

Joint Participation Agreement (Drainage and Paving Repair and Rehabilitation for Millwood Sections 2 and 3)

This Joint Participation Agreement (“Agreement”) is made and entered into by and between the following persons and entities:

- a) Fort Bend County, Texas, a political subdivision of the State of Texas (hereafter the “County”);
- b) Fort Bend County Municipal Utility District No. 149, a political subdivision of the State of Texas (the “District”); and
- c) Herrin Ranch Development II Inc. (“Herrin”).

The County, the District and Herrin are collectively referred to as the “Parties” or individually as a “Party”, as the context indicates.

I. *Definitions*

For purposes of this Agreement, the following defined terms used in this Agreement have the meanings set forth in this section:

Jaho means Jaho, Incorporated;

Millwood 2 means the subdivision in Fort Bend County, Texas known as Millwood at Riverstone, Section 2;

Millwood 3 means the subdivision in Fort Bend County, Texas known as Millwood at Riverstone, Section 3;

Subdivisions means collectively Millwood 2 and Millwood 3;

Millwood 2 Bond means that certain Bond number MNT9118159 executed on or about May 22, 2013 in the penal sum of \$161,280.00 with respect to the Millwood at Riverstone Section Two, a subdivision located in Fort Bend County, Texas, which bond was recorded in the Real Property Records of Fort Bend County under Clerk’s File No. 2013103522 and in which Herrin and Jaho, each as defined above, are “principal” and Colonial American Casualty and Surety Company is “surety”

Millwood 3 Bond means that certain Bond number MNT9118199 executed on or about October 18, 2013 in the penal sum of \$214,550.00 with respect to the Millwood at Riverstone Section Three, a subdivision located in Fort Bend County, Texas, which bond was recorded in the Real Property Records of Fort Bend County under Clerk’s File No. 2013147923 and in which Herrin and Jaho, each as defined above, are “principal” and Colonial American Casualty and Surety Company is “surety”;

Bonds means collectively the Millwood 2 Bond and the Millwood 3 Bond, each as defined above;

Regulations means those certain rules, regulations and requirements relating to Subdivisions in Fort Bend County, Texas, as more specifically set out in “Fort Bend County Regulations of Subdivisions,” as amended from time to time;

Colonial means Colonial American Casualty and surety Company, in its capacity as surety on the Bonds;

Plat means the respective plat for each of the Subdivisions which was approved by the County;

Bond Condition means that Jaho and Herrin, as principal under the Bonds, and their successors and assigns, will comply with the Regulations with respect to the construction and maintenance of the Work until approval of such maintenance by the Fort Bend County Engineer (the “County Engineer”) and acceptance of such roads, streets, bridges and drainage in the right-of-way by the Commissioners Court of Fort Bend County, Texas;

Work means the construction and maintenance of all drainage and paving in the right-of-way in the Subdivisions in accordance with the Regulations, or other agreement of the County and the District, until approval of same by the County Engineer and acceptance of same by the Commissioners Court of Fort Bend County, Texas; and

Deficiencies and Cost Estimates means the deficiencies claimed by the County with respect to the Work and the projected costs to correct such deficiencies, each of which are set forth in Exhibit “1” (for Millwood 2) and Exhibit “2” (for Millwood 3), each attached hereto and incorporated by reference herein.

II. *Recitals*

1. The County, the District, and Herrin, desire to participate in Work in the Subdivisions by providing funding and administration for the construction of such improvements.
2. The County and the District have determined in good faith that the expenditure of funds for the Scope of Work provided herein serves a public purpose in that it protects the public health and safety by protecting the property of the residents and business-owners, reducing the risk of mosquito or other insect-borne illnesses, and aiding in the flow of traffic in the Subdivisions.
3. Herrin contracted with Jaho to perform the Work.
4. Herrin has claimed that it has paid Jaho all sums due under its contracts with Jaho with respect to the Work.

5. County provided Herrin with a preliminary punch list of items that the County alleges constitute the Deficiencies as well the Cost Estimates to correct such Deficiencies, the same of which are set forth in Exhibit 1 and Exhibit 2.
6. Herrin contends the Deficiencies, if any, in the Work are the responsibility of Jaho.
7. The District has agreed to complete the Work, at the District's expense, subject to the terms herein.

III.

Terms, Stipulations, and Representations

NOW, THEREFORE, in consideration for the mutual promises and covenants herein contained, the County, the District and Herrin enter into this Agreement as follows:

1. *Period of the Agreement.* This Agreement becomes effective on the date signed by the last Party hereto and shall remain in effect until the Scope of Work, contemplated herein, is completed to the reasonable satisfaction of the County, in accordance with the terms hereof.
2. *Scope of Work.* The County and the District, by and through their respective engineers, agree to work together in good faith to prepare a scope of work as set forth in Exhibit "3" attached hereto and incorporated by reference herein, including specifications, updated cost estimate, and/or plans (hereafter the "Scope of Work") which are intended to correct the Deficiencies to the reasonable satisfaction of the County with respect to the Work.
3. *Costs to Complete the Scope of Work.* The District agrees to bear all reasonable costs for the Scope of Work herein provided, in an amount not to exceed \$900,000.
4. *District's Further Rights and Responsibilities.*
 - A. Once the Scope of Work contemplated by paragraph No. 2 above is agreed to by both the County and the District, the District shall, within a reasonable time from the date of such agreement, bid the agreed Scope of Work out, i.e. publicly advertise the Scope of Work thereby inviting bids from qualified contractors to complete the Scope of Work.
 - B. The District will enter into a contract with the successful bidder (the "Contractor"), which contract shall require payment and performance bonds as required by Texas law from a surety authorized to write such bonds in the State of Texas (the "Contract"). Both the County and the District will be named as joint obligees under the payment and performance bonds. The Scope of Work performed under the Contract is sometimes referred to as the "Project" in this Agreement.

- C. Any modification of the Contract by the District which reduces the Scope of Work shall require written approval and consent of the County, which consent shall not be unreasonably withheld, conditioned, or delayed. Unless the County notifies the District in writing that it does not consent to same within twenty-one (21) days of written notice requesting such approval and consent, consent and approval shall be deemed given.
- D. The District will be responsible for managing the construction and completion of the Scope of Work and the Project, including construction management, interim inspections, and construction materials testing in compliance with applicable state and federal law. District shall notify County of activities and request all standard interim inspections as normally required for subdivision work through construction@fbctx.gov.
- E. The District shall submit monthly reports to the County Engineer describing in sufficient detail the progress of the Project.
- F. The District shall have the right to participate in the final inspection by the County.
- G. The District will notify the County, by and through its engineer (the "District Engineer"), once it believes the Project is completed and request that the County perform a final inspection to determine whether the Scope of Work has been satisfactorily completed and approved by the County Engineer. County shall inspect the Project within thirty (30) days after receipt of District's notice. The District's submittal of any final inspection requests to County shall be permitted incrementally upon the "Substantial Completion" (as hereinafter defined) of identified streets and drainage areas by District. Upon the declaration of Final Completion for a street and drainage area following a final inspection, no additional inspections shall be required by County for said street and drainage area. Notwithstanding anything to the contrary set forth herein, save and except for the District's obligations to notify the County that it believes the Project is completed and to request a final inspection as set forth in this paragraph G, when the Scope of Work is deemed Substantially Complete by the District Engineer, in the District Engineer's reasonable discretion, the District's obligations to the County and Herrin under this Agreement shall be deemed complete; provided, however, that the District, the County and Herrin shall each have the right to require the Contractor to perform any Work deemed outstanding and required to achieve Final Completion (the "Punch List Items") by the County Engineer. Further, nothing contained herein shall

be interpreted to affect the contractual obligations between the District and the Contractor.

- H. *Substantial Completion* means the time at which the Project is sufficiently completed in accordance with the Contract with passing lab results and satisfies Fort Bend County Regulations of Subdivisions Appendix X, as set forth in Exhibit “4” attached hereto and incorporated by reference herein. The term “Substantially Complete” shall have the same meaning as set forth in this section.
- I. *Final Completion* means the time at which the Project, including the Punch List Items, has been completed in its entirety so that the County, upon final inspection, may accept the Work into the County Road Maintenance System.

5. *County’s Further Rights and Responsibilities.*

- A. The County shall have the right to approve the Scope of Work in the Contract that the District proposes to enter into with the successful bidder, as contemplated by paragraph 4 (B) above. Such approval shall not be unreasonably withheld. The failure to provide such approval within 14 days after receiving a written request for such approval, and then only after the District provides the County with an additional 3 day notice that the County has not responded in writing, shall be deemed to constitute approval of the terms and conditions of the Contract.
- B. To the extent allowed by law, the County will assign all rights it has against Jaho to the District.
- C. Within 45 days of the date that the Work is completed under the Contract and approved by the County Engineer, which approval shall not be unreasonably withheld, conditioned, or delayed, the roads, streets, and bridges in the rights-of-way of the Subdivisions shall be submitted to the Commissioners Court of Fort Bend County, Texas for acceptance into the County Road Maintenance System. Once accepted into the County Road Maintenance System, the County will release the Bonds.
- E. The County shall have the right to review all documents, maps, plats, records, photographs, reports and drawings related to the Scope of Work and shall have the right to approve all change orders under the Contract.

6. *Herrin's Further Rights and Responsibilities.*

- A. Herrin assigns all causes of action it has against Jaho, including for warranty work under Herrin's contracts with Jaho, to the District.
- B. Herrin agrees to cooperate with the County and the District in connection with the causes of action assigned in this Agreement to the District.

7. *Dispute Resolution.*

- A. In the event of a dispute related to the breach of this Agreement that cannot be settled through negotiation, the Parties agree to submit the dispute to mediation.
- B. In the event any Party hereto desires to mediate any dispute, that Party shall notify the other in writing of the dispute desired to be mediated. If the Parties are unable to resolve their differences within ten (10) days of the receipt of such notice, such dispute shall be submitted for mediation.
- C. All expenses associated with mediation herein shall be shared equally among the Parties to the dispute.
- D. The requirement to seek mediation shall be a condition required before filing an action at law or in equity. Any such action shall be filed in a court of competent jurisdiction in Fort Bend County, Texas, and the laws of Texas shall apply.

8. *Amendments.* All amendments or changes to this Agreement shall only be effective if reduced to writing and signed by all Parties effected thereby.

9. *Notices.*

- A. All notices by any Party hereto to any other Party required under this Agreement shall be delivered personally or sent by certified U.S. mail, postage prepaid, or by nationally recognized overnight carrier (such as Federal Express or USPS), as well as by email if an email address is provided below, and addressed to such Party at the following addresses:

| | |
|-------------------|--|
| The County | Fort Bend County, Texas Attn: County Judge 401 Jackson Street, First Floor Richmond, Texas 77469 |
|-------------------|--|

With a Copy to:

Fort Bend County Engineering
Attn: County Engineer
301 Jackson Street, 4th Floor
Richmond, Texas 77469
Email: construction@fbctx.gov

And

Fort Bend County Attorney's Office
Attn: Jennifer Fox and Kevin Hedges
401 Jackson St., 3rd Floor
Richmond, Texas 77469
Email: Jennifer.Fox@fbctx.gov
Kevin.Hedges@fbctx.gov

The District

Fort Bend County MUD No. 149
c/o Muller Law Group, PLLC
Attn: Shima Jalalipour
202 Century Square Blvd.
Sugar Land, Texas 77478
Email: shima@mullerlawgroup.com

With a Copy to:

Pape-Dawson Engineers
Attn: Chad Hablinski, P.E.
2107 CityWest Boulevard, Third Floor
Houston, Texas 77042
Email: chablinski@pape-dawson.com

Herrin

Herrin Ranch Development II Inc.
c/o Johnson Development Corporation
Attn: Elizabeth York
F.W. (Trey) Reichert, III
5005 Riverway, Suite 500
Houston, Texas 77056
Email: elizabeth@johnsondev.com
treyr@johnsondev.com

With a Copy to:

Coats Rose, P.C.

Attn: Nancy H. Hamren

9 Greenway Plaza, Suite 1000

Houston, Texas 77046

Email: nhamren@coatsrose.com

10. *Joint Product.* This Agreement is the joint product of each of the Parties hereto and shall not be construed more strictly against one or the other.
11. *Signatures.* This Agreement may be executed in two or more counterparts, each of which shall be deemed an original. Further, the Parties agree that signatures transmitted by DocuSign or email (.pdf) shall be deemed to be original signatures for all purposes.
12. *Legal Construction.* In case one or more of the provisions contained in this Agreement shall for any reason be held invalid, illegal, or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions and this Agreement shall be construed as if it did not contain the invalid, illegal, or unenforceable provision.
13. *Responsibilities of the Parties.* The Parties agree that neither Party is an agent, servant, or employee of the other Party.
14. *Ownership of Documents.* Upon completion or termination of this Agreement, all documents prepared by or for the County or the District shall remain the property of the County or the District, as the case may be.
15. *Compliance with Laws.* The Parties shall comply with all federal, state, county, and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of this Agreement.
16. *Sole Agreement.* This Agreement constitutes the sole and only agreement between the Parties and supersedes any prior understandings or written or oral agreements respecting the Agreement's subject matter.

17. *Inspection of Books and Records.* The Parties shall maintain all books, documents, papers, accounting records and other documentation relating to costs incurred under this Agreement or in connection with the Scope of Work to be performed hereunder and shall make such materials available to County and District, or their duly authorized representatives for review and inspection at their respective offices during the contract period and for four (4) years from the date of completion of Work defined under this contract or until any impending litigation, or claims are resolved. Additionally, the County and District and their duly authorized representatives shall have access to all the governmental records that are directly applicable to this Agreement for the purpose of making audits, examinations, excerpts, and transcriptions.
18. *Signatory Warranty.* The signatories to this Agreement warrant that each has the authority to enter into this Agreement on behalf of the Party represented.

[End of Agreement. Signatures and Exhibits to Follow]

IN TESTIMONY HEREOF, the Parties hereto have caused this Agreement to be executed in duplicate counterparts.

**Fort Bend County Municipal
Utility District No. 149**

Laura Thompson

Laura Thompson (May 6, 2025 17:24 CDT)

Laura Thompson, President

Date: 05/06/2025

Attest:

Rose Herbst

Rose Herbst, Secretary

Date: 05/06/2025

Fort Bend County, Texas

KP George, County Judge

Date: _____

Attest:

Laura Richard, County Clerk

Approved:

J. Stacy Slawinski

J. Stacy Slawinski, P.E, County Engineer

Herrin Ranch Development II Inc.

F.W. Reichert III

57AD51DD2E7D4BE...

F.W. (Trey) Reichert, III, Vice President

Date: 5/5/2025

EXHIBIT 1

(Follows Behind)



Fort Bend County Engineering
FORT BEND COUNTY, TEXAS

J. Stacy Slawinski, P.E.
County Engineer

May 02, 2024

Mr. Name
Company
Address
Address
[Email](#)

RE: Millwood at Riverstone Section 2

Dear Mr. :

A Final Street Acceptance Inspection on the above listed subject was made on 04/30/2024. Attached, please find the list of deficiencies which should be corrected in **120 days (from the date of this letter)**, or a new inspection may be scheduled after that time.

In addition, the gutters on all streets should be checked and cleaned of dirt, any leaves, etc., where applicable. All expansion joints shall be cleaned out and resealed. All concrete spills shall be removed. All debris shall be cleaned from the right-of-way.

Please email us at Construction@fortbendcountytexas.gov when these deficiencies have been corrected so a final inspection can be arranged. **Before acceptance of streets in to the County Road Maintenance system a permanent benchmark survey marker must be placed within the subdivision boundary according to Section 4.17 (Vertical & Horizontal Control) of the Regulations of Subdivisions. Call Courtney Velasquez at 281-633-7516 to obtain the brass survey marker.**

If you should have any questions regarding this punch list or need additional information, we can be contacted at Construction@fortbendcountytexas.gov.

Sincerely,

Billy Kovar
Construction Inspector
Engineer Technician I

BK/mw/bc

Attachment

cc: Commissioner , Pct.
Mr. Developer
Mr. Contractor
Mr. City
Mr. Brent McCauley, FBC Road & Bridge brent.mccauley@fbctx.gov
Mr. Scott Wieghat, FBC Road & Bridge
File

301 Jackson St., Suite 401 | Richmond, TX 77469
Phone 281-633-7500

FORT BEND COUNTY ENGINEERING DEPARTMENT

SUBDIVISION Millwood at Riverstone Section 2 **DATE** 04/30/2024

GENERAL NOTES:

1. Clean and reseal expansion, construction, control joints as required. Clean out gutters as required. Remove all debris in streets as required. Surface cracks may be sealed with a TxDOT approved sealed with a super low viscosity epoxy (gravity fed) sealant or approved alternative in accordance with manufacture application procedures. Prior to crack sealing submit to the County for approval of product and method of application.
2. Pollution Prevention Plan must be in place protecting all streets and drainage structures.
3. **DRIVEWAY RETURN:** Saw-cut beyond cracked curb, break out and replace.
4. **BIRD BATH:** Light grinding permitted, no more than ½ " deep, 6" from face of curb and within 15' of expansion joint. Repairs may be pavement removal and replacement, light grinding or lifting. Bird Baths moved upstream or down due to repair will also need to be eliminated. The extent of pavement removal will be determined in the field with FBC Engineering staff based on location of bird bath, joints, cracks, inlets, or other items.
5. **BROKEN CURB:** Saw-cut beyond cracks on both ends, break out curb and replace. Replace a minimum full length of curb adjacent to sidewalks that extend from front door walks. Replace expansion joints with 3/4" fiberboard.
6. Sidewalks across residential driveways shall be 5 ft. minimum width with a cross slope no greater than ¼ " per foot or 2 %, and adhere to ADA specifications.
7. Replace all missing buttons for flush valves and street knuckle locations.
8. Clean up all concrete spills within project area.
9. Add permanent benchmark survey marker.

SPECIFIC NOTES RELATED TO THIS SUBDIVISION

STREET NAME

DESCRIPTION

| | |
|--|--|
| Miller Ridge Lane at Sotoria Lane | |
| Sta 4+46 to 7+80 Lot 14, Blk 3 | Replace missing street sign blades |
| Reserve "D" | Remove and replace 190' of laydown curb with 6" curb per plan |
| Sta 3+49 | Replace missing ER8-3 sign |
| Sotoria Lane at Quiet Dawn Lane | |
| Sta 3+00 Lot 1, Blk 1 | Submit revised plans to Development for approval of street signage – Signage does not reflect approved plans |
| Quiet Dawn Lane at LJ Parkway | |
| Sta 1+50 Side of Lot 1, Blk 1 | Remove and replace 1 non-compliant ADA ramp – Slope |

FORT BEND COUNTY ENGINEERING DEPARTMENT

SUBDIVISION Millwood at Riverstone Section 2 **DATE** 04/30/2024

| | |
|--|---|
| | +2% |
| | |
| Miller Ridge Lane | |
| 4527 Lot 16, Blk 1 | Remove and replace 1 ADA ramp – Cracked / Damaged |
| 4526 Lot 12, Blk 3 | Remove and replace 1 ADA ramp – Cracked / Damaged |
| | |
| Sotoria Lane | |
| Side of Lot 6703 Lot 1, Blk 1 | Remove and replace 150' of laydown curb with 6" curb per plan |
| Sta 3+50 Lot 1, Blk 1 | Remove and replace 60'x28' pavement area – Subgrade failed at inlet |
| | |
| Montcliff Bend lane | |
| 4503 Lot 1, Blk 3 | Repair inlet top |
| 4507 Lot 2, Blk 3 Sta 8+21 | Bird Bath |
| Across from 4507 Lot 2, Blk 3 Sta 8+21 | Bird Bath |
| 4515 Lot 4, Blk 3 Sta 9+50 | Bird Bath; 1 Sidewalk Panel |
| Across from 4515 Lot 4, Blk 3 Sta 9+50 | Bird Bath |
| 4518 Lot 11, Blk 2 – 4522 Lot 10, Blk 2 | Remove and replace 28'x50' pavement area – Pavement area failed |
| 4519 Lot 5, Blk 3 | Remove and replace 14'x46' pavement area – Spalling |
| 4515 Lot 4, Blk 3 Sta 9+72 | Bird Bath |
| 4523 Lot 6, Blk 3 Sta 11+00 | Bird Bath; 3 LF broken curb |
| 4531 Lot 8, Blk 3 Sta 11+78 | Bird Bath |
| 4526 Lot 9, Blk 2 Sta 11+78 and Sta 11+95 | Bird Bath (x2) |
| 4543 Lot 11, Blk 3 Sta 13+57 | Remove and replace 12'x14' pavement area – Spall |
| Side of Lot 12, Blk 3 Sta 14+25 LP# 683856 | Bird Bath |
| 4606 Lot 4, Blk 2 to 4602 Lot 3, Blk 2 | Remove and replace 28'x60' pavement area – Spall / Uncontrolled cracking |
| Side of Lot 16, Blk 1 | 2 Sidewalk Panels |
| 4611 Lot 18, Blk 1 | 6 LF broken curb |
| 4610 Lot 2, Blk 2 | 3 LF broken curb |
| 4615 Lot 19, Blk 1 | 6 LF broken curb |
| 4619 Lot 20, Blk 1 | 6 LF broken curb |
| 4623 Lot 21, Blk 1 Sta 18+47 | Bird Bath |
| Reserve "B" at Mailbox Sta 19+00 | Bird Bath; 3 LF broken curb |
| Sta 15+50 Lot 4, Blk 2 | Remove and replace 70'x28' pavement area – Subgrade failed |
| | |
| Miller Ridge Lane | |
| 4527 Lot 16, Blk 1 Sta 1+42 | Remove and replace 28'x66' pavement area – Spall / Uncontrolled cracking; 3 LF broken curb; 25 LF broken curb |
| 4523 Lot 15, Blk 1 Sta 2+19 | Bird Bath |
| 4519 Lot 14, Blk 1 | 3 LF broken curb |
| 4518 Lot 13, Blk 3 Sta 3+00 LP# 683867 | Bird Bath |

FORT BEND COUNTY ENGINEERING DEPARTMENT

SUBDIVISION Millwood at Riverstone Section 2 **DATE** 04/30/2024

| | |
|--|---|
| 4511 Lot 12, Blk 1 Sta 3+33 | Bird Bath; 3 LF broken curb (x2) |
| 4507 | 6 LF broken curb; Repair inlet top |
| Across from 4507 Lot 11, Blk 1 | 3 Sidewalk Panels |
| Across 4503 Lot 14, Blk 3 at Fire Hydrant Sta 4+18 | Bird Bath |
| | |
| Sotoria Lane | |
| 6730 Lot 14, Blk 3 Sta 7+42 | Bird Bath |
| 6726 Lot 15, Blk 3 | 15 LF broken curb |
| 6723 Lot 6, Blk 1 | 6 LF broken curb; 12 LF broken curb; Repair inlet top |
| 6722 Lot 16, Blk 3 Sta 6+10 LP# 683865 | 3 LF broken curb |
| 6718 Lot 17, Blk 3 Sta 5+55 | Bird Bath |
| 6719 Lot 4, Blk 1 Sta 5+55 | Bird Bath |
| 6706 Lot 20, Blk 3 Sta 4+45 | Bird Bath |
| 6707 Lot 2, Blk 1 Sta 4+25 | Bird Bath |
| Across from 6703 Lot 1, Blk 1 at Mailbox | 12 LF broken curb |
| 6703 Lot 1, Blk 1 | Repair inlet top |
| | |
| Quiet Dawn Lane at LJ Parkway | |
| Sta 1+50 | Bird Bath (x2) |
| | |
| Entire Section | Remove and replace all ADA ramps – truncated domes do not meet ADA requirements |
| | Stop signs should be 36"x36" |
| | Street sign should reflect FBC Sign Detail |
| | |
| | Please refer to all additional notes below. |

ADDITIONAL NOTE(S):

Documentation needed at the time of punch list inspection request:



**OPINION OF PROBABLE CONSTRUCTION COSTS
MILLWOOD SECTION 2 PAVING REPAIRS
12-Nov-24**

| ITEM NO. | APPROX QTY | DESCRIPTION | UNIT PRICE | TOTAL AMOUNT |
|------------------------------------|------------|------------------------------|-----------------|--------------------|
| <u>Site Preparation</u> | | | | |
| 1 . | 1 | LS Mobilization and Bonds | \$4,800.00 | \$4,800.00 |
| 2 . | 2 | Mo Traffic Control | \$15,000.00 | \$30,000.00 |
| 3 . | 1 | EA Concrete Washout Area | \$2,000.00 | \$2,000.00 |
| 4 . | 898 | LF Sod Strip Behind Curb | \$10.00 | \$8,980.00 |
| | | | SUBTOTAL | \$45,780.00 |
| <u>Signage and Striping</u> | | | | |
| 5 . | 2 | EA Replace Sign Post | \$400.00 | \$800.00 |
| 6 . | 3 | EA Replace Sign Blade | \$250.00 | \$750.00 |
| 7 . | 5 | EA Blue Buttons | \$6.00 | \$30.00 |
| 8 . | 124 | LF Yellow Buttons | \$6.00 | \$744.00 |
| 9 . | 28 | LF White Buttons | \$6.00 | \$168.00 |
| 10 . | 2 | EA Repaint 24" Wide Stop Bar | \$1,500.00 | \$3,000.00 |
| | | | SUBTOTAL | \$5,492.00 |
| <u>Drainage System</u> | | | | |
| 11 . | 4 | EA Repair Inlet Top | \$1,250.00 | \$5,000.00 |
| | | | SUBTOTAL | \$5,000.00 |



OPINION OF PROBABLE CONSTRUCTION COSTS
MILLWOOD SECTION 2 PAVING REPAIRS
12-Nov-24

| ITEM NO. | APPROX QTY | DESCRIPTION | UNIT PRICE | TOTAL AMOUNT |
|----------------------------|------------|---|------------|---------------------|
| <u>Paving Items</u> | | | | |
| 1 . | 252 | LF Sawcut Pavement | \$20.00 | \$5,040.00 |
| 2 . | 1,042 | SY Remove and Dispose of Concrete Pavement and 6" subgrade | \$50.00 | \$52,111.11 |
| 3 . | 1,042 | SY 6" Cement Stabilized Sand Subgrade | \$20.00 | \$20,844.44 |
| 4 . | 1,042 | SY 6" High Early Strength Reinforced Concrete Pavement | \$100.00 | \$104,222.22 |
| 5 . | 898 | LF Remove and Dispose of Existing Curb | \$5.00 | \$4,490.00 |
| 6 . | 150 | LF 6" Curb | \$7.50 | \$1,125.00 |
| 7 . | 748 | LF 4" Roll Over (Residential) Curb | \$7.50 | \$5,610.00 |
| 8 . | 3 | EA Remove and Replace Wheelchair Ramp | \$3,500.00 | \$10,500.00 |
| 9 . | 0 | LS Remove and Replace Wheelchair Ramp Landing Only | \$1,000.00 | \$0.00 |
| 10 . | 400 | LF Superficial Crack Sealing (As Needed) | \$10.00 | \$4,000.00 |
| 11 . | 20 | EA Polyurethane Foam Lifting - Bird Bath Removal (Per Location) | \$2,500.00 | \$50,000.00 |
| 12 . | 200 | LF Diamond Grinding of Pavement (1/2" Max) - Bird Bath Removal | \$25.00 | \$5,000.00 |
| SUBTOTAL | | | | \$262,942.78 |
| TOTAL | | | | \$319,214.78 |
| Contingency (20%) | | | | \$63,842.96 |
| | | | | \$383,057.73 |

EXHIBIT 2

(Follows Behind)



Fort Bend County Engineering
FORT BEND COUNTY, TEXAS

J. Stacy Slawinski, P.E.
County Engineer

May 02, 2024

Mr. Name
Company
Address
Address
[Email](#)

RE: Millwood at Riverstone Section 3

Dear Mr. :

A Final Street Acceptance Inspection on the above listed subject was made on 04/30/2024. Attached, please find the list of deficiencies which should be corrected in **120 days (from the date of this letter)**, or a new inspection may be scheduled after that time.

In addition, the gutters on all streets should be checked and cleaned of dirt, any leaves, etc., where applicable. All expansion joints shall be cleaned out and resealed. All concrete spills shall be removed. All debris shall be cleaned from the right-of-way.

Please email us at Construction@fortbendcountytexas.gov when these deficiencies have been corrected so a final inspection can be arranged. **Before acceptance of streets in to the County Road Maintenance system a permanent benchmark survey marker must be placed within the subdivision boundary according to Section 4.17 (Vertical & Horizontal Control) of the Regulations of Subdivisions. Call Courtney Velasquez at 281-633-7516 to obtain the brass survey marker.**

If you should have any questions regarding this punch list or need additional information, we can be contacted at Construction@fortbendcountytexas.gov.

Sincerely,

Billy Kovar
Construction Inspector
Engineer Technician I

BK/mw/bc

Attachment

cc: Commissioner , Pct.
Mr. Developer
Mr. Contractor
Mr. City
Mr. Brent McCauley, FBC Road & Bridge brent.mccauley@fbctx.gov
Mr. Scott Wieghat, FBC Road & Bridge
File

301 Jackson St., Suite 401 | Richmond, TX 77469
Phone 281-633-7500

FORT BEND COUNTY ENGINEERING DEPARTMENT

SUBDIVISION Millwood at Riverstone Section 3 DATE 04/30/2024

GENERAL NOTES:

- 1. Clean and reseal expansion, construction, control joints as required. Clean out gutters as required. Remove all debris in streets as required. Surface cracks may be sealed with a TxDOT approved sealed with a super low viscosity epoxy (gravity fed) sealant or approved alternative in accordance with manufacture application procedures. Prior to crack sealing submit to the County for approval of product and method of application.
- 2. Pollution Prevention Plan must be in place protecting all streets and drainage structures.
- 3. DRIVEWAY RETURN: Saw-cut beyond cracked curb, break out and replace.
- 4. BIRD BATH: Light grinding permitted, no more than ½ ” deep, 6” from face of curb and within 15’ of expansion joint. Repairs may be pavement removal and replacement, light grinding or lifting. Bird Baths moved upstream or down due to repair will also need to be eliminated. The extent of pavement removal will be determined in the field with FBC Engineering staff based on location of bird bath, joints, cracks, inlets, or other items.
- 5. BROKEN CURB: Saw-cut beyond cracks on both ends, break out curb and replace. Replace a minimum full length of curb adjacent to sidewalks that extend from front door walks. Replace expansion joints with 3/4" fiberboard.
- 6. Sidewalks across residential driveways shall be 5 ft. minimum width with a cross slope no greater than ¼ “ per foot or 2 %, and adhere to ADA specifications.
- 7. Replace all missing buttons for flush valves and street knuckle locations.
- 8. Clean up all concrete spills within project area.
- 9. Add permanent benchmark survey marker.

SPECIFIC NOTES RELATED TO THIS SUBDIVISION

| <u>STREET NAME</u> | <u>DESCRIPTION</u> |
|--|---|
| Rising Hills Lane at Hickory Branch Lane | |
| Lot 25, Blk 4 | Street sign pole must be 7’ and sign blades should be re-aligned to represent correct streets to meet FBC sign detail |
| | |
| Millstone Canyon Lane at Rising Hills Lane | |
| Lot 1, Blk 1 | Street sign pole must be 7’ and sign blades should be re-aligned to represent correct streets to meet FBC sign detail; 4-Sidewalk Panels |
| | |
| Miller Shadow Lane | |

FORT BEND COUNTY ENGINEERING DEPARTMENT

SUBDIVISION Millwood at Riverstone Section 3 **DATE** 04/30/2024

| | |
|--|--|
| 6723 at ADA Ramp | 4 Sidewalk Panels |
| 6719 Lot 5, Blk 2 at ADA Ramp | 5 LF broken curb; 2 Sidewalk Panels ; Remove and replace 1 non-compliant ADA landing – Settled / Trip hazard |
| 6702 Lot 5, Blk 3 at ADA Ramp | Remove and replace 1 non-compliant ADA ramp and landing – Slope +2% / Settled / Trip hazard |
| | |
| Hickory Branch Lane | |
| 4603 Lot 6, Blk 3 at ADA Ramp | 2 Sidewalk Panels |
| | |
| Turlock Springs Court | |
| 6622 Lot 1, Blk 4 | Verify ADA ramp meets requirements – Submerged under water at time of inspection; Remove and replace 1 non-compliant ADA landing – Settled / Trip hazard |
| 6623 Lot 12, Blk 4 | 5 LF broken curb (x2) |
| | |
| Tara Creek Court | |
| 6622 Lot 13, Blk 4 | Remove and replace 1 non-compliant ADA landing – Settled / Trip hazard |
| 6623 Lot 24, Blk 4 | Remove and replace 1 non-compliant ADA ramp – Slope +2% |
| | |
| Montcliff Bend Lane | |
| Lot 5, Blk 2 Sta 1+42 LP# 689284 | Repair inlet top |
| Across from LP# 689284 Sta 1+42 | Repair inlet top |
| | |
| Miller Shadow Lane | |
| 6718 Lot 1, Blk 3 Sta 14+56 and Sta 15+16 | Bird Bath; Repair inlet top |
| 6711 Lot 3, Blk 2 Sta 13+15 | 3 LF broken curb; 1 Sidewalk Panel ; Repair inlet top |
| 6707 Lot 2, Blk 2 | 12 LF broken curb |
| 6703 Lot 1, Blk 2 Sta 12+57 | Bird Bath; 1 Sidewalk Panel ; Repair inlet top |
| 6642 Lot 17, Blk 1 Sta 9+00 | Bird Bath |
| 6638 Lot 18, Blk 1 | 1 Sidewalk Panel |
| Across from 6634 Lot 19, Blk 1 Sta 7+09 | Repair inlet top |
| 6630 Lot 20, Blk 1 | 12 LF broken curb |
| 6626 Lot 21, Blk 1 Sta 6+28 LP# 689292 | Bird Bath |
| Across from 6626 Lot 21, Blk 1 Sta 6+28 | Bird Bath |
| | |
| Shade Terrace Lane | |
| South Bound Side of Lot 13, Blk 1 Sta 2+70 | Bird Bath |
| South Bound Side of Lots 12 and 13, Blk 1 Sta 2+50 | Bird Bath |
| North Bound Side of Lots 5 and 6, Blk 3 Sta 2+50 | Bird Bath |
| Side of Lot 6, Blk 3 and Lot 12, Blk 1 Sta 1+40 | Remove and replace 28'x80' pavement area – Spall / Uncontrolled cracking; Repair inlet top |

FORT BEND COUNTY ENGINEERING DEPARTMENT

SUBDIVISION Millwood at Riverstone Section 3 **DATE** 04/30/2024

| | |
|--|--|
| | |
| Rising Hills Lane | |
| 6602 Lot 29, Blk 4 | 3 LF broken curb |
| 6607 Lot 1, Blk 1 | 3 Sidewalk Panels ; Backfill back of curb |
| 6611 Lot 2, Blk 1 | Redo Drive to ADA Specs |
| 6615 Lot 3, Blk 1 | 12 LF broken curb; Repair inlet top |
| 6614 Lot 26, Blk 4 | 1 Sidewalk Panel ; Repair inlet top |
| 6606 Lot 28, Blk 4 | 3 LF broken curb; 3 Sidewalk Panels |
| 6614 Lot 26, Blk 4 to 6618 Lot 25, Blk 4 | 12 LF broken curb; Remove and replace 28'x90' pavement area – Spall / Uncontrolled cracking |
| 6623 Lot 5, Blk 1 | Redo Drive to ADA Specs |
| Sta 4+25 Lot 4, Blk 1 | Remove and replace 60'x28' pavement area – Subgrade failed at inlet |
| | |
| Hickory Branch Lane | |
| 4507 Lot 7, Blk 1 Sta 5+50 | Bird Bath |
| Across from 4507 Lot 25, Blk 4 Sta 5+60 | Bird Bath |
| Side of Lots 24 and 25, Blk 4 LP# 689270 Sta 6+12 | 6 LF broken curb (x2); Repair inlet top |
| 4511 Lot 8, Blk 1 Sta 6+12 | 12 LF broken curb; Repair inlet top |
| 4519 Lot 10, Blk 1 | Backfill back of curb; 3 LF broken curb |
| 4523 Lot 11, Blk 1 | 8 LF broken curb |
| 4523 Lot 11 and 4527 Lot 12, Blk 1 Sta 7+74 LP# 689271 | Remove and replace 28'x40' pavement area – Spall |
| 4527 Lot 12, Blk 1 Sta 8+31 | Remove and replace 14'x70' pavement area – Spall; Bird Bath; 3 LF broken curb; Remove and replace 4'x12' Drive Apron |
| 4603 Lot 6, Blk 3 to 4607 Lot 7, Blk 3 Sta 10+07 | Remove and replace 14'x60' pavement area – Spall / Uncontrolled cracking; Bird Bath |
| 4607 Lot 7, Blk 3 Sta 10+62 | Remove and replace 28'x60' pavement area – Spall / Uncontrolled cracking; 3 LF broken curb; Repair inlet top |
| Across from 4527 Lot 12, Blk 1 Sta 7+91 | Bird Bath |
| Sta 7+50 Lot 11, Blk 1 | Remove and replace 100'x28' pavement area – Subgrade failed |
| | |
| Turlock Springs Court | |
| 6622 Lot 1, Blk 4 Sta 3+35 | Bird Bath |
| 6623 Lot 12, Blk 4 Sta 3+35 | Bird Bath; 3 LF broken curb; 4 Sidewalk Panels ; Repair inlet top (x2) |
| 6622 Lot 1, Blk 4 to 6618 Lot 2, Blk 4 | Remove and replace 14'x25' pavement area – Spall / Uncontrolled cracking; Repair inlet top |
| | |
| Tara Creek Court | |
| 6622 Lot 13, Blk 4 Sta 3+24 | Remove and replace 6'x18' pavement area – Spall / Uncontrolled cracking; Bird Bath; Repair inlet |
| 6623 Lot 24, Blk 4 Sta 3+24 | Bird Bath; Repair inlet top |
| 6619 Lot 23, Blk 4 Sta 2+50 | Bird Bath; 2 Sidewalk Panels |
| 6618 Lot 14, Blk 4 Sta 2+50 | Bird Bath; 3 LF broken curb |

FORT BEND COUNTY ENGINEERING DEPARTMENT

SUBDIVISION Millwood at Riverstone Section 3 DATE 04/30/2024

| | |
|-----------------------------|--|
| 6614 Lot 15, Blk 4 Sta 2+00 | Bird Bath |
| 6610 Lot 16, Blk 4 | Remove and replace 12'x14' pavement area – Crack within 12" of expansion joint |
| Sta 3+00 Lot 24, Blk 4 | Remove and replace 70'x28' pavement area – Subgrade failed |
| | |
| Entire Section | Street signs should reflect FBC Sign Detail |
| | Stop signs should be 36"x36" |
| | |
| | Please refer to all additional notes below. |

ADDITIONAL NOTE(S):

Documentation needed at the time of punch list inspection request:



OPINION OF PROBABLE CONSTRUCTION COSTS
MILLWOOD SECTION 3 PAVING REPAIRS
12-Nov-24

| ITEM NO. | APPROX QTY | DESCRIPTION | UNIT PRICE | TOTAL AMOUNT |
|------------------------------------|------------|------------------------------|-----------------|--------------------|
| <u>Site Preparation</u> | | | | |
| 1 . | 1 | LS Mobilization and Bonds | \$6,100.00 | \$6,100.00 |
| 2 . | 2 | Mo Traffic Control | \$15,000.00 | \$30,000.00 |
| 3 . | 1 | EA Concrete Washout Area | \$2,000.00 | \$2,000.00 |
| 4 . | 995 | LF Sod Strip Behind Curb | \$10.00 | \$9,950.00 |
| | | | SUBTOTAL | \$48,050.00 |
| <u>Signage and Striping</u> | | | | |
| 5 . | 2 | EA Replace Sign Post | \$400.00 | \$800.00 |
| 6 . | 3 | EA Replace Sign Blade | \$250.00 | \$750.00 |
| 7 . | 10 | EA Blue Buttons | \$6.00 | \$60.00 |
| 8 . | 93 | LF Yellow Buttons | \$6.00 | \$558.00 |
| 9 . | 53 | LF White Buttons | \$6.00 | \$318.00 |
| 10 . | 5 | EA Repaint 24" Wide Stop Bar | \$1,500.00 | \$7,500.00 |
| | | | SUBTOTAL | \$9,986.00 |
| <u>Drainage System</u> | | | | |
| 11 . | 17 | EA Repair Inlet Top | \$1,250.00 | \$21,250.00 |
| | | | SUBTOTAL | \$21,250.00 |



OPINION OF PROBABLE CONSTRUCTION COSTS
MILLWOOD SECTION 3 PAVING REPAIRS
12-Nov-24

| ITEM NO. | APPROX QTY | DESCRIPTION | UNIT PRICE | TOTAL AMOUNT |
|----------------------------|------------|---|------------|---------------------|
| <u>Paving Items</u> | | | | |
| 1 . | 364 | LF Sawcut Pavement | \$20.00 | \$7,280.00 |
| 2 . | 1,489 | SY Remove and Dispose of Concrete Pavement and 6" subgrade | \$50.00 | \$74,433.33 |
| 3 . | 1,489 | SY 6" Cement Stabilized Sand Subgrade | \$20.00 | \$29,773.33 |
| 4 . | 1,489 | SY 6" High Early Strength Reinforced Concrete Pavement | \$100.00 | \$148,866.67 |
| 5 . | 995 | LF Remove and Dispose of Existing Curb | \$5.00 | \$4,975.00 |
| 6 . | 0 | LF 6" Curb | \$7.50 | \$0.00 |
| 7 . | 995 | LF 4" Roll Over (Residential) Curb | \$7.50 | \$7,462.50 |
| 8 . | 2 | EA Remove and Replace Wheelchair Ramp | \$3,500.00 | \$7,000.00 |
| 9 . | 3 | LS Remove and Replace Wheelchair Ramp Landing Only | \$1,000.00 | \$3,000.00 |
| 10 . | 400 | LF Superficial Crack Sealing (As Needed) | \$10.00 | \$4,000.00 |
| 11 . | 15 | EA Polyurethane Foam Lifting - Bird Bath Removal (Per Location) | \$2,500.00 | \$37,500.00 |
| 12 . | 150 | LF Diamond Grinding of Pavement (1/2" Max) - Bird Bath Removal | \$25.00 | \$3,750.00 |
| SUBTOTAL | | | | \$328,040.83 |
| TOTAL | | | | \$407,326.83 |
| Contingency (20%) | | | | \$81,465.37 |
| | | | | \$488,792.20 |

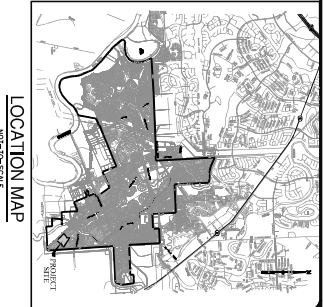
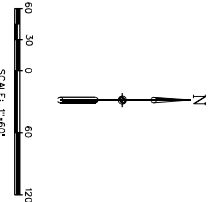
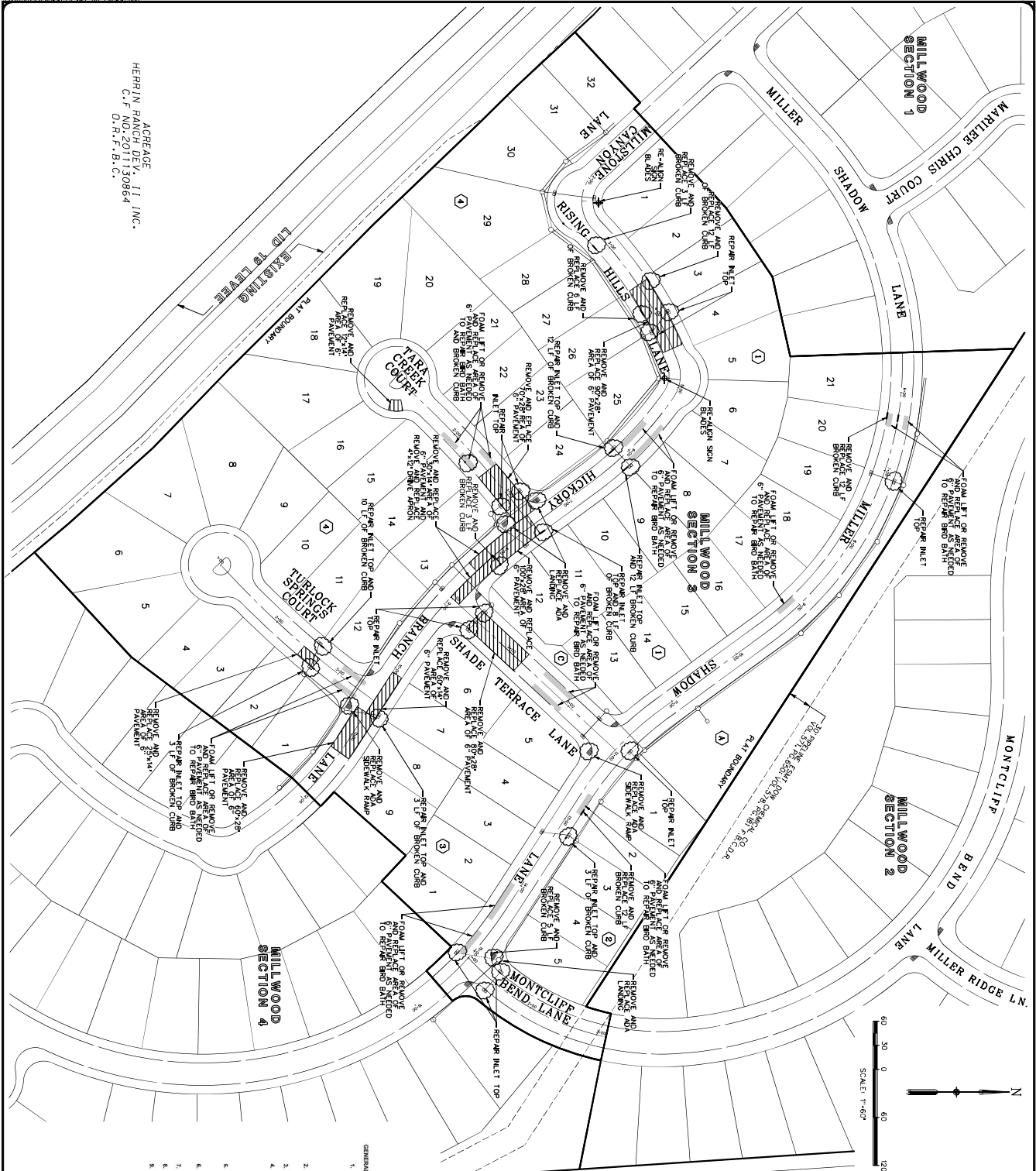
EXHIBIT 3

(Follows Behind)



Date: September 10, 2024, User ID: cdfwzr
File: P:\Costello\Drive\Riverstone\MILLWOOD SEC.
33\33-0247444-10\PAV-01.dwg

ACRAGE
HERRIN RANCH DEV. II INC.
C.F. NO. 2011110864
O.R.F.B.C.



- GENERAL NOTES:**
1. ALL PAVEMENT REPAIRS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TEXAS PAVEMENT DESIGN AND CONSTRUCTION MANUAL AND THE TEXAS PAVEMENT REPAIR MANUAL.
 2. ALL PAVEMENT REPAIRS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TEXAS PAVEMENT DESIGN AND CONSTRUCTION MANUAL AND THE TEXAS PAVEMENT REPAIR MANUAL.
 3. ALL PAVEMENT REPAIRS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TEXAS PAVEMENT DESIGN AND CONSTRUCTION MANUAL AND THE TEXAS PAVEMENT REPAIR MANUAL.
 4. ALL PAVEMENT REPAIRS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TEXAS PAVEMENT DESIGN AND CONSTRUCTION MANUAL AND THE TEXAS PAVEMENT REPAIR MANUAL.
 5. ALL PAVEMENT REPAIRS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TEXAS PAVEMENT DESIGN AND CONSTRUCTION MANUAL AND THE TEXAS PAVEMENT REPAIR MANUAL.
 6. ALL PAVEMENT REPAIRS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TEXAS PAVEMENT DESIGN AND CONSTRUCTION MANUAL AND THE TEXAS PAVEMENT REPAIR MANUAL.
 7. ALL PAVEMENT REPAIRS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TEXAS PAVEMENT DESIGN AND CONSTRUCTION MANUAL AND THE TEXAS PAVEMENT REPAIR MANUAL.
 8. ALL PAVEMENT REPAIRS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TEXAS PAVEMENT DESIGN AND CONSTRUCTION MANUAL AND THE TEXAS PAVEMENT REPAIR MANUAL.
- LEGEND**
- PAVEMENT TO BE REMOVED AND REPLACED
 - AREAS OF PAVEMENT TO BE REPAIRED
 - AREAS OF PAVEMENT TO BE REPAIRED
 - AREAS OF PAVEMENT TO BE REPAIRED
 - AREAS OF PAVEMENT TO BE REPAIRED
 - AREAS OF PAVEMENT TO BE REPAIRED
 - AREAS OF PAVEMENT TO BE REPAIRED
 - AREAS OF PAVEMENT TO BE REPAIRED
- CONCRETE CURB TO BE REPLACED

MILLWOOD SECTION 3
AT RIVERSTONE
MISSOURI CITY, TEXAS
PAVEMENT REHAB EXHIBIT

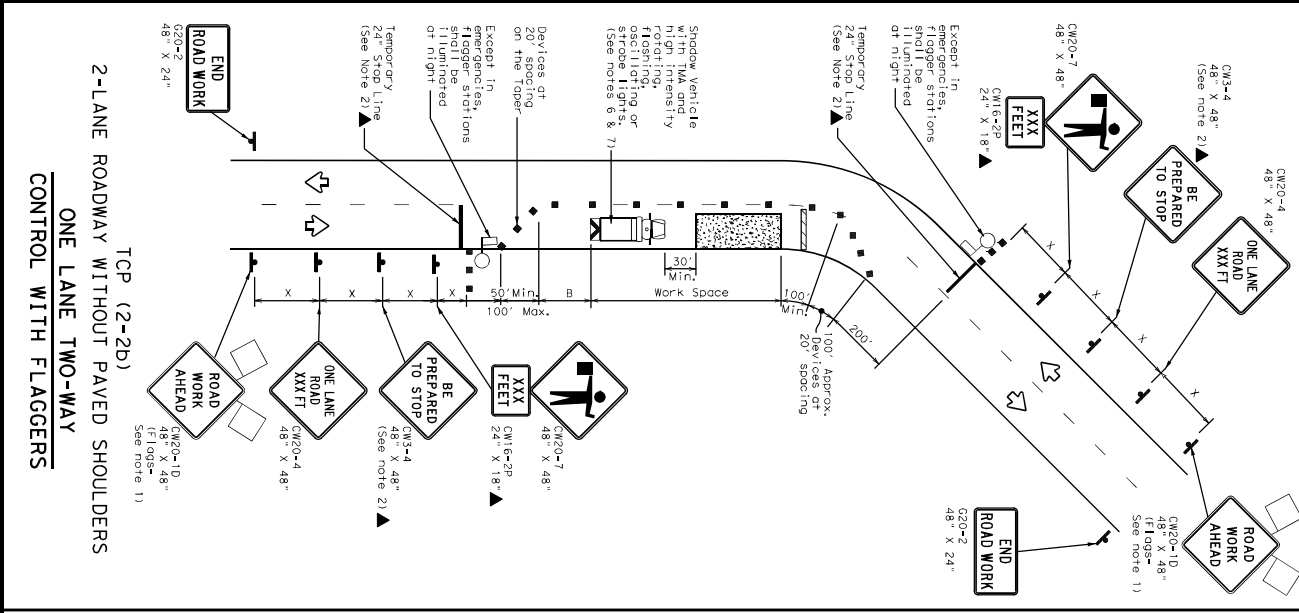
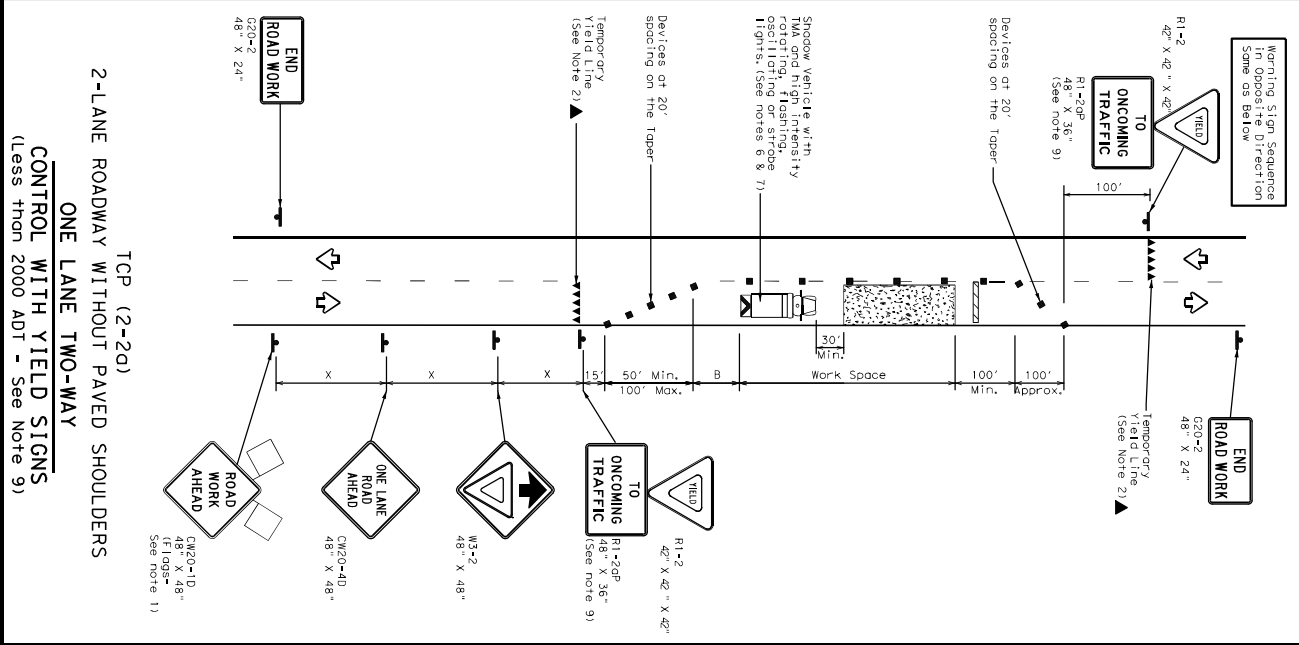
Pape-Dawson Engineers
2107 CITYVIEW BLVD., 3RD FL. • HOUSTON, TX 77042 • 713-428-2400
TEXAS ENGINEERING FIRM #410 • TEXAS SURVEYING FIRM #1023800



| NO. | REVISION | DATE |
|-----|----------|------|
| | | |
| | | |
| | | |
| | | |

DATE: FILE:

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.



LEGEND

| | | | |
|--|--------------------------------------|--|---|
| | Type 3 Barricade | | Channelizing Devices |
| | Heavy Work Vehicle | | Truck Mounted Attenuator (TMA) |
| | Trailer Mounted Flooding Arrow Board | | Portable Changeable Message Sign (PCMS) |
| | Sign | | Traffic Flow |

GENERAL NOTES

1. Flaggers stationed to signs where shown, are REQUIRED.
2. Flaggers stationed to signs where shown, are REQUIRED, except those shown with the triangle symbol by the Engineer.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4 "ONE LANE ROAD XXX FT" sign, but proper sign spacing shall be maintained.
4. Flaggers should use two-way radios or other methods of communication to control traffic.
5. A shadow vehicle with a TMA should be used to maintain the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the shadow vehicle and TMA.
6. In order to protect a wider work space.

TCP (12-20)

1. The R1-2 "YIELD TO ONCOMING TRAFFIC" sign may be used on projects with approaches that have adequate sight line to the work space. In rural areas, roadways with less than 2000 ADT, work space should be no longer than 400 feet.

2. Flaggers should use 24" Stop/Slow paddles to control traffic. Flaggers should be limited to emergency situations.

TCP (12-20b)

10. Channelizing devices on the center line may be omitted when a pilot car is leading traffic and approved by the Engineer.

11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain stopping sight distance to the flagger and a queue of stopped vehicles.

12. Flaggers should use 24" Stop/Slow paddles to control traffic. Flaggers should be limited to emergency situations.

TYPICAL USAGE

| MOBILE | SHORT TERM STATIONARY | INTERMEDIATE TERM STATIONARY | LONG TERM STATIONARY |
|--------|-----------------------|------------------------------|----------------------|
| ✓ | ✓ | ✓ | ✓ |

Texas Department of Transportation

Traffic Control Plan

ONE-LANE TWO-WAY TRAFFIC CONTROL

TCP (12-2) - 18

12/20/2024

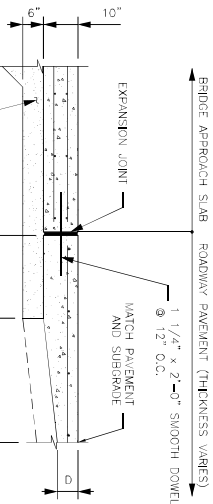
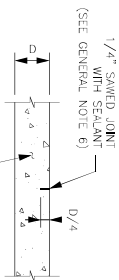
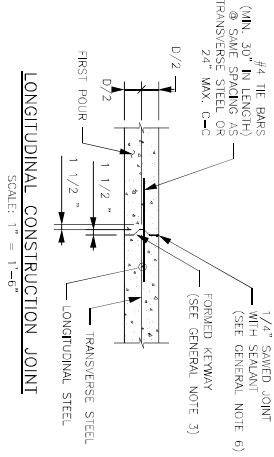
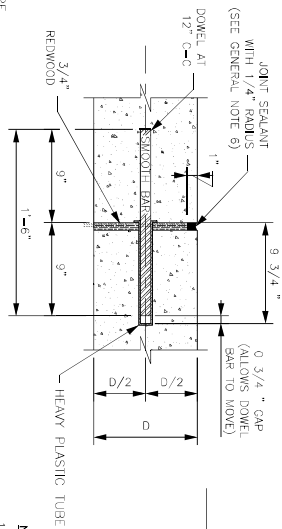
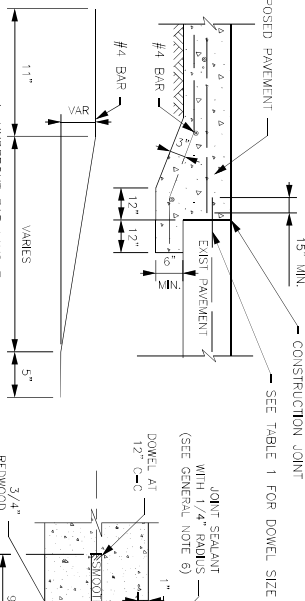
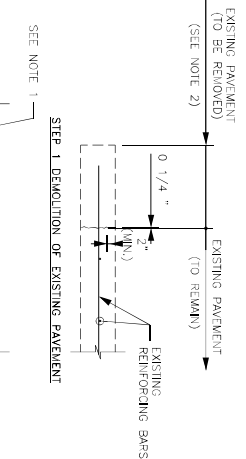
| | | | | | |
|------|---------------|-------|------|-----|----------|
| FILE | TCP-2-18-001 | REV | 001 | ISS | 001 |
| DATE | December 1985 | CONTR | SECT | 408 | REVISION |
| 8-95 | 3-0-1 | REV | 001 | 001 | 001 |
| 1-97 | 2-12 | REV | 001 | 001 | 001 |
| 1-98 | 2-18 | REV | 001 | 001 | 001 |

1. FORT BEND COUNTY MUST BE INVITED TO THE PRE-CONSTRUCTION MEETING.
2. CONTRACTOR SHALL NOTIFY FORT BEND COUNTY ENGINEERING DEPARTMENT OF ANY CHANGES TO THE SPECIFICATIONS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY WITHIN THE LIMITS OF THE PAVING AT CONSTRUCTION@FBCTX.GOV.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FROM WITHIN COUNTY ROAD RIGHT OF WAYS.
4. ALL PAVING IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FORT BEND COUNTY RULES, REGULATIONS AND REQUIREMENTS RELATING TO THE ACCEPTANCE OF IMPROVEMENTS IN SUBDIVISIONS AS CURRENTLY AMENDED.
5. ALL ROAD WIDTHS, CURB RADI AND CURB ALIGNMENT SHOWN INDICATES BACK OF CURB.
6. A CONTINUOUS LONGITUDINAL REINFORCING BAR SHALL BE USED IN THE CURBS.
7. ALL CONCRETE PAVEMENT SHALL BE 5% SACK CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MAXIMUM SPACING OF 60 FEET.
8. ALL WEATHER ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
9. 4" x 12" REINFORCED CONCRETE CURB SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE 6" REINFORCED CONCRETE CURB WITH NO CONSTRUCTION JOINT WITH IN 5' OF RAMP.
10. CURB HEADERS ARE REQUIRED AT CURB CONNECTIONS TO HANDCAP RAMPS, WITH NO CONSTRUCTION JOINT WITH IN 5' OF RAMP.
11. GUIDELINES ARE SET FORTH IN THE TEXAS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". AS CURRENTLY AMENDED, SHALL BE OBSERVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING AND WARNING DEVICES, ETC., DURING CONSTRUCTION - BOTH DAY AND NIGHT.
12. ALL R1-1 STOP SIGNS SHALL BE A MINIMUM OF 36"x36" WITH DIAMOND GRADE SHEETING PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
13. STREET NAME SIGNAGE SHALL BE ON A 9" HIGH SPEN FLAT PLATE W/REFLECTIVE GREEN BACKGROUND. STREET NAMES SHALL BE UPPERCASE AND LOWERCASE LETTERING WITH UPPERCASE LETTERS OF 8" MINIMUM AND LOWERCASE LETTERS OF 4.5" MINIMUM. THE LETTERS SHALL BE REFLECTIVE WHITE. STREET NAME SIGNS SHALL BE MOUNTED ON STOP SIGN POST.
14. A BLUE DOUBLE REINFORCERED BUTTON SHALL BE PLACED AT ALL FIRE HYDRANT LOCATIONS. THE BUTTON SHALL BE PLACED 12 INCHES OFF OF THE CENTERLINE OF THE STREET ON THE SAME SIDE AS THE HYDRANT.
15. THE PROJECT AND ALL PARTS THEREOF SHALL BE SUBJECT TO INSPECTION FROM TIME TO TIME BY INSPECTORS DESIGNATED BY FORT BEND COUNTY. NO SUCH INSPECTIONS SHALL RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS. HOWEVER, NEITHER FAILURE TO INSPECT NOR FAILURE TO DISCOVER OR REJECT ANY OF THE WORK AS NOT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS REDUCES OR RELIEVES THE CONTRACTOR OF ANY OBLIGATION OR LIABILITY TO THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AN ACCEPTANCE OF SUCH WORK OR TO RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS. HERENDUER.
16. STABILIZED SUBGRADE: DETERMINE THE TENSURESS OF THE STABILIZED SUBGRADE BY FIELD TESTING AND COMPARISON. IF THE SUBGRADE DEPTH IS 12" OR MORE, THE PROPOSED HEAVINESS BY 20% OR MORE, THE CUT LAY MUST PROVIDE VENTILATION THE PERCENTAGE OF MATERIAL BEING USED TO STABILIZE THE SUBGRADE MEETS OR EXCEEDS PROJECT REQUIREMENTS. TEST RESULTS REQUIRED.

W. H. H. H.

12/20/2024

[illegible]



| NO. | REVISIONS | DATE | NAME |
|-----|--------------------------|--------|------|
| 1 | ORIGINAL STANDARD ISSUED | 2-1-22 | RJS |
| 2 | | | |
| 3 | | | |
| 4 | | | |



| | | | |
|----------------|---------------------------|--------------------------------------|----|
| PROJECT TITLE: | | Millwood Paving and Drainage Repairs | |
| DRAWN BY: | | SHEET NO: | |
| DATE: | INT | SHEET DESCRIPTION: | 05 |
| SCALE: | CONCRETE PAVEMENT DETAILS | | |
| AS NOTED | | SHEET 1 OF 3 | |
| DATE: | APPROVED BY: | | |
| 2-1-22 | | | |

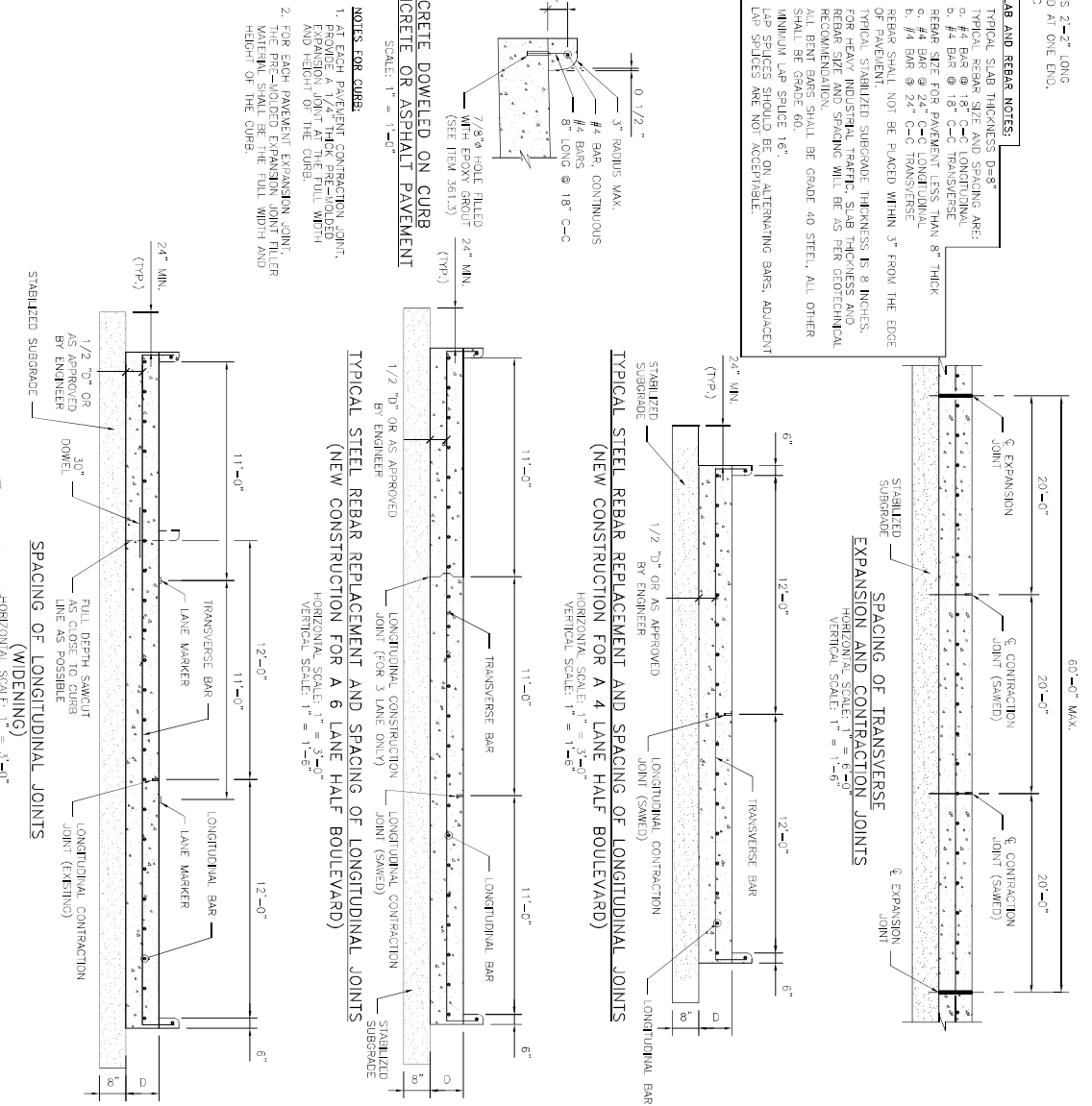
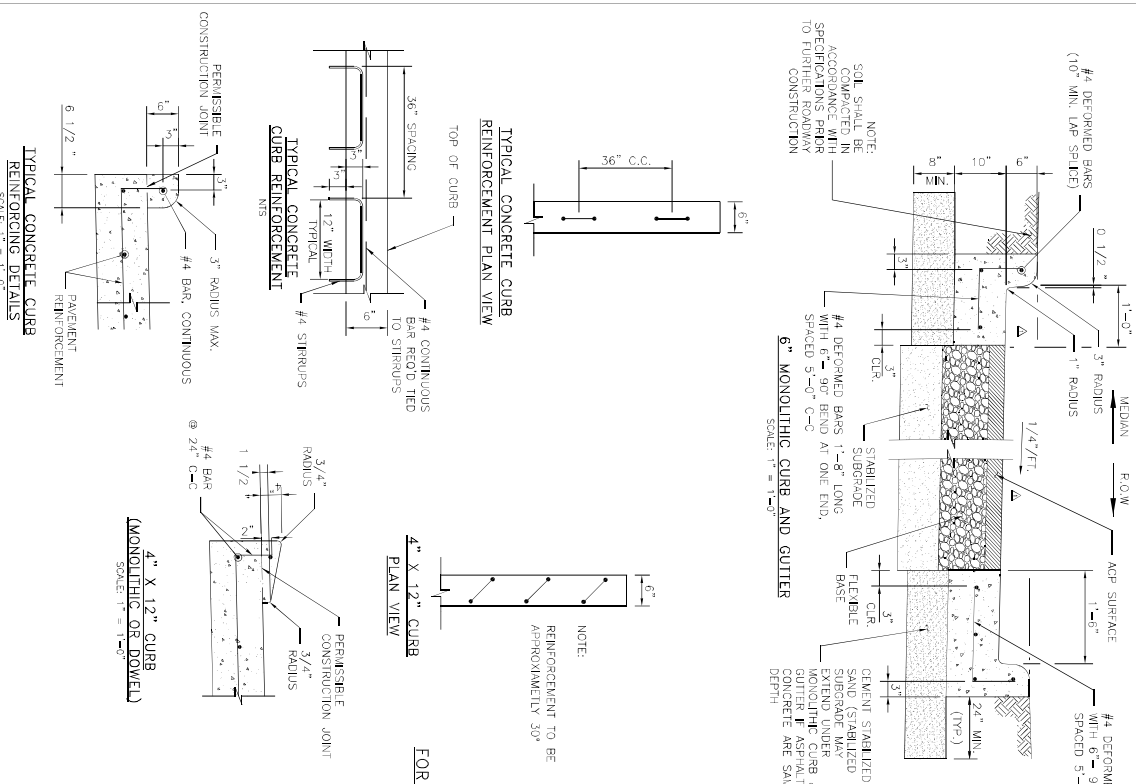
J:\1704\1601\Fort Bend County Standards\Fort Bend County STD\DONE\FBC CONCRETE PAVEMENT DETAILS\CONCRETE_PAVEMENT_DETAILS-2of2.dwg

| NO. | REVISIONS | DATE | NAME |
|-----|--------------------------|--------|------|
| 1 | ORIGINAL STANDARD ISSUED | 2-1-22 | RJS |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

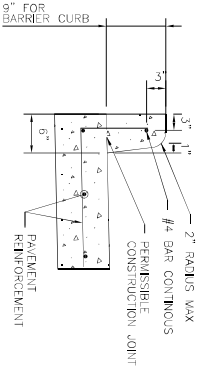
FORT BEND COUNTY
ENGINEERING DEPARTMENT



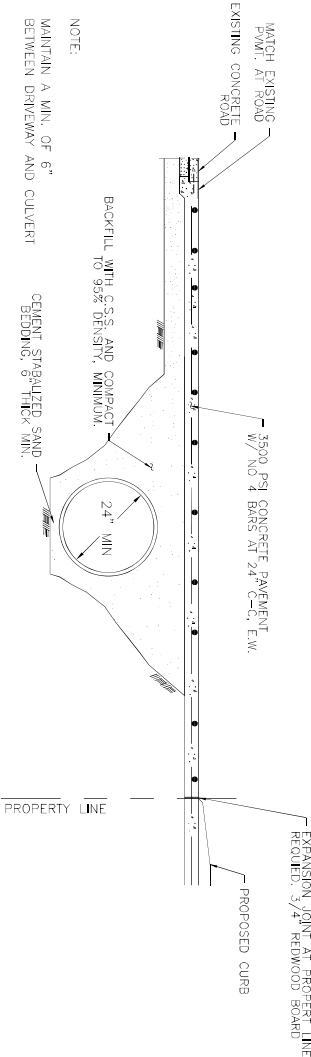
| | |
|---------------|--------------------------------------|
| PROJECT TITLE | Millwood Paving and Drainage Repairs |
| DRAWN BY | INT |
| CHECKED BY | CONCRETE PAVEMENT DETAILS |
| SCALE | AS NOTED |
| APPROVED BY | 2-1-22 |
| SHEET NO. | 2 OF 3 |
| SHEET NO. | / |



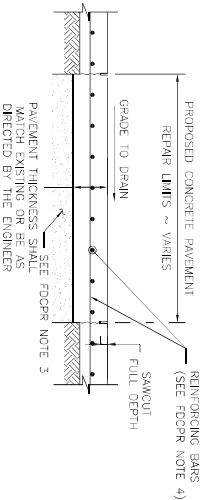
J:\1704\1601\Fort Bend County Standards\Fort Bend County STD\DONE\FBC CONCRETE PAVEMENT DETAILS\CONCRETE_PAVEMENT_DETAILS-1of2.dwg



9" BARRIER CURB




CONCRETE APRON DETAIL - DRIVEWAY PROFILE FOR CULVERT DRAINAGE



FULL DEPTH CONCRETE PAVEMENT REPAIR

FULL DEPTH CONCRETE PAVEMENT REPAIR (FDCPR) NOTES:

1. ONLY FULL DEPTH SAWCUTS WILL BE ALLOWED
2. EXISTING CONCRETE VERTICAL FACES SHALL BE CLEANED OF ALL DELETERIOUS LOOSE MATERIAL PRIOR TO CONCRETE PLACEMENT.
3. FOR REPAIR/REPLACE AREAS, A 8" DEPTH BASE SHALL BE REMOVED AND REPLACED WITH GEMENT STABILIZED SAND PER ITEM 433 HARRIS COUNTY SPECIFICATIONS.
4. REINFORCEMENT OF 9"-10" THICK CONCRETE PAVEMENT SHALL BE NO. 5 BARS AT 18" SPACING IN EACH DIRECTION. REFER TO TABLE ON CONCRETE PAVEMENT SHEET 2 OF 2
5. REFER TO FBC STREET ACCEPTANCE GUIDELINES

| | | | | | | |
|--|--------------------------|--------|------|--|--------------------------------------|--------------|
| NO. | REVISIONS | DATE | NAME |  | PROJECT TITLE | 12/20/2024 |
| 1 | ORIGINAL STANDARD ISSUED | 2-1-22 | RJS | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| FORT BEND COUNTY ENGINEERING DEPARTMENT | | | | | | |
| | | | | | Millwood Paving and Drainage Repairs | SHEET NO. 07 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

J:\1704\1601\Fort Bend County Standards\Fort Bend County STD\DONE\FBC TYPICAL PAVEMENT SECTIONS FOR DEV PROJECTS\TYPICAL_PAVEMENT_SECTIONS_FOR_DEV_PROJECTS.dwg

| NO. | REVISIONS | DATE | NAME |
|-----|--------------------------|--------|------|
| 1 | ORIGINAL STANDARD ISSUED | 2-1-22 | RJS |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

FORT BEND COUNTY
ENGINEERING DEPARTMENT



12/20/2024

| PROJECT TITLE | PROJECT NO. | SHEET NO. |
|--------------------------------------|--------------------------|-------------|
| Millwood Paving and Drainage Repairs | | 09 |
| DESIGNED BY | CHECKED BY | APPROVED BY |
| INT | FOR DEVELOPMENT PROJECTS | |
| SCALE | AS NOTED | 2-1-22 |
| SHEET NO. | | / |

- NOTES:**
- PAVEMENT SECTIONS SHOWN ARE INTENDED FOR DEVELOPMENT PROJECTS AND NOT FOR PUBLIC PROJECTS, WHERE WIDTH OF R.O.W. MAY VARY.
 - PAVEMENT SECTIONS SHALL BE LOCATED IN CENTER OF R.O.W.
 - SUBGRADE TREATMENT AND PAVEMENT THICKNESS AS DESIGNATED IN PLANS
 - REFERENCE CONSTRUCTION JOINT DETAIL ON THE STANDARD CIVIL ENGINEERING PLAN
 - NO TRAFFIC ON CONCRETE PAVEMENT FOR 7 DAYS AND COMPRESSIVE STRENGTH OF 3,500 PSI HAS BEEN REACHED.
 - ALL CONSTRUCTION JOINTS SHALL BE SEALED

**TABLE 1
(CONSTRUCTION JOINT DOWELS)**

| DOWEL SIZE | PAVEMENT DEPTH |
|------------|----------------|
| #4 BAR | < 6" |
| #5 BAR | 6" < D < 9" |
| #6 BAR | ≥ 9" |

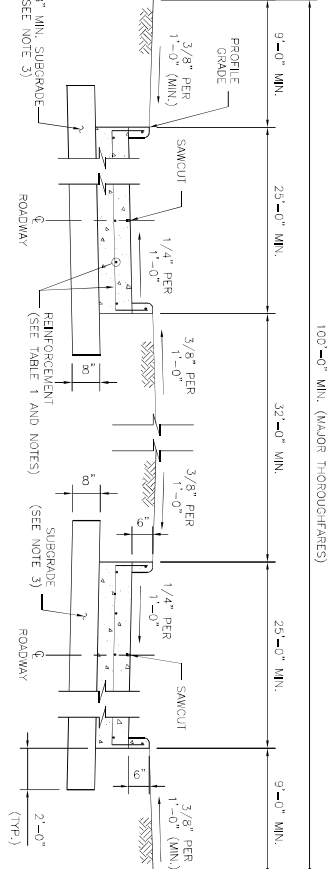
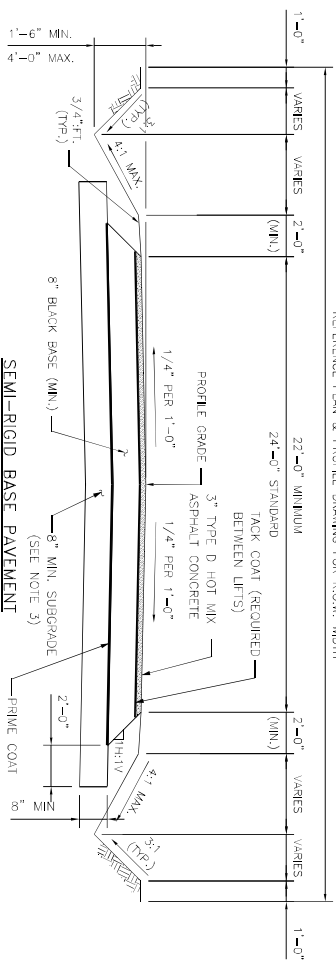
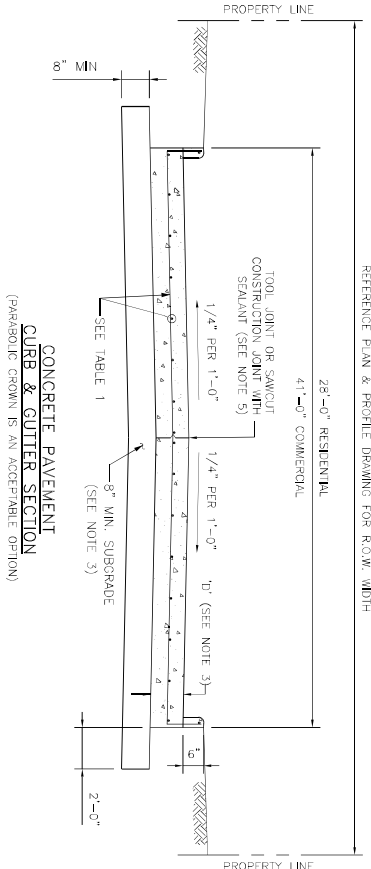
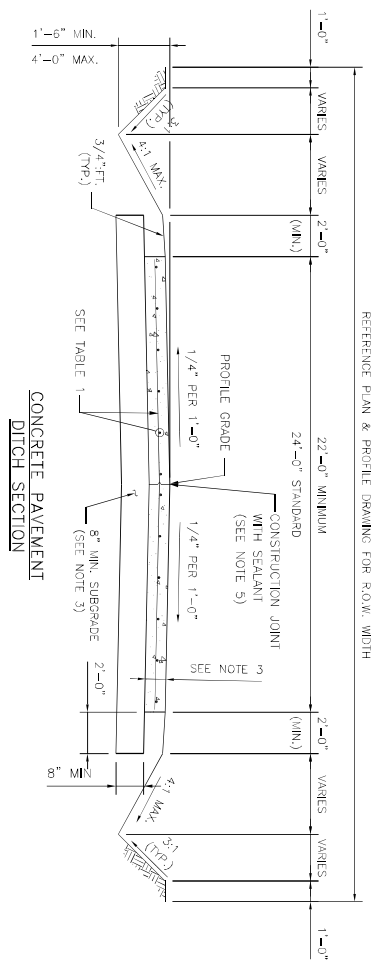
DOWEL SHALL BE DRILLED INTO EXISTING PAVEMENT (MIN. 10" MAX. 12") AND EPOXYED. (SEE ITEM 361.3)

TYPICAL SECTIONS FOR
MAJOR THOROUGHFARES

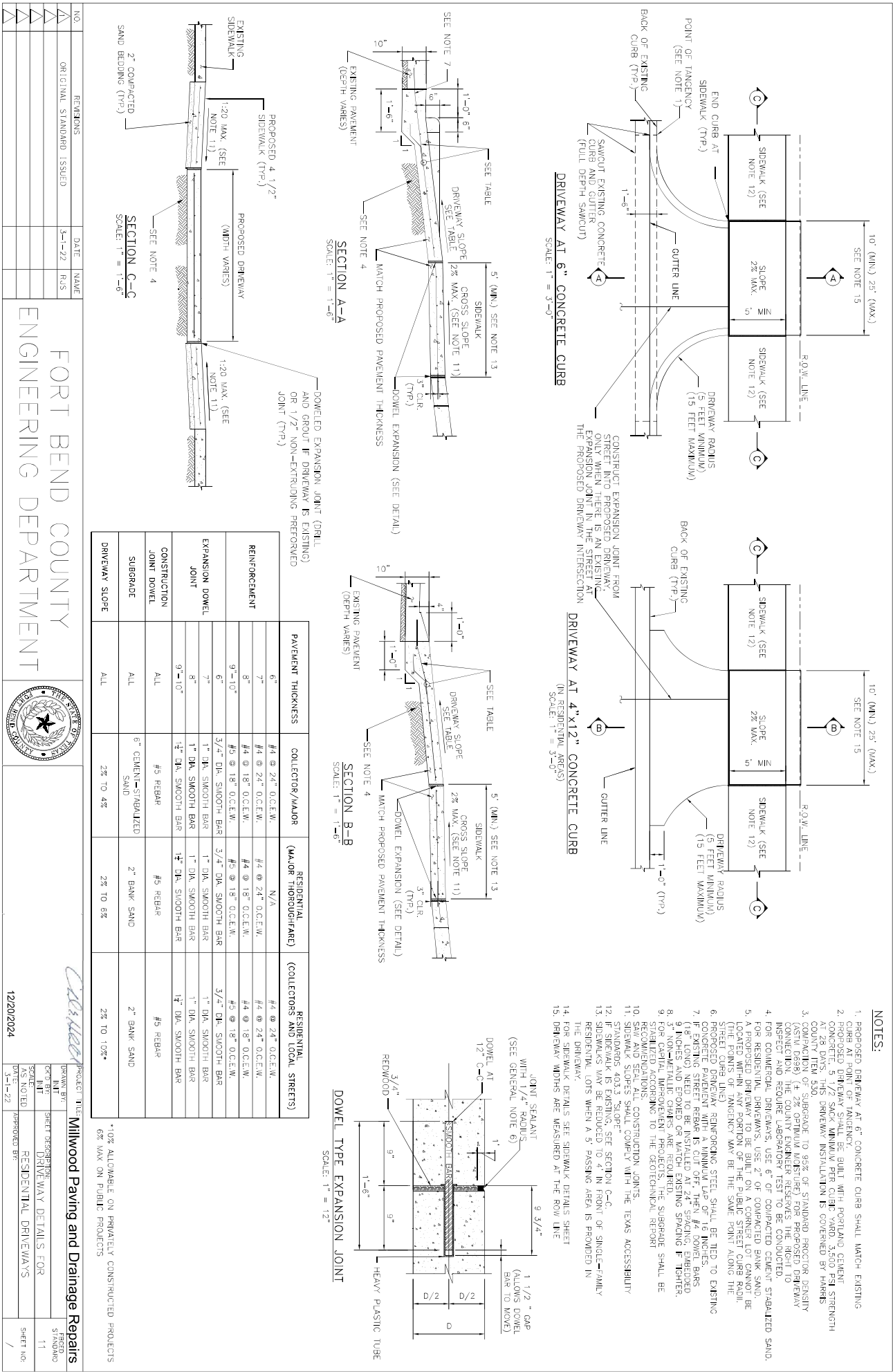
SLAB AND REBAR NOTES:

- TYPICAL SLAB THICKNESS 0-8"
- TYPICAL REBAR SPACING ARE:
a. #4 BAR @ 18" C-C LONGITUDINAL
b. #4 BAR @ 18" C-C TRANSVERSE
- REBAR SIZE FOR PAVEMENT LESS THAN 8" THICK
a. #4 BAR @ 24" C-C LONGITUDINAL
b. #4 BAR @ 24" C-C TRANSVERSE
- REBAR SHALL NOT BE PLACED WITHIN 3" FROM THE EDGE OF PAVEMENT.
- TYPICAL STABILIZED SUBGRADE THICKNESS IS 8 INCHES.
- FOR HEAVY INDUSTRIAL TRAFFIC, SLAB THICKNESS AND RECOMMENDATION SPACING WILL BE AS PER GEOTECHNICAL
- ALL BENT BARS SHALL BE GRADE 40 STEEL, ALL OTHER SHALL BE GRADE 60.
- MINIMUM LAP SPICE 16".
- LAP SPICES SHOULD BE ON ALTERNATING BARS, ADJACENT LAP SPICES ARE NOT ACCEPTABLE.

HORIZONTAL SCALE: 1"=3'-0"
VERTICAL SCALE: 1"=1'-6"



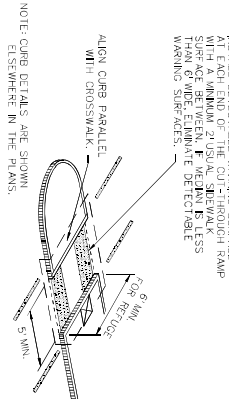
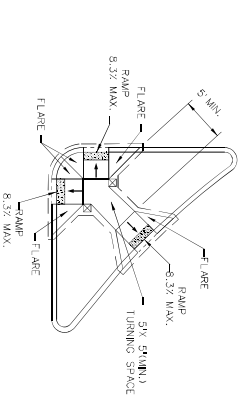
J:\1704\1601\Fort Bend County Standards\Fort Bend County STD\DONE\FBC SUBDIVISION DRIVEWAY DETAILS\SUBDIVISION_DRIVEWAY_DETAILS.dwg



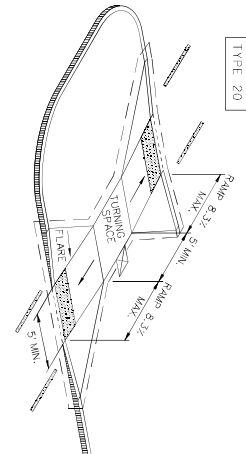
J:\1704\1703\Standard Sheets\07 FBC PED-18 RAMP DETAILS\PED-18_RAMP_DETAILS.dwg

| NO. | REVISIONS | DATE | NAME |
|-----|--------------------------|--------|------|
| 1 | ORIGINAL STANDARD ISSUED | 1-1-22 | RJS |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

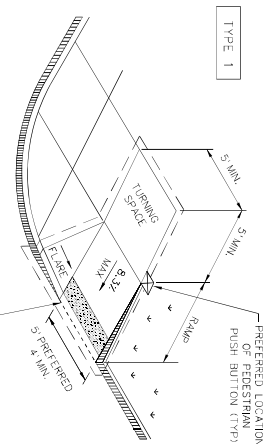
COMBINATION ISLAND RAMPS



CURB RAMPS AT MEDIAN ISLANDS



PERPENDICULAR CURB RAMP

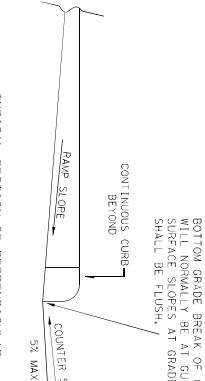


FORT BEND COUNTY
ENGINEERING DEPARTMENT

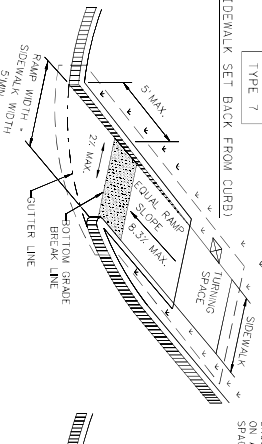
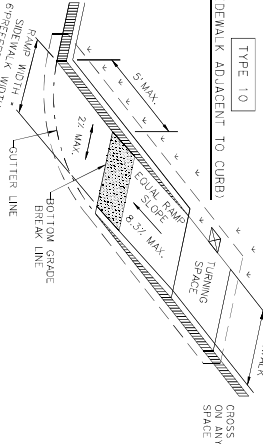


| | |
|---------------|--------------------------------------|
| PROJECT TITLE | Millwood Paving and Drainage Repairs |
| DRAWN BY | INT |
| CHECKED BY | INT |
| SCALE | 1" = 1' |
| APPROVED BY | 2-1-22 |
| SHEET NO. | 14 |
| SHEET NO. | 1 |

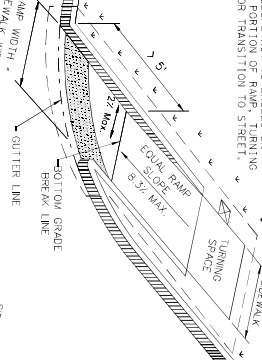
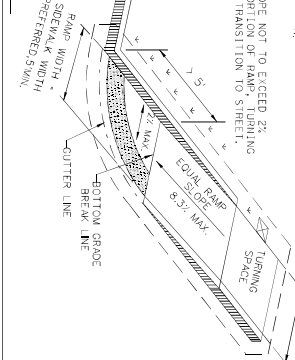
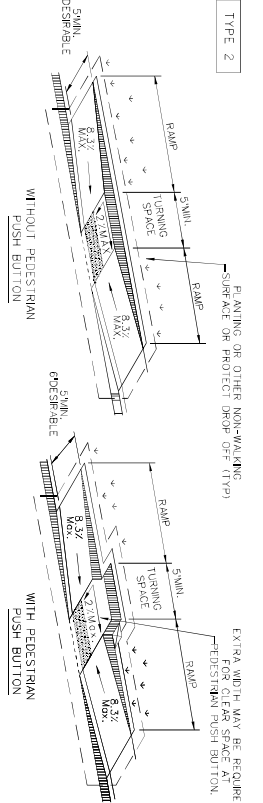
TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY



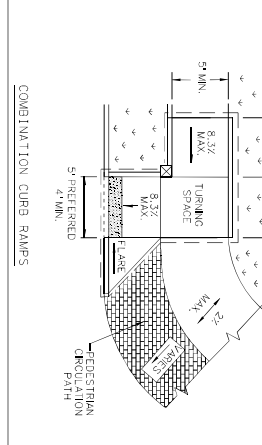
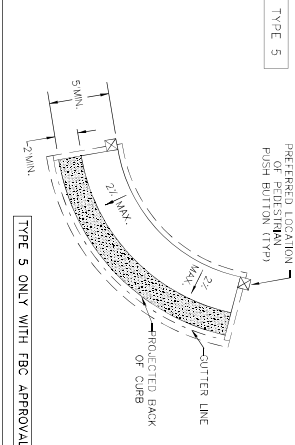
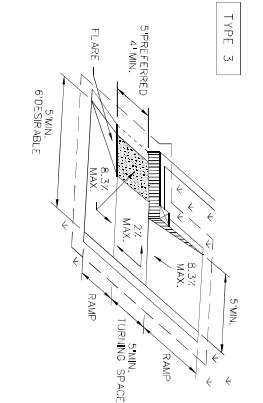
NOTES / LEGEND:



PARALLEL CURB RAMP



TYPE 6



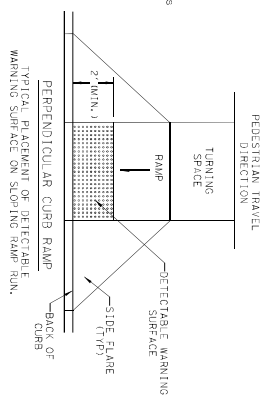
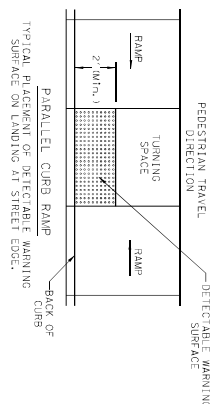
CURB RAMP

1. Install curb ramp or detectable transition at each pedestrian street crossing.
 2. All slopes between adjacent sidewalks, cross slopes of 1/4" and steeper running should be used. Adjunct curb ramp length or grade of approach sidewalks as directed.
 3. Maximum allowable cross slope on sidewalk and curb ramp surface is 2%.
 4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable, where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances.
 5. 5' x 5' passing areas or intervals not to exceed 200' are required.
 6. Turning Spaces shall be 5' x 5' minimum. Cross slope shall be maximum 2%.
 7. Clear space of the bottom of curb ramps shall be a minimum of 4' x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
 8. Provide flared sidewalks where the pedestrian circulation path crosses the curb ramp. Returned curbs may be used only where pedestrian space is planned substantially obstructed, or otherwise protected.
 9. Add additional information on curb ramp location, design, light reflective value and texture may be found in the final draft of the proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PRM) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
 10. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curb. Medians should be designed to provide accessible passage over or under the design.
 11. Small "islands" or "islands" which do not provide a minimum 5' x 5' landing at the top of the curb ramp, shall be cut through level with the surface of the street.
 12. Curb ramps shall be placed at intersections where crosswalk markings are not shown, elsewhere in the plans. At intersections where crosswalk markings are not shown, curb ramps shall align with theoretical crosswalks unless otherwise directed.
 13. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Intersecting curb ramps shall be constructed and paved for in accordance with Item 531 "5.15. Details".
 14. Curb ramps and landings shall be constructed and paved for in accordance with Item 531 "5.15. Details".
 15. Check depth of a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
 16. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
 17. Provide a smooth transition where the curb ramps connect to the street.
 18. Curb ramps on street 1 within the limits of segment are considered part of the curb ramp for pavement, whether it is concrete curb, gutter, or combined curb and gutter.
 19. Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.
- DETECTABLE WARNING MATERIAL**
20. Detectable Warning Materials must meet 1X021 Departmental Materials Specification with manufacturer's specification.
 21. Detectable warning surfaces must be firm, stable and slip resistant.
 22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where pedestrian access route enters the street.
 23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the curb. Detectable warning surfaces may be curved along the corner radius.
 24. Working surface on Sheet 1 of 4 indicate the approximate location for the detectable

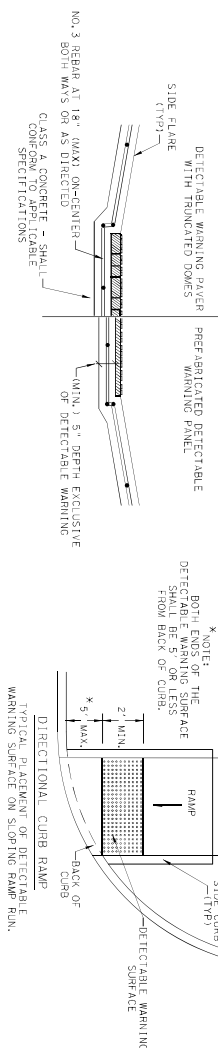
DETECTABLE WARNING PAVERS (IF USED):

25. Lay in one cable to warn of power units meeting all requirements of ASTM C-936, C-93.
 26. Lay full-size units first, followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning power units using a power saw.
- ### SIDEWALKS
27. Provide clear ground space or operable parts, including pedestrian push buttons, operable parts shall be placed within unobstructed reach range specified in applicable section below.
 28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, or clear ground space.
 29. Street grades and cross slopes shall be as shown elsewhere in the plans.
 30. Changes in level greater than 1/4 inch are not permitted.
 31. 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 adjacent street, provided that the sidewalk or crosswalk is not less than 2 percent. If a sidewalk is provided, handicrafts may be desirable to improve accessibility. If a handicraft is also needed to protect pedestrians from potentially hazardous conditions. If provided, handicrafts shall comply with ASTM A209.
 32. Handcraft extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
 33. Pavement and curbs shall be constructed and paid for in accordance with Item 1, "Construction and Materials." Sidewalk shall be constructed and paid for in accordance with Item, "Sidewalks."
 34. Sidewalk details are shown elsewhere in the plans.

DETECTABLE WARNING SURFACE DETAILS



SECTION VIEW DETAIL



| | | | |
|-----|--------------------------|--------|------|
| NO. | REVISIONS | DATE | NAME |
| Δ | ORIGINAL STANDARD ISSUED | 2-1-22 | RJS |
| Δ | | | |
| Δ | | | |
| Δ | | | |
| Δ | | | |
| Δ | | | |
| Δ | | | |

FORT BEND COUNTY ENGINEERING DEPARTMENT



PROJECT TITLE:

Millwood Paving and Drainage Repairs

DESIGNED BY:

DRAWN BY:

CHECKED BY:

IN CHARGE:

SCALE:

DATE:

APPROVED BY:

SHEET DESCRIPTION:

FED-18 RAMP DETAILS

SHEET 2 OF 4

STANDARD:

15

SHEET NO:

/

12/20/2024

J:\1704\1703\Standard Sheets\07 FBC PED-18 RAMP DETAILS\PED-18_RAMP_DETAILS.dwg

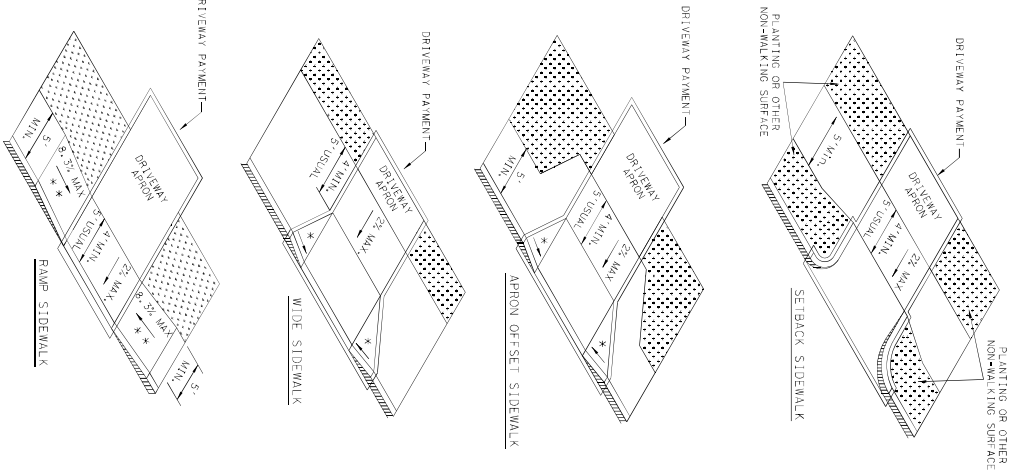
| NO. | REVISIONS | DATE | NAME |
|-----|--------------------------|--------|------|
| 1 | ORIGINAL STANDARD ISSUED | 2-1-22 | RJS |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

FORT BEND COUNTY
ENGINEERING DEPARTMENT

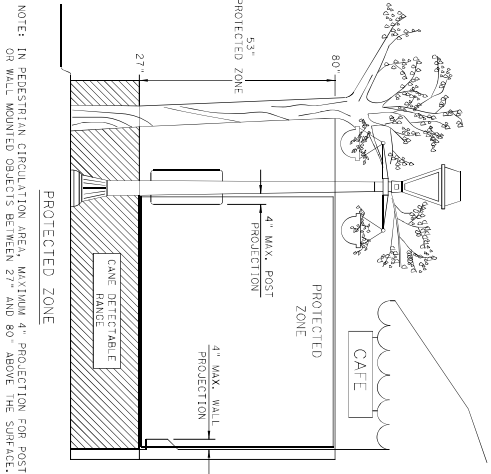


| | |
|--------------------|--------------------------------------|
| PROJECT TITLE: | Millwood Paving and Drainage Repairs |
| DRAWN BY: | INT |
| CHECKED BY: | INT |
| SHEET DESCRIPTION: | PED-18 RAMP DETAILS |
| SCALE: | 1" = 1' |
| DATE: | 12/20/2024 |
| APPROVED BY: | SHEET 3 OF 4 |
| SHEET NO.: | 16 |

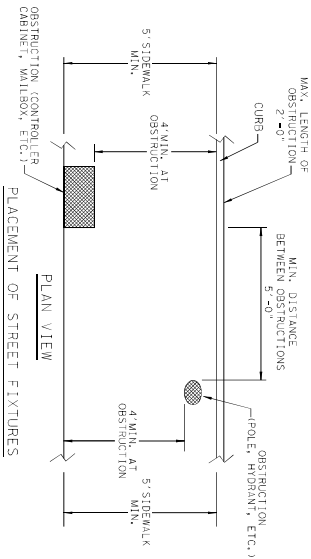
SIDEWALK TREATMENT AT DRIVEWAYS



- NOTES:
- * WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.
 - * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE DETECTABLE MARKING ARE NOT REQUIRED.

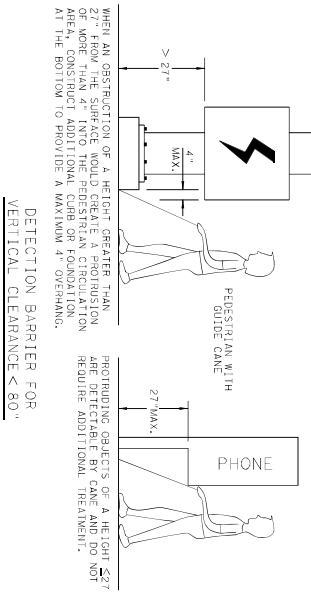
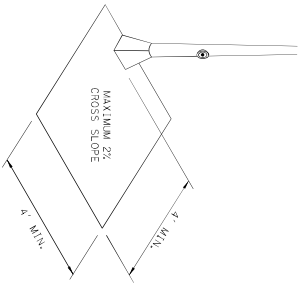


NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROTECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



NOTE: ITEMS NOT INTENDED FOR PUBLIC USE, MINIMUM 4" X 4" CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.

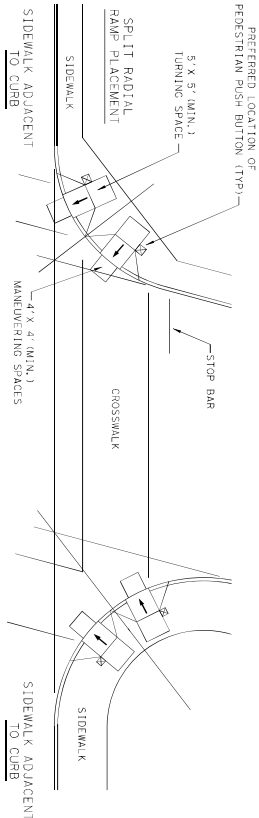
CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



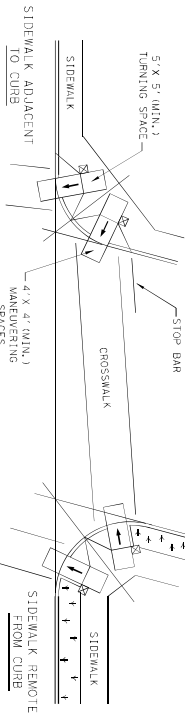
DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

J:\1704\1703\Standard Sheets\07 FBC PED-18 RAMP DETAILS\PED-18_RAMP_DETAILS.dwg

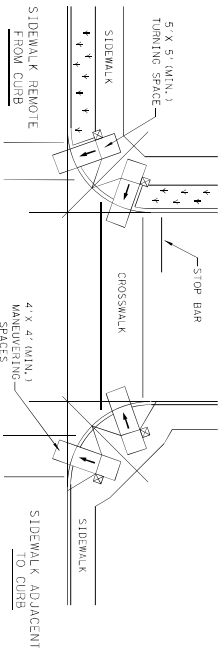
TYPICAL CROSSING LAYOUTS
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



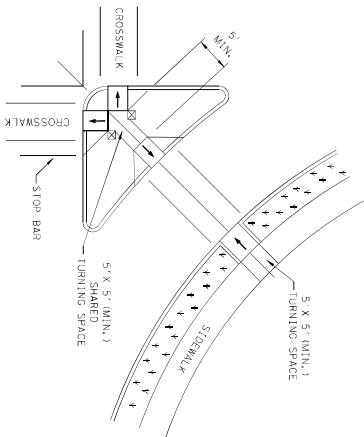
SKewed Intersection with "Large" Radius
REQUIRES FBC APPROVAL



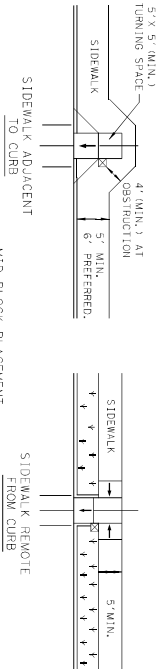
SKewed Intersection with "Small" Radius
REQUIRES FBC APPROVAL



NORMAL Intersection with "Small" Radius
REQUIRES FBC APPROVAL



AT INTERSECTION
w/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMP

LEGEND:

SHOWS DOWNWARD SLOPE.

DENOTES PREFERRED LOCATION OF PEDESTRIAN

PUSH BUTTON (IF APPLICABLE).

DENOTES PLANTING OR NON-WALKING SURFACE.

NOT PART OF PEDESTRIAN CIRCULATION PATH.

| NO. | REVISIONS | DATE | NAME |
|-----|--------------------------|--------|------|
| 1 | ORIGINAL STANDARD ISSUED | 2-1-22 | RJS |

FORT BEND COUNTY
ENGINEERING DEPARTMENT



| | |
|-------------------|--------------------------------------|
| PROJECT TITLE | Millwood Paving and Drainage Repairs |
| DRAWN BY: | INT |
| CHECKED BY: | DESIGN |
| SHEET DESCRIPTION | PED-18 RAMP DETAILS |
| SCALE | 1" = 1' |
| DATE | 12/20/2024 |
| APPROVED BY: | SHEET 4 OF 4 |
| SHEET NO. | 17 |

J:\1704\1601\Fort Bend County Standards\Fort Bend County STD\DONE\FBC PAVEMENT MARKINGS DETAILS\PAVEMENT_MARKING_DETAILS-2of2.dwg

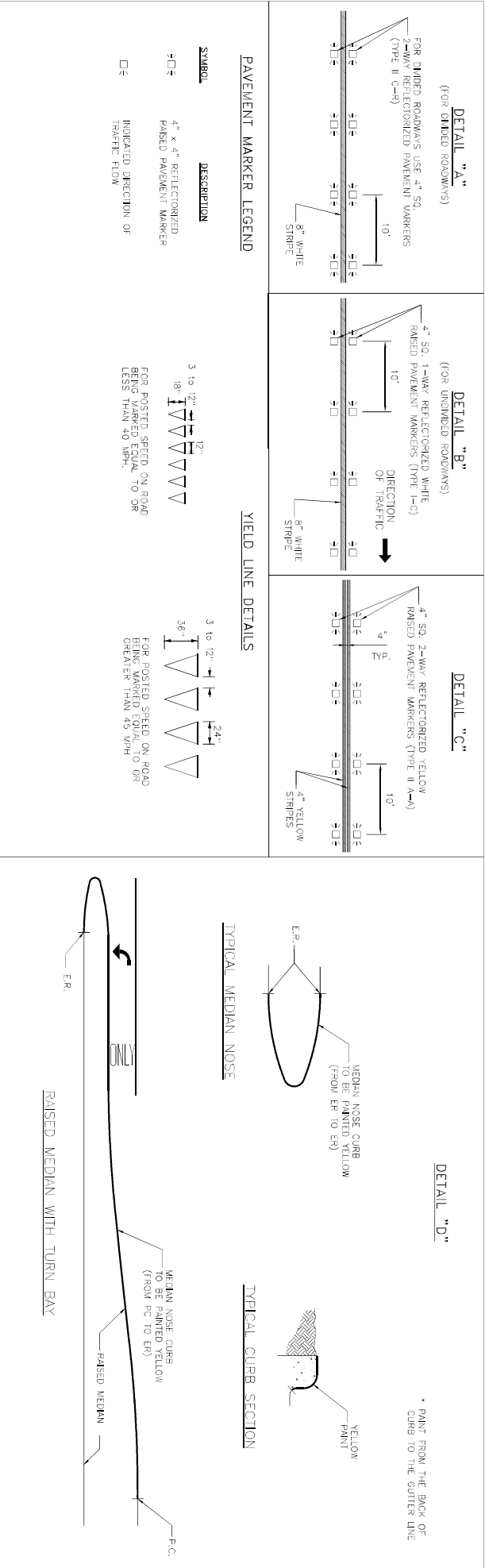
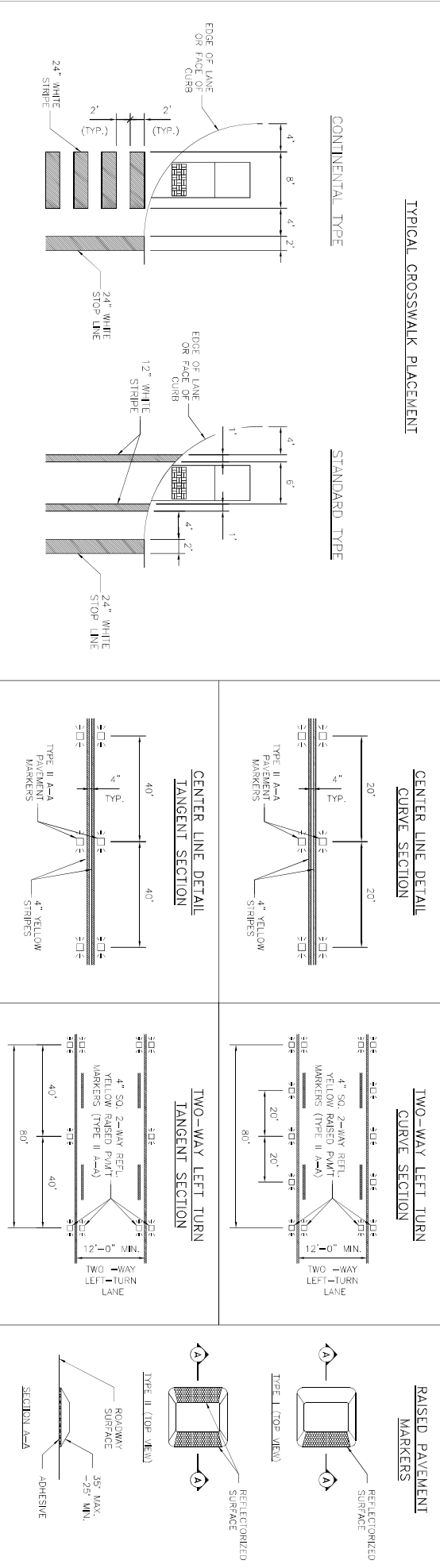
| NO. | REVISIONS | DATE | NAME |
|-----|--------------------------|--------|------|
| 1 | ORIGINAL STANDARD ISSUED | 2-1-22 | RJS |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

FORT BEND COUNTY
ENGINEERING DEPARTMENT



12/20/2024

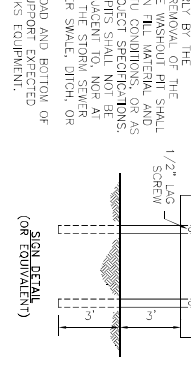
| PROJECT TITLE | PROJECT NO. | PROJECT DATE |
|--------------------------------------|-------------|--------------|
| Millwood Paving and Drainage Repairs | 2-1-22 | 12/20/2024 |
| DESIGNED BY | DRWING BY | CHECKED BY |
| SCALE | SCALE | SCALE |
| DATE | DATE | DATE |
| BY | BY | BY |
| APPROVED BY | APPROVED BY | APPROVED BY |
| SHEET NO. | SHEET NO. | SHEET NO. |
| 47 | 47 | 47 |
| STANDARD | STANDARD | STANDARD |
| 1 | 1 | 1 |





- Chas. Mear

| | | | |
|----------------------------------|--------|-----------|--|
| PROJECT TITLE | | SHEET NO. | |
| DRAWING BY | | / | |
| DATE | 2-1-12 | | |
| SHEET DESCRIPTION | | SHEET NO. | |
| TYPICAL GROUND SIGN INSTALLATION | | 52 | |
| SCALE | | | |
| CITY OF BIRMINGHAM | | | |
| INITIALS | | | |



| | | | |
|--|--------------------|--|-----------------|
| PROJECT TITLE Millwood Paving and Drainage Repairs | DRAWN BY: _____ | | SHEET NO: 54 |
| | CHECKED BY: _____ | | |
| | DATE: _____ | | |
| | APPROVED BY: _____ | | |
| | DATE: 7-1-22 | | |
| 12/20/2024 | SHEET NO: 54 | | |

Millwood Paving and Drainage Repairs

EXHIBIT 4

(Follows Behind)

FORT BEND COUNTY**Regulations of Subdivisions****Appendix**

APPENDIX**APPENDIX X - STREET ACCEPTANCE GUIDELINES**

This guidance document is prepared for use by Fort Bend County (FBC) staff, Developers, Engineers, and Contractors to provide understanding and clarity of County pavement requirements for acceptance of public roadways into County Maintenance. The General Acceptance Procedures can be found in the FBC Regulations of Subdivisions, Section 6 – Acceptance of Improvements within Subdivisions. This document provides guidance in determining if concrete pavement can be repaired and when it is necessary to replace.

Compliance with contract documents is required. Development within unincorporated FBC shall use Harris County specifications (Item 360 & 361 for Concrete Pavement). Development within City limits or extraterritorial jurisdiction shall use that City's specifications.

Engineer of Record or their designee shall notify County Engineer or their designee via email of deficiencies that are not within the specification limits as soon as the deficiency becomes known but in no case more than 24 hours after the construction activity. Examples include proof rolling, subgrade density, and concrete placement. **These guidelines do not relieve the developer, engineer, or contractor from adhering to applicable specifications and standards.**

Membrane curing compound shall be applied as soon as the surface water disappears in compliance with the manufacturer's recommendations. Sawing shall take place when concrete strength is acceptable for sawing and in compliance with the specifications without creating excessive raveling along the sawcut.

The following elements are covered in this document:

- Pavement cracking
- Bird Baths
- Construction practices that contribute to pavement failure

FORT BEND COUNTY**Regulations of Subdivisions
Appendix****APPENDIX****Concrete Pavement Cracking**

Visible cracks with no measureable width and no surface deflection are acceptable (e.g. shrinkage cracks).

Cracks less than or equal to 1/8" wide for less than 50% of the length of the crack may be sealed with a super low viscosity epoxy (gravity fed) sealant or approved alternative. Crack preparation and application of sealant will be in accordance with manufacturer's recommendations.

Cracks greater than 1/8" for more than 50% of the length of the crack must be removed and replaced.

Cracks within 12" of control or expansion joints must be removed and replaced.

Cracks with a difference in elevation (e.g. surface deflection or joint fault) greater than 1/8" must be removed and replaced.

Spalled concrete pavement must be removed and replaced.

Concrete Removal and Replacement

Minimum pavement removal area will be minimum 6-feet long and the full-lane width in accordance with Harris County Item 361 - Full Depth Repair of Concrete Pavement which states;

The minimum dimensions for full depth concrete pavement repair are one lane-width, and not less than 6 feet long. Repair areas smaller than the minimum will show excessive "rocking" against the adjoining concrete pavement sections. Likewise, the minimum remainder of the slab shall be at least 6 feet (to the end of slab or next repair area).

Evaluation of Subgrade

After pavement removal and before placement of concrete, the subgrade and the material beneath the subgrade must be evaluated by a certified testing laboratory to determine the material is suitably stable. Provide lab report for density, moisture, lime depth, and other related analysis of subgrade to FBC. Lab reports shall be sealed by a Texas licensed Professional Engineer and include recommendations for over-excavation of subgrade material, subgrade treatment, or other mitigation needed to address pavement cracking issues.

If the lab analysis recommends the subgrade be removed, new subgrade shall be Cement Stabilized Sand (2 sack/cy, compacted) or as recommended by the lab report, whichever is more stringent.

Concrete Slump, Temperature and Placement Time

Harris County Item 360 - Concrete Pavement, states;

Unless otherwise permitted, the concrete mix design shall be proportioned to provide a slump between 1 and 6 inches.

Any slump in excess of 6" will require the entire load of concrete (typically 10 yards) to be removed and replaced. A 10 cubic yard truck is equivalent to 60 square yards (SY) of 6" thick pavement, 52 SY of 7" thick pavement, or 45 SY of 8" thick pavement.

FORT BEND COUNTY**Regulations of Subdivisions
Appendix**

APPENDIX

Harris County Item 360.6 states, “*A slump test will be made for each sample of concrete obtained, or when slumps appear to be outside specification requirements.*” Therefore, when a slump is in excess of 6”, the CMT technician must perform a slump test on every subsequent truck until the slump is within specification.

Concrete temperature and placement time must be in accordance with the project specifications. Concrete temperature in excess of 100°F shall be rejected. Concrete discharged more than 90 minutes after batch time shall be rejected.

Concrete not meeting these specifications must be removed and replaced. If the pavement is otherwise undamaged (no cracking), the contractor has the option to reimburse Fort Bend County 25% of the cost of removal and replacement. The cost will be determined using the current FBC on-call contract unit prices. Funds will be placed in a Road & Bridge account to fund concrete repair contracts.

Mix designs containing admixtures which may modify the slump, temperature and/or placement time must be submitted and approved by FBC prior to use. For example, Harris County Item 421.6 states, “*If High Range Water-Reducing admixture is used, maximum acceptable placement slump shall be 9 inches.*”

FORT BEND COUNTY**Regulations of Subdivisions
Appendix****APPENDIX****Bird Baths**

The following images are of bird baths that would require correction. Correction may be pavement removal and replacement, light grinding, lifting, or removal of obstruction (i.e. joint sealant). The extent of pavement removal will be determined in the field with FBC Engineering staff based on location of bird bath, joints, cracks, inlets, or other items.

Light grinding may be done within 6 inches of the curb and no more than 1/2 inch in depth. Grind must be “feathered” so as not to create an edge.



Image 1 - Bird bath extends into driving lane; corrective measures required.



Image 2 - Bird bath has significant length and depth. Lifting, light grinding, or removal of joint sealant obstruction may be acceptable based on field conditions. Grinding shall be limited to 15' either side of the expansion joint.

FORT BEND COUNTY

Regulations of Subdivisions
Appendix

APPENDIX

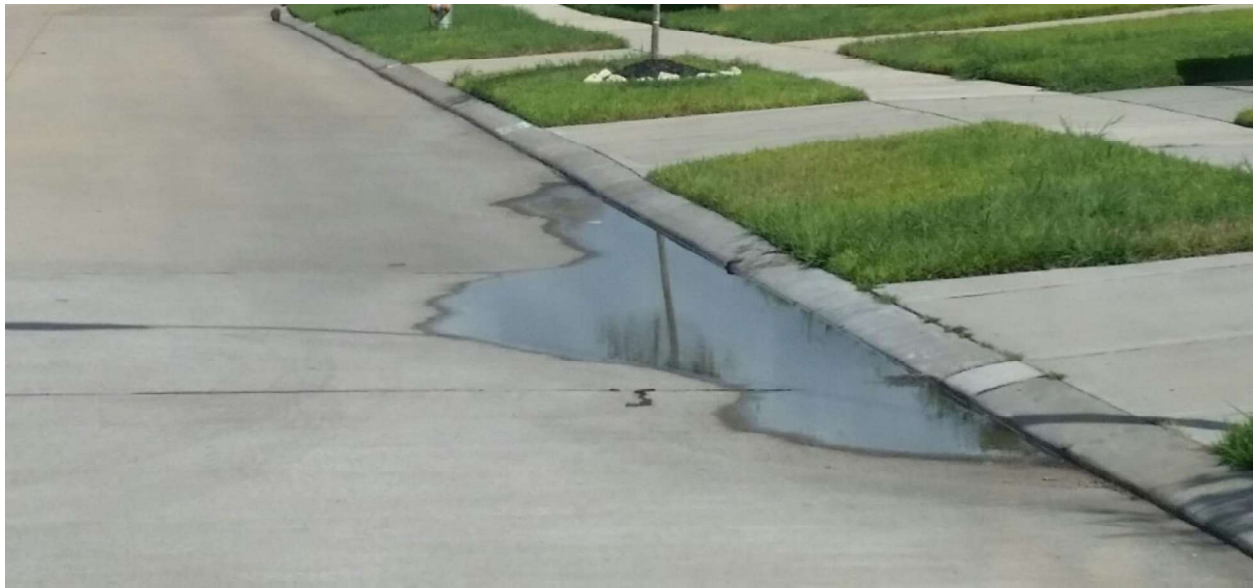


Image 3 - Bird bath has significant length, width, and depth. Lifting or pavement replacement is required. If the lifted pavement cracks then use Concrete Pavement Cracking Evaluation Criteria included in this document.



Image 4 - Bird baths which are relatively small in length, width, and depth do not require pavement replacement or lifting. Allowable width is approximately 12 inches.

FORT BEND COUNTYRegulations of Subdivisions
Appendix**APPENDIX****Construction Practices That Contribute To Pavement Failure**

The information below is to assist developers, engineers, contractors, and inspectors on identifying conditions that may lead to inadequate pavement structures and costly pavement replacement upon construction completion.



Image 5 - Subgrade is too dry.



Image 6 - Subgrade is too dry.

FORT BEND COUNTY

Regulations of Subdivisions Appendix

APPENDIX



Image 7 - Possible deficiencies in subgrade and base include: Inadequate proof rolling or improper mixing of lime for subgrade, not extending lime mixture to edges of proposed limits of the stabilized subgrade, calculating lime for a 6 inch subgrade and mixing it 8 or more inches deep.



Image 8 - Concrete under headers at expansion joints does not allow expansion to occur correctly.



Image 9 - Misaligned dowels may cause spalling near the joint.



Image 10 - Misaligned dowels may cause spalling near the joint.

FORT BEND COUNTY

Regulations of Subdivisions Appendix

APPENDIX



Image 11 - Membrane curing compound not applied to pavement



Image 12 - Inadequate curing compound

FORT BEND COUNTY

Regulations of Subdivisions Appendix

APPENDIX



Image 13 - Silt fence or irrigation is placed directly behind curb cuts through subgrade and impacts lateral support.



Image 14 - Excavation under or near pavement

FORT BEND COUNTY

Regulations of Subdivisions Appendix

APPENDIX



Image 15 - Not saw cutting within specified time (photo shows 4 day old concrete with no sawcuts)



Image 16 - Equipment operating on pavement with inadequate cure time.

FORT BEND COUNTY

Regulations of Subdivisions Appendix

APPENDIX



Image 17 - Driveway cut with water sitting weakens the subgrade



Image 18 – Private utility excavation beneath pavement