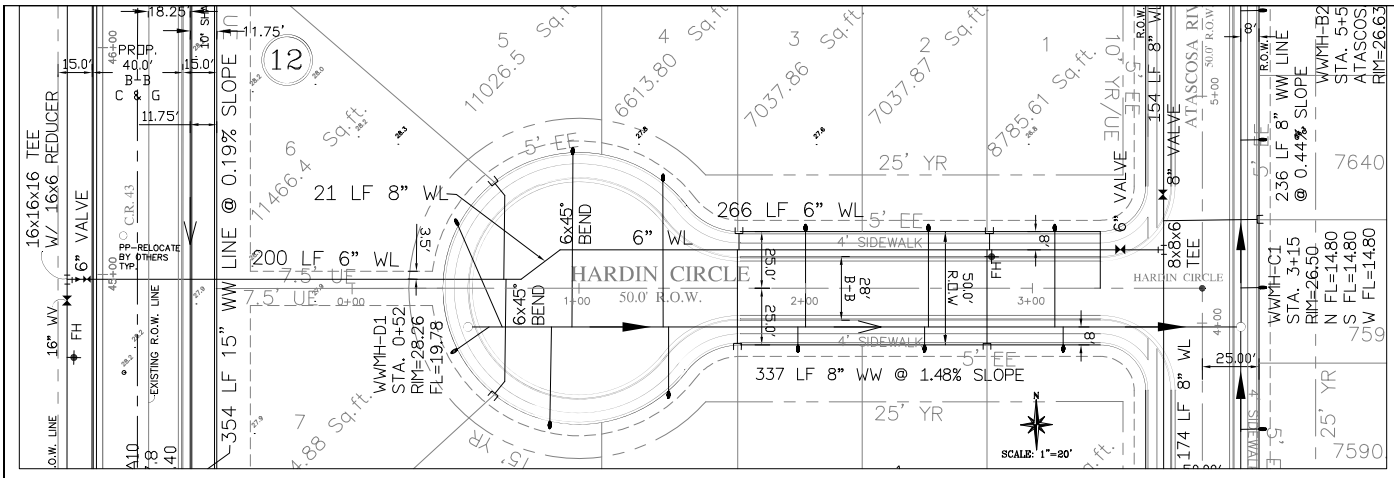

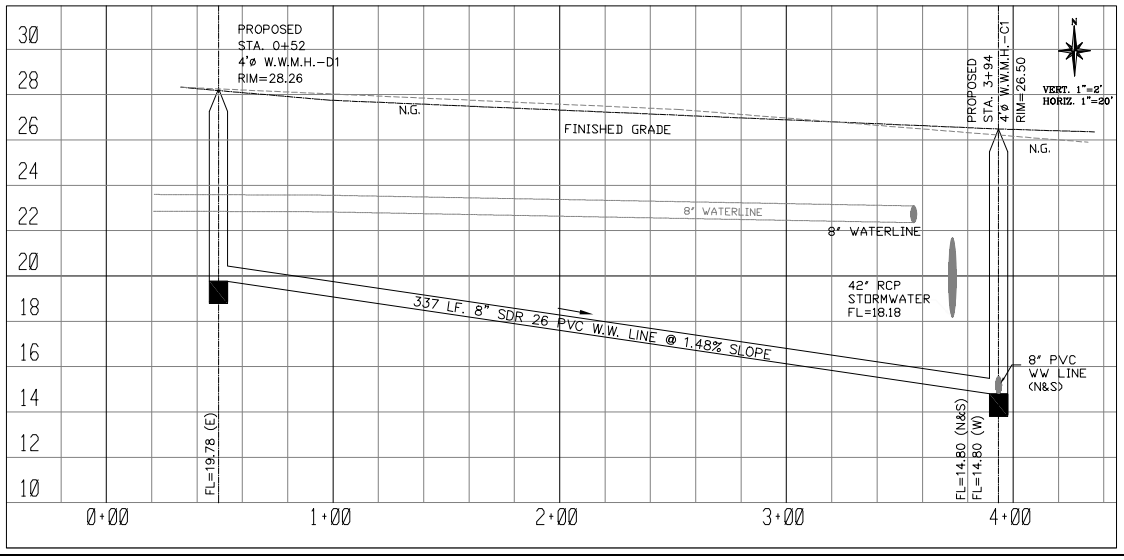

RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

HARDIN CIRCLE
W.W. PLAN PROFILE
STA. 0+00 TO STA. 4+00

KASPIAN SUBDIVISION UNIT 1
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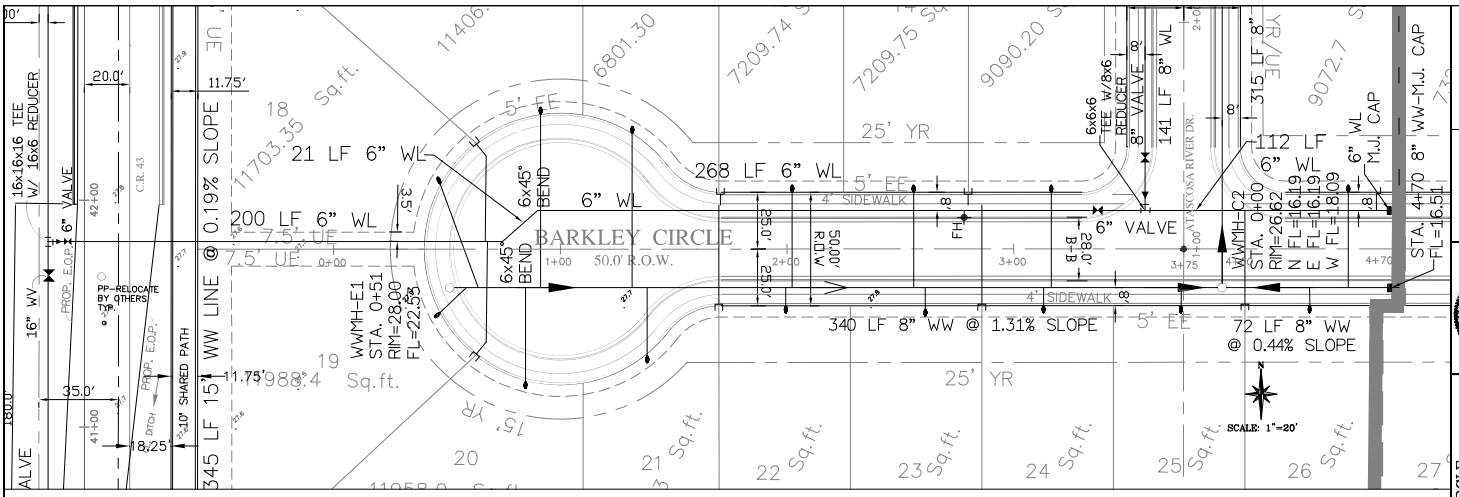

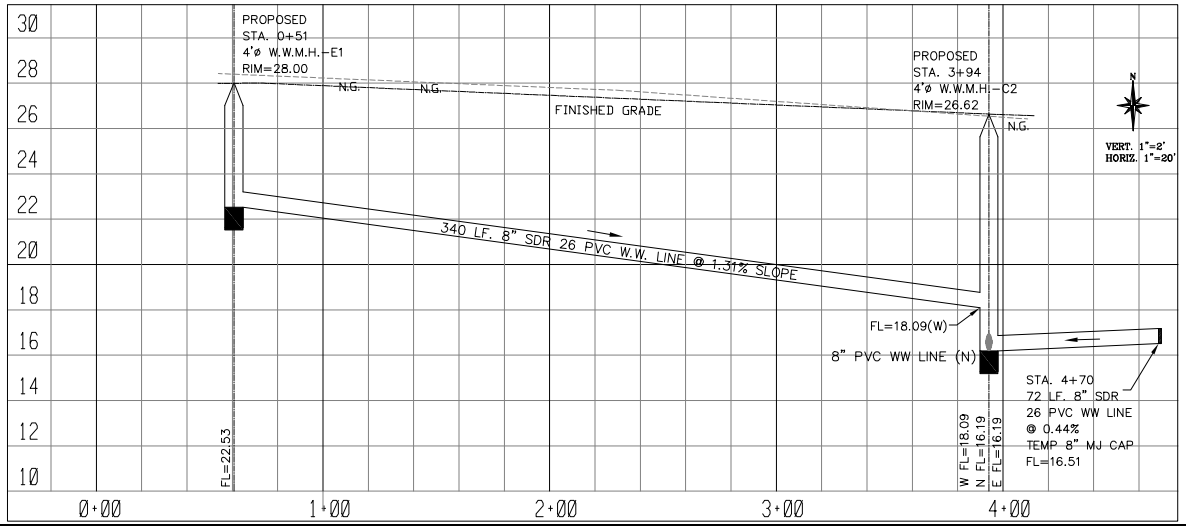

RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

BARKLEY CIRCLE
W.W. PLAN & PROFILE
STA. 0+00 TO STA. 4+80

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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DATE: 11-10-23	SCALE: SHOWN
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JOE PERALES, JR. 66652 REGISTERED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

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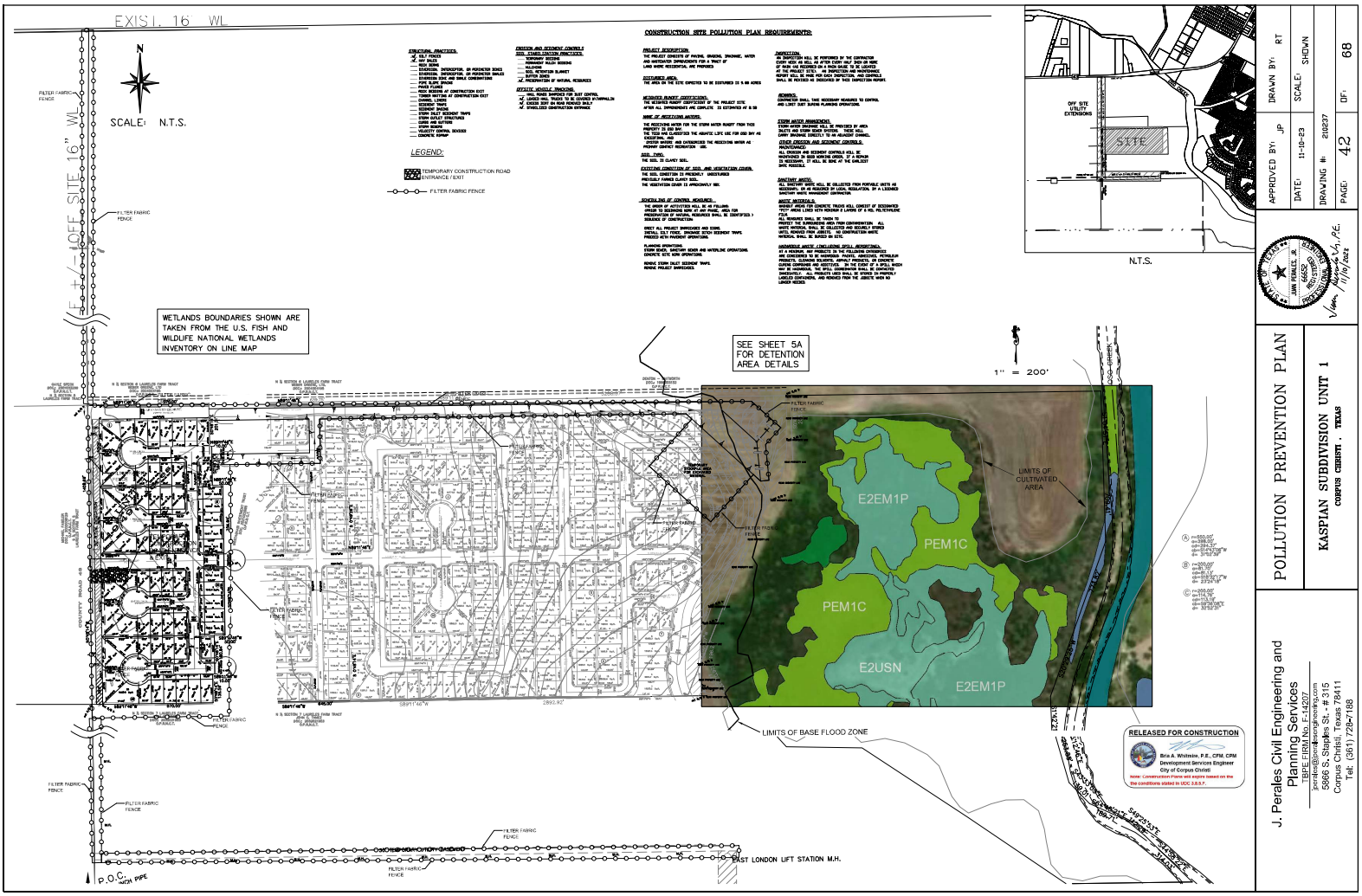
Tel: (361) 728-7188



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PAGE: 42 OF: 68

JAN PERALES, JR. 66628 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

POLLUTION PREVENTION PLAN

KASPIAN SUBDIVISION UNIT 1

CORPUS CHRISTI, TEXAS

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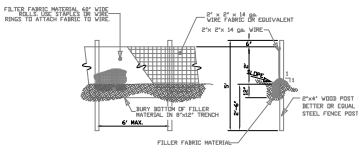
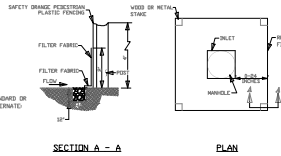
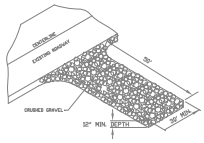


FILTER FABRIC FENCE DETAIL



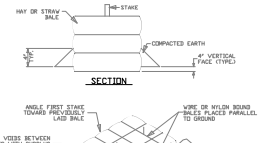
INLET & MANHOLE PROTECTION BARRIER

NOT TO SCALE



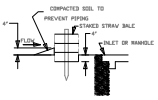
TEMPORARY STABILIZED CONSTRUCTION ROAD ENTRANCE / EXIT DETAIL

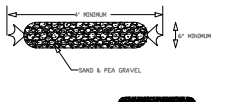
NOT TO SCALE

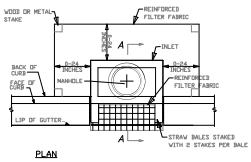


HAY BALES BARRIER FENCE

NOT TO SCALE







CURB INLET INLET PROTECTION BARRIER

NOT TO SCALE

GENERAL NOTES:

1. BAGS SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BAGS. PLACE BAGS WITH BINDING PARALLEL TO GROUND SURFACE.
2. BAGS SHALL BE APPROVED BY THE CPA IN ORANGE COLOR WITH HIGH UV RESISTANT
3. FILL BAGS WITH A 70% SAND AND 30% GRAVEL TO ENSURE THE BEST WATER FILTRATION
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY BY CONTRACTOR, AS NEEDED.
5. BAGS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES.

SNAKE BAG INLET PROTECTION

NOT TO SCALE

GENERAL NOTES:

1. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES. FILL THE VOIDS BETWEEN BALES WITH SURPLUS STRAW. PLACE BALES WITH BINDING PARALLEL TO GROUND SURFACE.
2. WHERE POSSIBLE EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY 3/8-INCH REBAR STAKES DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARDS THE PREVIOUS BALE TO FORCE THE BALES TOGETHER.
4. BALES SHALL BE BOUND BY EITHER WIRE OR NYLON ROPE TIED ACROSS THE HAY BALES.
5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY BY CONTRACTOR, AS NEEDED.
6. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES.

STANDARD NOTES:

A. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST.

B. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS (WHERE FEASIBLE). THE FENCE POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 30 INCHES).

C. A TRENCH SHALL BE EXCAVATED, ROUGHLY 8 INCHES WIDE AND 12 INCHES DEEP, UPSLOPE AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE BURIED.

D. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

E. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND ON INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.

F. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF STANDARD NOTE "C". APPLYING.

G. THE TRENCH SHALL BE BACK FILLED AND HAND TAMPED.

H. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

I. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

FILTER FABRIC FENCE DETAIL

NOT TO SCALE

TOPSOILING:

WHEN TOPSOILDING, THE CONTRACTOR SHALL MAINTAIN EROSION AND SEDIMENTATION CONTROL SYSTEMS, SUCH AS DIKES, SWALES, GRADE STABILIZATION STRUCTURES, WATERWAYS, AND SEDIMENT BASINS OPERATIONAL.

PROTECTION OF TREES:

THE CONTRACTOR SHALL PROTECT TREES DESIGNATED TO REMAIN IN CONSTRUCTION AREAS. HEAVY EQUIPMENT, VEHICULAR TRAFFIC, AND STOCKPILES OF CONSTRUCTION MATERIALS, INCLUDING TOPSOIL, ARE NOT PERMITTED WITHIN THE DRIP LINE OF ANY TREE TO BE RETAINED. TREE TRUNKS, EXPOSED ROOTS, AND LIMBS OF TREES DESIGNATED TO BE RETAINED WHICH ARE DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE CARED FOR BY A LICENSED TREE EXPERT. SPECIMEN TREES SHALL BE BOXED OR FENCED.

DUST CONTROL:

THE CONTRACTOR SHALL CONTROL DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS TO PREVENT LOSS OF SOIL, SURFACE, TO REDUCE ONSITE AND OFFSITE DAMAGE, TO PREVENT HEALTH HAZARDS, AND TO IMPROVE TRAFFIC SAFETY.

THE CONTRACTOR SHALL CONTROL DUST BLOWING BY UTILIZING ONE OR MORE OF THE FOLLOWING METHODS. DUST CONTROL METHODS SHALL BE IMPLEMENTED IMMEDIATELY WHENEVER DUST CAN BE OBSERVED BLOWING ON THE PROJECT SITE.

A. MULCHES BOUND WITH CHEMICAL BINDERS SUCH AS A CURASOL, TERRATACK, OR APPROVED EQUAL.
B. TEMPORARY VEGETATIVE COVER.
C. SPRAY-ON ADHESIVES ON MINERAL SOILS WHEN NOT USED BY TRAFFIC.
D. IRRIGATION BY WATER SPRINKLING.
E. BARRIERS USING SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, OR SIMILAR MATERIALS.

WASHING AREAS:

VEHICLES SUCH AS READY MIX CONCRETE OR DUMP TRUCKS AND OTHER CONSTRUCTION EQUIPMENT SHALL NOT BE WASHED AT LOCATIONS WHERE THE RUNOFF WILL FLOW DIRECTLY INTO A WATERCOURSE OR STORM WATER CONVEYANCE SYSTEM. SPECIAL AREAS SHALL BE DESIGNATED FOR WASHING VEHICLES. THESE AREAS SHALL BE LOCATED WHERE THE WATER WILL SPREAD OUT AND EVAPORATE OR INFILTRATE DIRECTLY INTO THE GROUND, OR WHERE THE RUNOFF CAN BE COLLECTED IN A TEMPORARY HOLDING OR SEEPAGE BASIN. WASH AREAS SHALL HAVE GRAVEL OR CRUSHED STONE BASES.

EQUIPMENT MAINTENANCE AND REPAIR:

THE CONTRACTOR'S MAINTENANCE AND REPAIR OF CONSTRUCTION MACHINERY AND EQUIPMENT SHOULD BE CONFINED TO AREAS SPECIFICALLY DESIGNATED FOR THAT PURPOSE. SUCH DESIGNATED AREAS SHOULD BE LOCATED AND DESIGNED SO THAT OILS, GASOLINE, GREASE, SOLVENTS, AND OTHER POTENTIAL POLLUTANTS CANNOT BE WASHED DIRECTLY INTO RECEIVING STREAMS OR STORM WATER CONVEYANCE SYSTEMS. THE CONTRACTOR SHALL PROVIDE THESE AREAS WITH ADEQUATE WASTE DISPOSAL RECEPTACLES FOR LIQUID AS WELL AS SOLID WASTE. MAINTENANCE AREAS SHOULD BE INSPECTED AND CLEANED DAILY.

NON A CONSTRUCTION SITE WHERE DESIGNATED EQUIPMENT MAINTENANCE AREAS ARE NOT FEASIBLE, THE CONTRACTOR SHALL TAKE CARE DURING EACH INDIVIDUAL REPAIR OR MAINTENANCE OPERATION TO PREVENT POTENTIAL POLLUTANTS FROM BECOMING AVAILABLE TO BE WASHED INTO STREAMS OR STORM SEWER CONVEYANCE SYSTEMS. TEMPORARY WASTE DISPOSAL RECEPTACLES SHALL BE PROVIDED BY THE CONTRACTOR AS NECESSARY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING ALL ONSITE VEHICLES AND EQUIPMENT FOR LEAKS AND PERFORM REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

WASTE COLLECTION AND DISPOSAL:

THE CONTRACTOR SHALL FORMULATE A PLAN FOR THE COLLECTION AND DISPOSAL OF WASTE MATERIALS ON THE CONSTRUCTION SITE. THIS PLAN SHALL DESIGNATE LOCATIONS FOR TRASH AND WASTE RECEPTACLES AND ESTABLISH A SPECIAL COLLECTION SCHEDULE. METHODS FOR ULTIMATE DISPOSAL OF WASTE SHALL BE SPECIFIED AND CARRIED OUT IN ACCORDANCE WITH APPLICABLE LOCAL STATE, AND FEDERAL HEALTH AND SAFETY REGULATIONS. SPECIAL PROVISIONS SHALL BE MADE FOR THE COLLECTION DISPOSAL OF LIQUID WASTES AND TOXIC OR HAZARDOUS MATERIALS.

THE CONTRACTOR SHALL KEEP RECEPTACLES AND OTHER WASTE COLLECTION AREAS NEAT AND ORDERLY TO THE EXTENT POSSIBLE. WASTE SHALL NOT BE ALLOWED TO OVERFLOW ITS CONTAINER OR ACCUMULATE FOR EXCESSIVELY LONG PERIODS OF TIME. TRASH COLLECTION POINTS SHALL BE LOCATED WHERE THEY WILL LEAST LIKELY BE AFFECTED BY CONCENTRATED STORM WATER RUNOFF.

STORAGE OF CONSTRUCTION MATERIALS, CHEMICALS, ETC:

SITES WHERE CHEMICALS, CEMENTS, SOLVENTS, PAINTS OR OTHER POTENTIAL WATER POLLUTANTS ARE TO BE STORED SHALL BE ISOLATED BY THE CONTRACTOR IN AREAS WHERE THEY WILL NOT CAUSE RUNOFF POLLUTION.
FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. FERTILIZER SHALL BE STORED IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

TOXIC AND/OR OTHER HAZARDOUS CHEMICALS AND MATERIALS, SUCH AS PESTICIDES, PAINTS, AND ACIDS SHALL BE STORED IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. THE CONTRACTOR SHALL PROTECT GROUNDWATER RESOURCES FROM LEACHING BY PLACING A PLASTIC MAT, PACKED CLAY, TAR PAPER, OR OTHER IMPERVIOUS MATERIALS ON ANY AREAS WHERE TOXIC AND/OR HAZARDOUS LIQUIDS ARE TO BE SPENCED AND STORED.

SPILLS OF TOXIC AND/OR HAZARDOUS SUBSTANCES ARE TO BE CLEANED AND TREATED IMMEDIATELY AFTER DISCOVERY IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND CONTRACTOR'S PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

THE CONTRACTOR SHALL KEEP MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP IN THE MATERIALS STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT IS NOT LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

DEMOLITION:

DEMOLITION OF EXISTING IMPROVEMENTS MAY GENERATE DUST WITH SIGNIFICANT CONCENTRATIONS OF HEAVY METALS AND/OR OTHER TOXIC POLLUTANTS. THE CONTRACTOR SHALL EMPLOY DUST CONTROL TECHNIQUES TO LIMIT THE TRANSPORT OF AIRBORNE POLLUTANTS. HOWEVER, WATER OR SLURRY USED TO CONTROL DUST SHALL BE RETAINED ON THE SITE AND NOT BE ALLOWED TO RUN DIRECTLY INTO WATERCOURSES OR STORM WATER CONVEYANCE SYSTEMS.

SANITARY FACILITIES:

THE CONTRACTOR SHALL PROVIDE THE CONSTRUCTION SITE WITH ADEQUATE SANITARY FACILITIES FOR WORKERS IN ACCORDANCE WITH APPLICABLE HEALTH REGULATIONS.

PESTICIDES:

PESTICIDES USED DURING CONSTRUCTION SHALL BE STORED AND USED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINE AND WITH LOCAL STATE AND FEDERAL REGULATIONS. OVERUSE SHALL BE AVOIDED AND SPREAT CARE SHALL BE TAKEN TO PREVENT ACCIDENTAL SPILLAGE. PESTICIDE CONTAINERS SHALL NEVER BE WASHED IN OR NEAR FLOWING STREAMS OR STORM WATER CONVEYANCE SYSTEMS.

FILTER FABRIC SPECIFICATIONS:

THE FILTER FABRIC SHOWN IN THE VARIOUS DETAILS AND SPECIFICATIONS SHALL MEET THE FOLLOWING SPECIFICATIONS:

GRAB STRENGTH SHALL BE 100 POUNDS MINIMUM IN ANY PRINCIPAL DIRECTION WHEN TESTED IN ACCORDANCE WITH ASTM TEST PROCEDURE D-1682.

MULLON BURST STRENGTH SHALL BE 260 PSI MINIMUM WHEN TESTED IN ACCORDANCE WITH ASTM TEST PROCEDURE D-3786.

EQUIVALENT STANDARD SIEVE OPENING SIZE SHALL BE BETWEEN 60 AND 140.

WATER FLOW RATE SHALL BE A MINIMUM OF 10 GAL/MIN/SQ FEET AT 50 mm CONSTANT HEAD AS DETERMINED BY MULTIPLYING PERMITIVITY IN 1/SEC AS DETERMINED BY ASTM TEST PROCEDURE D-4491.

THE FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS AS NECESSARY TO PROVIDE ANY EXPECTED USEABLE LIFE COMPARABLE TO THE ANTICIPATED DURATION OF CONSTRUCTION.

RELEASED FOR CONSTRUCTION

Eric A. Whitmire, P.E., CPM, CPM
Development Services Engineer
City of Corpus Christi

Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

APPROVED BY: JP | DRAWN BY: RT
DATE: 11-10-23 | SCALE: SHOWN
DRAWING #: 210237
PAGE: 43 | OF: 68

POLLUTION PREVENTION DETAILS

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

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OVERALL DEVELOPMENT STORMWATER MANAGEMENT CONCEPT

THE SUBDIVISION PROPERTY INCLUDES 99.5 ACRES. AS SHOWN IN THE ON AND OFF SITE DRAINAGE OVERVIEW MAP, THE PROPERTY NATURALLY DRAINS IN AN EASTWARD DIRECTION TOWARD THE OSO CREEK.

DRAINAGE FROM A 6.3 ACRE OFFSITE AREA WEST OF THE PROPERTY AS SHOWN IN THE ON AND OFF SITE DRAINAGE OVERVIEW MAP MUST ALSO BE ACCOUNTED FOR IN THE SUBDIVISION'S PROPOSED STORMWATER COLLECTION SYSTEM.

THE PROPOSED STORMWATER COLLECTION SYSTEM FOR THE SUBDIVISION IS DIVIDED INTO TWO SUB-SYSTEMS, IDENTIFIED AS SYSTEM "A" AND SYSTEM "B". SYSTEM "A" WILL COLLECT STORMWATER RUNOFF FROM UNITS 1 AND 2 AND APPROXIMATELY 1.8 ACRES OUT OF UNIT 3 INTO A PROPOSED TRUNKLINE WHICH WILL RUN DOWN ARANSAS RIVER DRIVE TO A PRIMARY OUTFALL AT OSO PARKWAY.

SYSTEM "B" WILL COLLECT STORMWATER RUNOFF FROM UNITS 3, 4, AND 5 INTO A PROPOSED TRUNKLINE WHICH WILL RUN DOWN KASPIAN SEA DRIVE TO A PRIMARY OUTFALL AT OSO PARKWAY.

A 2 ACRE PORTION AT THE SOUTHEAST CORNER OF UNIT 5 WILL DRAIN TO A THIRD OUTFALL AT OSO PARKWAY.

INTERIM STORMWATER DETENTION FOR UNITS 1 AND 2 WILL BE PROVIDED BY A TEMPORARY DETENTION DITCH SYSTEM TO BE CONSTRUCTED WITH UNIT 1 IMPROVEMENTS. REFER TO SHEET 5A OF THE PLANS FOR DETAILS OF CONSTRUCTION.

THE PERMANENT DETENTION DITCH ALONG OSO PARKWAY WILL BE CONSTRUCTED AS PART OF UNITS 3, 4, AND 5 IMPROVEMENTS.

DRAINAGE SYSTEM CONSTRUCTION SEQUENCE:

UNIT 1 IMPROVEMENTS WILL INCLUDE ALL PROPOSED STORMWATER COLLECTION SYSTEM WITHIN THE LIMITS OF UNIT 1 AND THE CONSTRUCTION OF THE TEMPORARY DETENTION DITCH SYSTEM GENERALLY ALONG ARANSAS RIVER DRIVE AS SHOWN ON SHEET 5A OF THE PLANS.

UNIT 2 IMPROVEMENTS WILL INCLUDE ALL PROPOSED STORMWATER COLLECTION SYSTEM WITHIN THE LIMITS OF UNIT 2 AND THE EXTENSION OF THE SYSTEM "A" TRUNKLINE THROUGH THE LIMITS OF UNIT 2 ALONG ARANSAS RIVER DRIVE.

UNIT 3 IMPROVEMENTS WILL INCLUDE ALL PROPOSED STORMWATER COLLECTION SYSTEM WITHIN THE LIMITS OF UNIT 3 AND EXTENSION OF SYSTEM "A" AND SYSTEM "B" TRUNKLINES THROUGH THE LIMITS OF UNIT 3. A TEMPORARY OUTFALL DITCH WILL ALSO BE CONSTRUCTED ALONG KASPIAN SEA DRIVE FROM THE EASTERLY LIMITS OF UNIT 3 TO OSO PARKWAY. APPROXIMATELY 25% OF THE PERMANENT STORMWATER DETENTION DITCH ALONG OSO PARKWAY WILL ALSO BE CONSTRUCTED TO PROVIDE DETENTION FOR UNIT 3.

UNIT 4 IMPROVEMENTS WILL INCLUDE ALL PROPOSED STORMWATER COLLECTION SYSTEM WITHIN THE LIMITS OF UNIT 4 AND EXTENSION OF SYSTEM "A" AND SYSTEM "B" TRUNKLINES THROUGH THE LIMITS OF UNIT 4. AN ADDITIONAL 25% OF THE PERMANENT STORMWATER DETENTION DITCH ALONG OSO PARKWAY WILL ALSO BE INCLUDED WITH UNIT 4 CONSTRUCTION.

UNIT 5 IMPROVEMENTS WILL INCLUDE ALL PROPOSED STORMWATER COLLECTION SYSTEM WITHIN THE LIMITS OF UNIT 5 AND EXTENSION OF SYSTEM "A" AND SYSTEM "B" TRUNKLINES THROUGH THE LIMITS OF UNIT 5 TO THE PERMANENT OSO PARKWAY DETENTION DITCH. UNIT 5 CONSTRUCTION WILL ALSO INCLUDE REMOVAL OF THE TEMPORARY DETENTION DITCH AND COMPLETION OF THE REMAINING 50% OF THE PERMANENT STORMWATER DITCH ALONG OSO PARKWAY.

STORMWATER RUNOFF ESTIMATES

TOTAL PROPERTY AREA = 99.5 ACRES
OFFSITE CONTRIBUTING AREA = 6.1 ACRES
EXISTING LAND USE IS CULTIVATED FARMLAND WITH CLAYEY SOIL AND OVERLAND SLOPE < 1%
RUNOFF COEFFICIENT, C = 0.35
PER DRAFT DRAINAGE DESIGN MANUAL TABLE 4-1
ESTIMATED RUNOFF VELOCITY = 1.0 FT/SEC
PER DRAFT DRAINAGE DESIGN MANUAL EXHIBIT 4-1
L = 2200 FT.
TC EXISTING = 38.7 MIN
I5 EXISTING = 7.9/(38.7 + 8.7)0.794 = 3.82 IN/HR
I25 EXISTING = 91/(38.7 + 8.7)0.759 = 5.03 IN/HR
I100 EXISTING = 99/(38.7 + 8.4)0.730 = 6.04 IN/HR
Q5 EXISTING = (0.35)(3.82)(105.6) = 141.2 CFS
Q25 EXISTING = (0.35)(5.03)(105.6) = 185.9 CFS
Q100 EXISTING = (0.35)(6.04)(105.6) = 223.2 CFS

PROPOSED LAND USE SINGLE FAMILY RESIDENTIAL WITH LOTS LESS THAN 1/3 ACRE IN SIZE AND OVERLAND SLOPE >1%, <3.5%
RUNOFF COEFFICIENT, C = 0.55
PER DRAFT DRAINAGE DESIGN MANUAL TABLE 4-1
ESTIMATED RUNOFF VELOCITY = 2.0 FT/SEC FOR OVERLAND FLOW PER DRAFT DRAINAGE DESIGN MANUAL EXHIBIT 4-1, AND 2.0 FT/SEC FOR PIPE FLOW

L OVERLAND = 800 FT. T = 6.7 MIN

L PIPE = 3200 FT. T = 26.7 MIN

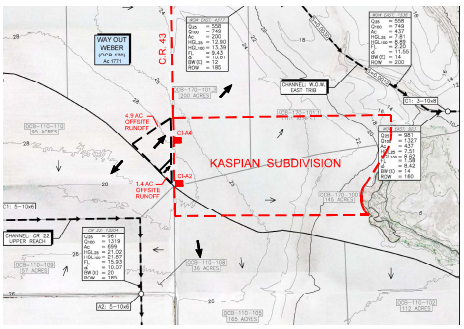
TC TOTAL = 33.4 MIN
I5 PROPOSED = 7.9/(33.4 + 8.7)0.794 = 4.05 IN/HR
I25 PROPOSED = 91/(33.4 + 8.7)0.759 = 5.33 IN/HR
I100 PROPOSED = 99/(33.4 + 8.4)0.730 = 6.37 IN/HR
Q5 PROPOSED = (0.55)(4.05)(105.6) = 235.2 CFS
Q25 PROPOSED = (0.55)(5.33)(105.6) = 309.0 CFS
Q100 PROPOSED = (0.55)(6.37)(105.6) = 370.0 CFS

CALCULATED DETENTION VOLUME REQUIREMENTS:
APPLYING U.S. SOIL CONSERVATION SERVICE TRIANGULAR UNIT HYDROGRAPH PROCEDURE (FOR AREAS OF LESS THAN 200 ACRES),
TL = 2/3 TC MAX = 2/3 (33.4 MIN.) = 22.2 MIN.
TD = 8/3 TL = 8/3 (22.2 MIN.) = 59.2 MIN.
REQUIRED Q100 DETENTION VOLUME
= (370.0 – 223.2 CFS) X 60 CFM/CFS X 59.2 MIN./2) = 260717 CUBIC FEET

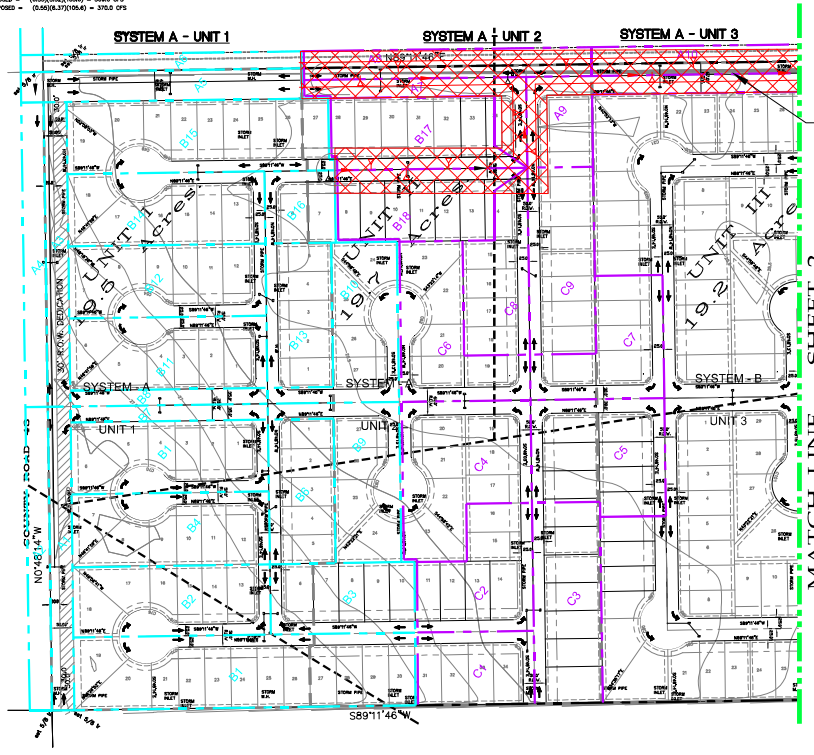
DETENTION VOLUME PROVIDED BY DETENTION CHANNEL = 324409 CUBIC FEET
=> 100 YEAR EVENT DETENTION PROVIDED EXCEEDS DETENTION REQUIRED

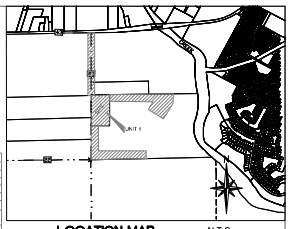
FLOW & DETENTION SUMMARY TABLE

UNIT NO.	AREA	C EXIST	I5	Q5	I25	Q25	I100	Q100	C PROP	I5	Q5	I25	Q25	I100	Q100	5 YR DETENTION VOLUME	25 YR DETENTION VOLUME	100 YR DETENTION VOLUME
	ACRES		IN/HR	CFS	IN/HR	CFS	IN/HR	CFS		IN/HR	CFS	IN/HR	CFS	IN/HR	CFS	CUBIC FEET	CUBIC FEET	CUBIC FEET
1	25.80	0.35	3.82	34.5	5.03	45.4	6.04	54.5	0.55	4.33	61.4	5.68	80.6	6.78	96.2	51774	62515	74059
2	19.70	0.35	3.82	26.3	5.03	34.7	6.04	41.6	0.55	4.33	46.9	5.68	61.5	6.78	73.5	36986	47597	56654
3	19.20	0.35	3.82	25.7	5.03	33.8	6.04	40.6	0.55	4.33	45.7	5.68	60.0	6.78	71.6	35520	46530	55056
4	18.65	0.35	3.82	24.9	5.03	32.7	6.04	39.3	0.55	4.33	44.3	5.68	58.1	6.78	69.4	34454	45110	53458
5	22.50	0.35	3.82	30.1	6.03	39.6	6.04	47.6	0.55	4.33	53.6	5.68	70.3	6.78	83.8	41736	54623	64469
TOTAL	105.80			141		186		224			252		331	396		196070	256276	303696
NOTE: UNIT 1 INCLUDES 19.5 ACRES PLUS 6.3 ACRES OFFSITE FLOW															UNITS 1 & 2 SUBTOTAL	84360	110112	130713
TOTAL PERMANENT STORMWATER DETENTION PROVIDED BY OSO PARKWAY DETENTION DITCH																		339409
TOTAL STORMWATER DETENTION PROVIDED BY TEMPORARY ARANSAS RIVER DRIVE DETENTION DITCH (WITH 1' FREEBOARD)																		175368



OFF-SITE DRAINAGE OVERVIEW





LEGEND
SUBDIVISION BOUNDARY (TYP)
CITY LIMITS WATER BASIN BOUNDARY (TYP)
SUBDIVISION PHASE BOUNDARY (TYP)

NOTE:
CONTOURS SHOWN ARE EXISTING

GENERAL NOTES

1) EXISTING LAND USE IS CULTIVATED FARMLAND. PROPOSED LAND USE IS SINGLE FAMILY RESIDENTIAL DISTRICT WITH LOTS LESS THAN 1/3 ACRE. THE SITE IS INSIDE THE CORPUS CHRISTI CITY LIMITS AND IS CURRENTLY ZONED RS-6 SINGLE FAMILY RESIDENTIAL USE.
2) TOTAL ACREAGE OF THE PROPOSED SUBDIVISION IS 99.5 ACRES
3) ALL PROPOSED FINISHED FLOOR ELEVATIONS WILL BE A MINIMUM OF 18 INCHES ABOVE CROWN ELEVATIONS OF FRONTING STREETS.
4) A STORM WATER POLLUTION PREVENTION PLAN WILL BE SUBMITTED WITH THE DETAILED CONSTRUCTION PLANS FOR THE SUBDIVISION.
5) DRAINAGE IS IN SUBSTANTIAL COMPLIANCE WITH THE CITY'S MASTER DRAINAGE PLAN.
6) NORTHERLY PORTIONS OF THE PROPOSED DEVELOPMENT FALL WITHIN SECTIONS OCB-170-101.1 AND OCB-170-101.3 OUT OF THE WAY OUT WEBER SUB-BASIN (OCB-170) WITHIN THE OSO CREEK STORM WATER DRAINAGE BASIN.
7) SOUTHERLY PORTIONS OF THE PROPOSED DEVELOPMENT FALL PRIMARILY WITHIN SECTION OCB-170-100 OUT OF THE WAY OUT WEBER (OCB-170) SUB-BASIN WITHIN THE OSO CREEK STORM WATER DRAINAGE BASIN.
8) THE RECEIVING WATER BODY FOR THE STORM WATER RUNOFF FOR THIS PROPERTY IS THE OSO CREEK BASIN. THE TCEQ HAS NOT CLASSIFIED THE AQUATIC LIFE FOR THE OSO CREEK, BUT IT IS RECOGNIZED AS AN ENVIRONMENTALLY SENSITIVE AREA. THE OSO CREEK DRAINS DIRECTLY INTO THE OSO BAY. THE TCEQ HAS CLASSIFIED THE AQUATIC LIFE USE FOR THE OSO BAY AS "EXCEPTIONAL" AND "OYSTER WATERS", AND HAS CATEGORIZED THE RECEIVING WATERS AS "CONTACT RECREATION" USE.
9) THERE ARE NO KNOWN NATURAL WATER BODIES, JURISDICTIONAL WETLANDS, ENDANGERED SPECIES HABITATS, STATE OF TEXAS SUBMERGED LANDS, OR CRITICAL DUNES WITHIN THE PROPERTY BOUNDARIES.
10) THE SITE DOES NOT LIE WITHIN A VELOCITY ZONE, NOR IS ADJACENT TO THE NUECES RIVER WATER SUPPLY.
11) PER FLOOD INSURANCE RATE MAP, MAP NUMBER 48355C0520G, PRELIMINARY REVISION, DATED MAY 5, 2016, THE SUBJECT PROPERTY IS NOT LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREAS. THIS FLOODING STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR OR ENGINEER.
12) ALL BEARINGS ARE GRID BEARINGS BASED ON THE TEXAS COORDINATE SYSTEM FOR THE LAMBERT SOUTH ZONE NAD 83 (CORS 96) EPOCH 2002. ALL DISTANCES SHOWN ARE SURFACE DISTANCES.

RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

STATE OF TEXAS
JUAN PERALES, JR.
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REGISTERED
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10/02/2023

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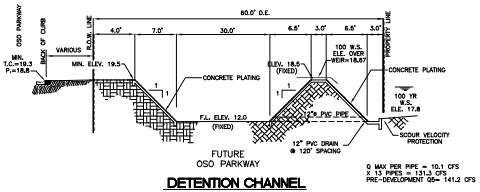
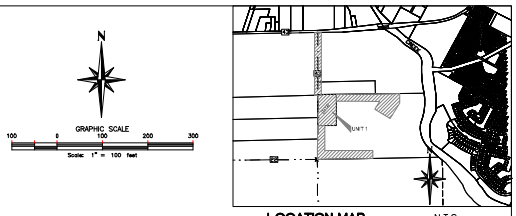
STORM WATER MANAGEMENT PLAN
KASPIAN SUBDIVISION



DETENTION CHANNEL TYPICAL CROSS SECTION
N.T.S.



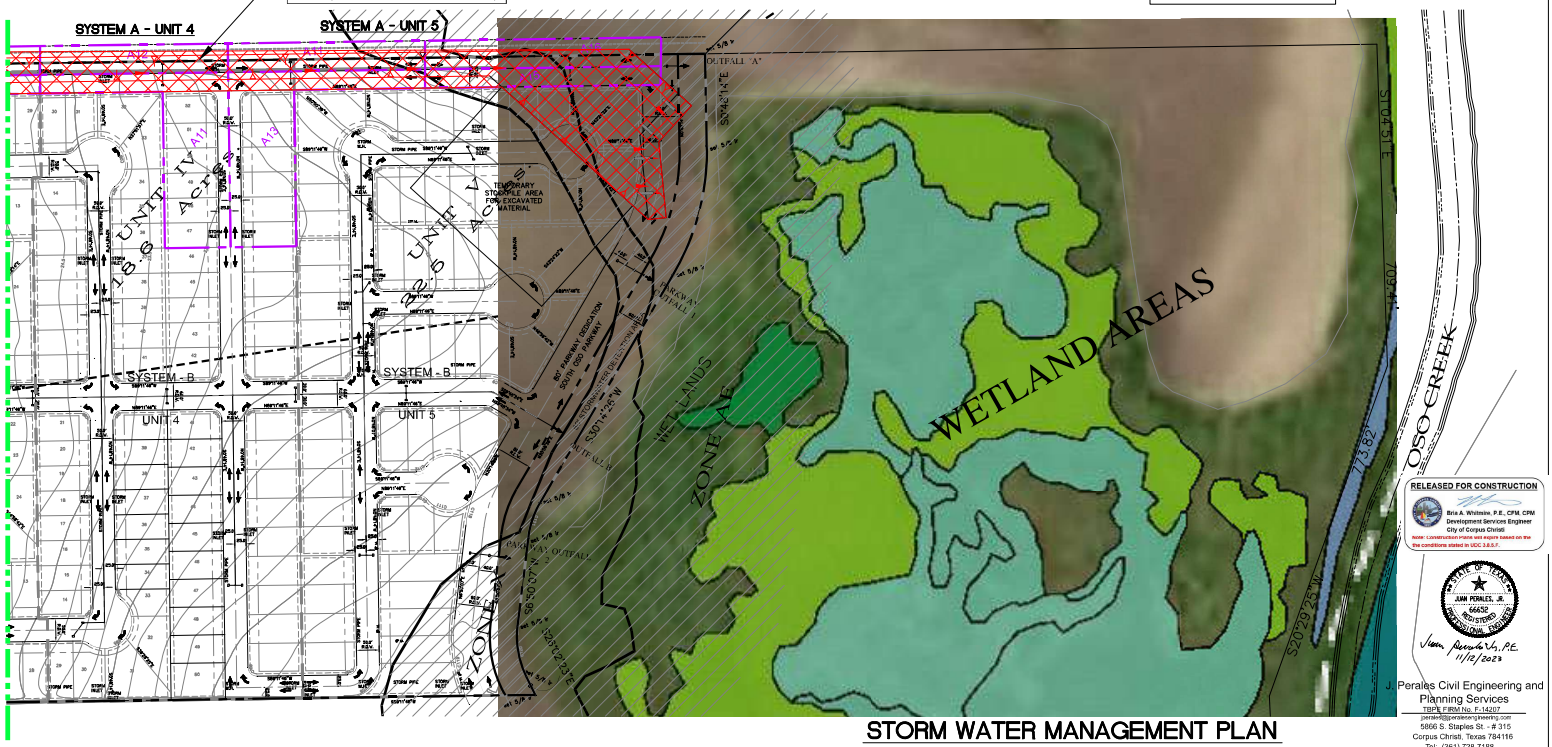
LOCATION MAP N.T.S.

WETLANDS BOUNDARIES SHOWN ARE TAKEN FROM THE U.S. FISH AND WILDLIFE NATIONAL WETLANDS INVENTORY ON LINE MAP

TEMPORARY UNIT 1 OFF SITE STORMWATER OUTFALL & DETENTION AREA (SEE SHEET 5A FOR DETAILS)

LEGEND

NOTE:
CONTOURS SHOWN ARE EXISTING



STORM WATER MANAGEMENT PLAN
KASPIAN SUBDIVISION

RELEASED FOR CONSTRUCTION
Bria A. Wilmink, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.6.5.7.

STATE OF TEXAS
JUAN PERALES, JR.
66652
REGISTERED
PROFESSIONAL ENGINEER
Juan Perales Jr., P.E.
11/2/2023

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Tel: (361) 728-7188

KASPIAN SUBDIVISION UNIT 1 STORMWATER CALCULATION SUMMARY

Drainage Area ID	Area, Ac	C	IS, in/hr	I25, in/hr	I100, in/hr	Q5, cfs	Q25, cfs	Q100, cfs			Pipe Segment	Contributing Areas	Q5, cfs	Q25, cfs	Q100, cfs	Pipe size, in	Pipe material	Length, ft	U.S. Flowline	U.S. HGLS	H, ft.	Pipe slope, %	D.S. Flowline	D.S. HGLS
A1	0.6	0.80	3.91	5.39	7.84	1.9	2.6	3.4		UNIT 3	OA1-MH1	A1	1.9	2.6	3.4	1 - 18"	RCP	20	21.86	25.15	0.20	0.25	21.79	24.95
A2	0.6	0.80	3.91	5.39	7.84	1.9	2.6	3.4		UNIT 3	MH1-MH2	A1, A2	11.6	16.0	20.8	1 - 30"	RCP	596	20.79	24.95	1.20	0.12	19.86	20.75
A4	5.5	0.80	3.91	5.39	7.84	17.2	23.7	31.0		UNIT 3	OA2-MH2	A3	1.9	2.6	3.4	1 - 18"	RCP	20	21.46	23.95	0.20	0.25	23.86	23.75
A5	0.6	0.80	3.91	5.39	7.84	1.9	2.6	3.4		UNIT 3	OA3-MH2	A5	17.2	23.7	31.0	1 - 30"	RCP	20	20.86	24.20	0.85	0.25	19.98	20.75
A6	0.6	0.80	3.91	5.39	7.84	1.9	2.6	3.4		UNIT 3	MH2-MH3	A5-A6	30.7	42.3	55.2	1 - 42"	RCP	866	19.08	23.75	1.10	0.13	19.00	22.65
A8	0.6	0.80	3.91	5.39	7.84	1.9	2.6	3.4		UNIT 3	MH3-MH4	A1-A8	41.4	57.0	75.0	1 - 48"	RCP	320	18.90	22.65	0.65	0.13	17.40	21.95
A9	0.7	0.80	3.91	5.39	7.84	2.2	3.0	3.9		UNIT 3	OA5-MH4	A5	1.9	2.6	3.4	1 - 18"	RCP	25	20.00	22.50	0.20	0.40	19.90	22.55
A10	0.7	0.80	3.91	5.39	7.84	2.2	3.0	3.9		UNIT 3	OA6-MH4	A6	1.9	2.6	3.4	1 - 18"	RCP	25	20.00	22.50	0.20	0.00	19.90	22.55
A11	1.8	0.55	3.91	5.39	7.84	3.9	5.3	7.0		UNIT 3	MH4-MH5	A1-A6, A17	58.2	92.6	68.7	1 - 60"	RCP	402	18.40	22.50	0.20	0.15	15.71	22.15
A12	0.6	0.80	3.91	5.39	7.84	1.9	2.6	3.4		UNIT 2	OA7-MH5	A7	1.9	2.6	3.4	1 - 18"	RCP	25						
A15	1.7	0.55	3.91	5.39	7.84	3.7	5.0	6.6		UNIT 2	OA8-MH5	A8	1.9	2.6	3.4	1 - 18"	RCP	25						
A14	0.5	0.80	3.91	5.39	7.84	1.8	2.2	2.8		UNIT 2	MH5-MH6	A1-A8, A17	41.9	57.8	75.0	1 - 60"	RCP	320	15.71	22.15	0.20	0.65	13.70	21.95
A13	0.6	0.80	3.91	5.39	7.84	1.9	2.6	3.4		UNIT 1	CB1-CB2	B1	6.0	8.3	10.8	1 - 24"	RCP	58	19.60	26.00	0.20	2.01	18.19	25.60
A16	0.6	0.80	3.91	5.39	7.84	1.9	2.6	3.4		UNIT 3	CB2-MH1	B1, B2	9.3	13.0	17.0	1 - 24"	RCP	14	19.00	25.60	0.40	10.00	18.12	25.40
A17	1.2	0.80	3.91	5.39	7.84	3.8	5.2	6.8		UNIT 3	CB3-MH1	B3	2.6	3.6	4.6	1 - 18"	RCP	14	20.10	25.50	0.10	10.00	18.61	25.40
B5	7.8	0.55	3.91	5.39	7.84	8.8	8.6	10.6		UNIT 3	MH5-MH7	MH5	17.0	26.6	21.7	1 - 42"	RCP	206	17.17	24.60	0.70	0.06	16.98	24.70
B2	1.8	0.55	3.91	5.39	7.84	3.4	4.7	6.2		UNIT 3	CB4-MH2	B4	3.4	4.7	6.2	1 - 18"	RCP	16	20.19	25.65	0.15	10.00	18.44	25.20
B3	1.2	0.55	3.91	5.39	7.84	2.6	3.6	4.6		UNIT 3	CB5-MH2	B5	2.4	3.3	4.3	1 - 18"	RCP	16	20.19	25.50	0.10	10.40	18.44	25.20
B4	1.6	0.55	3.91	5.39	7.84	3.4	4.7	6.2		UNIT 3	MH6-MH2	B1-B4, B5	17.8	24.6	32.1	1 - 48"	RCP	56	16.41	25.20	0.20	0.06	16.27	25.00
B5	1.6	0.55	3.91	5.39	7.84	3.4	4.7	6.2		UNIT 3	CB6-MH6	B6	3.4	4.7	6.2	1 - 18"	RCP	14	20.10	25.15	0.15	12.30	18.27	25.00
B6	1.1	0.55	3.91	5.39	7.84	2.4	3.3	4.3		UNIT 3	MH8-MH6	B4-B6	21.3	29.5	38.3	1 - 48"	RCP	160	16.37	25.00	0.25	0.06	16.25	24.75
B7	0.6	0.80	3.91	5.39	7.84	1.1	1.5	2.0		UNIT 3	CB7-MH6	B7	1.1	1.5	2.0	1 - 18"	RCP	14	20.36	25.55	0.10	6.56	19.20	25.15
B8	1.2	0.55	3.91	5.39	7.84	2.6	3.6	4.6		UNIT 3	CB8-MH6	B8	1.1	1.5	2.0	1 - 18"	RCP	24	20.36	25.25	0.10	6.56	19.20	25.15
B9	1.2	0.55	3.91	5.39	7.84	2.6	3.6	4.6		UNIT 3	MH6-MH8	B7, B8	2.2	3.0	3.9	1 - 18"	RCP	167	19.20	25.15	0.40	0.60	18.25	24.75
B10	1.2	0.55	3.91	5.39	7.84	2.6	3.6	4.6		UNIT 3	CB9-MH8	B9	2.6	3.6	4.6	1 - 18"	RCP	20	20.30	25.00	0.10	5.35	19.03	24.85
B11	1.6	0.55	3.91	5.39	7.84	3.4	4.7	6.2		UNIT 3	CB10-MH10	B10	2.6	3.6	4.6	1 - 18"	RCP	20	20.30	25.05	0.10	5.35	19.03	24.90
B12	1.6	0.55	3.91	5.39	7.84	3.4	4.7	6.2		UNIT 3	MH9-MH8	B9, B10	5.2	7.1	9.3	1 - 24"	RCP	156	19.15	24.95	0.20	1.00	17.75	24.75
B13	1.0	0.55	3.91	5.39	7.84	2.2	3.0	3.9		UNIT 3	MH8-MH7	B1-B10	28.6	39.5	51.6	1 - 48"	RCP	148	15.75	24.75	0.30	0.06	15.63	24.45
B14	1.6	0.55	3.91	5.39	7.84	3.4	4.7	6.2		UNIT 3	CB11-MH07	B11	3.4	4.7	6.2	1 - 18"	RCP	14	18.25	24.00	0.20	0.86	18.13	24.45
B15	2.1	0.55	3.91	5.39	7.84	4.5	6.2	8.1		UNIT 3	MH07-MH08	B1-B11	32.1	44.2	57.8	1 - 60"	RCP	84	15.63	24.45	0.30	0.08	15.56	24.15
B16	0.6	0.55	3.91	5.39	7.84	1.3	1.8	2.3		UNIT 3	CB12-MH08	B12	3.4	4.7	6.2	1 - 18"	RCP	16	18.75	24.30	0.20	4.50	18.06	24.15
B17	1.5	0.55	3.91	5.39	7.84	3.3	4.6	5.8		UNIT 3	CB13-MH08	B13	3.3	4.5	5.9	1 - 18"	RCP	16	18.75	24.35	0.15	4.50	18.06	24.15
B18	1.5	0.55	3.91	5.39	7.84	3.2	4.4	5.8		UNIT 3	MH08-MH09	B1-B13	37.7	51.9	67.8	1 - 60"	RCP	226	14.56	24.15	0.20	0.06	14.38	23.95
C1	1.0	0.55	3.91	5.39	7.84	2.2	3.0	3.9		UNIT 3	CB14-MH09	B14	3.8	4.7	6.2	1 - 18"	RCP	14	18.75	24.15	0.20	6.20	17.88	23.95
C2	1.4	0.55	3.91	5.39	7.84	3.0	4.2	5.4		UNIT 3	CB15-MH09	B15	1.5	1.8	2.3	1 - 18"	RCP	14	18.75	24.05	0.10	6.20	17.88	23.95
C3	1.5	0.55	3.91	5.39	7.84	3.2	4.4	5.8		UNIT 3	MH09-MH010	B1-B14, B16	42.4	58.5	76.5	1 - 60"	RCP	92	14.38	23.95	0.20	0.10	14.33	23.75
C4	2.0	0.55	3.91	5.39	7.84	4.3	5.9	7.7		UNIT 3	CB16-MH010	B16	4.3	6.1	8.1	1 - 18"	RCP	20	17.66	24.05	0.55	0.75	17.55	23.75
C5	1.7	0.55	3.91	5.39	7.84	3.7	5.0	6.6		UNIT 3	MH010-MH011	B1-B16	46.9	64.7	84.5	1 - 72"	RCP	316	14.33	23.75	0.45	0.06	14.08	23.30
C6	1.3	0.55	3.91	5.39	7.84	3.2	4.4	5.8		UNIT 3	CB17-MH011	B17	3.2	4.4	5.8	1 - 18"	RCP	14						
C7	1.2	0.55	3.91	5.39	7.84	3.2	4.4	5.8		UNIT 3	CB18-MH011	B18	3.2	4.4	5.8	1 - 18"	RCP	14						
C8	1.1	0.55	3.91	5.39	7.84	2.4	3.3	4.3		UNIT 3	MH011-MH012	B1-B18	53.4	73.6	96.1	1 - 72"	RCP	102	14.06	23.30	0.45	0.06	13.87	22.85
C9	1.4	0.55	3.91	5.39	7.84	3.0	4.2	5.4		UNIT 3	CB19-MH012	C1	3.2	4.4	5.8			14						
										UNIT 2	CB2-MH01	C1, C2	5.2	7.1	9.3			14						
										UNIT 2	CB3-MH01	C3	3.2	4.4	5.8			14						
										UNIT 2	MH01-MH04	C1-C3	8.4	11.6	15.1	1 - 36"	RCP	464	17.14	23.80	0.20	0.06	16.77	23.60
										UNIT 2	CB4-MH02	C4	4.3	5.9	7.7			20						
										UNIT 2	CB5-MH02	C5	3.2	4.4	5.8			20						
										UNIT 2	MH02-MH04	C4, C5	7.3	10.4	13.6	1 - 24"	RCP	142	17.39	24.00	0.40	0.06	17.27	23.60
										UNIT 2	CB6-MH03	C6	3.7	5.0	6.6			20						
										UNIT 2	CB7-MH03	C7	2.6	3.6	4.6			20						
										UNIT 2	MH03-MH04	C6, C7	6.2	8.6	11.2	1 - 24"	RCP	142	17.39	23.95	0.35	0.06	17.27	23.60
										UNIT 2	MH04-MH05	C1-C7	22.2	30.3	39.8	1 - 42"	RCP	280	23.77	23.60	0.40	0.06	23.55	23.15
										UNIT 2	CB8-MH05	C8	2.4	3.3	4.3			20						
										UNIT 2	CB9-MH05	C9	3.0	4.2	5.4			20						
										UNIT 2	MH05-MH012	C1-C9	27.5	37.9	49.6	1 - 48"	RCP	230	15.05	23.15	0.30	0.06	14.87	22.85
										UNIT 2	MH012-MH04	B1-B18, C1-C9	80.9	111.5	143.7	1 - 60"	RCP	222	13.87	22.85	0.80	0.06	13.70	21.95
										UNIT 2	MH04-MH07	A1-A5, B1-B18, C1-C9	102.8	144.3	183.1	2 - 60"	RCP	234	13.70	21.95	0.35	0.06	13.46	21.43
										UNIT 2	CB10-MH07	A8	2.2	3.0	3.9			20						
										UNIT 2	OA10-MH07	A10	2.2	3.0	3.9			20						
										UNIT 3	MH07-MH18	A1-A10, B1-B18, C1-C9	127.2	179.3	229.9	2 - 72" OR 3 - 4'X8' BOX	RCP	730	13.46	21.43	1.10	0.06	12.86	20.10
										UNIT 3	OA11-MH18	A11	3.9	5.3	7.0			20						
										UNIT 2	OA12-MH18	A12	1.9	2.6	3.4			25						
										UNIT 4	MH18-MH19	A1-A12, B1-B18, C1-C9	152.9	188.3	238.4	2 - 72" OR 3 - 4'X8' BOX	RCP	282	12.66	20.50	0.30	0.06	12.65	20.00
										UNIT 2	OA13-MH19	A13	3.7	5.0	6.6			25						
										UNIT 2	OA14-MH19	A14	1.6	2.2	2.8			25						
										UNIT 5	MH19-MH100	A1-A14, B1-B18, C1-C9	198.2	198.3	248.8	2 - 72" OR 3 - 4'X8' BOX	RCP	638	12.65	20.00	0.45	0.06	12.36	19.55
										UNIT 2	OA15-MH100	A15	1.9	2.6	3.4			25						
										UNIT 2	OA16-MH100	A16	1.9	2.6	3.4			25						
										UNIT 5	MH100-MH111	A1-A16, B1-B18, C1-C9	261.9	295.6	359.3	3 - 72" OR 3 - 4'X8' BOX	RCP	412	12.36	19.55	0.30	0.10	12.05	19.05
										UNIT 5	BA1-OUTFALL	A1-A16, B1-B18, C1-C9	261.9	295.6	359.3	3 - 72" OR 3 - 4'X8' BOX	RCP	48	12.05	19.25	0.25	0.10	12.00	19.00

INLET/ MANHOLE ID#	PIPE SIZE N	PIPE SIZE E	PIPE SIZE S	PIPE SIZE W	DIMENSIONS	DEPTH, FT.	TYPE
CI A1	n/a	n/a	n/a	18"	3'-0" X 2'-0"	5.96	STD CURB
CI A7	n/a	36"	n/a	18"	3'-0" X 2'-0"	6.46	STD CURB
CI A3	18"	n/a	n/a	18"	3'-0" X 2'-0"	5.92	STD CURB
CI A4	n/a	30"	n/a	24"	3'-0" X 2'-0"	5.47	STD CURB
CI A5	18"	n/a	n/a	n/a	3'-0" X 2'-0"	5.66	STD CURB
CI A6	n/a	n/a	18"	n/a	3'-0" X 2'-0"	5.96	GRATE
CI B1	36"	n/a	n/a	n/a	3'-0" X 2'-0"	6.03	STD CURB
CI B2	n/a	24"	n/a	24"	3'-0" X 2'-0"	6.12	STD CURB
CI B3	n/a	n/a	n/a	18"	3'-0" X 2'-0"	5.57	STD CURB
CI B4	n/a	18"	n/a	n/a	3'-0" X 2'-0"	5.73	STD CURB
CI B5	n/a	18"	n/a	n/a	3'-0" X 2'-0"	5.67	STD CURB
CI B6	n/a	n/a	n/a	18"	3'-0" X 2'-0"	5.78	STD CURB
CI B7	18"	n/a	n/a	n/a	3'-0" X 2'-0"	5.96	GRATE
CI B8	n/a	n/a	18"	n/a	3'-0" X 2'-0"	5.96	GRATE
CI B9	18"	n/a	n/a	n/a	3'-0" X 2'-0"	6.08	STD CURB
CI B10	n/a	n/a	18"	n/a	3'-0" X 2'-0"	6.09	STD CURB
CI B11	n/a	n/a	n/a	18"	3'-0" X 2'-0"	6.38	STD CURB
CI B11-B	n/a	n/a	n/a	18"	3'-0" X 2'-0"	4.79	STD CURB
CI B12	n/a	18"	n/a	n/a	3'-0" X 2'-0"	4.77	STD CURB
CI B13	n/a	n/a	n/a	18"	3'-0" X 2'-0"	4.77	STD CURB
CI B14	n/a	18"	n/a	n/a	3'-0" X 2'-0"	4.78	STD CURB
CI B15	n/a	n/a	n/a	n/a	3'-0" X 2'-0"	4.78	STD CURB
CI B16	n/a	n/a	n/a	18"	3'-0" X 2'-0"	4.78	STD CURB
MH A1	30"	18"	n/a	24"	4'-0" x 6'-6"	6.81	TYPE C
MH A2	36"	18"	30"	30"	4'-0" x 8'-0"	7.31	TYPE C
MH A3	n/a	48"	30"	n/a	5'-0" x 8'-0"	9.76	TYPE D
MH A4	18"	60"	36"	48"	6'-0" x 7'-0"	9.66	TYPE D
MH B1	36"	18"	n/a	24"	4'-0" x 5'-0"	7.08	TYPE C
MH B2	42"	18"	36"	18"	4'-0" x 6'-6"	7.68	TYPE C
MH B3	42"	n/a	42"	18"	4'-0" x 8'-0"	7.88	TYPE C
MH B4	18"	18"	18"	n/a	4'-0" x 4'-0"	6.73	TYPE C
MH B5	18"	n/a	24"	24"	4'-0" x 4'-0"	6.08	TYPE C
MH B6	48"	24"	42"	18"	6'-0" x 8'-0"	9.03	TYPE D
MH B7	48"	18"	48"	18"	6'-0" X 6'-0"	7.38	TYPE C
MH B8	48"	18"	48"	18"	6'-0" X 7'-0"	8.28	TYPE C
MH B10	60"	18"	60"	n/a	7'-0" X 7'-0"	8.42	TYPE C

HWL/TOP/FLOW WEIR ELEV. 18.90

DETENTION FLOWLINE ELEV. 12.00

RELEASED FOR CONSTRUCTION

Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

DRAWN BY:	RT
APPROVED BY:	JP
SCALE:	SHOWN
DATE:	11-10-23
DRAWING #:	210237
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STORM WATER MANAGEMENT TABLES

KASPIAN SUBDIVISION UNIT 1

CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

DRAWN BY: RT
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DATE: 11-10-23
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JOHN PERALES, JR. 66458 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
11/10/2023

SIGNS, MARKING AND LIGHTING PLAN

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
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jperales@peralesengineering.com
5866 S. Staples St. - # 315
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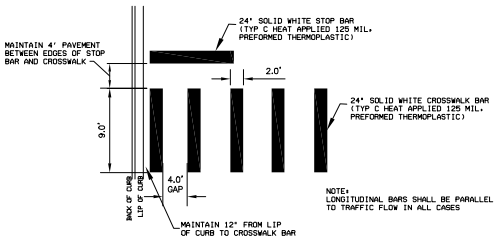
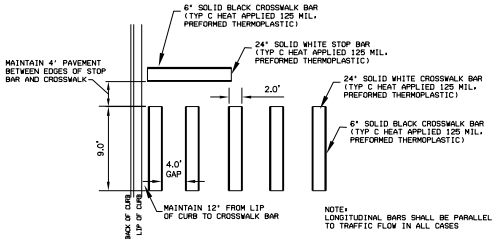


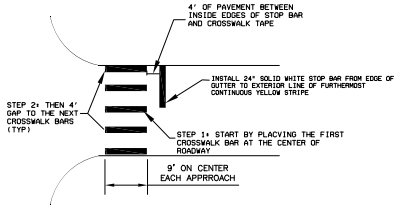
LONGITUDINAL CROSSWALK - DETAIL

FOR ASPHALT ROADWAYS - N.T.S.



HIGH CONTRAST CROSSWALK - DETAIL

FOR CONCRETE ROADWAYS - N.T.S.



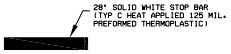
PLAN VIEW

CROSSWALK PAVEMENT MARKINGS

N.T.S.

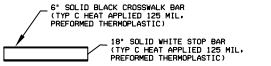
NOTE:

1. ALL STOP BAR AND CROSSWALK PAVEMENT MARKINGS SHALL BE 24" SOLID WHITE, TYPE C HEAT APPLIED, 125 MIL PREFORMED THERMOPLASTIC. HIGH CONTRAST CROSSWALK INCLUDES 24" SOLID BLACK ON BOTH SIDES (TYPE C HEAT AP HEAT APPLIED, 125 MIL, PERFORMED THERMOPLASTIC).
2. CONTRACTOR SHALL PREMARK STRIPING LAYOUT FOR CITY APPROVAL PRIOR TO THE PLACEMENT OF ANY FINAL PAVEMENT MARKINGS.
3. THE PLACEMENT OF CROSSWALK BARS SHALL START BY PLACING THE FIRST CROSSWALK BAR AT THE CENTER OF THE ROADWAY, AND THEN 4' TO THE NEXT CROSSWALK BARS.
4. DO NOT STRIPE STREET WITH ROADWAY SURFACE TEMPERATURE LESS 55°F.
5. ALL CROSSWALK AND STOP BARS SHALL BE IN ACCORDANCE WITH THIS DETAIL AND THE 2011 TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TUMUCD).



SCHOOL ZONE BAR - DETAIL

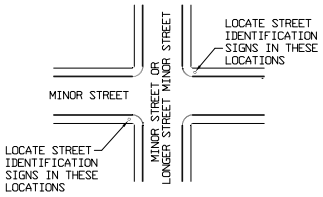
FOR ASPHALT ROADWAYS - SCALE: N.T.S.

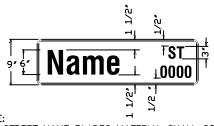


HIGH CONTRAST SCHOOL ZONE BAR - DETAIL

FOR CONCRETE ROADWAYS - N.T.S.

STREET NAME BLADE SIGN





NOTE:

1. STREET NAME BLADES MATERIAL SHALL CONSIST OF EXTRUDED ALUMINUM. THE HEIGHT OF NAME BLADES SHALL BE 9" AND THE HEIGHT OF LETTERING SHALL BE 6". STREET NAME LEGEND SHALL CONSIST OF INITIAL CASE. FONT ON STREET NAME BLADES SHALL BE SERIES B. WHEN TWO STREET NAME BLADES WILL BE ON THE SAME ASSEMBLY. THESE TWO STREET NAME BLADES SHALL HAVE THE SAME WIDTH.
2. ANTI-GRAFFITI COATING ON FRONT OF THE SIGN PLAQUE (APPLICABLE TO ALL SIGNS EXCEPT FOR NAME BLADES).
3. SIGNS AND PAVEMENT MARKINGS SHALL MEET 2011 TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES(TMUTCD), AND TX DOT STANDARDS.

RELEASED FOR CONSTRUCTION

Brio A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

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APPROVED BY: JP	SCALE: SHOWN		
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IAN PERALES, JR. 66458 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
Ian Perales, Jr., P.E.
11/10/2023

SIGNS & MARKING DETAILS

KASPIAN SUBDIVISION UNIT 1

CORPUS CHRISTI, TEXAS

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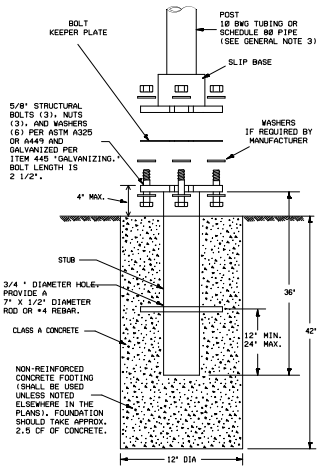
DISCLAIMER: THE USE OF THIS STANDARD IS GOVERNED BY THE "TEXAS ENGINEERING PRACTICE ACT". NO WARRANTY OF ANY KIND IS MADE BY THE TEXAS DEPARTMENT OF TRANSPORTATION FOR ANY PURPOSE WHATSOEVER. TXDOT ASSUMES NO RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THIS STANDARD OR FOR INCORRECT RESULTS OR DAMAGES RESULTING FROM ITS USE.

DATE:
FILE:

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

NOTE

THERE ARE VARIOUS DEVICES APPROVED FOR THE TRIANGULAR SLIPBASE SYSTEM. PLEASE REFERENCE THE MATERIAL PRODUCER LIST FOR APPROVED SLIP BASE SYSTEMS. HTTP://WWW.TXDOT.GOV/BUSINESS/PRODUCER_LIST.HTM THE DEVICES SHALL BE INSTALLED PER MANUFACTURERS' RECOMMENDATIONS. INSTALLATION PROCEDURES SHALL BE PROVIDED TO THE ENGINEER BY CONTRACTOR.

GENERAL NOTES:

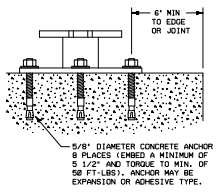
1. SLIP BASE SHALL BE PERMANENTLY MARKED TO INDICATE MANUFACTURER, METHOD, DESIGN, AND LOCATION OF MARKING ARE SUBJECT TO APPROVAL OF THE TXDOT TRAFFIC STANDARDS ENGINEER.
2. MATERIAL USED AS POST WITH THIS SYSTEM SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
   10 BWG TUBING (2.875" OUTSIDE DIAMETER)
   0.134" NOMINAL WALL THICKNESS
   SEAMLESS OR ELECTRIC-RESISTANCE WELDED STEEL TUBING OR PIPE
   STEEL SHALL BE HSLAS OR 55 PER ASTM A1011 OR ASTM A1008
   OTHER STEELS MAY BE USED IF THEY MEET THE FOLLOWING:
   55,000 PSI MINIMUM YIELD STRENGTH
   70,000 PSI MINIMUM TENSILE STRENGTH
   20% MINIMUM ELONGATION IN 2"
   WALL THICKNESS (UNCOATED) SHALL BE WITHIN THE RANGE OF 0.122" TO 0.136"
   OUTSIDE DIAMETER (UNCOATED) SHALL BE WITHIN THE RANGE OF 2.867" TO 2.883"
   GALVANIZATION PER ASTM A123 OR ASTM A653 G210. FOR PRECOATED STEEL TUBING (ASTM A653). RECOAT TUBE OUTSIDE DIAMETER WELD SEAM BY METALLIZING WITH ZINC WIRE PER ASTM B833.
   SCHEDULE 80 PIPE (2.875" OUTSIDE DIAMETER)
   0.276" NOMINAL WALL THICKNESS
   STEEL TUBING PER ASTM A500 GR C
   OTHER SEAMLESS OR ELECTRIC-RESISTANCE WELDED STEEL TUBING OR PIPE WITH EQUIVALENT OUTSIDE DIAMETER AND WALL THICKNESS MAY BE USED IF THEY MEET THE FOLLOWING:
   46,000 PSI MINIMUM YIELD STRENGTH
   62,000 PSI MINIMUM TENSILE STRENGTH
   21% MINIMUM ELONGATION IN 2"
   WALL THICKNESS (UNCOATED) SHALL BE WITHIN THE RANGE OF 0.248" TO 0.304"
   OUTSIDE DIAMETER (UNCOATED) SHALL BE WITHIN THE RANGE OF 2.855" TO 2.895"
   GALVANIZATION PER ASTM A123
3. SEE THE TRAFFIC OPERATIONS DIVISION WEBSITE FOR DETAILED DRAWINGS OF SIGN CLAMPS AND TEXAS UNIVERSAL TRIANGULAR SLIPBASE SYSTEM COMPONENTS. THE WEBSITE ADDRESS IS:
   HTTP://WWW.TXDOT.GOV/PUBLICATIONS/TRAFFIC.HTM
4. SIGN SUPPORTS SHALL NOT BE SPLICED EXCEPT WHERE SHOWN. SIGN SUPPORT POSTS SHALL NOT BE SPLICED.

ASSEMBLY PROCEDURE

FOUNDATION
1. PREPARE 12-INCH DIAMETER BY 42-INCH DEEP HOLE. IF SOLID ROCK IS ENCOUNTERED, THE DEPTH OF THE FOUNDATION MAY BE REDUCED SUCH THAT IT IS EMBEDDED A MINIMUM OF 18 INCHES INTO THE SOLID ROCK.
2. THE ENGINEER MAY PERMIT BATCHES OF CONCRETE LESS THAN 2 CUBIC YARDS TO BE MIXED WITH A PORTABLE, MOTOR-DRIVEN CONCRETE MIXER. FOR SMALL PLACEMENTS LESS THAN 0.5 CUBIC YARDS, HAND MIXING IN A SUITABLE CONTAINER MAY BE ALLOWED BY ENGINEER. CONCRETE SHALL BE CLASS A.
3. PUSH THE PIPE END OF THE SLIP BASE STUB INTO THE CENTER OF THE CONCRETE. ROTATE THE STUB BACK AND FORTH WHILE PUSHING IT DOWN INTO THE CONCRETE TO ASSURE GOOD CONTACT BETWEEN THE CONCRETE AND STUB. CONTINUE TO WORK THE STUB INTO THE CONCRETE UNTIL IT IS BETWEEN 2 TO 4 INCHES ABOVE THE GROUND.
4. PLUMB THE STUB. ALLOW A MINIMUM OF 4 DAYS TO SET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
5. THE TRIANGULAR SLIPBASE SYSTEM IS MULTIDIRECTIONAL AND IS DESIGNED TO RELEASE WHEN STRUCK FROM ANY DIRECTION.

SUPPORT
1. CUT SUPPORT SO THAT THE BOTTOM OF THE SIGN WILL BE 7 TO 7.5 FEET ABOVE THE EDGE OF THE TRAVELWAY (I.E., EDGE OF THE CLOSEST LANE) WHEN SLIP PLATE IS BELOW THE EDGE OF PAVEMENT OR 7 TO 7.5 FEET ABOVE SLIP PLATE WHEN THE SLIP PLATE IS ABOVE THE EDGE OF THE TRAVELWAY. THE CUT SHALL BE PLUMB AND STRAIGHT.
2. ATTACH SIGN TO SUPPORT USING CONNECTIONS SHOWN. WHEN MULTIPLE SIGNS ARE INSTALLED ON THE SAME SUPPORT, ENSURE THE MINIMUM CLEARANCE BETWEEN EACH SIGN IS MAINTAINED. SEE SMD(SLIP-2) FOR CLEARANCES BASED ON SIGN TYPES.

CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

CONCRETE ANCHOR CONSISTS OF 5/8" DIAMETER STUD BOLT WITH UNC SERIES BOLT THREADS ON THE UPPER END, HEAVY HEX NUT PER ASTM A563, AND HARDENED WASHER PER ASTM F436. THE STUD BOLT SHALL HAVE A MINIMUM YIELD AND ULTIMATE TENSILE STRENGTH OF 58 AND 75 KSI, RESPECTIVELY. NUTS, BOLTS AND WASHERS SHALL BE GALVANIZED PER ITEM 445, "GALVANIZING." ADHESIVE TYPE ANCHORS SHALL HAVE STUD BOLTS INSTALLED WITH TYPE III EPOXY PER DMS-6100, "EPOXIES AND ADHESIVES." ADHESIVE ANCHORS MAY BE LOADED AFTER ADEQUATE EPOXY CURE TIME PER THE MANUFACTURER'S RECOMMENDATIONS. TOP OF BOLT SHALL EXTEND AT LEAST FLUSH WITH TOP OF THE NUT WHEN INSTALLED. THE ANCHOR, WHEN INSTALLED IN 4000 PSI NORMAL-WEIGHT CONCRETE WITH A 5 1/2" MINIMUM EMBEDMENT, SHALL HAVE A MINIMUM ALLOWABLE TENSION AND SHEAR OF 3900 AND 3100 PSI, RESPECTIVELY.

TEXAS DEPARTMENT OF TRANSPORTATION
TRAFFIC OPERATIONS DIVISION

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08

JULY 2002	CONT	SECT	JOB	HIGHWAY
9-08 REVISIONS	DIST	COUNTY		SHEET NO.

268

RELEASED FOR CONSTRUCTION
Brio A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

APPROVED BY: JP | DRAWN BY: RT
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SIGNS & MARKING DETAILS

KASPIAN SUBDIVISION UNIT 1
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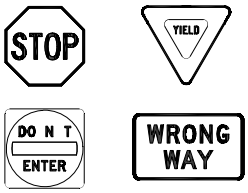
Tel: (361) 728-7188

REQUIREMENTS FOR RED BACKGROUND REGULATORY SIGNS

(STOP, YIELD, DO NOT ENTER AND WRONG WAY SIGNS)



REQUIREMENTS FOR FOUR SPECIFIC SIGNS ONLY

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	RED	TYPE B OR C SHEETING
BACKGROUND	WHITE	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE B OR C SHEETING
LEGEND	RED	TYPE B OR C SHEETING

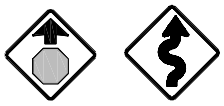
REQUIREMENTS FOR WHITE BACKGROUND REGULATORY SIGNS

(EXCLUDING STOP, YIELD, DO NOT ENTER AND WRONG WAY SIGNS)

TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	ALL OTHERS	TYPE B OR C SHEETING
LEGEND, BORDERS AND SYMBOLS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND, BORDERS AND SYMBOLS	ALL OTHER	TYPE B OR C SHEETING

REQUIREMENTS FOR WARNING SIGNS



TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	FLOURESCENT YELLOW	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND & SYMBOLS	ALL OTHER	TYPE B OR C SHEETING

REQUIREMENTS FOR SCHOOL SIGNS

TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	FLOURESCENT YELLOW GREEN	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND, BORDERS AND SYMBOLS	BLACK	ACRYLIC NON-REFLECTIVE FILM
SYMBOLS	RED	TYPE B OR C SHEETING

GENERAL NOTES

1. SIGNS TO BE FURNISHED SHALL BE AS DETAILED ELSEWHERE IN THE PLANS AND/OR AS SHOWN ON SIGN TABULATION SHEET. STANDARD SIGN DESIGNS AND ARROW DIMENSIONS CAN BE FOUND IN THE "STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS" (SHSD).
2. SIGN LEGEND SHALL USE THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) STANDARD HIGHWAY ALPHABETS (B, C, D, E, EMCD OR F).
3. LATERAL SPACING BETWEEN LETTERS AND NUMERALS SHALL CONFORM WITH THE SHSD, AND ANY APPROVED CHANGES THERETO. LATERAL SPACING OF LEGEND SHALL PROVIDE A BALANCED APPEARANCE WHEN SPACING IS NOT SHOWN.
4. BLACK LEGEND AND BORDERS SHALL BE APPLIED BY SCREENING PROCESS OR CUT-OUT ACRYLIC NON-REFLECTIVE BLACK FILM TO BACKGROUND SHEETING, OR COMBINATION THEREOF.
5. WHITE LEGEND AND BORDERS SHALL BE APPLIED BY SCREENING PROCESS WITH TRANSPARENT COLORED INK, TRANSPARENT COLORED OVERLAY FILM TO WHITE BACKGROUND SHEETING OR CUT-OUT WHITE SHEETING TO COLORED BACKGROUND SHEETING, OR COMBINATION THEREOF.
6. COLORED LEGEND SHALL BE APPLIED BY SCREENING PROCESS WITH TRANSPARENT COLORED INK. TRANSPARENT COLORED OVERLAY FILM OR COLORED SHEETING TO BACKGROUND SHEETING, OR COMBINATION THEREOF.
7. SIGN SUBSTRATE SHALL BE ANY MATERIAL THAT MEETS THE DEPARTMENTAL MATERIAL SPECIFICATION REQUIREMENTS OF DMS-7110 OR APPROVED ALTERNATIVE.
8. MOUNTING DETAILS FOR ROADSIDE MOUNTED SIGNS ARE SHOWN IN THE "SMD SERIES" STANDARD PLAN SHEETS.

ALUMINUM SIGN BLANKS THICKNESS	
SQUARE FEET	MINIMUM THICKNESS
LESS THAN 7.5	0.080
7.5 TO 15	0.100
GREATER THAN 15	0.125

DEPARTMENTAL MATERIAL SPECIFICATIONS	
ALUMINUM SIGN BLANKS	DMS-7110
SIGN FACE MATERIALS	DMS-8300

THE STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD) CAN BE FOUND AT THE FOLLOWING WEBSITE.

http://www.txdot.gov/

Texas Department of Transportation — Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

TSR(4)-13

FILE: TSR4-13.DGN	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
©TXDOT OCTOBER 2023	CONT	SECT	JOB	HIGHWAY
REVISIONS 12-83 7-13 9-08	DIST	COUNTY		SHEET NO.

4

RELEASED FOR CONSTRUCTION

Brio A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.7.

DISCLAIMER:
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SIGNS & MARKING DETAILS

KASPIAN SUBDIVISION UNIT 1
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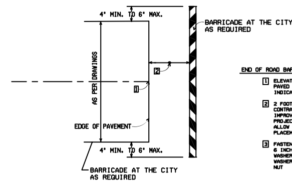
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

NOTES

1. CONTRACTOR TO PROVIDE AND INSTALL IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, MANUFACTURER RECOMMENDATIONS, AND INDUSTRY STANDARDS.
   1.1. IN THE EVENT THAT A SPECIFICATION, RECOMMENDATION, OR STANDARD CONFLICTS WITH ANOTHER, THE PRODUCT WILL NOT PERFORM AS INTENDED.
2. CONTRACTOR IS TO INSTALL THE BARRICADE PRIOR TO OPENING THE STREET TO THE PUBLIC.
3. BARRICADE SHALL BE INSTALLED AT LOCATIONS INDICATED WITHIN THE DRAWINGS AND/OR AS INDICATED BY THE OAR.
4. BARRICADE SHALL EXTEND ACROSS THE ROADWAY WITH THE STRIPES SLOPING DOWNWARD TOWARDS THE CENTER OF THE ROADWAY.
5. ANY IDENTIFICATION MARKINGS SHALL BE ON THE BACK OF THE BARRIADE RAILS WITH A MAXIMUM HEIGHT OF ANY LETTERS AND/OR LOGOS USED BEING NO LARGER THAN 1-INCH.
6. PROJECT WARRANTY OF 14-MONTHS FROM DATE OF RELEASE OF RETAINAGE IN FULL WILL GOVERN THIS ITEM UNLESS OTHERWISE INDICATED WITHIN THE PROJECT DOCUMENTS OR BY THE OAR.

MATERIALS AND INSTALLATION

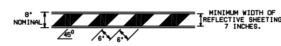
1. ALL PRODUCTS SHALL BE AS INDICATED UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR AS INDICATED BY THE OAR.
2. WOOD
   2.1. ALL WOOD SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE (SYP) THAT MEETS OR EXCEEDS THE SOUTHERN PINE INSPECTION BUREAU (SPIB) GRADE 2 WHICH IS TREATED TO AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) UC4B, FREE OF SUBSTANTIAL KNOTS, DEFECTS THAT PREVENT THE MATERIAL FROM SUPPORTING ITSELF, SUBSTANTIAL EDGE DAMAGE THAT REDUCES THE WIDE FLAT SURFACE WIDTH BY MORE THAN ?-INCH, DELETERIOUS MATERIAL THAT WILL PREVENT THE TREATMENT, PAINT, OR DECALS FROM PENETRATING OR ADHERING TO THE WOOD MATERIAL.
3. FASTENERS
   3.1. ALL FASTENERS SHALL BE HOT-DIPPED GALVANIZED FASTENERS AND CONNECTORS, OR BETTER OF SIZE AND LENGTHS AS INDICATED, UNLESS OTHERWISE NOTED OR INDICATED BY THE OAR.
4. PAINT AND SHEET MATERIAL
   4.1. NOTICE: THE WOOD MATERIAL WILL BE REQUIRED TO DRY IN A MANNER THAT PREVENTS THE MATERIAL FROM WARPING AND/OR CRACKING TO A POINT THAT THE WOOD MEMBER EASILY ACCEPTS WATER WHEN IT IS POURED ON IT, TEST OF SMALL AREAS IS REQUIRED PRIOR TO PAINTING AND WILL REQUIRE AREA TO DRY PRIOR TO PROCEEDING WITH PAINTING.
   4.2. INSTALL AN EXTERIOR GRADE LATEX WHITE PRIMER THAT IS RECOMMENDED FOR TREATED WOOD IN ACCORDANCE WITH PAINT MANUFACTURER RECOMMENDATIONS. IF PAINTED PRIOR TO INSTALLATION THE CONTRACTOR WILL BE REQUIRED TO PRIME ANY CUT EDGES.
   4.3. INSTALL TWO (2) COATS OF EXTERIOR SEMI-GLOSS LATEX WHITE PAINT THAT IS RECOMMENDED FOR TREATED WOOD IN ACCORDANCE WITH PAINT MANUFACTURER RECOMMENDATIONS ON ALL WOOD MATERIAL, ANY SCRATCHES AND ACROSS ALL JOINTS, TWO (2) COATS ACROSS ALL FASTENERS AND PRIMED ENDS, ONCE INSTALLATION IS COMPLETE.
   4.4. SHEETING SHALL BE RETROREFLECTIVE TYPE A CONFORMING TO TxDOT DMS-8300 UNLESS OTHERWISE INDICATED BY THE OAR.
4.5. CLEAN-UP OF PAINT SHALL BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATION.



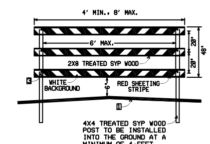
TYPE BARRICADE PLACEMENT
N.T.S.

END OF ROAD BARRICADE CODED NOTES

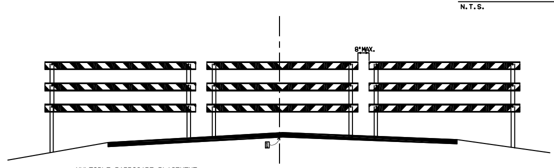
1. ELEVATION OF CENTER OF PAVED ROAD AT POINT INDICATED
2. 2 FOOT MIN. TO 4 FOOT MAX. CONTRACTOR TO ADJUST IMPROVEMENTS AT THE PROJECT BOUNDARY TO ALLOW FOR BARRICADE PLACEMENT
3. FASTENER - 1/2 INCH X 6 INCH CARRIAGE BOLT, WASHER, AND NUT. PLACE WASHER BETWEEN WOOD AND NUT



TYPICAL STRIPING DETAIL
N.T.S.



TYPICAL PANEL DETAIL
N.T.S.



MULTIPLE BARRICADE PLACEMENT
N.T.S.

TYPE A END OF ROAD BARRICADE
N.T.S.

RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
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STATE OF TEXAS
JUAN PERALES, JR.
66652
REGISTERED PROFESSIONAL ENGINEER
P.E. 11/10/2023

SIGNS & MARKING DETAILS

KASPIAN SUBDIVISION UNIT 1
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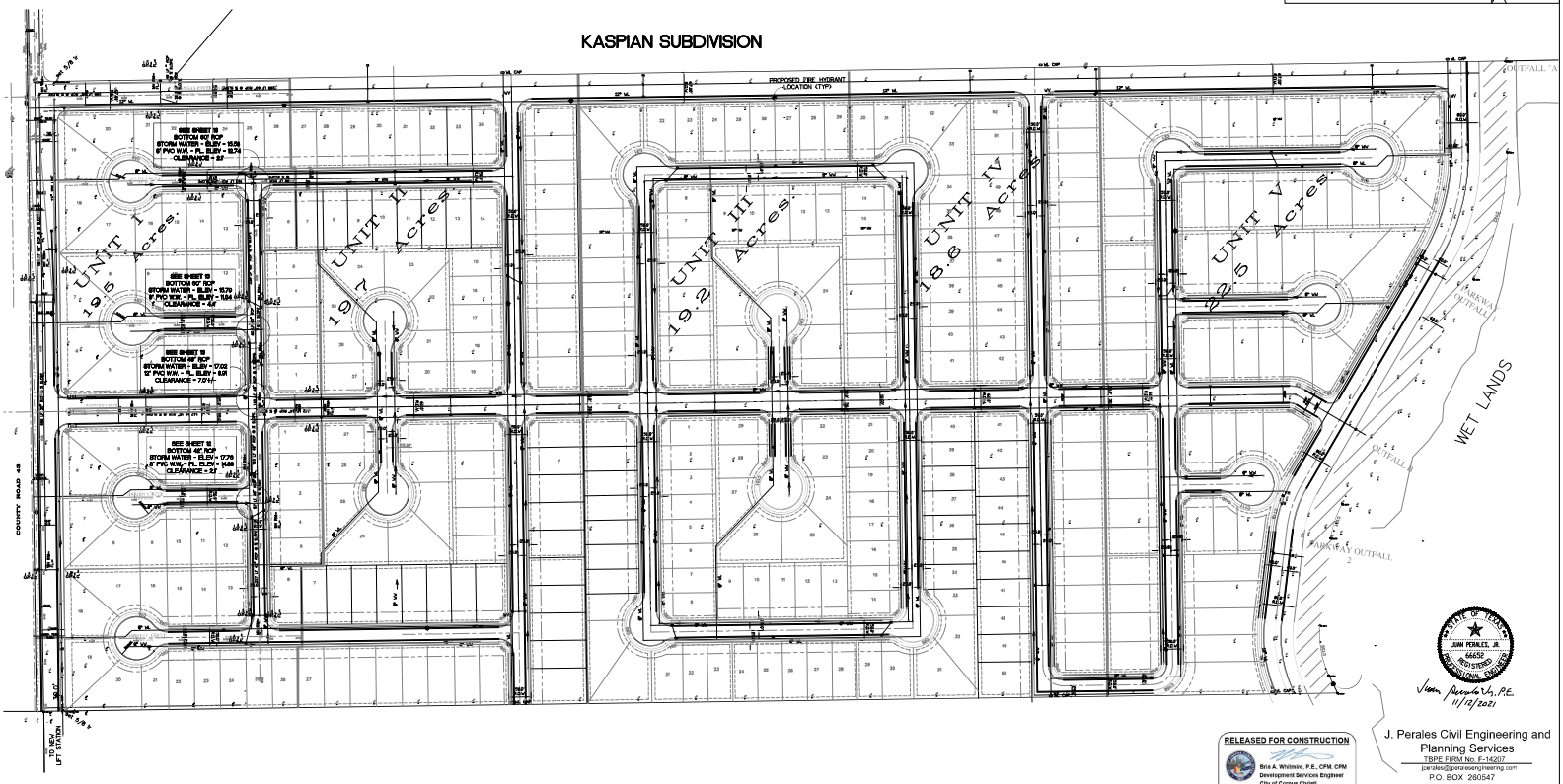
OVER ALL UTILITY PLAN

KASPIAN SUBDIVISION



STATE OF TEXAS
JUAN PERALES, JR.
84452
REGISTERED
PROFESSIONAL ENGINEER

Juan Perales Jr., P.E.
11/19/2021

RELEASED FOR CONSTRUCTION

Eric A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

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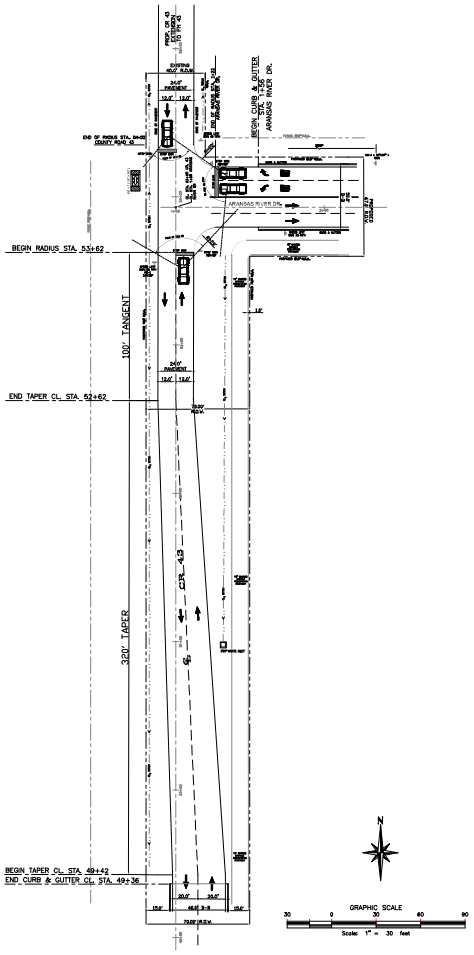
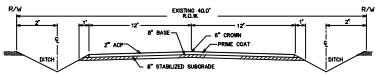
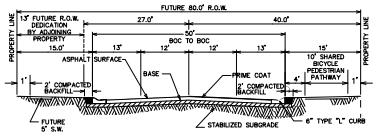
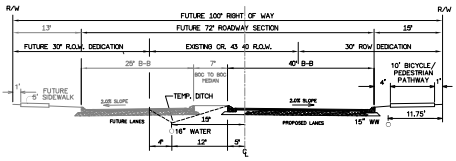




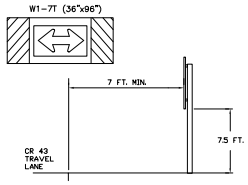
COUNTY ROAD 43
RURAL ROADWAY SECTION
STA. 52+62 TO STA. 80+00



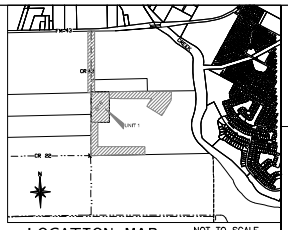
ARANSAS RIVER DRIVE
SECTION
STA. 1+00 TO STA. 6+70



COUNTY ROAD 43
CURB & GUTTER SECTION
STA. 40+18 TO STA. 49+36



SIGNAGE AT END
OF
ARANSAS RIVER DR.



LOCATION MAP NOT TO SCALE

RELEASED FOR CONSTRUCTION
Bria A. Whimm, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.1.

APPROVED BY: JP | DRAWN BY: RT
DATE: 11-10-23 | SCALE: SHOWN
DRAWING #: 210237
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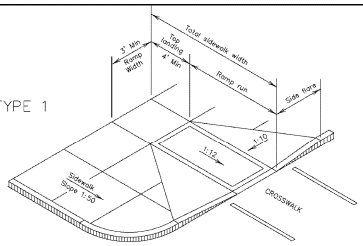
JOHN PERALES, JR. 66626 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
John Perales, Jr., P.E. 11/10/2023

CR 43 & ARANSAS RIVER DRIVE
INTERSECTION DETAIL

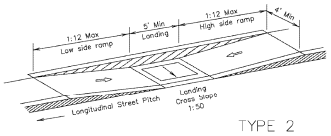
KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5665 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel.: (361) 725-7168

TYPE 1



PERPENDICULAR CURB RAMPS



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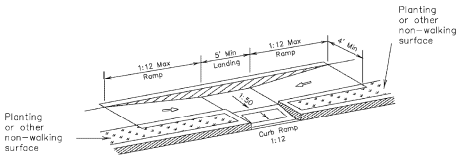
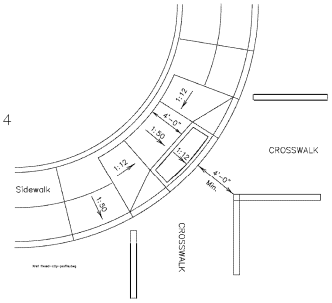
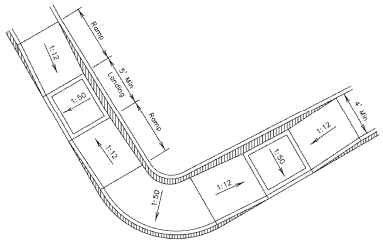


TYPE 3

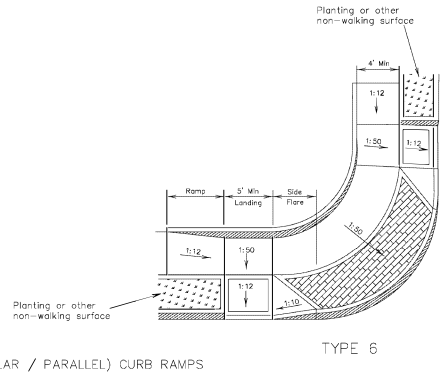
PARALLEL CURB RAMPS

TYPE 4





TYPE 5

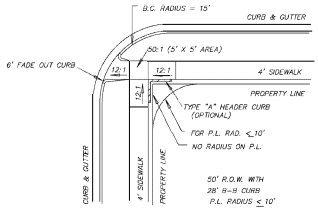


TYPE 6

COMBINATION (PERPENDICULAR / PARALLEL) CURB RAMPS

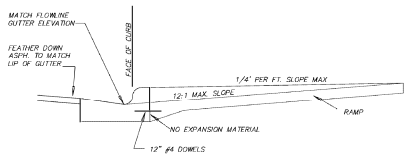
SINGLE DIAGONAL CURB RAMP
- *PERPENDICULAR TO THE TANGENT OF THE CURB RADIUS.
- *REQUIRED TO BE CONTAINED IN CROSSWALK.
- *REQUIRED TO HAVE LANDING.

CURB RAMP TYPE
- *THE USE OF SINGLE DIRECTIONAL RAMPS ARE REQUIRED ON NEW STREET CONSTRUCTION PROJECTS.
- *ON STREET RECONSTRUCTION OR PAVEMENT REHABILITATION PROJECTS THE TYPE OF RAMPS ARE REQUIRED TO BE DIRECTIONAL OR PARALLEL.
- *DIAGONAL CURB RAMPS MAY BE ALLOWED WHEN PHYSICAL CONSTRAINTS/ OBSTRUCTIONS ARE PRESENT AND DIRECTIONAL CURB RAMPS CAN NOT BE CONSTRUCTED IN COMPLIANCE WITH TEXAS DEPARTMENT OF LICENSING AND REGULATION GUIDELINES.



TYPE 7
DETACHED SIDEWALKS BOTH SIDES CROSS ONE DIRECTION

NOT TO SCALE



CURB RAMP PROFILE

NOT TO SCALE

Texas Department of Transportation
Design Division (Roadway)

RELEASED FOR CONSTRUCTION

Eric A. Wilkinson, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.6.F.

APPROVED BY: JP | DRAWN BY: RT
DATE: | SCALE: SHOWN
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JOAN PERALES, JR. 66636 LICENSED PROFESSIONAL ENGINEER — 01/09/2023

ADA CURB RAMP DETAILS

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
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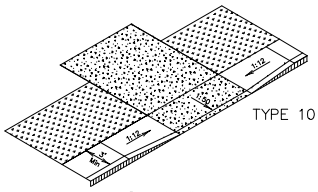
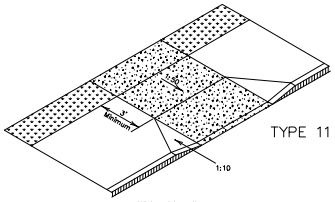
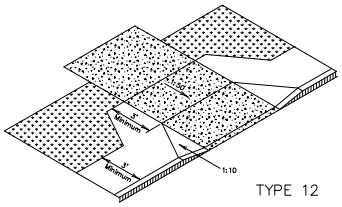
Joan Perales, P.E. | joan@jperales.com
5686 S. Staples, Suite #315
Corpus Christi, Texas 78411
Tel: (361) 728-7188



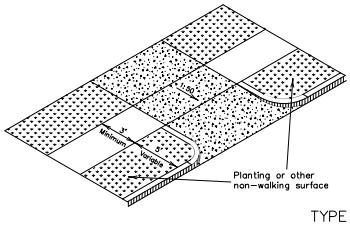
Ramp sidewalk



Wide sidewalk

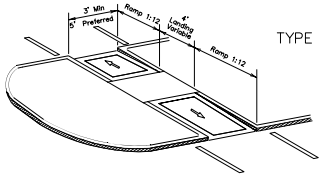


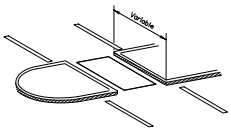
Apron offset sidewalk



Setback sidewalk

DRIVEWAY APRONS





CURB RAMPS AT MEDIAN ISLANDS

GENERAL NOTES

1. REFERENCE STANDARD SPECIFICATION 025614, "CONCRETE CURB RAMPS".
2. SLOPE SUMMARY:
   RAMPS:
   LONGITUDINAL MAX. 1" PER FOOT
   CROSS SLOPE 1/8" TO 1/4" PER FOOT MAX
   SIDE FLARE (IF REQUIRED) MAX 10:1
   ADJOINING AREAS:
   LONGITUDINAL MAX. 1/2"
   CROSS SLOPE (IF APPLICABLE) 1/8" TO 1/4" PER FT.
   CURBS ARE NOT RESTRICTED, IF NOT PEDESTRIAN PATH.
3. THE DETAILS SHOWN ARE FOR 6" CURB AND GUTTER ALONG STREETS AND INTERSECTIONS AND ARE NOT APPLICABLE FOR DRIVEWAYS.
4. LOCATION OF RAMP MAY BE SHIFTED TO CLEAR OBSTRUCTIONS, AS APPROVED BY THE CITY.
5. CURB RAMPS, SHALL HAVE TEXTURED SURFACES. DRIVEWAYS ARE NOT RAMPS AND DO NOT REQUIRE TEXTURED SURFACES AS RAMPS. DRIVEWAYS SHALL NOT BE CONSIDERED A SUBSTITUTE FOR A RAMP.
6. REBAR SHALL BE 4x4-W2.9 @6 AND CONCRETE SHALL BE CLASS "A". RAMPS SHALL TYPICALLY BE 4" THICK. EXPANSION JOINTS SHALL TYPICALLY BE USED AT MATCH-LINE WITH ADJOINING AREAS.
7. ALL SLOPES ARE MAXIMUM ALLOWABLE. FLATTER SLOPES THAT WILL STILL DRAIN PROPERLY ARE ENCOURAGED.
8. FOR PURPOSES OF WARNING, THE CURB RAMPS SHALL HAVE A COLOR AND TEXTURE THAT SIGNIFICANTLY CONTRASTS WITH THAT OF ADJOINING PEDESTRIAN ROUTES.
9. TEXTURES MAY CONSIST OF PAVERS WITH TRUNCATED DOMED SURFACES OR GROOVES. TEXTURES ARE REQUIRED TO BE DETECTABLE UNDERFOOT. SURFACES THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED
10. COLOR CONTRAST, WILL BE ACHIEVED WITH TERRA COTTA COLORED CONCRETE PAVERS THAT HAVE TRUNCATED DOMES OR BY TERRA COTTA COLOR STAINED CONCRETE WITH GROOVES, EITHER OF WHICH WOULD PROVIDE A CONTRAST WITH TYPICALLY LIGHT COLORED CONCRETE.
11. RAISED MEDIANS SEPARATE OPPOSING DIRECTIONS OF TRAFFIC AND PROVIDE A REFUGE AREA FOR PEDESTRIANS IF THEY ARE UNABLE TO CROSS THE ENTIRE ROADWAY IN THE ALLOTTED SIGNAL PHASE. TO SERVE AS A REFUGE AREA, THE MEDIAN SHOULD BE A MINIMUM OF 4 FEET WIDE. MEDIANS SHOULD BE DESIGNED TO PROVIDE ACCESSIBLE PASSAGE OVER OR THROUGH THEM.
12. ANY PART OF THE ACCESSIBLE ROUTE WITH A SLOPE GREATER THAN 1:20 (5%) SHALL BE CONSIDERED A RAMP. IF A RAMP HAS A RISE GREATER THAN 6 INCHES OR A HORIZONTAL PROJECTION GREATER THAN 72 INCHES, THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES WITH THE FOLLOWING EXCEPTIONS.
    * HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. CURB RAMPS SHALL BE PROVIDED WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
    * THE LEAST POSSIBLE GRADE SHOULD BE USED TO MAXIMIZE ACCESSIBILITY. THE RUNNING SLOPE OF SIDEWALKS, WITHIN THE PUBLIC RIGHT OF WAY MAY FOLLOW THE GRADE OF THE ADJACENT ROADWAY WITHOUT INVOKING TEXAS ACCESSIBILITY STANDARDS (TAS) VARIANCES. WHERE A CONTINUOUS GRADE GREATER THAN 5% MUST BE PROVIDED, HANDRAILS MAY BE DESIRABLE ON ONE OR BOTH SIDES OF THE SIDEWALK TO BE IMPROVE ACCESSIBILITY. HANDRAILS MAY ALSO BE NEEDED TO PROTECT PEDESTRIANS FROM POTENTIALLY HAZARDOUS CONDITIONS.
13. TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SHALL BE PLACED SO NOT TO OBSTRUCT THE ACCESSIBLE ROUTE.
14. THESE STANDARDS DO NOT PRECLUDE THE RESPONSIBILITY OF THE PROJECT ENGINEER TO MEET ALL TEXAS DEPARTMENT OF LICENSE & REGULATION REQUIREMENTS.
15. ALL PLANS AND SPECIFICATIONS FOR CONSTRUCTION OR FOR THE SUBSTANTIAL RENOVATION, MODIFICATION, OR ALTERATION OF A BUILDING OR FACILITY THAT HAS AN ESTIMATED CONSTRUCTION COST OF $50,000 OR MORE AND THAT IS SUBJECT TO THE PROVISIONS OF THIS ARTICLE SHALL BE SUBMITTED TO TDLR FOR REVIEW AND APPROVAL (TEXAS CIVIL STATUTES--ARCHITECTURAL BARRIERS ARTICLE 9102, SECTION 5(j)).
16. THE PROJECT ENGINEER IS REQUIRED TO SUBMIT PLANS TO TDLR FOR REVIEW AND APPROVAL WITHIN 5 DAYS OF SEALING SUCH PLANS (TEXAS CIVIL STATUTES--ARCHITECTURAL BARRIERS ARTICLE 9102, SECTIONS,(x)).

RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CPM, CFM
Development Services Engineer
City of Corpus Christi
NOTE: Construction Plans are expire based on the the conditions stated in UDC 3.8.5.F.

Texas Department of Transportation
Design Division (Roadway)

APPROVED BY: JP | DRAWN BY: RT
DATE: | SCALE: SHOWN
DRAWING #:
PAGE: 54 | OF: {{}}

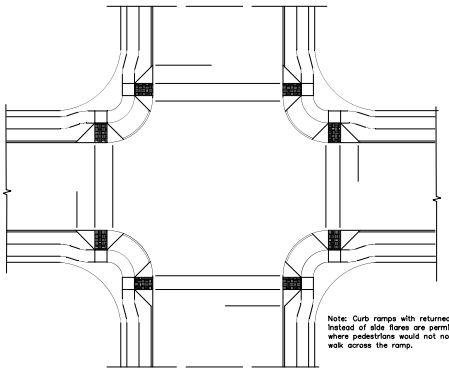
LAN PERALES, JR. 66452 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
Date: 10/31/2022

ADA CURB RAMP DETAILS

KASPIAN SUBDIVISION UNIT 1

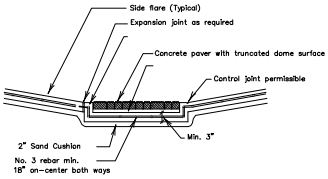
CORPUS CHRISTI, TEXAS

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jpcivilengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel: (361) 728-7188

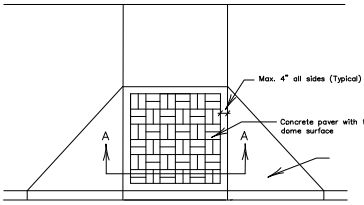


Note: Curb ramps with returned curbs instead of side flares are permitted where pedestrians would not normally walk across the ramp.

TYPICAL INTERSECTION LAYOUT WITH OFFSET SIDEWALKS

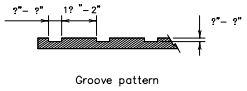


Section A-A

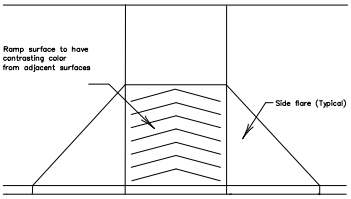


TYPE A

Truncated Dome Pattern Curb Ramp



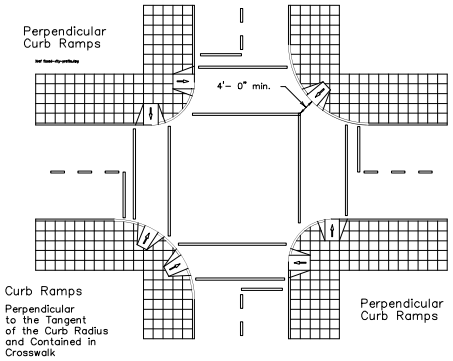
Groove pattern



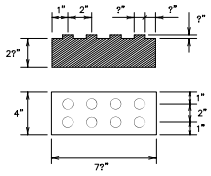
TYPE B

Groove Pattern Curb Ramp
(15 Degree to Horizontal)

Single Diagonal Curb Ramp



TYPICAL CURB RAMP PLACEMENTS AT INTERSECTIONS



Concrete paver with truncated dome surface

General Notes

Concrete paver units shall meet all requirements of ASTM C-636, C-33, and shall be laid in a two by two unit basket weave pattern, unless shown otherwise in the plans.

Concrete paver units shall have a truncated dome top surface for detectable warning to pedestrians.

Concrete paver unit color for the ramp shall be a contrasting color to the adjacent surfaces. The color of the concrete paver units shall be light brow, according to Pavestone colors. (Adjacent surfaces include side flares).

Concrete paver units shall be saw cut only and any cut unit shall be not less than 25 percent of a full unit.

CURB RAMP TEXTURING

General Notes

Concrete surface areas that are identified in the plans to receive sealer/stain treatment, shall not be treated w/ curing compound (retardant) and shall be allowed to cure a minimum of 30 days prior to application of the sealer/stain.

The sealer/stain for the ramp shall be a contrasting color to the adjacent surfaces (adjacent surfaces include the side flares). The color of the sealer/stain shall be Rustic copper.

Sealer/stain shall be applied in accordance with applicable specifications.

Areas receiving sealer/stain treatment shall be cleaned using a "dry" (sand) blast cleaning method in accordance with applicable specifications.

RELEASED FOR CONSTRUCTION
Brie A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
NOTE: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

Texas Department of Transportation
Design Division (Roadway)

DRAWN BY: RT
APPROVED BY: JP
SCALE: SHOWN
DATE:
DRAWING #:
PAGE: 55
OF: 68

JAN PERALES, JR. 66652 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS
10/04/2021

ADA CURB RAMP DETAILS

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

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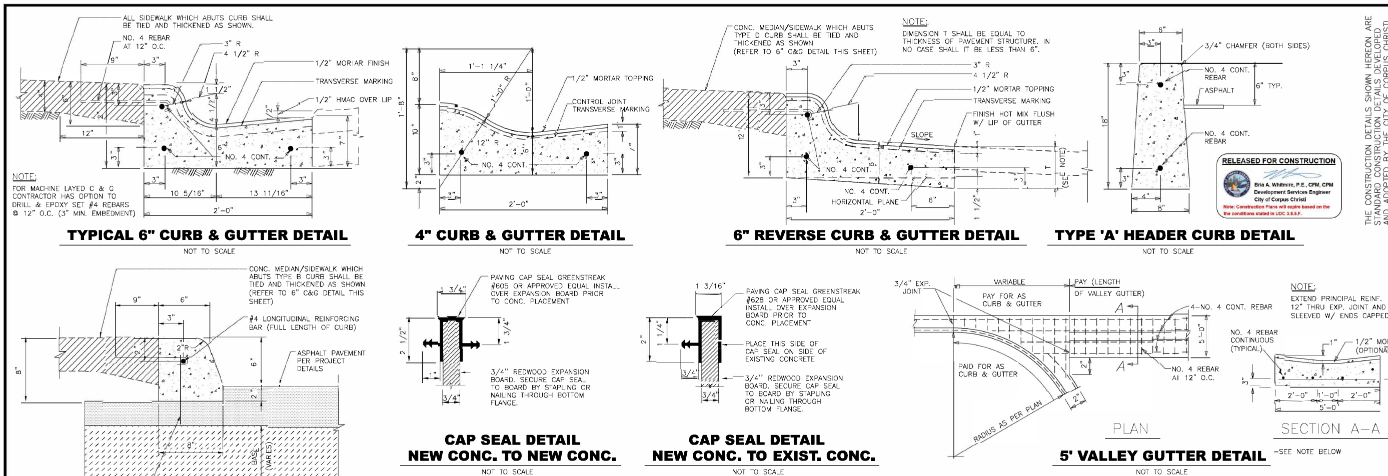
TBPE FIRM No. F-14207
jperales@jperalesengineering.com
5866 S. Staples St. - # 315
Corpus Christi, Texas 78411
Tel. (361) 728-7188



TYPICAL 6" CURB & GUTTER DETAIL — NOT TO SCALE

4" CURB & GUTTER DETAIL — NOT TO SCALE

6" REVERSE CURB & GUTTER DETAIL — NOT TO SCALE

TYPE 'A' HEADER CURB DETAIL — NOT TO SCALE

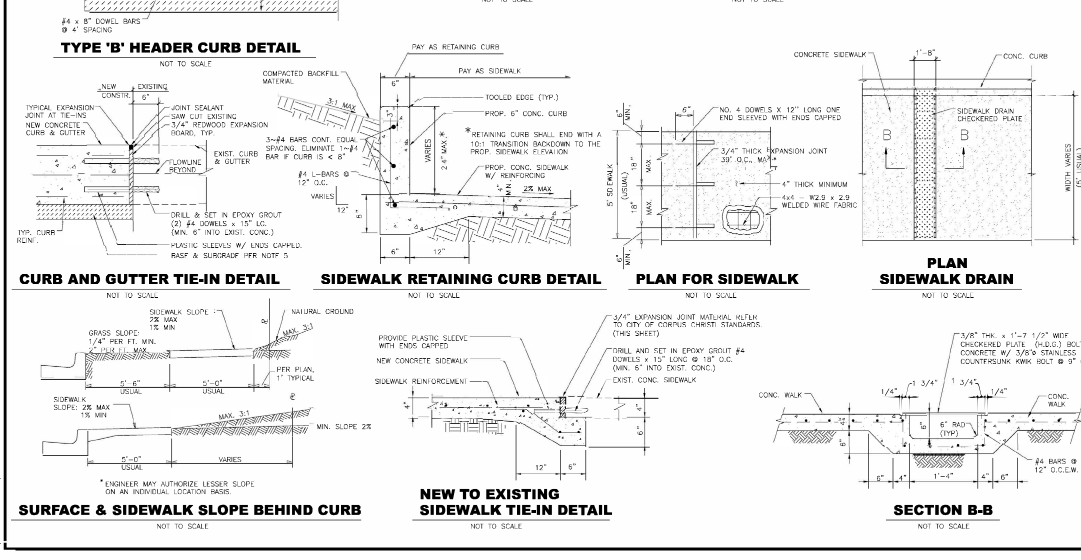
TYPE 'B' HEADER CURB DETAIL — NOT TO SCALE

CAP SEAL DETAIL NEW CONC. TO NEW CONC. — NOT TO SCALE

CAP SEAL DETAIL NEW CONC. TO EXIST. CONC. — NOT TO SCALE

5' VALLEY GUTTER DETAIL — NOT TO SCALE

*SEE NOTE BELOW



CURB AND GUTTER TIE-IN DETAIL — NOT TO SCALE

SIDEWALK RETAINING CURB DETAIL — NOT TO SCALE

PLAN FOR SIDEWALK — NOT TO SCALE

PLAN SIDEWALK DRAIN — NOT TO SCALE

SURFACE & SIDEWALK SLOPE BEHIND CURB — NOT TO SCALE

NEW TO EXISTING SIDEWALK TIE-IN DETAIL — NOT TO SCALE

SECTION B-B — NOT TO SCALE

VALLEY GUTTER NOTE:

1. USE OF VALLEY GUTTERS ON CITY STREETS ARE NOT ALLOWED PER CITY STANDARDS. THIS DETAIL IS INCLUDED ONLY FOR ISOLATED OR TEMPORARY USE IN LOCATIONS WHERE NO OTHER DRAINAGE OPTIONS EXIST, AND SHALL ONLY BE USED WITH PRIOR APPROVAL FROM THE CITY.

CURB & GUTTER AND HEADER CURB NOTES:

1. ALL CONCRETE CLASS "A" 3,000 P.S.I. ALL STEEL GRADE 60 fy = 60,000 P.S.I., MIN.
2. TRANSVERSE GROOVES 1/8" WIDE BY 1/2" DEEP SHALL BE MADE IN ALL CURB & GUTTER AND HEADER CURB AT 10' O.C. (MAXIMUM).
3. 3/4" THICK EXPANSION JOINTS SHALL BE PROVIDED AT 39'-0" CENTERS* (MAXIMUM). REINFORCEMENT SHALL CONSIST OF THE NO. 4 DOWELS X 15" LONG SPACED AS INDICATED . THE NO. 4 DOWEL SHALL BE EXTENDED ACROSS THE JOINT 9 INCHES AND THIS END SHALL BE SLEEVED WITH ENDS CAPPED.
4. WHERE NEW CURB & GUTTER OR HEADER CURB JOINS EXISTING CURB & GUTTER, TRANSITION THE LAST 10' OF THE NEW TO MATCH THE OLD IN SHAPE.
5. BASE, SUB-BASE, AND SUBGRADE THICKNESS UNDER CONCRETE CURB AND GUTTER TO BE AS SPECIFIED IN THE PROJECT SPECIFICATIONS AND PROJECT DETAILS, PER LOADING DESIGN CONDITIONS. REFER TO THE PROJECT SPECIFIC STREET SECTION(S) AND RELATED PROJECT DETAILS SHOWN ON THE DRAWINGS. BOTH THE TREATED SUBGRADE (8" MINIMUM) AND THE FLEXIBLE BASE (4" MINIMUM) OR EQUIVALENT SHALL EXTEND A MINIMUM OF 1' BEYOND THE BACK OF CURB.
6. TYPICAL 6" CURB & GUTTER DETAIL IS CITY STANDARD AND SHALL BE USED IN MOST CASES. DETAILS FOR 4" CURB & GUTTER, 6" REVERSE CURB & GUTTER, AND HEADER CURBS ARE SPECIALTY ITEMS AND ARE PROVIDED FOR USE AS NEEDED TO ADDRESS PROJECT SPECIFIC CONDITIONS. USE IS SUBJECT TO CITY APPROVAL.
7. FINAL ACCEPTANCE OF THE PROJECT SHALL BE CONTINGENT UPON THE CONTRACTOR PROVIDING THE CITY WITH A CERTIFICATION LETTER, FROM THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR), POLICY AND STANDARDS DIVISION, ARCHITECTURAL BARRIERS SECTION, THAT ALL ADA (AMERICANS WITH DISABILITIES ACT) HANDICAP IMPROVEMENTS, AS CONSTRUCTED, COMPLY WITH THE TEXAS ACCESSIBILITY STANDARDS (TAS) OF THE ARCHITECTURAL BARRIERS ACT ARTICLE 9102, TEXAS CIVIL STATUTES.
8. AT LEAST 1' OF THE AREA BEHIND THE CURB SHALL BE BACKFILLED AND COMPACTED (MINIMUM 95% STANDARD PROCTOR DENSITY) IN ACCORDANCE WITH THE SPECIFICATIONS AS SOON AS POSSIBLE AND NO LATER THAN 48 HOURS OF REMOVAL OF FORMS (OR SOONER IN THE EVENT OF INCLEMENT WEATHER) IN ORDER TO PROTECT THE MOISTURE OF THE PAVEMENT STRUCTURE.

SIDEWALK NOTES:

1. ALL EXPANSION JOINTS TO BE 3/4" REDWOOD EXPANSION BOARD, UNLESS OTHERWISE NOTED.
2. ALL CONCRETE CLASS "A", 3,000 psi. ALL STEEL, GRADE 60, fy = 60,000 psi.
3. CONCRETE TO RECEIVE BROOM FINISH.
4. TRANSVERSE CONTRACTION JOINTS 1/8": WIDE BY 1/2" DEEP SHALL BE CUT IN ALL SIDEWALKS AT 5'-0" INTERVALS (TYPICAL) OR THE INTERVALS SHALL BE SPACED TO MATCH THE WIDTH OF THE SIDEWALK.

THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD CONSTRUCTION DETAILS DEVELOPED AND ADOPTED BY THE CITY OF CORPUS CHRISTI, AND BY THIS SEAL AND SIGNATURE ARE INCORPORATED INTO THE ATTACHED PLAN SET IN THEIR ENTIRETY WITHOUT CHANGE OR EDIT.

RELEASED FOR CONSTRUCTION

CONSULTANT'S SHEET No.

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
P.O. BOX 260547
Corpus Christi, Texas 78426
Tel: (361) 728-7188

CITY of CORPUS CHRISTI TEXAS
Department of Capital Programs

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

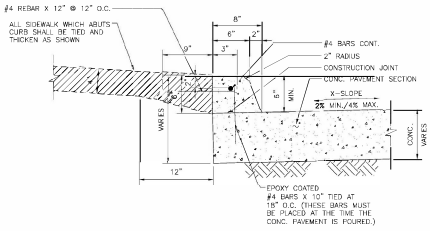
CITY OF CORPUS CHRISTI
CURB GUTTER AND SIDEWALK STANDARD DETAILS

SHEET 56 of 68

RECORD DRAWING NO.

CITY PROJECT #

(5-1-2015)

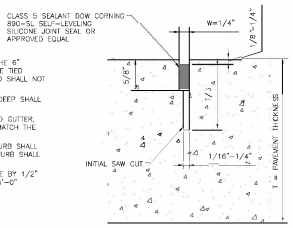


TYPICAL 6" CURB DETAIL

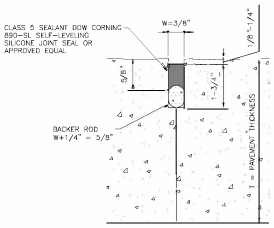
NOT TO SCALE

6" CURB NOTES:

1. EXPANSION AND CONSTRUCTION JOINTS OF THE 6" SEPARATE CURB SHALL MATCH THOSE OF THE TIED SIDEWALK AND/OR CONCRETE PAVEMENT, AND SHALL NOT EXCEED 39' O.C. (MAX) SPACING.
2. TRANSVERSE GROOVES 1/8" WIDE BY 1/2" DEEP SHALL BE MADE AT 10' O.C. (MAXIMUM).
3. WHERE NEW CURB JOINS EXISTING CURB AND GUTTER, TRANSITION THE LAST 10' OF THE NEW TO MATCH THE OLD IN SHAPE.
4. EXPANSION JOINTS ON ALL SIDEWALK AND CURB SHALL BE REDWOOD. ALL JOINTS IN 6" SEPARATE CURB SHALL BE SEALED WITH JOINT SEALANT.
5. TRANSVERSE CONTRACTION JOINTS 1/8" WIDE BY 1/2" DEEP SHALL BE CUT IN ALL SIDEWALKS AT 5'-0" INTERVALS (MAXIMUM).

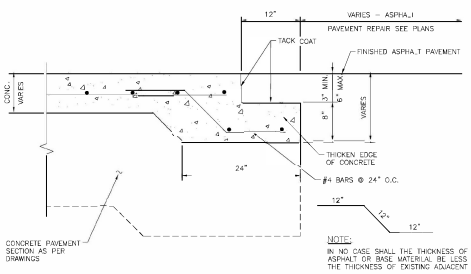


SAWED LONGITUDINAL JOINT



LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT

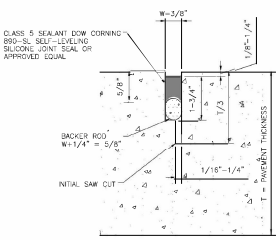
THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD CONSTRUCTION DETAILS DEVELOPED AND ADOPTED BY THE CITY OF CORPUS CHRISTI, TEXAS. ALL CONSTRUCTION SHALL BE INCORPORATED INTO THE ATTACHED PLAN SET IN THEIR ENTIRETY WITHOUT CHANGE OR EDIT.



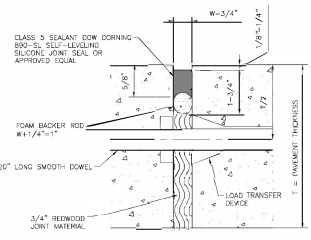
NOTE:
IN NO CASE SHALL THE THICKNESS OF THE ASPHALT OR BASE MATERIAL BE LESS THAN THE THICKNESS OF EXISTING ADJACENT MATERIAL.

CONCRETE TO ASPHALT PAVEMENT SECTION TIE-IN DETAIL

NOT TO SCALE



TRANSVERSE SAWED CONTRACTION JOINT



EXPANSION JOINT

JOINT SEALANT COMPOUND

NOT TO SCALE

GENERAL NOTES:

1. THE LOCATION OF JOINTS SHALL BE AS SHOWN ELSEWHERE IN THE DRAWINGS.
2. THE JOINT RESERVOIR FOR SEALANT SHALL BE SAWED UNLESS OTHERWISE SHOWN ON THE PLANS FOR THE LONGITUDINAL AND TRANSVERSE CONSTRUCTION AND THE TWO SAWED JOINTS.
3. THE JOINTS SHALL BE CLEANED IN ACCORDANCE WITH THE SEALANT MANUFACTURER'S RECOMMENDATION. PRIOR TO BEGINNING OPERATIONS, THE CONTRACTOR SHALL SUBMIT A STATEMENT FROM THE SEALANT MANUFACTURER SHOWING THE RECOMMENDED EQUIPMENT AND INSTALATION PROCEDURES TO BE USED.
4. THE SAW CUT FOR THE LONGITUDINAL JOINT SHALL BE ONE FOURTH THE SLAB THICKNESS WHEN CRUSHED LIMESTONE IS USED AS THE COARSE AGGREGATE.

RELEASED FOR CONSTRUCTION
Brian A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.6.F.

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CITY of CORPUS CHRISTI TEXAS
Department of Capital Programs

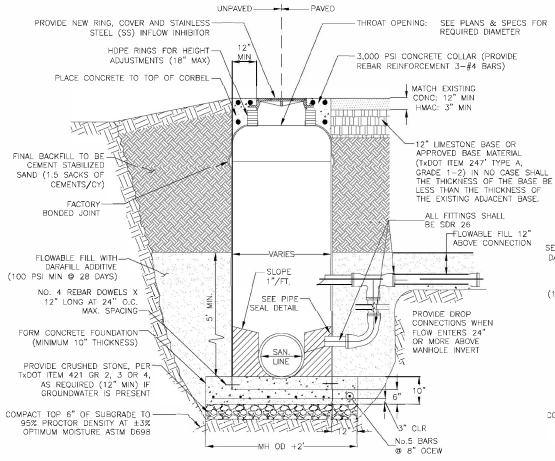
KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

CITY OF CORPUS CHRISTI
CONCRETE PAVEMENT
STANDARD DETAILS

SHEET 57 68
RECORD DRAWING NO.

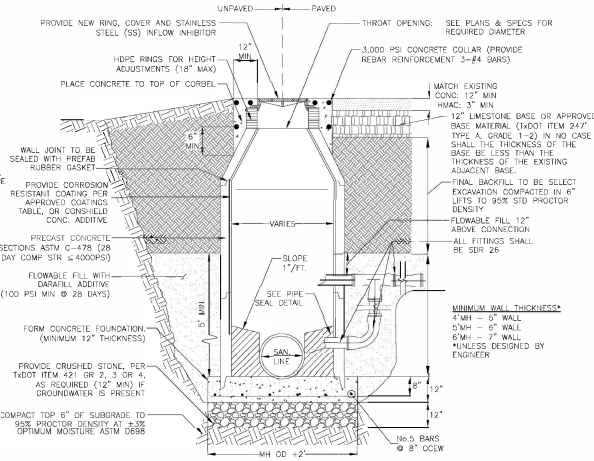
CITY PROJECT #

REVISION NO. | DATE | BY | DESCRIPTION



FIBERGLASS MANHOLE

NOT TO SCALE



CONCRETE MANHOLE

NOT TO SCALE

MINIMUM WALL THICKNESS*
4'MH – 5" WALL
5'MH – 6" WALL
6'MH – 7" WALL
*UNLESS DESIGNED BY ENGINEER

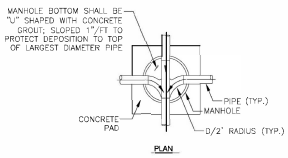
MANHOLE REQUIREMENTS	
PIPE DIAMETER	MANHOLE DIAMETER
≤18"	4'
18"< TO ≤36"	5'
36"< TO ≤42"	6'

APPROVED COATINGS TABLE	
MANUFACTURER	MODEL NAME
JEFFCOAT	JEFFCOAT 326
RAVEN LINING SYSTEM	RAVEN 405
SHERWIN WILLIAMS	DURAPLATE 5800
CARBOLINE	PHENOLINE 309

NOTE:
COAT ALL CONCRETE SURFACES INCLUDING BENCH & WALLS.

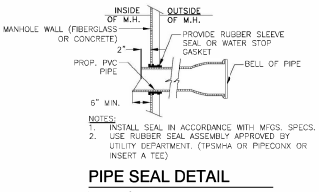
RELEASED FOR CONSTRUCTION
Eric A. Whitmire, P.E., CPM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.5.5.F.

THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD DETAILS OF THE CITY OF CORPUS CHRISTI, AND ADOPTED BY THE CITY OF CORPUS CHRISTI, AND BY THIS SEAL AND SIGNATURE ARE MADE A PART OF THIS PLAN. THIS PLAN IS TO BE USED AS SET IN THEIR ENTIRETY WITHOUT CHANGE OR EDIT.



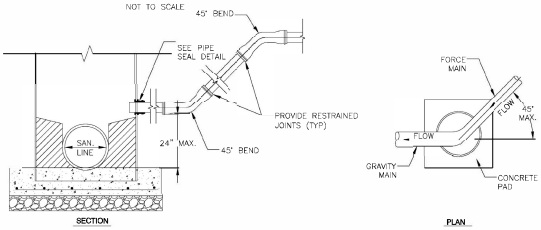
WASTEWATER MANHOLE (BOTTOM)

NOT TO SCALE



PIPE SEAL DETAIL

NOT TO SCALE

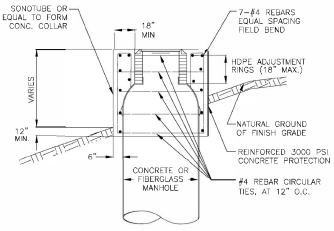


FORCE MAIN DISCHARGE MANHOLE DETAIL

NOT TO SCALE

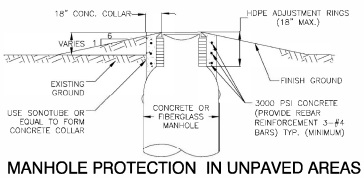
GENERAL WASTEWATER CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND EXAMINE LOCAL CONDITIONS TO BE ENCOUNTERED, IMPROVEMENTS TO BE PROTECTED, AND PERMITS AND FEES TO BE REQUIRED, ALONG WITH OTHER RESEARCH THAT IS NECESSARY TO ENSURE THAT THE CONTRACTOR THOROUGHLY UNDERSTANDS THE PROJECT AND IS FULLY AWARE OF ALL THE CONDITIONS AND CONSTRAINTS THAT MAY BE ENCOUNTERED DURING THE COURSE OF CONSTRUCTION.
2. THE CONTRACTOR SHALL ADHERE TO ALL TCEQ REGULATIONS PER 30 TAC CHAPTER 217 AND TRENCH SAFETY FOR EXCAVATIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL AND MUST ADHERE TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL FIBERGLASS MANHOLES SHALL BE MONOLITHIC WITH 0.50" MINIMUM WALL THICKNESS. IF PROVIDED OR REQUIRED, FIBERGLASS BOTTOM SHALL BE DESIGNED TO WITHSTAND HYDROSTATIC HEAD PRESSURE UNDER ALL CONDITIONS.
5. THE MANHOLE WALL PENETRATIONS FOR PIPE (8"–15" DIAMETER PIPE) ABOVE THE FLOWLINE OF THE MANHOLE SHALL BE CORED AND SEALED WITH APPROVED SEAL GASKET WATER STOP ASSEMBLY.
6. FOR FIBERGLASS MANHOLES, THE MANHOLE FOUNDATION MAY BE PRECAST ON GROUND SURFACE. (PROCEDURE MUST BE SUBMITTED TO THE ENGINEERING SERVICES CONSTRUCTION ENGINEER FOR APPROVAL.)
7. THE CONTRACTOR SHALL PROVIDE PROTECTIVE COATING ON ALL EXPOSED CONCRETE SURFACES, INCLUDING CORBEL AREA, MANHOLE WALLS AND MANHOLE BENCH. FOR FIBERGLASS MANHOLES WITH WATERTIGHT BOTTOM, ADHERE TO ALL MANUFACTURER REQUIREMENTS. FIBERGLASS BOTTOM AND BENCH MUST ALSO BE FACTORY INSTALLED.



MANHOLE PROTECTION IN UNPAVED AREAS (CULTIVATED/SPECIAL)

NOT TO SCALE



MANHOLE PROTECTION IN UNPAVED AREAS (RESIDENTIAL)

NOT TO SCALE

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CITY OF CORPUS CHRISTI
TEXAS
Department of Engineering Services

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

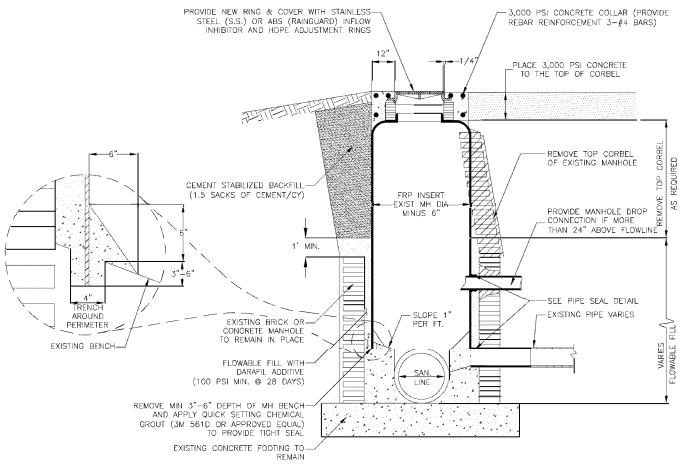
CITY OF CORPUS CHRISTI
WASTEWATER STANDARD DETAILS
MANHOLE INSTALLATION

1 OF 4

SHEET 58 of 68
RECORD DRAWING NO.

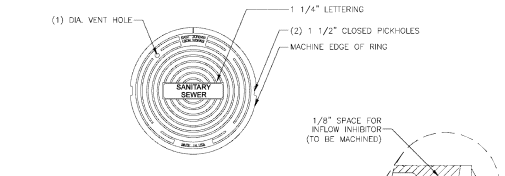
CITY PROJECT #

DESCRIPTION | BY | DATE | REVISION NO.



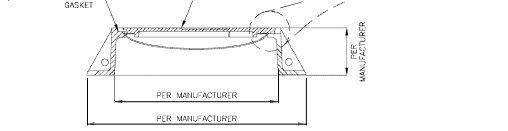
FRP INSERT REHABILITATION OF EXISTING MANHOLE

NOT TO SCALE



COVER PLAN VIEW

NOT TO SCALE

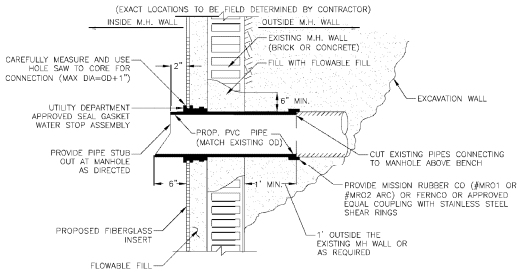


SECTION OF RING & COVER

NOT TO SCALE

FRP INSERT REHABILITATION OF EXISTING MANHOLE NOTES:

1. THE CONTRACTOR SHALL FIELD-VERIFY THE EXISTING MANHOLE DIAMETER, FLOW LINE, RIM ELEVATION, NUMBER OF LATERALS, LOCATIONS, SIZES, AND OTHER INFORMATION NEEDED TO REHABILITATE EACH MANHOLE.
2. PRIOR TO INSTALLING CONTROL OF FLOW OR INITIATING MANHOLE REPAIRS, THE CONTRACTOR SHALL PLACE BARRICADES AND SIGNS TO DIVERT TRAFFIC AND PEDESTRIANS PER THE APPROVED TRAFFIC CONTROL PLAN, AS REQUIRED.
3. THE CONTRACTOR SHALL PREPARE THE INTERIOR OF THE EXISTING FOUNDATION STRUCTURE BY REMOVING ALL DEFECTIVE GROUT AND DEBRIS/BLOCKAGES, MECHANICALLY ROUGHEN THE ENTIRE INVERT, AND CLEAN THE INTERIOR WITH A HIGH-PRESSURE WATER JET.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF THE RESULTING SLUDGE AND DEBRIS AT AN APPROVED SITE, ACCORDING TO ALL PERTINENT WASTE DISPOSAL REGULATIONS.
5. THE CONTRACTOR SHALL USE QUICK-SETTING, NON-SHRINK CONCRETE GROUT TO SEAL AND RESHAPE THE BOTTOM. SUBMIT PROPOSED MATERIALS TO BE USED TO THE ENGINEER FOR APPROVAL.
6. PROVIDE COATING TO EXPOSED CONCRETE SURFACES WITH APPROVED SYSTEM TO PREVENT CORROSION.
7. FRP INSERT SHALL COMPLY WITH ASTM D3753 WITH SINGLE PIECE MONOLITHIC BARREL AND CORBEL CONSTRUCTION WITHOUT SEAMS, JOINTS OR SECTIONS. WALL THICKNESS SHALL PROVIDE AN AASHTO H-20 LOAD RATING AND WALL STIFFNESS OF 36 PSI MIN.
8. CUT BOTTOM OF FRP INSERT TO FIT EVENLY ON BENCHES OR CHIP BENCHES OUT TO EVENLY SUPPORT INSERT.
9. SEAL ANNULAR SPACE AROUND EXIST LINES WITH JUTE ROPE AND CHEMICAL GROUT.



FRP INSERT PIPE SEAL DETAIL

NOT TO SCALE

ROADWAY MANHOLE RING AND COVER:

1. THE CONTRACTOR SHALL PROVIDE STAINLESS STEEL (S.S.) INFLOW INHIBITOR WITH SS TETHER SECURED TO MANHOLE WALL, SUCH THAT THE INNER LID IS FLUSH WITH THE OUTER LID.
2. TRAFFIC SHALL BE RESTRICTED FROM MANHOLE FOR 48 HOURS AFTER THE PLACEMENT OF CONCRETE, AND COLLAR SHALL PROVIDE A SUFFICIENT, CLEAR OPENING TO ACCOMMODATE THE SPECIFIED MANHOLE COVER.
3. AASHTO-M-306 (LATEST REVISION) PROOF LOAD TESTING IS REQUIRED (40,000 LBS) AND MUST BE INSPECTED, PRIOR TO INSTALLATION, THE RESULTS OF THE TEST SHALL BE SUBMITTED TO THE CITY.
4. THE MANUFACTURING FACILITIES FOR ALL PROVIDED RING AND COVER ASSEMBLIES SHALL MEET OR EXCEED ALL EPA ENVIRONMENTAL STANDARDS AND OSHA SAFETY STANDARDS. THE CASTINGS SHALL BE MANUFACTURED FROM RECYCLED MATERIALS. THE CONTRACTOR SHALL PROVIDE CERTIFICATION.

CLEAR OPENING	MANUFACTURER (1)	MODEL NUMBER*	INFLOW INHIBITOR
24"	EAST JORDAN IRON WORKS	V-1168	REQUIRED ON ALL INSTALLATIONS PER CITY SPECIFICATIONS
	U.S. FOUNDRY	COVER- #8018538 FRAME- #8022247	
	NEENAH FOUNDRY	R-1930-24	
30" (2)	EAST JORDAN IRON WORKS	COVER- V1430 FRAME- V1420	
	U.S. FOUNDRY	COVER- #9210048 FRAME- #8021361	
	NEENAH FOUNDRY	DF-1274	

(1) OR APPROVED EQUAL (MADE IN THE USA)
(2) UNLESS NOTED IN THE PLANS, ALL COVERS SHALL BE 24" DIAMETER AND NOT INTENDED FOR MANNED ENTRY.

RING & COVER APPROVED LIST

RELEASED FOR CONSTRUCTION
Eric A. Wilbrink, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the fee conditions stated in UDC 8.8.4.F.

THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD CONSTRUCTION DETAILS DEVELOPED AND APPROVED BY THE CITY OF CORPUS CHRISTI, AND BY THIS REFERENCE ARE HEREBY MADE A PART AND INCORPORATED INTO THE ATTACHED PLAN SET IN THEIR ENTIRETY WITHOUT CHANGE OR EDIT.

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DESCRIPTION | BY | DATE | REVISION NO.

CITY OF CORPUS CHRISTI
TEXAS
Department of Engineering Services

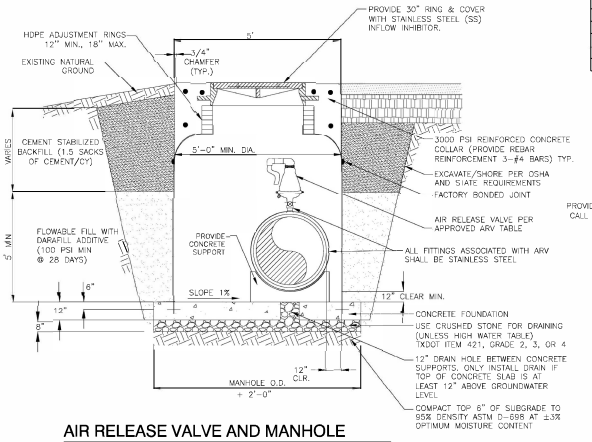
DESCRIPTION | BY | DATE | REVISION NO.

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

CITY OF CORPUS CHRISTI
WASTEWATER STANDARD DETAILS
REHABILITATION OF EXISTING MANHOLE & MANHOLE RING AND COVER DETAILS
2 OF 4

SHEET 59 of 68
RECORD DRAWING NO.

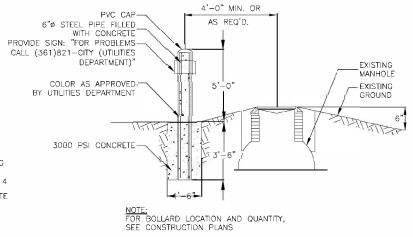
CITY PROJECT #



AIR RELEASE VALVE AND MANHOLE

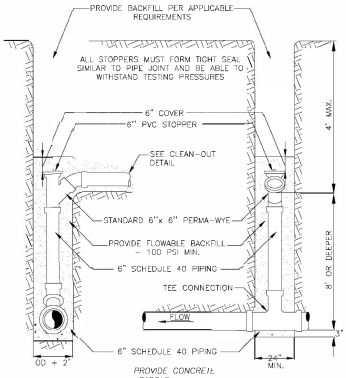
NOT TO SCALE

APPROVED ARVs		
MANUFACTURER	MODEL NAME	MATERIAL
A.R.I.	D-025 OR D-025 SHORT	316 SS
H-TEC	MODEL 986 (SS) AND 988	
VENT O'MAT	MODEL RGXII (ST. STEEL)	
VALMATIC	VM 48AS OR VM 49AS	



BOLLARD DETAIL

NOT TO SCALE



DEEP CUT SERVICE CONNECTION

NOT TO SCALE

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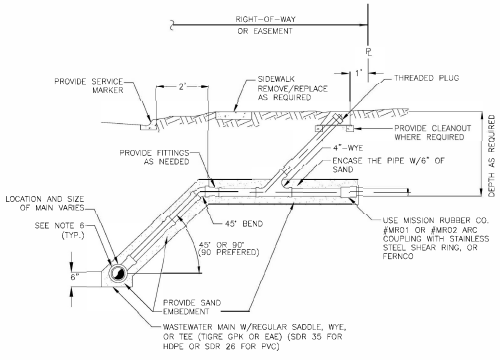
RELEASED FOR CONSTRUCTION
Eric A. Wilkinson, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.9.5.F.

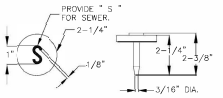


SERVICE CONNECTION DETAILS

NOT TO SCALE

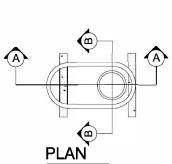
SERVICE CONNECTION NOTES:

1. CONTRACTOR TO PROVIDE SERVICE CONNECTION TAP TO THE R.O.W. LINE & CONNECT EXIST. SERVICE LINE OUTSIDE EASEMENT AS SHOWN AND REQUIRED.
2. ALL SERVICE PIPE AND FITTINGS TO BE SOLVENT WELD SCH 40 PVC UNLESS SHOWN OTHERWISE IN THE PLANS.
3. FOR EXISTING MAIN PIPE MATERIAL – PVC AND/OR VCP USE UTILITY DEPARTMENT APPROVED CONNECTOR.
4. FOR NEW PVC MAIN AND SERVICE, USE PVC WYE OR TEE AS DIRECTED AT SERVICE CONNECTION.
5. IF PIPE LENGTH, ON SERVICE LINE, IS GREATER THAN 50', USE 6" PVC SCH 40 FROM CLEANOUT WYE TO THE MAIN LINE.



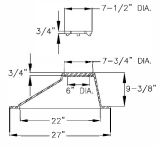
STANDARD SERVICE MARKER

BRASS – ONE REQUIRED EACH STREET TAP
NOT TO SCALE



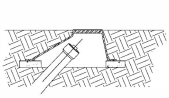
PLAN

NOT TO SCALE



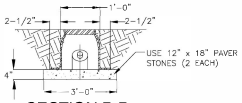
CLEAN-OUT BOOT

NOT TO SCALE



SECTION A-A

NOT TO SCALE



SECTION B-B

NOT TO SCALE

TYPICAL CAST IRON CLEAN-OUT BOOT

NOT TO SCALE

CONSULTANT'S SHEET NO.

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CITY OF CORPUS CHRISTI
TEXAS
Department of Engineering Services

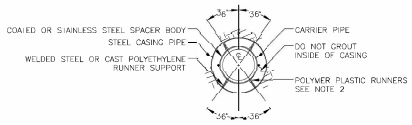
REVISION NO.	DATE	BY	DESCRIPTION

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

CITY OF CORPUS CHRISTI
WASTEWATER STANDARD DETAILS
AIR RELEASE VALVE, BOLLARD AND SERVICE CONNECTION DETAILS 3 OF 4

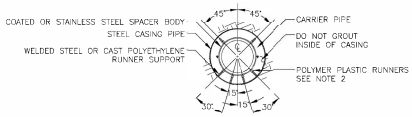
SHEET 60 of 68
RECORD DRAWING NO.

CITY PROJECT #



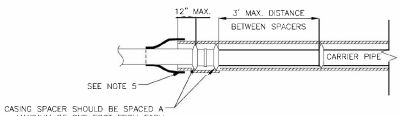
4" TO 10" CASING DETAIL

NOT TO SCALE



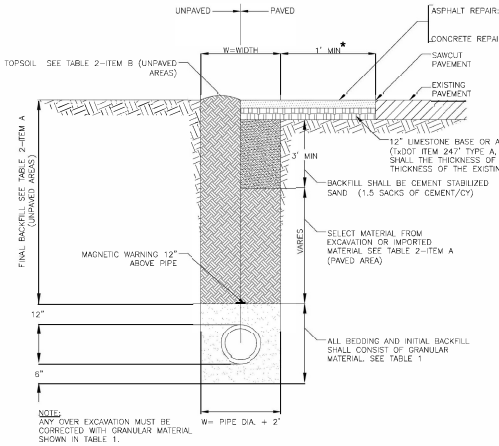
12" TO 36" CASING DETAIL

NOT TO SCALE



CASING DETAIL

NOT TO SCALE



TRENCH BACKFILL FOR WASTEWATER LINES AND PAVEMENT REPAIR FOR UTILITIES

NOT TO SCALE

THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD CONSTRUCTION DETAILS DEVELOPED AND ADOPTED BY THE CITY OF CORPUS CHRISTI, INCORPORATED INTO THE ATTACHED PLAN SET IN THEIR ENTIRETY WITHOUT CHANGE OR EDIT.

RELEASED FOR CONSTRUCTION
Erin A. Wilhelm, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

***NOTE:**

PER CITY ORD. 030040 ARTICLE III CUTS AND EXCAVATIONS, A PERMIT FROM CITY DEVELOPMENT SERVICES DEPARTMENT IS REQUIRED FOR ALL UTILITY STREET CUTS. THE INSTALLATION OF A UTILITY THAT CROSSES THE ROW AT A PERPENDICULAR OR NEAR PERPENDICULAR ANGLE AND HAS AN O.D. OF 6" OR LESS WILL NOT BE PERMITTED TO BE INSTALLED BY CUTTING THE ROAD SECTION.

ANY UTILITY RELATED STREET EXCAVATION/CUT SHALL INCLUDE REPAIR OF NOT ONLY THE IMPACTED TRENCH, BUT ALSO A FULL LANE OVERLAY/PAVEMENT REPAIR FOR PARALLEL CUTS OR 12' WIDE FOR PERPENDICULAR CUTS ON ASPHALT STREETS, AND FULL PANEL REPLACEMENT ON CONCRETE STREETS. A SITE SPECIFIC PAVEMENT CUT AND RESTORATION PLAN THAT INDICATES THE GENERAL NATURE OF THE PAVEMENT AND ROADWAY TO BE CUT AND RESTORED, THE EXISTING PAVEMENT SECTION (IF KNOWN), THE LOCATION AND APPROXIMATE AREA OF THE EXCAVATION/PAVEMENT REPAIR, INCLUDING THE APPROXIMATE LENGTH AND WIDTH OF THE PAVEMENT REPAIR IN RELATION TO THE ROADWAY TRAVEL LANE(S), MUST BE INCLUDED IN THE DRAWINGS/PERMIT APPLICATION.

CASING NOTES:

1. CASING DIAMETER, LENGTH, LOCATION, AND WALL THICKNESS SHALL BE PER PROJECT SPECIFIC REQUIREMENTS. (MINIMUM SCHEDULE 40)
2. ALL CARRIER PIPES IN INSTALLED CASINGS SHALL BE SUPPORTED BY BOLT-ON STYLE CASING SPACERS ("ADVANCED PRODUCTS" OR APPROVED EQUAL).
3. THE CONTRACTOR SHALL PROVIDE MECHANICALLY RESTRAINED JOINTS FOR FORCE MAINS ONLY ON CARRIER PIPES. "MEGALUG" TYPE JOINT RESTRAINTS OR APPROVED EQUAL SHALL BE USED.
4. CASING SPACERS SHALL BE SIZED TO SECURELY FASTEN TO THE CARRIER PIPE O.D. AND SHALL BE FURNISHED WITH A MINIMUM RUNNER HEIGHT TO MAINTAIN SEPARATION BETWEEN THE MAXIMUM O.D. OF THE CARRIER PIPE AND THE CASING WALL.
   A. POSITIONING OF THE SPACERS SHALL ENSURE THAT THE CARRIER PIPE IS ADEQUATELY SUPPORTED THROUGHOUT ITS LENGTH.
   B. SPACERS AT EACH END SHALL NOT BE FURTHER THAN 12" FROM THE END OF THE CASING.
   C. CASING SPACERS SHALL BE INSTALLED IN THE CENTER OF THE PIPE SECTION. THE MAXIMUM SPACING OF THE CASING SPACERS SHALL BE 3 FEET.
5. THE TWO ENDS OF THE CASING PIPE SHALL BE SEALED WATERTIGHT WITH AN ADVANCED PRODUCTS SYSTEM, INC. MODEL AZ – ZIPPER, PSI MODEL C END SEAL, OR AN APPROVED EQUAL.

GENERAL NOTES FOR BACKFILL

TABLE 1
BEDDING AND INITIAL BACKFILL
(BELOW PIPE TO 12" ABOVE PIPE)

ALL BEDDING AND INITIAL BACKFILL SHALL CONSIST OF THE FOLLOWING OR REFER TO DESIGN ENGINEER REQUIREMENTS: GRANULAR BACKFILL CONSISTING OF EITHER NATURAL SAND OR SANDY GRAVEL, OR MATERIAL PRODUCED BY CRUSHING OF NATURAL STONE OR GRAVEL:

① EXCAVATIONS <20 FT. DEEP AND ABOVE WATER TABLE, USE MATERIAL MEETING THE FOLLOWING CRITERIA.

MEETING REQUIREMENTS OF ASTM D2487 FOR:

SP	GP
SW	GW
SP-SM	GP-GM
SW-SM	GW-GM

AND IN ADDITION:
PASSING 1/2" SIEVE – 100%
PASSING #4 SIEVE – 30% MINIMUM
PLASTICITY INDEX (PI) – NP TO 10 MAX.

② IN DEEP EXCAVATIONS (>20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF:

A. CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4.

OR

B. CRUSHED LIMESTONE PER TxDOT ITEM 421 GRADE 2, 3, OR 4.

TABLE 2
FINAL BACKFILL
(GREATER THAN 12" ABOVE PIPE)

UNPAVED AREAS

A. FROM 12" ABOVE PIPE TO BOTTOM OF TOPSOIL BACKFILL SHALL BE APPROVED SELECT MATERIAL FROM THE EXCAVATION; OR IMPORTED MATERIAL; ALL TO BE FREE OF ROCKS, DEBRIS, OR ANY CLUMPS GREATER THAN 2" IN DIAMETER; LOOSE LIFTS TO BE PLACED 10" MAX.

COMPACT MATERIAL TO 95% STD. PROCTOR (D698).

MOISTURE TO BE ADJUSTED TO ± 3% OF OPTIMUM.

B. TOPSOIL TO BE PROVIDED EQUAL OR BETTER THAN EXISTING; AND MATCH EXISTING TOPSOIL DEPTH. COMPACT TO EXISTING ADJACENT TOP-SOIL THICKNESS. (CONSTRUCTION TO BE PERFORMED BY "DOUBLE DITCH" METHOD-TOP SOIL SALVAGED TO BE PLACED ON TOP)

PAVED AREAS

A. FROM 12" ABOVE PIPE TO 3' BELOW BOTTOM OF ROAD BASE; BACKFILL SHALL BE SELECT MATERIAL FROM EXCAVATION OR IMPORTED MATERIAL. IN EITHER CASE, ALL MATERIAL SHALL MEET THE FOLLOWING:

LL<35
PI 8-20
NO CLUMPS > 2" DIA.
MOISTURE – 1 TO +3%
COMPACT 95% D698 STD PROCTOR

LOOSE LIFTS OF 12" MAX OR IF SELECT MATERIAL FROM EXCAVATION DOES NOT MEET REQUIREMENTS, THEN USE CEMENT STABILIZED SAND. SEE TABLE 2-ITEM B BELOW.

B. FROM 3' BELOW BOTTOM OF ROAD BASE TO BOTTOM OF ROAD BASE:

BACKFILL SHALL BE CEMENT STABILIZED SAND (1.5 SK/C.Y.) AND SHALL MEET THE FOLLOWING REQUIREMENTS:

SAND GRADATION:

% PASSING	
#4	55-100
#10	40-100
#40	25-100
#200	10-20
PI	NP-10

COMPACT TO 95% OF D688. MOISTURE TO BE ADJUSTED TO TO (+/-2%) OF OPTIMUM.

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CITY OF CORPUS CHRISTI
TEXAS
Department of Engineering Services

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

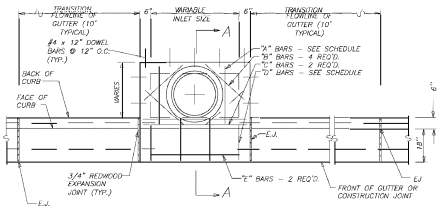
CITY OF CORPUS CHRISTI
WASTEWATER STANDARD DETAILS
PAVEMENT REPAIR/BACKFILL/GENERAL NOTES/CASING DETAILS

4 OF 4

SHEET 61 of 68
RECORD DRAWING NO.

CITY PROJECT #

REVISION NO. | DATE | BY | DESCRIPTION

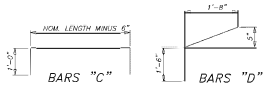


PLAN OF 5' STANDARD INLET

NOT TO SCALE

SPECIAL NOTE:

1. CONTRACTOR TO PROVIDE #4 x 12" DOWELS @ 12" O.C. WHERE PROH. SIDEWALK ABUTS INLET. (NO SEPARATE PAYMENT)
2. FOR CURB INLET THROAT EXTENSION DETAILS REFER TO STORM WATER STANDARD DETAIL SHEET 3 OF 3.



** THROAT OPENINGS SHALL HAVE A 6" X 6" CONCRETE SUPPORT PLACED AT MID-THROAT

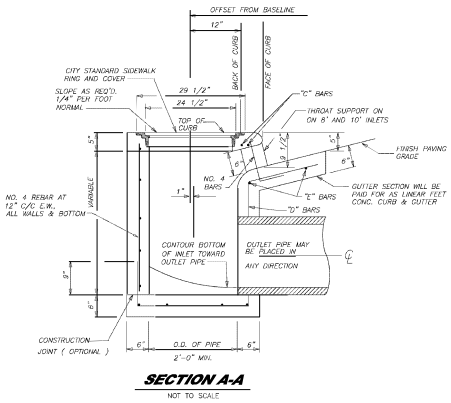
* NOMINAL LENGTH OF INLET SHALL BE DESIGNATED AS THE CLEAR WIDTH OPENING.

STANDARD CURB INLET STEEL SCHEDULE

ALL BARS No. 4 PREFORMED

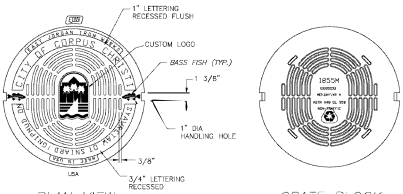
INLET SIZE (Nom. Length)	NO. REQ'D./LENGTH "A" BARS	"B" BARS	"C" BARS	"D" BARS	"E" BARS
4'	2/c	4/1'-10"	2/5'-6"	4/3'-2"	2/4'-6"
5'	2/c	4/3'-2"	2/6'-6"	4/3'-2"	2/5'-6"
6'	4/c	4/4'-0"	2/7'-6"	6/3'-2"	2/6'-6"
* * 8'	4/c	4/4'-0"	2/9'-6"	6/3'-2"	2/8'-6"
* * 10'	6/c	4/4'-0"	2/11'-6"	7/3'-2"	2/10'-6"
BENDING	STRAIGHT	STRAIGHT	SEE DET.	SEE DET.	STRAIGHT

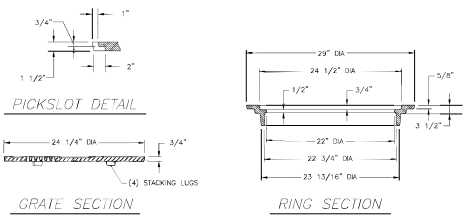
o = O.D. + 8", 2'-8" MIN. MAX. PIPE I.D. = 48 INCHES

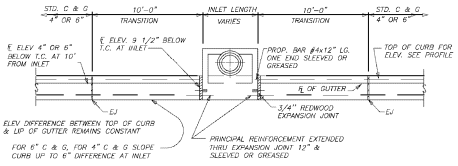


SECTION A-A

NOT TO SCALE







FLOWLINE TRANSITION AT INLET FOR 4" OR 6" STD. CURB AND GUTTER

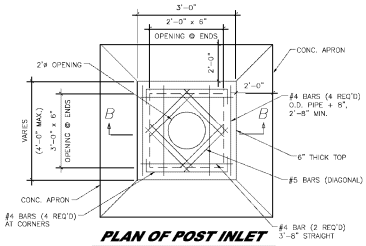
NOT TO SCALE

CITY STANDARD INLET AND SIDWALK MANHOLE RING & COVER CASTING DETAILS

NOT TO SCALE

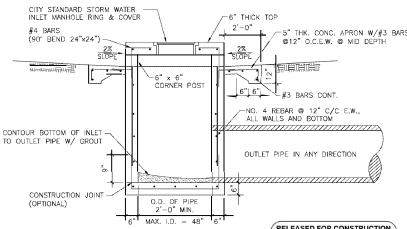
INLET AND SIDEWALK MANHOLE RING & COVER NOTES

1. MANHOLE RING & COVER SHALL BE EAST JORDAN MANHOLE ASSEMBLY FOR LOAD RATING NON-TRAFFIC.
2. THESE DETAILS SHOW GREY-IRON CASTINGS, FILLETED AT ANGLES WITH SHARP AND PERFECT ARISES.
3. CASTING SHALL BE TRUE TO PATTERN, FORM, AND DIMENSIONS, FREE FROM CRACKS, SPONGINESS AND BLOWHOLES.
4. MACHINE SURFACES TO YIELD FIT WHICH WILL NOT RATTLE WITH PASSING TRAFFIC LOAD.
5. TRAFFIC SHALL BE RESTRICTED FROM M.H. FOR 36 HOURS AFTER PLACEMENT OF RING.
6. RING AND COVER SHALL BE DIPPED IN COAL TAR OR ASPHALT.
7. OTHER CASTING PATTERNS FOR RING & COVERS MAY BE SUBMITTED FOR APPROVAL PROVIDED THE PLAN PATTERN OF COVER IS THE SAME AS SHOWN ON THIS SHEET AND PROVIDED OTHER CASTINGS SHALL BE COMPLETELY INTERCHANGEABLE, I.E., THE COVERS OF THIS SHEET SHALL FIT PROPERLY, THE RINGS OF OTHER CASTING DETAILS AND THE COVERS OF OTHER CASTINGS SHALL FIT THE RINGS OF THIS SHEET.
8. MINIMUM WEIGHTS OF FINISHED CASTINGS: THE COVER = 60 POUNDS, THE RING = 135 POUNDS.



PLAN OF POST INLET

NOT TO SCALE



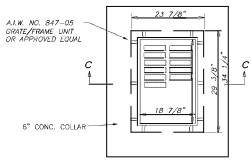
SECTION B-B

NOT TO SCALE

RELEASED FOR CONSTRUCTION

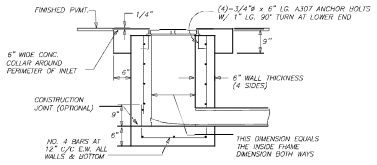
Brie A. Withrich, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.8.F.



PLAN OF STANDARD GRATE INLET

NOT TO SCALE



SECTION C-C

NOT TO SCALE

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CONSULTANT'S SHEET No.

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CITY of CORPUS CHRISTI TEXAS
Department of Capital Programs

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI, TEXAS

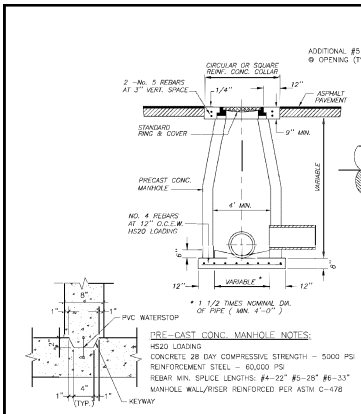
CITY OF CORPUS CHRISTI
STORM WATER STANDARD DETAILS

1 OF 3

SHEET 62 of 68
RECORD DRAWING NO.

CITY PROJECT #

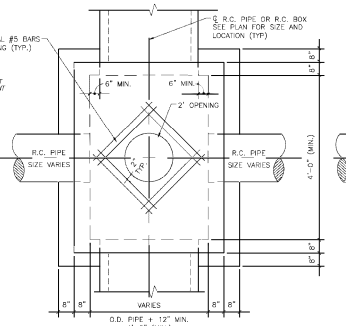
REVISION NO. | DESCRIPTION | DATE | BY



PRE-CAST CONC. MANHOLE NOTES:

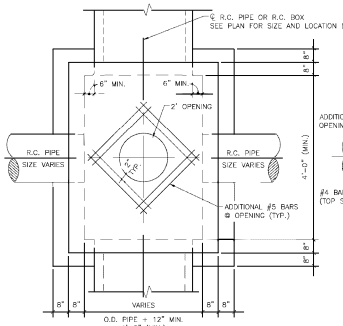
HS20 LOADING
CONCRETE 28 DAY COMPRESSIVE STRENGTH – 5000 PSI
REINFORCEMENT STEEL – 60,000 PSI
REBAR MIN. SPLICE LENGTHS: #4-22" #5-28" #6-33"
MANHOLE WALL/RISER REINFORCED PER ASTM C-478

KEYWAY DETAIL
NOT TO SCALE



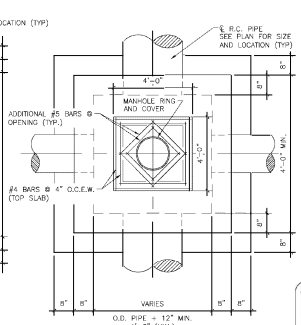
NOTE:
FOR R.C. PIPE SIZES, DIRECTION, AND FLOWLINES, REFER TO STREET AND STORM WATER PLAN AND PROFILES

PLAN
TYPE "A" MANHOLE
NOT TO SCALE



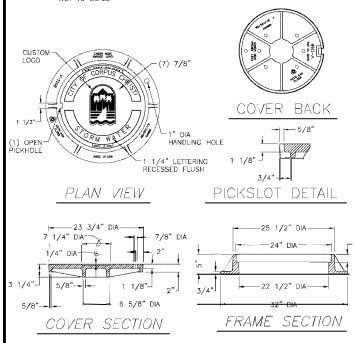
NOTE:
FOR R.C. PIPE SIZES, DIRECTION, AND FLOWLINES, REFER TO STREET AND STORM WATER PLAN AND PROFILES

PLAN
TYPE 'B' MANHOLE
NOT TO SCALE

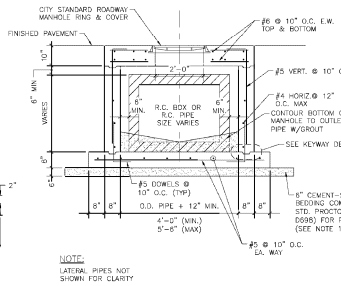


NOTE:
FOR R.C. PIPE SIZES, DIRECTION, AND FLOWLINES, REFER TO STREET AND STORM WATER PLAN AND PROFILES

PLAN
TYPE 'C' MANHOLE
NOT TO SCALE

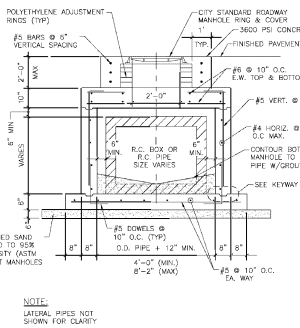


CITY STANDARD ROADWAY MANHOLE RING & COVER CASTING DETAIL
NOT TO SCALE



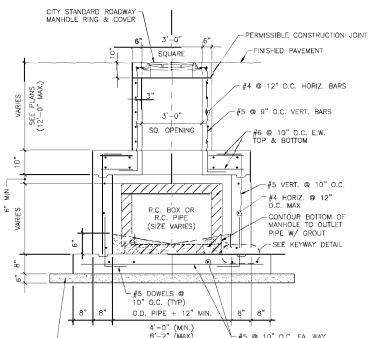
NOTE:
LATERAL PIPES NOT SHOWN FOR CLARITY

SECTION
TYPE 'B' MANHOLE
NOT TO SCALE



NOTE:
LATERAL PIPES NOT SHOWN FOR CLARITY

SECTION
TYPE 'C' MANHOLE
NOT TO SCALE



6" CEMENT-STABILIZED SAND BEDDING COMPACTED TO 95% STD. PROCTOR DENSITY (ASTM D698) FOR PRECAST MANHOLES (SEE NOTE 12)

NOTE:
LATERAL PIPES NOT SHOWN FOR CLARITY

SECTION
TYPE 'D' MANHOLE
NOT TO SCALE

ROADWAY MANHOLE RING & COVER NOTES

1. MANHOLE RING & COVER SHALL BE EAST JORDAN V 1168 ASSEMBLY AND FOR SCHOOL ZONE SHALL BE EAST JORDAN BOLTED-IN 1168 ASSEMBLY LOAD RATING HEAVY DUTY.
2. THESE DETAILS SHOW GREY-IRON CASTINGS, FILLETED AT ANGLES WITH SHARP AND PERFECT ARISES.
3. CASTING SHALL BE TRUE TO PATTERN, FORM, AND DIMENSIONS, FREE FROM CRACKS, SPONGINESS AND BLOWHOLES.
4. MACHINE SURFACES TO YIELD FIT WHICH WILL NOT RATTLE WITH PASSING TRAFFIC LOAD.
5. TRAFFIC SHALL BE RESTRICTED FROM M.H. FOR 36 HOURS AFTER PLACEMENT OF RING.
6. RING AND COVER SHALL BE DIPPED IN COAL TAR OR ASPHALT.
7. OTHER CASTING PATTERNS FOR RING & COVERS MAY BE SUBMITTED FOR APPROVAL PROVIDED THE PLAN PATTERN OF COVER IS THE SAME AS SHOWN ON THIS SHEET AND PROVIDED OTHER CASTINGS SHALL BE COMPLETELY INTERCHANGEABLE, I.E., THE COVERS OF THIS SHEET SHALL FIT PROPERLY, THE RINGS OF OTHER CASTING DETAILS AND THE COVERS OF OTHER CASTINGS SHALL FIT THE RINGS OF THIS SHEET.
8. MINIMUM WEIGHTS OF FINISHED CASTINGS : THE COVER – 160 POUNDS, THE RING – 180 POUNDS.
9. POLYETHYLENE MANHOLE ADJUSTMENT RINGS SHALL BE DESIGNED TO SUPPORT HS 20 TRAFFIC LOADING.

GENERAL NOTES FOR CONCRETE DRAINAGE STRUCTURES:

1. ALL CONCRETE SHALL BE CLASS "C" (3600 PSI) EXCEPT CITY STANDARD CURB INLETS AND CONCRETE COLLARS MAY BE CLASS "A".
2. ALL REINFORCING STEEL SHALL BE GRADE 60.
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.
5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. CHAMFER ALL EXPOSED EDGES 3/4".
7. PROVIDE CITY STANDARD SIDEWALK MANHOLE RING AND COVER FOR CITY STANDARD CURB INLET. PROVIDE CITY STANDARD ROADWAY STORM WATER MANHOLE RING AND COVER FOR SPECIAL CURB INLET.
8. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS AND MANHOLES, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION. PRECAST MANHOLE WITHIN THE ROADWAY SHAL BE DESIGNED TO SUPPORT HS 20 TRAFFIC LOADING AND SEALED BY A LICENSED ENGINEER.
9. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE, WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED TO INCHES. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
10. INVERT OF INLET SHALL BE SLOPED 1:20 WITH GROUT.
11. NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED EXCEPT WHERE OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.
12. IN DEEP EXCAVATIONS (> 20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4.

THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD CONSTRUCTION DETAILS DEVELOPED AND ADOPTED BY THE CITY OF CORPUS CHRISTI. ANY MODIFICATIONS TO THESE DETAILS ARE TO BE INCORPORATED INTO THE ATTACHED PLAN SET IN THEIR ENTIRETY WITHOUT CHANGE OR EDIT.

RELEASED FOR CONSTRUCTION
Eric A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

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CITY of CORPUS CHRISTI TEXAS
Department of Capital Programs

KASPIAN SUBDIVISION UNIT 1
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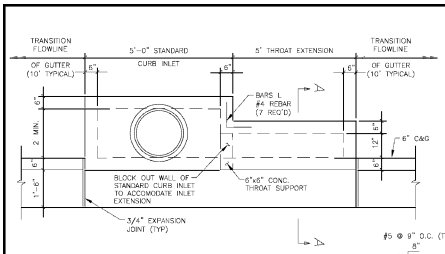
CITY OF CORPUS CHRISTI
STORM WATER STANDARD DETAILS
2 OF 3

SHEET 63 of 68
RECORD DRAWING NO.

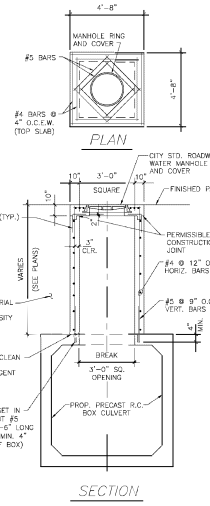
CITY PROJECT #

REVISION NO.	DATE	BY	DESCRIPTION



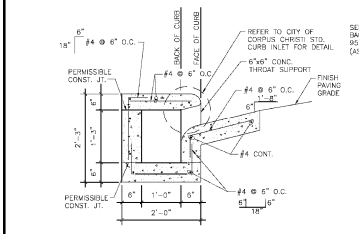
CURB INLET THROAT EXTENSION PLAN

NOT TO SCALE



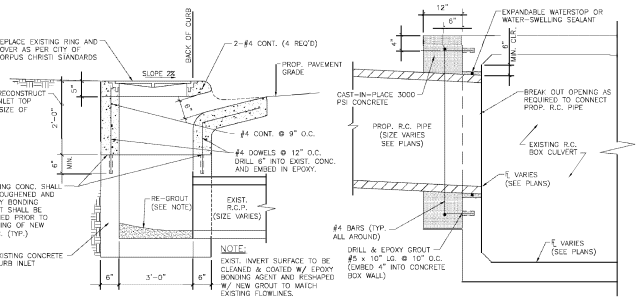
MANHOLE RISER DETAIL

NOT TO SCALE



SECTION A-A

NOT TO SCALE



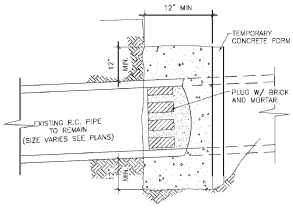
REMOVE AND REPLACE TOP OF EXISTING CURB INLET DETAIL

NOT TO SCALE

PROP. PIPE TO EXISTING R.C. BOX CONNECTION DETAIL

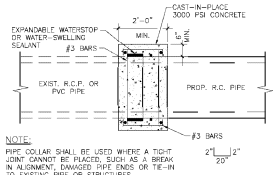
NOT TO SCALE

THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD CONSTRUCTION DETAILS DEVELOPED AND ADOPTED BY THE CITY OF CORPUS CHRISTI. THESE DETAILS ARE HEREBY MADE A PART AND INCORPORATED INTO THE ATTACHED PLAN SET IN THEIR ENTIRETY WITHOUT CHANGE OR EDIT.



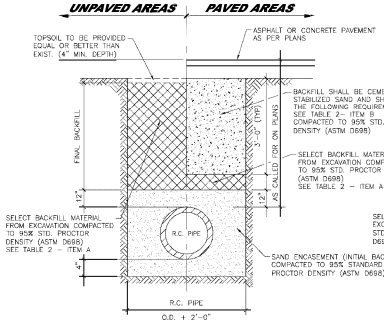
EXISTING R.C. PIPE PLUG

NOT TO SCALE



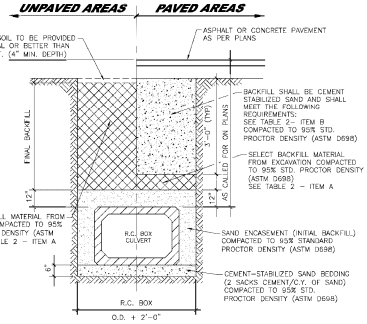
CONCRETE COLLAR DETAIL

NOT TO SCALE



TRENCH BACKFILL FOR STORM WATER PIPES

NOT TO SCALE



NOTE: (CONCRETE PAVEMENT ONLY)
CONTRACTOR HAS OPTION TO USE CEMENT STABILIZED SAND OR BACKFILL WITH SELECT BACKFILL MATERIAL.

TRENCH BACKFILL FOR STORM WATER R.C. BOX CULVERTS

NOT TO SCALE

GENERAL NOTES FOR BACKFILL

TABLE 1
BEDDING AND INITIAL BACKFILL
(BELOW PIPE TO 12" ABOVE PIPE)

ALL BEDDING AND INITIAL BACKFILL SHALL CONSIST OF GRANULAR MATERIAL CONSISTING OF EITHER NATURAL SAND OR SANDY GRAVEL, OR MATERIAL PRODUCED BY CRUSHING OF NATURAL STONE OR GRAVEL. SEWER LINES:

1. EXCAVATIONS <20FT. DEEP AND ABOVE WATER TABLE, USE MATERIAL MEETING THE FOLLOWING CRITERIA.

   MEETING REQUIREMENTS OF ASTM D2487 FOR:

SP	GP
SW	GW
SP–SM	GP–GM
SW–SM	GW–GM

   AND IN ADDITION:
   PASSING 1/2" SIEVE – 100%
   PASSING #4 SIEVE – 30% MINIMUM
   PLASTICITY INDEX (PI) – NP TO 10 MAX.

2. IN DEEP EXCAVATIONS (>20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF:

   A. CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4.

FOR ALL UTILITIES:

1. FOR PIPE DIAMETER EQUAL TO OR SMALLER THAN 16", USE 4" MINIMUM BEDDING UNDER PIPE.
2. FOR PIPE DIAMETER GREATER THAN 16", USE 6" MINIMUM BEDDING UNDER PIPE.

TABLE 2
FINAL BACKFILL
(GREATER THAN 12" ABOVE PIPE)

UNPAVED AREAS	PAVED AREAS
A. FOR 12" ABOVE PIPE TO BOTTOM OF TOPSOIL BACKFILL SHALL BE APPROVED SELECT MATERIAL FROM THE EXCAVATION; OR IMPORTED MATERIAL; ALL TO BE FREE OF ROCKS, DEBRIS, OR ANY CLUMPS GREATER THAN 2" IN DIAMETER. LOOSE LIFTS TO BE PLACED 10" MAX. COMPACT MATERIAL TO 95% STD. PROCTOR (D698). MOISTURE TO BE ADJUSTED TO ± 3% OF OPTIMUM.	A. FOR 12" ABOVE PIPE TO 3' BELOW BOTTOM OF ROAD BASE: BACKFILL SHALL BE SELECT MATERIAL FROM EXCAVATION OR TO BE IMPORTED MATERIAL AND SHALL MEET THE FOLLOWING: LL<35 PI 8–20 NO CLUMPS > 2" DIA. MOISTURE 0 TO +3% COMPACT 95% D698 STD PROCTOR LOOSE LIFTS OF 10" MAX OR IF SELECT MATERIAL FROM EXCAVATION DOES NOT MEET REQUIREMENTS, THEN USE CEMENT STABILIZED SAND SEE TABLE 2–ITEM B
B. TOPSOIL TO BE PROVIDED EQUAL OR BETTER THAN EXISTING; AND MATCH EXISTING TOPSOIL DEPTH. (4" MIN.) COMPACT TO FIX CONFLICT TO EXISTING ADJACENT TOPSOIL. (CONSTRUCTION TO BE PERFORMED BY "DOUBLE DITCH" METHOD TOP SOIL SALVAGED TO BE PLACED ON TOP)	B. FOR 3' BELOW BOTTOM OF ROAD BASE TO BOTTOM OF ROAD BASE: BACKFILL SHALL BE CEMENT STABILIZED SAND AND SHALL MEET THE FOLLOWING REQUIREMENTS: SAND GRADATION % PASSING 1/2" 100% #4 55–100 #10 40–100 #40 25–100 #200 10–20 PI NP–10 2 SACKS CEMENT/C.Y. OF SAND. COMPACT TO 95% OF D698. MOISTURE TO BE ADJUSTED TO (+/–2%) OF OPTIMUM.

RELEASED FOR CONSTRUCTION
Eric A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.6.5.F.

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CITY of CORPUS CHRISTI TEXAS
Department of Capital Programs

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

CITY OF CORPUS CHRISTI
STORM WATER STANDARD DETAILS

3 OF 3

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RECORD DRAWING NO.

CITY PROJECT #

DESCRIPTION | BY | DATE | REVISION NO.

WATER DISTRIBUTION SYSTEM GENERAL NOTES

1. PROPOSED WATER DISTRUBUTION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF CORPUS CHRISTI WATER DIVISION DISTRIBUTION SYSTEM STANDARDS.
2. THE CITY RESERVES THE RIGHT TO ACCEPT THE SYSTEM FOR OPERATION AT ANY TIME, BUT THE DATE OF OFFICIAL ACCEPTANCE OF THE SYSTEM WILL BE UPON COMPLETION OF THE PROJECT AND SATISFACTORY TEST RESULTS.
3. THE EXISTING SYSTEM SHALL REMAIN IN SERVICE UNTIL THE PROPOSED SYSTEM IS PUT INTO SERVICE. THE CONTRACTOR SHALL PROTECT THE EXISTING SYSTEM UNTIL IT IS TAKEN OUT OF SERVICE.
4. THE CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED TO INSTALL THE PROPOSED SYSTEM.
5. TESTING OF LINES (STERILIZATION AND PRESSURED) SHALL BE DONE BY THE CONTRACTOR UNDER THE SUPERVISION OF THE WATER DIMISION. WATER FOR FILLING THE NEW WATER LINE AND PERFORMING TESTS WILL BE FURNISHED TO THE CONTRACTOR BY THE CITY OF CORPUS CHRISTI THROUGH A STANDARD WATER CONSTRUCTION METER CONNECTION. STANDARD WATER CONSTRUCTION METER AND GAUGE WILL BE SUPPLIED BY THE CITY AFTER THE CONTRACTOR HAS PAID ALL APPLICABLE FEES FOR THE WATER CONSTRUCTION METER. ALL WATER DISCHARGE MUST BE DECHLORINATED IN ACCORDANCE WITH TNRCC & NPDES REGULATIONS.
6. THE CONTRACTOR SHALL RECOVER AND STOCK-PILE AT A LOCATION DESIGNATED BY THE WATER DIVISION INSPECTOR, ALL FIRE HYDRANTS, VALVES, AND FITTINGS THAT ARE TAKEN OUT OF SERVICE . THESE MATERIALS MAY BE SALVAGED BY THE CITY ; HOWEVER, ALL ITEMS NOT CLAIMED BY THE CITY PRIOR TO THE FINAL INSPECTION SHALL BE DISPOSED OF BY THE CONTRACTOR.
7. THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH WATERLINE REPAIRS (WHICH RESULT FROM DAMAGE CAUSED BY THE CONTRACTOR) UPON COMPLETION OF PROJECTS. ALL WATER LINES SHALL BE FREE OF ALL PATCHES AND SPLICES.
8. ALL PHYSICAL TIES OF THE PROPOSED SYSTEM INTO THE EXISTING WATERLINE SHALL BE RECONNECTED AND BE MADE UNDER SUPERVISION OF THE WATER DIVISION INSPECTOR. THE CONTRACTOR SHALL FURNISH ALL MATERIALS AND ALL EQUIPMENT THAT IS REQUIRED TO MAKE TIE-INS. CITY WATER DIVISION CREWS WILL MAKE TAPS ON CITY MAINS ARRANGED THROUGH WATER DIVISION INSPECTOR (72 HOUR NOTIFICATION).
9. ALL EXISTING SERVICE CONNECTIONS TIED ONTO THE EXISTING WATERLINE SHALL BE RECONNECTED BY THE CONTRACTOR, INCLUDING RELOCATING EXISTING WATER METERS. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO NOTIFY AND COORDINATE WITH THE WATER DIVISION INSPECTOR SAID RECONNECTIONS / RELOCATIONS IN ADVANCE OF CONSTRUCTION TO AVOID DELAYS. (NO SEPARATE COSTS)
10. MINOR LENGTH OF DUCTILE IRON PIPE ADJACENT TO FITTINGS MAY BE REQUIRED AS DIRECTED BY THE WATER DIVISION INSPECTOR BASED ON CONDITIONS ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL USE D.I.P. AS DIRECTED AND SHALL BE PAID AT THE UNIT PRICE BID FOR THE APPROPRIATE SIZE WATERLINE. A MINOR LENGTH IS DEFINED AS A SINGLE LOCATION REQUIRING THE USE OF TWO JOINTS OR LESS.
11. MINOR ADJUSTMENTS IN THE LOCATIONS OF FITTINGS, VALVES, FIRE HYDRANTS, ETC. CAN BE ANTICIPATED. THE CONTRACTOR SHALL MAKE SAID MINOR ADJUSTMENTS AS DIRECTED BY THE ENGINEER AND/OR WATER DIVISION INSPECTOR AT NO INCREASE OF CONTRACT PRICE. WATER DIVISION WILL BE NOTIFIED PRIOR TO ALL CHANGES.
12. ALL NIPPLES BETWEEN FITTINGS AND VALVES ALONG MAINS SHALL BE DUCTILE IRON.
13. ALL DUCTILE IRON PIPES, VALVES, AND FITTINGS SHALL BE WRAPPED WITH (2) THICKNESSES OF 8 MIL POLYETHYLENE AND SHALL BE RESTRAINED WITH "MEGALUG", MECHANICAL JOINT RESTRAINT OR ENGINEER APPROVED EQUAL AT ALL FITTINGS. CONCRETE THRUST BLOCKS SHALL BE PLACED BEHIND ALL FITTINGS EXCEPT WHERE LOCKING OR SWIVEL FITTINGS ARE UTILIZED, UNLESS OTHERWISE SPECIFIED BY THE WATER DIVISION ENGINEER.
14. ALL OFFSETS ARE TO BE DUCTILE IRON PIPE ASSEMBLIES LOCKED TOGETHER BY RETAINER GLANDS. DUCTILE IRON BENDS SHALL BE UTILIZED FOR ANY CHANGES IN ALIGNMENT OR GRADE.
15. IF A WATER LINE IS TO BE ABANDONED, THE CONTRACTOR WILL FILL WITH CONTROLLED LOW STRENGTH MATERIAL "DARFILL" BRAND OR ENGINEER APPROVED EQUAL. VALVES WILL BE REMOVED OR FILLED AS REQUIRED BY WATER DIVISION INSPECTOR.
16. CONTRACTOR SHALL COORDINATE WITH WATER DIVISION INSPECTOR AND NOTIFY ALL AFFECTED CUSTOMERS 24 HOURS PRIOR TO KILLOUT OF EXISTING WATER SYSTEM.
17. WATER DISTRIBUTION SYSTEM STANDARDS CALL FOR MAXIMUM 48" COVER ON WATERLINES. WHEN DEPTHS EXCEED 48" COVER TO AVOID OBSTRUCTION, THE USES OF BENDS COULD BE REQUIRED.
18. CONTRACTOR SHALL KEEP ALL EXISTING VALVES ACCESSIBLE DURING ALL PHASES OF CONSTRUCTION.
19. ALL NEW WATER MAINS SHALL BE INSTALLED SO THAT PIPE IDENTIFICATION MARKINGS ARE LOCATED ON THE TOP OF THE PIPE.
20. ALL SERVICE LINES UNDER PAVEMENT SHALL BE ONE INCH, INSIDE DIAMETER, MINIMUM.

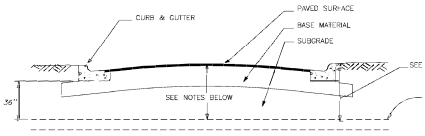
SPECIAL NOTE:

ENGINEER SHALL CONTACT THE UTILITY DEPARTMENT FOR WATER VAULT DESIGN COORDINATION.

SEPARATION OF WATER AND WASTEWATER LINES

1. THE SEPARATION OF WATER AND WASTEWATER LINES AND THE MATERIAL USED SHALL BE IN ACCORDANCE WITH THE "RULES & REGULATIONS FOR PUBLIC WATER SYSTEMS" OF TEXAS NATURAL RESOURCE CONSERVATION COMMISSION AND THE CITY WATER DETAILS .
2. WHENEVER WATER & WASTEWATER LINES CROSS, ONE JOINT OF C900 PVC WATER LINE SHALL BE CENTERED OVER THE WASTEWATER LINE IN ADDITION TO ANY REQUIREMENTS AS DICTATED BY ITEM 1 ABOVE .

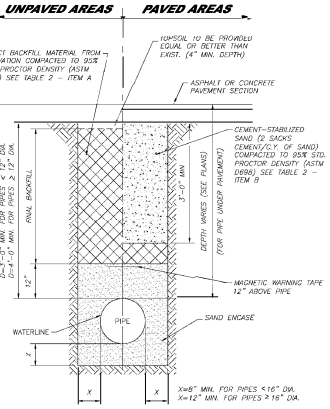
NOTES:
CONTRACTOR MAY BE REQUIRED BY THE WATER DIVISION INSPECTOR TO INSTALL CENTERED JOINTS OF DUCTILE IRON PIPE AT WATERLINE CROSSINGS OF EXISTING HAZARDOUS PRODUCT FLOWLINES.



WATERLINE MINIMUM COVER REQUIREMENTS

NOT TO SCALE

NOTES:
1. ALL MAINS IN THE STREET SHALL HAVE A MINIMUM OF 36" OF COVER AND BE 12" MINIMUM BELOW SUBGRADE AT ALL POINTS AND HAVE VALVE CLEARANCES IN ACCORDANCE WITH THE VALVE DETAIL.
2. ALL TRANSMISSION MAINS (12" DIAMETER & ABOVE) IN THE STREET SHALL HAVE 48" OF COVER AT ALL POINTS.
3. ALL MAINS NOT UNDER THE STREET SHALL HAVE A MINIMUM OF 36" OF COVER AT ALL POINTS.



TYP. PIPE TRENCHING, BEDDING AND BACKFILL FOR WATERLINE

NOT TO SCALE

NOTE: (CONCRETE PAVEMENT ONLY)
CONTRACTOR HAS OPTION TO USE CEMENT STABILIZED SAND OR BACKFILL WITH SELECT BACKFILL MATERIAL

GENERAL NOTES FOR BACKFILL

TABLE 1
BEDDING AND INITIAL BACKFILL
(BELOW PIPE TO 12" ABOVE PIPE)

ALL BEDDING AND INITIAL BACKFILL SHALL CONSIST OF THE FOLLOWING OR REFER TO DESIGN ENGINEER REQUIREMENTS:
GRANULAR BACKFILL CONSISTING OF EITHER NATURAL SAND OR SANDY GRAVEL, OR MATERIAL PRODUCED BY CRUSHING OF NATURAL STONE OR GRAVEL.

WATER LINES:

1. EXCAVATIONS <20FT. DEEP AND ABOVE WATER TABLE. USE MATERIAL MEETING THE FOLLOWING CRITERIA.

MEETING REQUIREMENTS OF ASTM D2487 FOR:

SP	GP
SW	GW
SP–SM	GP–GM
SW–SM	GW–GM

AND IN ADDITION:
PASSING 1/2" SIEVE – 100%
PASSING #4 SIEVE – 30% MINIMUM
PLASTICITY INDEX (PI) – NP TO 10 MAX.

2. IN DEEP EXCAVATIONS (>20') OR BELOW WATER TABLE, USE CRUSHED STONE OR CRUSHED GRAVEL MEETING GRADATION OF:

A. CONCRETE COARSE AGGREGATE; TxDOT ITEM 421; GRADE 2, 3, OR 4.

TABLE 2
FINAL BACKFILL
(GREATER THAN 12" ABOVE PIPE)

UNPAVED AREAS

A. FOR 12" ABOVE PIPE TO BOTTOM OF TOPSOIL BACKFILL SHALL BE APPROVED SELECT MATERIAL FROM THE EXCAVATION, OR IMPORTED MATERIAL; ALL TO BE FREE OF ROCKS, DEBRIS, OR ANY CLUMPS GREATER THAN 2" IN DIAMETER. LOOSE LIFTS TO BE PLACED 10" MAX.

COMPACT MATERIAL TO 95% STD. PROCTOR (D698).

MOISTURE TO BE ADJUSTED TO ± 3% OF OPTIMUM.

B. TOPSOIL TO BE PROVIDED EQUAL OR BETTER THAN EXISTING, AND MATCH EXISTING TOPSOIL DEPTH. COMPACT TO FIX CONFLICT TO EXISTING ADJACENT TOPSOIL (CONSTRUCTION TO BE PERFORMED BY "DOUBLE DITCH" METHOD TOP SOIL SALVAGED TO BE PLACED ON TOP)

PAVED AREAS

A. FOR 12" ABOVE PIPE TO 3' BELOW BOTTOM OF ROAD BASE: BACKFILL SHALL BE SELECT MATERIAL FROM EXCAVATION OR TO BE IMPORTED MATERIAL IN EITHER CASE, ALL MATERIAL SHALL MEET THE FOLLOWING:

LL<35
PI 8–20
NO CLUMPS > 2" DIA.
MOISTURE 0 TO +3%
COMPACT 95% D698 STD PROCTOR

LOOSE LIFTS OF 10" MAX OR IF SAND MATERIAL FROM EXCAVATION DOES NOT MEET REQUIREMENTS, THEN USE CEMENT STABILIZED SAND SEE TABLE 2–ITEM B BELOW (OR PER DESIGN ENGINEER)

B. FOR 3' BELOW BOTTOM OF ROAD BASE TO BOTTOM OF ROAD BASE:

BACKFILL SHALL BE CEMENT STABILIZED SAND (2 SK/C.Y.) AND SHALL MEET THE FOLLOWING REQUIREMENTS:

SAND GRADATION
% PASSING

#4	55–100
#10	40–100
#40	25–100
#200	10–20
PI	NP–10

(OR AS PER DESIGN ENGINEER)

COMPACT TO 95% OF D698. MOISTURE TO BE ADJUSTED TO (+/–2%) OF OPTIMUM.

RELEASED FOR CONSTRUCTION
Eric A. Winbrish, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD CONSTRUCTION DETAILS DEVELOPED AND APPROVED BY THE CITY OF CORPUS CHRISTI, AND BY THIS SEAL AND SIGNATURE ARE INCORPORATED INTO THE ATTACHED PLAN SET IN THEIR ENTIRETY WITHOUT CHANGE OR EDIT.

CONSULTANT'S SHEET No.

Eric Finnell, P.E.
04/11/2022

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CITY of CORPUS CHRISTI
Department of Capital Programs

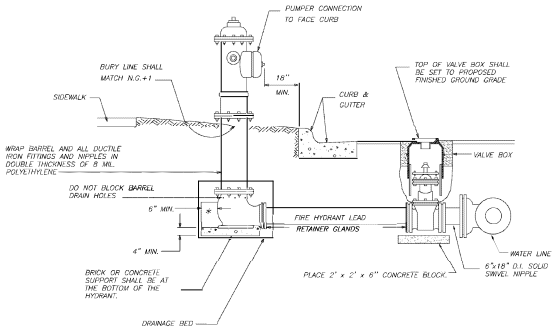
DESCRIPTION	BY	DATE	REVISION NO

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

CITY OF CORPUS CHRISTI
WATER STANDARD DETAILS
WATER DISTRIBUTION SYSTEM GENERAL NOTES & BACKFILL AND EMBEDMENT DETAILS

SHEET 65 of 68
RECORD DRAWING NO.

CITY PROJECT #



* NOTE:

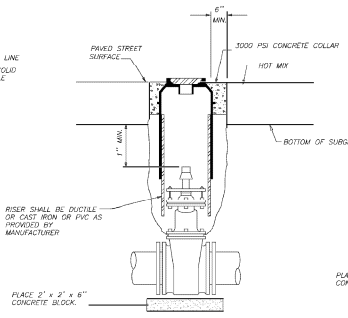
1. ANYTHING LESS THAT 20' WILL BE DUCTILE IRON LOCKED TO THE VALVE.
2. ANYTHING MORE THAN 20' SHALL REQUIRE CONCRETE THRUST BLOCK BEHIND HYDRANT AGAINST UNDISTURBED SOIL.

FIRE HYDRANT ASSEMBLY DETAIL (TYPE 1)

NOT TO SCALE

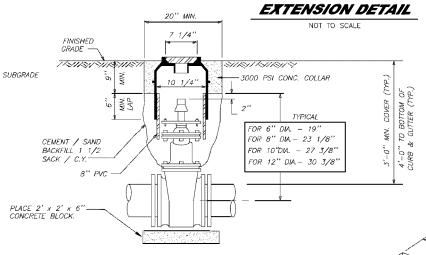
FIRE HYDRANTS:

1. DRAINAGE BED SHALL CONSIST OF CRUSHED STONE OR COARSE GRAVEL W/ COARSE SAND, MIN. VOLUME 7 CU. FT., DRAIN BED SHALL EXTEND A MIN. 6" ABOVE DRAIN OUTLET.
2. ALL FIRE HYDRANT FITTINGS SHALL BE LOCKED TOGETHER BY LOCKING RETAINER GLANDS.
3. FIRE HYDRANT TO BE BLOCKED AGAINST FIRM SOIL AS SHOWN.
4. ALL HYDRANTS SHALL BE INSTALLED PLUMB.
5. LARGE NOZZLE FACES ROAD, UNLESS OTHERWISE NOTED. ROTATE BARREL AS REQUIRED.
6. HYDRANT SHOULD NOT BE SET CLOSER THAN 4' TO OBSTRUCTIONS THAT ARE IN LINE WITH NOZZLE.
7. FIRE HYDRANT SHALL BE SET TO MANUFACTURER'S BURY LINE AT PROPOSED/EXISTING GRADE PLUS 1".
8. NO TAPS ARE TO BE MADE ON FIRE HYDRANT LEAD.



VALVE BOX DETAIL @ PAVEMENT

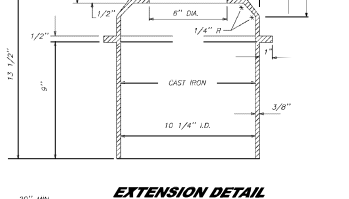
NOT TO SCALE



VALVE BOX DETAIL @ NATURAL GROUND

NOT TO SCALE

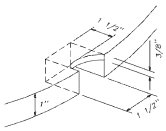
ALL VALVES SHALL BE HOUSED IN APPROVED VALVE BOXES



EXTENSION DETAIL

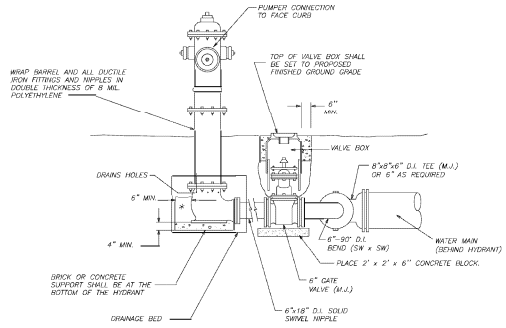
NOT TO SCALE

THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD DETAILS OF THE CITY OF CORPUS CHRISTI, AND ADOPTED BY THE CITY OF CORPUS CHRISTI, AND WITH THE SEAL AND SIGNATURES AFFIXED HERETO, ARE APPROVED FOR USE AS SET IN THEIR ENTIRETY WITHOUT CHANGE OR EDIT.



PICK NOTCH

NOT TO SCALE



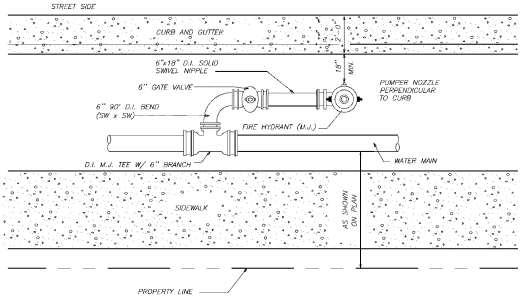
* NOTE:

1. ANYTHING LESS THAT 20' WILL BE DUCTILE IRON LOCKED TO THE VALVE.
2. ANYTHING MORE THAN 20' SHALL REQUIRE CONCRETE THRUST BLOCK BEHIND HYDRANT AGAINST UNDISTURBED SOIL.

FIRE HYDRANT ASSEMBLY DETAIL (TYPE 2)

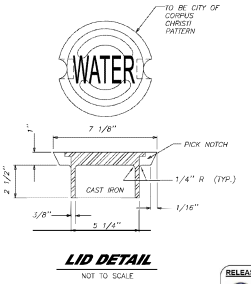
WATER LINE BEHIND CURB

NOT TO SCALE



FIRE HYDRANT ASSEMBLY DETAIL (TYPE 2)

NOT TO SCALE



LID DETAIL

NOT TO SCALE

RELEASED FOR CONSTRUCTION

Eric A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.1.

CONSULTANT'S SHEET No.

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CITY of CORPUS CHRISTI TEXAS
Department of Capital Programs

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

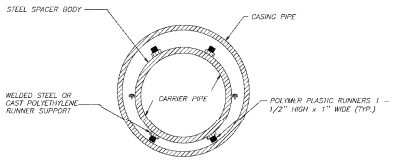
CITY OF CORPUS CHRISTI
WATER STANDARD DETAILS
FIRE HYDRANT, VALVE BOX AND LID

2 OF 4

SHEET 66 of 68
RECORD DRAWING NO.

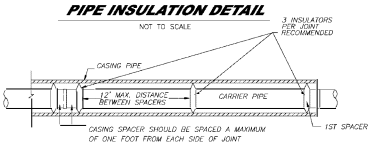
CITY PROJECT #

REVISION NO.	DATE	BY	DESCRIPTION



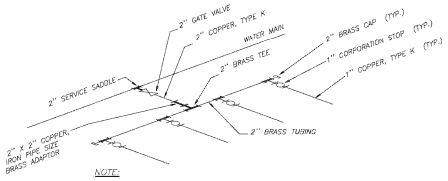
PIPE INSULATION DETAIL

NOT TO SCALE



INSULATOR SPACING DETAIL

NOT TO SCALE



NOTE:

MANIFOLDS LARGER THAN SIX CONNECTIONS WILL REQUIRE APPROVAL FROM THE CITY OF CORPUS CHRISTI WATER DEPARTMENT FOR ANOTHER WATER TAP AND SERVICE.

THREE TO SIX WATER CONNECTIONS

NOT TO SCALE

CASING SPACERS

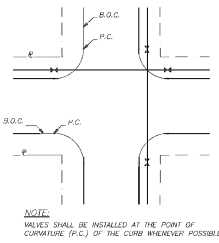
A. ALL CARRIER PIPE IN CASING INSTALLED BY JACKING OR BORING SHALL BE SUPPORTED BY BOLT-ON STYLE CASING SPACERS, AS MANUFACTURED BY ADVANCE PRODUCTS INC. OR ENGINEER APPROVED EQUAL.

B. CASING SPACERS FOR PIPE INSTALLED IN CASING SHALL HAVE A FUSION BONDED EPOXY CARBON STEEL BODY, NEOPRENE OR PVC LINER, STEEL SUPPORTS AND U.H.M.W. POLYETHYLENE RUNNERS.

C. CASING SPACERS SHALL BE SIZED TO SECURELY FASTEN ON TO THE CARRIER PIPE BARREL O.D. AND SHALL BE FURNISHED WITH A MINIMUM RUNNER HEIGHT TO PREVENT THE PIPE FROM RESTING OR SLIDING ON ITS JOINTS DURING THE INSTALLATION.

1. POSITIONING OF SPACERS SHOULD ENSURE THAT THE CARRIER PIPE IS ADEQUATELY SUPPORTED THROUGHOUT ITS LENGTH.
2. SPACERS AT EACH END SHALL NOT BE FURTHER THAN 6" FROM THE END OF CASING REGARDLESS OF SIZE OF CASING AND CARRIER PIPE OR TYPE OF SPACER USED.

D. FOR PIPE WITH MECHANICAL JOINTS, FLANGES OR BELL AND SPIGOT JOINTS, CASING SPACERS SHALL BE INSTALLED WITHIN ONE FOOT ON EACH SIDE OF THE BELL OR FLANGE AND ONE IN THE CENTER OF THE JOINT WHEN 18 TO 20 FOOT LONG JOINTS ARE USED. MAXIMUM SPACING FOR SPACERS IS 12 FEET.

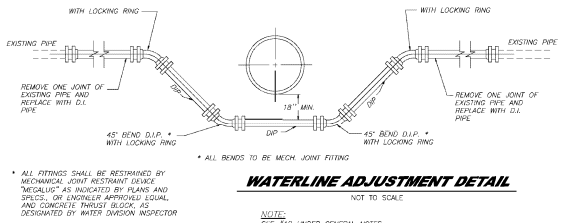


NOTE:

VALVES SHALL BE INSTALLED AT THE POINT OF CURVATURE (P.C.) OF THE CURB WHENEVER POSSIBLE.

TYPICAL VALVE INSTALLATION AT INTERSECTIONS

NOT TO SCALE



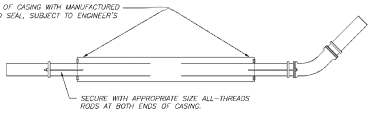
* ALL FITTINGS SHALL BE RESTRAINED BY MECHANICAL JOINT RESTRAINT DEVICE "MEGALUG" AS INDICATED BY PLANS AND SPECS., OR ENGINEER APPROVED EQUAL AND CONCRETE THRUST BLOCK, AS DESIGNATED BY WATER DIVISION INSPECTOR

WATERLINE ADJUSTMENT DETAIL

NOT TO SCALE

NOTE:

SEE #18 UNDER GENERAL NOTES



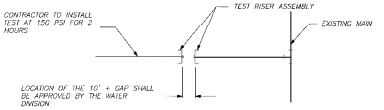
NOTE:

CASING SHALL BE STEEL.

TYPICAL CASING DETAIL

NOT TO SCALE

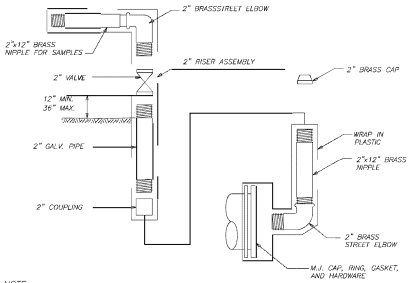
THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD CONSTRUCTION DETAILS DEVELOPED AND ADOPTED BY THE CITY OF CORPUS CHRISTI, AND ARE INCORPORATED INTO THIS PLAN SET AS AN ATTACHED PLAN AND ARE TO BE USED IN THEIR ENTIRETY WITHOUT CHANGE OR EDIT.



1. HYDROSTATIC TEST: WATER FOR FILLING THE NEW WATER LINE AND PERFORMING TESTS WILL BE FURNISHED TO THE CONTRACTOR BY THE CITY OF CORPUS CHRISTI THROUGH A STANDARD WATER CONSTRUCTION METER CONNECTION. STANDARD WATER CONSTRUCTION METER AND GAUGE WILL BE SUPPLIED BY THE CITY AFTER THE CONTRACTOR HAS PAID ALL APPLICABLE FEES FOR THE WATER CONSTRUCTION METER. THE TEST PUMP WITH APPROPRIATE CONNECTION POINTS AS APPROVED BY THE WATER SUPERINTENDENT FOR THE INSTALLATION OF METER AND GAUGE SHALL BE FURNISHED BY THE CONTRACTOR. THE METER SHALL BE DIRECTLY CONNECTED TO THE MAIN OR PIPE BEING TESTED BY THE USE OF COPPER TUBING OR AN APPROVED REINFORCED HOSE. THE METER SHALL BE PROTECTED AGAINST EXTREME PRESSURES BY THE USE OF A ONE (1") INCH SAFETY RELIEF VALVE SET AT THE TEST PRESSURE PLUS TEN POUNDS PER SQUARE INCH AND FURNISHED BY THE CITY (48 HOURS NOTIFICATION).
2. BACTERIOLOGICAL TEST: CONTRACTOR SHALL FURNISH AND INSTALL TEST RISER ASSEMBLY. AFTER BACTERIOLOGICAL SAMPLE PASSES TEST, CONTRACTOR SHALL REMOVE TEST RISER ASSEMBLIES AND TIE NEW SYSTEM TO EXISTING UNDER THE SUPERVISION OF THE WATER DIVISION INSPECTOR. CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR AND EQUIPMENT THAT IS REQUIRED TO MAKE TIE / CONNECTION. CONTRACTOR WILL SCHEDULE & COORDINATE WITH WATER DIVISION INSPECTOR ON DATE & TIME OF TIE-IN. (24 HOURS NOTIFICATION)
3. CONTRACTOR SHALL FURNISH AND INSTALL TAPPING SLEEVE OR SADDLE AND TAPPING GATE VALVE AND VALVE BOX COMPLETE. CITY TO MAKE TAP (72 HOURS NOTIFICATION)

DETAIL "A" TEST RISER ASSEMBLY CONNECTION

NOT TO SCALE



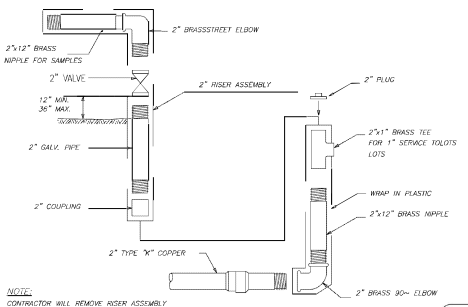
NOTE:

AFTER BACTERIOLOGICAL SAMPLE PASSES TEST, CONTRACTOR WILL REMOVE RISER ASSEMBLY AND INSTALL 2" BRASS CAP

DETAIL "B" TEST RISER ASSEMBLY

NOT TO SCALE

FURNISHED AND INSTALLED BY CONTRACTOR



NOTE:

CONTRACTOR WILL REMOVE RISER ASSEMBLY AND INSTALL 2" BRASS PLUG ON 2"x1" BRASS TEE AFTER SAMPLE PASSES

DETAIL "C" TEST RISER ASSEMBLY

NOT TO SCALE

FURNISHED AND INSTALLED BY CONTRACTOR

RELEASED FOR CONSTRUCTION

Bria A. Wilstrom, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi

Note: Construction Plans will expire based on the fee conditions stated in UDC 3.8.5.F.

CONSULTANT'S SHEET No.

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14907
jperales@jperalescivilengineering.com
P.O. BOX 260547
Corpus Christi Texas 78426
Tel: (361) 726-7188

Vilma Acevedo C.A., P.E.
April 2024

DESCRIPTION | DATE | BY | REVISION NO.

CITY of CORPUS CHRISTI TEXAS
Department of Capital Programs

DESCRIPTION

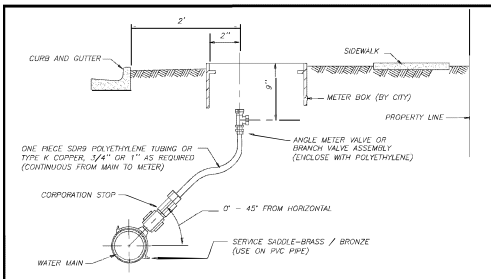
KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

CITY OF CORPUS CHRISTI
WATER STANDARD DETAILS
ADJUSTMENTS, CASING DETAILS, RISER DETAILS & TYP. VALVE LAYOUT

3 OF 4

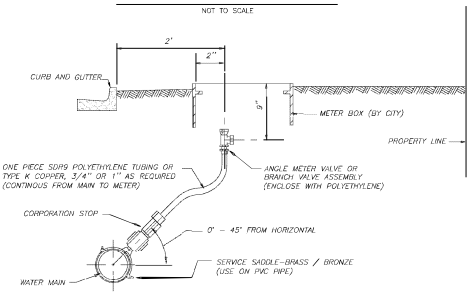
SHEET 67 of 68
RECORD DRAWING NO.

CITY PROJECT #



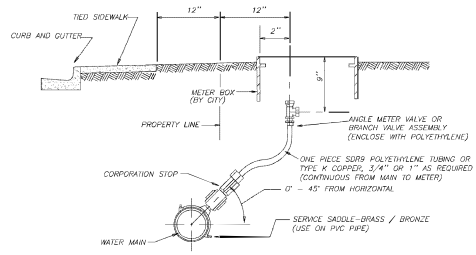
SERVICE WITH SIDEWALK

NOT TO SCALE



SERVICE WITHOUT SIDEWALK

NOT TO SCALE

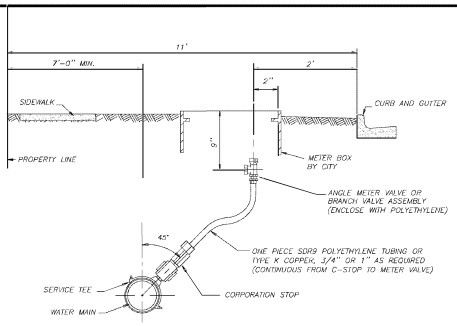


SERVICE WITH SIDEWALK TIED TO CURB

NOT TO SCALE

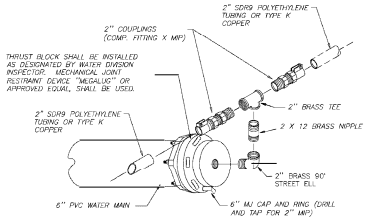
NOTES:

1. IF THERE IS LESS THAN 2' FROM BACK OF SIDEWALK TO PROPERTY LINE, THE METER BOX SHALL BE PLACED 1' BEHIND PROPERTY LINE AND UTILITY EASEMENT WILL BE REQUIRED.
2. IF THERE IS MORE THAN 2' FROM BACK OF SIDEWALK TO PROPERTY LINE, THE METER BOX SHALL BE PLACED BEHIND SIDEWALK.
3. THE WATER DIVISION WILL APPROVE ANY PLACEMENT OF A SERVICE LINE IN A TIED/SIDEWALK SITUATION.



TYPICAL CUL-DE-SAC SERVICE

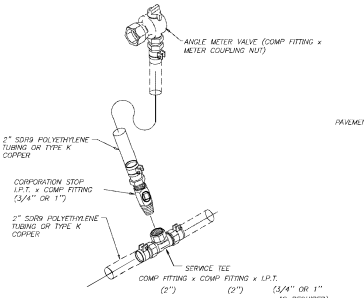
NOT TO SCALE



NOTE:
NO MORE THAN 3 LOTS SHALL BE SERVED PER LEG.

TYPICAL CONNECTION DETAIL

NOT TO SCALE



TYPICAL CONNECTION DETAIL

NOT TO SCALE

BRASS "W" DETAIL

MARKER LOCATION

PRE-SET SERVICE LINE MARKER DETAILS

NOT TO SCALE

THE CONSTRUCTION DETAILS SHOWN HEREON ARE STANDARD CONSTRUCTION DETAILS DEVELOPED AND APPROVED BY THE CITY OF CORPUS CHRISTI, AND BY THIS SEAL AND SIGNATURE PLAN ARE INCORPORATED INTO THE ATTACHED PLAN SET. IN NO WAY CONTRACT WITHOUT CHANGE OR EDIT.

SERVICE LINE MATERIALS

SERVICE CLAMPS
FOR 3/4", 1", 1 1/2" I.P. THREAD TAPS FOR 6" MAINS; 2" I.P. THREAD CLAMP TAP CONNECTION ALLOWED FOR 8" AND LARGER MAINS.

CORPORATION STOPS
3/4", 1", 1 1/2" AND 2" REQUIRED WITH I.P. THREAD INLET BY COPPER COMPRESSION OUTLET WITH CLAMP - CORPORATION STOP REQUIRED AT ALL SERVICE TAPS.

ONE PIECE SDR9 POLYETHYLENE TUBING OR TYPE K COPPER
REQUIRED FOR ALL SERVICE LINES BETWEEN MAIN TO METER - SIZES REQUIRED 3/4", 1", 1 1/2", AND 2" (NO SPLICES ALLOWED)

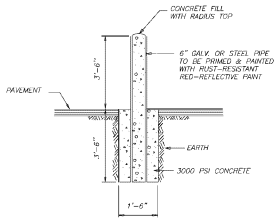
ANGLE METER STOP
REQUIRED AT ALL METERS - SIZES 3/4" & 1" - INSTALL 3/4" UNLESS DIRECTED OTHERWISE - COPPER COMPRESSION W/ CLAMP INLET BY METER COUPLING NUT OUTLET.

METER (BY OTHERS)
METER ADAPTER AND CHECK VALVE (BY OTHERS)
REQUIRED AT ALL METERS - SIZES 3/4" & 1" - INSTALL 3/4" UNLESS DIRECTED OTHERWISE - METER NUT INLET BY 3/4" MALE I.P. OUTLET.

ADAPTER COUPLING (BY OTHERS)
REQUIRED AT ALL METERS - 3/4" & 1" - FEMALE I.P. BY PVC COMPRESSION.

METER BOX
CAST IRON W/ HOT TAR DIP SHALL BE PROVIDED BY THE CONTRACTOR FOR 3/4" METER SETTINGS, IF EXISTING STRUCTURE DOES NOT HAVE ONE. BOXES FOR LARGER (1" & UP) METER SETTINGS SHALL BE FURNISHED BY THE CITY.

BRASS FITTINGS
BRASS FITTINGS SHALL COMPLY WITH A.W.W.A. C800-66 AND BE WRAPPED IN POLYETHYLENE.



NOTE:
DO NOT PLACE BOLLARD IN FRONT OF HOSE OUTLETS

BOLLARD DETAIL

NOT TO SCALE

RELEASED FOR CONSTRUCTION
Bria A. Wittmin, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

CONSULTANT'S SHEET No.

J. Perales Civil Engineering and Planning Services
TBPE FIRM No. F-14207
jperales@jperalescivil.com
P.O. BOX 280547
Corpus Christi, Texas 78426
Tel: (361) 728-7188

CITY OF CORPUS CHRISTI TEXAS
Department of Capital Programs

KASPIAN SUBDIVISION UNIT 1
CORPUS CHRISTI , TEXAS

CITY OF CORPUS CHRISTI
WATER STANDARD DETAILS
MAIN TO SERVICE DETAILS AND OTHERS

4 OF 4

SHEET 68 of 68
RECORD DRAWING NO.

CITY PROJECT #

DESCRIPTION | BY | DATE | REVISION NO.

EXHIBIT 4

J. Perales & Associates, PLLC dba

J. Perales Civil Engineering and Planning Services

T.B.P.E. Firm # F-14207

ENGINEER'S ESTIMATE OF REIMBURSABLE COSTS FOR PUBLIC WASTEWATER IMPROVEMENTS FOR KASPIAN UNIT 1 SUBDIVISION, CORPUS CHRISTI, TEXAS

Item	Quantity	Unit	Unit Cost	Item Cost
Wastewater Trunkline Construction				
15" PVC Sanitary sewer line, D = 18' to 23'	2,505.00	L.F.	$590.00	$1,477,950
4' dia. fiberglass manhole 18'-19' deep	1.00	Ea.	$23,000.00	$23,000
4' dia. fiberglass manhole 19'-20' deep	1.00	Ea.	$24,000.00	$24,000
4' dia. fiberglass manhole 21'-22' deep	4.00	Ea.	$25,000.00	$100,000
4' dia. fiberglass manhole 22'-23' deep	1.00	Ea.	$26,000.00	$26,000
Trench de-watering	2,505.00	L.F.	$95.00	$237,975
Trench protection	2,505.00	L.F.	$10.00	$25,050
15" M.J. Cap	2.00	Ea.	$600.00	$1,200
Stormwater Pollution Prevention	1.00	L.S.	$4,500.00	$4,500
Sub-Total Construction Costs				$1,919,675
Engineering @ 6%				$115,181
Construction Staking & Supervision @ 2.0%				$38,394
Sub-Total Engineering & Construction				$2,073,249
Contingencies @ 10%				$207,325
TOTAL ALL COSTS				$2,280,574

PREPARED BY JUAN PERALES, JR., P.E.
J. PERALES & ASSOCIATES, PLLC
TBPE FIRM NO. F-14207

5/01/2026

Juan Perales Jr., P.E.

5866 S. Staples St., Ste. 315, Corpus Christi, Texas 78413

Phone: (361) 728-7188 Email: jperales@jperalesengineering.com

EXHIBIT 5

CITY OF CORPUS CHRISTI
DEVELOPMENT SERVICES

Disclosure Of Interest

Pursuant to City Ordinance Sec 2-349, as amended, all persons or firms seeking to do business with the City are required to provide the following information. Every question must be answered. If the question is not applicable, answer with "NA".

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".

1. Employee Name & Title: n/a ; Department: _____
2. Employee Name & Title: _____ ; Department: _____
3. Employee Name & Title: _____ ; Department: _____

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".

1. Official's Name & Title: n/a ; Department: _____
2. Official's Name & Title: _____ ; Department: _____
3. Official's Name & Title: _____ ; Department: _____

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".

1. Board Member's Name & Title: n/a ; Board: _____
2. Board Member's Name & Title: _____ ; Board: _____
3. Board Member's Name & Title: _____ ; Board: _____

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".

1. Consultant's Name: n/a ; Firm: _____
2. Consultant's Name: _____ ; Firm: _____
3. Consultant's Name: _____ ; Firm: _____

Person's Name: George Mostaghasi, Mostaghasi George Development, LLC **Person's Title:** Manager/President

Mailing Address: 5626 Ocean Drive ; City: Corpus Christi ; State TX Zip: 78412

E-mail Address: mostaghasig@hotmail.com ; Cell: (361) 765-4422

Firm (IF APPLICABLE): __ Corporation; __ Partnership; __Sole Owner; __Association; __Other: LLC

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.

Person's Signature: _____ ; **Date:** 05 / 05 / 26