WATER ARTERIAL TRANSMISSION AND GRID MAIN CONSTRUCTION AND REIMBURSEMENT AGREEMENT

STATE OF TEXAS §
§
COUNTY OF NUECES §

This Water Arterial Transmission and Grid Main Construction and Reimbursement Agreement ("Agreement") is entered into between the City of Corpus Christi ("City"), a Texas home-rule municipality, and **LSK Development, LLC** (“Developer/Owner”), a Texas Limited Liability Corporation.

WHEREAS, the Developer/Owner, in compliance with the City’s Unified Development Code (“UDC”), has a plat, approved by the Planning Commission on **October 5, 2022** to develop a tract of land, to wit: approximately **19.747** acres known as **Queen’s Crossing Unit 2 Subdivision located south of the Cimarron Blvd and Lens Dr intersection** as shown in the attached **Exhibit 1**, the content of such exhibit being incorporated by reference into this Agreement;

WHEREAS, under the UDC, the Developer/Owner is responsible for construction of the Arterial Transmission and Grid main extension (“Water Improvements”);

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

WHEREAS, it is in the best interests of the City to have the Water Improvements be constructed to its ultimate capacity under the City’s applicable Master Plan;

WHEREAS, Section 8.5.1.C. of the UDC authorizes the acceptance of applications to be eligible for reimbursement in the future when certain funds become fully available in the Arterial Transmission and Grid Main Line Trust Fund and are appropriated by the City Council; and

WHEREAS, Developer/Owner has submitted an application for reimbursement of the costs of extending Water Improvements as shown in **Exhibit 2**, the content of such exhibit being incorporated by reference into this Agreement**.**

WHEREAS, the Water Arterial Transmission and Grid Main Trust Fund does not currently have sufficient funds to fully reimburse Developer/Owner for Water Improvements; and

WHEREAS, Developer/Owner may be paid when assets of the Water Arterial Transmission and Grid Main Trust Fund are sufficient, authorized for such purpose, and Developer/Owner has priority per UDC §8.5.1. C.

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 Water Trust Fund pursuant to UDC §8.5. The City is acting as trustee to further its governmental functions of providing

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

b. The Water Arterial Transmission and Grid Main Trust Fund was established by Ordinance No. 17092 to encouraging the orderly development of subdivisions within and surrounding the City of Corpus Christi, Texas and continues pursuant Texas Local Government Code §395.001(4)(C). The revenue generated for funding and continuation of the Water Arterial Transmission and Grid Main Trust Fund is subject to legislation of the State of Texas and the City of Corpus Christi. Nothing in this agreement guarantees neither the continuation nor future revenues of the Water Arterial Transmission and Grid Main Trust Fund. The City is not liable for modification or termination of the Water Arterial Transmission and Grid Main Trust Fund. The Developer/Owner agrees that any modification or termination of the Water Arterial Transmission and Grid Main Trust Fund is a legislative action and 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. PLANS AND SPECIFICATIONS

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

WATER ITEMS REIMBURSABLE BY CITY					
ITEM	**DESCRIPTION**	**QTY**	**UNIT**	**COST**	**TOTAL**
1	12" PVC PIPE	1881	LF	$90.00	$169,290.00
2	12" GATE VALVE WITH BOX	4	EA	$6,000.00	$24,000.00
3	12" EL, ANY ANGLE	7	EA	$1,300.00	$9,100.00
4	12" TEE	8	EA	$2,000.00	$16,000.00
5	12" X 6" REDUCER	1	EA	$900.00	$900.00
6	6" PVC PIPE	31	LF	$50.00	$1,550.00
7	6" X 30" PVC PIPE NIPPLE	3	EA	$550.00	$1,650.00
8	6" 90° EL	1	EA	$800.00	$800.00
9	6" GATE VALVE WITH BOX	2	EA	$1,500.00	$3,000.00
10	FIRE HYDRANT ASSY	4	EA	$6,500.00	$26,000.00
11	PAVEMENT PATCHING	1	LS	$6,500.00	$6,500.00
				SUBTOTAL	$258,790.00
				10% CONTINGINCIES	$25,879.00
				SUBTOTAL	$284,669.00

7.5% ENGINEERING, SURVEYING, & TESTING	$21,350.18
SUBTOTAL	$306,019.18
LESS WATER ACREAGE FEE, COMMERCIAL	$(11,799.80)
LESS WATER ACREAGE FEE, RESIDENTIAL	$(8,304.45)
TOTAL AMOUNT REIMBURSABLE	**$285,914.93**

b. The plan must be in compliance with the City's master plans.

c. The plans and specifications must comply with City Water Distribution Standards and Standard Specifications.

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

3. REIMBURSEMENT

a. The cost for the Water Improvements less $20,104.25 lot/acreage fee credit is **$285,914.93.** Subject to the conditions for reimbursement from the Water Arterial Transmission and Grid Main Trust Fund and the appropriation of funds, the City will reimburse the developer, the reasonable actual cost of the Water Improvements up to an amount not to exceed **$285,914.93** as shown in the attached **Exhibit 4**, the contents of such exhibit being incorporated by reference into this Agreement.

b. Subject to the conditions for reimbursement from the Water Arterial Transmission and Grid Main Trust Fund per the UDC, this agreement, and the appropriation of funds, the City agrees to reimburse the Developer/Owner on a monthly basis upon invoicing for work performed. The submitted invoice shall be deemed administratively complete by the City prior to payment. The reimbursement will be made no later than 30-days from the date of the City's administrative approval of the invoice. Developer/Owner shall submit all required performance bonds and proof of required insurance under the provisions of this Agreement.

c. Cost-supporting documentation to be submitted shall include:
   1. Summary of Costs and Work Performed on form provided by the Development Services Department,
   2. Contractor and professional services invoices detailing work performed,
   3. The first reimbursement request requires submittal of invoices for work performed. Future disbursements shall provide evidence of payment by the developer/owner through a cancelled check or bank ACH for the previous submittal. The final reimbursement request shall require evidence that all invoices to date have been paid.

d. 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.

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

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

4. PAYMENTS, CREDITS AND DEFERRED REIMBURSEMENT.

a. All payments, credits, priority of reimbursement, and deferred reimbursement shall be made in accordance with UDC §8.5. Developer/Owner understands and agrees that if funds are not available in the Water Arterial Transmission and Grid Main Trust Fund, that reimbursement will not be made until such funds are available, appropriated, and Developer/Owner has priority per UDC §8.5.1. Pursuant UDC §8.5.1. C., priority is determined according to the date the reimbursement agreement is approved by the City Council.

b. Payments will not be paid when funds are not available in the Water Arterial Transmission and Grid Main Trust Fund. Payments may be made when monies are available in and appropriated from the Water Arterial Transmission and Grid Main Trust Fund and the Developer/Owner has priority in accordance with UDC §8.5.1. C.

c. If the developer is owed funds from the Water Arterial Transmission and Grid Main Trust Fund, the developer will be given credit for lot or acreage fees that are due on subsequent final plats filed with the County Clerk in accordance with UDC §8.5.1. C. The amounts credited will be deducted from the outstanding amounts owed to the developer by the Water Arterial Transmission and Grid Main Trust Fund until the total amount owed has been paid, provided that the lands being platted are within or contiguous to the boundaries of the preliminary plat of the originally developed property, the land will be served by the water line for which the credit was given, and an extension of the line was not required to serve the land.

5. DEVELOPER/OWNER TO COMPLETE IMPROVEMENTS

Developer/Owner shall award a contract and complete the Water Improvements, under the approved plans and specifications within 24 months from the date of City Council approval of this agreement.

6. NOTICES

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

1. If to the Developer/Owner:

LSK Development, LLC
P.O. Box 8155
Corpus Christi, Texas 78468

2. If to the City:

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

with a copy to:

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

b. Notice may 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.

7. REQUIRED CONSTRUCTION

Developer/Owner shall construct the Water Improvements in compliance with the City's UDC, the City's Infrastructure Design Manual, and all local, state and federal laws, codes and regulations, in accordance with the plans and specifications submitted to the City's Development Services Department and reviewed and approved by the City's Development Services Engineer.

8. SITE IMPROVEMENTS

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

9. PLATTING FEES

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

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

11. PROMPT AND GOOD FAITH ACTIONS

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

12. DEFAULT

The following events shall constitute default:

a. Developer/Owner fails to engage a professional engineer for the preparation of plans and specifications by the 10th calendar day after the date of approval of this Agreement by the City Council.

b. Developer/Owner's professional engineer fails to submit the plans and specifications to the City's Director of Engineering Services by the 40th calendar day after the date of approval by City Council.

c. Developer/Owner fails to award a contract for the construction of the project, according to the approved plans and specifications, by the 70th calendar day after the date of approval by City Council.

d. Developer/Owner's contractor does not reasonably pursue construction of the Water Improvements under the approved plans and specifications.

e. Developer/Owner's contractor fails to complete construction of the Water Improvements, under the approved plans and specifications as provided in section 4 of this agreement.

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

13. 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 detail the nature of the default and the requirements to cure such default.

b. After delivery of the default notice, the defaulting party has 15 business days from the delivery of the default notice ("Cure Period") to cure the default.

c. In the event the default is not cured by the defaulting party within the Cure Period, then the non-defaulting party may pursue its remedies in this section.

d. Should Developer/Owner fail to perform any obligation or duty of this Agreement, the City shall give notice to Developer/Owner, at the address stated in section 6, of the need to perform the obligation or duty, and should Developer/Owner fail to

perform the required obligation or duty within 15 days of receipt of the notice, the City may perform the obligation or duty, charging the cost of such performance to Developer/Owner by reducing the reimbursement amount due Developer/Owner.

e. In the event of an uncured default by the Developer/Owner, after the appropriate notice and cure period, the City has all its common law remedies and the City may:

1. Terminate this Agreement after the required notice and opportunity to cure the default;

2. Refuse to record a related plat or issue any certificate of occupancy for any structure to be served by the project; and/or

3. Perform any obligation or duty of the Developer/Owner under this agreement and charge the cost of such performance to Developer/Owner. Developer/Owner shall pay to City the reasonable and necessary cost of the performance within 30 days from the date Developer/Owner receives notice of the cost of performance. In the event that Developer/Owner pays the City under the preceding sentence, and is not otherwise in default under this Agreement, then the Agreement shall be considered in effect and no longer in default.

f. In the event of an uncured default by the City after the appropriate notice and cure period, the Developer/Owner has all its remedies at law or equity for such default.

14. 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; epidemic; 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.

15. THIRD-PARTY BENEFICIARY

Developer/Owner’s contracts with the professional engineer for the preparation of the plans and specifications for the construction of the Water Improvements contracts for testing services, and with the contractor for the construction of the Water Improvements must provide that the City is a third-party beneficiary of each contract.

16. PERFORMANCE AND PAYMENT BONDS

Developer/Owner shall, before beginning the work that is the subject of this Agreement, furnish a performance bond payable to the City of Corpus Christi if the contract is in excess of $100,000 and a payment bond if the contract is in excess of $50,000. Bonds furnished must meet the requirements of Texas Insurance Code 3503, Texas Government Code 2253, and all other applicable laws and regulations. The performance or payment bond must name the City as an obligee. If the Developer/Owner is not an obligor, then Developer/Owner shall be named as a joint obligee. The bond must clearly and prominently display on the bond or on an attachment to the bond:

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

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

17. DEDICATION OF WATER IMPROVEMENTS.

Upon completion of the construction, dedication of Water Improvements will be subject to City inspection and approval

18. WARRANTY

Developer/Owner shall fully warranty the workmanship of and function of the Water 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.

19. INDEMNIFICATION

Developer/Owner covenants to fully indemnify, save and hold harmless the City of Corpus Christi, its officers, employees, and agents, ("indemnitees") against any and all liability, damage, loss, claims, demands suits and causes of action of any nature whatsoever asserted against or recovered from city on account of injury or damage to person including, without limitation on the foregoing, workers compensation and death claims, or property loss or damage of any other kind whatsoever, to the extent any injury, damage, or loss may be incident to, arise out of, be caused by, or be in any way connected with, either proximately or remotely, wholly or in part, the Developer/Owner's failure to comply with its obligations under this agreement or to provide city water 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/owner shall be responsible under this subparagraph shall include but shall not be limited to the fees charged by (i) attorneys, (ii) environmental consultants, (iii) engineers, (iv) surveyors, and (v) expert witnesses.

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

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

20. ASSIGNMENT OF AGREEMENT

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

21. DISCLOSURE OF INTERESTS

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

22. CERTIFICATE OF INTERESTED PARTIES.

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

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

(1) persons with a "controlling interest" in the entity, which includes:
   a. an ownership interest or participating interest in a business entity by virtue of units, percentage, shares, stock or otherwise that exceeds 10 percent;
   b. membership on the board of directors or other governing body of a business entity of which the board or other governing body is composed of not more than 10 members; or
   c. service as an officer of a business entity that has four or fewer officers, or service as one of the four officers most highly compensated by a business entity that has more than four officers.

(2) a person who actively participates in facilitating a contract or negotiating the terms of a contract with a governmental entity or state agency, including a broker, intermediary, adviser or attorney for the business entity.

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

23. CONFLICT OF INTEREST.

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

24. 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.

25. EFFECTIVE DATE

This Agreement shall be executed in one original, which shall be considered one instrument. *This Agreement becomes effective and is binding upon, and inures to the benefit of the City and Developer/Owner from and after the date that all original copies have been executed by all signatories.

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

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

ATTEST:

_____
Rebecca Huerta
City Secretary

CITY OF CORPUS CHRISTI

_____
Albert J. Raymond III, AIA, CBO
Director of Development Services

APPROVED AS TO LEGAL FORM:

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

DEVELOPER/OWNER:

LSK Development, LLC
P.O. Box 8155
Corpus Christi, Texas 78468

By: _____
Ata O. Azali
Governing Person

STATE OF TEXAS **§**
§
COUNTY OF _____ **§**

This instrument was acknowledged before me on _____, 20___, by **Ata O. Azali,** Governing Person of LSK Development, LLC, a Limited Liability Company, on behalf of said Company.

_____
Notary Public's Signature

Exhibit 1

STATE OF TEXAS §

COUNTY OF NUECES §

WE, DORSAL DEVELOPMENT, LLC, HEREBY CERTIFY THAT WE ARE THE OWNERS OF THE LAND EMBRACED WITHIN THE BOUNDARIES OF THE FOREGOING PLAT, SUBJECT TO A LIEN IN FAVOR OF _____, THAT WE HAVE HAD SAID LAND SURVEYED AND SUBDIVIDED AS SHOWN, THAT EASEMENTS AND STREETS AS SHOWN HAVE BEEN HERETOFORE DEDICATED, OR IF NOT PREVIOUSLY DEDICATED, ARE HEREBY DEDICATED TO THE PUBLIC USE FOREVER, AND THAT THIS PLAT WAS MADE THE PURPOSE OF DESCRIPTION AND DEDICATION.

THIS THE _____ DAY OF _____, 20_____,

_____
ATA O. AZALI, PRESIDENT

STATE OF TEXAS §

COUNTY OF NUECES §

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME BY ATA O. AZALI, PRESIDENT OF DORSAL DEVELOPMENT, LLC.

THIS THE _____ DAY OF _____, 20_____,

_____
NOTARY PUBLIC, IN AND FOR
THE STATE OF TEXAS

STATE OF TEXAS §

COUNTY OF NUECES §

I, NIXON M. WELSH, REGISTERED PROFESSIONAL LAND SURVEYOR OF BASS & WELSH ENGINEERING, HEREBY CERTIFY THAT THE FOREGOING PLAT WAS PREPARED FROM A SURVEY MADE ON THE GROUND UNDER MY DIRECTION, IS TRUE AND CORRECT AND THAT WE HAVE BEEN ENGAGED TO SET ALL LOT CORNERS UPON COMPLETION OF SUBDIVISION CONSTRUCTION IMPROVEMENTS WITHOUT DELAY.

THIS THE _____ DAY OF _____, 20_____,

_____
NIXON M. WELSH, R. P. L. S.

NOTES:

1. THE BASIS OF BEARINGS IS THE STATE OF TEXAS LAMBERT GRID, SOUTH ZONE, NAD 1983.

2. THE SUBJECT SITE IS A PORTION OF A FORMER U.S. NAVAL AIRFIELD. RUNWAYS MADE OF CONCRETE OR ASPHALT, STORM SEWER PIPES AND INLETS, BUILDINGS AND OTHER APPURTENANCES MAY HAVE EXISTED OR STILL EXIST AT THE SUBJECT SITE.

3. ALL OF THE SUBJECT SITE LIES IN FEMA ZONE "X" OTHER AREAS, UNLESS SHOWN OTHERWISE, PURSUANT TO FEMA MAP, 48355C0520G, STAMPED "REVISED PRELIMINARY" AND DATED MAY 30, 2018.

4. THE RECEIVING WATER FOR THE STORM WATER RUNOFF FROM THIS PROPERTY IS THE OSO CREEK. THE TCEQ HAS NOT CLASSIFIED THE AQUATIC LIFE USE FOR THE OSO CREEK, BUT IT IS RECOGNIZED AS AN ENVIROMENTALLY SENSETIVE AREA. THE OSO CREEK FLOWS DIRECTLY INTO THE OSO BAY. THE TCEQ HAS CLASSIFIED THE AQUATIC LIFE USE FOR THE OSO BAY AS "EXCEPTIONAL" AND "OYSTER WATERS" AND CATEGORIZED THE RECEIVING WATER AS "CONTACT RECREATION" USE.

5. SET 5/8" IRON RODS AT ALL LOT CORNERS UNLESS SHOWN OTHERWISE.ALL SET IRON RODS CONTAIN A CAP LABELED BASS AND WELSH ENGINEERING.

6. PRIVATE DRIVEWAY ACCESS FROM LOT 30, BLOCK 2 TO CIMARRON BOULEVARD IS PROHIBITED.

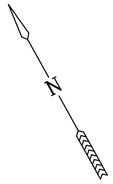
7. IF LOT 1, BLOCK 1 IS DEVELOPED WITH RESIDENTIAL USES, THE PUBLIC OPEN SPACE REQUIREMENT FEE WILL BE REQUIRED DURING THE PERMITTING PHASE OF THE DEVELOPMENT.

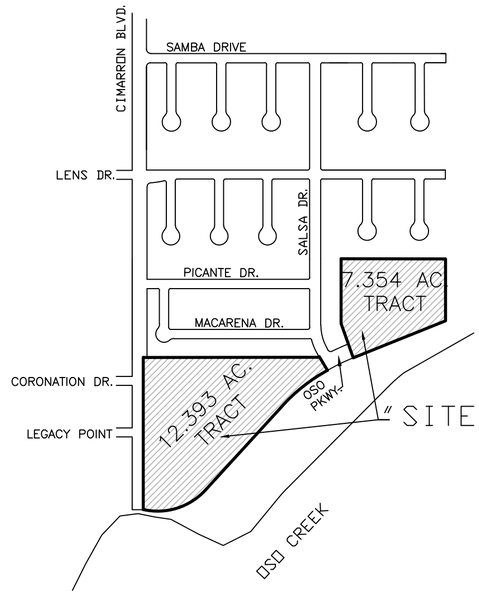
8. THE SUBJECT SITE CONTAINS 12.393 ACRES PLUS 7.354 ACRES INCLUDING STREETS, IN TOTAL 19.747 ACRES.

9. DRIVEWAYS TO OSO PARKWAY FOR LOTS IN BLOCK 2 SHALL BE AT LOCATIONS AS SHOWN IN PLAT.

10. LEGAL DESCRIPTION – TWO TRACTS OF LAND, A 12.393 ACRE TRACT, MORE OR LESS, A PORTION OF LOTS 17, 18, 25 & 26, SECTION 22, FLOUR BLUFF AND ENCINAL FARM AND GARDEN TRACTS, A MAP OF WHICH IS RECORDED IN V. "A", PAGES 41 – 43, MAP RECORDS, NUECES COUNTY, TEXAS, AND A 7.354 ACRE TRACT, MORE OR LESS, A PORTION OF LOTS 18, 19, AND 25, SAID SECTION 22, IN TOTAL 19.747 ACRES OF LAND, MORE OR LESS, CORPUS CHRISTI, NUECES CO., TX

11. SHARED DRIVEWAY PROVISIONS FOR ALL SINGLE–FAMILY RESIDENTIAL LOT FRONTAGE ALONG OSO PARKWAY HEREIN REPRESENTED ON THIS PLAT SHALL BE EMPLOYED UNLESS THE ABUTTING ROADWAY SEGMENT HAS BEEN ELIMINATED FROM A GOVERNING CITY TRANSPORTATION PLAN.





LOCATION MAP
1" = 600'

Plat approved by Planning Commission on October 5, 2022

PLAT OF
QUEEN'S CROSSING UNIT 2

TWO TRACTS OF LAND, A 12.393 ACRE TRACT, MORE OR LESS, A PORTION OF LOTS 17, 18, 25 & 26, SECTION 22, FLOUR BLUFF AND ENCINAL FARM AND GARDEN TRACTS, A MAP OF WHICH IS RECORDED IN V. "A", PAGES 41 – 43, MAP RECORDS, NUECES COUNTY, TEXAS, AND A 7.354 ACRE TRACT, MORE OR LESS, A PORTION OF LOTS 18, 19, AND 25, SAID SECTION 22, IN TOTAL 19.747 ACRES OF LAND, MORE OR LESS

CORPUS CHRISTI, NUECES COUNTY, TEXAS

BASS & WELSH ENGINEERING
3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

DATE PLOTTED: 09/22/22
COMP. NO.: PLAT-SH1.DWG
JOB NO.: 05069
SCALE: AS SHOWN
PLOT SCALE: 1" = 60'
SHEET 1 OF 3

STATE OF TEXAS §

COUNTY OF NUECES §

WE, _____(NAME), HEREBY CERTIFY THAT WE ARE THE HOLDERS OF A LIEN ON THE LAND EMBRACED WITHIN THE BOUNDARIES OF THE FOREGOING MAPS AND THAT WE APPROVE THE SUBDIVISION AND DEDICATION FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED.

BY: _____

TITLE: _____

STATE OF TEXAS §

COUNTY OF NUECES §

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME BY _____ OF _____.

THIS THE _____ DAY OF _____, 20_____,

_____
NOTARY PUBLIC, IN AND FOR
THE STATE OF TEXAS

STATE OF TEXAS §

COUNTY OF NUECES §

THE FINAL PLAT OF THE HEREIN DESCRIBED PROPERTY WAS APPROVED BY THE DEPARTMENT OF DEVELOPMENT SERVICES OF THE CITY OF CORPUS CHRISTI, TEXAS

_____
BRIA WHITMIRE, PE
DEVELOPMENT SERVICES ENGINEER

_____
DATE

STATE OF TEXAS §

COUNTY OF NUECES §

THE FINAL PLAT OF THE HEREIN DESCRIBED PROPERTY WAS APPROVED ON BEHALF OF THE CITY OF CORPUS CHRISTI, TEXAS BY THE PLANNING COMMISSION.

THIS THE _____ DAY OF _____, 20_____,

_____
KAMRAN ZARGHOUNI
CHAIRMAN

_____
AL RAYMOND, III, AIA
SECRETARY

STATE OF TEXAS §

COUNTY OF NUECES §

I, KARA SANDS, CLERK OF THE COUNTY COURT IN AND FOR SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT DATED THE _____ DAY OF _____, 20_____ WITH ITS CERTIFICATE OF AUTHENTICATION, WAS FILED FOR RECORD IN MY OFFICE THE _____ DAY OF _____, 20_____ AT _____ O'CLOCK _____,M., AND DULY RECORDED THE _____ DAY OF _____, 20_____ AT _____ O'CLOCK _____,M. IN THE MAP RECORDS OF SAID COUNTY IN VOLUME _____, PAGE _____, INSTRUMENT NUMBER _____, WITNESS MY HAND AND SEAL OF THE COUNTY COURT IN AND FOR SAID COUNTY AT OFFICE IN CORPUS CHRISTI, NUECES COUNTY, TEXAS, THE DAY AND YEAR LAST WRITTEN.

BY: _____
DEPUTY

_____
KARA SANDS, CLERK
COUNTY COURT
NUECES COUNTY, TEXAS

CL CORONATION DR.

CL CIMARRON BLVD.

CL LEGACY POINT

N28° 42' 10" E 846. 55'

20' ROAD DEDICATION, V. 'A', P. 41 - 43, M. R.

20' STREET DEDICATION N28° 42' 10" E

17. 5' STREET DEDICATION N28° 42' 10" E 210. 95'

50' DE, V. 641, P. 288, D. R.

QUEEN'S CROSSING UNIT 1
V. 64, P. 135 - 137, M. R.

QUEEN'S CROSSING UNIT 1
V. 64, P. 135 - 137, M. R.

S61° 18' 43" E 969. 47'

FD 5/8" I. R.

SALSA DR.

OSO PARKWAY (EXISTING)
S1° 57' 56" E
84. 33'

CL PAVEMENT, OSO PARKWAY

N61° 17' 50" W
48. 09'

N56° 10' 10" W 203. 85'

N61° 18' 43" W 398. 19'

340. 00' R
L = 30. 52'

S56° 10' 10" E 203. 85'

S61° 18' 43" E 398. 19'

OSO PARKWAY

TYP. FOR SHARED DW'S ON OSO PKWY.

450. 00' R
L = 268. 41'

1150. 00' R
L=70. 69'

69. 12 AC. CITY OF CORPUS CHRISTI, V. 2092, P. 778, D. R.

S71° 06' 58" W 628. 00'

LOT 25
SECT 22, FB & EF & GT

LOT 26
SECT 22, FB & EF & GT

LOT 1
357216 SF
8. 201 AC

PRE DEVELOPMENT GROUND CONTOUR LINE (TYP.)

80' AEP TRANS. EASEMENT

185. 83'

FD 5/8" I. R.

CURVE DATA

1	4	7	10	13
I=41° 17' 10" R=15. 00' T=5. 65' L=10. 81' CB=S81° 57' 15" E CH=10. 58'	I=05° 08' 34" R=300. 00' T=13. 47' L=26. 93' CB=N58° 44' 27" W CH=26. 92'	I=91° 00' 36" R=15. 00' T=15. 27' L=23. 83' CB=N74° 12' 28" E CH=21. 40'	I=34° 10' 31" R=490. 00' T=150. 63' L=292. 27' CB=S78° 23' 59" E CH=287. 96'	I=115° 46' 56" R=45. 00' T=71. 71' L=90. 94' CB=N47° 58' 13" E CH=76. 23'
2	5	8	11	14
I=03° 31' 18" R=1190. 00' T=36. 58' L=73. 15' CB=S86° 16' 25" W CH=73. 13'	I=04° 02' 11" R=380. 00' T=13. 39' L=26. 77' CB=N58° 11' 16" W CH=26. 76'	I=04° 07' 04" R=300. 00' T=10. 78' L=21. 56' CB=S58° 13' 42" E CH=21. 56'	I=16° 55' 06" R=1110. 00' T=165. 08' L=327. 76' CB=S79° 34' 31" W CH=326. 57'	I=38° 37' 24" R=35. 00' T=12. 26' L=23. 59' CB=N09° 23' 27" E CH=23. 15'
3	6	9	12	
I=24° 20' 31" R=410. 00' T=88. 43' L=174. 19' CB=N83° 18' 59" W CH=172. 88'	I=88° 54' 31" R=15. 00' T=14. 72' L=23. 28' CB=N15° 45' 06" W CH=21. 01'	I=05° 08' 33" R=380. 00' T=17. 06' L=34. 11' CB=S58° 44' 27" E CH=34. 09'	I=60° 22' 30" R=360. 00' T=209. 42' L=379. 35' CB=N78° 41' 47" W CH=362. 04'	

0 30' 60' 120'

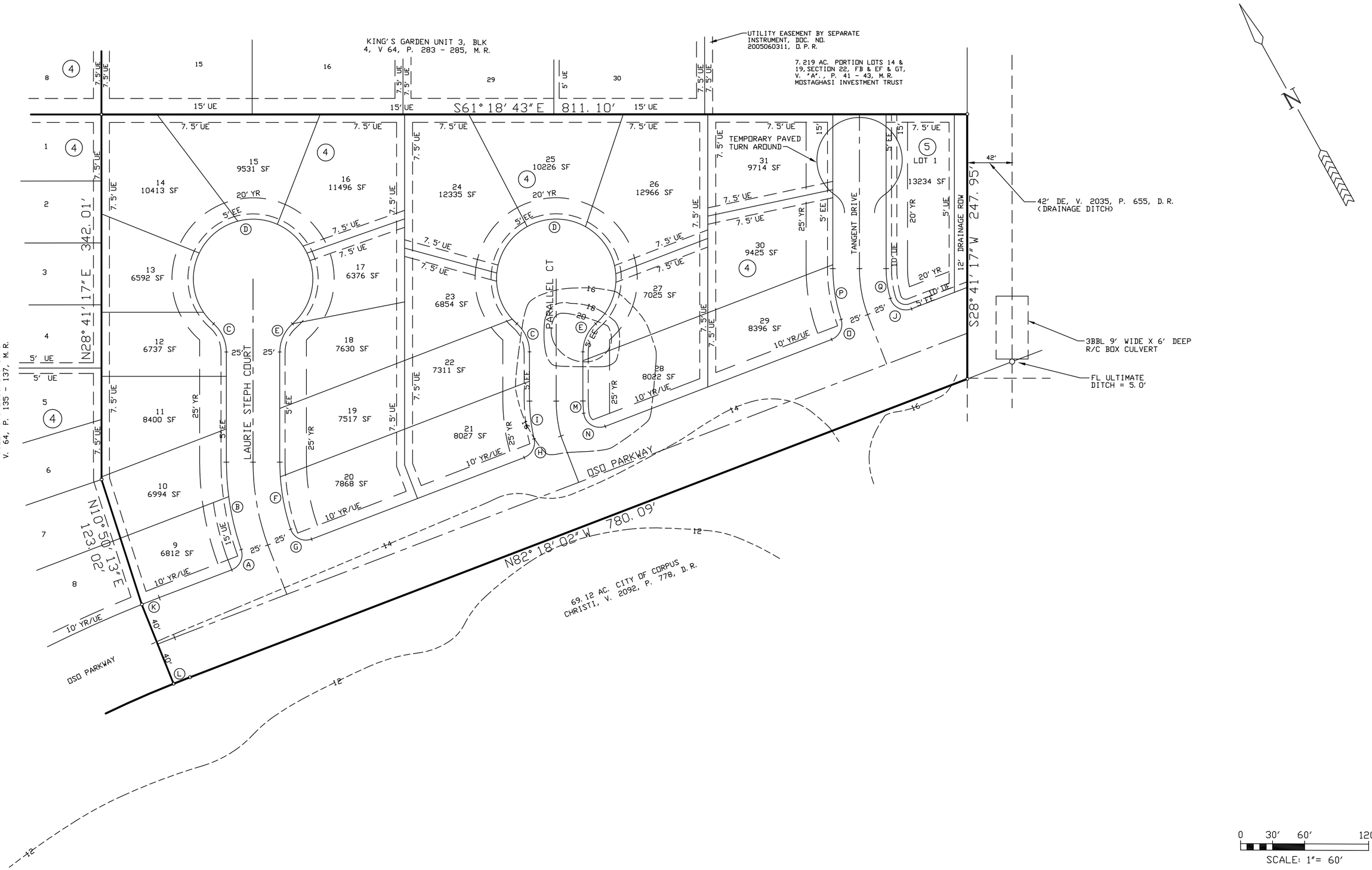
SCALE: 1"= 60'

PLAT OF QUEEN'S CROSSING UNIT 2

CORPUS CHRISTI, NUECES COUNTY, TEXAS

BASS & WELSH ENGINEERING
3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

DATE PLOTTED: 09/22/22
COMP. NO.: PLAT-SH2 AS PLAT
JOB NO.: 05069
SCALE: AS SHOWN
PLAT SCALE: 1' = 60'
SHEET 2 OF 3



0 30' 60' 120'

SCALE: 1"= 60'

PLAT OF QUEEN'S CROSSING UNIT 2

CORPUS CHRISTI, NUECES COUNTY, TEXAS

BASS & WELSH ENGINEERING
3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

DATE PLOTTED: 09/22/22
COMP. NO.: PLAT-SH3
JOB NO.: 05069
SCALE: AS SHOWN
PLAT SCALE: 1" = 60'
SHEET 3 OF 3

Exhibit 2

Reimbursement Agreement Application

Date of Application: 11/14/23

Approved Plat Name: Queens Crossing

Reimbursable Public Improvements:

Approved Public Improvement Plans: Y [ ] N [ ]

Cost Estimate for Public Improvements:

Ownership and authorized signatories to enter into the agreement:

Contact Information

Name: Mona Serna

E-mail address: office@ataliving.com

Phone Number: 361-994-2850

Preferred Method of Contact: Email [x] Phone [ ] Other [ ]
If other, provide detail:

Company Name entering into the agreement: LSK Development LLC

Company Address: P.O. Box 8155
Corpus Christi, TX 78468

President

Applicant's Signature & Title

Submit Application Electronically to:
contractsandagreements@cctexas.com

Mail to:

Development Services

Attn: Business Manager

2406 Leopard St. Suite 100

Corpus Christi, Texas 78408

Exhibit 3

Plans and Specifications

PUBLIC IMPROVEMENTS TO QUEEN'S CROSSING UNIT 2, CORPUS CHRISTI, NUECES COUNTY, TEXAS

CITY STANDARD SPECIFICATIONS

THE FOLLOWING CITY OF CORPUS CHRISTI STANDARD SPECIFICATIONS OF WHICH CAN BE OBTAINED FROM THE CITY OF CORPUS CHRISTI WEBSITE (WWW.CCTEXAS.COM <http://www.cctexas.com>). SHALL BE UTILIZED FOR THIS PROJECT. CONTRACTOR SHALL PRINT AND OBTAIN COPIES OF THESE SPECIFICATIONS PRIOR TO BIDDING THE WORK AND PRIOR TO CONSTRUCTION OF THE WORK. THE WORD "ENGINEER" AS USED IN SAID CITY STANDARD SPECIFICATIONS SHALL REFER TO BASS & WELSH ENGINEERING.

021202	SITE CLEARING AND STRIPPING
021040	SITE GRADING
022020	EXCAVATION AND BACKFILL FOR UTILITIES
022021	CONTROL OF GROUND WATER
022022	CONTROL OF GROUND WATER
022040	STREET EXCAVATION
022060	CHANNEL EXCAVATION
022080	EMBANKMENT
022100	SELECT MATERIAL
022420	SELECT MATERIAL
025210	LIME STABILIZATION
025223	CRUSHED LIMESTONE FLEXIBLE BASE
025404	ASPHALTS, OILS AND EMULSIONS
025412	PRIME COAT
025424	HOT MIX ASPHALTIC CONCRETE PAVEMENT
025608	INLETS
025610	CONCRETE CURB AND GUTTER
025612	CONCRETE SIDEWALKS AND DRIVEWAYS
025614	CONCRETE CURB RAMPS
025802	TEMPORARY TRAFFIC CONTROLS DURING CONSTRUCTION
026201	WATER LINE RISER ASSEMBLIES
026202	HYDROSTATIC TESTING OF PRESSURE SYSTEMS
026409	TAPPING SLEEVS AND TAPPING VALVES
026206	DUCTILE IRON PIPE AND FITTINGS
026210	PVC PIPE – AWWA C900/C905 PRESSURE PIPE FOR MUNICIPAL WATER MAINS AND WASTEWATER FORCE MAINS
026402	WATER LINES
026404	WATER SERVICE LINES
026411	GATE VALVES FOR WATER LINES
026416	FIRE HYDRANTS
027202	MANHOLES
027203	VACUUM TESTING OF WASTE WATER MANHOLES AND STRUCTURES
027205	FIBERGLASS MANHOLES
027402	REINFORCED CONCRETE PIPE CULVERTS
027404	CONCRETE BOX CULVERTS
027602	GRAVITY WASTE WATER LINES
027606	WASTE WATER SERVICE LINES
028020	SEEDING
030020	PORTLAND CEMENT CONCRETE
032020	REINFORCING STEEL
038000	CONCRETE STRUCTURES
055420	FRAMES, GRATES, RINGS AND COVERS

PAVING, GRADING AND DRAINAGE NOTES

1. ALL PROPOSED CONCRETE CURB AND GUTTER, WALKS AND CURB RAMPS ARE SHOWN POCHED (SHADED).
2. PRIOR TO ANY EARTHWORK, ALL TREES, VEGETATION, ORGANIC MATERIAL AND ANY DELETERIOUS SUBSTANCES SHALL BE REMOVED FROM THE ENTIRE PROJECT SITE EXCEPT TREES 6" DIAMETER AND LARGER OUTSIDE OF PROPOSED STREET PAVING SHALL BE LEFT IN PLACE UNHARMED. AFTER REMOVAL OF ALL VEGETATION, ORGANIC MATTER, DELETERIOUS SUBSTANCES, APPROPRIATE TREES, ETC., CONTRACTOR MAY BEGIN EARTHWORK CUT AND FILL OPERATIONS FOR LOT GRADING AND EARTHWORK ASSOCIATED WITH STREETS.
3. CONTRACTOR SHALL PERFORM ALL ROUGH EARTHWORK (FILLING, GRADING, HAULING, CUTTING, LOADING, ETC.) TO VERIFY ADEQUATE EARTH QUANTITY ON-SITE TO ACHIEVE EARTH GRADES AS SHOWN PRIOR TO ANY OTHER CONSTRUCTION AND CONTRACTOR SHALL NOT PROCEED WITH SAID OTHER CONSTRUCTION UNTIL AFTER HE HAS RECEIVED ENGINEER'S PERMISSION. SHOULD THERE NOT BE AVAILABLE EARTH TO MEET GRADES AS SHOWN, CONTRACTOR SHALL HAUL EARTH ON TO THE SITE FROM OFFSITE SOURCES TO ACHIEVE GRADES AS SHOWN (NO SEPARATE PAY). AFTER COMPLETION OF ROUGH GRADING AND AFTER COMPLETION OF STREET, DRAINAGE, SANITARY SEWER AND WATER IMPROVEMENTS, THEN CONTRACTOR SHALL PROVIDE ALL FINAL/FINISH GRADING TO ACHIEVE GRADES AS SHOWN. THIS INCLUDES BACKFILL OF EXISTING DITCH.
4. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS FOR ALL CURB AND GUTTER, SIDEWALK AND RAMPS. CONCRETE FOR BOX CULVERTS, WINGWALLS, HEADWALLS, FOOTINGS AND BEAMS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3600 PSI AT 28 DAYS. ALL STEEL REINFORCING SHALL BE GRADE 60 (60,000 PSI YIELD STRENGTH) IN ACCORDANCE WITH ASTM A 615.
5. REINFORCED CONCRETE STORM SEWER PIPE SHALL BE CLASS III, STANDARD STRENGTH. NO HDPP STORM SEWER PIPE SHALL BE ALLOWED. STORM SEWER MANHOLES SHALL BE PRE-CAST CONCRETE.
6. ALL STREET, SANITARY SEWER AND STORM SEWER STATIONING IS MEASURED ALONG THE CENTERLINES OF STREETS.
7. LINEARLY INTERPOLATE BETWEEN GRADES AS SHOWN TO DETERMINE A PROPOSED GRADE AT ANY PARTICULAR POINT.
8. CURB ALIGNMENT SHALL PARALLEL ADJACENT RIGHT-OF-WAY LINES EXCEPT WHERE INDICATED OTHERWISE.
9. CURBS SHALL BE CONSTRUCTED 11.0' BACK OF CURB TO PROPERTY LINES FOR 50' STREET RIGHTS-OF-WAY AND AS SHOWN FOR OSO PARKWAY AND CIMARRON BLVD.
10. CONSTRUCT PROPOSED CURB RAMPS AT ALL STREET INTERSECTIONS AND AS SHOWN AND ACCORDING TO CITY CURB RAMP DETAILS AS SHOWN IN PLANS HEREOF. DEPRESS CURBS AS REQUIRED. RAMPS SHALL BE SLOPED NOT EXCEEDING 1" PER FOOT LONGITUDINAL AND 2% TRANSVERSE AND SHALL MEET ALL APPLICABLE GOVERNMENTAL REGULATIONS. NO SEPARATE PAY FOR CURB RAMPS (PAY FOR CURB RAMPS IN THE SQUARE FOOT PRICE OF 4" THICK R/C WALKS).
11. CONTRACTOR SHALL MEET ALL GOVERNMENTAL ONE-CALL AND OTHER REGULATIONS WITH REGARD TO EXISTING UNDERGROUND FACILITIES AND PIPELINES.
12. NO SEPARATE PAY FOR PRIME COAT (PAY FOR IN THE ESTABLISHED UNIT PRICE FOR HMAC).
13. ADA CURB RAMPS – THE CITY NO LONGER ALOWS THE PAVER OPTION AT CURB RAMPS. THE CONTRACTOR SHALL INSTALL COMPOSITE TACTILE WARNING PANELS AT ALL ADA CURB RAMPS.
14. GEOTEXTILE FABRIC MATERIAL IS REQUIRED FOR WRAPPING RCP PIPE JOINTS AND SHALL MEET REQUIREMENTS OF AASHTO M288.

SANITARY SEWER NOTES

1. SET ENDS OF SERVICE LINES MID LOT FRONTAGE UNLESS SHOWN OTHERWISE.
2. SANITARY SEWER STATIONING IS MEASURED ALONG THE CENTER LINE OF PROPOSED STREETS. ALL SANITARY SEWER MANHOLES SHALL BE FIBERGLASS, 48" MINIMUM DIAMETER UNLESS SHOWN OTHERWISE, 0.5" (MINIMUM) WALL AND CONSTRUCTED IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS.
3. ALL GRAVITY SEWER PIPES 8" THRU 18" SHALL BE PVC, SDR 26 AND SHALL BE 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. NO SEPARATE PAY FOR ANY DE-WATERING OR SPECIAL EMBEDMENT REQUIRED FOR 8" & 10" SANITARY SEWER PIPES AND MANHOLES.
5. THE WORDS SANITARY SEWER SHALL MEAN WASTE WATER AND VICE VERSA.
6. MANHOLES IN ROADWAYS TO BE HS-20 TRAFFIC RATED (IDM 5.02.11.F).

TRAFFIC CONTROL AND STREET LIGHT FEES

1. CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL AND BARRICADING PLAN AND SUBMIT IT TO THE CITY TRAFFIC ENGINEERING DEPARTMENT FOR APPROVAL AND SHALL DO NO WORK UNTIL HE HAS RECEIVED WRITTEN APPROVAL FROM THE CITY OF SAID PLAN. ALL TRAFFIC CONTROL AND BARRICADING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SAID PLAN.
2. R.O.W. PERMITS ARE REQUIRED PRIOR TO STARTING WORK IN ANY PUBLIC STREET RIGHT-OF-WAY. THE CONTRACTOR SHALL CONTACT TRAFFIC ENGINEERING TO DETERMINE ALL APPLICABLE REQUIREMENTS (PERMITS, TRAFFIC CONTROL PLAN, FEES, ETC.).
3. STREET LIGHT FEES SHALL BE PAID BY THE DEVELOPER TO THE CITY (NOT BY CONTRACTOR)

WATER NOTES

1. ALL WATER LINES AND FITTINGS 12" AND SMALLER ARE TO HAVE RESTRAINED JOINTS (IDM 4.06.H; 4.04.M). CONTRACTOR SHALL VERIFY ALL JOINT RESTRAINT DISTANCES PRIOR TO ANY WATER CONSTRUCTION.
2. PROVIDE CAST IRON BOXES AND PVC PIPE EXTENSIONS WITH CONCRETE AT GATE VALVES PURSUANT TO STANDARD WATER DETAILS AS SHOWN IN SHEET 2 OF 4.
3. CONSTRUCT WATER RISERS AT END CAPS ON PIPES AND 2" BLOW-OFF VALVES FOR FILLING AND TESTING PURPOSES PURSUANT TO DETAILS AS SHOWN IN STANDARD WATER DETAILS SHEET 3 OF 4.
4. CONSTRUCT WATER SERVICE LINES AND CONNECTIONS PURSUANT TO THE NOTES AND DETAILS AS SHOWN IN STANDARD WATER DETAILS SHEET 4 OF 4 (IDM 4.06).
5. ALL WATER MAINS 6" AND LARGER SHALL BE DR18 PVC WITH DUCTILE IRON MECHANICAL JOINT FITTINGS AND SHALL BE BEDDED IN (ENCASED IN) SAND TO 6" ALL AROUND PIPE (026210 AND 026402).
6. PROVIDE MINIMUM CLEARANCE BETWEEN WATER AND SANITARY SEWER LINES AND/OR MANHOLES AS REQUIRED BY THE TEXAS ADMINISTRATIVE CODE 290.44, SEPARATION DISTANCE AS REQUIRED BY TEXAS STATE WATER HYGIENE LAW AND ACCORDING TO CITY STANDARD DETAILS AND SPECIFICATIONS (IDM 4.03).
7. ALL WATER SERVICE LINES SHALL BE 1" DIAMETER FOR SINGLE AND DOUBLE WATER SERVICES UNLESS SHOWN OTHERWISE.
8. ALL PUBLIC WATER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH REQUIREMENTS SET FORTH BY THE CITY OF CORPUS CHRISTI INFRASTRUCTURE DESIGN MANUAL STANDARDS, DETAILS, AND PRACTICES. PVC PIPE AND FITTINGS FOR WATER LINES SHALL BE AWWA C-900, CLASS 150, WITH A DR OF 18. FIRE HYDRANTS WILL BE LOCKED ONTO VALVE BY USE OF RETAINER GLANDS ON DIP.
9. 2" WATER LINES SHALL BE SDR-9 POLYETHYLENE (PE) PIPE WITH COMPRESSION RESTRAINED BRASS FITTINGS AND STAINLESS STEEL INSERTS. PROVIDE FULL RESTRAINT OF ALL PIPE TO PIPE, PIPE TO FITTING AND PIPE TO VALVES FOR ALL 2" WATER.
10. LINE LOCATOR TAPE AND TRACER WIRE ARE TO BE INSTALLED WITH PROPOSED WATER LINES PER IDM 4.06.K (A AND B).

STORM WATER POLLUTION PREVENTION

1. PAY FOR ALL STORM WATER POLLUTION PREVENTION MEASURES, SOLID WASTE DISPOSAL, SOIL TRACKING, SEEDING, ETC., AS PART OF "STORM WATER POLLUTION PREVENTION".
2. UPON COMPLETION OF IMPROVEMENTS HEREOF, ALL DISTURBED AREAS SHALL BE GRASS SEEDED IN ACCORDANCE WITH CITY STANDARD SPECIFICATION 028020 "SEEDING".
3. THE NPDES PERMIT CAN BE FOUND ON THE TCEQ WEB SITE AT HTTPS://WWW.TCEQ.TEXAS.GOV/ASSETS/PUBLIC/PERMITTING/STORMWATER/TXR150000_CGP.PDF.

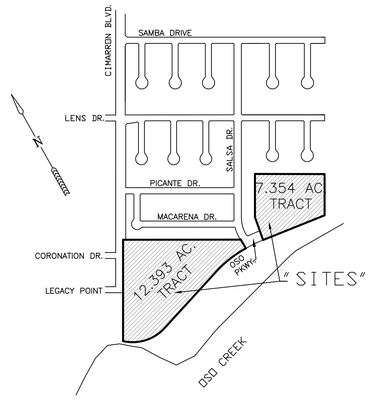
LEGEND

AP	ASPHALT PAVEMENT
BB	BACK OF CURB TO BACK OF CURB
(1)	BLOCK NO. 1
6" C & G	6" R/C CURB AND GUTTER
CL	CENTERLINE
CW	R/C CONCRETE WALK
DE	DRAINAGE EASEMENT
DCSC	DEEP CUT SERVICE CONNECTION (SAN. SEWER)
——►	DRAINAGE DIRECTION OR DIMENSION ARROW
EP	EDGE OF PAVEMENT
(13.45)	FINISHED GROUND ELEVATION
	FIRE HYDRANT SYMBOL
FL	FLOW LINE OR INVERT ELEVATION
FW	FINISHED WALK ELEVATION
GB	GRADE BREAK (CHANGE OF DRAINAGE DIRECTION OR SLOPE)
HDPP	HIGH DENSITY POLYETHELENE PIPE
LT	LEFT
MH	MANHOLE
PC	POINT OF CURVATURE (BEGINNING OF CURVE)
PCCP	PORTLAND CEMENT CONCRETE PAVING
PE	POLYETHELENE
PT	POINT OF TANGENCY (END OF CURVE)
R/C	REINFORCED PORTLAND CEMENT CONCRETE
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT-OF-WAY LINE
RT	RIGHT
S = 0.3%	LONGITUDINAL SLOPE
SS	SANITARY SEWER
SSF	SEDIMENTATION SCREENING FENCE ALSO KNOWN AS SILT FENCE OR TEMPORARY SEDIMENT CONTROL FENCE
SSMH	SANITARY SEWER MANHOLE
SSS	SANITARY SEWER SERVICE (PIPE & FITTINGS, 4" AND 6")
TC	TOP OF CURB
TW	TOP OF WALK
UE	UTILITY EASEMENT
8"W	8" WATER LINE
	WATER VALVE SYMBOL
WSD	DOUBLE WATER SERVICE (1" PIPE, FITTINGS, CORPORATION STOP AND ANGLE METER VALVES)
WSS	SINGLE WATER SERVICE (1" PIPE, FITTINGS, CORPORATION STOP AND ANGLE METER VALVE)
YR	YARD REQUIREMENT

LINE NOTES:

ALL PROPOSED TOP OF CURB AND UTILITY LINES ARE INDICATED IN PROFILES WITH BOLD CONTINUOUS LINES EXCEPT THAT WATER LINES ARE INDICATED WITH DOTTED LINES. EXISTING LINES ARE INDICATED WITH DASHED LINES.

ALL PROPOSED UTILITY LINES ARE INDICATED AS "PROPOSED"



LOCATION MAP
1" = 600'

SHEET INDEX

CALL BEFORE YOU DIG!

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

PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST – STOP AND CALL 811

THE LONE STAR NOTIFICATION COMPANY AT 1-800-669-8344

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.

GENERAL NOTES

1. IF A PARTICIPATION AGREEMENT AND/OR REIMBURSEMENT ARE BEING REQUESTED BY THE DEVELOPER/ENGINEER, THEN PRIOR TO START OF CONSTRUCTION, CITY COUNCIL MUST APPROVE SAID AGREEMENT.
2. THIS WORK WILL BE INSPECTED BY THE CITY'S CONSTRUCTION INSPECTION DIVISION. CONSTRUCTION INSPECTION SHOULD BE CONTACTED AT LEAST 72 HOURS PRIOR TO START OF CONSTRUCTION. THE NUMBER TO CONTACT CONSTRUCTION INSPECTION IS (361) 826-3240.
3. DEVELOPER/DEVELOPER'S AGENT SHALL ENSURE THAT BEST MANAGEMENT PRACTICES TO MINIMIZE EROSION AND SEDIMENTATION ARE BEING USED AND THAT ANY AND ALL TCEQ PERMITS WHERE NEEDED HAVE BEEN OBTAINED.
4. DEVELOPER/DEVELOPER'S AGENT SHALL ENSURE THAT TRAFFIC CONTROL MEASURES ARE IMPLEMENTED AS NEEDED. ANY WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY'S TRAFFIC ENGINEERING DIVISION.
5. ANY WORK AFFECTING TXDOT RIGHT-OF-WAY REQUIRES REVIEW, APPROVAL AND/OR PERMIT AS APPLICABLE.
6. ALL PUBLIC IMPROVEMENTS SHALL BE WARRANTED BY THE DEVELOPER PER UNIFIED DEVELOPMENT CODE (UDC) SECTION 8.1.6 FROM THE DATE OF ACCEPTANCE OF THOSE IMPROVEMENTS BY THE DIRECTOR OF ENGINEERING.
7. APPROVAL FOR PUBLIC IMPROVEMENTS PERTINENT TO PLATTING REQUIREMENTS OF A FINAL PLAT SHALL EXPIRE IF THE FINAL PLAT EXPIRES. A FINAL PLAT EXPIRES SIX (6) MONTHS FROM THE DATE OF ITS APPROVAL BY PLANNING COMMISSION IF IMPROVEMENTS HAVE NOT BEEN INITIATED AND SUBSTANTIAL PROGRESS CONTINUED TOWARDS COMPLETION UNLESS AN EXTENSION HAS BEEN GRANTED BY ENGINEERING SERVICES.
8. APPROVAL FOR PUBLIC IMPROVEMENTS ASSOCIATED WITH A BUILDING PERMIT SHALL EXPIRE IF THE BUILDING PERMIT EXPIRES. A BUILDING PERMIT EXPIRES 180 DAYS FROM THE DATE OF ISSUANCE UNLESS AN EXTENSION HAS BEEN GRANTED BY BUILDING INSPECTIONS.
9. A PERMIT IS REQUIRED FOR ANY EXCAVATION IN PUBLIC RIGHT OF WAY. EXCAVATION MEANS AN ACTIVITY THAT CUTS, PENETRATES, OR BORES UNDER ANY PORTION OF THE PUBLIC WAY THAT HAS BEEN IMPROVED WITH A PAVED SURFACE FOR STREET, SIDEWALK, SURFACE DRAINAGE, OR RELATED PUBLIC TRANSPORTATION INFRASTRUCTURE PURPOSES. PERMITS WILL NOT BE ISSUED FOR EXCAVATION IN ANY PUBLIC WAY THAT HAS BEEN CONSTRUCTED, RECONSTRUCTED, REPAVED, OR RESURFACED IN THE PRECEDING PERIOD OF FIVE YEARS FROM THE DATE OF ACCEPTANCE BY THE PUBLIC WORKS CONSTRUCTION ENTITY.
10. ANY EXCAVATIONS ALLOWED BY THE DIRECTOR OF DEVELOPMENT SERVICES ON CONCRETE STREETS MUST BE PERFORMED IN SUCH A WAY THE ENTIRE CONCRETE PANEL IS REPLACED.
11. ELECTRICAL CASING PIPES SHALL BE PVC SCHEDULE 40 PIPE, SOLVENT WELD, CAPPED EACH END (WITHOUT SOLVENT WELD AT END CAPS). CASINGS ARE FOR FUTURE ELECTRICAL WIRE/CABLES TO BE INSERTED BY OTHERS. SIZE OF CASINGS AND PLACEMENT LOCATIONS SHALL BE MADE PURSUANT TO THE REQUIREMENTS OF CPL PLACE ELECTRICAL CASINGS AND BACKFILL IN ACCORDANCE WITH ALL REQUIREMENTS FOR SANITARY SEWER SERVICE LINES. INSTALL CASING PIPES WITH A MINIMUM OF 4' OF COVER FROM FINISHED SURFACE. CONTRACTOR SHALL CONTACT CPL TO DETERMINE THE LOCATION OF CASINGS REQUIRED BY AEP.
12. SUBSIDIARY WORK: IN THE COURSE OF FURNISHING OR CONSTRUCTING A COMPLETE WORK OR IMPROVEMENT, CERTAIN WORK MAY BE NECESSARY WHICH IS SUBSIDIARY TO THE ITEMS WHICH ARE ESTABLISHED AS PAY ITEMS. SOME SUCH SUBSIDIARY WORK MAY BE SHOWN AND SPECIFIED IN DETAIL IN THE PLANS AND SPECIFICATIONS, OTHER WORK MAY BE LESS COMPLETELY SHOWN, AND OTHER SUCH WORK WHICH IS ENTIRELY NECESSARY FOR THE SATISFACTORY COMPLETION OF THE WORK AS A WHOLE MAY NOT BE NOTED ON THE PLANS OR IN THE SPECIFICATIONS. IT SHALL BE THE DUTY OF THE CONTRACTOR TO CARRY OUT ALL SUCH SUBSIDIARY WORK AS IF FULLY SHOWN, AND THE COST OF SUCH WORK SHALL BE MADE SUBSIDIARY TO THE ESTABLISHED PAY ITEM.
13. 13. SURVEY DATA – THE BASIS OF BEARINGS IS THE STATE OF TEXAS LAMBERT GRID, SOUTH ZONE, NAD 1983. ELEVATIONS ARE NAVD 1988 BY STATIC OBSERVATION AND OPUS SOLUTION. BENCHMARKS AS SHOWN ARE BASED ON THE ABOVE DESCRIBED HORIZONTAL AND VERTICAL CONTROL. IN ADDITION CITY SURVEY MONUMENT SR 070 WAS SURVEYED WITH RESIDUALS N -0.04', E -0.14' AND 2 (VERTICAL) -0.30'. THIS MONUMENT IS A 10' STAINLESS STEEL ROD INSIDE A 6" PVC PIPE BUT WAS MISSING ITS BRASS DISK, LOCATED ABOUT 73' SOUTHEAST OF THE ENTRANCE TO BILL WITT PARK 10' FROM THE BACK OF CURB ON YORKTOWN BLVD.
14. USDA MAP INDICATES THE SOIL TO BE GV GULLIED LAND, SALINE (CLAY) AND VICTORIA CLAY, 0 TO 1 PERCENT SLOPES.
15. ALL CONSTRUCTION PROCEEDURES, TESTING PROCEEDURES AND CONSTRUCTION MATERIALS AND APPURTENANCES SHALL ADHERE AND BE IN OMPLIANCE OF THE LATEST REVISIONS OF THE CITY OF CORPUS CHRISTI INFRASTRUCTURE DESIGN MANUAL, UNIFIED DEVELOPMENT CODE, CODE OF ORDINANCES, TCEQ AND ANY OTHER LOCAL, STATE AND FEDERAL CODE OF JURISCICTION OF THIS PROJECT FOR THE DURATION OF THE PROJECT.
16. ALL OF THE SUBJECT SITE LIES IN FEMA ZONE X OTHER AREAS OR ZONE X OTHER FLOOD AREAS, ACCORDING TO FEMA MAP 48355C0520G, STAMPED "REVISED PRELIMINARY" AND DATED MAY 30, 2018, UNLESS SHOWN OTHERWISE

STATE OF TEXAS
NIKON M. WELSH
36240
REGISTERED
PROFESSIONAL ENGINEER
08/03/23

BENCHMARKS
(CITY DATUM, NGVD '88)

TOP OF FIRE HYDRANT IN CIMARRON BLVD. (SEE SHEET 4, TOP LEFT), EL 15.26

CHISEL MARK ON EXISTING STORM SEWER INLET IN OSO PARKWAY (SEE SHEET 4, TOP RIGHT), EL 12.24

DEVELOPER:
ALEX AZALI
P.O. BOX 8155
CORPUS CHRISTI, TEXAS 78468
688-8000

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

COVER SHEET AND MISCELLANEOUS INFORMATION

DWN.		PLOT SCALE: 1" = 50'	COM. NO. CS.DWG
CHK. N. WELSH		SCALE (H): AS SHOWN	JOB NO. 05069
		SCALE (V): AS SHOWN	SHEET 1 OF 20
		DATE PLOTTED 08/03/23	

100 YEAR FLOOD LEVELS

FOR INLET AT CIMARRON BLVD STA 00+28.30 TC 12.03, ESTIMATED WATER SURFACE ELEVATION (WS) IS 12.03, THUS AT INLET TC.

FOR INLET AT OSD PARKWAY STA 00+56 TC 11.92, ESTIMATED WATER SURFACE ELEVATION (WS) IS 12.78, THUS 0.86' ABOVE INLET, DK.

FOR INLETS AT OSD PARKWAY STA 4+84.53 TC 12.30, ESTIMATED WATER SURFACE ELEVATION (WS) IS 13.08, THUS 0.78' ABOVE INLET, DK.

FOR INLETS AT OSD PARKWAY STA 10+46.93 TC 12.25, ESTIMATED WATER SURFACE ELEVATION (WS) IS 13.12, THUS 0.87' ABOVE INLET, DK.

FOR INLETS AT OSD PARKWAY STA 13+20.27 TC 11.89, ESTIMATED WATER SURFACE ELEVATION (WS) IS EQUAL TO TC THUS NO STANDING WATER. DK.

FOR INLETS AT OSD PARKWAY STA 16+13.25 TC 11.41, ESTIMATED WATER SURFACE ELEVATION (WS) 11.81 THUS 0.4' ABOVE INLETS, DK.

FOR INLETS AT TANGENT DRIVE STA 1+45.87 TC 12.42, ESTIMATED WATER SURFACE ELEVATION (WS) BELOW THIS INLET, THUS NO STANDING WATER, DK.

SWQMP FLOWS - PRE DEVELOPED

5-YR FLOW FROM IDM TABLE 3.2, 30 MINUTES TC Q = 0.2 (1.99 X 2) X 19.747 AC = 15.7 CFS

100-YR FLOW Q = 0.2 (3.41 X 2) X 19.747 AC = 26.90CFS

SWQMP FLOWS - DEVELOPED

FOR SINGLE FAMILY RESIDENTIAL

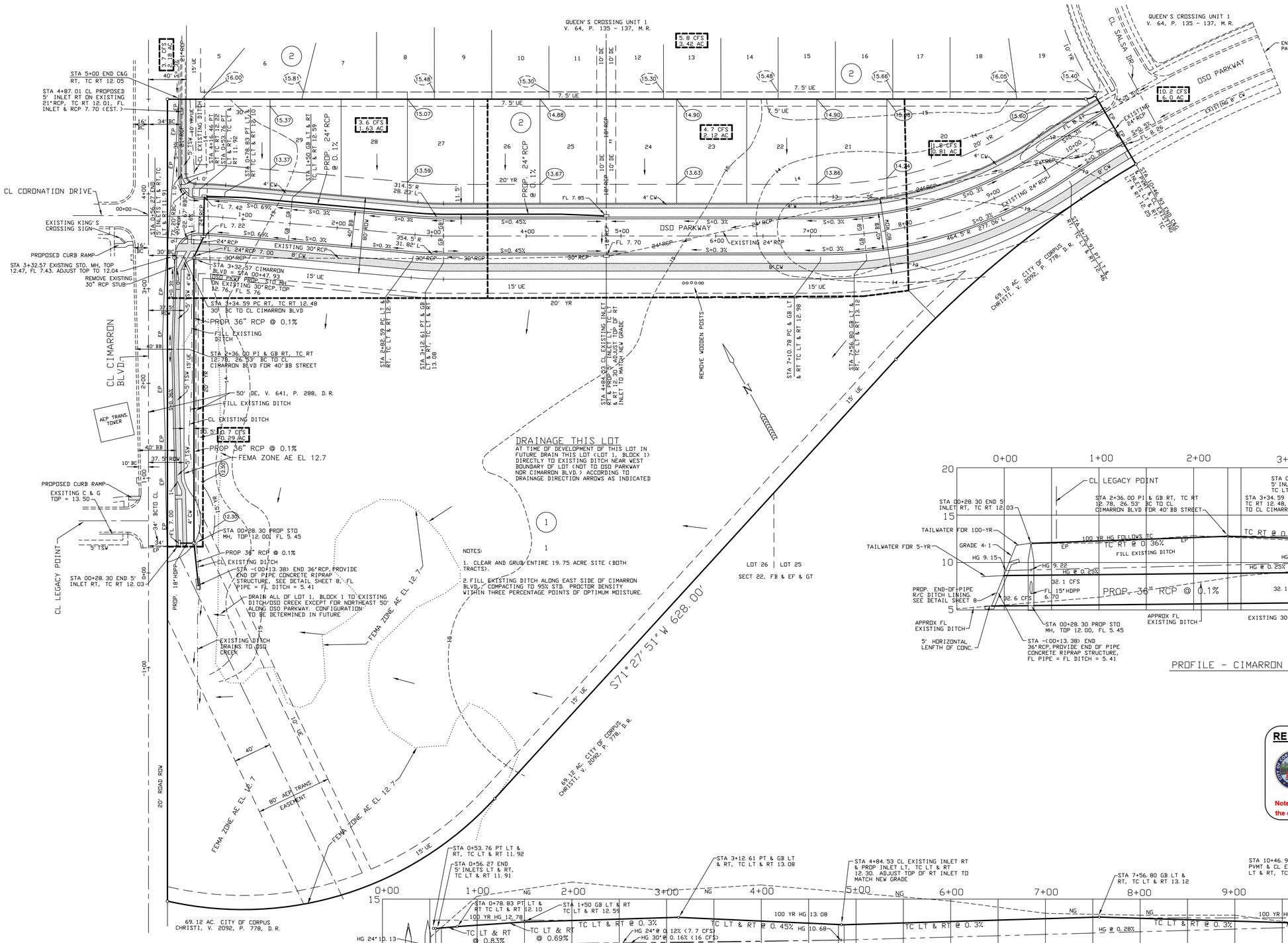
5-YR FLOW FROM IDM TABLE 3.2, 30 MINUTES TC 5 YR FLOW Q = 0.55 (1.99 X 2) X 11.546 AC = 25.3 CFS

100-YR FLOW Q = 0.55 (3.41 X 2) X 11.546 AC. = 43.3 CFS

FOR COMMERCIAL (FUTURE DEVELOPMENT)

5-YR FLOW FROM IDM TABLE 3.2, 30 MIN TC Q = 0.8 (1.99 X 2) X 8.201 AC = 26.1 CFS

100-YR FLOW Q = 0.8 (3.41 X 2) X 8.201 AC = 44.7 CFS



PROFILE - CIMARRON BLVD.

PROFILE - OSD PARKWAY

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.

0 25' 50' 100'
SCALE: 1"= 50'

STATE OF TEXAS
NIXON M. WELSH
36240
REGISTERED PROFESSIONAL ENGINEER
08/03/23

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
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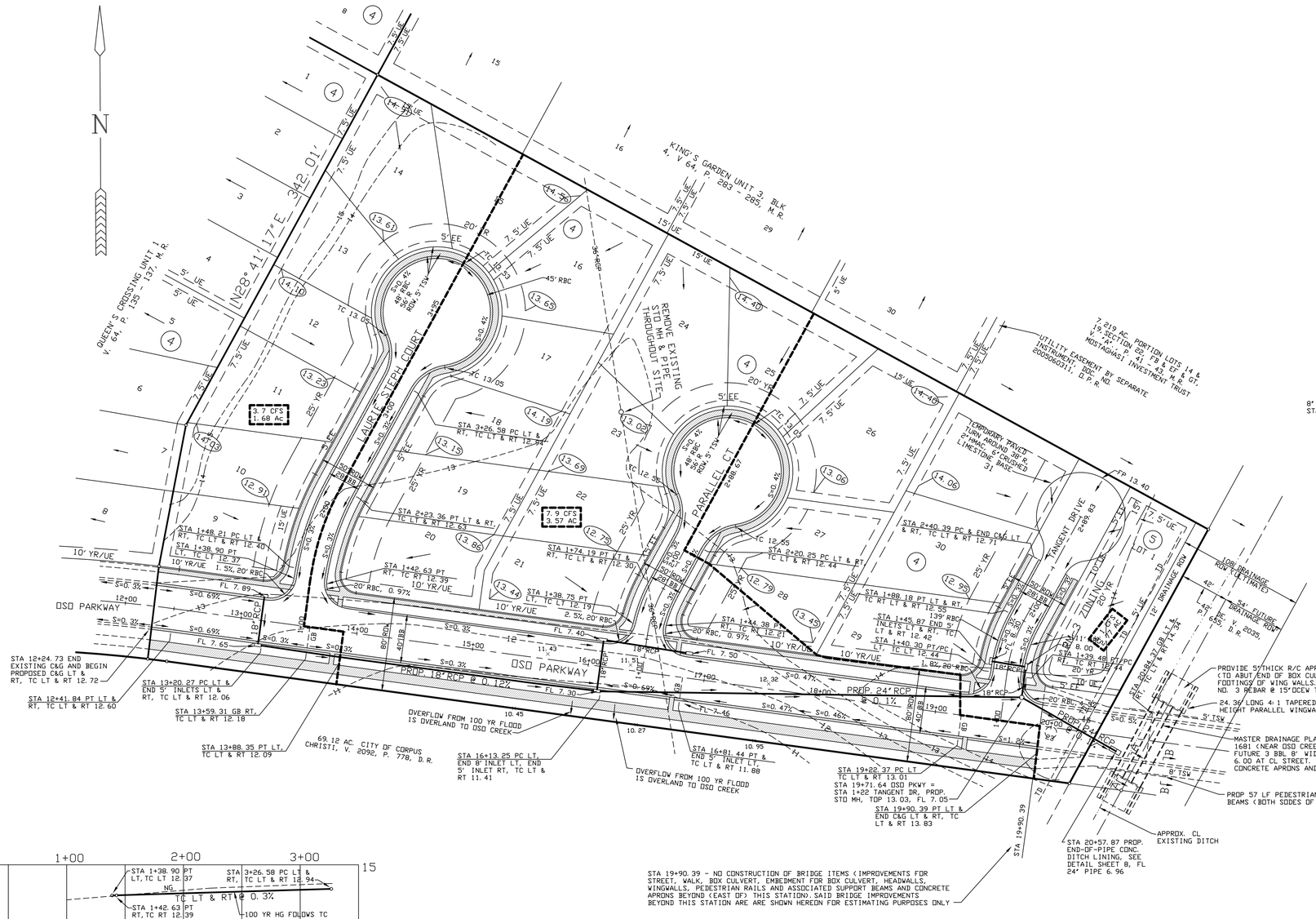
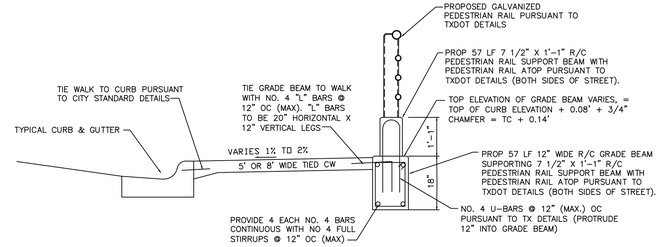
PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

PAVING, GRADING AND DRAINAGE PLAN
STREET AND STORM SEWER PROFILES

PLOT SCALE: 1" = 50'
SCALE (H): 1" = 50'
SCALE (V): 1"=5'
DATE PLOTTED 08/03/23

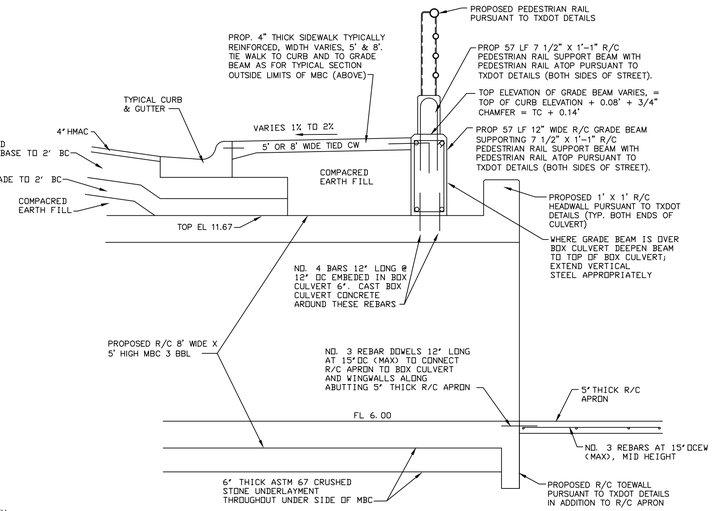
COM. NO. PGD1 AS PGD
JOB NO. 05069
SHEET 2 OF 20





SECTION. B-B (OUTSIDE LIMITS OF MBC)

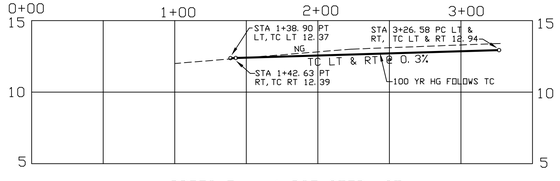
NTS



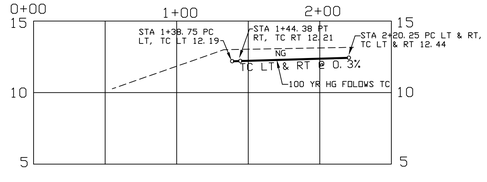
NOTE: FOR TYPICAL STREET SECTION OVER BOX CULVERT, CRUSHED LIMESTONE BASE AND LIME STABILIZED SUBGRADE SHALL MEET ALL COMPACTION, DENSITY, MOISTURE AND STABILIZATION REQUIREMENTS OF TYPICAL STREET SECTION AND EARTH FILL SHALL BE COMPACTED TO 98% MODIFIED PROCTOR DENSITY WITHIN TWO PERCENTAGE POINTS OF OPTIMUM MOISTURE

SECTION. A-A (AT MBC)

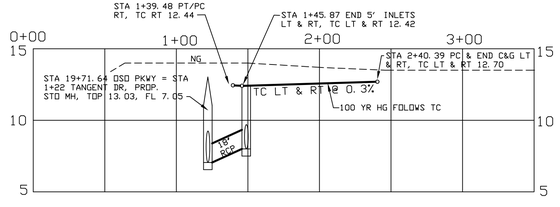
NTS



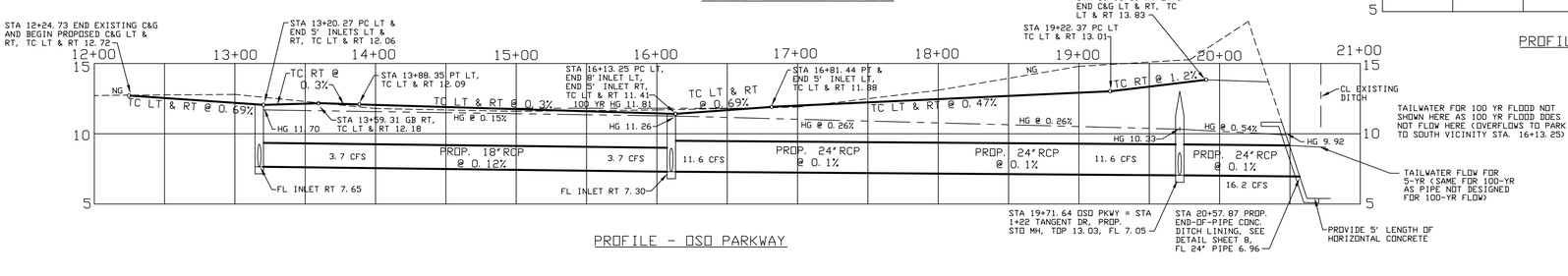
PROFILE - LAURIE STEPH CT



PROFILE - PARALLEL CT



PROFILE - TANGENT DRIVE



PROFILE - OSD PARKWAY

RELEASED FOR CONSTRUCTION

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

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STATE OF TEXAS
NIXON M. WELSH
36240
REGISTERED
PROFESSIONAL ENGINEER

08/03/23

0 25' 50' 100'

SCALE: 1"= 50'

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PUBLIC IMPROVEMENTS TO
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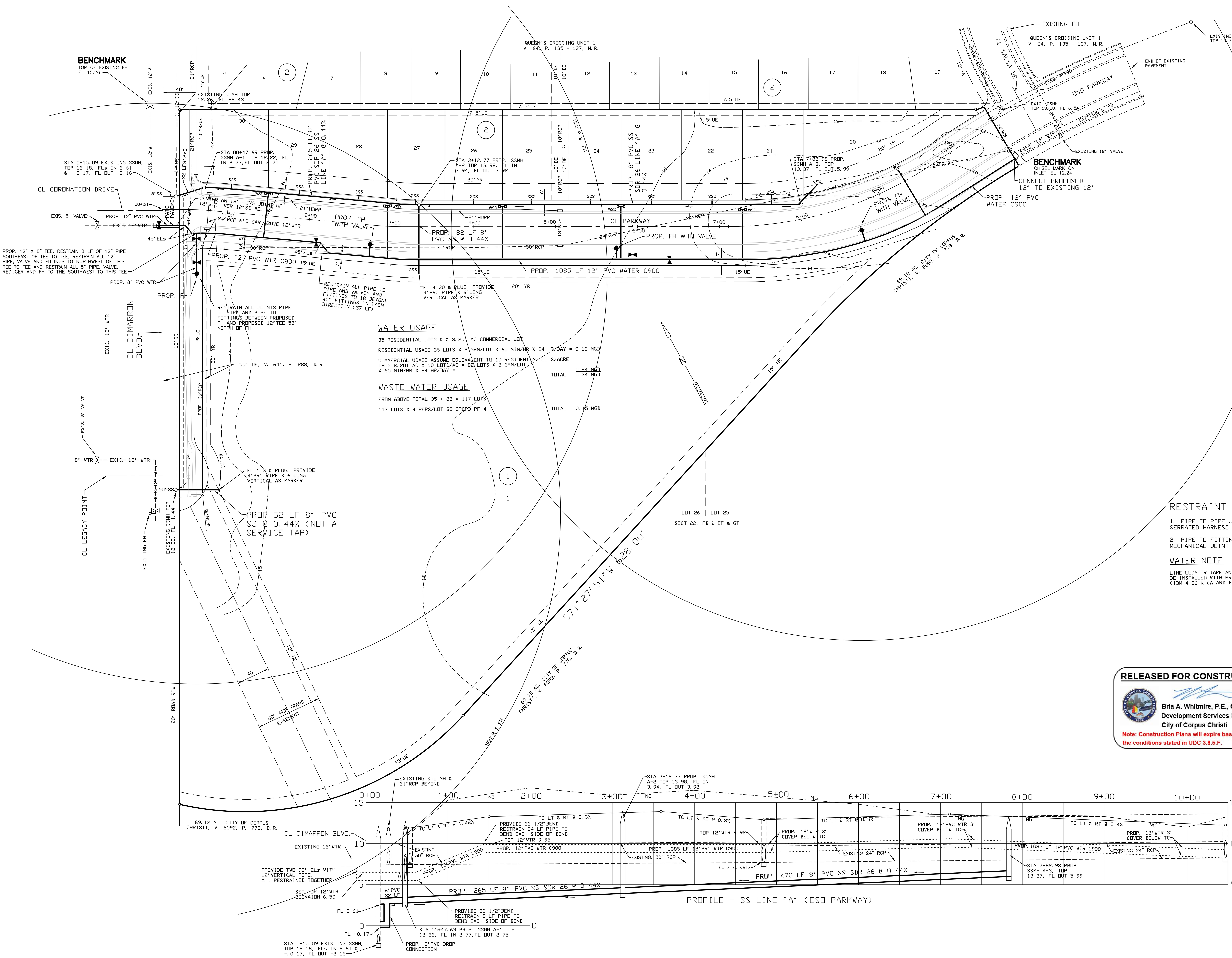
PAVING, GRADING AND DRAINAGE PLAN
STREET AND STORM SEWER PROFILES

DWN.	PLOT SCALE: 1" = 50'	COM. NO.	PGD2 AS PGD
CHK. N. WELSH	SCALE (H): 1" = 50'	JOB NO.	05069
	SCALE (V): 1"=5'	SHEET	3 OF 20
	DATE PLOTTED 08/03/23		



WATER USAGE

35 RESIDENTIAL LOTS & & 8.201 AC COMMERCIAL LOT

RESIDENTIAL USAGE 35 LOTS X 2 GPM/LOT X 60 MIN/HR X 24 HR/DAY = 0.10 MGD

COMMERCIAL USAGE ASSUME EQUIVALENT TO 10 RESIDENTIAL LOTS/ACRE THUS 8.201 AC X 10 LOTS/AC = 82 LOTS X 2 GPM/LOT X 60 MIN/HR X 24 HR/DAY = 0.24 MGD

TOTAL 0.34 MGD

WASTE WATER USAGE

FROM ABOVE TOTAL 35 + 82 = 117 LOTS

117 LOTS X 4 PERS/LOT 80 GPCPD PF 4 TOTAL 0.15 MGD

RESTRAINT FOR WATER PIPES AND FITTINGS

1. PIPE TO PIPE JOINT RESTRAINT - USE EBBA IRON SERIES 1900 SPLIT SERRATED HARNESS TO CONNECT SPIGGOT TO BELL FOR LENGTHS SPECIFIED

2. PIPE TO FITTING JOINT RESTRAINT - USE EBBA IRON EBAA MEGALUG MECHANICAL JOINT RESTRAINTS.

WATER NOTE

LINE LOCATOR TAPE AND TRACER WIRE ARE TO BE INSTALLED WITH PROPOSED WATER LINES (IDM 4.06.K (A AND B)).

RELEASED FOR CONSTRUCTION

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

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STATE OF TEXAS — NIXON M. WELSH — 36240 — REGISTERED PROFESSIONAL ENGINEER — 08/03/23

BASS AND WELSH ENGINEERING
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CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

SANITARY SEWER AND WATER PLAN AND PROFILE

PLOT SCALE:	1" = 50'	COM. NO.	PGD1 AS SSW
SCALE (H):	1" = 50'	JOB NO.	05069
SCALE (V):	1"=5'	SHEET	4 OF 20
DATE PLOTTED	08/03/23		

WATER NOTE

LINE LOCATOR TAPE AND TRACER WIRE ARE TO BE INSTALLED WITH PROPOSED WATER LINES (IDM 4.06.K (A AND B)).

SANITARY SEWER NOTE

WASTE WATER MHs IN PAVEMENT SHALL BE TRAFFIC RATED HS-20

RELEASED FOR CONSTRUCTION

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Development Services Engineer
City of Corpus Christi
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08/03/23

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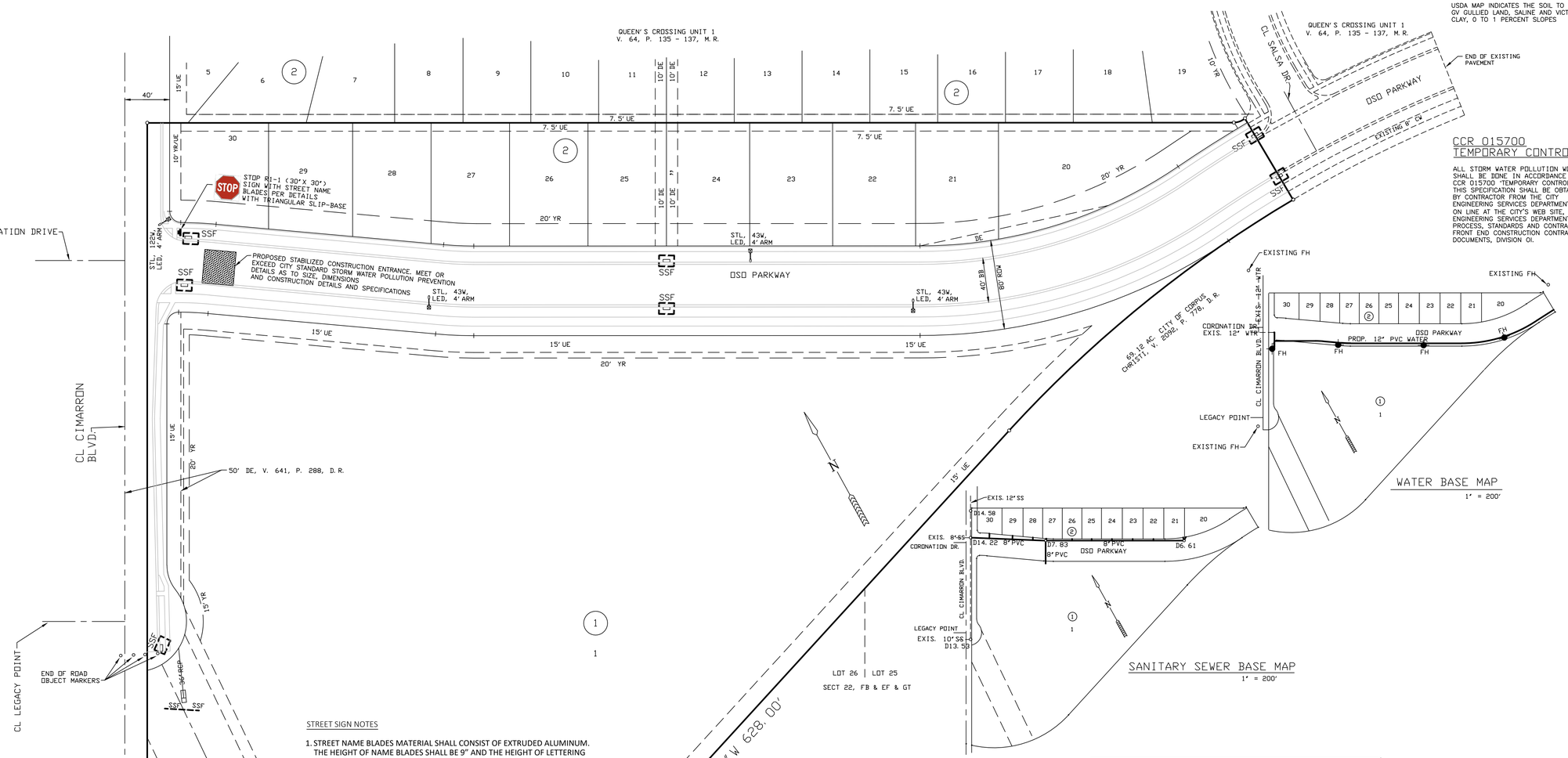
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

SANITARY SEWER AND WATER PLAN AND PROFILE

DWN.	PLOT SCALE: 1" = 50'	COM. NO. PGD2 AS SSW	
	SCALE (H): 1" = 50'	JOB NO. 05069	
CHK. N. WELSH	SCALE (V): 1"=5'		
	DATE PLOTTED 08/03/23	SHEET 5 OF 20	



SOIL TYPES

USDA MAP INDICATES THE SOIL TO BE GV GULLIED LAND, SALINE AND VICTORIA CLAY, 0 TO 1 PERCENT SLOPES

CCR 015700 TEMPORARY CONTROLS

ALL STORM WATER POLLUTION WORK SHALL BE DONE IN ACCORDANCE WITH CCR 015700 'TEMPORARY CONTROLS'. THIS SPECIFICATION SHALL BE OBTAINED BY CONTRACTOR FROM THE CITY ENGINEERING SERVICES DEPARTMENT OR ON LINE AT THE CITY'S WEB SITE, ENGINEERING SERVICES DEPARTMENT, PROCESS, STANDARDS AND CONTRACTS, FRONT END CONSTRUCTION CONTRACT DOCUMENTS, DIVISION 01.

POLLUTION PREVENTION NOTES

1. CONSTRUCTION ENTRANCE - CONSTRUCT A PROPOSED 28' X 30' CONSTRUCTION ENTRANCE CONSISTING OF AN AREA SURFACED WITH CRUSH STONE OR GRAVEL OF SIZE 2" TO 4". THE GRAVEL OR CRUSHED STONE SHALL BE PLACED IN A MINIMUM 4" THICK LAYER AND SHALL OVERLAY A LAYER OF FILTER CLOTH MEETING THE SAME REQUIREMENTS AS FOR SEDIMENTATION SCREENING FENCE. CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION ENTRANCE IN GOOD CONDITION THROUGHOUT THE DURATION OF THE PROJECT AND SHALL REMOVE MUD OR OTHER DEBRIS FROM THE CONSTRUCTION ENTRANCE PERIODICALLY DURING THE PROJECT.
2. CONSTRUCTION EQUIPMENT TRACKING - CONTRACTORS SHALL ENSURE THAT NO MUD OR ANY OTHER DEBRIS BE TRACKED ONTO ANY PAVED STREETS IN THE AREA OF THIS PROJECT. SHOULD ANY MUD OR OTHER DEBRIS BE TRACKED ONTO PAVED STREETS, CONTRACTOR SHALL IMMEDIATELY CLEANUP SAME AT HIS OWN EXPENSE.
3. SILT SCREENS - CONSTRUCT SILT SCREENS AT LOCATIONS AS SHOWN IN THE PLANS. ALL SILT SCREENS SHALL MEET THE REQUIREMENTS OF CITY STANDARD SPECIFICATION 02240 'SILT FENCE'. THE SILT FENCES SHALL BE INSPECTED THROUGHOUT THE CONSTRUCTION PERIOD ON A WEEKLY BASIS AND SHALL BE REPAIRED/REPLACED AS NECESSARY.
4. SOLID WASTE DISPOSAL - ALL TRASH AND DEBRIS WILL BE HAULED TO AN APPROVED LANDFILL. NO CONSTRUCTION WASTE MATERIAL WILL BE BURIED ON-SITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES SHALL BE POSTED AT THE JOB SITE.
5. HAZARDOUS WASTE - NO HAZARDOUS WASTE IS EXPECTED TO BE GENERATED OR ENCOUNTERED IN THIS PROJECT. IN THE EVENT THAT HAZARDOUS WASTE IS ENCOUNTERED, ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATIONS OR BY THE MANUFACTURER.
6. SPILL PREVENTION - THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF. AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THIS JOB. ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER. WHENEVER POSSIBLE, ALL OF THE PRODUCT WILL BE USED UP BEFORE DISPOSING THE CONTAINER. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED. THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE. FUELING OF CONSTRUCTION VEHICLES SHALL BE MADE A MINIMUM OF 200' AWAY FROM ANY DRAINAGE INLET OR SWALE.
7. PAY FOR SEDIMENTATION SCREENING FENCES, STABILIZED CONSTRUCTION ENTRANCE AND ALL POLLUTION PREVENTION MEASURES OF ALL TYPES IN UNIT PRICE OF 'STORM WATER POLLUTION PREVENTION'.
8. CONTRACTOR SHALL CONTROL DUST BY APPROPRIATE MEASURES. NO DUST SHALL BE ALLOWED TO BE BLOWN OFFSITE.
9. A CONCRETE TRUCK WASH-OUT AREA SHALL BE DESIGNATED BY CONTRACTOR AND ALL CONCRETE TRUCKS SHALL BE REQUIRED TO WASH OUT THEIR TRUCKS IN THIS AREA DURING THE CONSTRUCTION PROCESS. AT COMPLETION OF CONSTRUCTION IMPROVEMENTS ALL CONCRETE AND CONCRETE-SOILED EARTH SHALL BE REMOVED FROM THIS AREA (REMOVED FROM THE JOB SITE).
10. POLLUTION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. THESE MEASURES SHALL BE INSPECTED WEEKLY AND REPAIRED IMMEDIATELY IF NECESSARY. POLLUTION CONTROL MEASURES SHALL BE REMOVED UPON COMPLETION OF SUBDIVISION CONSTRUCTION IMPROVEMENTS.

SEDIMENTATION SCREENING FENCE

SEE CITY STANDARD STORM WATER POLLUTION PREVENTION DETAILS FOR CONSTRUCTION

WATER BASE MAP

1" = 200'

SANITARY SEWER BASE MAP

1" = 200'

STREET SIGN NOTES

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.
2. ANTI-GRAFFITI COATING ON FRONT OF THE SIGN 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 TXDOT STANDARDS.
4. DEVELOPER AND CONTRACTOR SHALL FURNISH AND INSTALL ALL SIGNAGE PROPOSED ON THESE PLANS. THE CITY DOES NOT PROVIDE STOP SIGNS ON SITE OR COMMUNITY DEVELOPMENTS.

ESTIMATE SUMMARY

STREET & SURFACE OVERWIDTH/OVERDEPTH ITEMS REIMBURSABLE BY CITY (NOT CONSTRUCTION PAY ITEMS, INCLUDES ITEMS IN FRONTAGE OF PARK)			
ITEM	DESCRIPTION	QUANTITY	UNIT
1	OVERDEPTH HMAC 2" TO 4"= 2"HMAC	7639	SY
2	OVERDEPTH OF CRUSHED LIMESTONE BASE 8" TO 11"	8725	SY
3	OVERWIDTH OF CONCRETE WALK FOR BIKE PATH 4' TO 8'	7292	SF

STORM SEWER ITEMS			
ITEM	DESCRIPTION	QUANTITY	UNIT
1	BACKFILL EXISTING DITCH ALONG SOUTHEAST SIDE OF CIMARRON BLVD	1	LS
2	18" RCP	470	LF
3	24" RCP (INCLUDES PIPE TO DITCH)	929	LF
4	36" RCP	344	LF
5	END OF PIPE RIPRAP STRUCTURE/ DITCH LINING	2	EA
6	5' INLET	12	EA
7	8' INLET	1	EA
8	ADJUST EXISTING INLET OR MANHOLE TOP IN ELEVATION	2	EA
9	MANHOLE	3	EA

SANITARY SEWER ITEMS			
ITEM	DESCRIPTION	QUANTITY	UNIT
1	8" PVC PIPE	2105	LF
2	4" OR 6" PVC SERVICE	35	EA
3	FIBERGLASS MANHOLE	8	EA
4	PAVEMENT PATCHING	8	SY

STREET & SURFACE ITEMS (NOT WITHIN 108' DRAINAGE ROW)			
ITEM	DESCRIPTION	QUANTITY	UNIT
1	6" CURB & GUTTER	5283	LF
2	5' TIED SIDEWALK	4635	SF
3	4" THICK R/C SIDEWALK	24807	SF
4	2" HMAC	3234	SY
5	4" HMAC	7639	SY
6	11" CRUSHED LIMESTONE BASE	9315	SY
7	8" LIME STABILIZED SUBGRADE	13220	SY
8	EXCAVATION	1	LS
9	CLEARING & GRUBBING	19.75	AC
10	STREET SIGN	5	EA
11	END OF ROAD OBJECT MARKERS SET OF 4	2	SET
12	TYPE "A" END OF ROAD BARRICADE	1	EA

WATER ITEMS			
ITEM	DESCRIPTION	QUANTITY	UNIT
1	6" PVC PIPE	1637	LF
2	6" GATE VALVE WITH BOX	7	EA
3	6"EL OR BEND, ANY ANGLE	7	EA
4	6" TEE	2	EA
5	FIRE HYDRANT ASSEMBLY	2	EA
6	DOUBLE OR SINGLE WATER SERVICE	20	EA
7	8"PVC PIPE	48	LF
8	12"X 8"REDUCER	1	EA
9	8" GATE VALVE WITH BOX	1	EA

WATER ITEMS REIMBURSABLE BY CITY			
ITEM	DESCRIPTION	QUANTITY	UNIT
1	12" PVC PIPE	1881	LF
2	12" GATE VALVE WITH BOX	5	EA
3	12" EL, ANY ANGLE	11	EA
4	12" TEE	8	EA
5	12" X 6" REDUCER	1	EA
6	6" PVC PIPE	31	LF
7	6" X 30" PVC PIPE NIPPLE	3	EA
8	6" 90° EL	1	EA
9	6" GATE VALVE WITH BOX	2	EA
10	FIRE HYDRANT	4	EA
11	PAVEMENT PATCHING	1	LS

PARK REIMBURSEMENT ITEMS (NET, DOES NOT INCLUDE OVERWIDTH/OVERDEPTH)			
ITEM	DESCRIPTION	QUANTITY	UNIT
1	2" HMAC	1596	SY
2	8" CRUSHED LIMESTONE BASE TO 2' BC	1950	SY
3	8" LIME STABILIZED SUBGRADE TO 2' BC	1950	SY
4	4' WIDE R/C WALK	3152	SF
5	6" CURB & GUTTER	794	LF
6	EXCAVATION TO 2' BC	1950	SY
7	CLEARING & GRUBBING	0.36	AC
8	TYPE A END OF ROAD BARRICADE	0.5	EA

BRIDGE ITEMS (IMPROVEMENTS WITHIN 108' DRAINAGE ROW, SHEET 3)			
ITEM	DESCRIPTION	QUANTITY	UNIT
1	6' THICK ASTM 67 CRUSHED STONE EMBEDMENT BENEATH BOX CULVERT	203	SY
2	3 BARRELL 5' HIGH X 8' WIDE R/C BOX CULVERT W/HEADWALLS	75	LF
3	5' THICK R/C APRON	140	SY
4	VARIABLE HEIGHT PARALLEL R/C WING WALLS W/INTEGRAL FOOTING	102	LF
5	PEDESTRIAN RAIL W/GRADE BEAMS OUTSIDE OF AND ABOVE BOX CULVERT	118	LF
6	6" CURB & GUTTER	232	LF
7	11" CRUSHED LIMESTONE BASE TO 2' BC	566	SY
8	8" TO 10" THICK LIME STABILIZED SUBGRADE TO 2' BC	566	SY
9	STREET EXCAVATION PAID TO 2' BC	566	SY

MISCELLANEOUS ITEMS			
ITEM	DESCRIPTION	QUANTITY	UNIT
1	4" PVC CONDUIT FOR AEP	300	LF
2	TRAFFIC CONTROL AND BARRICADING PLAN (TRAFFIC CONTROL DURING CONSTRUCTION)	1	LS
3	STORM WATER POLLUTION PREVENTION	1	LS
4	TRENCH SAFETY FOR EXCAVATIONS (STORM AND SANITARY SEWER PIPES OF ALL SIZES)	4725	LF

ESTIMATE SUMMARY NOTES: CONTRACTOR SHALL VERIFY ALL QUANTITIES FOR THE PROJECT PRIOR TO BIDDING OR NEGOTIATING A CONTRACT FOR CONSTRUCTION OF IMPROVEMENTS.

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.

0 25' 50' 100'
SCALE: 1"= 50'

HIRON M. WELSH 39240 REGISTERED PROFESSIONAL ENGINEER
08/03/23

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
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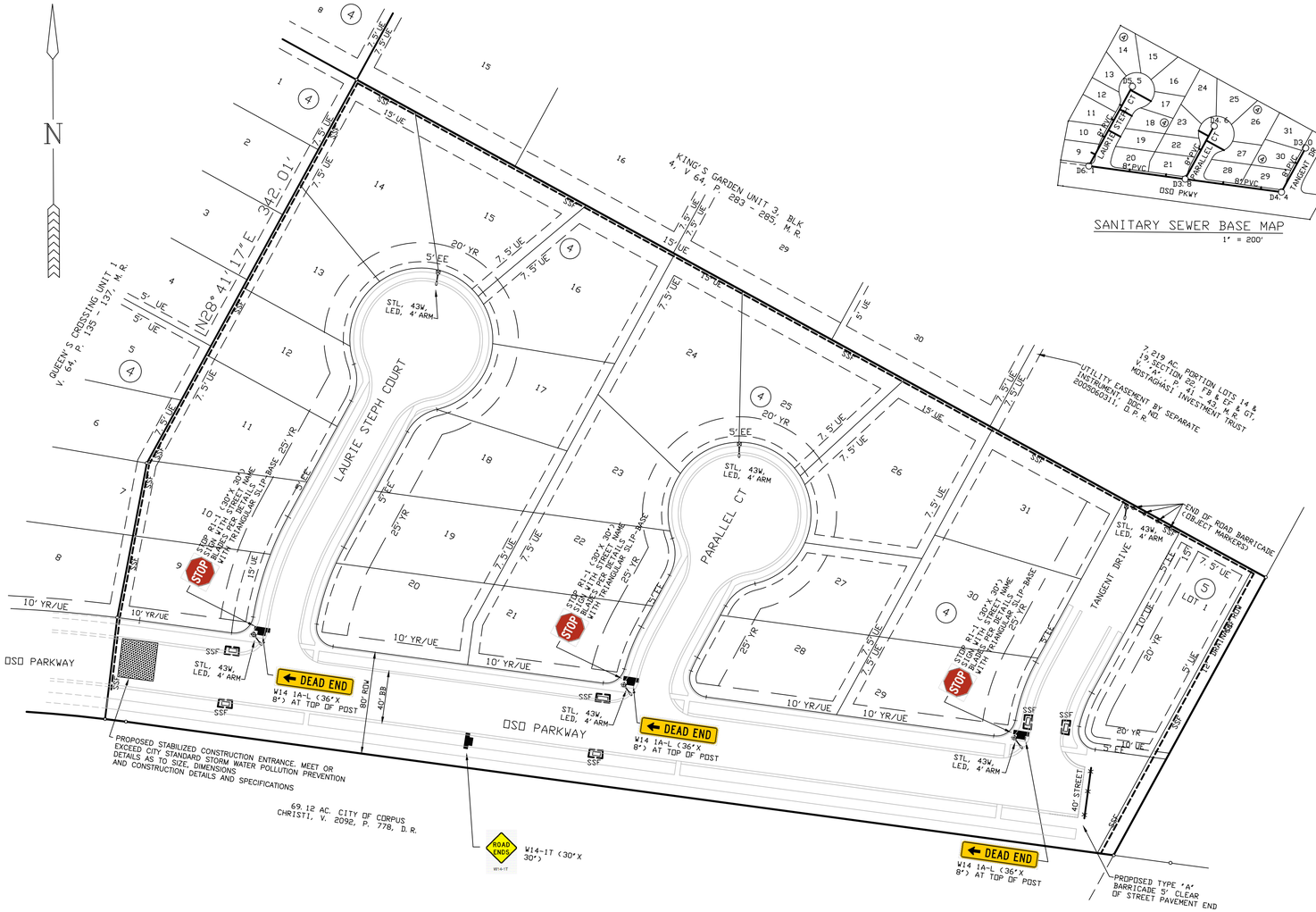
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

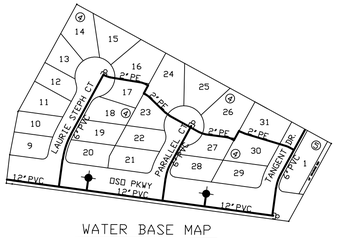
STREET LIGHTING AND SIGNAGE PLAN, STORM WATER POLUTION PREVENTION PLAN BASE MAPS AND ESTIMATE SUMMARY

PLOT SCALE: 1" = 50'
SCALE (H): 1" = 50'
SCALE (V): 1"=5'
DATE PLOTTED 08/03/23

COM. NO. PGD1 AS SWPPP
JOB NO. 05069
SHEET 6 OF 20



SANITARY SEWER BASE MAP
1" = 200'



WATER BASE MAP
1" = 200'

BARRICADE NOTES:

1. BARRICADES SHALL MEET REQUIREMENTS OF THE LATEST EDITION OF TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) UNDER PARAGRAPH 2B.67 BARRICADES AND 6F.68 TYPE 1, 2 OR 3 BARRICADES.

2 BARRICADE MATERIALS AND INSTALLATION:

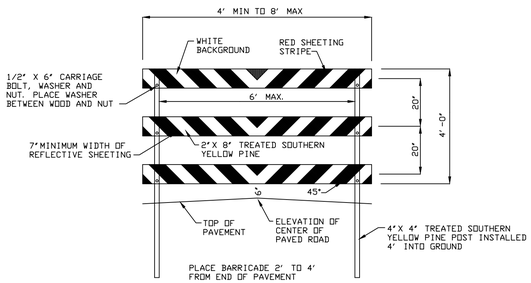
A. WOOD SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE (SYP) THAT MEETS OR EXCEEDS THE SOUTHERN PINE INSPECTION BUREAU (SPIB) GRADE 2 WHICH TREATED TO AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) UC4B, FREE OF SUBSTANTIAL KNOTS, DEFECTS THAT PREVENT THE MATERIAL FROM SUPPORTING ITSELF, SUBSTANTIAL EDGE DAMAGE THAT REDUCED THE WIDE FLAT SURFACE WIDTH BY MORE THAN ½-INCH, DELETERIOUS MATERIAL THAT WILL PREVENT THE TREATMENT, PAINT, OR DECALS FROM PENETRATING OR ADHERING TO THE WOOD MATERIAL.

B. FASTENERS: ALL FASTENERS SHALL BE HOT-DIPPED GALVANIZED FASTENERS AND CONNECTORS, OR BETTER OF SIZE AND LENGTHS AS INDICATED, UNLESS OTHERWISE NOTED OR INDICATED.

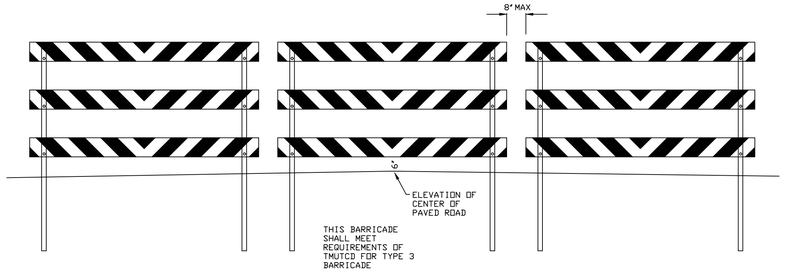
C. PAINT AND SHEET MATERIAL:

C.1 NOTICE: THE WOOD MATERIAL WILL BE REQUIRED TO DRY IN A MANNER THAT PREVENTS THE MATERIALS 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.
C.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.
C.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. IF PAINTED PRIOR TO INSTALLATION THE CONTRACTOR SHALL INSTALL ONE (1) COAT OF THIS PAINT ON ANY SCRATCHES AND ACROSS ALL JOINTS, TWO (2) COATS ACROSS ALL FASTENERS AND PRIMED EDGES, ONCE INSTALLATION IS COMPLETE.
C.4 SHEETING SHALL BE RETROREFLECTIVE TYPE A CONFORMING TO TXDOT DMS-8300 UNLESS OTHERWISE INDICATED BY THE OAR.
C.5 CLEAN-UP OF PAINT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION.

3. BARRICADE(S) SHALL BE CONSTRUCTED AND INSTALLED TO THE SATISFACTION OF THE CITY.



TYPICAL BARRICADE PANEL DETAIL
NTS



TYPE A END-OF-ROAD BARRICADE
NTS

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.

0 25' 50' 100'
SCALE: 1"= 50'

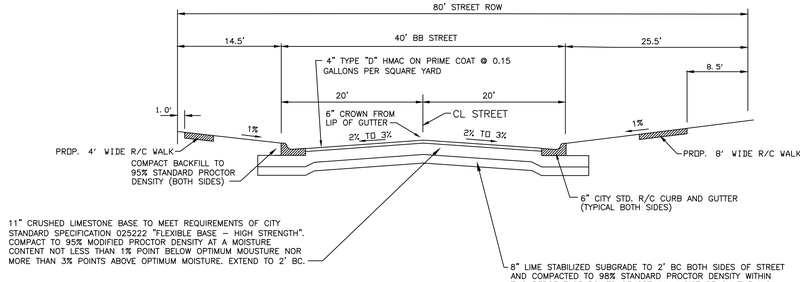
STATE OF TEXAS
NIXON M. WELSH
36240
REGISTERED PROFESSIONAL ENGINEER
08/03/23

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

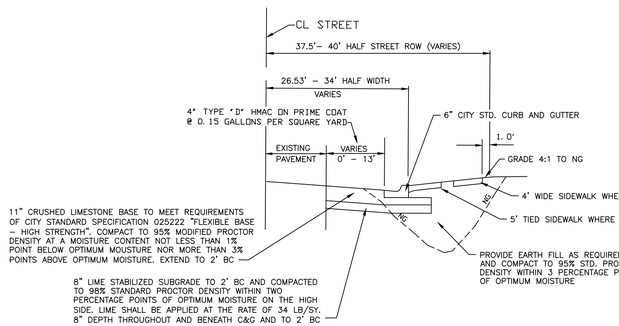
STREET LIGHTING AND SIGNAGE PLAN, STORM WATER POLUTION PREVENTION PLAN, BARRICADE NOTES AND DETAILS AND BASE MAPS

DWN.		PLOT SCALE: 1" = 50'	COM. NO. PGD2 AS SWPPP
CHK.	N. WELSH	SCALE (H): 1" = 50'	JOB NO. 05069
		SCALE (V): 1"=5'	SHEET 7 OF 20
		DATE PLOTTED 08/03/23	



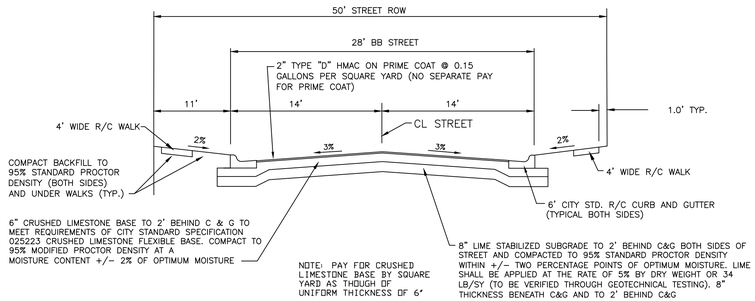
TYPICAL STREET SECTION – 0SO PKWY

NTS



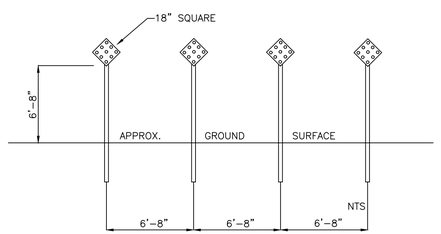
TYPICAL STREET SECTION – CIMARRON BLVD. LOOKING NORTHEAST

NTS

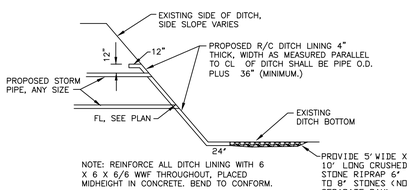


TYPICAL STREET SECTION – 50' ROW

NTS

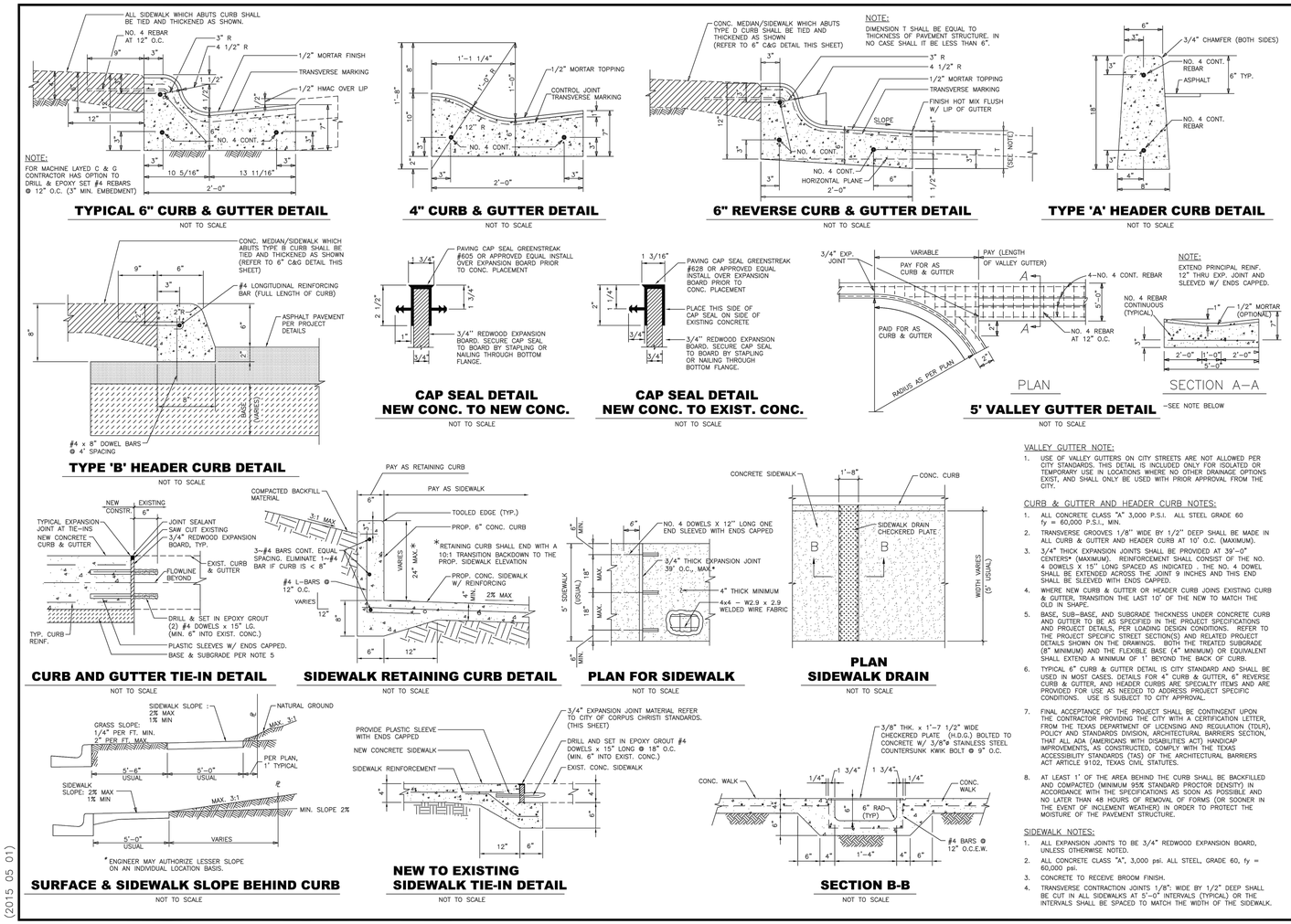


DETAIL – END OF ROAD BARRICADE INSTALLATION (OBJECT MARKERS OM4-2)



TYPICAL SECTION – PROPOSED CONCRETE LINING IN DITCH AT END OF PROPOSED STO. PIPE

NTS



(2015 05 01)

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.

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.

STATE OF TEXAS
NIXON M. WELSH
36240
REGISTERED PROFESSIONAL ENGINEER
08/03/23

TENSAR GEO GRID

TENSAR GEOGRID TX–5 (OR PRE–APPROVED EQUAL) MAY BE USED IN LIEU OF 8" LIME STABALIZED SUBGRADE IF THE SOIL PI AT THE SITE IS ABOVE 20. IF APPROVED, PLACE GEO GRID TO 2' BC AND CONSTRUCT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CRUSHED LIMESTONE BASE SHALL OVERLAY GEO GRID. CONSTRUCT IN ACCORDANCE WITH CITY STANDARD SPECIFICATION 022040 AND THE MANUFACTURERS RECOMMENDATIONS. IF GEOGRID IS USED PROVIDE 6" (MINIMUM) THICKNESS COMPACTED CRUSHED LIMESTONE BASE IMMEDIATELY ABOVE THE GEOGRID.

SOIL TYPES

USDA MAP INDICATES THE SOIL TO BE Gv (CLAY) GULLIED LAND, SALINE AND VICTORIA CLAY, 0 TO 1 PERCENT SLOPES

CONSULTANT'S SHEET No.

REVISION NO.	DATE	BY	DESCRIPTION

CITY of CORPUS CHRISTI
TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI
CURB, GUTTER AND SIDEWALK
STANDARD DETAILS

SHEET ____ of ____
RECORD DRAWING NO.
CITY PROJECT #

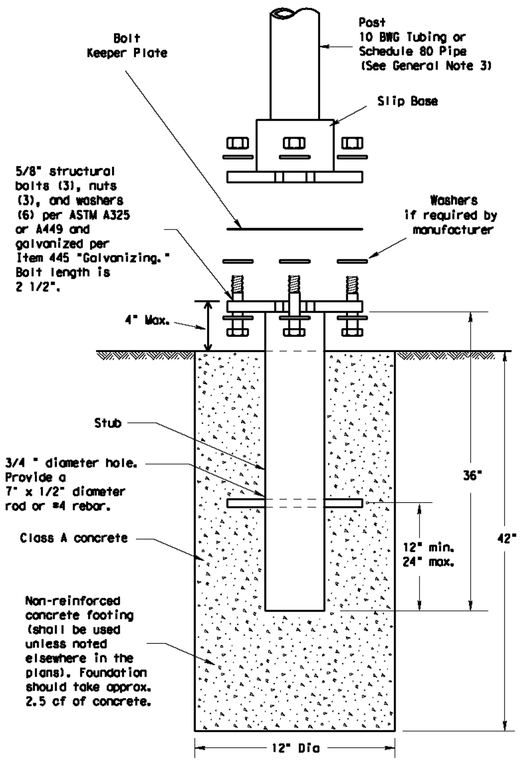
BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F–52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

STREET, WALK AND DRAINAGE DETAILS, CITY STANDARD
CURB, GUTTER AND SIDEWALK STANDARD DETAILS

DWN.	PLOT SCALE: 1" = 50'	COM. NO.	STR–DET
CHK. N. WELSH	SCALE (H): AS SHOWN	JOB NO.	05069
	SCALE (V): AS SHOWN	SHEET 8	OF 20
	DATE PLOTTED 08/03/23		

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



SW 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 Gr 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 0.138"
   - 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.

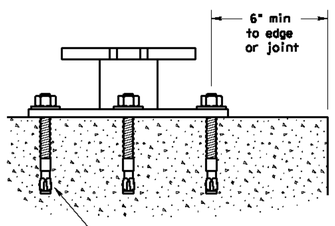
   Schedule 80 Pipe (2.875" outside diameter)
   - 0.276" nominal wall thickness
   - Steel tubing per ASTM A500 Gr C
   - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
     - 46,000 PSI minimum 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:
   https://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



SW 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 50 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.

DATE:
FILE:

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08

© TxDOT July 2002	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
9-08 REVISIONS	CONT	SECT	JOB	HIGHWAY
	DIST	COUNTY		SHEET NO.

26B

STATE OF TEXAS
NIXON M. WELSH
36240
REGISTERED
PROFESSIONAL ENGINEER
08/03/23

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.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

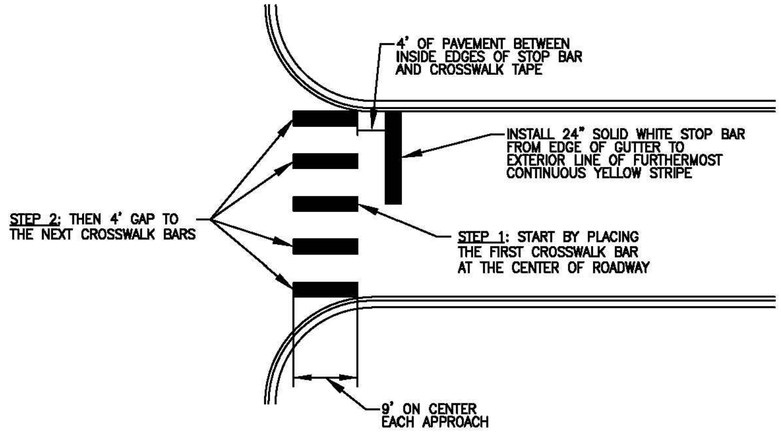
TXDOT SIGN MOUNTING DETAILS: SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

DWN. ____
CHK. N. WELSH

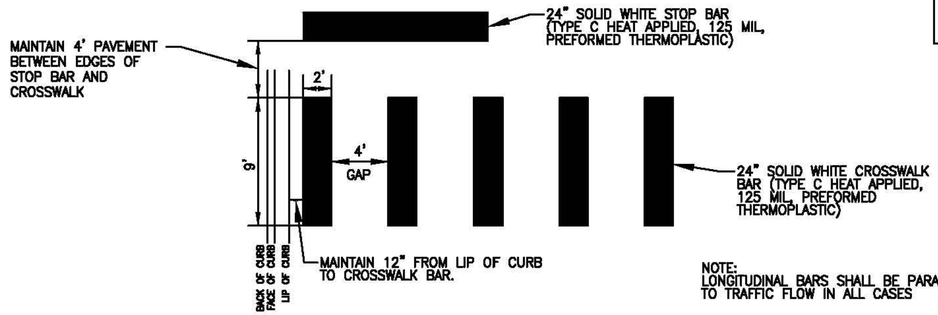
PLOT SCALE: 1" = 50'
SCALE (H): AS SHOWN
SCALE (V): AS SHOWN
DATE PLOTTED 08/03/23

COM. NO. TXDOT SIGN MTG DET
JOB NO. 05069
SHEET 9 OF 20

CROSSWALK PAVEMENT MARKINGS

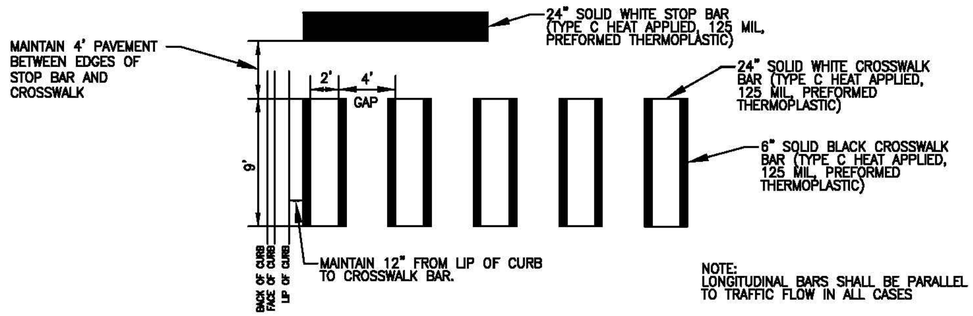


PLAN
SCALE: N.T.S.



NOTE:
LONGITUDINAL BARS SHALL BE PARALLEL TO TRAFFIC FLOW IN ALL CASES

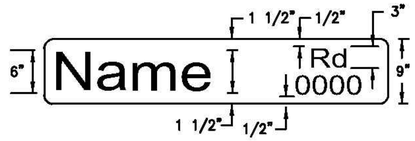
LONGITUDINAL CROSSWALK – DETAIL
FOR ASPHALT ROADWAYS – SCALE: N.T.S.

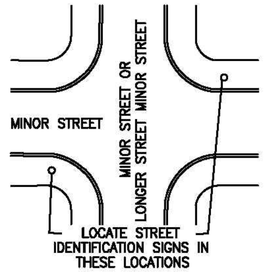


NOTE:
LONGITUDINAL BARS SHALL BE PARALLEL TO TRAFFIC FLOW IN ALL CASES

HIGH CONTRAST CROSSWALK – DETAIL
FOR CONCRETE ROADWAYS – SCALE: N.T.S.

STREET NAME BLADE SIGN





NOTES:

1. STREET NAME BLADE MATERIAL SHALL CONSIST OF EXTRUDED ALUMINUM. THE HEIGHT OF NAME BLADES SHALL BE 9" AND THE HEIGHT OF LETTERING SHALL 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 IS APPLICABLE TO ALL SIGNS EXCEPT FOR NAME BLADES.
3. REPLACEMENT OF SIGNS SHALL MEET 2011 TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), AND TXDOT STANDARDS. CROSSWALK BARS.

NOTES:

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 WHITE WITH 6" SOLID BLACK ON BOTH SIDES (TYPE C HEAT AP HEAT APPLIED, 125 MIL, PREFORMED 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 (TMUTCD).

CONSULTANT'S SHEET NO.

APPROVED: _____ CITY TRAFFIC ENGINEER
DATE: _____

DESIGN: D.A.L.	HORZ. SCALE: NOTED	
DRAWN: D.A.L.	VERT. SCALE: NOTED	
CHECK: D.A.L.	REVISION NO.	DATE 8/22/2023 BY

CITY of CORPUS CHRISTI
TEXAS
Department of Public Works
Traffic Engineering Division

CITY STANDARD SHEET

CROSSWALK PAVEMENT MARKINGS AND STREET NAME BLADE SIGN DETAILS

REVISION NO.	DATE	BY	DESCRIPTION

SHEET 1 of 1
RECORD DRAWING NO.
—
CITY PROJECT #

HINON M. WELSH 36240 REGISTERED PROFESSIONAL ENGINEER
08/03/23

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.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F–52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

CITY CROSSWALK PAVEMENT MARKINGS AND
STREET NAME BLADE SIGN DETAILS

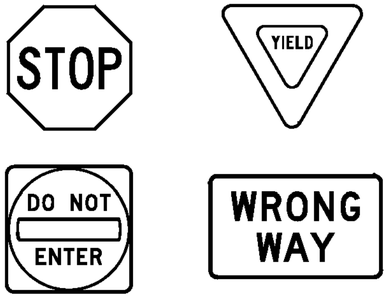
DWN. _____
CHK. N. WELSH

PLOT SCALE: 1" = 50'
SCALE (H): AS SHOWN
SCALE (V): AS SHOWN
DATE PLOTTED 08/03/23

COM. NO. CITY PAMT MARKINGS
JOB NO. 05069
SHEET 10 OF 20

DATE:
FILE:

REQUIREMENTS FOR RED BACKGROUND REGULATORY SIGNS
(STOP, YIELD, DO NOT ENTER AND WRONG WAY SIGNS)



REQUIREMENTS FOR FOUR SPECIFIC SIGNS ONLY

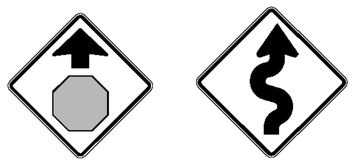
SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	RED	TYPE B OR C SHEETING
BACKGROUND	WHITE	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE B OR C SHEETING
LEGEND	RED	TYPE B OR C SHEETING

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, Emod 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 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS				
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08				

4

NIXON M. WELSH 36240 REGISTERED PROFESSIONAL ENGINEER
08/03/23

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.

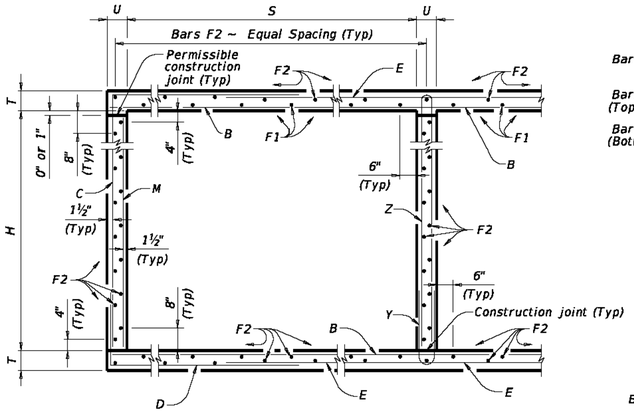
BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

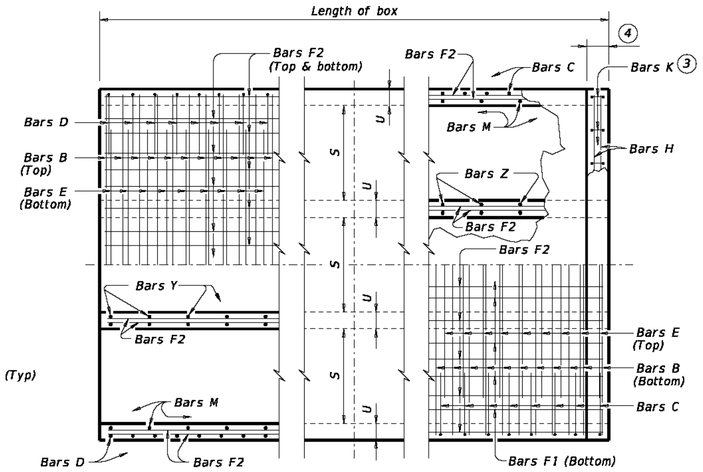
TXDOT TYPICAL SIGN REQUIREMENTS
TSR(4)-13

DWN.	PLOT SCALE: 1" = 50'	COM. NO.	TXDOT TYP SIGN REQ
CHK. N. WELSH	SCALE (H): AS SHOWN	JOB NO.	05069
	SCALE (V): AS SHOWN	SHEET	11 OF 20
	DATE PLOTTED 08/03/23		

DATE:
FILE:

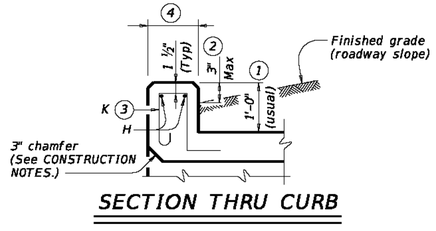


TYPICAL SECTION



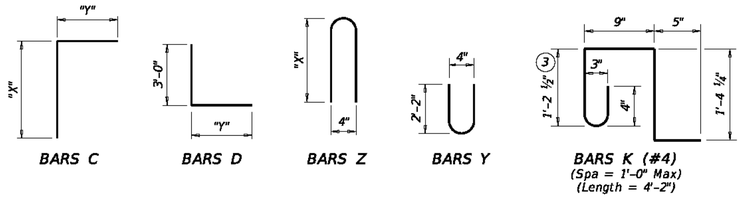
BOTTOM SLAB TOP SLAB

PART PLANS



SECTION THRU CURB

TABLE OF BAR DIMENSIONS		
H	"X"	"Y"
3'-0"	3'-6 ½"	5'-1"
4'-0"	4'-6 ½"	5'-1"
5'-0"	5'-6 ½"	5'-1"
6'-0"	6'-6 ½"	5'-1"
7'-0"	7'-6 ½"	5'-1"
8'-0"	8'-6 ½"	5'-1"



1. 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'-0", refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM) standard sheet. Refer to the Rail Anchorage Curb (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.

2. For vehicle safety, the following requirements must be met:
   - For structures without bridge rail, construct curbs no more than 3" above finished grade.
   - For structures with bridge rail, construct curbs flush with finished grade.

   Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

3. For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, Bars K may be omitted.

4. 1'-0" typical. 2'-3" when the Rail Anchorage Curb (RAC) standard sheet is referred to elsewhere in the plans.

The Contractor may replace Bars B, C, D, E, F1, F2, M, Y, and/or Z with deformed welded wire reinforcement (WWR) meeting the requirements of ASTM A1064. The area of required reinforcement may be reduced by the ratio of 60 ksi / 70 ksi. Spacing of WWR is limited to 4" Min and 18" Max. When required, provide lap splices in the WWR of the same length required for the equivalent bar size, rounded up for wire sizes between conventional bar sizes. The lap length required for WWR is never less than the lap length required for uncoated #4 bars.

Example conversion: Replacing No. 6 Gr 60 at 6" Spacing with WWR
Required WWR = (0.44 sq. in. per 0.5 ft.) x (60 ksi / 70 ksi) = 0.755 sq. in. per ft.
If D30.6 wire is used to meet the 0.755 sq. in. per ft. requirement in this example, the required spacing = (0.306 sq. in.) / (0.755 sq. in. per ft.) x (12 in. per ft.) = 4.86" Max spacing. Required lap length for the provided D30.6 wire is 2'-1" (the same minimum lap length required for uncoated #5 bars, as listed under MATERIAL NOTES).

CONSTRUCTION NOTES:

Do not use permanent forms.
Chamfer the bottom edge of the top slab 3" at the entrance.
Optionally, raise construction joints shown at the flow line by a maximum of 6". If this option is taken, Bars M may be cut off or raised, Bars C and D may be reversed, and Bars Y and Z may be reversed.

MATERIAL NOTES:

Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
Provide Class C concrete (f'c = 3,600 psi) for culvert barrel and curb, with the following exceptions: provide Class S concrete (f'c = 4,000 psi) for top slabs of:
- culverts with overlay,
- culverts with 1-to-2 course surface treatment, or
- culverts with the top slab as the final riding surface.

Provide bar laps, where required, as follows:
- Uncoated or galvanized ~ #4 = 1'-8" Min
- Uncoated or galvanized ~ #5 = 2'-1" Min
- Uncoated or galvanized ~ #6 = 2'-6" Min

GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications for the range of fill heights shown.
See the Multiple Box Culverts Cast-In-Place Miscellaneous Detail (MC-MD) standard sheet for details pertaining to skewed ends, angle sections, and lengthening.

Cover dimensions are clear dimensions, unless noted otherwise.
Reinforcing bar dimensions shown are out-to-out of bar.

HL93 LOADING SHEET 1 OF 2

Texas Department of Transportation — Bridge Division Standard

MULTIPLE BOX CULVERTS CAST-IN-PLACE 8'-0" SPAN 0' TO 13' FILL

MC-8-13

FILE: mc813ste-20.dgn	DN: TBE	CK: BMP	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

STATE OF TEXAS — NIKON M. WELSH — 36240 — REGISTERED PROFESSIONAL ENGINEER — 08/03/23

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.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

TXDOT MULTIPLE BOX CULVERTS, CAST-IN-PLACE,
8'-0" SPAN, 0' TO 13' FILL, MC-8-13

DWN. ____ CHK. N. WELSH
PLOT SCALE: 1" = 50'
SCALE (H): AS SHOWN
SCALE (V): AS SHOWN
DATE PLOTTED 08/03/23
COM. NO. TXDOT MBC1 DET
JOB NO. 05069
SHEET 12 OF 20

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

NUMBER OF SPANS	SECTION DIMENSIONS				BILLS OF REINFORCING STEEL (For Box Length = 40 feet)																														QUANTITIES					
					Bars B					Bars C & D							Bars E					Bars F1 ~ #4				Bars F2 ~ #4				Bars M ~ #4				Bars Y & Z ~ #4						Bars H 4 ~ #4		Bars K		Per Foot of Barrel		Curb		Total	
	S	H	T	U	No.	Size	Spa	Length	Wt	No.	Size	Spa	Bars C Length	Bars C Wt	Bars D Length	Bars D Wt	No.	Size	Spa	Length	Wt	No.	Spa	Length	Wt	No.	Spa	Length	Wt	No.	Spa	Length	Wt	No.	Spa	Bars Y Length	Bars Y Wt	Bars Z Length	Bars Z Wt	Length	Wt	No.	Wt	Conc (CY)	Renf (Lb)	Conc (CY)	Renf (Lb)	Conc (CY)	Renf (Lb)
2	8' – 0"	3' – 0"	8"	7"	162	#6	6"	17' – 6"	4,258	108	#6	9"	8' – 8"	1,406	8' – 2"	1,325	162	#6	6"	12' – 9"	3,102	12	18"	39' – 9"	319	56	18"	39' – 9"	1,487	108	9"	3' – 0"	216	54	9"	4' – 7"	165	7' – 3"	262	17' – 6"	47	38	106	1.071	313.5	1.3	153	44.2	12,693
3	8' – 0"	3' – 0"	8"	7"	162	#6	6"	26' – 1"	6,347	108	#6	9"	8' – 8"	1,406	8' – 2"	1,325	162	#6	6"	21' – 4"	5,191	18	18"	39' – 9"	478	80	18"	39' – 9"	2,124	108	9"	3' – 0"	216	108	9"	4' – 7"	331	7' – 3"	523	26' – 1"	70	56	156	1.560	448.5	1.9	226	64.3	18,167
4	8' – 0"	3' – 0"	8"	7"	162	#6	6"	34' – 8"	8,435	108	#6	9"	8' – 8"	1,406	8' – 2"	1,325	162	#6	6"	29' – 11"	7,279	24	18"	39' – 9"	637	104	18"	39' – 9"	2,762	108	9"	3' – 0"	216	162	9"	4' – 7"	496	7' – 3"	785	34' – 8"	93	72	200	2.048	583.5	2.6	293	84.5	23,634
5	8' – 0"	3' – 0"	8"	7"	162	#6	6"	43' – 3"	10,524	108	#6	9"	8' – 8"	1,406	8' – 2"	1,325	162	#6	6"	38' – 6"	9,368	30	18"	39' – 9"	797	128	18"	39' – 9"	3,399	108	9"	3' – 0"	216	216	9"	4' – 7"	661	7' – 3"	1,046	43' – 3"	116	90	251	2.537	718.6	3.2	367	104.7	29,109
6	8' – 0"	3' – 0"	8"	7"	162	#6	6"	51' – 10"	12,612	108	#6	9"	8' – 8"	1,406	8' – 2"	1,325	162	#6	6"	47' – 1"	11,457	36	18"	39' – 9"	956	152	18"	39' – 9"	4,036	108	9"	3' – 0"	216	270	9"	4' – 7"	827	7' – 3"	1,308	51' – 10"	138	106	295	3.026	853.6	3.8	433	124.9	34,576
2	8' – 0"	4' – 0"	8"	7"	162	#6	6"	17' – 6"	4,258	108	#6	9"	9' – 8"	1,568	8' – 2"	1,325	162	#6	6"	12' – 9"	3,102	12	18"	39' – 9"	319	56	18"	39' – 9"	1,487	108	9"	4' – 0"	289	54	9"	4' – 7"	165	9' – 3"	334	17' – 6"	47	38	106	1.136	321.2	1.3	153	46.8	13,000
3	8' – 0"	4' – 0"	8"	7"	162	#6	6"	26' – 1"	6,347	108	#6	9"	9' – 8"	1,568	8' – 2"	1,325	162	#6	6"	21' – 4"	5,191	18	18"	39' – 9"	478	80	18"	39' – 9"	2,124	108	9"	4' – 0"	289	108	9"	4' – 7"	331	9' – 3"	667	26' – 1"	70	56	156	1.646	458.0	1.9	226	67.8	18,546
4	8' – 0"	4' – 0"	8"	7"	162	#6	6"	34' – 8"	8,435	108	#6	9"	9' – 8"	1,568	8' – 2"	1,325	162	#6	6"	29' – 11"	7,279	24	18"	39' – 9"	637	104	18"	39' – 9"	2,762	108	9"	4' – 0"	289	162	9"	4' – 7"	496	9' – 3"	1,001	34' – 8"	93	72	200	2.156	594.8	2.6	293	88.8	24,085
5	8' – 0"	4' – 0"	8"	7"	162	#6	6"	43' – 3"	10,524	108	#6	9"	9' – 8"	1,568	8' – 2"	1,325	162	#6	6"	38' – 6"	9,368	30	18"	39' – 9"	797	128	18"	39' – 9"	3,399	108	9"	4' – 0"	289	216	9"	4' – 7"	661	9' – 3"	1,335	43' – 3"	116	90	251	2.667	731.7	3.2	367	109.9	29,633
6	8' – 0"	4' – 0"	8"	7"	162	#6	6"	51' – 10"	12,612	108	#6	9"	9' – 8"	1,568	8' – 2"	1,325	162	#6	6"	47' – 1"	11,457	36	18"	39' – 9"	956	152	18"	39' – 9"	4,036	108	9"	4' – 0"	289	270	9"	4' – 7"	827	9' – 3"	1,668	51' – 10"	138	106	295	3.177	868.5	3.8	433	130.9	35,171
2	8' – 0"	5' – 0"	8"	7"	162	#6	6"	17' – 6"	4,258	108	#6	9"	10' – 8"	1,730	8' – 2"	1,325	162	#6	6"	12' – 9"	3,102	12	18"	39' – 9"	319	62	18"	39' – 9"	1,646	108	9"	5' – 0"	361	54	9"	4' – 7"	165	11' – 3"	406	17' – 6"	47	38	106	1.201	332.8	1.3	153	49.4	13,465
3	8' – 0"	5' – 0"	8"	7"	162	#6	6"	26' – 1"	6,347	108	#6	9"	10' – 8"	1,730	8' – 2"	1,325	162	#6	6"	21' – 4"	5,191	18	18"	39' – 9"	478	88	18"	39' – 9"	2,337	108	9"	5' – 0"	361	108	9"	4' – 7"	331	11' – 3"	812	26' – 1"	70	56	156	1.733	472.8	1.9	226	71.3	19,138
4	8' – 0"	5' – 0"	8"	7"	162	#6	6"	34' – 8"	8,435	108	#6	9"	10' – 8"	1,730	8' – 2"	1,325	162	#6	6"	29' – 11"	7,279	24	18"	39' – 9"	637	114	18"	39' – 9"	3,027	108	9"	5' – 0"	361	162	9"	4' – 7"	496	11' – 3"	1,217	34' – 8"	93	72	200	2.264	612.7	2.6	293	93.1	24,800
5	8' – 0"	5' – 0"	8"	7"	162	#6	6"	43' – 3"	10,524	108	#6	9"	10' – 8"	1,730	8' – 2"	1,325	162	#6	6"	38' – 6"	9,368	30	18"	39' – 9"	797	140	18"	39' – 9"	3,717	108	9"	5' – 0"	361	216	9"	4' – 7"	661	11' – 3"	1,623	43' – 3"	116	90	251	2.796	752.7	3.2	367	115.1	30,473
6	8' – 0"	5' – 0"	8"	7"	162	#6	6"	51' – 10"	12,612	108	#6	9"	10' – 8"	1,730	8' – 2"	1,325	162	#6	6"	47' – 1"	11,457	36	18"	39' – 9"	956	166	18"	39' – 9"	4,408	108	9"	5' – 0"	361	270	9"	4' – 7"	827	11' – 3"	2,029	51' – 10"	138	106	295	3.328	892.6	3.8	433	137.0	36,138
2	8' – 0"	6' – 0"	8"	7"	162	#6	6"	17' – 6"	4,258	108	#6	9"	11' – 8"	1,893	8' – 2"	1,325	162	#6	6"	12' – 9"	3,102	12	18"	39' – 9"	319	68	18"	39' – 9"	1,806	108	9"	6' – 0"	433	54	9"	4' – 7"	165	13' – 3"	478	17' – 6"	47	38	106	1.265	344.5	1.3	153	51.9	13,932
3	8' – 0"	6' – 0"	8"	7"	162	#6	6"	26' – 1"	6,347	108	#6	9"	11' – 8"	1,893	8' – 2"	1,325	162	#6	6"	21' – 4"	5,191	18	18"	39' – 9"	478	96	18"	39' – 9"	2,549	108	9"	6' – 0"	433	108	9"	4' – 7"	331	13' – 3"	956	26' – 1"	70	56	156	1.819	487.6	1.9	226	74.7	19,729
4	8' – 0"	6' – 0"	8"	7"	162	#6	6"	34' – 8"	8,435	108	#6	9"	11' – 8"	1,893	8' – 2"	1,325	162	#6	6"	29' – 11"	7,279	24	18"	39' – 9"	637	124	18"	39' – 9"	3,293	108	9"	6' – 0"	433	162	9"	4' – 7"	496	13' – 3"	1,434	34' – 8"	93	72	200	2.372	630.6	2.6	293	97.5	25,518
5	8' – 0"	6' – 0"	8"	7"	162	#6	6"	43' – 3"	10,524	108	#6	9"	11' – 8"	1,893	8' – 2"	1,325	162	#6	6"	38' – 6"	9,368	30	18"	39' – 9"	797	152	18"	39' – 9"	4,036	108	9"	6' – 0"	433	216	9"	4' – 7"	661	13' – 3"	1,912	43' – 3"	116	90	251	2.926	773.7	3.2	367	120.3	31,316
6	8' – 0"	6' – 0"	8"	7"	162	#6	6"	51' – 10"	12,612	108	#6	9"	11' – 8"	1,893	8' – 2"	1,325	162	#6	6"	47' – 1"	11,457	36	18"	39' – 9"	956	180	18"	39' – 9"	4,780	108	9"	6' – 0"	433	270	9"	4' – 7"	827	13' – 3"	2,390	51' – 10"	138	106	295	3.479	916.8	3.8	433	143.0	37,106
2	8' – 0"	7' – 0"	8"	7"	162	#6	6"	17' – 6"	4,258	108	#6	9"	12' – 8"	2,055	8' – 2"	1,325	162	#6	6"	12' – 9"	3,102	12	18"	39' – 9"	319	68	18"	39' – 9"	1,806	108	9"	7' – 0"	505	54	9"	4' – 7"	165	15' – 3"	550	17' – 6"	47	38	106	1.330	352.1	1.3	153	54.5	14,238
3	8' – 0"	7' – 0"	8"	7"	162	#6	6"	26' – 1"	6,347	108	#6	9"	12' – 8"	2,055	8' – 2"	1,325	162	#6	6"	21' – 4"	5,191	18	18"	39' – 9"	478	96	18"	39' – 9"	2,549	108	9"	7' – 0"	505	108	9"	4' – 7"	331	15' – 3"	1,100	26' – 1"	70	56	156	1.905	497.0	1.9	226	78.1	20,107
4	8' – 0"	7' – 0"	8"	7"	162	#6	6"	34' – 8"	8,435	108	#6	9"	12' – 8"	2,055	8' – 2"	1,325	162	#6	6"	29' – 11"	7,279	24	18"	39' – 9"	637	124	18"	39' – 9"	3,293	108	9"	7' – 0"	505	162	9"	4' – 7"	496	15' – 3"	1,650	34' – 8"	93	72	200	2.480	641.9	2.6	293	101.8	25,968
5	8' – 0"	7' – 0"	8"	7"	162	#6	6"	43' – 3"	10,524	108	#6	9"	12' – 8"	2,055	8' – 2"	1,325	162	#6	6"	38' – 6"	9,368	30	18"	39' – 9"	797	152	18"	39' – 9"	4,036	108	9"	7' – 0"	505	216	9"	4' – 7"	661	15' – 3"	2,200	43' – 3"	116	90	251	3.056	786.8	3.2	367	125.5	31,838
6	8' – 0"	7' – 0"	8"	7"	162	#6	6"	51' – 10"	12,612	108	#6	9"	12' – 8"	2,055	8' – 2"	1,325	162	#6	6"	47' – 1"	11,457	36	18"	39' – 9"	956	180	18"	39' – 9"	4,780	108	9"	7' – 0"	505	270	9"	4' – 7"	827	15' – 3"	2,750	51' – 10"	138	106	295	3.631	931.7	3.8	433	149.1	37,700
2	8' – 0"	8' – 0"	8"	7"	162	#6	6"	17' – 6"	4,258	108	#6	9"	13' – 8"	2,217	8' – 2"	1,325	162	#6	6"	12' – 9"	3,102	12	18"	39' – 9"	319	74	18"	39' – 9"	1,965	108	9"	8' – 0"	577	54	9"	4' – 7"	165	17' – 3"	622	17' – 6"	47	38	106	1.395	363.8	1.3	153	57.1	14,703
3	8' – 0"	8' – 0"	8"	7"	162	#6	6"	26' – 1"	6,347	108	#6	9"	13' – 8"	2,217	8' – 2"	1,325	162	#6	6"	21' – 4"	5,191	18	18"	39' – 9"	478	104	18"	39' – 9"	2,762	108	9"	8' – 0"	577	108	9"	4' – 7"	331	17' – 3"	1,244	26' – 1"	70	56	156	1.992	511.8	1.9	226	81.6	20,698
4	8' – 0"	8' – 0"	8"	7"	162	#6	6"	34' – 8"	8,435	108	#6	9"	13' – 8"	2,217	8' – 2"	1,325	162	#6	6"	29' – 11"	7,279	24	18"	39' – 9"	637	134	18"	39' – 9"	3,558	108	9"	8' – 0"	577	162	9"	4' – 7"	496	17' – 3"	1,867	34' – 8"	93	72	200	2.588	659.8	2.6	293	106.1	26,684
5	8' – 0"	8' – 0"	8"	7"	162	#6	6"	43' – 3"	10,524	108	#6	9"	13' – 8"	2,217	8' – 2"	1,325	162	#6	6"	38' – 6"	9,368	30	18"	39' – 9"	797	164	18"	39' – 9"	4,355	108	9"	8' – 0"	577	216	9"	4' – 7"	661	17' – 3"	2,489	43' – 3"	116	90	251	3.185	807.8	3.2	367	130.6	32,680
6	8' – 0"	8' – 0"	8"	7"	162	#6	6"	51' – 10"	12,612	108	#6	9"	13' – 8"	2,217	8' – 2"	1,325	162	#6	6"	47' – 1"	11,457	36	18"	39' – 9"	956	194	18"	39' – 9"	5,151	108	9"	8' – 0"	577	270	9"	4' – 7"	827	17' – 3"	3,111	51' – 10"	138	106	295	3.782	955.8	3.8	433	155.1	38,666

HL93 LOADING SHEET 2 OF 2

Texas Department of Transportation | Bridge Division Standard

MULTIPLE BOX CULVERTS CAST-IN-PLACE 8'-0" SPAN 0' TO 13' FILL

MC-8-13

FILE: mcB13ste-20.dgn	DN: TBE	CK: BMP	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

STATE OF TEXAS
NIXON M. WELSH
36240
REGISTERED PROFESSIONAL ENGINEER
08/03/23

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.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

TXDOT MULTIPLE BOX CULVERTS, CAST-IN-PLACE,
8'-0" SPAN, 0' TO 13' FILL, MC-8-13

DWN. ____
CHK. N. WELSH

PLOT SCALE: 1" = 50'
SCALE (H): AS SHOWN
SCALE (V): AS SHOWN
DATE PLOTTED 08/03/23

COM. NO. TXDOT MBC2 DET
JOB NO. 05069
SHEET 13 OF 20

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for errors that may appear in this standard or other formats or for incorrect results or damages resulting from its use.

COMMENTS:

LEVELS DISPLAYED

1

TABLE OF DIMENSIONS & REINFORCING STEEL
(Wings for One Structure End)

Dimensions					Variable Reinforcing				Estimated (3) Quantities per ft of wing length (2~Wings)	
					Bars J1		Bars J2			
Maximum Wingwall Height Hw	W	X	Y	Z	Size	Spa	Size	Spa	Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	33.73	0.248
3'-0"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	37.07	0.261
3'-6"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	37.74	0.273
4'-0"	2'- 5"	1'- 0"	9"	7"	#4	1'-0"	#4	1'-0"	38.41	0.285
4'-6"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	41.75	0.330
5'-0"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	45.09	0.343
5'-6"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	45.75	0.355
6'-0"	3'- 2"	1'- 6"	1'- 0"	7"	#4	1'-0"	#4	1'-0"	46.42	0.367
7'-0"	3'- 8"	1'- 9"	1'- 3"	7"	#4	1'-0"	#4	1'-0"	52.77	0.414
8'-0"	4'- 2"	2'- 0"	1'- 6"	8"	#5	1'-0"	#4	1'-0"	60.19	0.486
9'-0"	4'- 8"	2'- 3"	1'- 9"	8"	#4	6"	#4	6"	81.49	0.535
10'-0"	5'- 2"	2'- 6"	2'- 0"	8"	#5	6"	#4	6"	97.25	0.584
11'-0"	5'- 8"	2'- 9"	2'- 3"	8"	#6	6"	#5	6"	133.65	0.634
12'-0"	6'- 2"	3'- 0"	2'- 6"	9"	#7	6"	#5	6"	162.29	0.721
13'-0"	6'- 8"	3'- 3"	2'- 9"	11"	#7	6"	#5	6"	178.80	0.856
14'-0"	7'- 2"	3'- 6"	3'- 0"	1'- 0"	#8	6"	#5	6"	216.78	0.959
15'-0"	7'- 8"	4'- 0"	3'- 0"	1'- 1"	#9	6"	#6	6"	283.06	1.068
16'-0"	8'- 2"	4'- 6"	3'- 0"	1'- 3"	#9	6"	#6	6"	297.02	1.234

TABLE OF WINGWALL REINFORCING (2~Wings)

Bar	Size	No.	Spa
D	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'-0"
R	#5	6	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

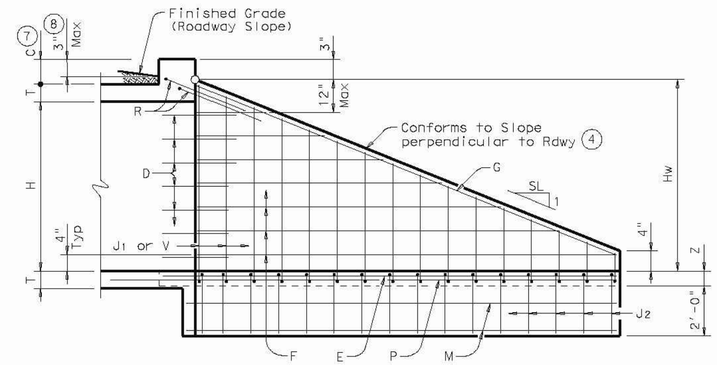
Bar	Size	No.	Spa
L	#4	~	1'-6"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

WING DIMENSION CALCULATIONS:

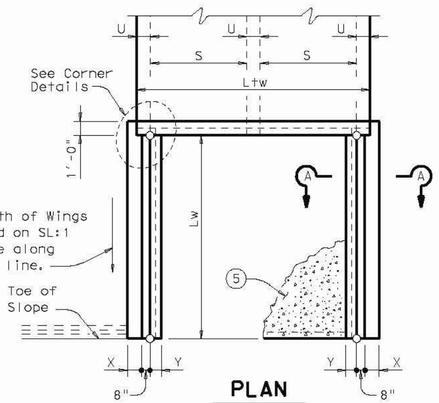
Formulas: (All values are in Feet)
Hw = H + T + C - 0.250'
Lw = (Hw - 0.333') (SL)
For Cast-in-place culverts:
Ltw = (N) (S) + (N+1) (U)
For Precast culverts:
Ltw = (N) (2U + S) + (N - 1) (0.5')
Total Wingwall Area (Two Wings ~ S.F.)=(Hw + 0.333') (Lw)

Hw = Height of Wingwall
SL:1 = Side Slope Ratio (Horizontal:1 Vertical)
Lw = Length of Wingwall
Ltw = Culvert Toewall Length
N = Number of Culvert Spans

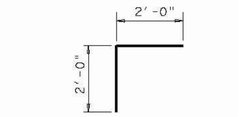
See applicable box culvert standard for H, S, T, and U values.



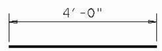
INSIDE ELEVATION
(Showing reinforcing. Culvert and Culvert Toewall reinforcing not shown for clarity.)



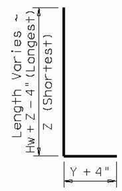
PLAN
(Showing Dimensions)



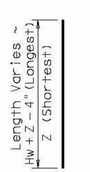
BARS R



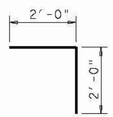
BARS D



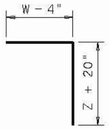
BARS J1



BARS V



BARS L

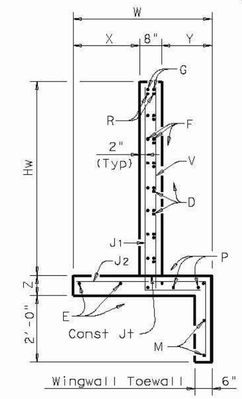


BARS J2

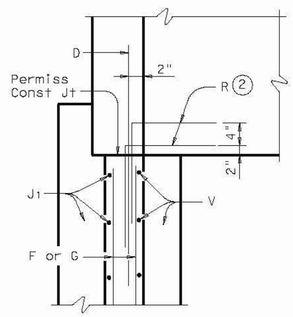
GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.
All reinforcing steel shall be Grade 60.
All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.
All reinforcing bars shall be adjusted to provide a minimum of 1 ¼" clear cover.
When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.
See BCS sheet for additional dimensions and information.
The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

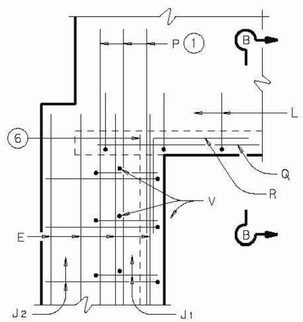
(1) Extend Bars P 3'-0" minimum into bottom slab of Box Culvert.
(2) Adjust to fit as necessary to maintain 1 ¼" clear cover and 4" minimum between bars.
(3) Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings multiply the tabulated values by Lw.
(4) Recommended values of Slope are: 2:1, 3:1, 4:1, & 6:1.
(5) When shown elsewhere on the plans, a 5" deep concrete riprap shall be constructed. Payment for riprap shall be as required by Item 432, "Riprap". Unless otherwise shown on the plans or directed by the Engineer, the riprap shall have a 6" wide by 1'-6" deep reinforced concrete toewall along all edges adjacent to natural ground; the toewall shall be reinforced by extending typical riprap reinforcing into the toewall; construction joints or grooved joints, oriented in the direction of flow, shall extend across the full distance of the riprap, at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B-B will not be required.
(6) At Contractor's option, Culvert Toewall may be ended flush with Wingwall Toewall. Adjust reinforcing from that shown as necessary.
(7) 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.
(8) For vehicle safety, curb heights and wall heights shall be reduced, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.



SECTION A-A

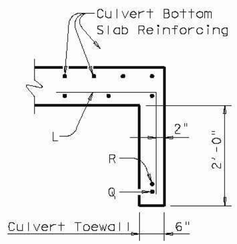


WINGWALL



FOOTING AND TOEWALL

CORNER DETAILS
(Culvert and Culvert Toewall reinforcing not shown for clarity.)



SECTION B-B (5)

Texas Department of Transportation
Bridge Division

CONCRETE WINGWALLS WITH STRAIGHT WINGS FOR 0° SKEW BOX CULVERTS

SW-0

FILE: sw-0stde.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: GAF
©TxDOT February 2010	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS				
	COUNTY	CONTROL	SECT	JOB	HIGHWAY

STATE OF TEXAS · NIXON M. WELSH · 36240 · REGISTERED PROFESSIONAL ENGINEER
08/03/23

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.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

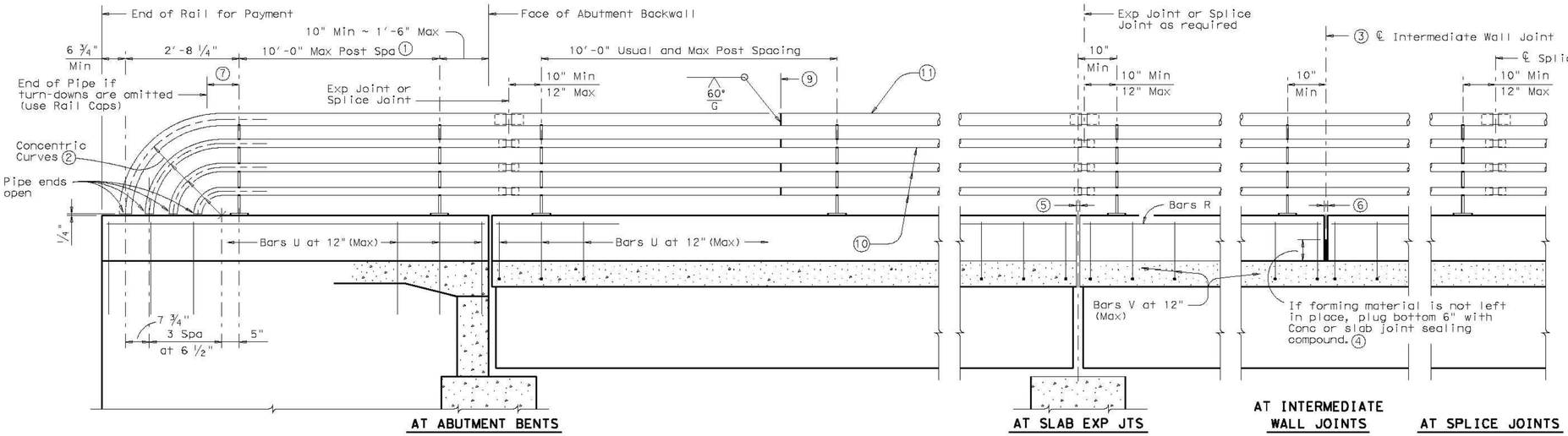
PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

TXDOT CONCRETE WINGWALLS WITH STRAIGHT WINGS FOR 0° SKEW BOX CULVERTS, SW-0

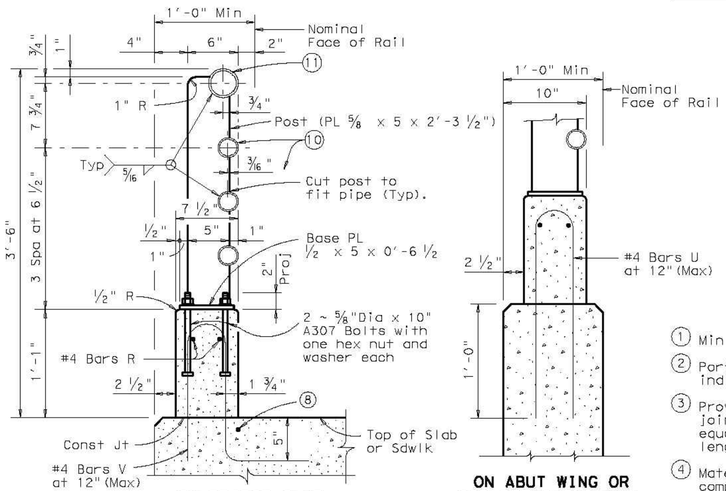
DWN. ____
CHK. N. WELSH
PLOT SCALE: 1" = 50'
SCALE (H): AS SHOWN
SCALE (V): AS SHOWN
DATE PLOTTED 08/03/23
COM. NO. TXDOT WING.DWG
JOB NO. 05069
SHEET 14 OF 20

ACC:

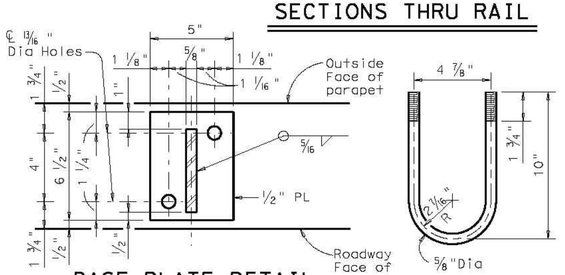
LEVELS DISPLAYED



ROADWAY ELEVATION OF RAIL

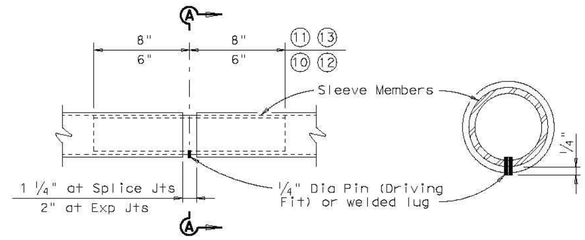


SECTIONS THRU RAIL



BASE PLATE DETAIL

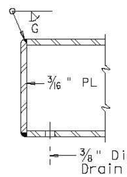
OPTIONAL U BOLT



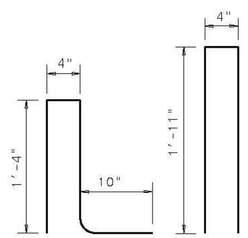
AT SPLICE OR EXP JTS — SECTION A-A

PIPE SPLICE DETAIL

1. Min of 2 posts required on wingwall.
2. Portion of railing with turn-downs to be used or omitted as indicated on Bridge Layout.
3. Provide intermediate wall joints over all slab construction joints, over interior supports on continuous units, and at equal intervals in between as necessary to maintain a 33' Max length of unbroken wall.
4. Material used in forming joint may be left in place if it is compressible and light in color such as the following materials: polystyrene, molded cork granules, sponge rubber sheet, etc.
5. Same as Slab opening
6. 1/4" Min ~ 3/4" Max
7. 10" Min ~ 1'-6" Max if turn-downs are omitted.
8. Top longitudinal slab bar may be adjusted laterally 3" plus or minus to tie rail reinforcing.
9. One shop splice per panel is permitted (with minimum 85 percent penetration). The weld may be square groove or single vee groove. Grind smooth.
10. 2" Std Pipe (2.375" O.D., 0.154" wall thickness)
11. 3" Std Pipe (3.500" O.D., 0.216" wall thickness)
12. 1 1/2" Std Pipe (1.900" O.D., 0.145" wall thickness)
13. 2 1/2" Std Pipe (2.875" O.D., 0.203" wall thickness)



RAIL CAP DETAIL



BARS V (#4) BARS U (#4)

CONSTRUCTION NOTES:

Panel lengths of railing must be attached to a minimum of three posts except on abutment wingwalls.

Face of rail, posts and parapet must be vertical transversely unless otherwise approved by the Engineer. Rail posts must be perpendicular to top of adjacent concrete parapet grade. Use epoxy mortar under post base plates if gaps larger than 1/16" exist.

For curved railing applications, fabricate the pipe rail to the radius when the radius is 600' or less. Submit shop drawings for approval when tubes are required to be fabricated to a radius. Shop drawings must be submitted to the Engineer for approval.

Exposed edges of pipe rail and pipe rail posts must be rounded or chamfered to approximately 1/16" by grinding.

MATERIAL NOTES:

Pipe for pipe rail must conform to ASTM A53 Gr B or A500 Gr B. Posts and Plates must be ASTM A36.

All steel components to be galvanized unless otherwise shown on plans.

Anchor bolts must be 5/8" Dia ASTM A307 Grade A bolts (or A36 threaded rods with one tack welded hex nut each) with one hex nut and one hardened steel washer at each bolt.

Threaded rods may be 0.557" minimum diameter with rolled threads. Nuts must conform to A563 requirements.

All concrete must be Class "C". Use Class C (HPC) if required elsewhere.

Epoxy coat all reinforcing if slab bars are epoxy coated.

All reinforcing must be Grade 60.

GENERAL NOTES:

Designed according to AASHTO LRFD Specifications.

This railing cannot be used on bridges with expansion joints providing more than 5" movement.

Rail anchorage details shown on this standard may require modification for select structure types. See appropriate details elsewhere in plans for these modifications.

For all rails, erection drawings showing section lengths, splice locations, rail post spacing and anchor bolt setting must be submitted to the Engineer for approval.

Average weight of railing: 102 plf ~ Conc (with no Overlay)
23 plf ~ Steel

Texas Department of Transportation
Bridge Division

PEDESTRIAN RAIL

TYPE PR2

FILE: ristd029.dgn	DN: TxDOT	CK: TxDOT	DW: JTR	CK: TxDOT	
©TxDOT April 2009	DISTRICT	FEDERAL AID PROJECT		SHEET	
REVISIONS					
	COUNTY		CONTROL	SECT	JOB	HIGHWAY

STATE OF TEXAS
NIXON M. WELSH
36240
REGISTERED PROFESSIONAL ENGINEER
08/03/23

RELEASED FOR CONSTRUCTION

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

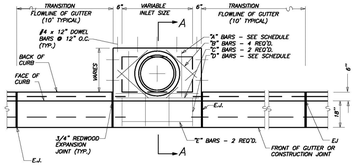
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

TXDOT PEDESTRIAN RAIL - TYPE PR2

DWN.	PLOT SCALE: 1" = 50'	COM. NO.	TXDOT PED.DWG
CHK. N. WELSH	SCALE (H): AS SHOWN	JOB NO.	05069
	SCALE (V): AS SHOWN	SHEET	15 OF 20
	DATE PLOTTED 08/03/23		

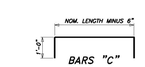


PLAN OF 5' STANDARD INLET

NOT TO SCALE

SPECIAL NOTE:

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

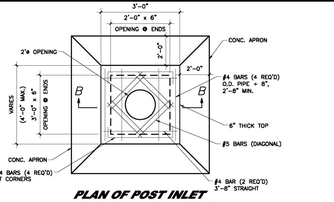


** THROAT OPENINGS SHALL HAVE A 6" X 6" CONCRETE SUPPORT PLACED AT MID-THROAT

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

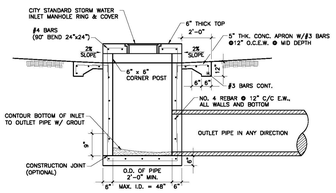
STANDARD CURB INLET STEEL SCHEDULE						
	ALL BARS No. 4 PREFORMED					
INLET SIZE (Nom. Length)	NO. REQ'D./LENGTH					
	"A" BARS	"B" BARS	"C" BARS	"D" BARS	"E" BARS	
4'	2/6	4/1'-10"	2/5'-6"	4/3'-2"	2/4'-6"	
5'	2/6	4/3'-2"	2/6'-8"	4/3'-2"	2/5'-6"	
6'	4/6	4/4'-0"	2/7'-8"	6/3'-2"	2/6'-6"	
** 8'	4/6	4/4'-0"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

a = O.D. + 8", 2'-0" MIN. MAX. PIPE I.D. = 48 INCHES



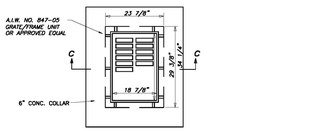
PLAN OF POST INLET

NOT TO SCALE



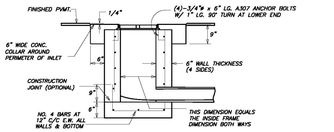
SECTION B-B

NOT TO SCALE



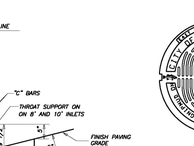
PLAN OF STANDARD GRATE INLET

NOT TO SCALE



SECTION C-C

NOT TO SCALE



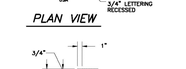
PLAN VIEW

GRATE BLOCK

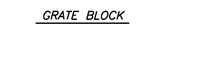
SECTION A-A

NOT TO SCALE

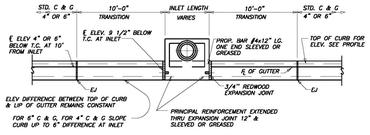
PICKSLOT DETAIL



GRATE SECTION



RING SECTION



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.

CONSULTANT'S SHEET No.

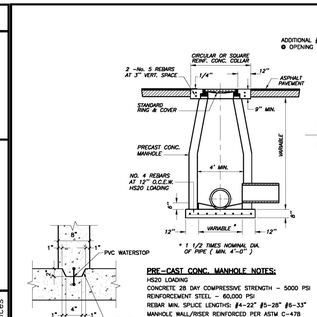
DESCRIPTION | BY | DATE | REVISION NO.

CITY of CORPUS CHRISTI TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI STORM WATER STANDARD DETAILS 2 of 3

SHEET ____ of ____
RECORD DRAWING NO.

CITY PROJECT # ____

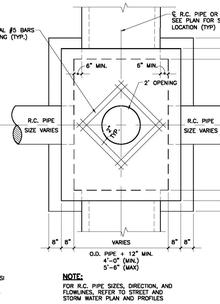


KEYWAY DETAIL

NOT TO SCALE

PRE-CAST CONC. MANHOLE NOTES:

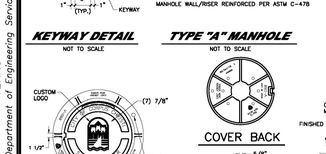
H520 LOADING
CONCRETE 28 DAY COMPRESSIVE STRENGTH – 5000 PSI
REINFORCEMENT STEEL – 60,000 PSI
REBAR MIN. SPLICE LENGTHS: #4–22" #5–28" #6–33"
MANHOLE WALL/RISER REINFORCED PER ASTM C-478



TYPE "A" MANHOLE

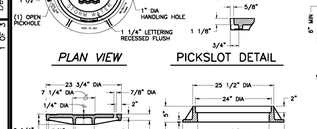
NOT TO SCALE

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



PLAN VIEW

PICKSLOT DETAIL



COVER SECTION

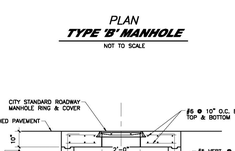
FRAME SECTION

CITY STANDARD ROADWAY MANHOLE RING & COVER CASTING DETAIL

NOT TO SCALE

ROADWAY MANHOLE RING & COVER NOTES

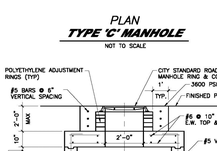
1. MANHOLE RING & COVER SHALL BE EAST JORDAN V 1168 ASSEMBLY AND FOR SCHOOL ZONE SHALL BE EAST JORDAN BOLTED-IN 1168 ASSEMBLY LOAD RATING HEAVY DUTY.
2. THESE DETAILS SHOW GREY-IRON CASTINGS, FILLETED AT ANGLES WITH SHARP AND PERFECT ARISES.
3. CASTING SHALL BE TRUE TO PATTERN, FORM, AND DIMENSIONS, 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.



TYPE "B" MANHOLE

NOT TO SCALE

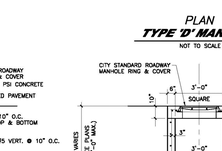
NOTE:
LATERAL PIPES NOT SHOWN FOR CLARITY



TYPE "C" MANHOLE

NOT TO SCALE

NOTE:
LATERAL PIPES NOT SHOWN FOR CLARITY



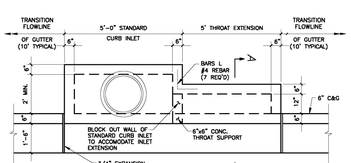
TYPE "D" MANHOLE

NOT TO SCALE

NOTE:
LATERAL PIPES NOT SHOWN FOR CLARITY

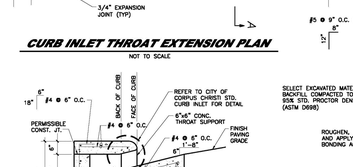
GENERAL NOTES FOR CONCRETE DRAINAGE STRUCTURES:

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. HOWEVER PRECAST UNITS, PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION. PRECAST MANHOLE WITHIN THE ROADWAY SHALL 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 10 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.



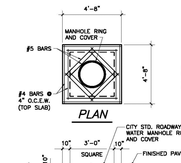
CURB INLET THROAT EXTENSION PLAN

NOT TO SCALE

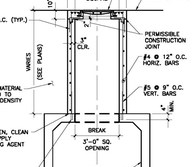


SECTION A-A

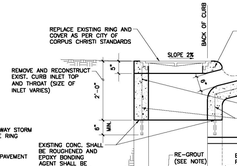
NOT TO SCALE



PLAN

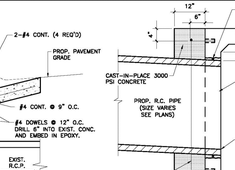


SECTION



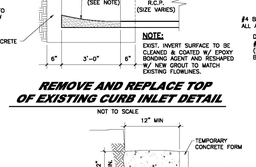
REMOVE AND REPLACE TOP OF EXISTING CURB INLET DETAIL

NOT TO SCALE



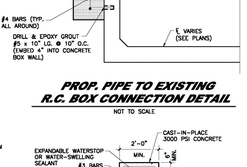
PROP. PIPE TO EXISTING R.C. BOX CONNECTION DETAIL

NOT TO SCALE



EXISTING R.C. PIPE PLUG

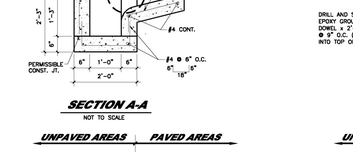
NOT TO SCALE



NOTE:
PIPE COLLAR SHALL BE USED WHERE A TIGHT JOINT CANNOT BE PLACED, SUCH AS A BREAK IN ALIGNMENT, DAMAGED PIPE ENDS OR TIE-INS TO EXISTING PIPE OR STRUCTURES.

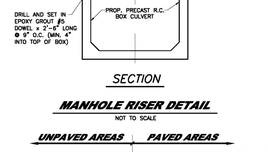
CONCRETE COLLAR DETAIL

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, AND CLAY LUMPS LARGER THAN 2" IN DIAMETER. LOOSE LIFTS TO BE PLACED 10" MAX.	*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:*
COMPACT MATERIAL TO 95% STD. PROCTOR (D698).	*LL<35* *PI 8–20* *NO CLUMPS > 2" DIA.* *MOISTURE ± 3% OF OPTIMUM.* *COMPACT 95% D698 STD PROCTOR*
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)	*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. 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.

CONSULTANT'S SHEET No.

DESCRIPTION | BY | DATE | REVISION NO.

CITY of CORPUS CHRISTI TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI STORM WATER STANDARD DETAILS 3 of 3

SHEET ____ of ____
RECORD DRAWING NO.

CITY PROJECT # ____

STATE OF TEXAS
NIXON M. WELSH
36240
REGISTERED PROFESSIONAL ENGINEER
08/03/23

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.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F–52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

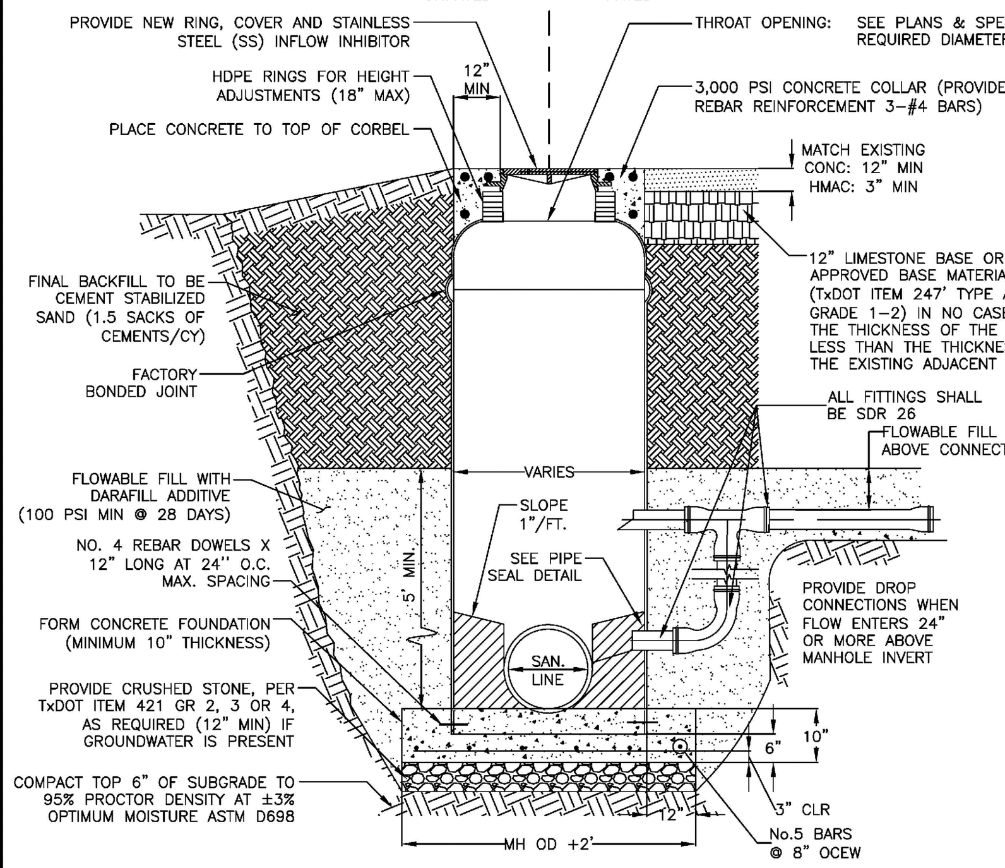
PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

CITY STANDARD STORM WATER DETAILS

DWN. ____
CHK. N. WELSH

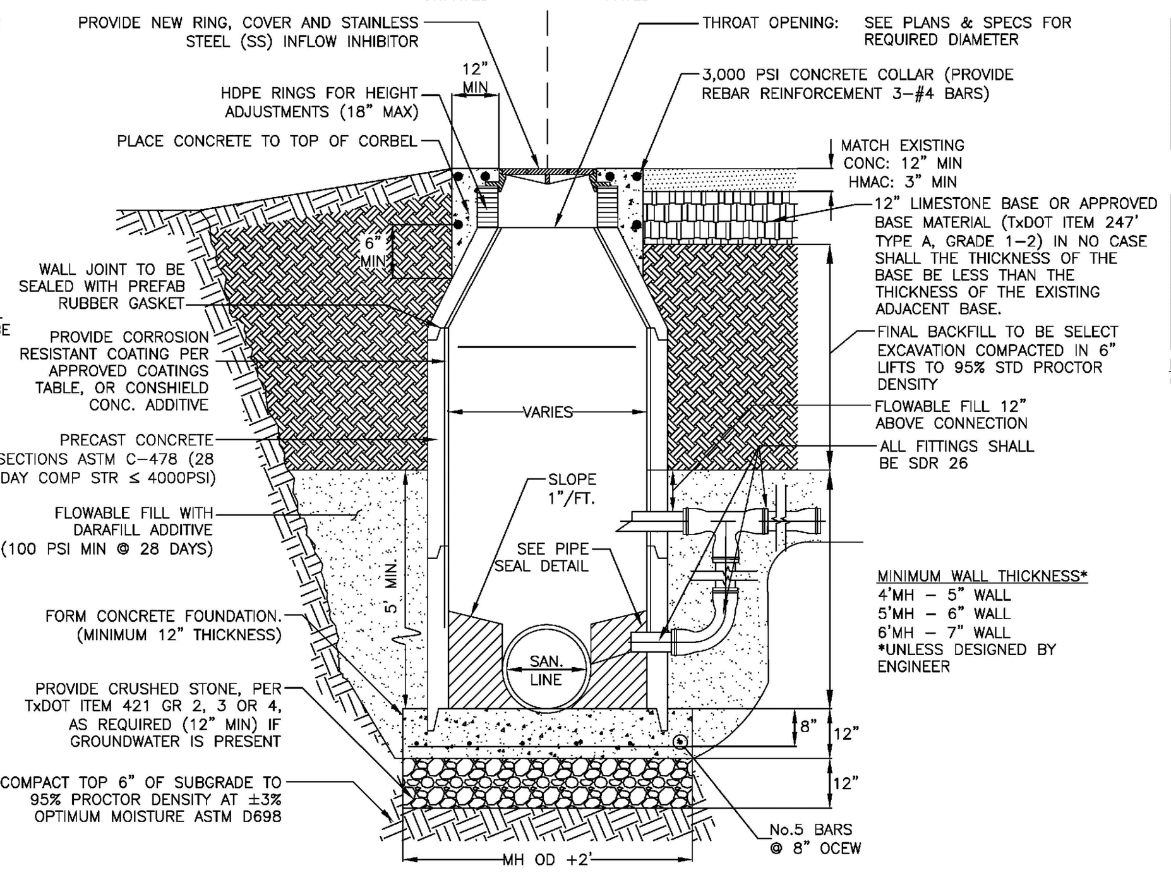
PLOT SCALE: 1" = 50'
SCALE (H): AS SHOWN
SCALE (V): AS SHOWN
DATE PLOTTED 08/03/23

COM. NO. CITY STD.DWG
JOB NO. 05069
SHEET 16 OF 20



FIBERGLASS MANHOLE

NOT TO SCALE



CONCRETE MANHOLE

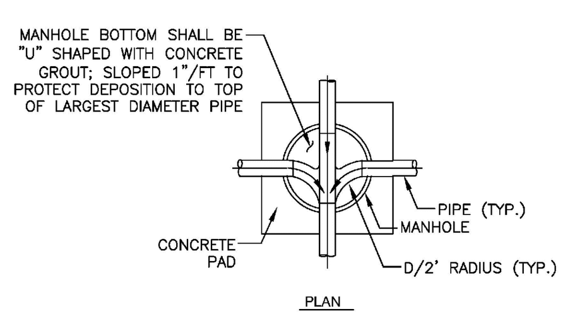
NOT TO SCALE

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'

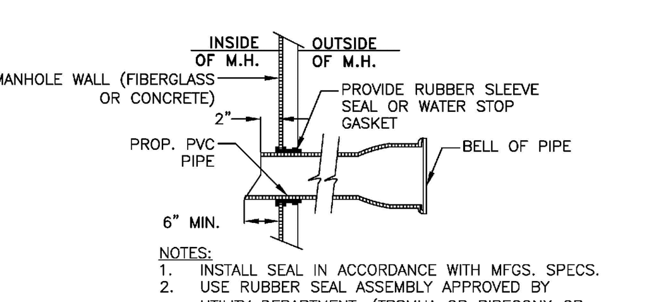
APPROVED COATINGS TABLE	
MANUFACTURER	MODEL NAME
JEFFCOAT	JEFFCOAT 326
RAVEN LINING SYSTEM	RAVEN 405
SHERWIN WILLIAMS	DURAPLATE 5800
CARBOLINE	PHENOLINE 309

NOTE:
COAT ALL CONCRETE SURFACES INCLUDING BENCH & WALLS.



WASTEWATER MANHOLE (BOTTOM)

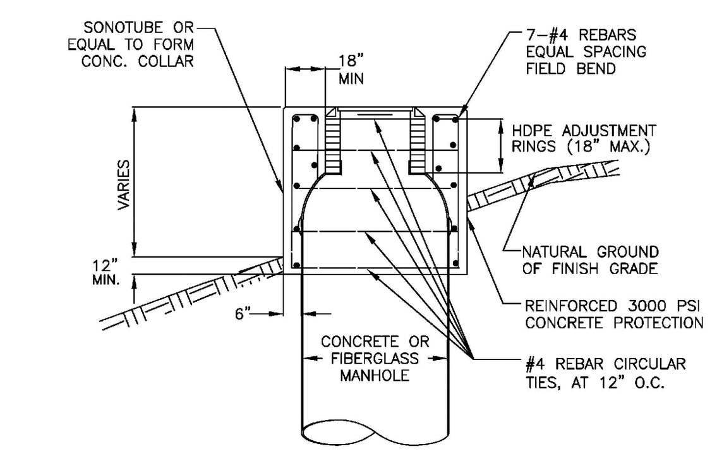
NOT TO SCALE



NOTES:
1. INSTALL SEAL IN ACCORDANCE WITH MFGS. SPECS.
2. USE RUBBER SEAL ASSEMBLY APPROVED BY UTILITY DEPARTMENT. (TPSMHA OR PIPECONX OR INSERT A TEE)

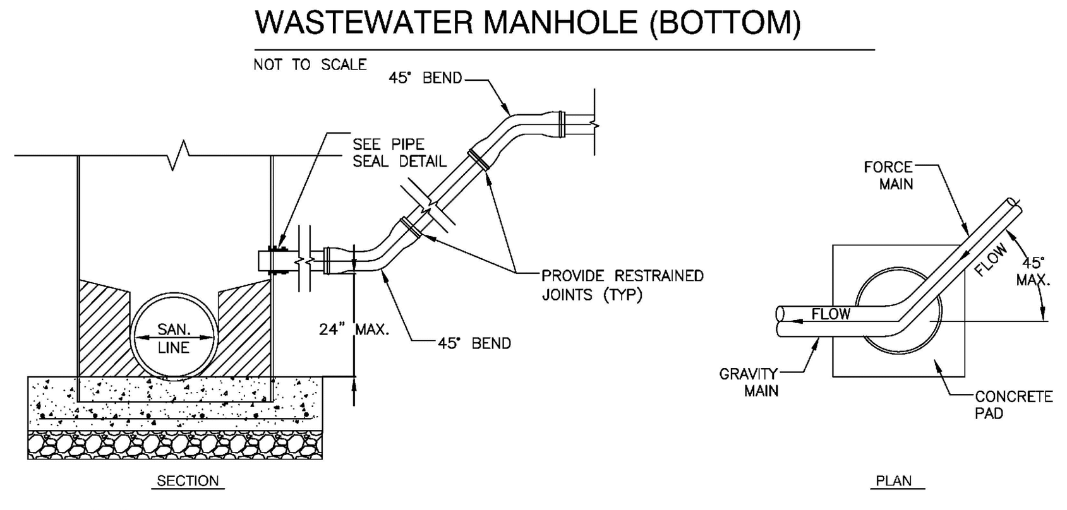
PIPE SEAL DETAIL

NOT TO SCALE



MANHOLE PROTECTION IN UNPAVED AREAS (CULTIVATED/SPECIAL)

NOT TO SCALE



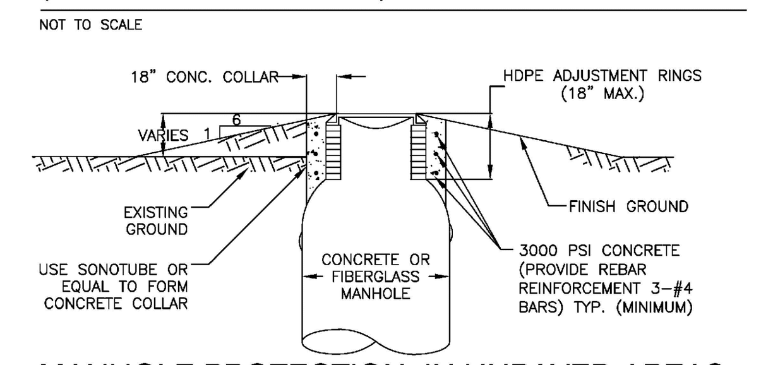
NOTES:
1. ALL BENDS SHALL BE DUCTILE IRON WITH RESTRAINED JOINTS.
2. INFLUENT FORCE MAIN MUST BE NO MORE THAN 45° FROM PARALLEL WITH DOWNSTREAM FLOW DIRECTION.

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.
8. 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 (RESIDENTIAL)

NOT TO SCALE

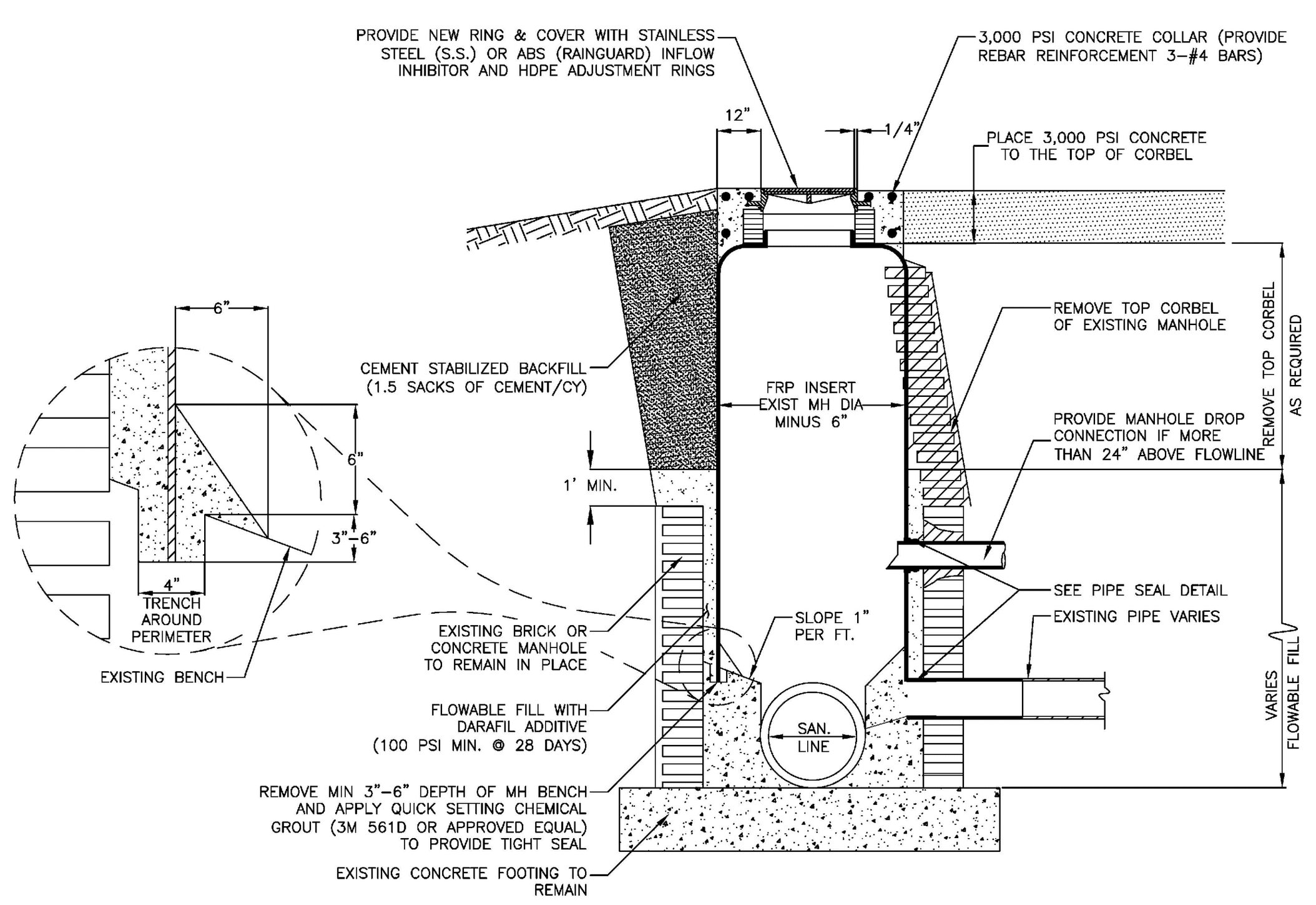
CONSULTANT'S SHEET NO.

CITY OF CORPUS CHRISTI
TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI
WASTEWATER STANDARD DETAILS
MANHOLE INSTALLATION
1 OF 4

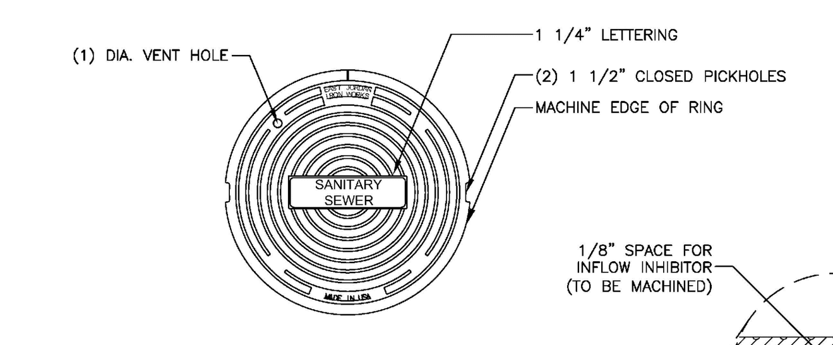
REVISION NO. | DATE | BY | DESCRIPTION

SHEET ____ of ____
RECORD DRAWING NO.
CITY PROJECT #____



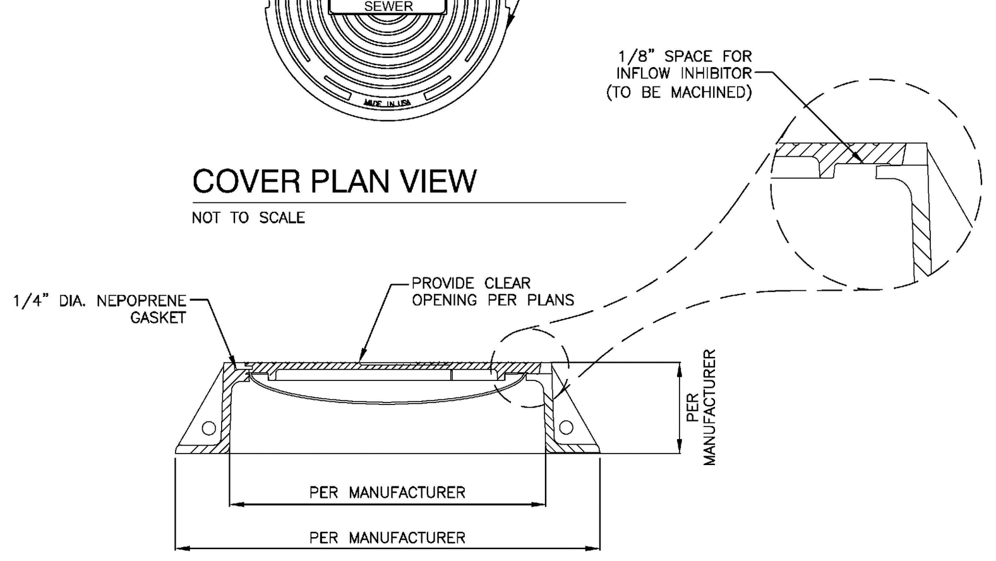
FRP INSERT REHABILITATION OF EXISTING MANHOLE

NOT TO SCALE



COVER PLAN VIEW

NOT TO SCALE

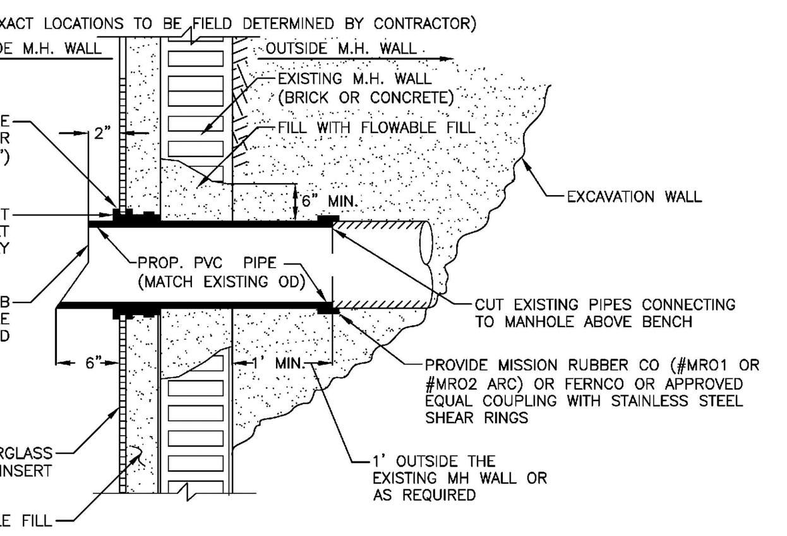


SECTION OF RING & COVER

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

CONSULTANT'S SHEET NO.

CITY OF CORPUS CHRISTI
TEXAS
Department of Engineering Services

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

REVISION NO. | DATE | BY | DESCRIPTION

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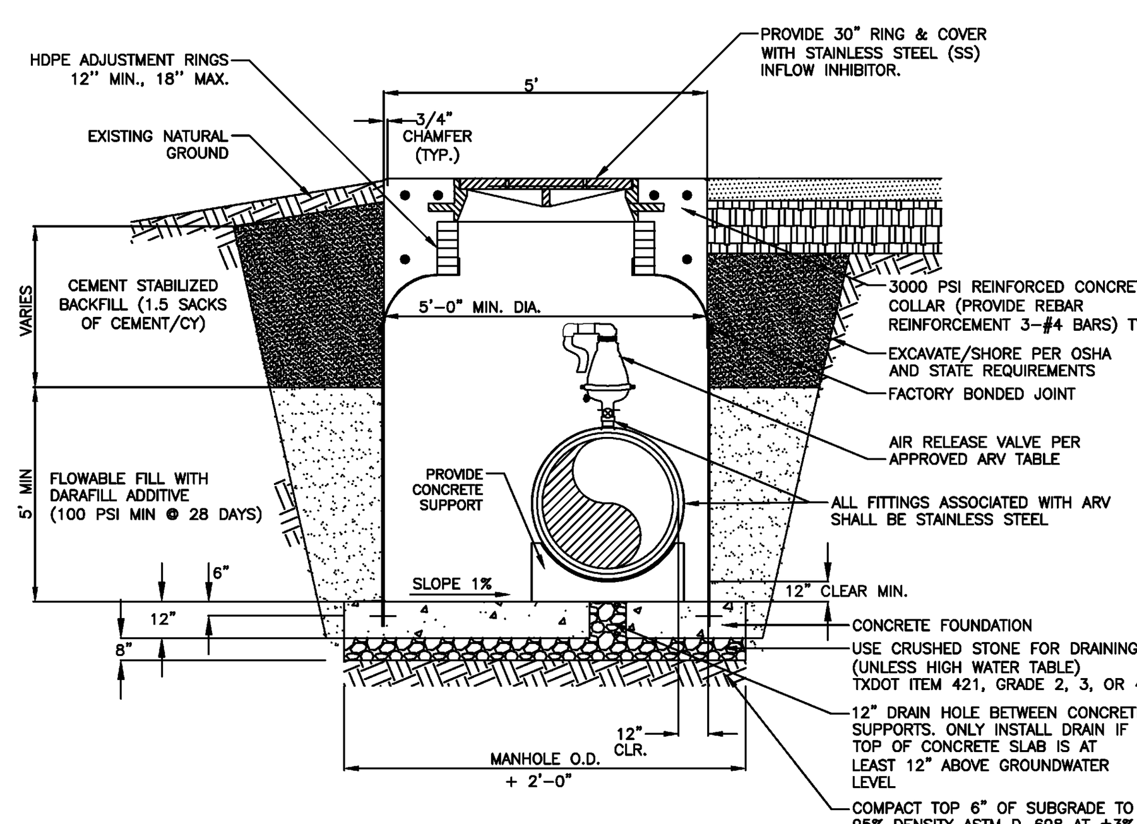
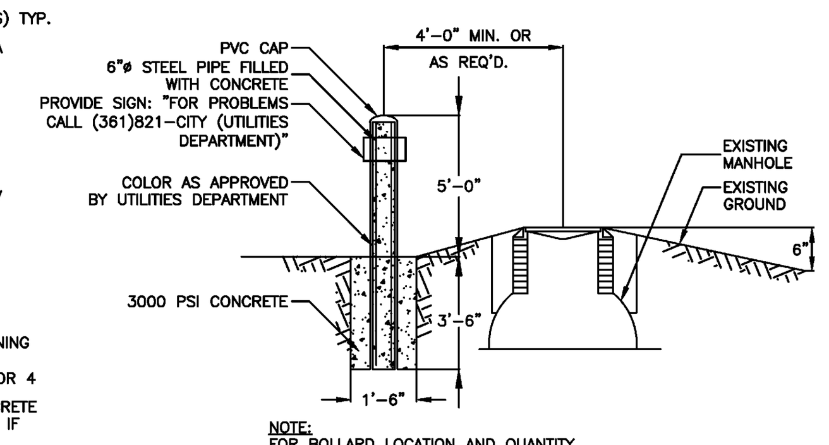


AIR RELEASE VALVE AND MANHOLE

NOT TO SCALE

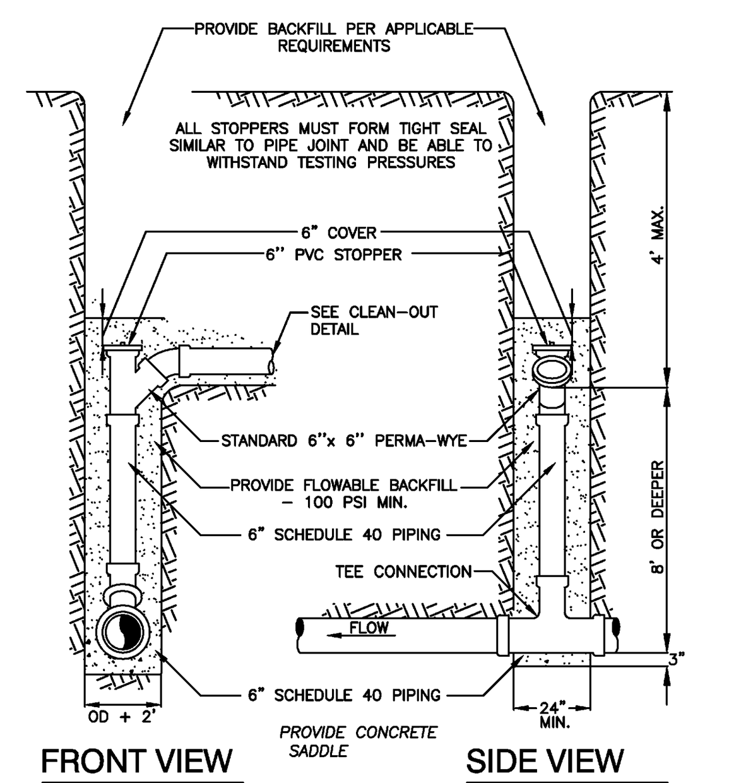
APPROVED ARVs		
MANUFACTURER	MODEL NAME	MATERIAL
A.R.I.	D-025 OR D-025 SHORT	316 SS
H-TEC	MODEL 986 (SS) AND 988	
VENT OMAT	MODEL RGXII (ST. STEEL)	
VALMATIC	VM 48AS OR VM 49AS	



NOTE:
FOR BOLLARD LOCATION AND QUANTITY, SEE CONSTRUCTION PLANS

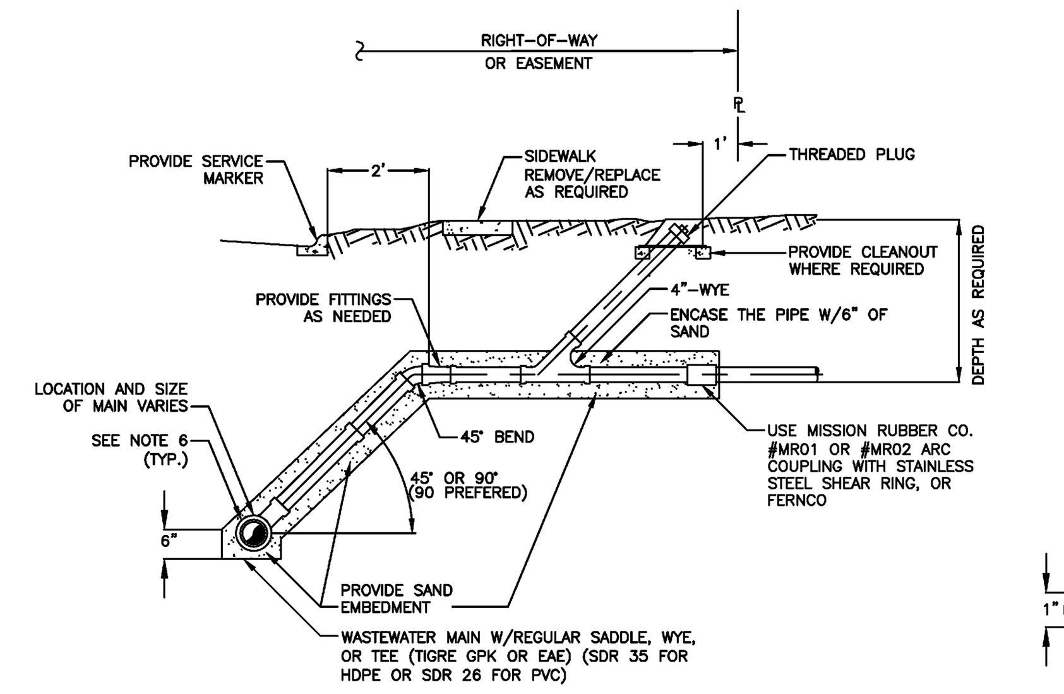
BOLLARD DETAIL

NOT TO SCALE



DEEP CUT SERVICE CONNECTION

NOT TO SCALE

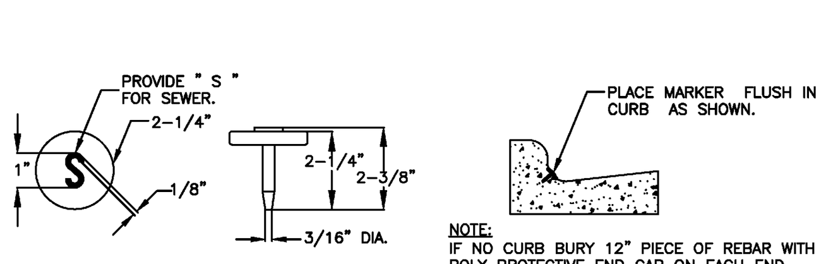


SERVICE CONNECTION DETAILS

NOT TO SCALE

SERVICE CONNECTION NOTES:

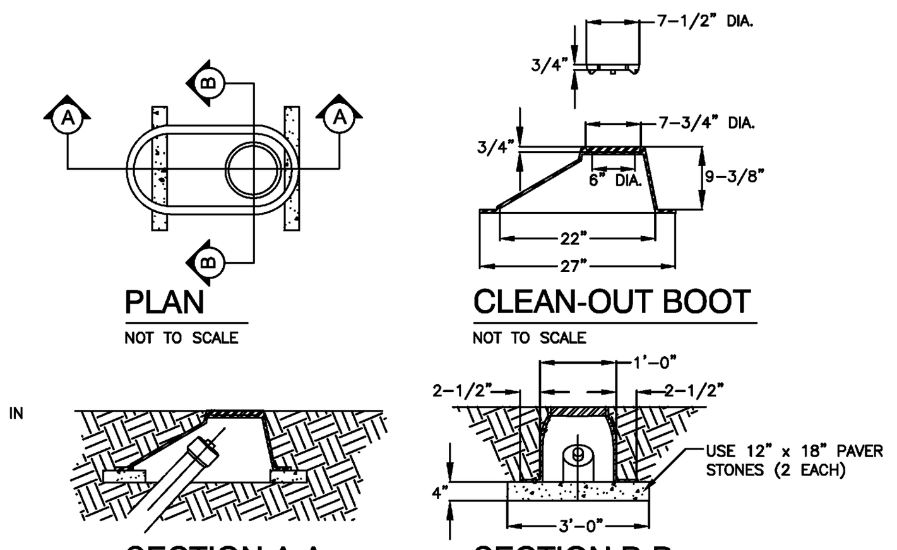
1. CONTRACTOR TO PROVIDE SERVICE CONNECTION TAP TO THE R.O.W. LINE & CONNECT EXIST. SERVICE LINE OUTSIDE EASEMENT AS SHOWN AND REQUIRED.
2. ALL SERVICE PIPE AND FITTINGS TO BE SOLVENT WELD SCH 40 PVC UNLESS SHOWN OTHERWISE IN THE PLANS.
3. FOR EXISTING MAIN PIPE MATERIAL – PVC AND/OR VCP USE UTILITY 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.



NOTE:
IF NO CURB BURY 12" PIECE OF REBAR WITH POLY PROTECTIVE END CAP ON EACH END.

STANDARD SERVICE MARKER

BRASS – ONE REQUIRED EACH STREET TAP
NOT TO SCALE



TYPICAL CAST IRON CLEAN-OUT BOOT

NOT TO SCALE

CONSULTANT'S SHEET NO.

CITY OF CORPUS CHRISTI
TEXAS
Department of Engineering Services

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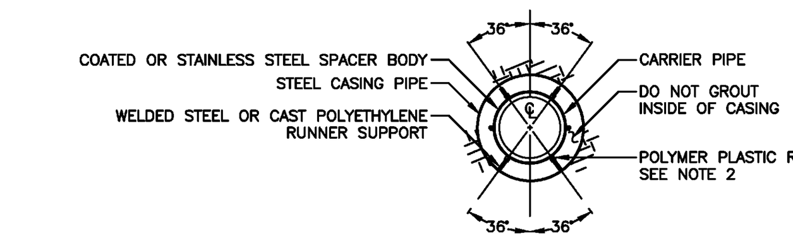
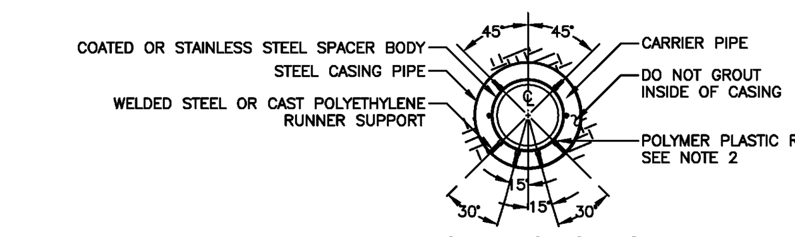


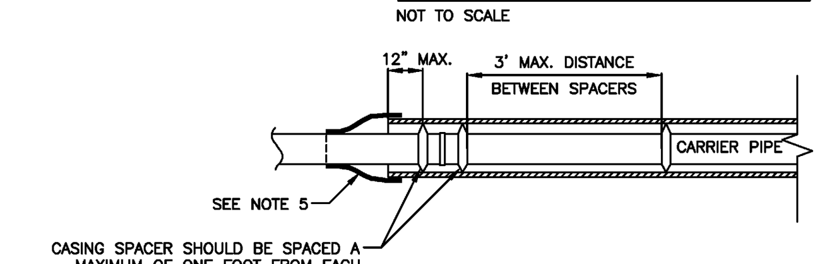
4" TO 10" CASING DETAIL

NOT TO SCALE



12" TO 36" CASING DETAIL

NOT TO SCALE

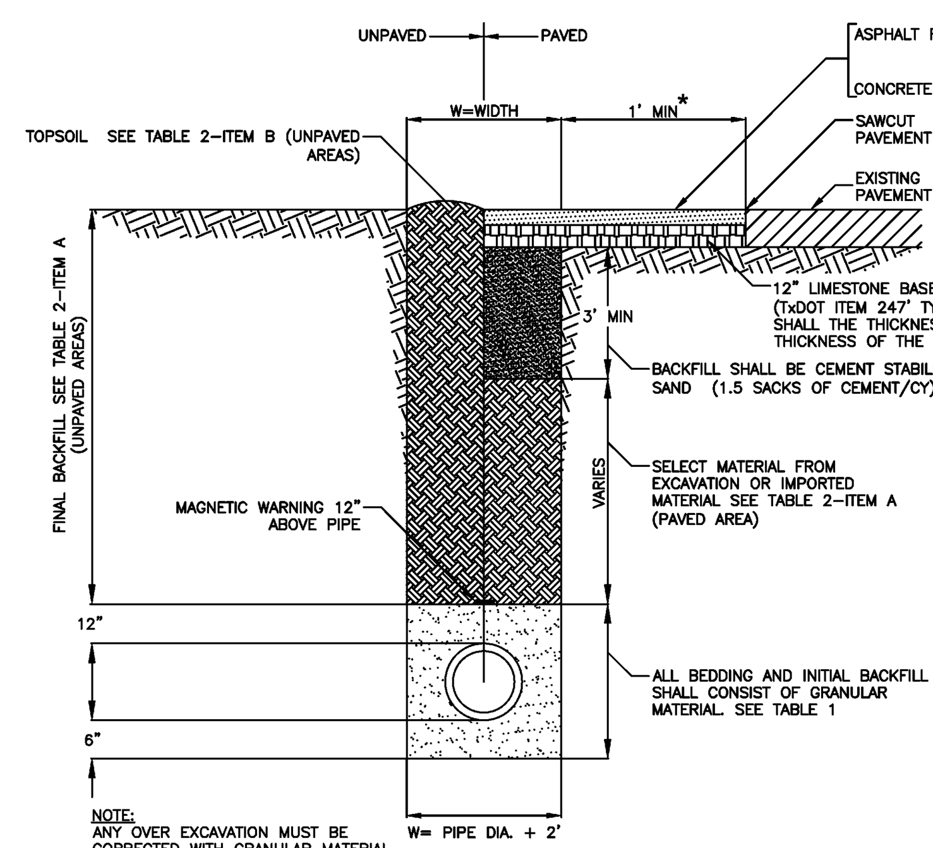


CASING DETAIL

NOT TO SCALE

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.



ASPHALT REPAIR: 3" MIN. THICKNESS. IN NO CASE SHALL REPAIR BE LESS THAN THE THICKNESS OF EXISTING PAVEMENT. PROVIDE PRIME COAT (0.15 GAL. PER SY MIN.)
CONCRETE REPAIR: 12" MIN. THICKNESS. IN NO CASE SHALL REPAIR BE LESS THAN THE THICKNESS OF EXISTING CONCRETE PAVEMENT.

NOTE:
ANY OVER EXCAVATION MUST BE CORRECTED WITH GRANULAR MATERIAL SHOWN IN TABLE 1.

TRENCH BACKFILL FOR WASTEWATER LINES AND PAVEMENT REPAIR FOR UTILITIES

NOT TO SCALE

*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.

GENERAL NOTES FOR BACKFILL

TABLE 1 BEDDING AND INITIAL BACKFILL (BELOW PIPE TO 12" ABOVE PIPE)	TABLE 2 FINAL BACKFILL (GREATER THAN 12" ABOVE PIPE) UNPAVED AREAS	 PAVED AREAS
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.	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)	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 D588. MOISTURE TO BE ADJUSTED TO TO (+/-2%) OF OPTIMUM.

CONSULTANT'S SHEET NO.

CITY OF CORPUS CHRISTI
TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI
WASTEWATER STANDARD DETAILS
PAVEMENT REPAIR/BACKFILL/GENERAL NOTES/CASING DETAILS
4 OF 4

REVISION NO. | DATE | BY | DESCRIPTION

SHEET ____ of ____
RECORD DRAWING NO.
CITY PROJECT #____

STATE OF TEXAS
NIXON M. WELSH
36240
REGISTERED PROFESSIONAL ENGINEER
08/03/23

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.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

CITY STANDARD WASTE WATER DETAILS

DWN.		PLOT SCALE:	1" = 50'	COM. NO.	CITY WW.DWG
		SCALE (H):	AS SHOWN	JOB NO.	05069
CHK.	N. WELSH	SCALE (V):	AS SHOWN		
		DATE PLOTTED	08/03/23	SHEET	17 OF 20

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 DIVISION. 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, "DARAFILL" 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.

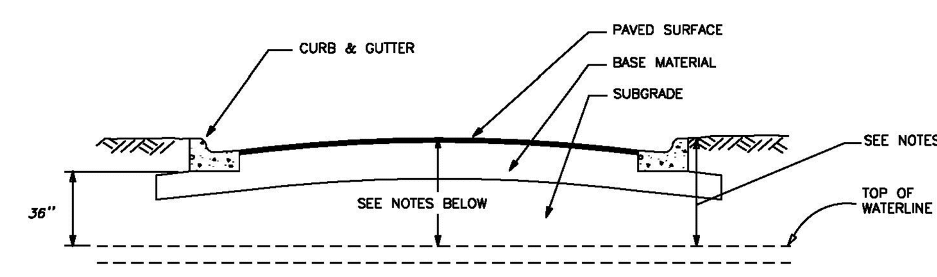
SPECIAL NOTE:

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 .

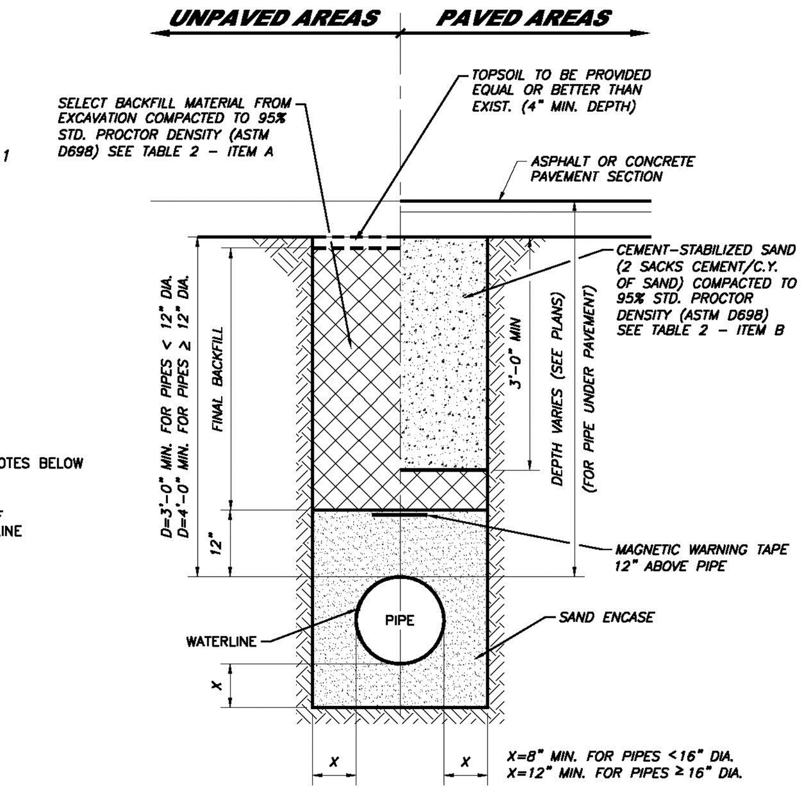
NOTES:
CONTRACTOR MAY BE REQUIRED BY THE WATER DIVISION INSPECTOR TO INSTALL CENTERED JOINTS OF DUCTILE IRON PIPE AT WATERLINE CROSSINGS OF EXISTING HAZARDOUS PRODUCT FLOWLINES.



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.



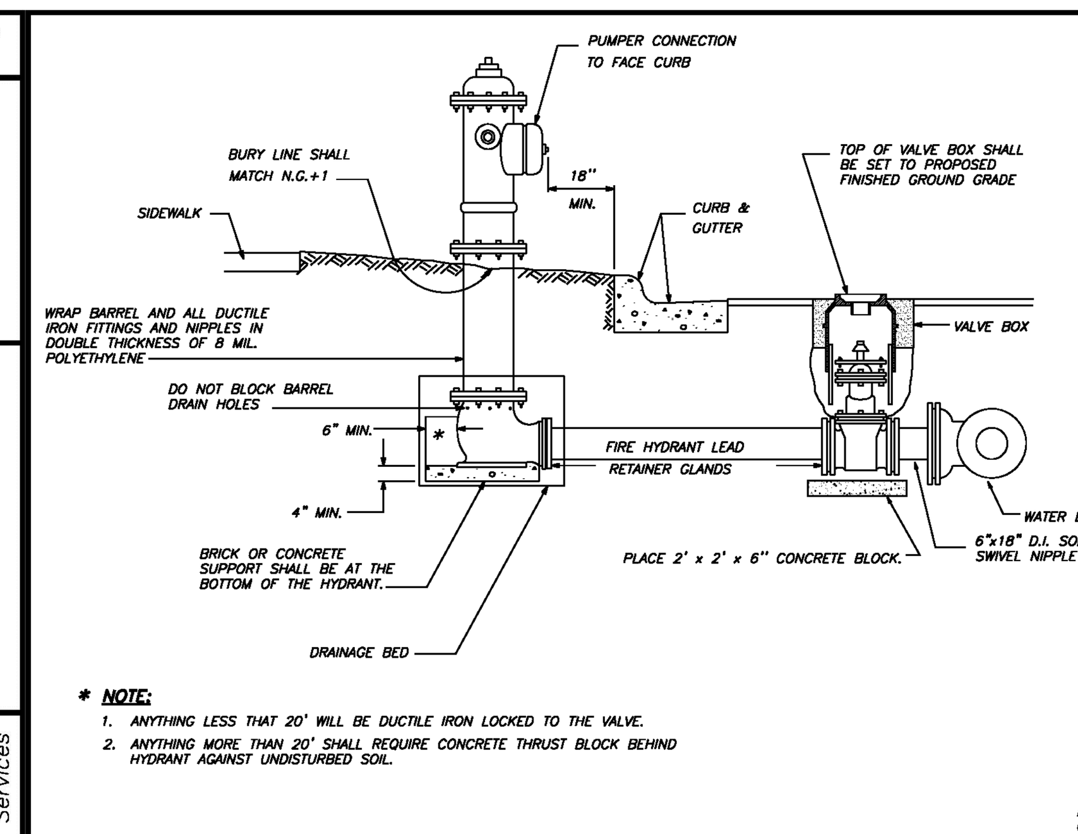
TYP. PIPE TRENCHING, BEDDING AND BACKFILL FOR WATERLINE

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)	TABLE 2 FINAL BACKFILL (GREATER THAN 12" ABOVE PIPE) UNPAVED AREAS	PAVED AREAS
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.	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)	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 SELECT 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.

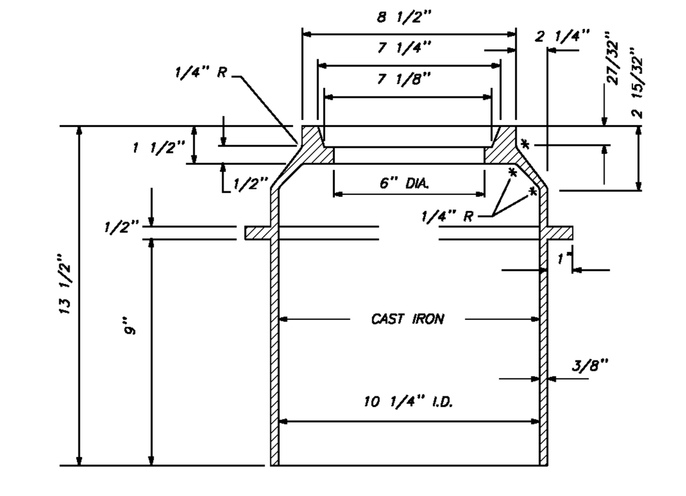


*** NOTE:**
1. ANYTHING LESS THAT 20' WILL BE DUCTILE IRON LOCKED TO THE VALVE.
2. ANYTHING MORE THAN 20' SHALL REQUIRE CONCRETE THRUST BLOCK BEHIND HYDRANT AGAINST UNDISTURBED SOIL.

FIRE HYDRANT ASSEMBLY DETAIL (TYPE 1)

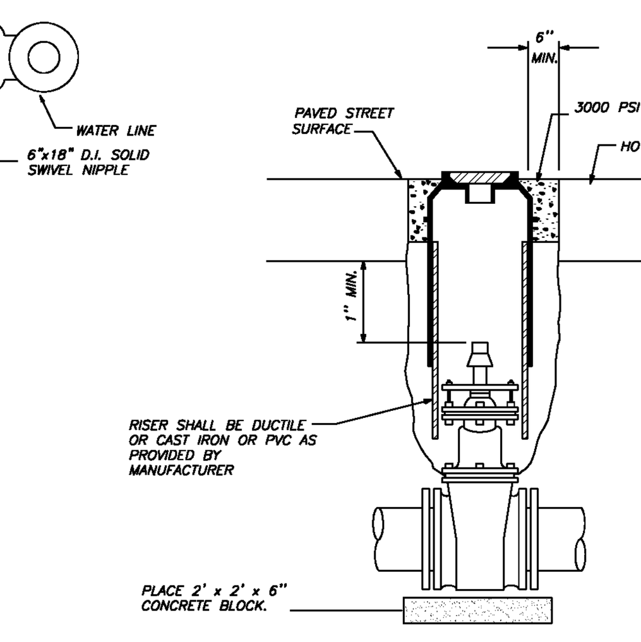
NOT TO SCALE

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.



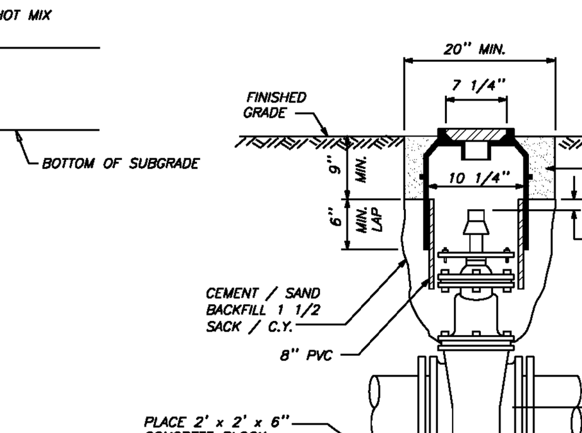
EXTENSION DETAIL

NOT TO SCALE



VALVE BOX DETAIL @ PAVEMENT

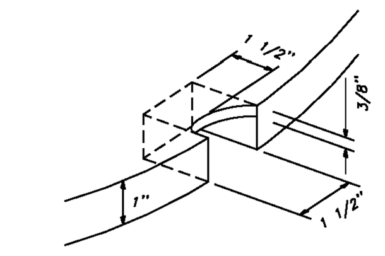
NOT TO SCALE



VALVE BOX DETAIL @ NATURAL GROUND

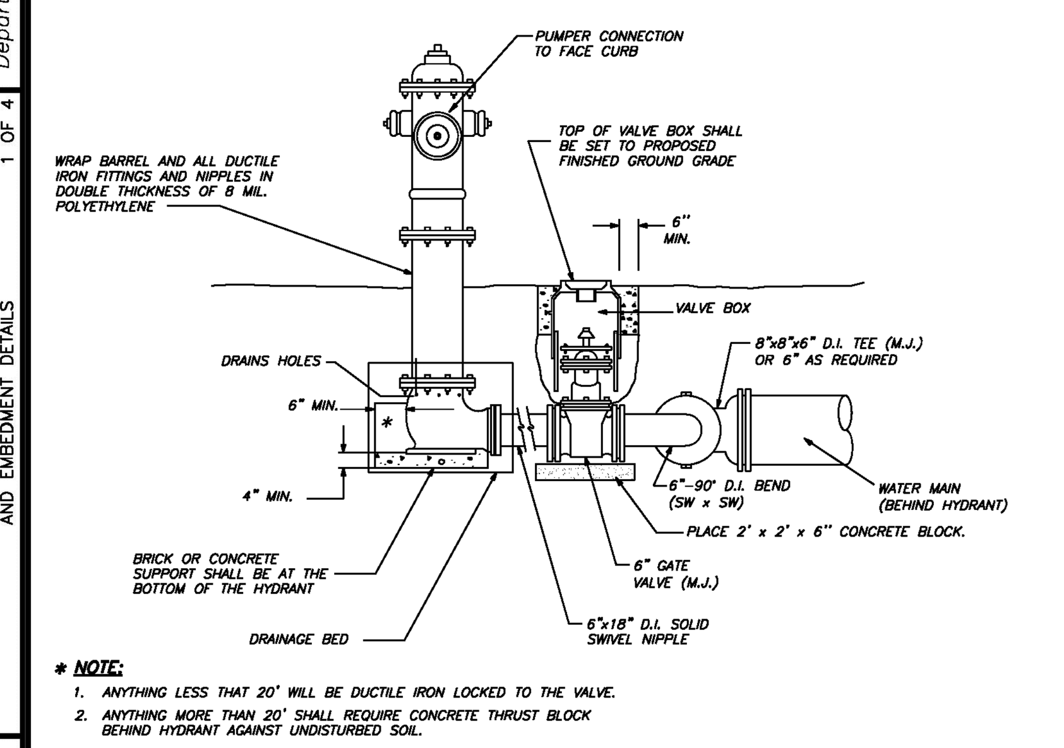
NOT TO SCALE

ALL VALVES SHALL BE HOUSED IN APPROVED VALVE BOXES



PICK NOTCH

NOT TO SCALE

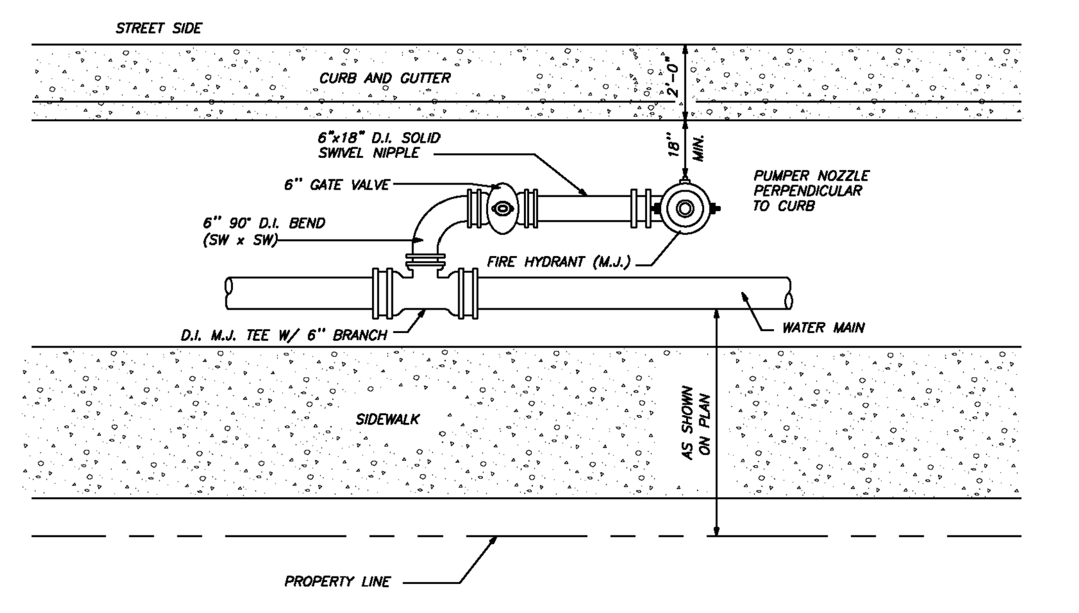


*** NOTE:**
1. ANYTHING LESS THAT 20' WILL BE DUCTILE IRON LOCKED TO THE VALVE.
2. ANYTHING MORE THAN 20' SHALL REQUIRE CONCRETE THRUST BLOCK BEHIND HYDRANT AGAINST UNDISTURBED SOIL.

FIRE HYDRANT ASSEMBLY DETAIL (TYPE 2)

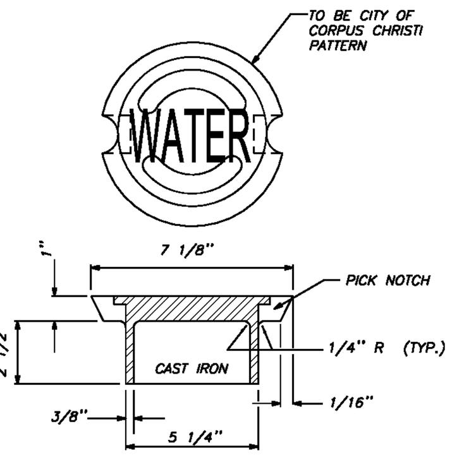
WATER LINE BEHIND CURB

NOT TO SCALE



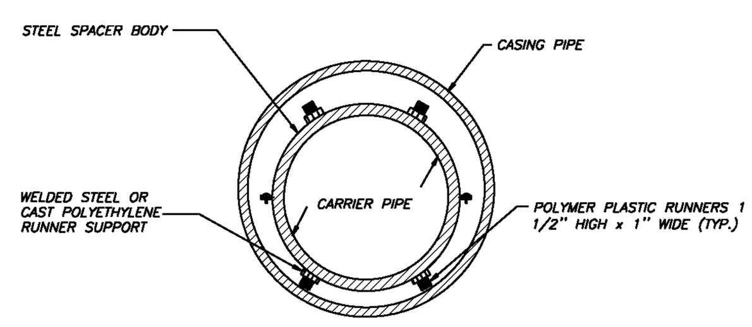
FIRE HYDRANT ASSEMBLY DETAIL (TYPE 2)

NOT TO SCALE



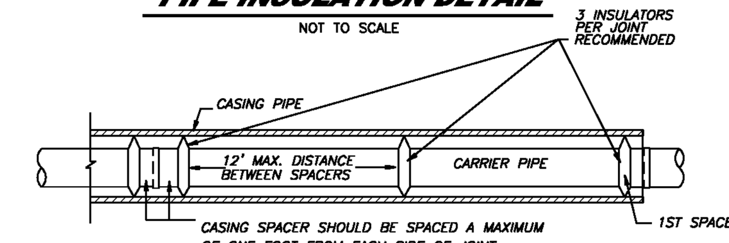
LID DETAIL

NOT TO SCALE



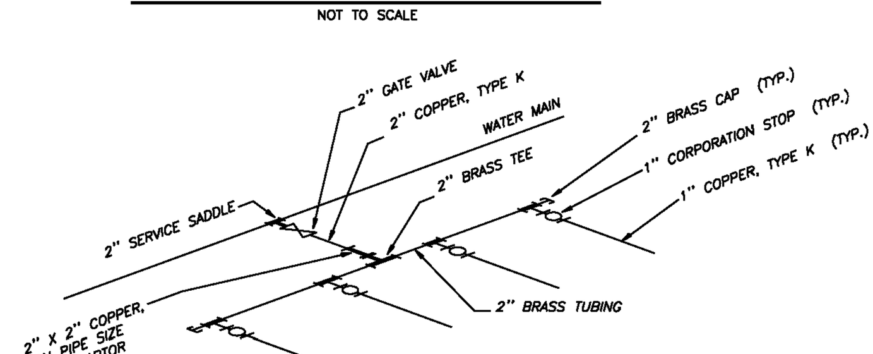
PIPE INSULATION DETAIL

NOT TO SCALE



INSULATOR SPACING DETAIL

NOT TO SCALE



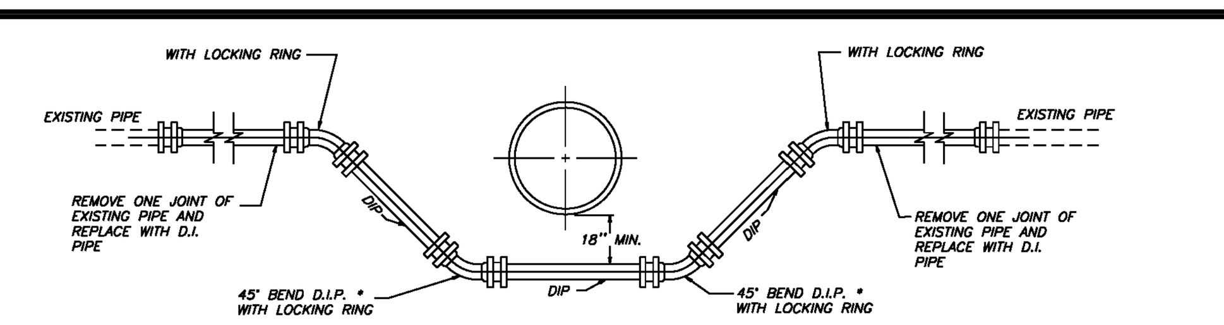
NOTE:
MANIFOLDS LARGER THAN SIX CONNECTIONS WILL REQUIRE APPROVAL FROM THE CITY OF CORPUS CHRISTI WATER DEPARTMENT FOR ANOTHER WATER TAP AND SERVICE.

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 BARRIER 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.

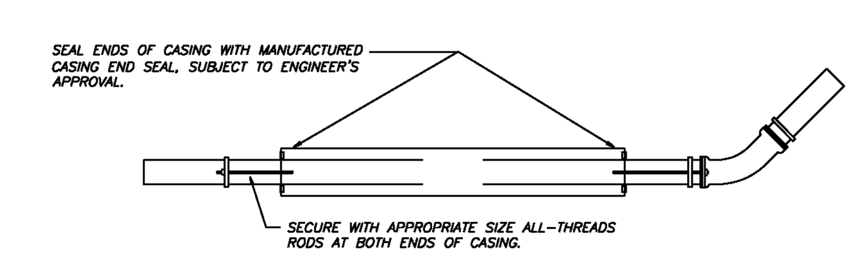


* ALL FITTINGS SHALL BE RESTRAINED BY MECHANICAL JOINT RESTRAINT DEVICE "MEGALUG" AS INDICATED BY PLANS AND SPECS., OR ENGINEER APPROVED EQUAL, AND CONCRETE THRUST BLOCK, AS DESIGNATED BY WATER DIVISION INSPECTOR

WATERLINE ADJUSTMENT DETAIL

NOT TO SCALE

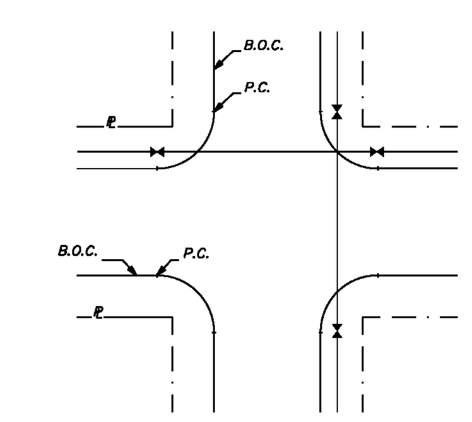
NOTE:
SEE #18 UNDER GENERAL NOTES



NOTE:
CASING SHALL BE STEEL.

TYPICAL CASING DETAIL

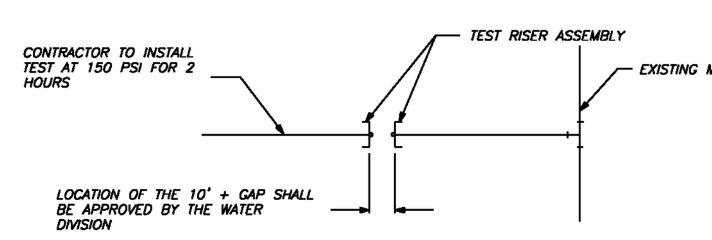
NOT TO SCALE



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

TYPICAL VALVE INSTALLATION AT INTERSECTIONS

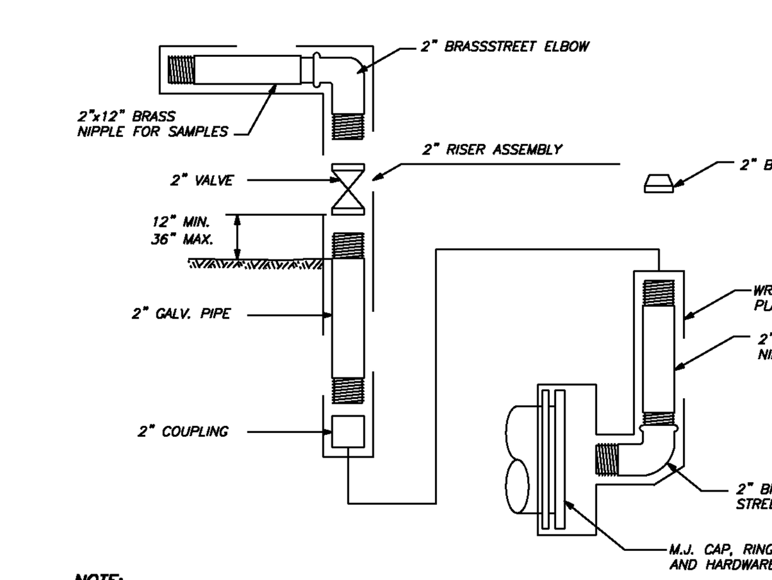
NOT TO SCALE



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

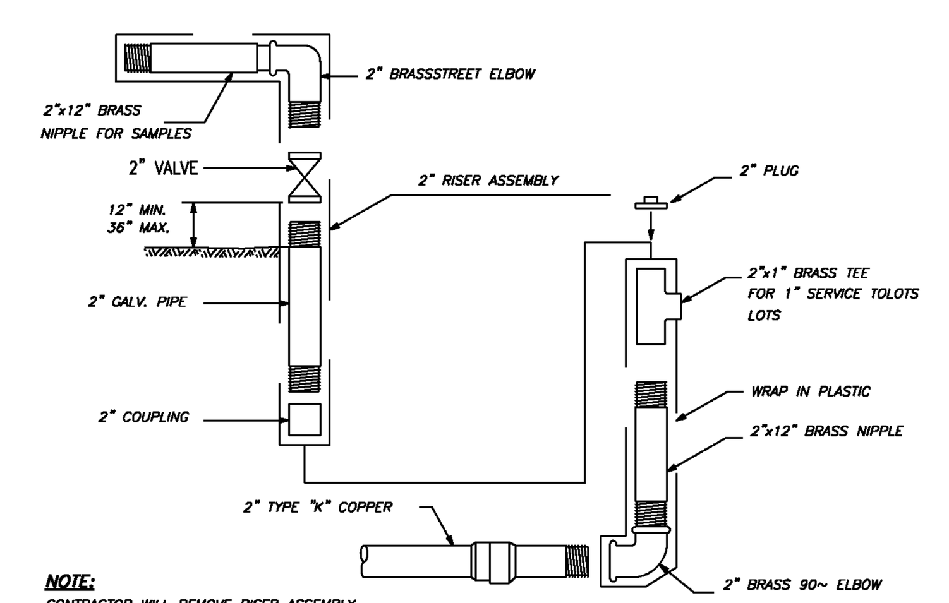


NOTE:
AFTER BACTERIOLOGICAL SAMPLE PASSES TEST, CONTRACTOR WILL REMOVE RISER ASSEMBLY AND INSTALL 2" BRASS CAP

DETAIL "B" TEST RISER ASSEMBLY

NOT TO SCALE

FURNISHED AND INSTALLED BY CONTRACTOR

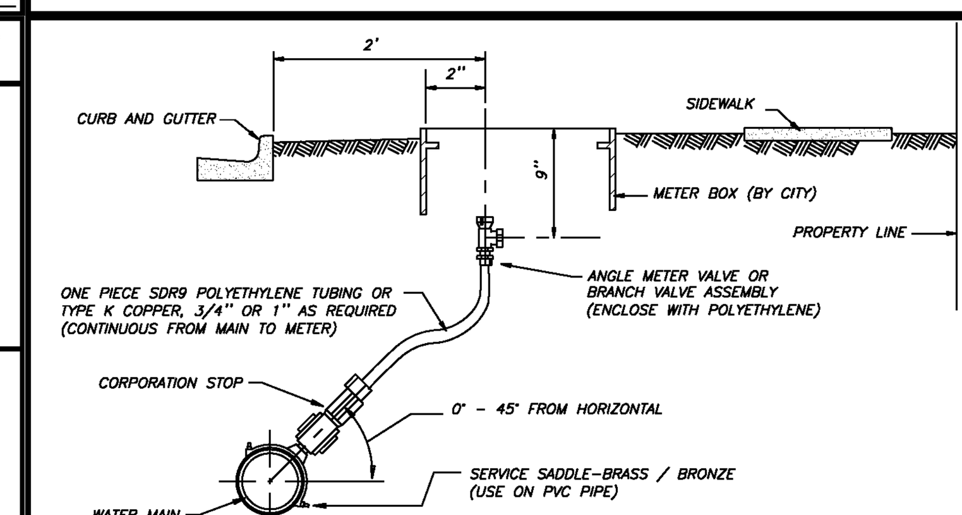


NOTE:
CONTRACTOR WILL REMOVE RISER ASSEMBLY AND INSTALL 2" BRASS PLUG ON 2"x1" BRASS TEE AFTER SAMPLE PASSES

DETAIL "C" TEST RISER ASSEMBLY

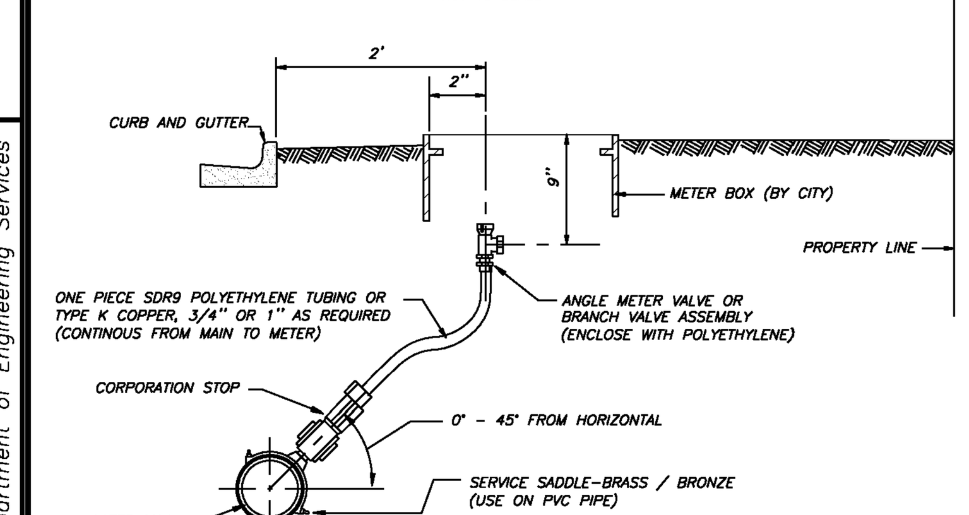
NOT TO SCALE

FURNISHED AND INSTALLED BY CONTRACTOR



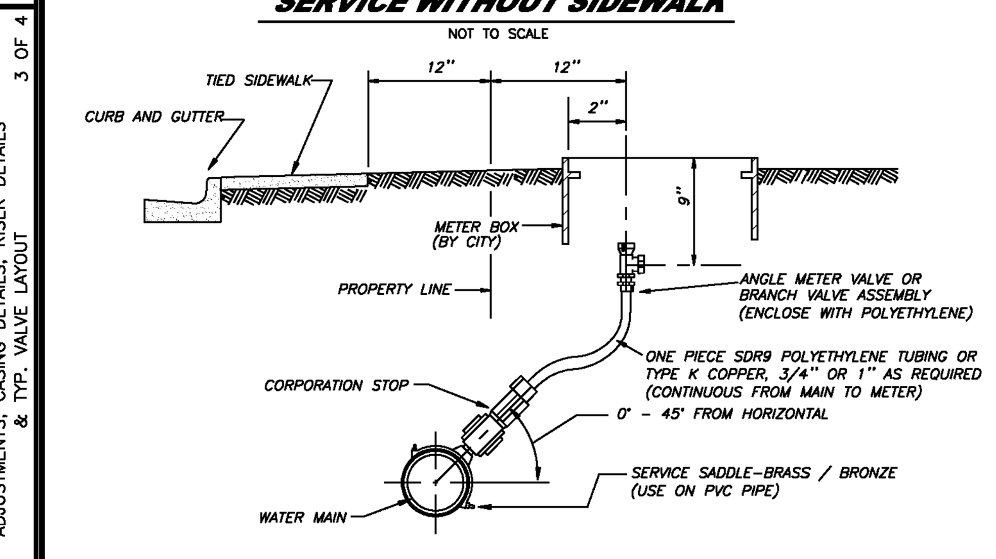
SERVICE WITH SIDEWALK

NOT TO SCALE



SERVICE WITHOUT SIDEWALK

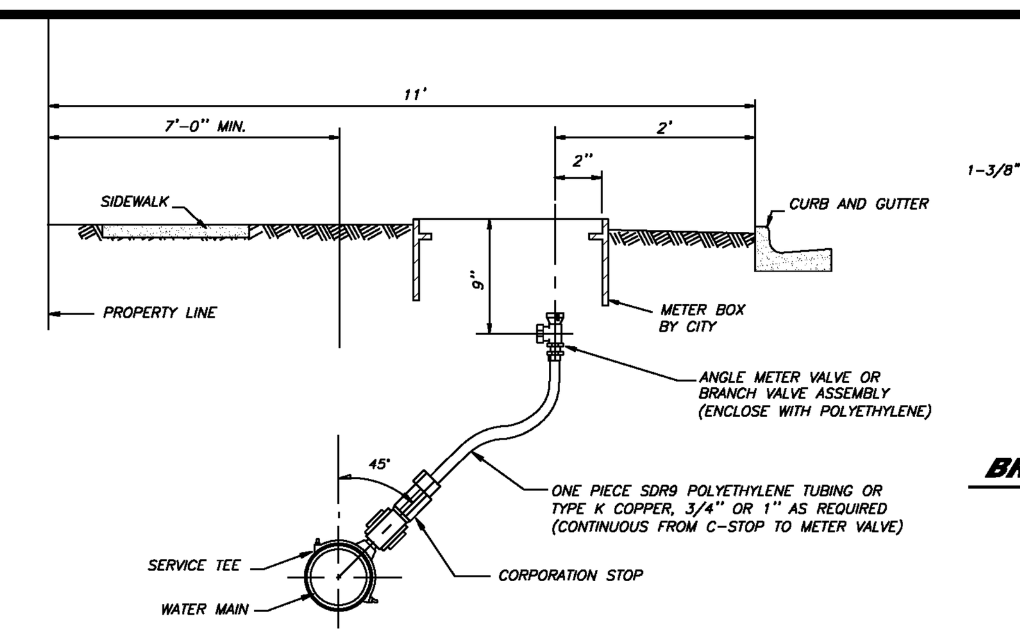
NOT TO SCALE



SERVICE WITH SIDEWALK TIED TO CURB

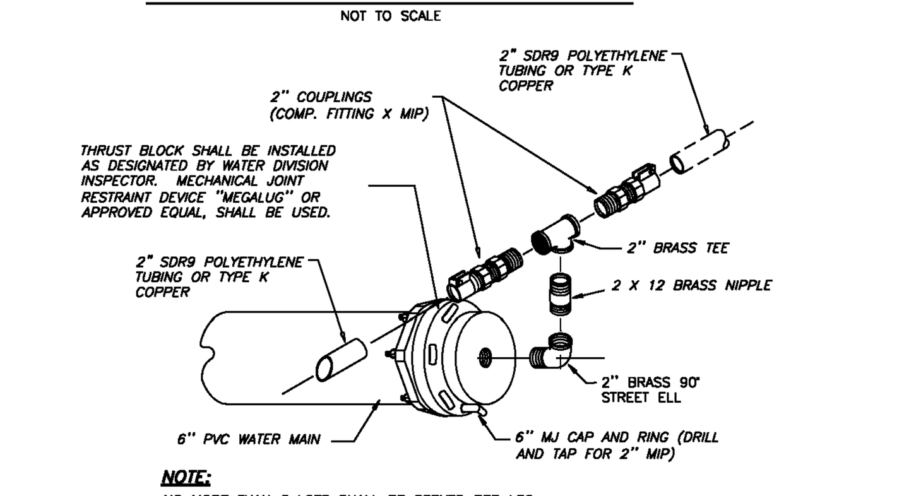
NOT TO SCALE

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 TIEDISIDEWALK SITUATION.



TYPICAL CUL-DE-SAC SERVICE

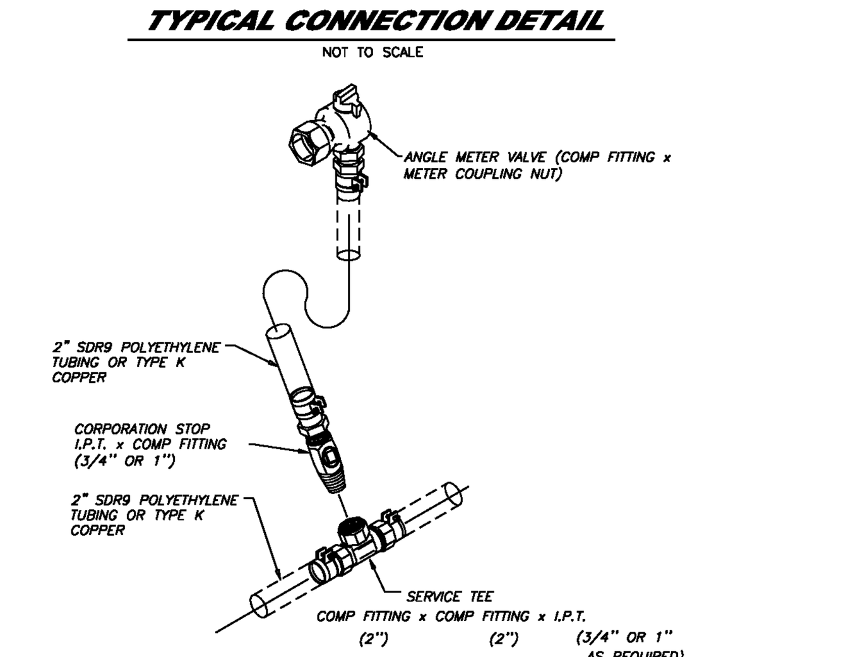
NOT TO SCALE



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

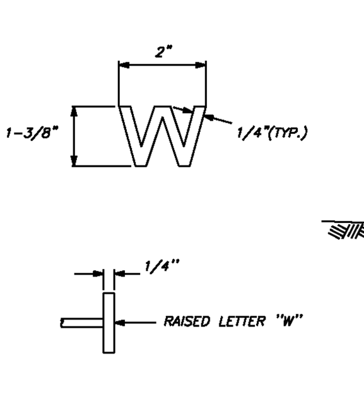
TYPICAL CONNECTION DETAIL

NOT TO SCALE



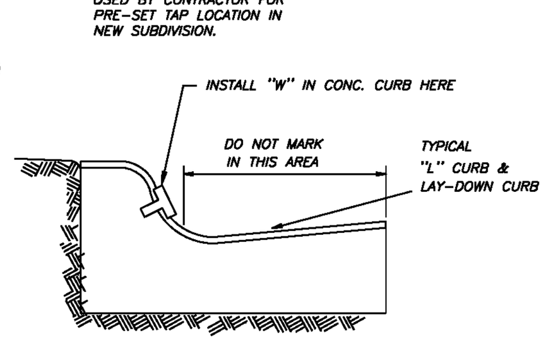
TYPICAL CONNECTION DETAIL

NOT TO SCALE



BRASS "W" DETAIL

NOTE:
USED BY CONTRACTOR FOR PRE-SET TAP LOCATION IN NEW SUBDIVISION.



MARKER LOCATION

PRE-SET SERVICE LINE MARKER DETAILS

NOT TO SCALE

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)

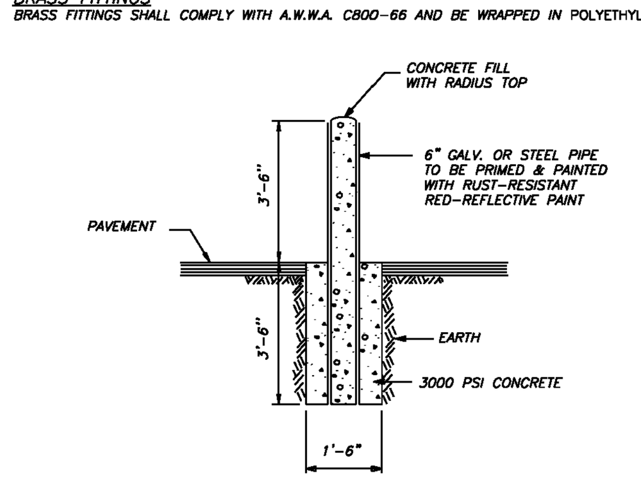
ANGLE METER STOP
REQUIRED AT ALL METERS – SIZES 3/4" & 1" – INSTALL 3/4" UNLESS DIRECTED OTHERWISE – COPPER COMPRESSION W/ CLAMP INLET BY METER COUPLING NUT OUTLET.

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

CONSULTANT'S SHEET No. | DESCRIPTION | BY | DATE | REVISION NO.

CITY of CORPUS CHRISTI TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI
WATER STANDARD DETAILS
WATER DISTRIBUTION SYSTEM GENERAL NOTES & BACKFILL AND EMBEDMENT DETAILS
1 OF 4

SHEET ____ of ____
RECORD DRAWING NO.
CITY PROJECT # ______

CITY OF CORPUS CHRISTI
WATER STANDARD DETAILS
FIRE HYDRANT, VALVE BOX AND LID
2 OF 4

CITY OF CORPUS CHRISTI
WATER STANDARD DETAILS
ADJUSTMENTS, CASING DETAILS, RISER DETAILS & TYP. VALVE LAYOUT
3 OF 4

CITY OF CORPUS CHRISTI
WATER STANDARD DETAILS
MAIN TO SERVICE DETAILS AND OTHERS
4 OF 4

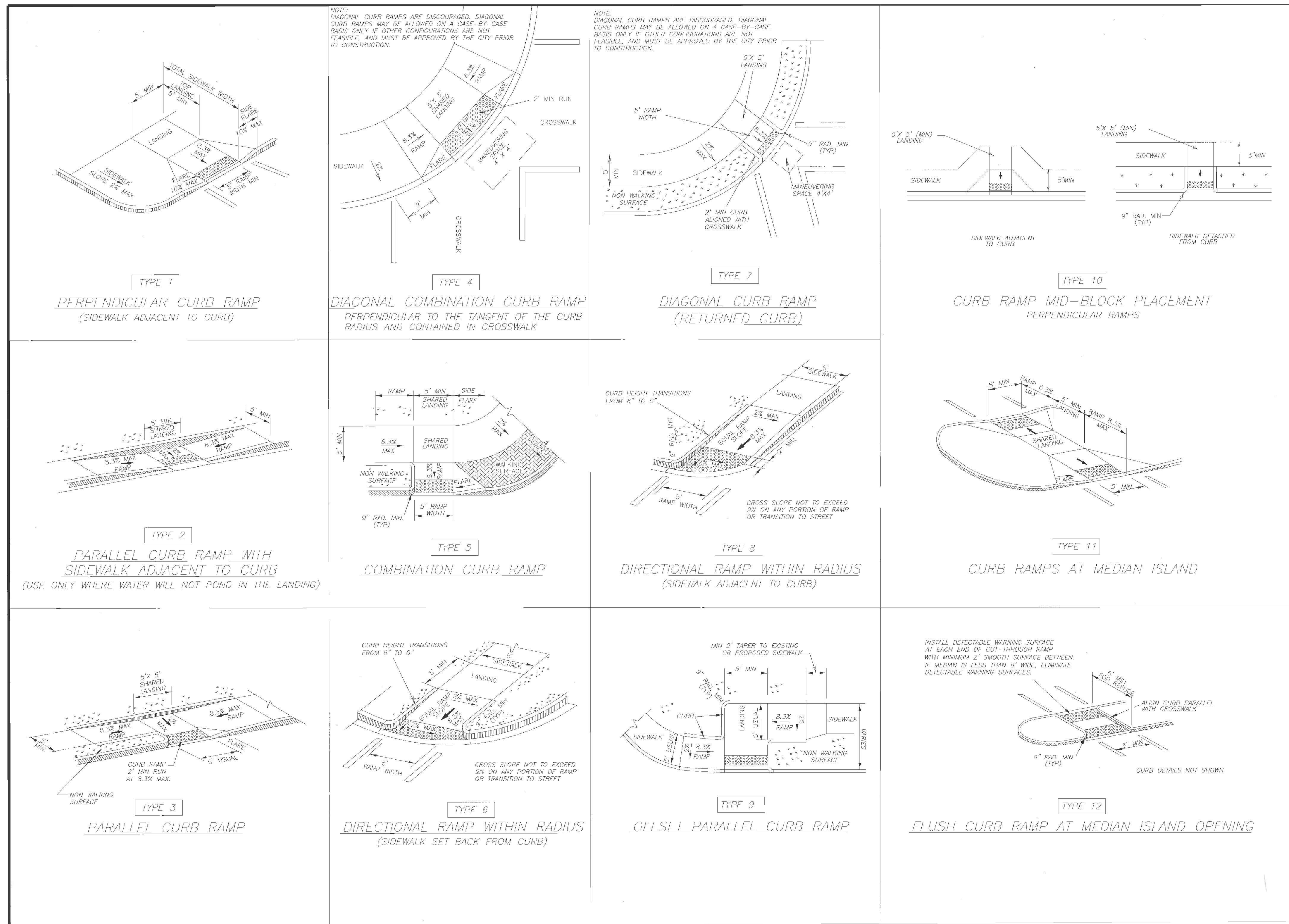
RELEASED FOR CONSTRUCTION
Bria A. Whitmire, P.E., CFM, CPM
Development Services Engineer
City of Corpus Christi
Note: Construction Plans will expire based on the the conditions stated in UDC 3.8.5.F.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

CITY STANDARD WATER DETAILS

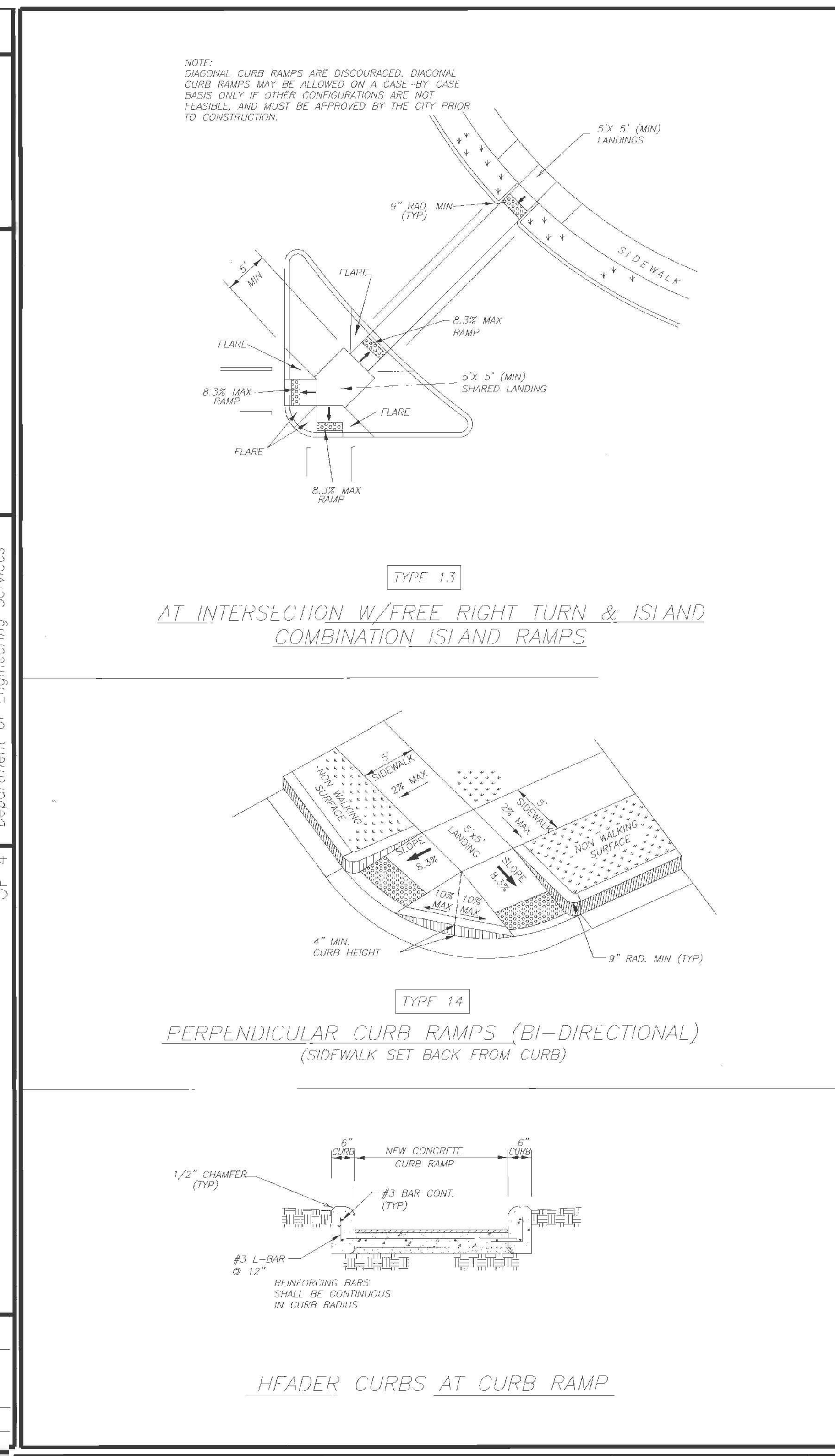
DWN.		PLOT SCALE: 1" = 50'	COM. NO. CITY WTR.DWG
		SCALE (H): AS SHOWN	JOB NO. 05069
CHK.	N. WELSH	SCALE (V): AS SHOWN	
		DATE PLOTTED 08/03/23	SHEET 18 OF 20



TYPE 1
PERPENDICULAR CURB RAMP
(SIDEWALK ADJACENT TO CURB)
TYPE 4
DIAGONAL COMBINATION CURB RAMP
PERPENDICULAR TO THE TANGENT OF THE CURB RADIUS AND CONTAINED IN CROSSWALK
TYPE 7
DIAGONAL CURB RAMP (RETURNED CURB)
TYPE 10
CURB RAMP MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS
TYPE 2
PARALLEL CURB RAMP WITH SIDEWALK ADJACENT TO CURB
(USE ONLY WHERE WATER WILL NOT POND IN THE LANDING)
TYPE 5
COMBINATION CURB RAMP
TYPE 8
DIRECTIONAL RAMP WITHIN RADIUS
(SIDEWALK ADJACENT TO CURB)
TYPE 11
CURB RAMPS AT MEDIAN ISLAND
TYPE 3
PARALLEL CURB RAMP
TYPE 6
DIRECTIONAL RAMP WITHIN RADIUS
(SIDEWALK SET BACK FROM CURB)
TYPE 9
OFFSET PARALLEL CURB RAMP
TYPE 12
FLUSH CURB RAMP AT MEDIAN ISLAND OPENING

CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI PEDESTRIAN CURB RAMP STANDARDS 1 OF 4



SUBGRADE PREPARATION:

1. SUBGRADE UNDER CONCRETE SIDEWALKS AND CURB RAMPS SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.

SIDEWALK NOTES:

1. THE MINIMUM SIDEWALK WIDTH FOR ALL ARTERIAL AND COLLECTOR STREETS IS 5'. WHERE A 5' SIDEWALK CAN NOT BE PROVIDED DUE TO SITE CONSTRAINTS, A MINIMUM 4' SIDEWALK MAY BE PROVIDED. 5'X5' PASSING AREAS SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200' FOR ALL SIDEWALKS LESS THAN 5' IN WIDTH.
2. MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK SURFACE IS 2%.
3. ALL EXPANSION JOINTS TO BE 3/4" THICK WOOD FIBER ASPHALT-IMPREGNATED EXPANSION BOARD, UNLESS OTHERWISE NOTED.
4. ALL CONCRETE TO BE CLASS 'A' f'c=3,000 PSI. ALL REINFORCING STEEL TO BE GRADE 60, fy=60,000 PSI.
5. SIDEWALKS SHALL BE AT LEAST 4" THICK CONCRETE.
6. CONCRETE SURFACE TO RECEIVE BROOM FINISH.
7. TRANSVERSE CONTRACTION JOINTS 1/8" WIDE BY 1/2" DEEP SHALL BE CUT IN ALL SIDEWALKS AT 5'-0" INTERVALS (MAXIMUM).
8. PROVIDE PEDESTRIAN ACCESSIBLE ROUTE WITH DETECTABLE WARNING SURFACE FOR SIDEWALKS THAT INTERSECT CONTROLLED DRIVEWAYS. DETECTABLE WARNING SURFACE SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE ACCESSIBLE ROUTE WHERE IT INTERSECTS THE CONTROLLED DRIVEWAY.

CURB RAMP NOTES:

1. PROVIDE CURB RAMPS WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
2. SLOPE CRITERIA2

RAMPS AND LANDING AREAS	MAX SLOPE (V:H, %, IN PER FT)
RAMP IN DIRECTION OF TRAVEL	1:12 / 8.03% / 1" PER FT
SIDE SLOPE OF RAMP (FLARE)	1:10 / 10% / 1.2" PER FT
CROSS SLOPE OF RAMP	1:50 / 2% / 0.24" PER FT
LANDING AREA (ALL DIRECTIONS)	1:50 / 2% / 0.24" PER FT
ADJOINING AREAS	
SIDEWALK IN DIRECTION OF TRAVEL	1:20 / 5% / 0.60" PER FT
SIDEWALK CROSS SLOPE	1:50 / 2% / 0.24" PER FT
GUTTER IN DIRECTION OF TRAVEL	1:20 / 5% / 0.60" PER FT

A SMOOTH TRANSITION (S≤1:50) IN DIRECTION OF TRAVEL IS REQUIRED WHERE RAMPS TRANSITION TO THE STREET

3. PROVIDE FLARED SIDES WHERE THE PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP. FLARED SIDES SHALL BE SLOPED AT 10% MAXIMUM, MEASURED PARALLEL TO THE CURB. RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP, EITHER BECAUSE THE ADJACENT SURFACE IS PLANTED, SUBSTANTIALLY OBSTRUCTED, OR OTHERWISE PROTECTED.
4. LANDINGS SHALL BE 5'X5' MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
5. CURB RAMP MUST BE WHOLLY CONTAINED WITHIN CROSSWALK MARKINGS, EXCLUDING SIDE FLARES.

CURB RAMP NOTES (CONTINUED):

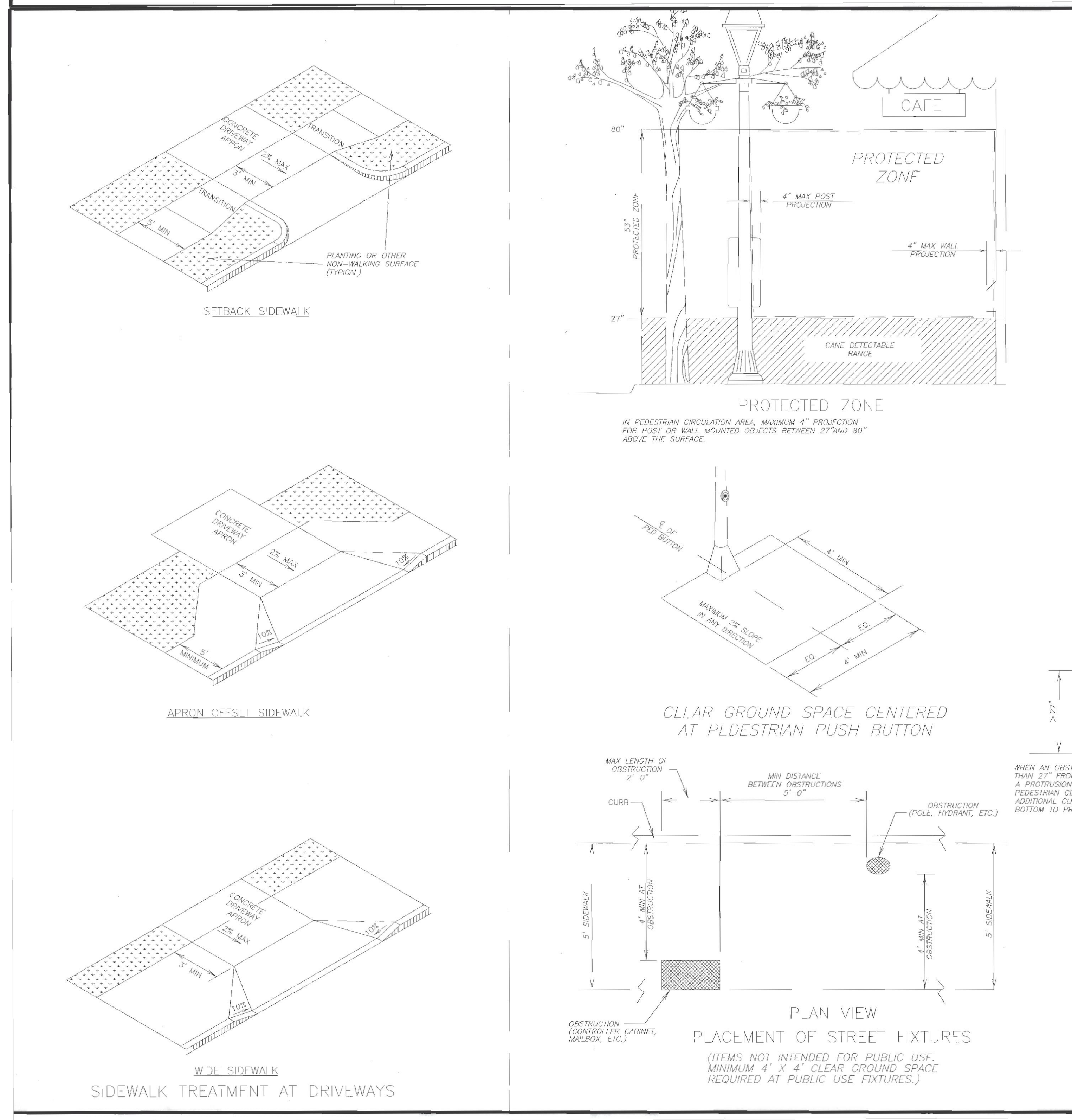
6. CURB RAMPS, FLARES AND LANDINGS SHALL BE AT LEAST 5" THICK CONCRETE AND EXPANSION JOINTS SHALL TYPICALLY BE USED AT MATCHLINE WITH ADJOINING AREAS.
7. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X4' WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
8. LAYBACK CURB AND GUTTER MAY BE CONSTRUCTED MONOLITHICALLY WITH CURB RAMPS. PROVIDE NO. 4 X 12" LONG SMOOTH DOWELS @ 12" ON CENTERS IF NOT PLACED MONOLITHICALLY.
9. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET. 5% MAXIMUM SLOPE IN GUTTER.
10. ADDITIONAL INFORMATION ON CURB RAMP LOCATION, DESIGN, LIGHT REFLECTIVE VALUE AND TEXTURE MAY BE FOUND IN THE CURRENT EDITION OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND 16 TAC §68.102.
11. DIAGONAL CURB RAMPS ARE DISCOURAGED. DIAGONAL CURB RAMPS MAY BE ALLOWED ON A CASE-BY-CASE BASIS ONLY IF OTHER CONFIGURATIONS ARE NOT FEASIBLE, AND MUST BE APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
12. FINAL ACCEPTANCE OF THE PROJECT SHALL BE CONTINGENT UPON THE CONTRACTOR PROVIDING THE CITY WITH A FINAL INSPECTION REPORT FROM A CERTIFIED REGISTERED ACCESSIBILITY SPECIALIST (RAS) PER 16 TAC §68.52 STATING THAT ALL ADA (AMERICANS WITH DISABILITIES ACT) HANDICAP IMPROVEMENTS, AS CONSTRUCTED, COMPLY WITH THE TEXAS ACCESSIBILITY STANDARDS (TAS) FOR ELIMINATION OF ARCHITECTURAL BARRIERS PER TEXAS GOVERNMENT CODE CHAPTER 469.

DETECTABLE WARNING SURFACE NOTES:

1. CURB RAMPS MUST CONTAIN A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES COMPLYING WITH SECTION 705 OF THE TAS. THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACES INCLUDING SIDE FLARES.
2. DETECTABLE WARNING SURFACE FOR RAMPS SHALL BE ADA SOLUTIONS, INC. PART NO. 2460REP CAST-IN-PLACE REPLACEABLE TACTILE WARNING SURFACE TILES TRUNCATED DOME, OR APPROVED EQUIVALENT, IN "BRICK RED" COLOR.
3. ALIGN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
4. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
5. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS A MINIMUM OF 6" AND A MAXIMUM OF 10" FROM THE EXTENSION OF THE FACE OF CURB. DETECTABLE WARNING SURFACES TO BE CURVED ALONG THE CORNER RADIUS.

CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

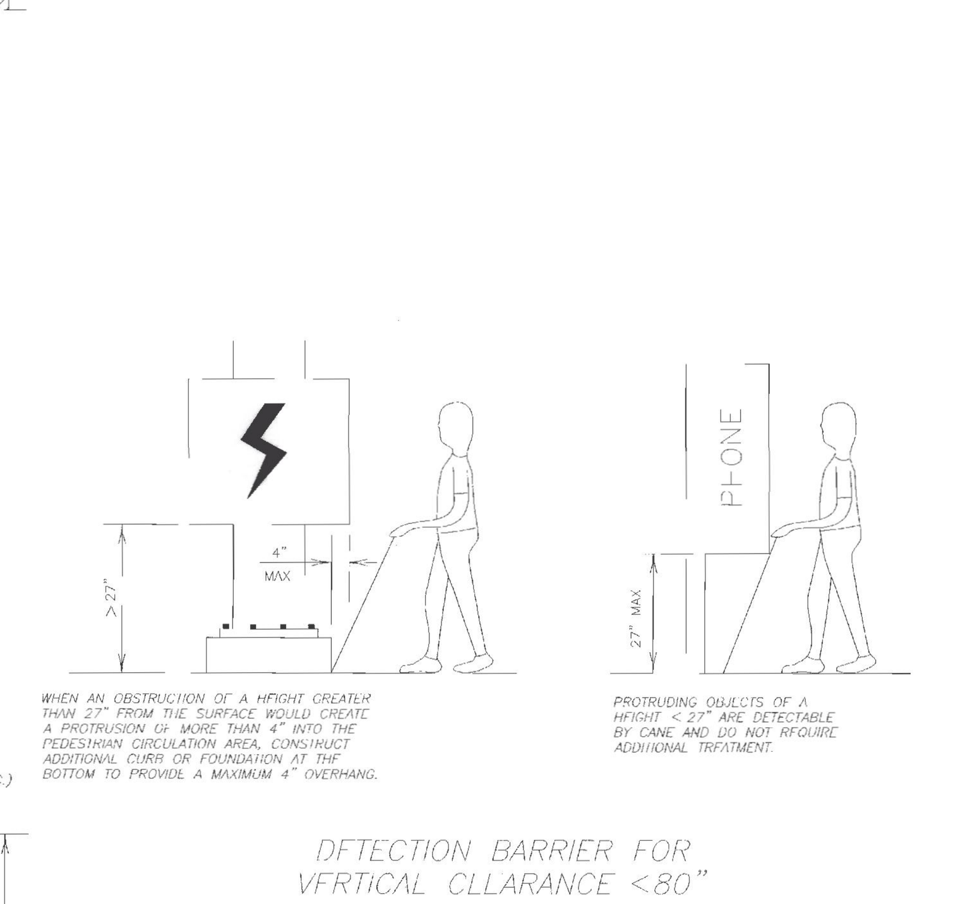
CITY OF CORPUS CHRISTI PEDESTRIAN CURB RAMP STANDARDS 2 OF 4



SETBACK SIDEWALK
APRON OFFSET SIDEWALK
WIDE SIDEWALK
SIDEWALK TREATMENT AT DRIVEWAYS
PROTECTED ZONE
CLEAR GROUND SPACE CENTERED AT PEDESTRIAN PUSH BUTTON
PLAN VIEW
PLACEMENT OF STREET FIXTURES
(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)

GENERAL NOTES

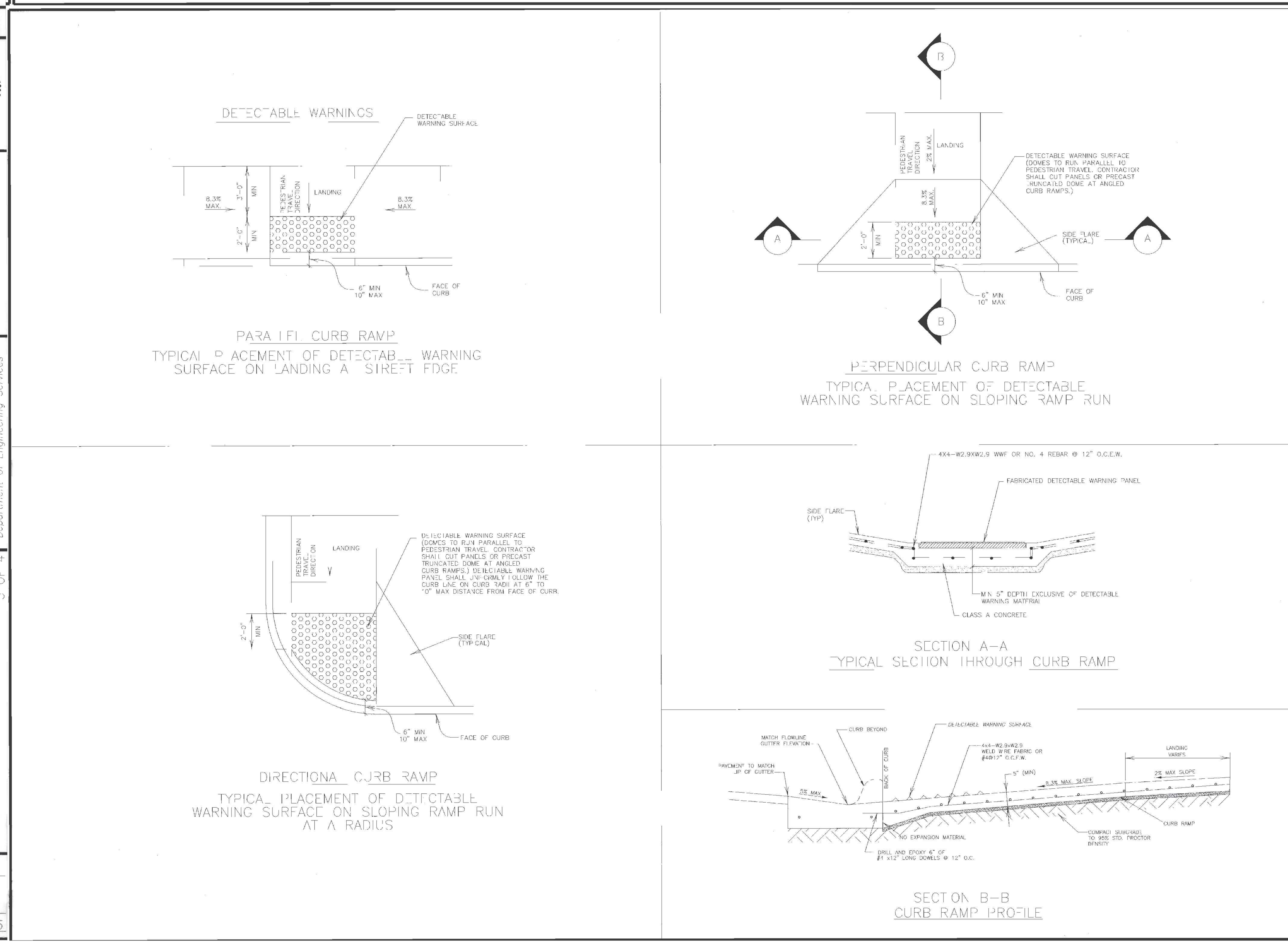
1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED.
2. PLACE TRAFFIC SIGNAL OR ILLUMINATION POLES, GROUND BOXES, CONTROLLER BOXES, SIGNS, DRAINAGE FACILITIES AND OTHER ITEMS SO AS NOT TO OBSTRUCT THE ACCESSIBLE ROUTE OR CLEAR GROUND SPACE.
3. THE MAXIMUM ALLOWABLE SIDEWALK CROSS SLOPE EQUALS 2%.
4. STREET GRADES AND CROSS SLOPES SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
5. EXISTING FEATURES THAT COMPLY WITH TAS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
6. CHANGES IN LEVEL GREATER THAN ¼ INCH ARE NOT PERMITTED.
7. THE LEAST POSSIBLE GRADE SHOULD BE USED TO MAXIMIZE ACCESSIBILITY. THE RUNNING SLOPE OF SIDEWALKS AND CROSSWALKS, WITHIN THE PUBLIC RIGHT-OF-WAY, MAY FOLLOW THE GRADE OF THE PARALLEL ROADWAY. WHERE A CONTINUOUS GRADE GREATER THAN 5% MUST BE PROVIDED, HANDRAILS MAY BE DESIRABLE ON ONE OR BOTH SIDES OF THE SIDEWALK TO IMPROVE ACCESSIBILITY. HANDRAILS MAY ALSO BE NEEDED TO PROTECT PEDESTRIANS FROM POTENTIALLY HAZARDOUS CONDITIONS. IF PROVIDED, HANDRAILS MUST COMPLY WITH TAS 4.8.5.
8. HANDRAIL EXTENSIONS SHALL NOT PROTRUDE INTO THE USABLE LANDING AREA OR INTO INTERSECTING PEDESTRIAN ROUTES.
9. SIDEWALK DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.



CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI PEDESTRIAN CURB RAMP STANDARDS 3 OF 4

CITY PROJECT # 6485



DETECTABLE WARNINGS
PARALLEL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE
PERPENDICULAR CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN
DIRECTIONAL CURB RAMP
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN AT A RADIUS
SECTION A-A
TYPICAL SECTION THROUGH CURB RAMP
SECTION B-B
CURB RAMP PROFILE

CITY OF CORPUS CHRISTI TEXAS
Department of Engineering Services

CITY OF CORPUS CHRISTI PEDESTRIAN CURB RAMP STANDARDS 4 OF 4

NIXON M. WELSH 08/03/23

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.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F-52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

CITY PEDESTRIAN CURB RAMP STANDARD DETAILS

DWN.	PLOT SCALE: 1" = 50'	COM. NO. CITY CURB RAMP STD	
CHK. N. WELSH	SCALE (H): AS SHOWN	JOB NO. 05069	
	SCALE (V): AS SHOWN	SHEET 19 OF 20	
	DATE PLOTTED 08/03/23		

SITE DESCRIPTION

NOT TO SCALE

PROJECT LIMITS: QUEEN'S CROSSING UNIT 2

PROJECT DESCRIPTION: THE PRIMARY ACTIVITIES WILL BE PAVEMENT EARTHWORK AND CONSTRUCTION, STORM SEWER AND UTIILITY CONSTRUCTION AND LOT GRADING

MAJOR SOIL DISTURBING ACTIVITIES: PAVEMENT EARTHWORK AND CONSTRUCTION, LOT GRADING & STORM SEWER AND UTILITY CONSTRUCTION

TOTAL PROJECT AREA: 19.747 ACRES

TOTAL AREA TO BE DISTURBED: 17 ACRES

WEIGHTED RUNOFF COEFFICIENT (AFTER CONSTRUCTION): 55%

EXISTING CONDITION OF SOIL & VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER: GULLIED LAND, SALINE 77%; VICTORIA CLAY 0–1% SLOPES

NAME OF RECEIVING WATERS: OSO CREEK

NARRATIVE – SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

1. CONSTRUCT "SILT FENCE", CLEAR WORK AREA, INSTALL UTILITIES (WASTE WATER, STORM WATER AND POTABLE WATER), STREET EARTHWORK AND PAVING AND LOT GRADING
2. GRADE PROPOSED PAVEMENT TO SUBGRADE ELEVATION, COMPACT SUBGRADE CONSTRUCT PAVEMENT,
3. UPON COMPLETION OF CONSTRUCTION, TEMPORARY CONTROL STRUCTURES WILL REMAIN IN PLACE UNTIL LANDSCAPING OR PATIO GRASSES ARE IN PLACE.

EROSION AND SEDIMENT CONTROLS

STORM WATER MANAGEMENT: STORM WATER DRAINAGE WILL BE PROVIDED BY THE STREET SECTION AND ROADSIDE DITCHES. CURB & GUTTER WILL CARRY THE RUNOFF TO THE COLLECTION POINTS.

SOIL STABILIZATION PRACTICES:

- [X] TEMPORARY SEEDING
- [ ] PERMANENT PLANTING, SODDING, OR SEEDING
- [ ] MULCHING
- [ ] SOIL RETENTION BLANKET
- [ ] BUFFER ZONES
- [ ] PRESERVATION OF NATURAL RESOURCES

OTHER: DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITY HAS CEASED (TEMPORARILY OR PERMANENT) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITIES ARE SCHEDULED TO RESUME AND DO WITHIN 21 DAYS.

STRUCTURAL PRACTICES:

- [X] SILT FENCES
- [ ] HAY BALE DAM
- [ ] ROCK BERMS
- [ ] DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- [ ] DIVERSION, INTERCEPTIOR, OR PERIMETER SWALES
- [ ] DIVERSION, DIKE AND SWALE COMBINATIONS
- [ ] PIPE SLOPE DRAINS
- [ ] PAVED FLUMES
- [ ] ROCK BEDDING AT CONSTRUCTION EXIT
- [ ] TIMBER MATTING AT CONSTRUCTION EXIT
- [ ] CHANNEL LINERS
- [ ] SEDIMENT TRAPS
- [ ] SEDIMENT BASINS
- [ ] STORM INLET SEDIMENT TRAP
- [ ] STONE OUTLET STRUCTURES
- [ ] CURBS AND GUTTERS
- [ ] STORM SEWERS
- [ ] VELOCITY CONTROL DEVICES

MAINTENANCE: ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE DONE AT THE EARLIEST DATE POSSIBLE, BUT NO LATER THAN 7 CALENDER DAYS AFTER THE SURROUNDING EXPOSED GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT. THE AREAS ADJACENT TO CREEKS AND DRAINAGEWAYS SHALL HAVE PRIORITY FOLLOWED BY BY DEVICES PROTECTING STORM SEWER INLETS.

INSPECTION: ALL INSPECTION WILL BE PERFORMED BY AN INSPECTOR EVERY WEEK AS WELL AS AFTER EVERY HALF INCH OR MORE OF RAIN (AS RECORDED ON A NON–FREEZING RAIN GAUGE TO BE LOCATED AT THE PROJECT SITE). AN INSPECTION AND MAINTENANCE REPORT WILL BE MADE PER EACH INSPECTION. BASED ON THE INSPECTION RESULTS, THE CONTROLS SHALL BE REVISED PER THE INSPECTION REPORT.

WASTE MATERIALS: CONTRACTOR SHALL PROVIDE A WASH OUT AREA FOR CONCRETE TRUCKS. THIS AREA SHALL BE AT A LOCATION THAT WILL NOT ALLOW ANY DEBRIS OR CONTAMINATION TO ENTER THE INLETS OR STORM SEWER SYSTEM. ALL MEASURES SHALL BE TAKEN TO PROTECT THE SURROUNDING AREA FROM CONTAMINATION. WASH OUT AREA SHALL BE RESTORED UPON PROJECT COMPLETION. ALL WASTE MATERIAL SHALL BE COLLECTED AND SECURELY STORED UNTIL REMOVAL FROM JOBSITE. NO CONSTRUCTION WASTE MATERIAL SHALL BE BURIED ONSITE.

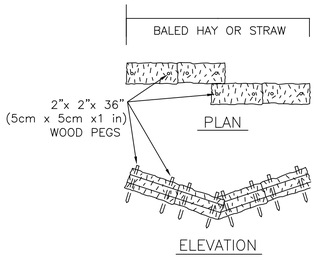
SANITARY WASTE: ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NECESSARY.

OFFSITE VEHICLE TRACKING:

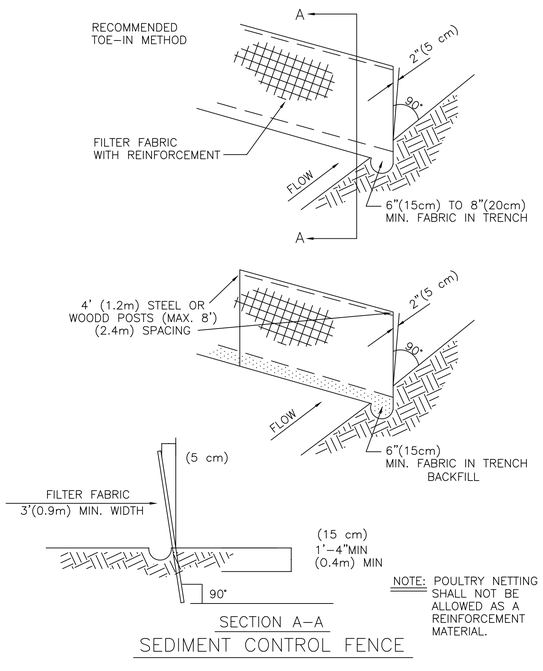
- [ ] HAUL ROADS DAMPENED FOR DUST CONTROL
- [ ] LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- [X] EXCESS DIRT ON ROAD REMOVED DAILY
- [ ] STABILIZED CONSTRUCTION ENTRANCE

REMARKS: DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATER BODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS. ALL WATERWAYS SHALL BE CLEARED AS SOON AS POSSIBLE OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING, FALSEWORK, PILING, DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.

CONTRACTOR SHALL PROVIDE ALL PERMITS AND INSPECTIONS AS MAY BE REQUIRED BY TCEQ AND EPA. CONTRACTOR SHALL PROVIDE NOI AND NOT.



PLACEMENT FOR BALED HAY
FILTER DAMS



NOTE: POULTRY NETTING SHALL NOT BE ALLOWED AS A REINFORCEMENT MATERIAL.

SEDIMENT CONTROL FENCE

STATE OF TEXAS
NIXON M. WELSH
36240
REGISTERED
PROFESSIONAL ENGINEER
08/03/23

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.

BASS AND WELSH ENGINEERING
TX REGISTRATION NO. F–52, 3054 S. ALAMEDA STREET
CORPUS CHRISTI, TEXAS 78404

PUBLIC IMPROVEMENTS TO
QUEEN'S CROSSING UNIT 2
CORPUS CHRISTI, NUECES CO., TX

STORM WATER POLLUTION PREVENTION PLAN

DWN. ____
CHK. N. WELSH

PLOT SCALE: 1" = 50'
SCALE (H): AS SHOWN
SCALE (V): AS SHOWN
DATE PLOTTED 08/03/23

COM. NO. 20SWPPP
JOB NO. 05069
SHEET 20 OF 20

NIXON M. WELSH, P.E., R.P.L.S.
Email: NixMW1@gmail.com

BASS WELSH ENGINEERING
TX Registration No. F-52
Survey Registration No. 100027-00
P.O. Box 6397
Corpus Christi, TX 78466-6397

3054 S. Alameda St.
361 882-5521~ FAX 361 882-1265

QUEENS CROSSING UNIT 2
12" WATER GRID MAIN REIMBURSEMENT ESTIMATE
02/06/2023

WATER ITEMS REIMBURSABLE BY CITY					
ITEM	**DESCRIPTION**	**QUANTITY**	**UNIT**	**COST**	**TOTAL**
1	12" PVC PIPE	1881	LF	90.00	169,290.00
2	12" GATE VALVE WITH BOX	4	EA	6,000.00	24,000.00
3	12" EL, ANY ANGLE	7	EA	1,300.00	9,100.00
4	12" TEE	8	EA	2,000.00	16,000.00
5	12" X 6" REDUCER	1	EA	900.00	900.00
6	6" PVC PIPE	31	LF	50.00	1,550.00
7	6" X 30" PVC PIPE NIPPLE	3	EA	550.00	1,650.00
8	6" 90° EL	1	EA	800.00	800.00
9	6" GATE VALVE WITH BOX	2	EA	1,500.00	3,000.00
10	FIRE HYDRANT ASSY	4	EA	6,500.00	26,000.00
11	PAVEMENT PATCHING	1	LS	6,500.00	6,500.00

SUBTOTAL	$258,790.00
10% CONTINGINCIES	$25,879.00
SUBTOTAL	$284,669.00
7.5% ENGINEERING, SURVEYING, & TESTING	$21,350.18
SUBTOTAL	$306,019.18
LESS WATER ACREAGE FEE, COMMERCIAL	-11,799.80
LESS WATER ACREAGE FEE, RESIDENTIAL	-8,304.45
TOTAL AMOUNT REIMBURSABLE	**$285,914.93**

Exhibit 4

Exhibit 5

DISCLOSURE OF INTERESTS

Development Services Department

2406 Leopard St. Corpus Christi, TX 78408 | Phone: 361.826.3240 | platapplication@cctexas.com

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

NAME: LSK Development LLC

STREET: P.O. Box 8155 **CITY:** Corpus Christi **ZIP:** 78468

FIRM is: ☐ Corporation ☐ Partnership ☐ Sole Owner ☐ Association ☐ Other LLC

DISCLOSURE QUESTIONS

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

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

Name	Job Title and City Department (if known)
NA	

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

Name	Title
NA	

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

Name	Board, Commission, or Committee
NA	

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

Name	Consultant
NA	

CERTIFICATE (To Be Notarized)

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

Certifying Person: Alex Azali (Print) Title: President

Signature of Certifying Person: Date: 11/15/23