

**REVIEW BY FORT BEND COUNTY
COMMISSIONERS COURT**

13A
**Fort Bend County
Engineering Department**
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytx.gov

Right of Way Permit
 Commercial Driveway Permit
Permit No: 2018-21544

Applicant: R Construction Company Civil, LLC dba R Construction Company

Job Location Site: 900 Macek Road, Richmond, TX 77469

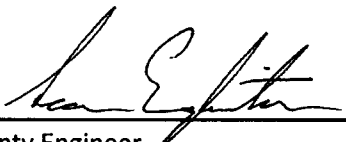
Bond No. **Date of Bond:** 6/7/2018 **Amount:** \$5,000.00

The above applicant came to make use of certain Fort Bend County property subject to, "The Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas, of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Chapter 181, Vernon's Texas Statutes and Codes Annotated.

Notes:

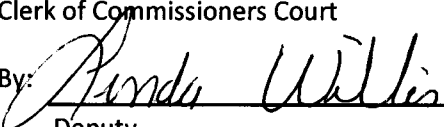
1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
 - a. 48 hours in advance of construction start up, and
 - b. When construction is completed and ready for final inspection, submit notification to Permit Administrator thru MyGovernmentOnline.org portal.
3. This permit expires one (1) year from date of permit if construction has not commenced.

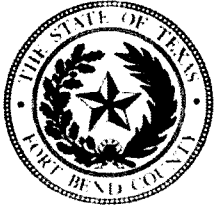
On this 26th day of June, 2018, Upon Motion of Commissioner Meyers, seconded by Commissioner Patterson, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Signature
By: 
County Engineer

Presented to Commissioners Court and approved.
Date Recorded 7-3-2018 Comm. Court No. 13A

By: N/A
Drainage District Engineer/Manager

Clerk of Commissioners Court
By: 
Deputy



**PERMIT APPLICATION REVIEW FORM FOR
CABLE, CONDUIT, AND POLE LINE ACTIVITY
IN FORT BEND COUNTY**

**Fort Bend County
Engineering Department**
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytx.gov

- Right of Way Permit
 Commercial Driveway Permit

Permit No: 2018-21544

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

(1) COMPLETE APPLICATION FORM:

- a. Name of road, street, and/or drainage ditch affected.
 b. Vicinity map showing course of directions
 c. Plans and specifications

(2) BOND:

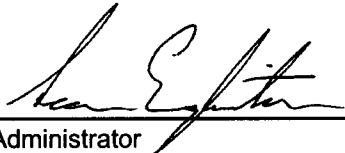
- County Attorney, approval when applicable.
- Perpetual bond currently posted. Bond No: _____ Amount: _____
- Performance bond submitted. Bond No: ██████████ Amount: \$5,000.00
- Cashier's Check Check No: _____ Amount: _____

(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):

Drainage District Approval

Date

We have reviewed this project and agree it meets minimum requirements.



Permit Administrator

6/21/2018

Date

34



**PERFORMANCE BOND COVERING ALL CABLE, CONDUIT AND/OR POLE LINE
ACTIVITY IN, UNDER, ACROSS OR ALONG FORT BEND COUNTY ROAD
(AUTHORIZED)**

BOND NO [REDACTED]

THE STATE OF TEXAS §
COUNTY OF FORT BEND §

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, R Construction Company Civil, LLC dba R Construction Company whose (address and phone) is 800 Wilcrest, Suite 360, Houston, TX 77042, (713) 334-5757 Texas, hereinafter called the Principal, and SureTec Insurance Company, a Corporation existing under and by virtue of the laws of the state of Texas and authorized to do an indemnifying business in the state of Texas, and whose principal office is located at (name/address/phone) 1330 Post Oak Blvd, Suite 1100, Houston, TX 77056, (713) 812-0800, whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought whining said state is Steve D. Nelson and whose address is 1330 Post Oak Blvd, Suite 1100, Houston, TX 77056, (713) 812-0800, hereinafter called the Surety, and held and firmly bound unto, Robert e. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, in the full sum of Five Thousand Dollars (\$5,000.00) current, lawful money of the United States of America, to be paid to said Robert E. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, to which payment well and truly to be made and done, we, the undersigned, bind ourselves and each of us, our heirs, executors, administrators, successors, assigns, and legal representatives, jointly and severally, by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT, WHEREAS, the above bounden principal contemplates laying, constructing, maintaining and/or repairing one or more cables, conduits, and/or pole lines in, under, across and/or along roads, streets and highways, commercial driveway and median openings or modifications in the County of Fort Bend, and the State of Texas, under the jurisdiction of the Commissioners' Court of Fort Bend County, Texas, pursuant to the Commissioners' Court order adopted on the 1st day of December, A.D. 1980, recorded in Volume 13, of the Commissioners' Court Minutes of Fort Bend County, Texas, regulating same, which Commissioners' Court order is hereby referred to and made a part hereof for all purposes as though fully set out herein;

AND WHEREAS, the principal desires to provide Fort Bend County with a performance bond covering all such cable, conduit and/or pole line activity, commercial driveway and median openings or modifications;

NOW, THEREFORE, if the above bounden principal shall faithfully perform all its cable, conduit and/or pole line activity (including, but not limited to the laying, construction, maintenance and/or repair of cables, conduits and/or pole lines) in, under, across and/or along roads, streets and highways, commercial driveway and median openings or modifications in the County of Fort Bend and State of Texas, under the jurisdiction of the Commissioners Court of Fort Bend County, Texas, pursuant to and in accordance with minimum requirements and conditions of the above mentioned Commissioners' Court order set forth and specified to be by said principal done and performed, at the time and in the manner therein specified, and shall pay over and make good and reimburse Fort Bend County, all loss and damages which Fort Bend County may sustain by reason of any failure or default on the part of said principal, then this obligation shall be null and void, otherwise to remain in full force and effect.

This bond is payable at the County Courthouse in the County of Fort Bend and State of Texas.

It is understood that at any time Fort Bend County deems itself insecure under this bond, it may require further and/or additional bonds of the principal.

EXECUTED this 7th day of June, 2018.

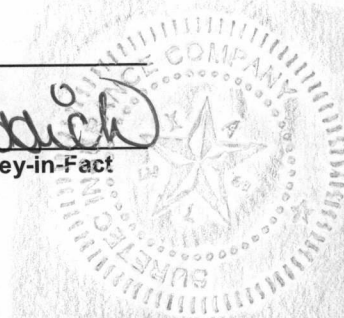
R Construction Civil, LLC dba
R Construction Company
PRINCIPAL

BY

SureTec Insurance Company
SURETY

BY Melissa Ann Haddick, Attorney-in-Fact

CCM 6-26-18 #13A
Fort Bend County Clerk
Return Admin Serv Coord
Permit # 2018-21544 RAC



SureTec Insurance Company

LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

Dan. W. Burton, Teresa D. Kelly, Craig C. Payne, Laura L. Kneitz, Rheagyn L. White, Melissa Haddick

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for, providing the bond penalty does not exceed

Twenty Five Million and 00/100 Dollars (\$25,000,000.00)

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the CEO, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

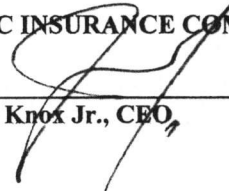
Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its CEO, and its corporate seal to be hereto affixed this 10th day of April, A.D. 2018.

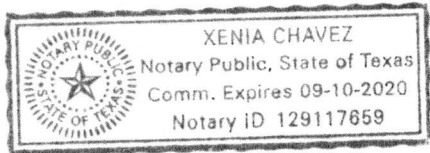
SURETEC INSURANCE COMPANY

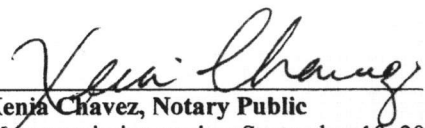
By: 
John Knox Jr., CEO



State of Texas ss:
County of Harris


On this 10th day of April, A.D. 2018 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is CEO of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.



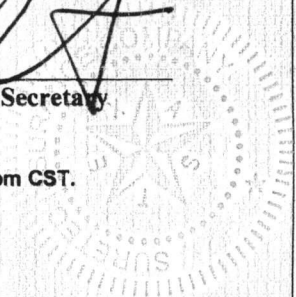

Xenia Chavez, Notary Public
My commission expires September 10, 2020

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 7 day of June, 2018, A.D.


M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.
For verification of the authority of this power you may call (713) 812-0800 any business day between 8:30 am and 5:00 pm CST.



SureTec Insurance Company

THIS BOND RIDER CONTAINS IMPORTANT COVERAGE INFORMATION

Statutory Complaint Notice

To obtain information or make a complaint: You may call the Surety's toll free telephone number for information or to make a complaint at: 1-866-732-0099. You may also write to the Surety at:

SureTec Insurance Company
9737 Great Hills Trail, Suite 320
Austin, TX 78759

You may contact the Texas Department of Insurance to obtain information on companies, coverage, rights or complaints at 1-800-252-3439. You may write the Texas Department of Insurance at

PO Box 149104
Austin, TX 78714-9104
Fax#: 512-475-1771

PREMIUM OR CLAIM DISPUTES: Should you have a dispute concerning your premium or about a claim, you should contact the Surety first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

Terrorism Risks Exclusion

The Bond to which this Rider is attached does not provide coverage for, and the surety shall not be liable for, losses caused by acts of terrorism, riot, civil insurrection, or acts of war.

Exclusion of Liability for Mold, Mycotoxins, Fungi & Environmental Hazards

The Bond to which this Rider is attached does not provide coverage for, and the surety thereon shall not be liable for, molds, living or dead fungi, bacteria, allergens, histamines, spores, hyphae, or mycotoxins, or their related products or parts, nor for any environmental hazards, bio-hazards, hazardous materials, environmental spills, contamination, or cleanup, nor the remediation thereof, nor the consequences to persons, property, or the performance of the bonded obligations, of the occurrence, existence, or appearance thereof.

FILED AND RECORDED
OFFICIAL PUBLIC RECORDS

Laura Richard

Laura Richard, County Clerk

Fort Bend County Texas

July 02, 2018 02:00:43 PM



FEE: \$0.00

RMM

2018073565

CONSTRUCTION OF WATER, SANITARY, DRAINAGE & PAVING FACILITIES IN GREATWOOD LAKE SEC 2A

FOR FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT No. 192

INDEX OF DRAWINGS

SHEET No.	TITLE
1	COVER SHEET & INDEX
2	GENERAL CONSTRUCTION LAYOUT - WATER & SANITARY SEWER
3	GENERAL CONSTRUCTION LAYOUT - PAVING & DRAINAGE
4	GENERAL CONSTRUCTION LAYOUT - SIGNING & PAVEMENT MARKING PLAN
5	DRAINAGE CALCULATIONS
6	GENERAL CONSTRUCTION NOTES I
7	GENERAL CONSTRUCTION NOTES II
8	GENERAL CONSTRUCTION NOTES III

PLAN & PROFILE

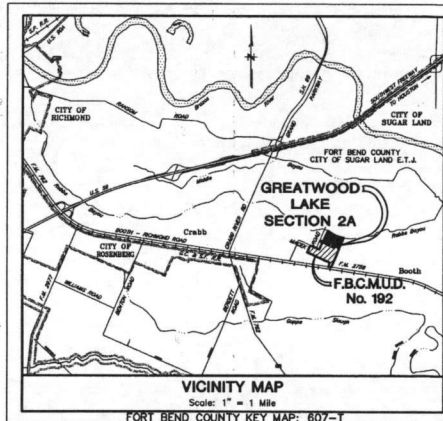
STREET NAME	STATION
9 MESQUITE HILL LANE	6+79.11 TO 11+59.03
PECAN PLACE LANE	11+59.03 TO 13+00.00
10 PECAN PLACE LANE	13+00.00 TO 19+22.11
KNUCKLE	0+47.50 TO 2+17.29
11 CYPRESS CREEK LANE	5+51.29 TO 10+09.59
12 YAUPON CREEK LANE	4+52.27 TO 7+29.11
OFFSITE WATER	7+29.11 TO 10+08.90
13 CHESTNUT COVE LANE	1+00.00 TO 8+79.10
14 OUTFALL A	12+01.60 TO 13+35.92
OUTFALL B	12+28.57 TO 13+35.92
15 OFFSITE SANITARY SEWER	8+41.48 TO 11+67.33
16 RABBS BAYOU GRADING I	0+80.35 TO 6+00.00
17 RABBS BAYOU GRADING II	6+00.00 TO 14+01.23
18 EXISTING BASELINE A	11+00.00 TO 18+50.00

DETAILS

19	MISCELLANEOUS DETAILS I
20	MISCELLANEOUS DETAILS II
21	MISCELLANEOUS DETAILS III
22	PAVING DETAILS I
23	PAVING DETAILS II
24	PAVEMENT MARKING DETAILS
25	GRADING PLAN
26	STORM WATER POLLUTION PREVENTION PLAN
27	STORM WATER POLLUTION PREVENTION PLAN DETAILS
28	1xDOT PED-12A

**DIG-TESS NOTIFICATION SYSTEM
CALL BEFORE YOU DIG!!!**

www.digtess.org/
Texon811 or 1-800-DIG-TESS
1-800-344-8377



FEBRUARY 2018

J|C JONES | CARTER
Texas Board of Professional Engineers Registration No. F-439
2230 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

NOTES:

These plans were prepared to meet or exceed the specifications and requirements of City of Sugar Land and Fort Bend County as currently amended. Approval by Fort Bend County will be deemed void if construction has not begun within one year of approval date. Construction shall not begin before the plat of this section is filed in the Fort Bend County Map Records. Construction will be monitored under the supervision of a licensed professional engineer of JONES|CARTER. Contractor shall notify the Fort Bend County Engineering Department at least 48 hours prior to commencement at Construction@FortBendCountyTx.gov

FORT BEND COUNTY ENGINEER

ENGINEER: Richard W. Stollis, P.E.
For RICHARD W. STOLLIS, P.E.

DATE: 4/20/18
THESE SIGNATURES ARE VOID IF
CONSTRUCTION
HAS NOT COMMENCED IN ONE (1) YEAR FROM
DATE OF APPROVAL.

APPROVED: Lyndsay J. Evans
DEVELOPMENT COORDINATOR

DATE: 4/20/18

I, Lyndsay J. Evans, a Professional Engineer licensed in the State of Texas do hereby certify that these plans were prepared under my supervision to meet or exceed the specifications and requirements of Fort Bend County, Texas.

Lyndsay J. Evans 2/28/18
Lyndsay J. Evans, P.E. Date

CITY OF SUGAR LAND, TEXAS

Guillermo Salcedo, P.E. 10 April 2018
City Engineer Date

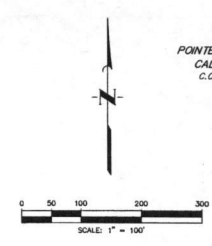


Lyndsay J. Evans 2/28/18
Lyndsay J. Evans Date

SHEET No.
1
OF 28

GREATWOOD LAKE SECTION 2A - WATER, SANITARY, DRAINAGE & PAVING FACILITIES

JONES | CARTER
LMT, TEXAS



POINTE GREATWOOD, LLC
CALLED 100.37 AC
C.C.F. No. 2012146345
G.P.F.B.C.T.

GREATWOOD BEND
SLIDE No. 11234
P.R.F.B.C.T.

GREATWOOD STONEBRIDGE
SECTION TWO
Slide No. 20859
P.R.F.V.C.T.

GREATWOOD LAKE
SECTION ONE
C.C.F. No. 20140242
G.P.R.F.B.C.T.

MINH C. NGUYEN, ET UX
CALLED 63.896 AC.
F.B.C.C.F. No. 2002140649

BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT HEIGHTS, LOCATED 50.3 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.4' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.6 FEET (NAVD83).

TBM "A"
TEMPORARY BENCHMARK A BEING A 60 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 90 FT CORNER OF THE INTERSECTION OF FM 2700 AND A GRAVEL DRIVEWAY WITH ADDRESS 8239.
ELEVATION = 78.65' (NAVD 88 Adjustment)

TBM "B"
TEMPORARY BENCHMARK B BEING A 60 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 90 FT NORTHWEST OF A 90 DEGREE BEND IN MACKED RD AND APPROXIMATELY 1800 FEET EAST OF THE INTERSECTION OF RABBS CROSSING AND MACKED RD.
ELEVATION = 81.13' (NAVD 88 Adjustment)

100-YEAR FLOOD PLAIN
THIS TRACT LIES WITHIN ZONES "AE, X, & Y SHADED" OF THE FLOOD INSURANCE RATE MAP NUMBER 48150004A, PANEL 249 OF 560, FOR FORT BEND COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "AE" IS DEFINED AS SPECIAL FLOOD HAZARD AREAS DETERMINED BY THE 1% FLOOD BASE FLOOD ELEVATIONS DETERMINED. ZONE "Y" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. ZONE "X" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT ON WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD. THIS FLOOD STATEMENT DOES NOT GUARANTEE THE SAFETY OF STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON OCCASIONAL FLOODING CAN AND WILL OCCUR AND FLOODS VAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *CAB*
DEVELOPMENT COORDINATOR
DATE: 4/18/19

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD NO. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A
GENERAL CONSTRUCTION LAYOUT
WATER & SANITARY SEWER

JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
21039 Mechanics Way, Suite 170, Glen Rose, TX 75748 (817) 913-4000

SCALE: 1"=100' DGN. BY: KCM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO. _____
SUBMITTED: _____ SURV. BY: _____
F.B. NO. _____

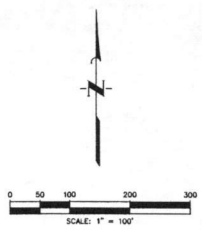
STATE OF TEXAS
Professional Engineer
LYNEBAY J. EVANS
2/28/19

SHEET NO. 2 OF 28

Prop Lift Station
(By Separate
JC Contract)

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		WATERLINE w/ GATE VALVE
		FLUSH VALVE w/ GATE VALVE
		PLUG & CLAMP w/ BLOW OFF
		WATERLINE LEAD
		SANITARY SEWER w/ MANHOLE
		SANITARY STACK
		SANITARY LEAD
		STORM SEWER w/ MANHOLE
		STORM SEWER w/ INLET
		SWALE CENTERLINE
		NATURAL GROUND CONTOUR
		UE
		WLE
		SSE
		STM SE
		DE
		AE
		GRADE BREAK LINE
		LOT NUMBER
		BLOCK NUMBER



POINTE GREATWOOD, LUC
CALLED 100.37 AC
C.C.F. No. 2012146145
D.P.R.F.B.C.T.

GREATWOOD BEND
SLAKE No. 13124
P.R.F.B.C.T.

GREATWOOD STONEBRIDGE
SECTION TWO
SHLAK No. 200550
P.R.F.V.C.T.

MINH N. NGUYEN, ET UX
CALLED 63.896 AC
F.B.C.C.F. No. 2002140649

LEGEND

- | EXISTING | PROPOSED | |
|----------|----------|------------------------------|
| | | WATERLINE w/ GATE VALVE |
| | | FLUSH VALVE w/ GATE VALVE |
| | | PLUG & CLAMP w/ BLOW OFF |
| | | WATERLINE LEAD |
| | | SANITARY SEWER w/ MANHOLE |
| | | SANITARY STACK |
| | | SANITARY LEAD |
| | | STORM SEWER w/ MANHOLE |
| | | STORM SEWER w/ INLET |
| | | SWALE CENTERLINE |
| | | NATURAL GROUND CONTOUR |
| | | UTILITY EASEMENT |
| | | WATERLINE EASEMENT |
| | | SANITARY SEWER EASEMENT |
| | | STORM SEWER EASEMENT |
| | | DRAINAGE EASEMENT |
| | | AERIAL EASEMENT |
| | | INLET |
| | | DRAINAGE AREA IN ACRES |
| | | STORM SEWER RUNOFF IN C.F.S. |
| | | DRAINAGE AREA LINE |
| | | DRAINAGE AREA NUMBER |
| | | EXTREME EVENT SHEET FLOW |
| | | GRADE BREAK LINE |

INLET 1.82 AC

STORM SEWER 8.83 AC
12.99 AC

VII

----- DRAINAGE AREA LINE

VII DRAINAGE AREA NUMBER

----- EXTREME EVENT SHEET FLOW

----- GRADE BREAK LINE

GREATWOOD LAKE
SECTION ONE
C.C.F. 20140242
D.P.R.F.B.C.T.

BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT 102072, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.4' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.8 FEET (NAVD88).

TBM "A"
TEMPORARY BENCHMARK A BEING A 80 D HAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHWEST OF A 90 DEGREE BEND IN MACEE RD AND APPROXIMATELY 1800 FEET EAST OF THE INTERSECTION OF RABBIT CROSSING AND MACEE RD.
ELEVATION = 78.85' (NAVD 88 Adjustment)

TBM "B"
TEMPORARY BENCHMARK B BEING A 80 D HAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHWEST OF A 90 DEGREE BEND IN MACEE RD AND APPROXIMATELY 1800 FEET EAST OF THE INTERSECTION OF RABBIT CROSSING AND MACEE RD.
ELEVATION = 81.13' (NAVD 88 Adjustment)

100-YEAR FLOOD PLAIN
THIS TRACT LIES WITHIN ZONES "AE, X, & X SHADDED" OF THE FLOOD INSURANCE RATE MAP NUMBER HERRICK0004, PANEL 248 OF 500, FOR FORT BEND COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "AE" IS DEFINED AS SPECIAL FLOOD HAZARD AREAS INUNDATED BY THE 1% FLOOD. BASE FLOOD ELEVATIONS DETERMINED. ZONE "X" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. ZONE "X SHADDED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD. AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE, OR THAT OCCASIONAL FLOODS CAN AND WILL OCCUR AND FLOODS VAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.
APPROVED: *CLB* DEVELOPMENT COORDINATOR

DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

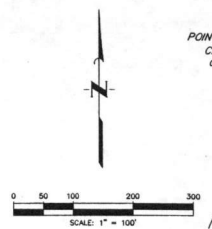
GREATWOOD LAKE SECTION 2A
GENERAL CONSTRUCTION LAYOUT
PAVING & DRAINAGE

JC JONES CARTER

Texas Board of Professional Engineers Registration No. 1-439
2230 Westpark Way, Suite 110, San, TX 77469 (832) 934-8000

SCALE: 1"=100' DGN BY: KCM
DATE: FEBRUARY 2018 DWN BY: EPV
JOB NO. 05537-0008-00 DWG. NO.
SUBMITTED: SURV. BY:
F.B. NO.

Lindsay J Evans
LYNDAY J. EVANS
128786
2/28/18
SHEET NO. 3 OF 28



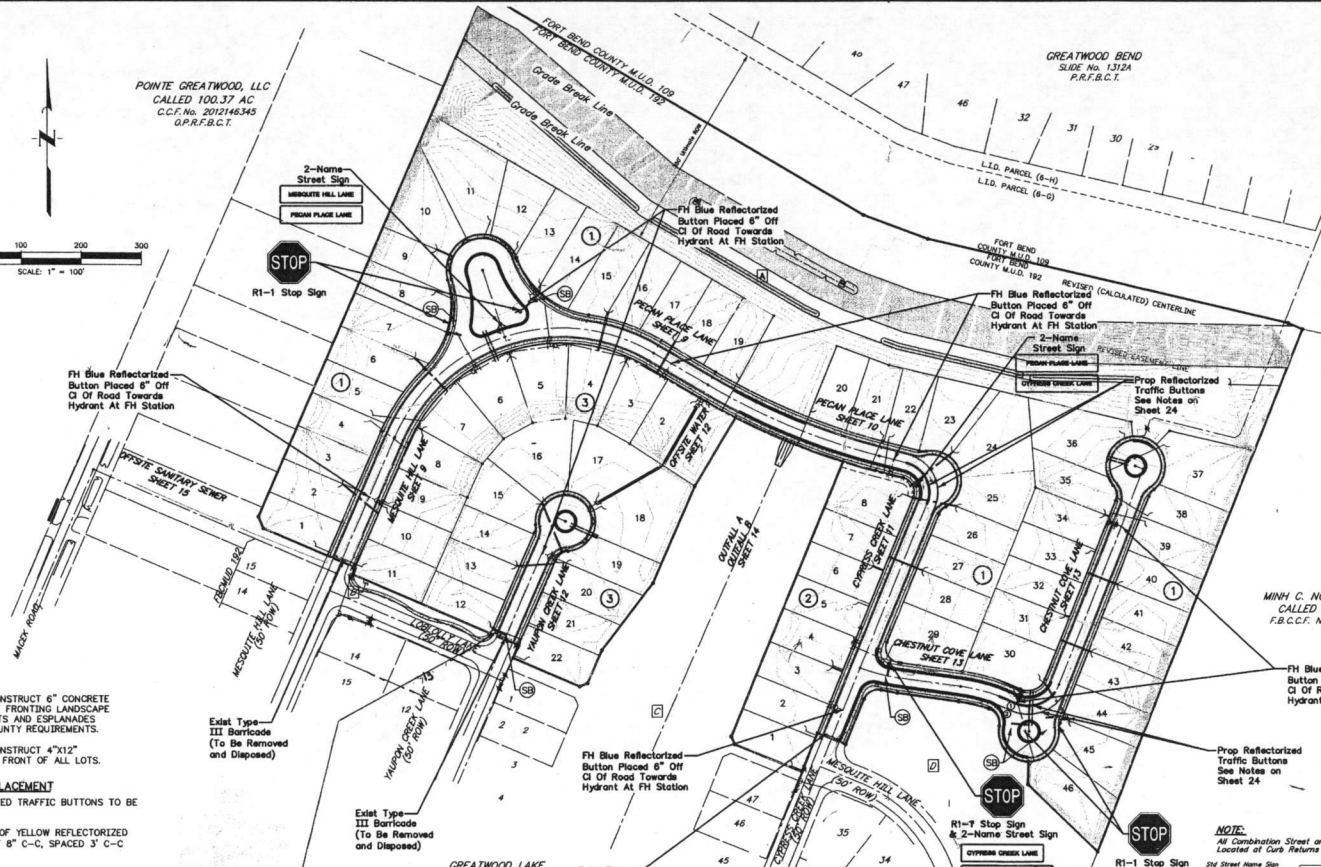
POINTE GREATWOOD, LLC
CALLED 100.37 AC
C.C.F. No. 2012146345
D.P.R.F.B.C.T.

GREATWOOD BEND
PLD No. 1312A
S.R.F.B.C.T.

GREATWOOD STONEBRIDGE
SECTION TWO
Slide No. 2065B
P.R.F.V.C.T.

BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT 485272, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SWATERS LAKE ROAD, 26.6' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 68.6 FEET (NAVD88).
TBM "A"
TEMPORARY BENCHMARK A BEING A 60 D NAIL IN A POWER POLE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF FM 2759 AND A GRAVEL DRIVEWAY WITH ADDRESS 8238.
ELEVATION = 78.65' (NAVD 88 Adjustment)
TBM "B"
TEMPORARY BENCHMARK B BEING A 60 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHWEST OF A 90 DEGREE BEND IN HACKER RD AND APPROXIMATELY 1860 FEET EAST OF THE INTERSECTION OF HANCO CROSSING AND HACKER RD.
ELEVATION = 81.13' (NAVD 88 Adjustment)

100-YEAR FLOOD PLAIN
THIS TRACT LIES WITHIN ZONES "AE, X, & Y SHADED" OF THE FLOOD INSURANCE RATE MAP NUMBER 48157C0245L PANEL 245 OF 550, FOR FORT BEND COUNTY, TEXAS AND UNINCORPORATED AREAS. ZONE "AE" IS DEFINED AS SPECIAL FLOOD HAZARD AREAS DETERMINED TO BE OUTSIDE THE 1% FLOOD BASE FLOOD ELEVATIONS DETERMINED. ZONE "X" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 1% ANNUAL CHANCE OF 0.2% ANNUAL CHANCE FLOOD AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE AND AREAS PROTECTED BY LEVEES FROM THE ANNUAL CHANCE FLOOD. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE OR FARE OCCASIONS FLOODS CAN AND WILL OCCUR AND FLOODS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.



CURB NOTE

- CONTRACTOR TO CONSTRUCT 6" CONCRETE CURB ON PAVEMENT FRONTING LANDSCAPE RESERVES, SIDE LOTS AND ESPRANDES PER FORT BEND COUNTY REQUIREMENTS.
- CONTRACTOR TO CONSTRUCT 4"x12" CONCRETE CURB IN FRONT OF ALL LOTS.

TRAFFIC BUTTON PLACEMENT

- PROPOSED REFLECTORIZED TRAFFIC BUTTONS TO BE PLACED AS FOLLOWS:
- PLACE DOUBLE ROW OF YELLOW REFLECTORIZED TRAFFIC BUTTONS AT 6" C-C, SPACED 3' C-C FROM C/R TO C/R.
 - PLACE SINGLE ROW OF WHITE REFLECTORIZED TRAFFIC BUTTONS AT 3' C-C, FROM C/R TO C/R.

Exist Type III Barricade (To Be Removed and Disposed)

Exist Type III Barricade (To Be Removed and Disposed)

Exist Type III Barricade (To Be Removed and Disposed)

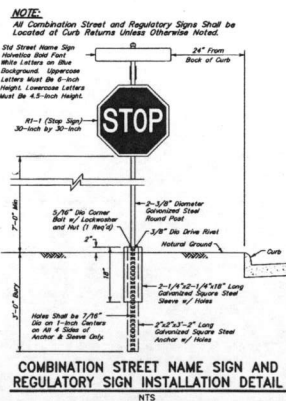
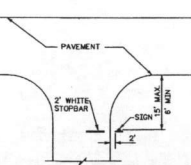
Exist Type III Barricade (To Be Removed and Disposed)

2-Name Street Sign
LOBBLY LANE
YALTON CREEK LANE

LEGEND

+	STOP SIGN WITH STREET NAME SIGN	⊕	4"x12" CURB
<	STREET NAME SIGNS ONLY	▬	24" STOP BAR
≡	WHEELCHAIR RAMP (TYPE 7)	⊞	6" IRRIGATION SLEEVES
≡≡	TYPE III BARRICADE	□	RESERVE-SEE PLAT
---	EXIST TYPE III BARRICADE (TO BE REMOVED & DISPOSED)	---	5' CONCRETE SIDEWALK BY OTHERS
---	6" CURB	---	GRADE BREAK LINE
		4	LOT NUMBER
		3	BLOCK NUMBER

SIGN LOCATION DETAIL
NTS



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *[Signature]* DEVELOPMENT COORDINATOR
DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD NO. 192
FORT BEND COUNTY, TEXAS
GREATWOOD LAKE SECTION 2A
GENERAL CONSTRUCTION LAYOUT
SIGNING & PAVEMENT
MARKING PLAN

JONES CARTER
Texas Board of Professional Engineers Registration No. 6-439
21388 Merchandise Way, Suite 170, Katy, TX 77449 (832) 913-6000
SCALE: 1"=100' DON. BY: KCM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0006-00 DWG. NO.
SUBMITTED: SURV. BY:
F.B. NO.

LYNDAY J. EVANS
Professional Engineer
No. 10278
SIGNED: *[Signature]*
DATE: 4/20/18
SHEET NO. 4 OF 28

AS PER ORIGINAL

ASPHALTIC CONCRETE PAVEMENT:

- 1. ASPHALTIC MATERIAL AND WORKMANSHIP SHALL COMPLY WITH ASTM C 33, ASTM C 131, ASTM C 136, AND TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES (1993) AND ITS LATEST REVISIONS. ASPHALT SHALL BE TYPE D-100 UNLESS SPECIFICALLY NOTED AND APPROVED BY CITY OF SUGAR LAND ENGINEER. CONTRACTOR SHALL VERIFY ELEVATIONS AND GRADES THAT BASE COURSE IS READY TO SUPPORT IMPOSED LOADS. APPLY A PAVEMENT COURSE PER CITY OF SUGAR LAND AND TxDOT STANDARDS. DO NOT APPLY TACK COAT UNTIL PROVED BASE COURSE IS CURED AND IS APPROVED BY THE CONSTRUCTION INSPECTOR. TACK COAT SHALL COMPLY TO CITY OF SUGAR LAND AND TxDOT STANDARDS. DO NOT USE CUTBACK ASPHALT APRIL 16 THROUGH SEPTEMBER 15. DO NOT PLACE ASPHALT WHEN AMBIENT TEMPERATURE IS BELOW 50° AND FALLING. MIXTURE MAY BE PLACED WHEN AMBIENT TEMPERATURE IS 40° AND RISING. ON PUBLIC ROADS, STREETS, AND RIGHTS-OF-WAY, ASPHALT SHALL BE PLACED IN MAXIMUM 2-INCH LIFTS. IN THE EVENT MORE THAN ONE LIFT IS REQUIRED, EACH LIFT SHALL BE COMPACTED, TESTED, AND GIVEN ADEQUATE TIME FOR THE PREVIOUS LIFT TO CURE AND DRY BEFORE THE NEXT LIFT IS PLACED. IF COMPLETELY CURED AND DRIED, A TACK COAT WILL BE REQUIRED BETWEEN LIFTS. A CERTIFIED LAB SHALL BE ON SITE AT ALL TIMES TO TEST AND PROPERLY DOCUMENT THE CONSTRUCTION METHODS AND QUALITY OF MATERIALS. ROLLING PATTERNS SHALL BE ESTABLISHED BY THE CONTRACTOR, AS RECOMMENDED BY THE LAB, TO ACHIEVE THE MAXIMUM COMPACTION. THE SELECTED ROLL PATTERN SHALL BE FOLLOWED UNLESS CHANGES IN THE PLACEMENT OR MAJOR OCCUR, WHICH AFFECT COMPACTION. ROLLING COEFFICIENT SHALL BE ASKED. ASPHALT SHALL NOT BE PLACED ON WET BASE. NO "BONDINGS" ARE ALLOWED. IF THE SURFACE RAELS (SEPARATES), CRACKS, RUTS, OR DISTURBANCES IN ANY MANNER PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR WILL CORRECT THIS CONDITION AT HIS EXPENSE TO THE SATISFACTION OF THE CITY OF SUGAR LAND ENGINEER. THE CONTRACTOR SHALL PROTECT THE PAVEMENT UNTIL DIRECTED BY THE CITY ENGINEER TO OPEN SAID PAVEMENT TO TRAFFIC. RIDE QUALITY SHALL COMPLY WITH TxDOT ITEM 585, "RIDE QUALITY FOR PAVEMENT SURFACES". SPECIAL NOTE: CONTRACTOR, WHILE MAXIMIZING COMPACTION, SHALL USE CAUTION NOT TO "TOVER-ROLL" ASPHALT. PAVEMENT STRUCTURE ON OVER-ROLLED, WHERE COMPACTION IS BROKEN, SHALL NOT BE ACCEPTED AND SHALL BE REPAIRED TO THE CITY ENGINEER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE. CORNER SAMPLES SHALL BE TAKEN RANDOMLY AT A MINIMUM OF EVERY 500 LF PER LANE OF ROADWAY OR ONE PER EVERY 200 SQ. YD., WHICHEVER IS APPLICABLE AND SHALL BE STAGGERED RELATIVE TO TESTING LINES IN ADJUTING TRAFFIC LANES. ALL ASPHALTIC CONCRETE PAVEMENT REPAIRS SHALL BE SAW CUT TO FULL ASPHALT DEPTH. REFER TO ASPHALT STABILIZED BASE, FLEXIBLE BASE, ASPHALT BASE, AND OIL AND EMULSION NOTES. ALL DAMAGED BASE AND SUBGRADES SHALL BE REMOVED AND REPLACED TO THE CITY ENGINEER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AREA DAMAGED DURING CONSTRUCTION, INCLUDING AREAS OUTSIDE THE DESIGNATED REPAIR.

STABILIZED CRUSHED CONCRETE:

- 1. TEST AND ANALYSIS OF AGGREGATE AND BINDER MATERIALS WILL BE PERFORMED IN ACCORDANCE WITH ASTM 1557 AND ASTM 4318. CEMENT SHALL BE ASTM 150 TYPE I. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES (1993) AND ITS LATEST REVISIONS AND CITY OF SUGAR LAND STANDARDS. PRIME COURSE SHALL BE M.C. 30 OR EP-1 PRIME. DESIGN MIX FOR MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 200 PSI IN 48 HRS. PROVIDE MINIMUM CEMENT CONTENT OF 2.5% PER TON OF MIX. CEMENT CONTENT MAY BE RASSED AT THE CONTRACTOR'S EXPENSE IF TESTS ON FIELD SAMPLES FALL BELOW 200 PSI. THREE SAMPLES SHALL BE MOULDED EACH DAY FOR EACH 300 YARDS OF PRODUCTION. COMPRESSIVE STRENGTH SHALL BE THE AVERAGE OF THREE TESTS FOR EACH PRODUCTION. LOT. CONTRACTOR SHALL REPLACE, AT HIS OWN EXPENSE, ANY MATERIAL BELOW MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY LINES, GRADES, AND COMPACTED SUBGRADES AS READY TO RECEIVE MATERIALS PRIOR TO ITS PLACEMENT. CEMENT STABILIZED BASE MAY NOT BE PLACED IF AMBIENT TEMPERATURE IS 40° AND FALLING. BASE MATERIAL MAY BE PLACED IF AMBIENT TEMPERATURE IS 50° AND RISING. MATERIAL MAY NOT BE PLACED IN LIFTS EXCEEDING 8 INCHES IN DEPTH. EACH LIFT SHALL HAVE IDENTIFY TAGS. CEMENT STABILIZED BASE MAY NOT BE STORED FOR LONG PERIODS. RELIEF OF MATERIALS AND UTILIZATION SHOULD BE TIMED ACCORDINGLY. MAXIMUM TIME ALLOWED 3 HRS. FROM BATCH TIME TO HAVING BEEN INSTALLED. CEMENT STABILIZED BASE SHALL NOT BE ALLOWED 3 HRS. FROM BATCH TIME TO HAVING BEEN INSTALLED. COMPACT TO MAXIMUM DENSITY OF 95% OF MAXIMUM DRY DENSITY, UNLESS OTHERWISE INDICATED ON DRAWINGS. MOISTURE SHALL BE BETWEEN 1 OR -2% OPTIMUM AS DETERMINED BY ASTM 898. AFTER COMPACTING FINAL COURSE, BASE SURFACE TO FINAL GRADE, ANY IRREGULARITIES, WEAK SPOTS, AREAS OF EXCESSIVE WEENESS, OR SURFACE HAZ LINE CRACKING SHALL BE REPAIRED AND/OR REPLACED AT CONTRACTOR'S EXPENSE. A CERTIFIED LAB SHALL BE ON SITE AT ALL TIMES TO TEST AND PROPERLY DOCUMENT THE CONSTRUCTION METHODS AND QUALITY OF MATERIALS. CONSTRUCTION TESTING WILL BE PERFORMED IN ACCORDANCE WITH ASTM D 1556 OR ASTM D 2922 AND ASTM D 3017 AT RANDOMLY SELECTED LOCATIONS AS DIRECTED BY CITY OF SUGAR LAND CONSTRUCTION INSPECTOR. A MINIMUM OF ONE CORE SHALL BE TAKEN AT RANDOM LOCATIONS PER 300 LF PER LANE OF ROADWAY OR ONE PER 200 SQ. YD., WHICHEVER IS APPLICABLE AND SHALL BE STAGGERED RELATIVE TO TESTING LINES IN ADJUTING TRAFFIC LANES. CORES FOR A MINIMUM OF 7 DAYS BEFORE ADDING ASPHALT PAVEMENT COURSES. COVER SURFACE WITH CURING MEMBRANES AS THE FOLLOWING RATES: M.C-30-01 GAL. PER SQ. YD. OR EP-1 POUNDS PER GAL. PER SQ. YD. DO NOT USE COVERK ASPHALT APRIL 16 TO SEPTEMBER 15. PROTECT THE MEMBRANE BY ALLOWING MEMBRANE TO FULLY CURE PRIOR TO PERMITTING TRAFFIC TO DRIVE ON IT. UNSTABILIZED CRUSHED CONCRETE MAY NOT BE USED ON PUBLIC STREETS, ROADS, OR RIGHTS-OF-WAY. STABILIZED LIMESTONE MAY BE SUBSTITUTED FOR STABILIZED CRUSHED CONCRETE IF SUBMITTED AND APPROVED BY THE CITY ENGINEER.

STORM SEWER NOTES:

- 1. STORM SEWERS SHALL BE DESIGNED AND CONSTRUCTED WITH CITY OF SUGAR LAND'S STANDARD CONSTRUCTION SPECIFICATIONS AND IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD DETAILS SHEET AND LATEST REVISIONS. ALL PIPE STORM SEWERS SHALL BE INSTALLED, BEDED, AND BACKFILLED IN ACCORDANCE WITH CITY OF SUGAR LAND STANDARD DETAIL DRAWINGS. ALL CEMENT STABILIZED SAND (C.S.S.) SHALL BE 1-1/2 SA PER CUBIC YD. AND MEET MINIMUM C.S.S. STANDARDS COMPACTED TO SIZE. ALL STORM SEWERS UNDER AND WITHIN TWO (2) FOOT OF PROPOSED OR FUTURE PAVEMENTS SHALL BE BACKFILLED AND COMPACTED WITH 1-1/2 SA PER CUBIC YD. AND MEET MINIMUM C.S.S. STANDARDS COMPACTED TO SIZE. ALL STORM SEWERS UNDER AND WITHIN TWO (2) FOOT OF PROPOSED OR FUTURE PAVEMENTS SHALL BE BACKFILLED WITH BEST MATERIAL AND GROUTED WITH A MINIMUM OF 1/2-INCH NON-SHRINK GROUT INSIDE AND OUTSIDE, UNLESS OTHERWISE NOTED. ALL STORM SEWERS EXCEPT MANHOLES IN VARIOUS PUMPS. ALL STORM SEWER MANHOLES SHALL BE OF SUGAR LAND TYPE "C" UNLESS OTHERWISE NOTED AND SHALL BE LOCATED A MINIMUM OF THREE (3) FEET BACK OF CURB. IF CONTACT DISTS, BACK OVER MANHOLE TO MISS PROPOSED CURB. ALL STORM SEWERS SHOWN ON PLANS ARE APPROXIMATE ONLY. UTILITY CONTRACTOR SHALL ADJUST RIM ELEVATIONS TO 0.4 FEET ABOVE THE FINISH GRADE AT EACH LOCATION AFTER CONTRACTOR HAS COMPLETED FINAL GRADING. SLOPED PIPES SHALL BE ADDED FOR STORM WATER DRAINAGE AWAY FROM RIM. RIM ELEVATIONS SHALL BE PROPERLY ADJUSTED TO GRADE IN PAVEMENT AND SIDEWALKS. APPROVED BULKHEADS SHALL BE USED IN PAVEMENT. ALL STORM SEWER MANHOLES MUST INCLUDE "STORM SEWER" AND "DUMP NO WASTE", "DRAINS TO WATERSHED" WITH CITY OF SUGAR LAND SYMBOL AS DEPICTED IN THE DETAIL SHEETS. MINIMUM STORM SEWER SIZE SHALL BE 24-INCH DIAMETER. ALL STORM SEWER PIPES 24" AND LARGER ARE TO BE REINFORCED CONCRETE PIPE ASTM C-581 OR EQUIVALENT. ALL STORM SEWER PIPES SHALL BE RUBBER GASKETED. ALL GMP PIPE SHALL BE IN ACCORDANCE WITH C.O.S.L. APPROVED PRODUCT LIST AND STANDARD DETAILS. CONTRACTOR SHALL VERIFY NATURAL GROUND SPOTS PRIOR TO MANHOLE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION DURING THE COURSE OF ANY AND ALL CLEARING, GRUBBING, FILL, GRADING, EXCAVATION OR OTHER CONSTRUCTION. CONTRACTOR SHALL ENSURE THAT STORM DRAINAGE PATHWAYS ARE MAINTAINED AND REMOVED DURING THE COURSE OF ANY AND ALL CLEARING, GRUBBING, FILL, GRADING, EXCAVATION OR IN ANY WAY STORM SEWER INLETS SHALL BE PROTECTED FROM ENTRY OF SILT, TRASH, DEBRIS AND ANY SUBSTANCES RELUCTANT TO THE STORM SEWER SYSTEM AND/OR INLETWAYS RECEIVING STORM WATER RUNOFF. CONTRACTOR SHALL AT COMPLETION OF WORK, FILL LOW SPOTS AND GRADE ALL RIGHTS-OF-WAY AND UTILITY EASEMENTS AND RESTORE/RESTORE PATCHES AS NECESSARY TO MAINTAIN AND/OR ESTABLISH POSITIVE DRAINAGE. CONTRACTOR TO PROVIDE A MINIMUM OF 8-INCHES CLEARANCE AT UTILITY CROSSINGS AND A MINIMUM OF NINE (9) INCHES AT SANITARY SEWER CROSSING. DRAINAGE SYSTEM SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACKSLOPE DAMAGE SYSTEM DISTURBED AS A RESULT OF HIS WORK. ALL UTILITY CROSSINGS SHALL BE RESTORED TO ORIGINAL OR INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE COMPACTED AND ALL DISTURBED AREAS SHALL BE RESEDED OR REVEGETED WITHIN TO WORKING TIME OF OCCURRENCE AND SEPARATE AND TO THE SATISFACTION OF THE CITY ENGINEER. THE UTILITY CONTRACTOR SHALL GROUT CUT ALL WITHIN 0.2 FT. OF FINISH CONTRACTOR, UPON COMPLETION OF PAVING, SHALL COMPLETE ALL UTILITY CROSSINGS AND RESTORE ALL AREAS WITHIN RIGHT-OF-WAY FOR SEEDING OR SOILING AND FERTILIZATION. ALL STORM SEWERS MUST BE CLEAN-FREE OF DIRT AND DEBRIS AT THE TIME AND INITIAL PAVEMENT ACCEPTANCE. REFER TO GENERAL NOTES AND C.S.S. NOTES.

SANITARY SEWER NOTES:

- 1. SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS SHALL BE DESIGNED AND CONSTRUCTED AS PER THE REQUIREMENTS OF THE CITY OF SUGAR LAND DESIGN STANDARDS AND CORRESPONDING STANDARD CONSTRUCTION DETAILS SHEETS AND AS PER THE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY "DESIGN CRITERIA FOR SEWAGE SYSTEMS". SHOULD A CONFLICT ARISE BETWEEN INFORMATION DERIVED ON APPROVED CONSTRUCTION DRAWINGS AND/OR INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARD SHALL GOVERN. ALL MATERIALS AND PRODUCTS USED IN THE CONSTRUCTION OF SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS SHALL COMPLY WITH THE CITY OF SUGAR LAND DESIGN STANDARDS AND THE CURRENT APPROVED PRODUCTS LIST. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION DURING THE COURSE OF ANY AND ALL CLEARING, GRUBBING, FILL, GRADING, EXCAVATION OR OTHER CONSTRUCTION. CONTRACTOR SHALL ENSURE THAT STORM DRAINAGE PATHWAYS ARE MAINTAINED AND REMOVED DURING THE COURSE OF ANY AND ALL CLEARING, GRUBBING, FILL, GRADING, EXCAVATION OR IN ANY WAY STORM SEWER INLETS SHALL BE PROTECTED FROM ENTRY OF SILT, TRASH, DEBRIS AND ANY SUBSTANCES RELUCTANT TO THE STORM SEWER SYSTEM AND/OR INLETWAYS RECEIVING STORM WATER RUNOFF. CONTRACTOR SHALL AT COMPLETION OF WORK, FILL LOW SPOTS AND GRADE ALL RIGHTS-OF-WAY AND UTILITY EASEMENTS AND RESTORE/RESTORE PATCHES AS NECESSARY TO MAINTAIN AND/OR ESTABLISH POSITIVE DRAINAGE. CONTRACTOR TO PROVIDE A MINIMUM OF 8-INCHES CLEARANCE AT UTILITY CROSSINGS AND A MINIMUM OF NINE (9) INCHES AT SANITARY SEWER CROSSING. DRAINAGE SYSTEM SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACKSLOPE DAMAGE SYSTEM DISTURBED AS A RESULT OF HIS WORK. ALL UTILITY CROSSINGS SHALL BE RESTORED TO ORIGINAL OR INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE COMPACTED AND ALL DISTURBED AREAS SHALL BE RESEDED OR REVEGETED WITHIN TO WORKING TIME OF OCCURRENCE AND SEPARATE AND TO THE SATISFACTION OF THE CITY ENGINEER. THE UTILITY CONTRACTOR SHALL GROUT CUT ALL WITHIN 0.2 FT. OF FINISH CONTRACTOR, UPON COMPLETION OF PAVING, SHALL COMPLETE ALL UTILITY CROSSINGS AND RESTORE ALL AREAS WITHIN RIGHT-OF-WAY FOR SEEDING OR SOILING AND FERTILIZATION. ALL STORM SEWERS MUST BE CLEAN-FREE OF DIRT AND DEBRIS AT THE TIME AND INITIAL PAVEMENT ACCEPTANCE. REFER TO GENERAL NOTES AND C.S.S. NOTES.

WATER DISTRIBUTION NOTES:

- 1. WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE DESIGNED AND CONSTRUCTED AS PER REQUIREMENTS OF THE CITY OF SUGAR LAND DESIGN STANDARDS AND CORRESPONDING STANDARD CONSTRUCTION DETAILS SHEETS AND AS PER THE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY. SHOULD A CONFLICT ARISE BETWEEN INFORMATION DERIVED ON APPROVED CONSTRUCTION DRAWINGS AND/OR INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL GOVERN. ALL MATERIALS AND PRODUCTS USED IN THE CONSTRUCTION OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL COMPLY WITH THE CITY OF SUGAR LAND DESIGN STANDARDS AND THE CURRENT APPROVED PRODUCTS LIST AS MAINTAINED BY THE CITY'S ENGINEERING DEPARTMENT. ALL FIRE HYDRANTS SHALL BE PAINTED AND/OR REPAINTED WITH GGG-666 301 BRIGHT SILVER POLYURETHANE ENAMEL MANUFACTURED BY GGG-OLEN ENTERPRISES, INC. SURFACE PREPARATION SHALL INCLUDE REMOVAL OF OIL, GREASE AND MOISTURE, FOLLOWED BY GLEN BLASTING TO SPFC-S105-83 SPECIFICATIONS (NEAR WHITE METAL) AS PER MANUFACTURER'S RECOMMENDATIONS. PRIME BARE METAL WITH IP-251 EPOXY PRIMER EPOXY PRIMER OR WITH IP-221, IP-231 OR IP-241 MINERAL PRIMER. RUST AND COSE RELATIVE HUMIDITY ARE OPTIMAL CONDITIONS FOR APPLICATION OF PRIMER AND OF PAINT. DO NOT APPLY PRIMER AND/OR PAINT WHEN SURFACE TO BE PAINTED IS LESS THAN 9° ABOVE THE DEW POINT IN ORDER TO PREVENT MOISTURE FROM CONDENSING ON THE SURFACE TO BE PRIMED AND/OR PAINTED. A BLUE TRAFFIC BOTTLE SHALL BE INSTALLED ON THE STREET 12" OFF THE CENTER LINE FOR EACH HYDRANT. MINIMUM SEPARATION DISTANCES AS REQUIRED BY TCD SECTION 317.13.200. APPENDIX E MUST BE MAINTAINED BETWEEN POTABLE WATER LINES AND SANITARY SEWERS, FORCE MAINS, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS. INSTALLATION OF FIRE HYDRANTS WITHIN 9' OF A SANITARY SEWER SYSTEM IS PROHIBITED. REFER TO C.O.S.L. STANDARDS FOR CONSTRUCTION REQUIREMENTS OF OTHER INSTALLATIONS WHERE DISTANCES ARE GREATER THAN 9' (NINE) FT. CANNOT BE MAINTAINED. EACH WATER SERVICE LEAD STUD SHALL BE MARKED WITH A PRESSURE TREATED 4 X 4 TIMBER OR PAPE PIPE AT THE TIME OF CONSTRUCTION, BEGINNING AT THE INVERT ELEVATION OF THE STUD AND EXTENDING TWO FEET ABOVE FINISHED GRADE. EACH TIMBER MARKER SHALL BE PAINTED BLUE AND LABELED "POTABLE WATER" WITH PIPE SIZE NOTED. TESTING OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE CONDUCTED AS PER REQUIREMENTS OF ANNA C003-04. INSPECTION OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE CONDUCTED AS PER REQUIREMENTS OF ANNA C050 AND TCEC. NO CONNECTIONS SHALL BE MADE TO EXISTING WATER LINES UNLESS THOSE EXISTING WATER LINES HAVE BEEN THOROUGHLY INSPECTED, TESTED, FLOWED, AND SAMPLED AND CONNECTION HAS BEEN AUTHORIZED BY THE CITY ENGINEER. ALL WATER PIPING AND BEDDING SHALL BE INSPECTED BY THE CITY INSPECTOR FOR CONFORMANCE TO DESIGN STANDARDS PRIOR TO BACKFILLING OF PIPING IN TRENCH. CONTRACTOR SHALL NOT COVER PIPING UNTIL SUCH AS INSPECTOR HAS NOTIFIED CONTRACTOR. THE RESULTS OF PIPING INSPECTION ARE SATISFACTORY AND THAT BACKFILLING MAY BE ACCOMPLISHED. ANY PIPING INSTALLED AND/OR BACKFILLED WITHOUT INSPECTOR'S SPECIFIC APPROVAL, SHALL BE UNCOVERED AT INSPECTOR'S DIRECTION AND INSPECTED ACCORDINGLY. 24-HOUR NOTICE REQUIRED. ALL MECHANICALLY RESTRAINED FITTINGS MUST BE MECHANICALLY RESTRAINED JOINTS OR APPROVED EQUAL. THE CITY OF SUGAR LAND MUST HAVE A COPY OF THE BACTERIOLOGICAL TEST RESULTS AT LEAST 24 HOURS PRIOR TO THE INITIAL INSPECTION. IF NOT, THEN THE INSPECTION WILL BE RECHECKED.

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR. APPROVED: [Signature] DEVELOPMENT COORDINATOR

DATE: 4/20/16

Table with columns for NO, DATE, REVISIONS, APP. and a section for CITY OF SUGAR LAND, TEXAS ENGINEERING DEPARTMENT CONSTRUCTION PLANS FOR GENERAL CONSTRUCTION NOTES II.

FORT BEND COUNTY MUD NO. 192 FORT BEND COUNTY, TEXAS GREATWOOD LAKE SECTION 2A

GENERAL CONSTRUCTION NOTES II

JONES CARTER Texas Board of Professional Engineers Registration No. F-403 2328 MacArthur Way, Suite 1700, Suite 12700, Houston, TX 77058 (832) 933-6000 SCALE: N.T.S. DATE: FEBRUARY 2016 JOB NO. 05537-0008-00 SUBMITTED: SURV. BY: F.B. NO.

LYNDRAY J. EVANS 02/28/16 SHEET 7 OF 28

FORT BEND COUNTY GENERAL NOTES

1. FORT BEND COUNTY MUST BE INVITED TO THE PRE-CONSTRUCTION MEETING.
2. CONTRACTOR SHALL NOTIFY FORT BEND COUNTY ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AND 48 HOUR NOTICE TO ANY CONSTRUCTION ACTIVITY WITHIN THE LIMITS OF THE PAVING AT CONSTRUCTION@FORTBENDCOUNTY.TX.GOV.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FROM FORT BEND COUNTY PRIOR TO COMMENCING CONSTRUCTION OF ANY IMPROVEMENTS WITHIN COUNTY ROAD RIGHT-OF-WAY.
4. ALL PAVING IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FORT BEND COUNTY RULES, REGULATIONS AND REQUIREMENTS RELATING TO THE APPROVAL AND ACCEPTANCE OF IMPROVEMENTS IN SUBSEQUENT AS CURRENTLY AMENDED.
5. ALL ROAD WIDTHS, CURB RADII 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" S&W CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 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 CURBS SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE 6" REINFORCED CONCRETE CURBS.
10. AT ALL INTERSECTION LOCATIONS, TYPE 7 RAMPS SHALL BE PLACED IN ACCORDANCE WITH TxDOT PED-12A STANDARD DETAIL SHEET, A.D.A. - HANDICAP RAMPS SHALL BE INSTALLED WITH STREET PAVING AT ALL INTERSECTIONS AND COMPLY WITH CURRENT A.D.A. REGULATIONS.
11. CURB HEADERS ARE REQUIRED AT CURB CONNECTIONS TO HANDICAP RAMPS, WITH NO CONSTRUCTION JOINT WITHIN 5' OF RAMPS.
12. ALL INTERSECTIONS UTILIZING TRAFFIC CONTROL MEASURES SHALL HAVE A.D.A. WHEEL CHAIR RAMPS INSTALLED.
13. 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 FLAGGING, SIGNING, STRIPING AND WARNING DEVICES, ETC., DURING CONSTRUCTION - BOTH DAY AND NIGHT.
14. ALL R-1 STOP SIGNS SHALL BE 30" X 30" WITH DIAMOND GRADE SHEETING. STREET NAME SIGNS SHALL BE UPPER AND LOWER CASE LETTERS WITH DIAMOND GRADE SHEETING.
15. STREET NAME SIGNAGE SHALL BE ON A 6" HIGH SIGN FLAT SLAB WITH REFLECTIVE GREEN BACKGROUND. STREET NAMES SHALL BE UPPER AND LOWERCASE LETTERING WITH UPPERCASE LETTERS OF 6" MINIMUM AND LOWERCASE LETTERS OF 4.5" MINIMUM. THE LETTERS SHALL BE REFLECTIVE WHITE. STREET NAME SIGNS SHALL BE MOUNTED ON STOP SIGN POST.
16. A BLUE DOUBLE REFLECTORIZED 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 OF THE HYDRANT.

GENERAL NOTES FOR SIDEWALKS AND DRIVEWAYS

1. PROPOSED DRIVEWAY, SIDEWALK, CURB, GUTTER LINE AND GRADE SHALL MATCH EXISTING STREET.
2. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT, CLASS A STRUCTURAL (REFER TO SPECIFICATION 00330), 4 INCHES THICK AND 4 FEET MINIMUM WIDTH.
3. PROPOSED DRIVEWAY AND CURB SHALL BE BUILT WITH PORTLAND CEMENT CONCRETE CLASS A STRUCTURAL (REFER TO SPECIFICATION 00330), 6 INCHES THICK, FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO RIGHT-OF-WAY LINE AND TO BE REINFORCED WITH #4 DEFORMED REINFORCING BARS (MINIMUM ASTM A618 GRAD 60, UNLESS NOTED) SPACED AT 24 INCHES C.C., EACH WAY, WITH 10 INCHES MINIMUM LAP.
4. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE TIED TO EXISTING ROADWAY REINFORCING STEEL WITH A MINIMUM 12 INCHES LAP.
5. PROPOSED GUTTER LINE IS TO BE MAINTAINED AT FACE OF EXISTING CURB.
6. SAW CUT EXISTING CURB AT EACH END OF PROPOSED DRIVEWAY AND KNOCK OUT EXISTING CURB.
7. SAW CUT EXISTING PAVEMENT MINIMUM 2 INCHES AND BREAK OUT TO EXPOSE EXISTING REINFORCEMENT STEEL AT LEAST 12 INCHES AT PROPOSED DRIVEWAY INTERSECTION. FULL DEPTH CUT IS ACCEPTABLE PROVIDED IS INCH LONG DRILL IN DOWNIES ARE INSTALLED AT A SPACING TO MATCH EXISTING WITH A MINIMUM 6 INCH EMBELEMANT.
8. COMPACT SUBGRADE FOR PROPOSED DRIVEWAY CONNECTION FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO RIGHT-OF-WAY, COMPACT TO 95% OF STANDARD PROCTOR DENSITY (A 2% OPT. MOISTURE). THE COUNTY ENGINEER RESERVES THE RIGHT TO REQUIRE LABORATORY TESTS IF HE DEEMS THEM NECESSARY.
9. PLACE AND COMPACT 4 INCHES CLEAN BANK SAND.
10. PROPOSED AREA FROM BACK OF CURB OF SIDEWALK AND FROM SIDEWALK TO RIGHT-OF-WAY LINE MAY BE CONCRETE OR DIRT (ROADWAYS WITH CURBS AND SIDEWALKS).
11. IF MORE THAN ONE PROPOSED DRIVEWAY IS BUILT ON THE SAME PROPERTY, SAID DRIVEWAYS SHALL BE SEPARATED BY A MINIMUM DISTANCE OF AT LEAST 20 FEET (ROADWAYS WITH CURBS AND SIDEWALKS).
12. SIDEWALKS SHALL HAVE 3/4 INCH REDWOOD BOARD EXPANSION JOINTS EVERY 20 FEET ON CENTER.
13. PLACE ONE-INCH BOARD EXPANSION JOINT AT RIGHT-OF-WAY LINE.
14. EXPANSION JOINT FILLER SHALL BE PRE-FORMED CONFORMING TO AASHTO M-303 OR M-213 BETWEEN SIDEWALK AND CURB, AROUND FIRE HYDRANTS AND UTILITY POLES.

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.
 APPROVED: *[Signature]*
 DEVELOPMENT COORDINATOR

DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD NO. 192
 FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A

GENERAL CONSTRUCTION NOTES III

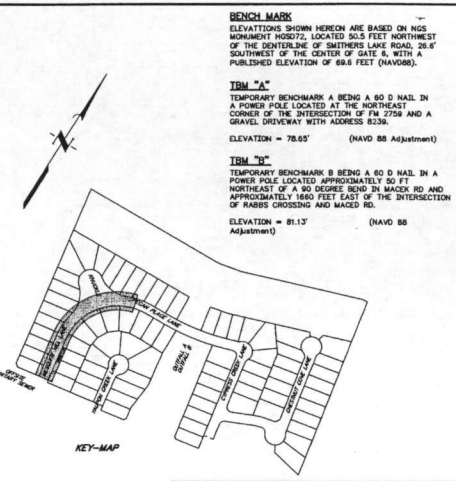
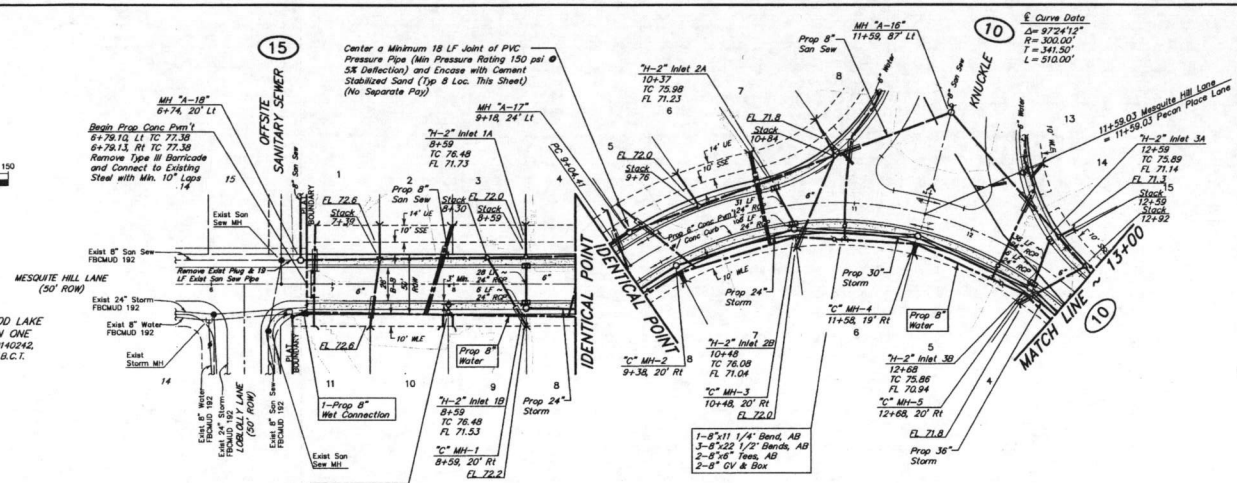
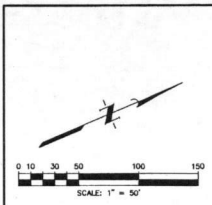


SCALE: N.T.S. DON. BY: JCM
 DATE: FEBRUARY 2018 DWN. BY: EPV
 JOB NO. 0537-0008-00 DWG. NO. _____
 SUBMITTED: _____ SURV. BY: _____
 F.B. NO. _____

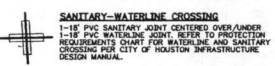
[Signature] Lindsay J. Evans
 2/28/18
 SHEET NO. 8 of 28

	PROPOSED WATER LINE				PROPOSED SANITARY SEWER			
	OVER		UNDER		OVER		UNDER	
	EXISTING SS	PROP SS	EXISTING SS	PROP SS	EXISTING WL	PROP WL	EXISTING WL	PROP WL
MINIMUM 2 FEET VERTICAL CLEARANCE	✓1	✓1	✓2	✓	✓6	✓	✓	✓1
PLACE 1 FULL SECTION (MIN 18FT) OF WL CENTERED AT SS CROSSING. PROVIDE RESTRAINED JOINTS ON WL SPACED AT LEAST 9 FT. HORIZONTALLY FROM CENTERLINE OF SS	✓	✓	✓	✓	✓6	✓	✓	✓
PLACE 1 FULL SECTION (MIN 18FT) OF SS CENTERED AT WL CROSSING. PROVIDE RESTRAINED JOINTS ON SS SPACED AT LEAST 9 FT. HORIZONTALLY FROM CENTERLINE OF WL		✓		✓7	✓6	✓7	✓	✓
REPLACE 1 FULL SECTION OF EXISTING SS WITH PRESSURE-RATED DIP OR PRESSURE RATED PVC PIPE WITH ADAPTERS AND RESTRAINED JOINTS CENTERED AT WL CROSSING FOR SMALL DIAMETER WL (LESS THAN 24 INCHES). PVC PIPE IS ONLY ALLOWED IF ENCASED FOR FAC 2004.4 AND USE RESTRAINED JOINTS FOR BOTH DIP AND PVC PIPE	✓3,4		✓4,7		✓6			
ENCASE SS WITH CSS FOR THE TOTAL LENGTH OF 1 PIPE SEGMENT PLUS 1 FOOT BEYOND THE JOINTS ON EACH END	✓3,4	✓5	✓4	✓5	✓5,6	✓5	✓5	✓5

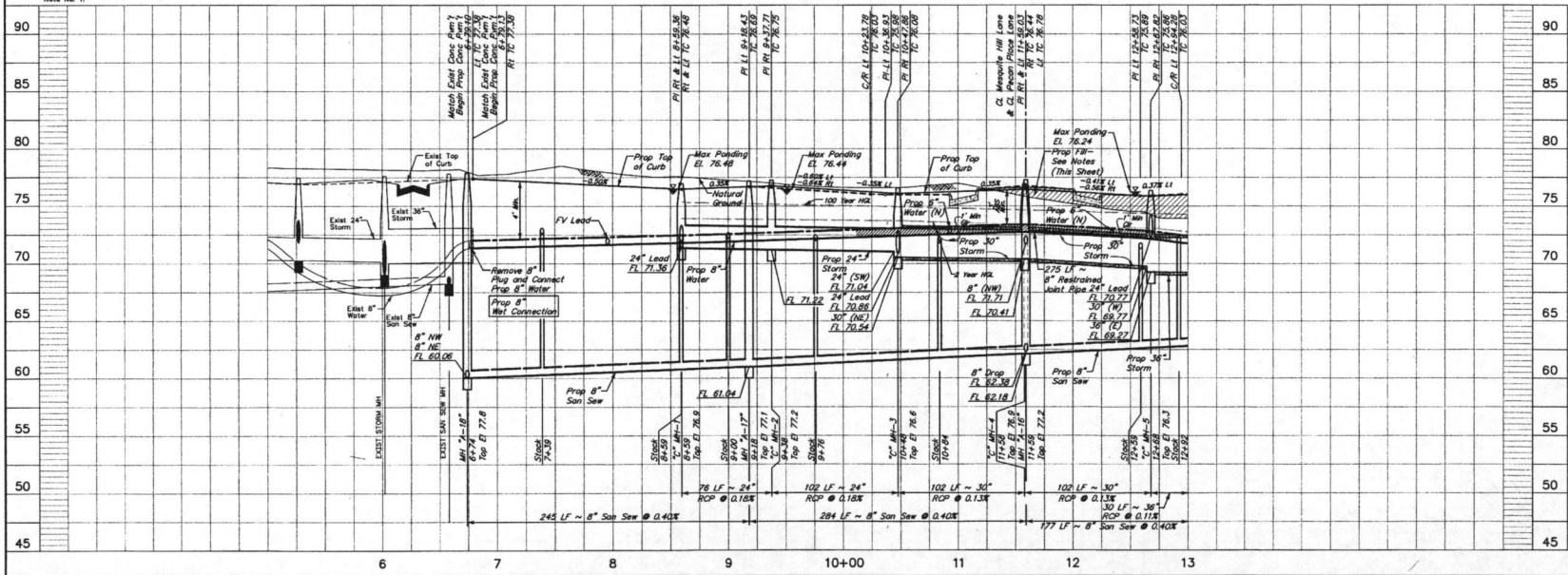
- PROTECTION REQUIREMENTS AT WATER LINE - SANITARY SEWER CROSSING**
1. MINIMUM CLEARANCE IS 2 FEET FOR NON-PRESSURE RATED SS AND 6 INCHES FOR PRESSURE RATED SS WITH AT LEAST 150 PSI PRESSURE RATING.
 2. MINIMUM CLEARANCE IS 2 FEET FOR NON-PRESSURE RATED SS AND 1 FOOT FOR PRESSURE RATED SS.
 3. REQUIRED IF EXISTING SS IS DISTURBED AND/OR THERE IS EVIDENCE OF LEAKAGE.
 4. NOT REQUIRED FOR AUGURED WL UNLESS THERE IS EVIDENCE OF LEAKAGE; COMPLETELY FULL AUGURED HOLE WITH BENTONITE/CLAY MORTAR.
 5. NOT REQUIRED FOR AUGURED SS; COMPLETELY FULL AUGURED HOLE WITH BENTONITE/CLAY MORTAR.
 6. NOT ALLOWED. REQUIRES APPROVAL OF CITY ENGINEER.
 7. BOTH WATERLINE AND WASTEWATER MAIN LATERAL MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN ANNA CDD STANDARDS.



- FILL NOTES**
- 1.) DRAINAGE SWALES: All Existing Drainage Swales Shall Be Filled as Shown with Material From Existing Adjacent Spill Banks to Minimum 8" Loose Lites and Compacted to 95% Proctor Density as Per AASHTO Test Method T-99.
 - 2.) DRAINAGE SWALES: All Existing Drainage Swales Under Proposed Concrete Pavement Shall Be Completely Mucked Out and Scarified to a Minimum Depth of 8" and Filled as Specified Above in Fill Note No. 1.
 - 3.) ROADWAY EMBANKMENT: Strip 3" of Vegetation From Area to Be Filled and Re-Connect Soil to 95% Proctor Density. Place Fill Material as Specified in Fill Note No. 1.



MESQUITE HILL LANE PECAN PLACE LANE



NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

NOTE: PROPOSED TOP OF CURB GRADES ARE BASED ON 6" CURBS, WHERE 4"x12" CURBS ARE INSTALLED, ACTUAL TOP OF CURBS WILL BE 0.17 FEET BELOW PLAN GRADE. REFER TO SHEET 4 FOR CURB LAYOUT.

BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGM MONUMENT H05072, LOCATED 80.5 FEET NORTHWEST OF THE CENTERLINE OF MESQUITE HILL ROAD, 26.4' SOUTHWEST OF THE CENTER OF GATE 8, WITH A PUBLISHED ELEVATION OF 68.6 FEET (NAVD88).

BM "A"
TEMPORARY BENCHMARK A BEING A 80 D NAIL IN A POWER POLE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF FM 2754 AND A GRAVEL DRIVEWAY WITH ADDRESS 8336.
ELEVATION = 78.65' (NAVD88 Adjustment)

BM "B"
TEMPORARY BENCHMARK B BEING A 80 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHWEST OF A 90 DEGREE BEND IN MACK RD AND APPROXIMATELY 1600 FEET EAST OF THE INTERSECTION OF HARRIS CROSSING AND MADED RD.
ELEVATION = 81.13' (NAVD88 Adjustment)

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *[Signature]*
DEVELOPMENT COORDINATOR

DATE: 4/20/18

NO. DATE REVISIONS APP.

FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A
MESQUITE HILL LANE
6+79.11 TO 11+59.03
PECAN PLACE LANE
11+59.03 TO 13+00.00

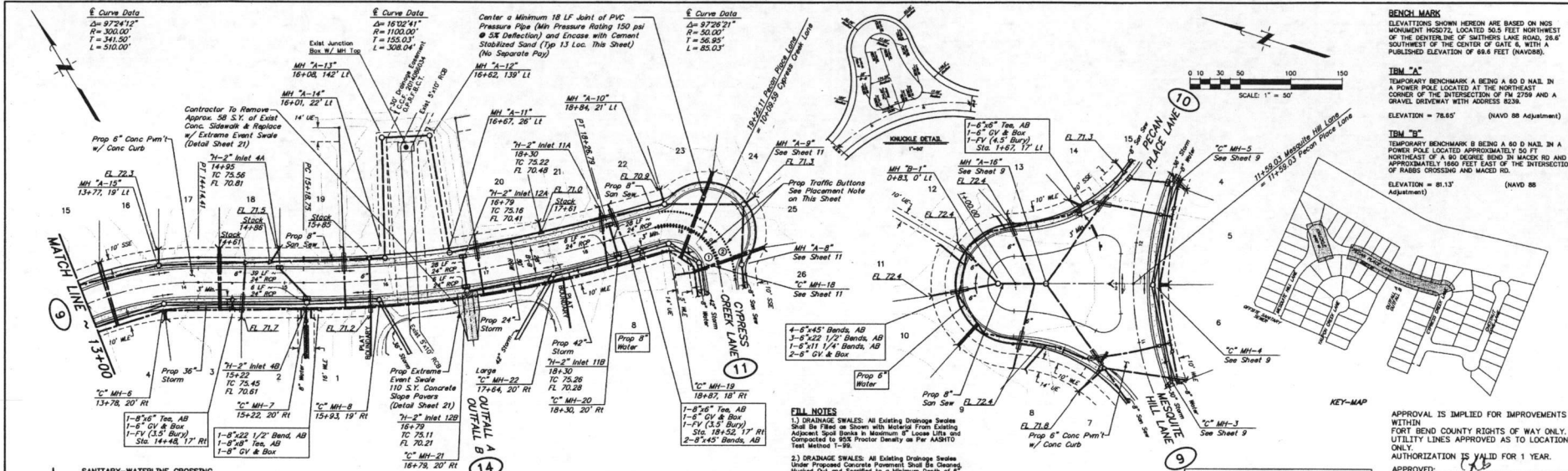
JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22800 MacArthur Blvd., Suite 425, Katy, TX 77450 (832) 934-0003

SCALE: 1"=50' H., 1"=50' V. DGN. BY: KOM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO. 1
SUBMITTED: SURV. BY: F.B. NO.

[Signature]
LYNSAY J. EVANS
2/28/18

REGISTERED PROFESSIONAL ENGINEER
NO. 12878
EXPIRES 12/31/2020

SHEET NO. 9 OF 28



BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NOS. MONUMENT #50272, LOCATED 90.5 FEET NORTHWEST OF THE CENTER OF SUTTERS LAKE ROAD, 26.5' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 68.6 FEET (NAVD80).

TRM "A"
TEMPORARY BENCHMARK BEING A 60 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHWEST OF A 90 SCISSOR BEND IN MACK RD AND APPROXIMATELY 1800 FEET EAST OF THE INTERSECTION OF PEBBLE CROSSING AND MACKED RD.
ELEVATION = 68.85' (NAVD 88 Adjustment)

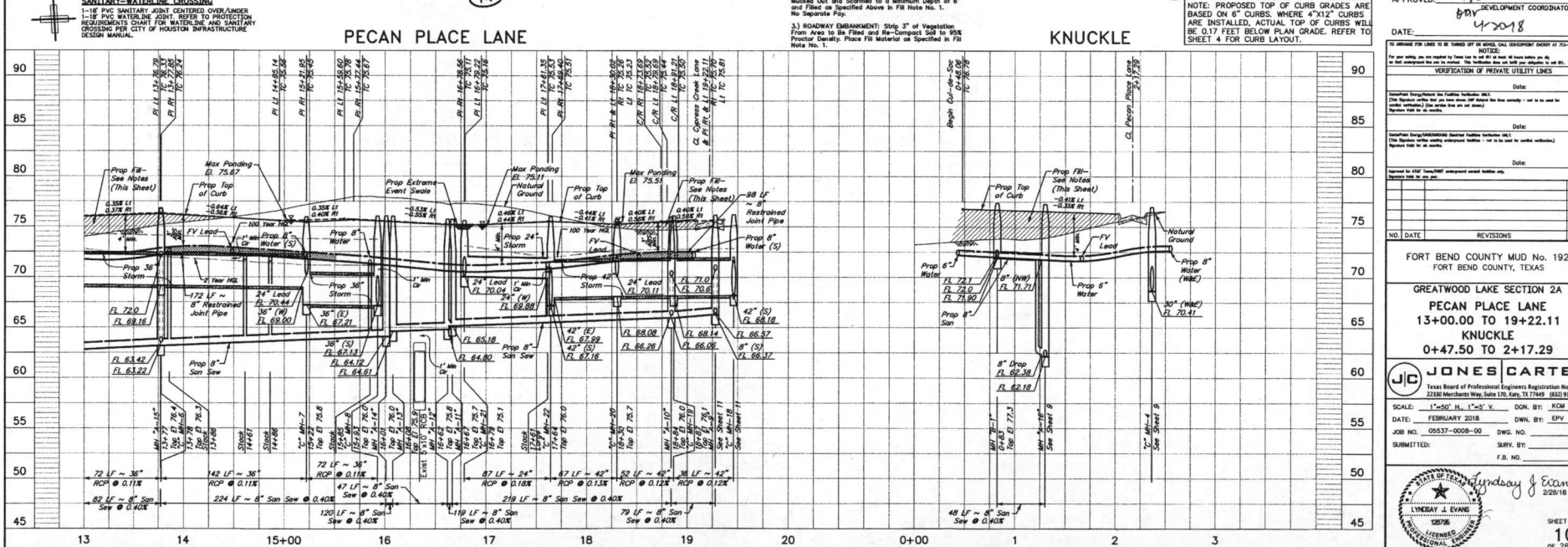
TRM "B"
TEMPORARY BENCHMARK BEING A 60 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHWEST OF A 90 SCISSOR BEND IN MACK RD AND APPROXIMATELY 1800 FEET EAST OF THE INTERSECTION OF PEBBLE CROSSING AND MACKED RD.
ELEVATION = 68.13' (NAVD 88 Adjustment)

FILL NOTES
1) DRAINAGE SWALES: All Existing Drainage Swales Under Proposed Concrete Pavement Shall Be Cleaned, Mucked Out and Scarified to a Minimum Depth of 6" and Filled as Specified Above in Fill Note No. 1. No Separate Pkg.
2) DRAINAGE SWALES: All Existing Drainage Swales Under Proposed Concrete Pavement Shall Be Cleaned, Mucked Out and Scarified to a Minimum Depth of 6" and Filled as Specified Above in Fill Note No. 1. No Separate Pkg.
3) ROADWAY EMBANKMENT: Strip 3" of Vegetation From Area to be Filled and Re-Compact Soil to Max Proctor Density. Place Fill Material as Specified in Fill Note No. 1.

NOTE: PROPOSED TOP OF CURB GRADES ARE BASED ON 6" CURBS. WHERE 4"x12" CURBS ARE INSTALLED, ACTUAL TOP OF CURBS WILL BE 0.17 FEET BELOW PLAN GRADE. REFER TO SHEET 4 FOR CURB LAYOUT.

PECAN PLACE LANE

KNUCKLE



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *[Signature]* DEVELOPMENT COORDINATOR

DATE: 4/20/18

VERIFICATION OF PRIVATE UTILITY LINES
Date: _____

VERIFICATION OF PUBLIC UTILITIES
Date: _____

VERIFICATION OF ALL UTILITIES
Date: _____

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

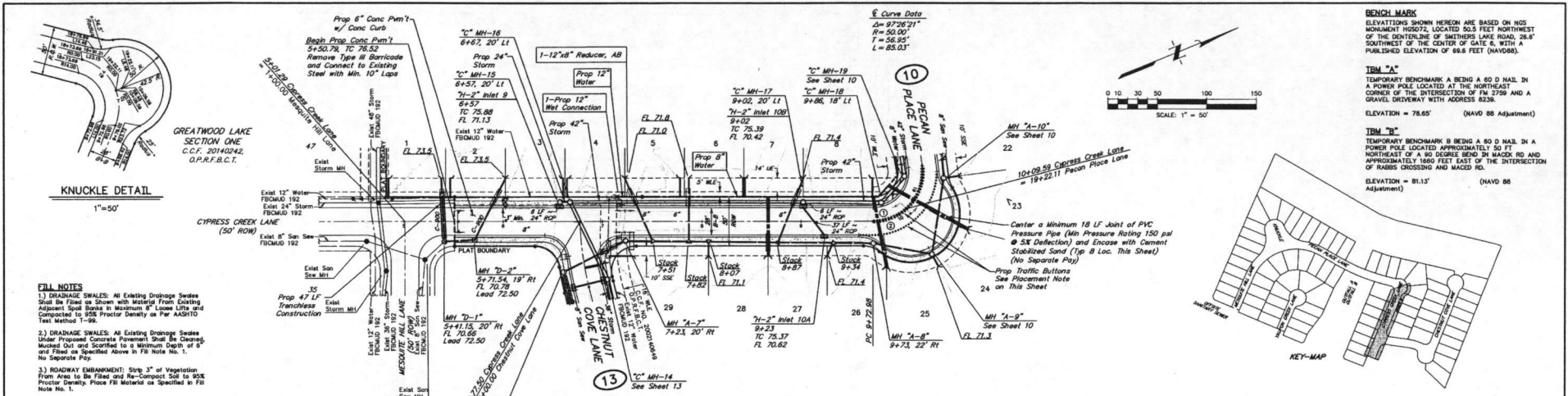
GREATWOOD LAKE SECTION 2A
PECAN PLACE LANE
13+00.00 TO 19+22.11
KNUCKLE
0+47.50 TO 2+17.29

JONES CARTER
Texas Board of Professional Engineers Registration No. 4-439
22300 Merchants Way, Suite 370, Katy, TX 77459 (832) 913-4000

SCALE: 1"=50' H, 1"=5' V. DWN. BY: JCM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO. _____
SUBMITTED: _____ SRV. BY: _____
F.B. NO. _____

LYNSAY J. EVANS
REGISTERED PROFESSIONAL ENGINEER
2/28/18

SHEET NO. 10 OF 28

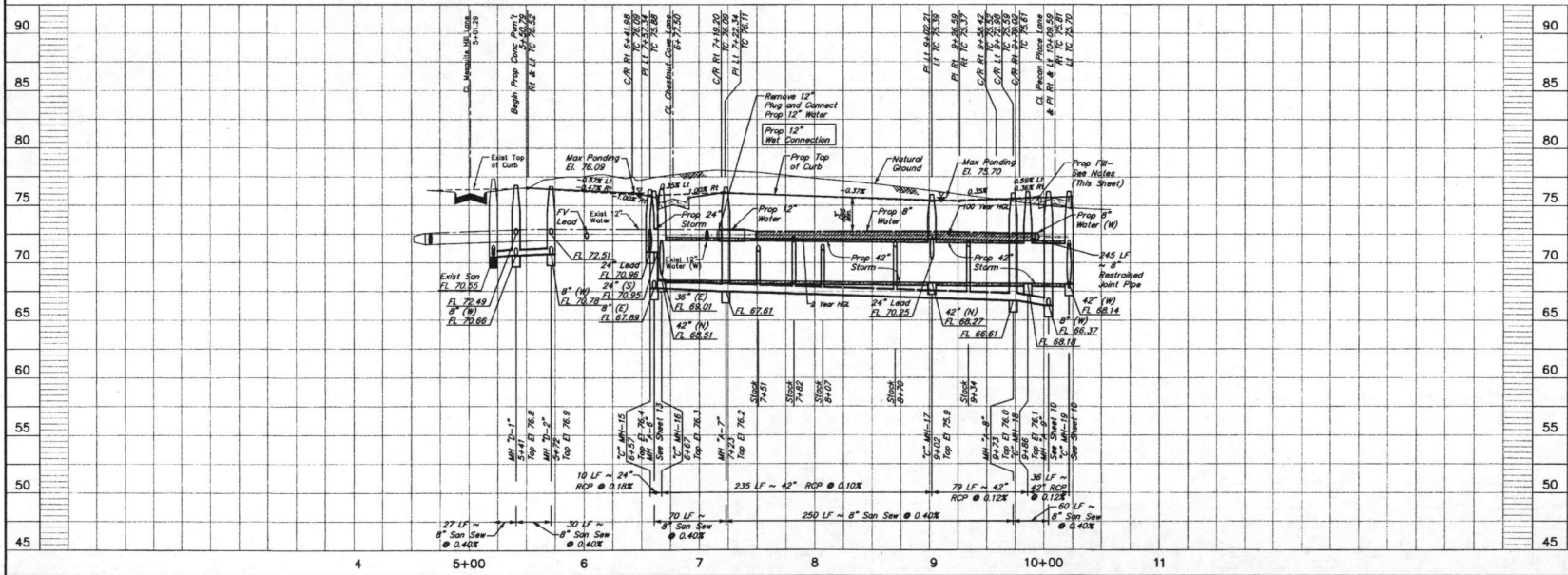


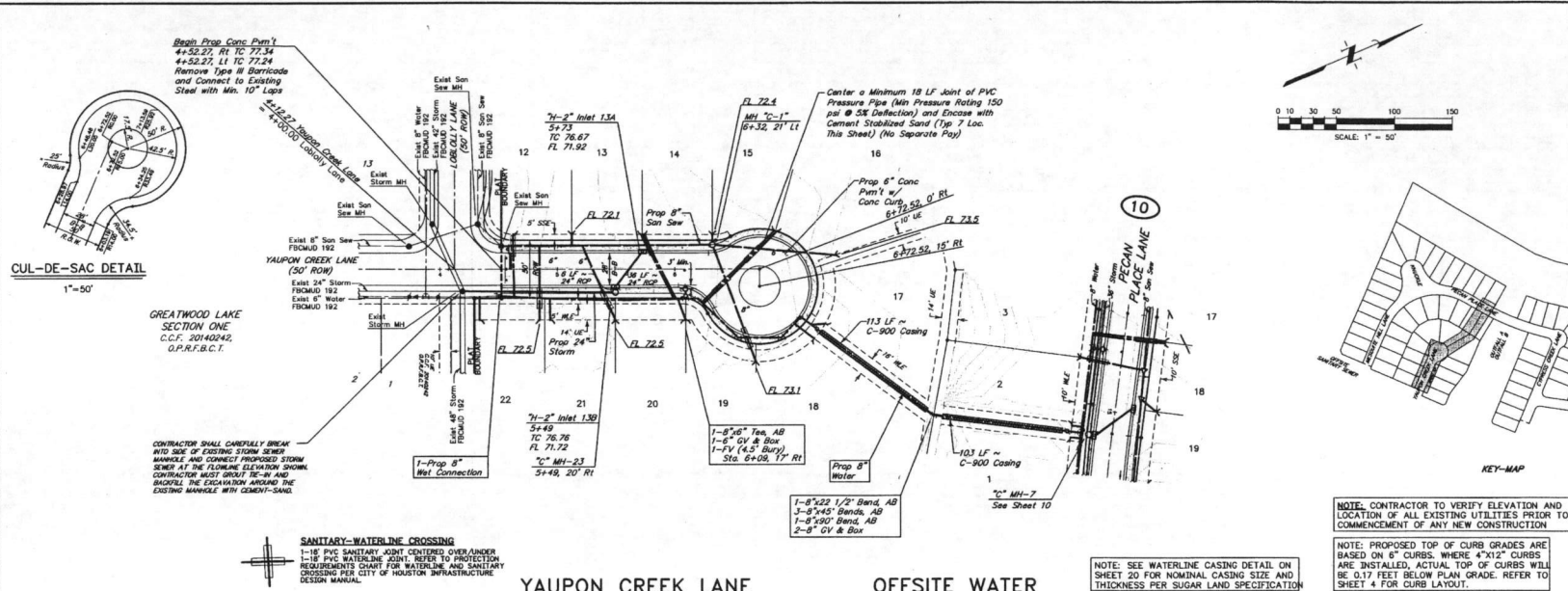
GREATWOOD LAKE SECTION ONE
C.C.F. 20140242
O.P.R.F.B.C.T.

- FILL NOTES**
- 1) DRAINAGE SWALES: All Existing Drainage Swales Shall be Filled as Shown with Material From Existing Adjacent. Spot Banks in Maximum 8' Loose L125 and Compacted to 90% Proctor Density as per AASHTO Test Method 1-99.
 - 2) DRAINAGE SWALES: All Existing Drainage Swales Under Proposed Concrete Placement Shall be Graded, Mucked Out and Scarified to a Minimum Depth of 6" and Filled as Specified Above in Fill Note No. 1. No Separate Pits.
 - 3) ROADWAY EMBANKMENT: Strip 3" of Vegetation From Area to be Filled and Re-Compact Soil to 90% Proctor Density. Place Fill Material as Specified in Fill Note No. 1.

SANITARY-WATERLINE CROSSING
1-18" PVC SANITARY JOINT CENTERED OVER UNDER 1-18" PVC WATERLINE JOINT. REFER TO PROTECTION REQUIREMENTS CHART FOR WATERLINE AND SANITARY CROSSING PER CITY OF HOUSTON INFRASTRUCTURE DESIGN MANUAL.

CYPRESS CREEK LANE

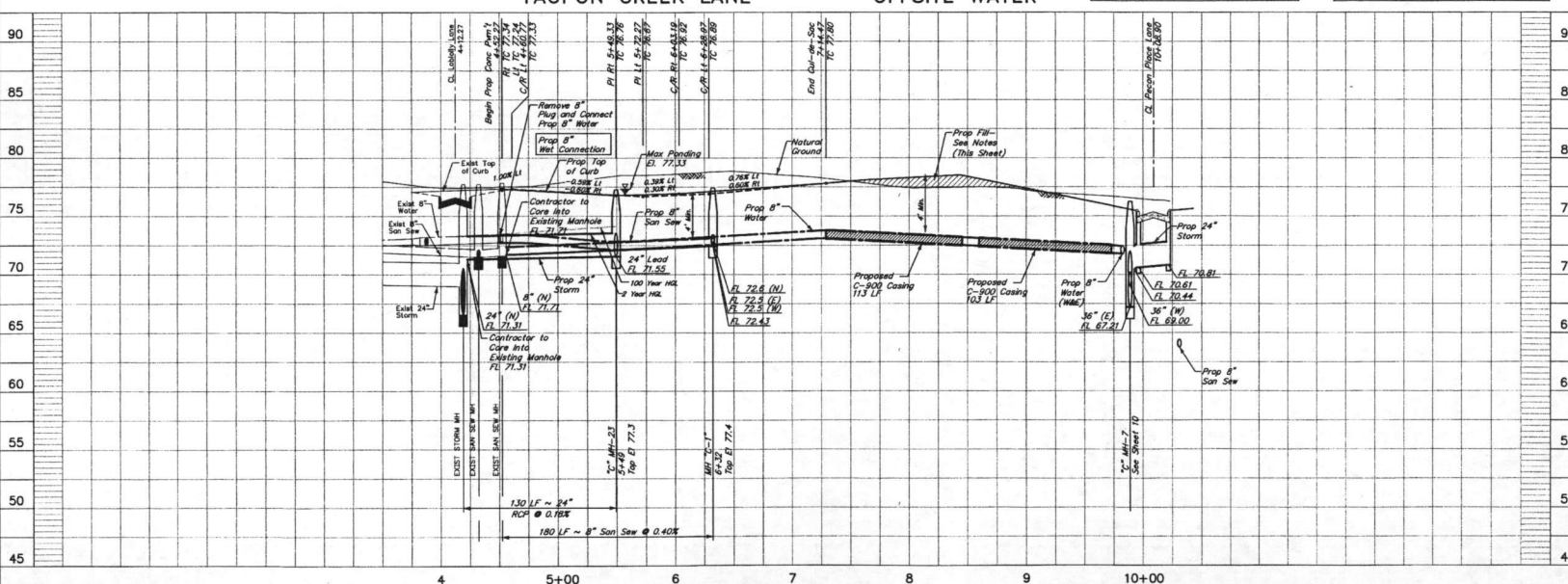




BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NOS MONUMENT H05272, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SOUTHERS LAKE ROAD, 26.4' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 66.6 FEET (NAVD83).

TBM "A"
TEMPORARY BENCHMARK A BEING A 60 D HAIL IN A POWER POLE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF FM 2709 AND A GRAVEL DRIVEWAY WITH ADDRESS 8239.
ELEVATION = 78.65' (NAVD 88 Adjustment)

TBM "B"
TEMPORARY BENCHMARK B BEING A 60 D HAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHEAST OF A 90 DEGREE BEND IN HACKB RD AND APPROXIMATELY 1660 FEET EAST OF THE INTERSECTION OF HARBES CROSSING AND MACKED RD.
ELEVATION = 81.13' (NAVD 88 Adjustment)



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *[Signature]* DEVELOPMENT COORDINATOR

DATE: 4/20/18

VERIFICATION OF PRIVATE UTILITY LINES

Date: _____

Signature: _____

NO. DATE REVISIONS APP

FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

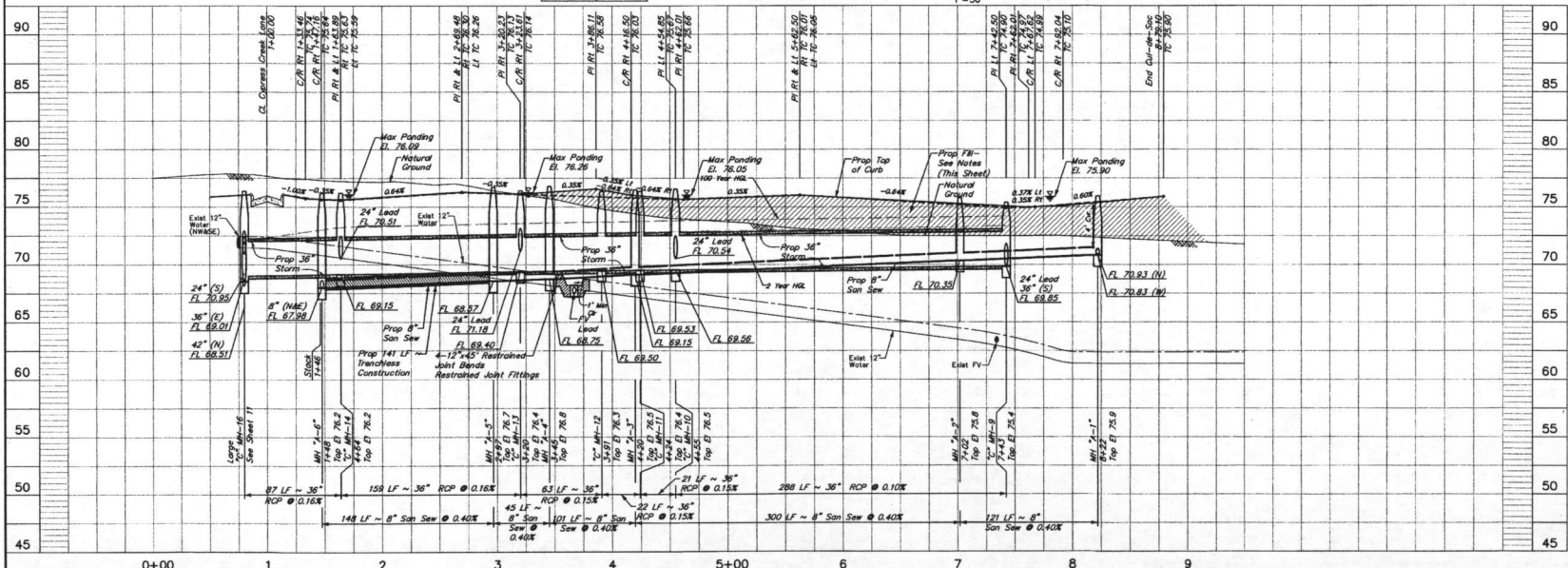
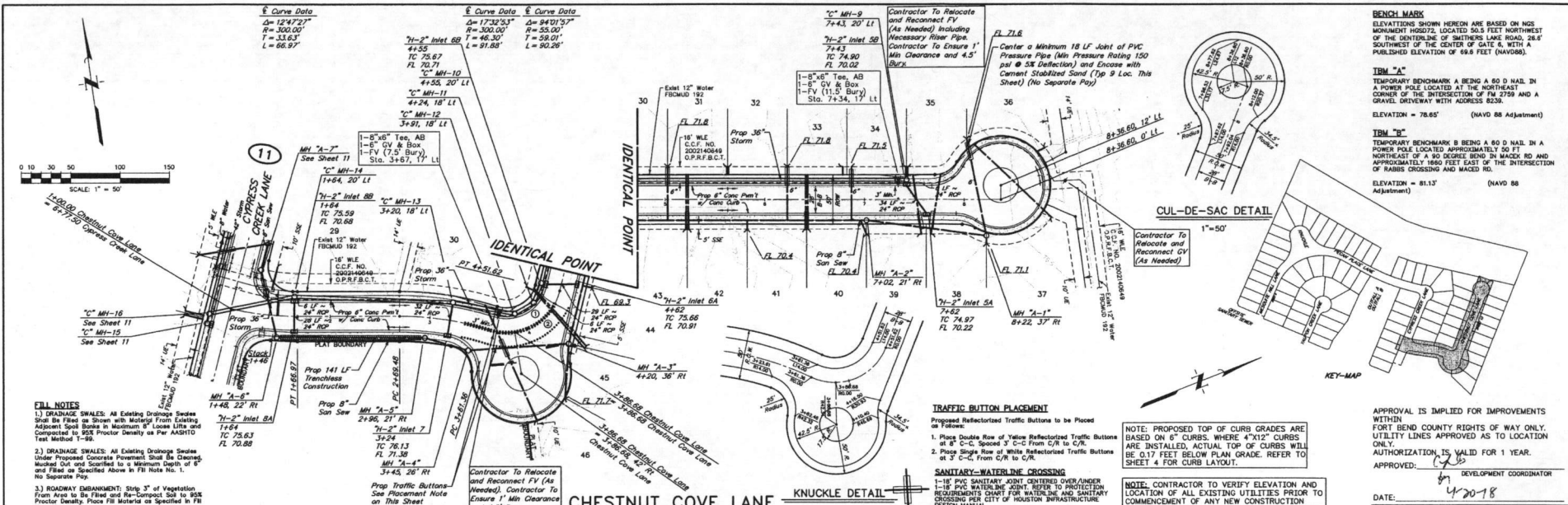
GREATWOOD LAKE SECTION 2A
YAUPON CREEK LANE
4+52.27 TO 7+29.11
OFFSITE WATER
7+29.11 TO 10+08.90

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22300 Merchants Way, Suite 170, Katy, TX 77450 (832) 583-8000

SCALE: 1"=50' H, 1"=5' V. DGN. BY: KCM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO. _____
SUBMITTED: _____ SURV. BY: _____
F.B. NO. _____

[Signature]
LYNSBAY J. EVANS
2/28/18

12 OF 28



BENCH MARK

ELEVATIONS SHOWN HEREON ARE BASED ON NGM MONUMENT H02072, LOCATED 50.5 FEET WEST OF THE CENTERLINE OF SWEETWATER LAKE ROAD, 26.4' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.8 FEET (NAVD83).

BM "A"

TEMPORARY BENCHMARK A BEING A 60 D NAIL IN A POWER POLE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF FM 2759 AND A GRAVEL DRIVEWAY WITH ADDRESS 808.

ELEVATION = 76.65' (NAVD 88 Adjustment)

BM "B"

TEMPORARY BENCHMARK B BEING A 60 D NAIL IN A POWER POLE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF FM 2759 AND APPROXIMATELY 1600 FEET EAST OF THE INTERSECTION OF RABBIT CROSSING AND MADED RD.

ELEVATION = 81.13' (NAVD 88 Adjustment)

KEY-MAP

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY LOCATION. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR. APPROVED: [Signature] DEVELOPMENT COORDINATOR

DATE: 4-20-18

NOTICE:

10. THESE PLAN LINES TO BE BASED UP TO 2000. ALL CONSTRUCTION SHALL BE TO 2022.

NOTICE:

For any utility, you are required to locate and mark all utility lines on file with the appropriate authority (see section 810.001 of the Texas Utilities Code) before any construction. Verify the location and depth of all utility lines. Verify the location and depth of all utility lines. Verify the location and depth of all utility lines.

Approved by: [Signature] Date: []

Approved by: [Signature] Date: []

Approved by: [Signature] Date: []

NO. DATE REVISIONS APP.

FORT BEND COUNTY MUD NO. 192
FORT BEND COUNTY, TEXAS

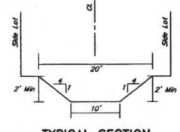
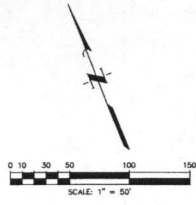
GREATWOOD LAKE SECTION 2A
CHESTNUT COVE LANE
1+00.00 TO 8+79.10

JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
2228 MacArthur Blvd., Suite 1700, Houston, TX 77057 (832) 954-0003

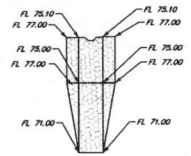
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DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO. []
SUBMITTED: [] SURV. BY: []
F.B. NO. []

LYNEBAY J. EVANS
REGISTERED PROFESSIONAL ENGINEER
128786
LICENSED

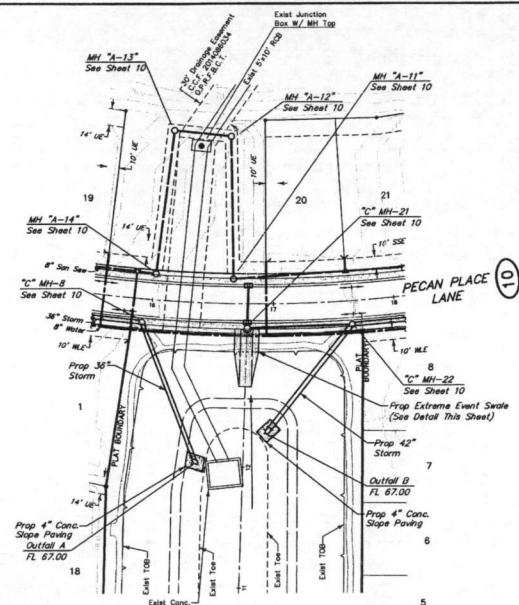
SHEET NO. 13 OF 28



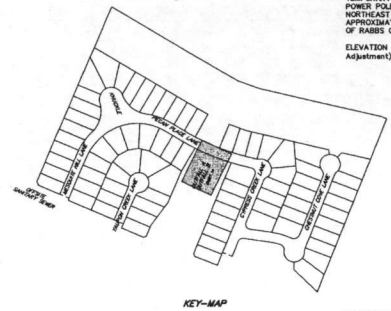
NTS
Extreme Event Swale to Follow Fort Bend County Drainage Standards. Extreme Event Swale to be Built with Interlocking Pavers Except at Sloeside.



OUTFALL A



OUTFALL B



KEY-MAP

BENCHMARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT #H25072, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SOUTHERS LAKE ROAD, 26.4' SOUTHWEST OF THE CENTER OF GATE A, WITH A PUBLISHED ELEVATION OF 69.6 FEET (NAVD83).

BM "A"
TEMPORARY BENCHMARK A BEING A 60 D NAIL IN A POWER POLE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF FM 2759 AND A GRAVEL DRIVEWAY WITH ADDRESS 8236. ELEVATION = 78.65' (NAVD 88 Adjustment)

BM "B"
TEMPORARY BENCHMARK B BEING A 60 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHWEST OF A 90 DEGREE BEND IN MACK RD AND APPROXIMATELY 1600 FEET EAST OF THE INTERSECTION OF BARNS CROSSING AND MACKED RD. ELEVATION = 81.13' (NAVD 88 Adjustment)

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.
APPROVED: *[Signature]* DEVELOPMENT COORDINATOR

DATE: 4/20/18

TO VERIFY FOR LINES TO BE TURNED OFF OR RELOCATED, CALL GROUNDWATER ENERGY AT 713-267-2222

NOTICE:
For your safety, you are required to Turn Out or call off all well log trucks before you dig. Do not attempt to dig until you are notified. The contractor does not hold any liability in an accident. Signature valid for 30 months. Date and not used.

VERIFICATION OF PRIVATE UTILITY LINES

Date: _____

Signature: _____

Date: _____

Signature: _____

Date: _____

Signature: _____

NO. DATE REVISIONS APP.

FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A
OUTFALL A

OUTFALL B

JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
2220 Westchase Way, Suite 210, Katy, TX 77450 (832) 512-8900

SCALE: 1"=50' H, 1"=5' V DGN BY: KCM

DATE: FEBRUARY 2018 DWN BY: EPV

JOB NO. 05537-0008-00 DWG. NO. _____

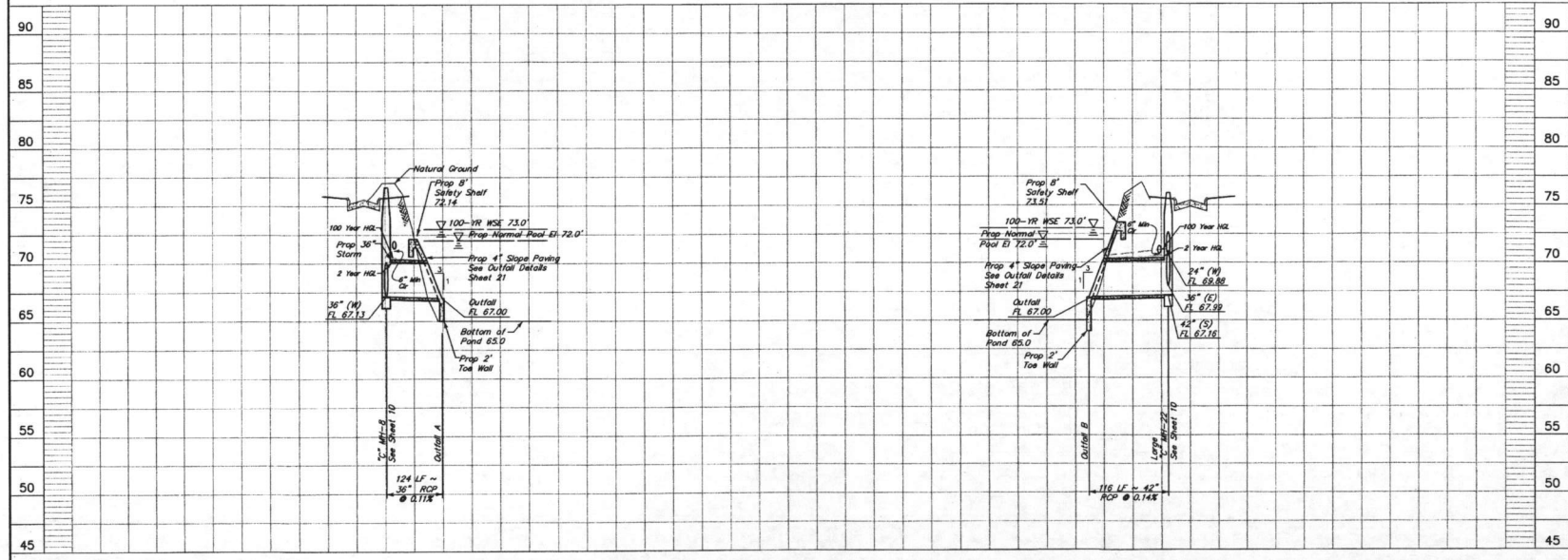
SUBMITTED: _____ SURV. BY: _____

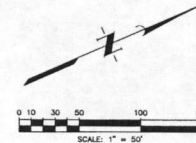
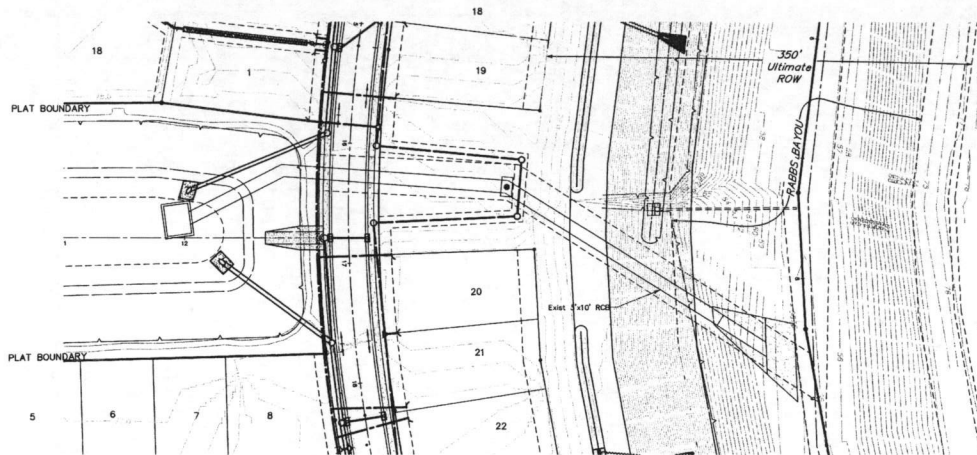
F.B. NO. _____

[Signature]
LYNDSEY J. EVANS
2/28/18

PROFESSIONAL ENGINEER
LYNDSEY J. EVANS
02876

SHEET NO. 14 OF 28

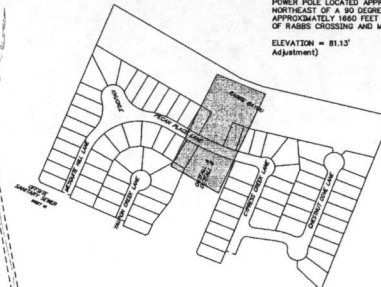




BENCHMARK
ELEVATIONS SHOWN HEREON ARE BASED ON MGS MONUMENT H02072, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.4' SOUTHWEST OF THE CENTER OF GATE 8, WITH PUBLISHED ELEVATION OF 89.6 FEET (NAVD88).

TBM "A"
TEMPORARY BENCHMARK A BEING A 60 D NAIL IN A POWER POLE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF FM 2759 AND A GRAVEL DRIVEWAY WITH ADDRESS 8238.
ELEVATION = 78.65' (NAVD 88 Adjustment)

TBM "B"
TEMPORARY BENCHMARK B BEING A 60 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHWEST OF A 90 DEGREE BEND IN MACKED RD AND APPROXIMATELY 1600 FEET EAST OF THE INTERSECTION OF RABBS CROSSING AND MACKED RD.
ELEVATION = 81.13' (NAVD 88 Adjustment)

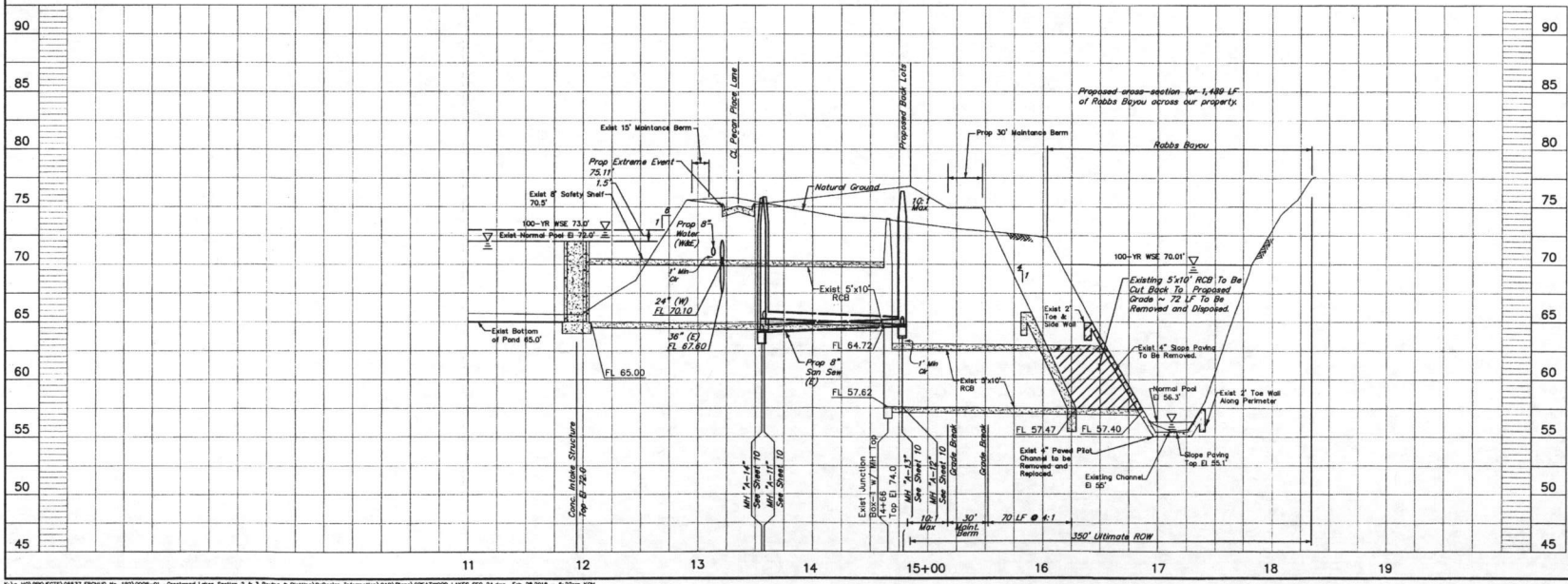


APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.
APPROVED: *[Signature]* DEVELOPMENT COORDINATOR
DATE: 4/20/18

NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

CONTRACTOR SHALL OBTAIN A PERMIT FROM THE FORT BEND COUNTY ENGINEERING DEPT. (283) 633-7500, PRIOR TO ANY WORK WITHIN THE FORT BEND COUNTY DRAINAGE DISTRICT RABBS BAYOU RIGHT-OF-WAY.

EXISTING BASELINE A



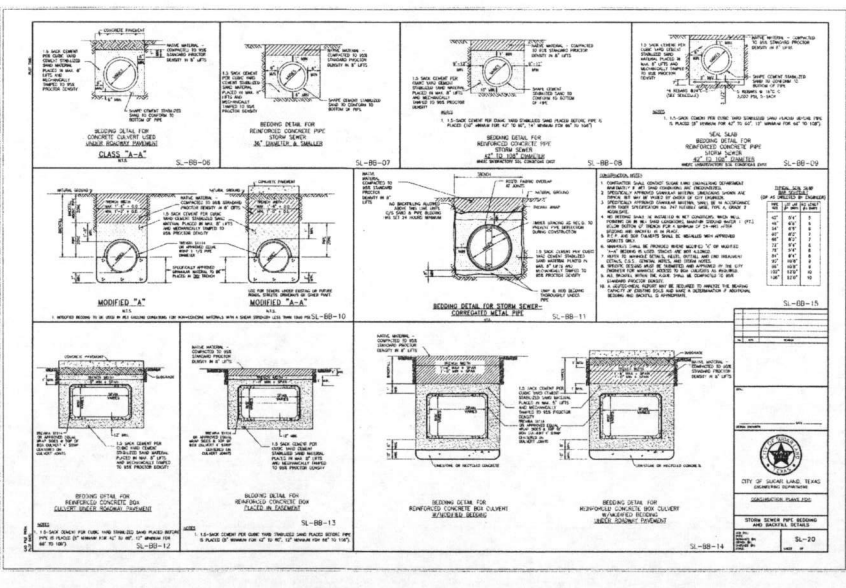
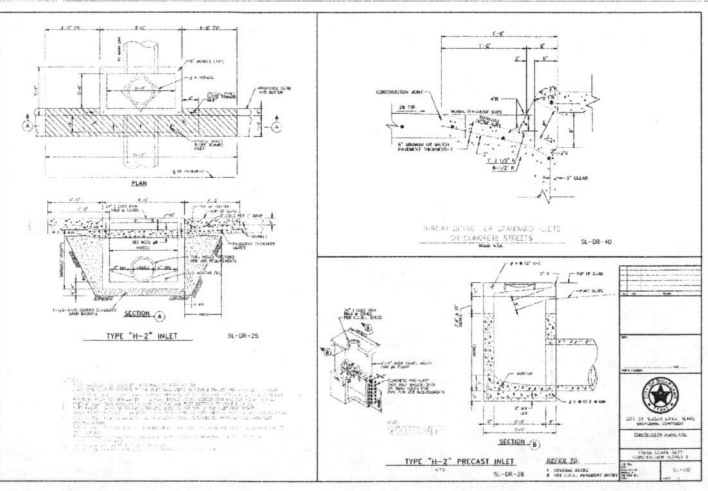
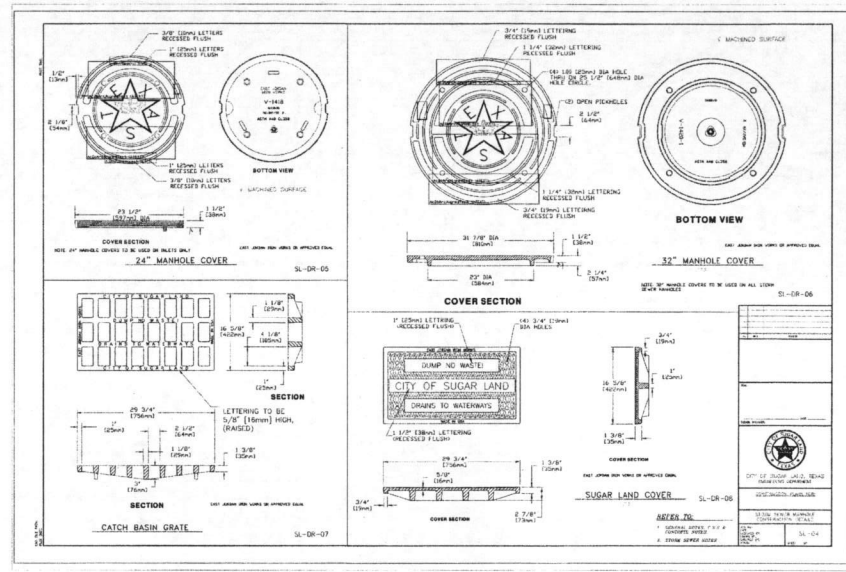
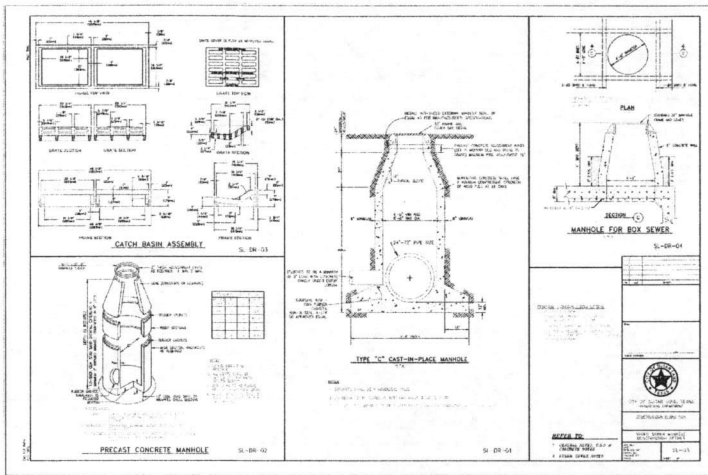
FOR PRELIMINARY LINES TO BE TURNED BY OR ADDED, CALL DEVELOPMENT DIVISION AT 713-587-6225.
NOTICE:
FOR ANY WORK YOU ARE REQUIRED TO TURN LINES BY OR ADDED, YOU MUST OBTAIN ALL NECESSARY PERMITS AND NOTIFICATIONS FROM THE APPROPRIATE AGENCIES PRIOR TO COMMENCEMENT OF ANY WORK. YOU ARE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND NOTIFICATIONS. (SEE LISTING FOR CONTACT INFORMATION.)

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD NO. 192
FORT BEND COUNTY, TEXAS
GREATWOOD LAKE SECTION 2A
EXISTING BASELINE A
11+00.00 TO 18+50.00

JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
3330 Merchants Way, Suite 370, Katy, TX 77449 (832) 914-6200
SCALE: 1"=50' H, 1"=20' V. DRAW BY: KSM
DATE: FEBRUARY 2018 DWN BY: EPV
JOB NO. 05537-0008-00 DWG. NO. _____
SUBMITTED: _____ SURV. BY: _____
F.S. NO. _____

Lynsby J. Evans
2/28/18
LYNSBY J. EVANS
2878
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
SHEET NO. 18 OF 28



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *[Signature]* DEVELOPMENT COORDINATOR

DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A

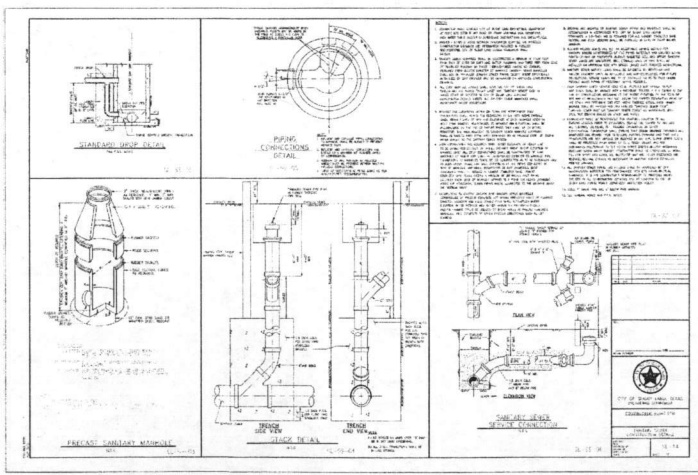
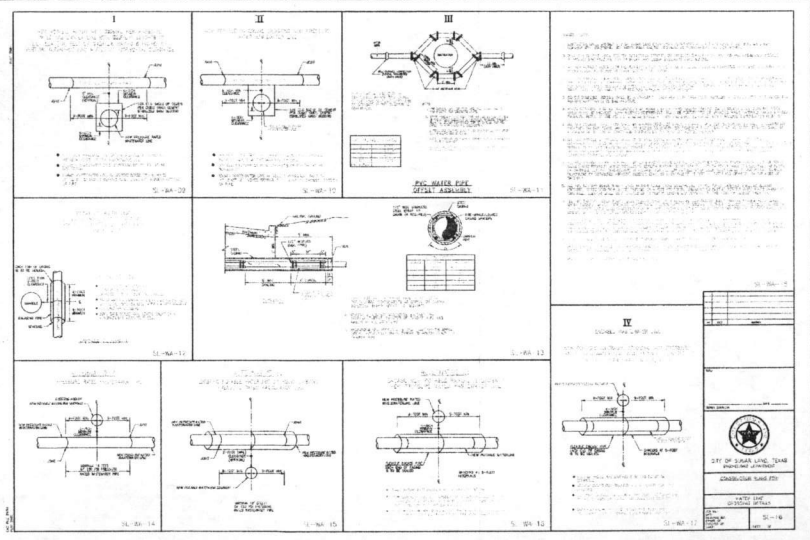
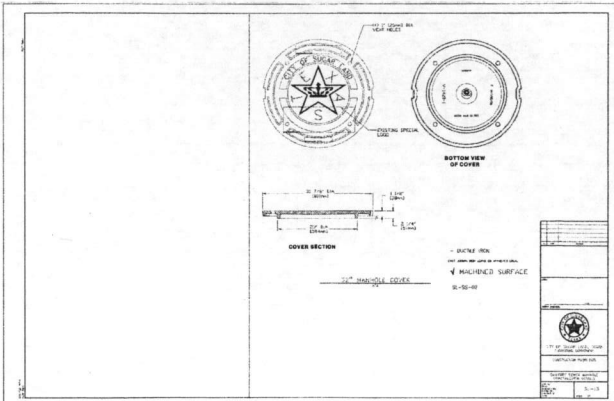
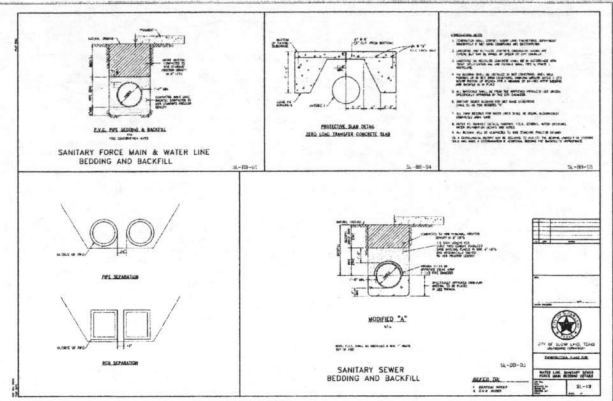
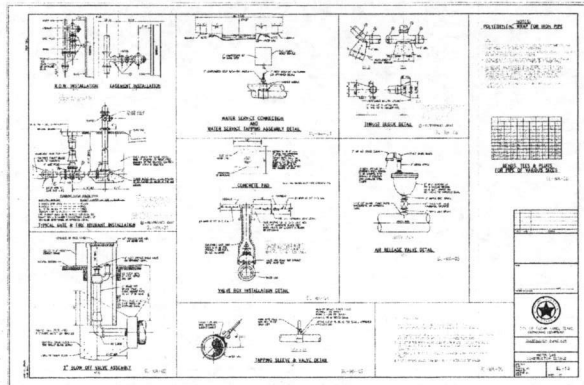
MISCELLANEOUS DETAILS I

J.C. JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
2280 Manchaca Way, Suite 175, Austin, TX 78704 (512) 453-4000

SCALE: N.T.S. DGN. BY: KCM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO. _____
SUBMITTED: _____ SURV. BY: _____
F.B. NO. _____

Lynsay J. Evans
REGISTERED PROFESSIONAL ENGINEER
No. 108736
EXPIRES 12/31/2021

SHEET NO. 19 OF 28



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *[Signature]* DEVELOPMENT COORDINATOR

DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A

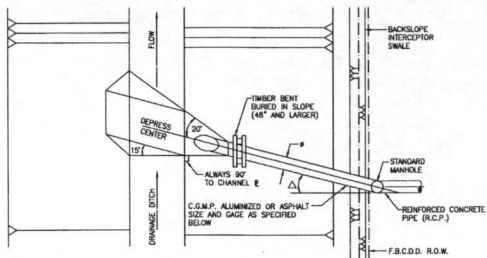
MISCELLANEOUS DETAILS II

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
2330 Merchants Way, Suite 270, Katy, TX 77450 (832) 933-8000

SCALE: N.T.S. DWN. BY: KCM
DATE: FEBRUARY 2018 DNG. NO.: EPV
JOB NO. 05537-0008-00 DWG. NO.:
SUBMITTED: SURV. BY:
F.B. NO.:

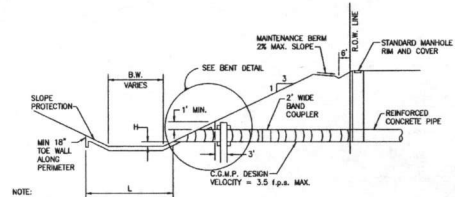
LINDSAY J. EVANS
202018
128796
REGISTERED
PROFESSIONAL ENGINEER

SHEET NO. 20 OF 28

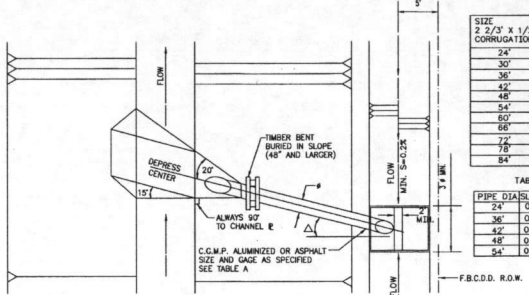


SIZE 2 2/3" X 1/2" CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE	SIZE 3'X1' & 5'X1' CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE
24"	16	16			
30"	16	16			
36"	16	16			
42"	16	16			
48"	14	16	48"	16	18
54"	12	14	54"	16	18
60"	12	14	60"	16	18
66"	10	12	66"	16	18
72"	10	12	72"	16	18
78"	8	10	78"	14	16
84"	8	10	84"	14	16

Δ : PROP. 24" TO 42" Δ = 15"
 PROP. 48" AND LARGER Δ = 30"
 H: FOR PIPE SIZES 24" TO 42"
 H=3" MAX. AND 1" MIN.
 FOR PIPE SIZES 48" AND LARGER
 H=1" MAX. AND MIN.
 L: $\frac{B.W.}{PIPE \#} \leq 7'-6"$ L WILL EXTEND ONE
 PIPE # ABOVE & ON
 OPPOSITE BANK (MIN.)
 $\frac{B.W.}{PIPE \#} > 7'-6"$ L = 6 # OR MIN. 1'-6"
 AND B.W. WHICHEVER
 IS GREATER



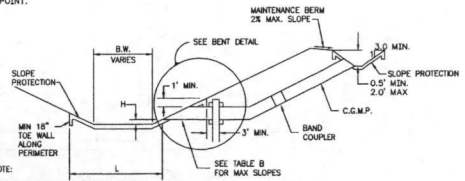
TYPICAL STORM SEWER OUTFALL
DETAIL FOR
FORT BEND COUNTY, TEXAS



SIZE 2 2/3" X 1/2" CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE	SIZE 3'X1' & 5'X1' CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE
24"	16	16			
30"	16	16			
36"	16	16			
42"	14	16	48"	16	18
48"	14	16	54"	16	18
54"	12	14	60"	16	18
60"	12	14	66"	16	18
66"	10	12	72"	16	18
72"	10	12	78"	14	16
78"	8	10	84"	14	16
84"	8	10	84"	14	16

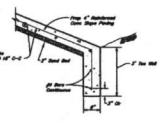
Δ : PROP. 24" TO 42" Δ = 15"
 PROP. 48" AND LARGER Δ = 30"
 H: FOR PIPE SIZES 24" TO 42"
 H=3" MAX. AND 1" MIN.
 FOR PIPE SIZES 48" AND LARGER
 H=1" MAX. AND MIN.
 L: $\frac{B.W.}{PIPE \#} \leq 7'-6"$ L WILL EXTEND ONE
 PIPE # ABOVE & ON
 OPPOSITE BANK (MIN.)
 $\frac{B.W.}{PIPE \#} > 7'-6"$ L = 6 # OR MIN. 1'-6"
 AND B.W. WHICHEVER
 IS GREATER

NOTE:
MAXIMUM BACKSLOPE DRAIN SPACING SHALL
BE 800 FEET OR 400 FEET TO THE SWALE
HIGH POINT.

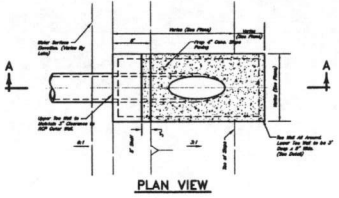


NOTE:
CONCRETE SLOPE PAVING SHALL HAVE A
MINIMUM THICKNESS OF 4" MINIMUM REINFORCING
STEEL SHALL BE #3 REBAR AT 18" O.C. OR
6x6x4 O.W.#4 WELDED WIRE FABRIC

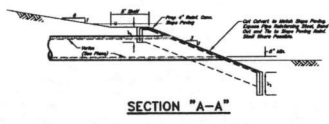
TYPICAL BACKSLOPE DRAIN DETAIL
FOR
FORT BEND COUNTY, TEXAS



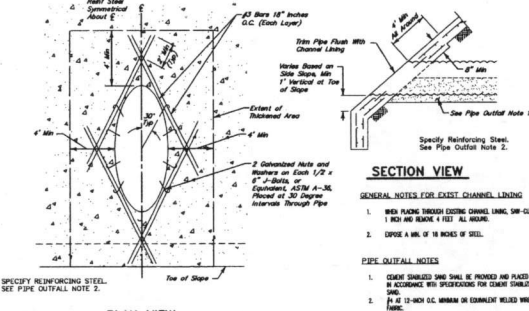
TOE WALL DETAIL
NOT TO SCALE



PLAN VIEW



SECTION "A-A"
OUTFALL CONCRETE SLOPE PAVING DETAIL
NOT TO SCALE



PIPE OUTFALL DETAIL
NOT TO SCALE
(FOR OUTFALLS 24"-42" INCH DIA.)

GENERAL NOTES FOR EXIST. CHANNEL LENDING
 1. WHEN PAVING EXISTING CHANNEL LINE, 5/8" O/C
 1" MIN. AND MAKE 1" FEET AL. BEHIND.
 2. DPOE A MIN. OF 8 INCHES OF STEEL.
PIPE OUTFALL NOTES
 1. CONCRETE SLOPE SHALL BE PROVED AND PAVED
 IN ACCORDANCE WITH SPECIFICATIONS FOR CONCRETE STABILIZED
 SOIL.
 2. #4 AT 12-INCH O.C. MINIMUM OR EQUIVALENT WELDED WIRE
 FABRIC.

APPROVAL IS IMPLIED FOR IMPROVEMENTS
 WITHIN
 FORT BEND COUNTY RIGHTS OF WAY ONLY.
 UTILITY LINES APPROVED AS TO LOCATION
 ONLY.
 AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *[Signature]*
 DEVELOPMENT COORDINATOR

DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

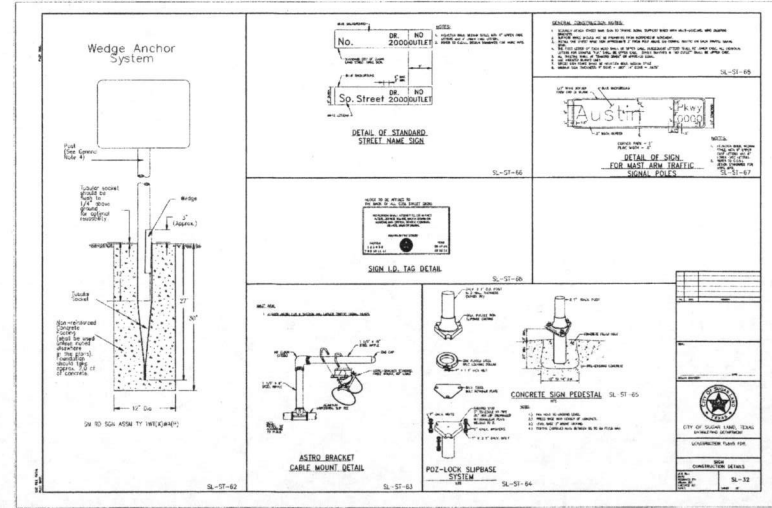
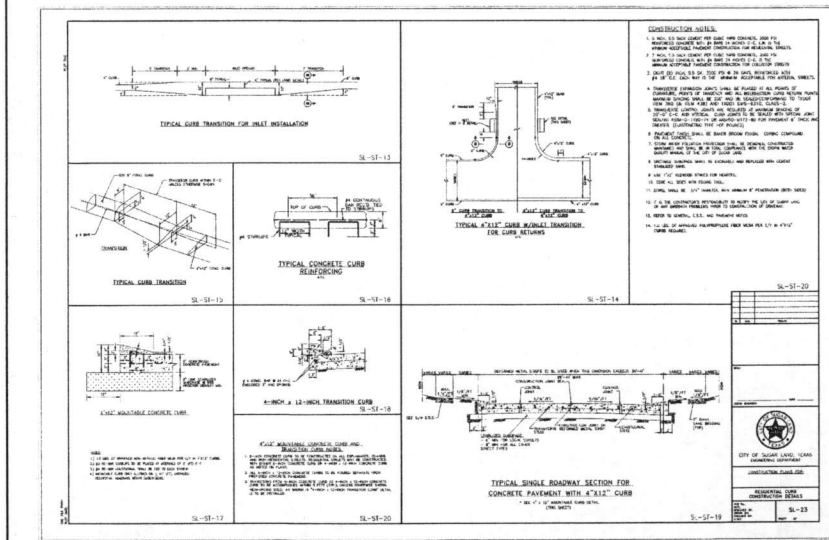
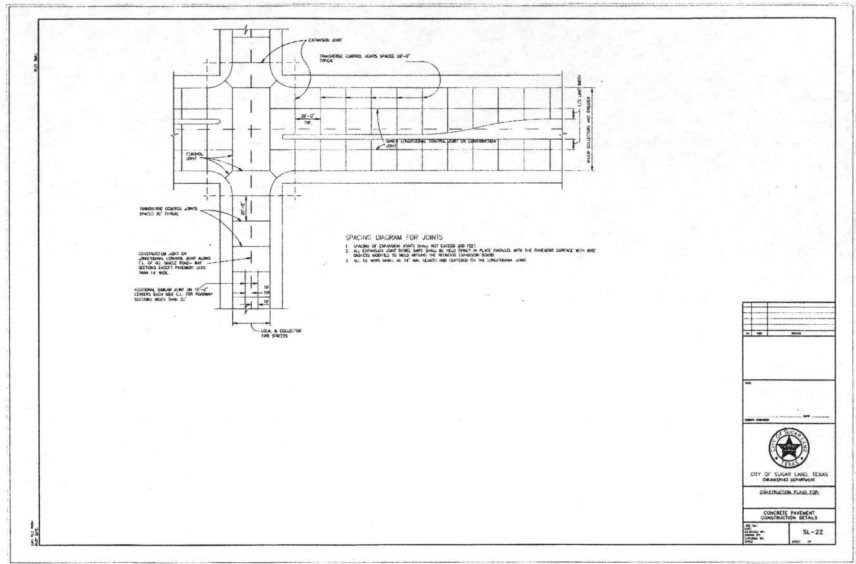
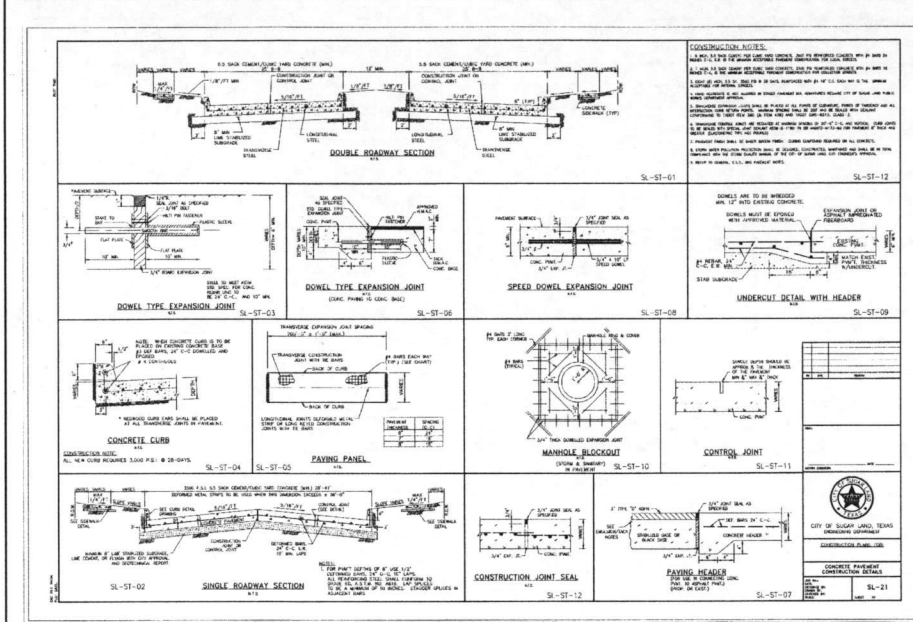
FORT BEND COUNTY MUD NO. 192
 FORT BEND COUNTY, TEXAS
 GREATWOOD LAKE SECTION 2A
 MISCELLANEOUS DETAILS III

JONES CARTER
 Texas Board of Professional Engineers Registration No. F-439
 22203-Mechanics Way, Suite 270, Evans, TX 77640 (832) 614-4900
 SCALE: N.T.S. DON BY: KCM
 DATE: FEBRUARY 2018 DWN BY: EPV
 JOB NO. 05537-0008-00 DWG. NO. _____
 SUBMITTED: _____ SURV. BY: _____
 F.B. NO. _____

THIS SHEET HAS BEEN PREPARED FOR USE ON FICDD PROJECTS OR PROJECTS TO BE MAINTAINED BY
 THE FICDD WHEN COMPLETED BY OTHERS. THE ENGINEER SHOULD CAREFULLY REVIEW THESE DETAILS TO
 DETERMINE THEIR APPLICABILITY TO A PARTICULAR PROJECT. IF REVISIONS ARE NECESSARY, THEY SHALL BE
 CLEARLY DELINEATED AND NOTED IN THE REVISION BLOCK IN ACCORDANCE WITH RULE 131.155(6) OF THE
 TEXAS STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS. AN ENGINEER WHO INCORPORATES THE
 DETAILS ON THIS SHEET INTO HIS WORK MUST SEAL THIS SHEET AND BECOME RESPONSIBLE FOR ITS USE IN
 THE END PRODUCT IN ACCORDANCE WITH RULE 131.166(h).

[Signature]
 LYNSEY J. EVANS
 2/20/18
 STATE OF TEXAS
 PROFESSIONAL ENGINEER
 02076
 LICENSE NO.

SHEET NO.
 21
 OF 28



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *[Signature]* DEVELOPMENT COORDINATOR

DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A

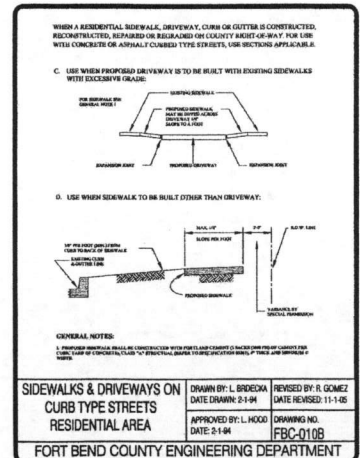
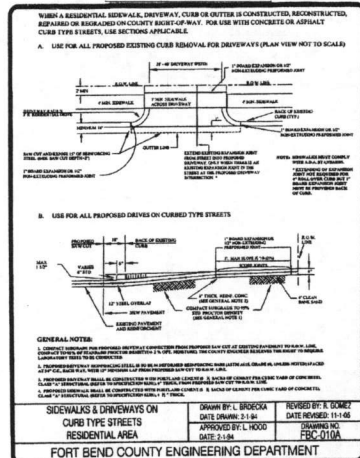
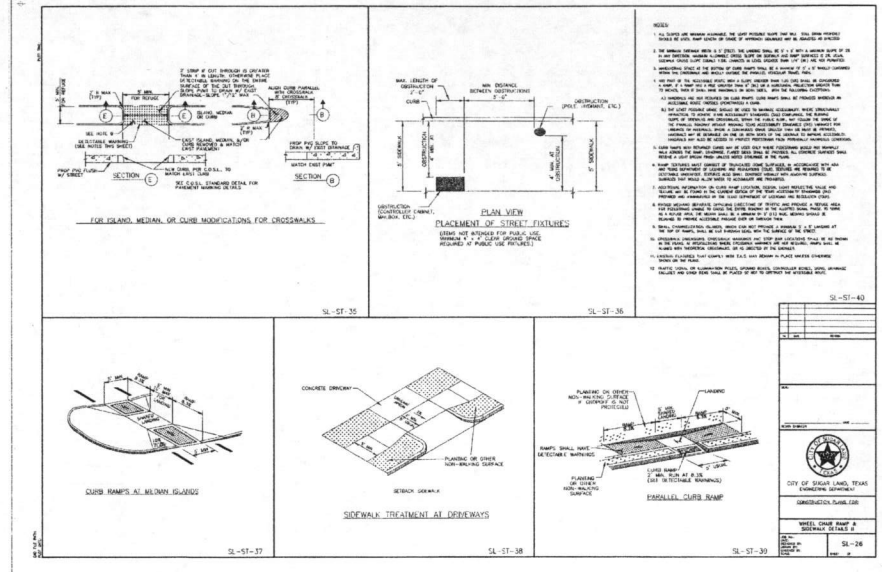
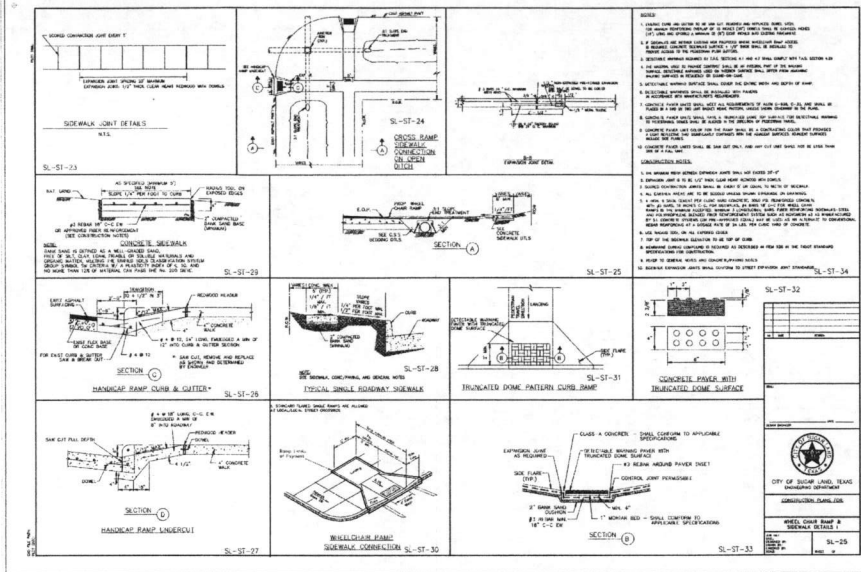
PAVING DETAILS I

JONES CARTER
Texas Board of Professional Engineers Registration No. 4-03
2230 Mechanics Way, Suite 170, Ennis, TX 77549 (832) 913-8200

SCALE: N.T.S. DGN. BY: JCM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO.:
SUBMITTED: SURV. BY:
F.B. NO.:

LYNCH & EVANS
REGISTERED PROFESSIONAL ENGINEERS
20876
22818

SHEET NO. 22 OF 28



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *[Signature]* DEVELOPMENT COORDINATOR

DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

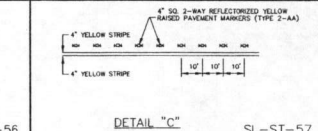
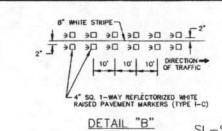
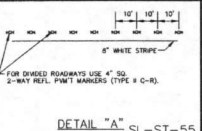
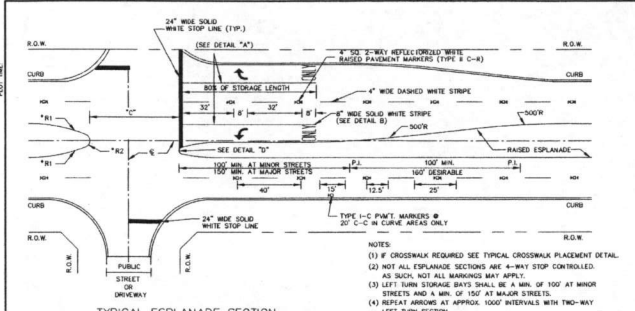
FORT BEND COUNTY MUD No. 192
 FORT BEND COUNTY, TEXAS
 GREATWOOD LAKE SECTION 2A
 PAVING DETAILS II

JONES CARTER
 Texas Board of Professional Engineers Registration No. F-438
 2228 Merchants Way, Suite 170, Katy, TX 77459 (832)763-0000

SCALE: N.T.S. DWN. BY: KCM
 DATE: FEBRUARY 2018 DWN. BY: EPV
 JOB NO. 05537-0008-00 DWG. NO. _____
 SUBMITTED: _____ SURV. BY: _____
 F.B. NO. _____

[Signature] LINDSEY J. EVANS
 2/28/18

SHEET NO. 23 OF 28



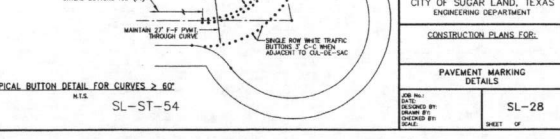
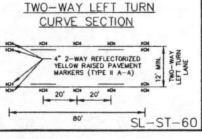
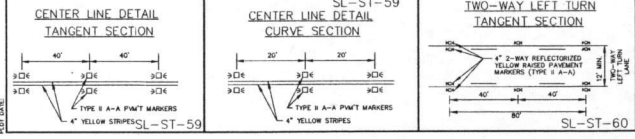
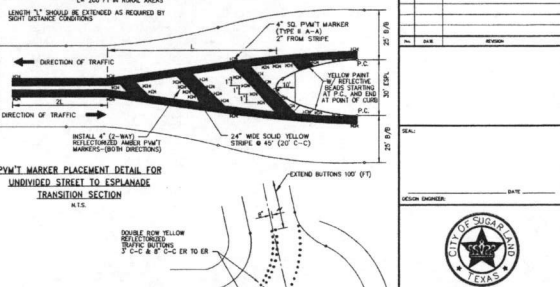
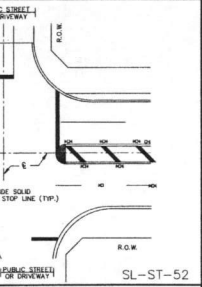
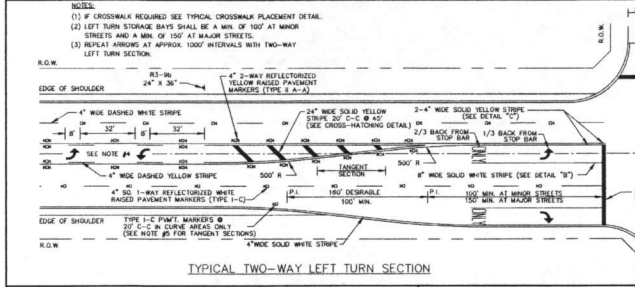
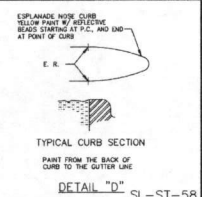
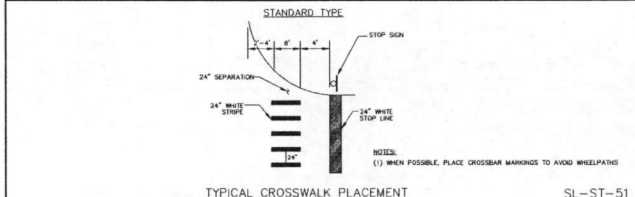
RADIUS DIMENSIONS

ESPLANADE	R1	R2
4'	N/A	R/2
8'-30'	R/2	R/5
>30'	N/A	R/5

PAVEMENT MARKER LEGEND

Symbol description:
 □ 4" x 4" REFLECTORIZED RAISED PAVEMENT MARKER
 ◻ INDICATES DIRECTION OF TRAFFIC FLOW

- NOTES:**
- ALL INTERSECTIONS WHERE A STOP SIGN IS LOCATED SHALL HAVE A STOP BAR. STOP BARS SHALL BE LOCATED WHERE PEDESTRIAN CROSSINGS ARE PROVIDED, 4' BEYOND CROSSWALKS.
 - STOP BARS SHALL BE 24" WIDE, AND CONSIST OF SOLID WHITE LINES EXTENDING ACROSS APPROACH LANES TO INDICATE THE POINT AT WHICH THE STOP IS INTENDED OR REQUIRED TO BE MADE.
 - ON APPROACH - BEGINNING WITH STOP BAR, INSTALL A 4" WIDE SOLID WHITE LINE FOR 25 FT BACK FROM STOP BAR SHIP 25' AND BEYOND NORMAL LANE LINES.
 - ON EXIT - BEGINNING WITH CROSSWALK OR 12' FROM CURB LINE OF INTERSECTING STREET, INSTALL A 4" WIDE SOLID WHITE LINE FOR 50 FT AND BEYOND NORMAL LANE LINE.
 - CROSSWALKS SHALL BE A MINIMUM WIDTH (MIN. WIDTH OF 5 FT). AT LOCATIONS WHERE ADDITIONAL VISIBILITY IS REQUIRED, WHERE TRAFFIC CONTROL DEVICES ARE NOT PRESENT, AND IN SCHOOL ZONES CENTRAL CROSSWALKS SHALL BE USED.
 - ALL PAVEMENT MARKINGS WHEN CITY FLOW SHALL BE MULTIDIRECTIONAL (GRANULES 80 AND ABOVE) IN ACCORDANCE WITH C.O.S.L. APPROVED PRODUCT LIST.
 - PAVEMENT MARKINGS MUST BE SHOWN ON THE APPROVED CONSTRUCTION PLANS. ALL PAVEMENT MARKINGS MUST BE RETRO-REFLECTIVE MATERIAL APPLIED TO THE ROAD SURFACE IN A MANNER THAT IS VISIBLE TO DRIVERS. SUPERSEDED EXTENSION, OR SPREAD BEANS, WITH A SURFACE APPLICATION OF GRAVEL BEANS, THROUGHOUT THEIR THROAT.
 - THE COLOR OF RAISED PAVEMENT MARKINGS UNDER BOTH DAYLIGHT AND NIGHTTIME CONDITIONS SHALL CONFORM TO THE COLOR OF THE MARKING FOR WHICH THEY SERVE AS A POSITIONING GUIDE OR FOR WHICH THEY SUPPLEMENT OR SUBSTITUTE.
 - ALL TRAFFIC BUTTONS AND MARKERS SHALL BE INSTALLED ADJACENT TO STRIPS (APPROX. 2').
 - ALL BUTTONS SHALL BE INSTALLED WITH AN APPROVED EPOXY.
 - A BLUE REFLECTORIZED BUTTON SET 8" OFF CENTERLINE OF ROADWAY SHALL BE INSTALLED ADJACENT TO ALL THE WORKZONES.
 - PAVEMENT SURFACE AREAS PRIOR TO PLACEMENT OF PAVEMENT MARKINGS AND/OR RAISED PAVEMENT MARKERS SHALL BE CLEANED BY ACCORDANCE WITH C.O.S.L. STANDARD. CONCRETE SURFACES SHALL BE CLEANED BY APPROVED BLASTING MEDIA.
 - ASPHALT PAVEMENT SURFACES SHALL BE CLEANED BY BRUSHING, WASHING, COMPRESSED AIR, AND/OR HIGH-PRESSURE WATER. AREAS MUST BE FREE OF CURING MEMBRANE, OIL, GREASE, LOOSE AND/OR FLAKING EXISTING MARKINGS AND OTHER FORMS OF DEBRIS.
 - ALL ESPLANADE ROADS AND CURBS IN LEFT TURN BAYS SHALL BE PAINTED WITH YELLOW REFLECTORIZED PAINT AND SHALL COMPLY WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC DEVICES, A.D.A., T.A.S., AND C.O.S.L. STANDARDS AND ALL REVISIONS THEREOF.
 - ALL ESPLANADE ROADS AND CURBS IN LEFT TURN BAYS SHALL BE REFLECTORIZED STRIPES 12" INSIDE THE EDGE OF PAVEMENT.
 - WITHIN A TANGENT SECTION THE TYPE I-C PAVEMENT MARKERS CAN BE PLACED AT 40' C/C OR ROADWAY'S WISDOM CURB AND OUTRETS.
 - ALL STREET CROSSINGS SHALL COMPLY WITH T.A.S. AND A.D.A. SEE HANDCAP CROSS DETAIL.
 - ALL PAVEMENT MARKINGS AND/OR RAISED PAVEMENT MARKERS SHALL COMPLY WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC DEVICES, A.D.A., T.A.S., AND C.O.S.L. STANDARDS AND ALL REVISIONS THEREOF.
 - ALL MARKINGS SHALL HAVE A UNIFORM CROSS-SECTION, AND THE QUANTITY AND QUALITY OF THE MARKINGS SHALL BE UNIFORM THROUGHOUT THEIR THROAT.
 - PAVEMENT MARKINGS PLACED THAT ARE NOT IN ALIGNMENT OR SEQUENCE, AS SHOWN ON THE PLANS OR LISTED IN THE PROJECT SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
 - FOR NEW INTERSECTIONS AND STREET WIDTHS NOT SHOWN, COORDINATE WITH THE C.O.S.L. ENGINEERING DEPARTMENT (303) 275-2780.
 - PRIOR TO PLACING MARKING CONTACT COG TO COORDINATE AND REVIEW IN THE FIELD COORDINATE WITH THE C.O.S.L. ENGINEERING DEPARTMENT (303) 275-2780.



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 192
 FORT BEND COUNTY, TEXAS
 GREATWOOD LAKE SECTION 2A
 PAVEMENT MARKING DETAILS

JONES CARTER
 Texas Board of Professional Engineers Registration No. F-489
 2230 Meritway Way, Suite 170, Katy, TX 77459 (832) 933-8000

SCALE: 1"=150'
 DATE: FEBRUARY 2018
 JOB NO: 05537-0008-00
 SUBMITTED: _____

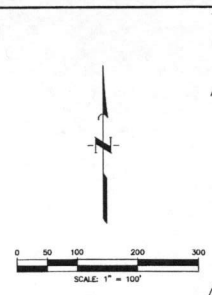
DON BY: KCM
 DWN BY: EPV
 SURV BY: _____
 F.B. NO. _____

CITY OF SUGAR LAND, TEXAS
 ENGINEERING DEPARTMENT
 CONSTRUCTION PLANS FOR:
 PAVEMENT MARKING DETAILS
 SHEET OF SL-28

LINDSEY J. EVANS
 LICENSED PROFESSIONAL ENGINEER
 STATE OF TEXAS
 026796

LINDSEY J. EVANS
 2/26/18

SHEET NO. 24 OF 28



POINTE GREATWOOD, LLC
CALLED 100.37 AC
C.C.F. No. 2012146349
G.P.R.F.B.C.T.

GREATWOOD BEND
SLIDE No. 1312A
P.R.F.B.C.T.

Robba Excavation Note:
Approximately 21,886 C.Y. of
Material to Be Excavated from Robba
Bayou as Shown on Sheet 16.
Existing RCB To Be Cut and Slope
Paved to Match Proposed Grade.

BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NOS
MONUMENT H08072, LOCATED 50.3 FEET NORTHWEST
OF THE CENTERLINE OF SWITHERS LAKE ROAD, 26.4'
SOUTHWEST OF THE CENTER OF GATE 6, WITH A
PUBLISHED ELEVATION OF 68.6 FEET (NAVD83).

TM "A"
TEMPORARY BENCHMARK A BEING A 60 D NAIL IN
A POWER POLE LOCATED AT THE NORTHEAST
CORNER OF THE INTERSECTION OF FM 2729 AND A
GRAVEL DRIVEWAY WITH ADDRESS 8238.
ELEVATION = 78.65' (NAVD 88 Adjustment)

SECTION TWO
Slide No. 20650
P.R.F.V.C.T.

TM "C"
TEMPORARY BENCHMARK C BEING A 60 D NAIL IN
A POWER POLE LOCATED APPROXIMATELY 50 FT
NORTHEAST OF A 90 GRADE BEND IN HASKER RD AND
APPROXIMATELY 1600 FEET EAST OF THE INTERSECTION
OF RABBIT CROSSING AND WAGD RD.
ELEVATION = 81.13' (NAVD 88
Adjustment)

100-YEAR FLOOD PLAIN
THIS TRACT LIES WITHIN ZONES "AE, X, & X SHAIDED"
OF THE FLOOD INSURANCE RATE MAP NUMBER
481570245A, PANEL 245 OF 550, FOR FORT BEND
COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "AE"
IS DEFINED AS SPECIAL FLOOD HAZARD AREAS
DUNAGED BY THE 1% FLOOD. BASE FLOOD ELEVATIONS
DETERMINED. ZONE "X" IS DEFINED AS AREAS
DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE
FLOODPLAIN. ZONE "X SHAIDED" IS DEFINED AS AREAS
OF 0.2% ANNUAL CHANCE FLOOD. AREAS OF 1% ANNUAL
CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1
FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE
MILE, AND AREAS PROTECTED BY LEVEES FROM 1%
ANNUAL CHANCE FLOOD. THIS FLOOD STATEMENT DOES
NOT IMPLY THAT THE PROPERTY OR STRUCTURES
THEREON WILL BE FREE FROM FLOODING ON FLOOD
DAMAGE. ON RARE OCCASIONS FLOODS CAN AND WILL
OCCUR AND FLOODS CAN AND WILL OCCUR AND FLOOD
DAMAGES MAY BE INCREASED BY NON-NATURAL
CAUSES. THIS FLOOD STATEMENT SHALL NOT
CREATE LIABILITY ON THE PART OF THE SURVEYOR.

LEGEND

	EXISTENT GROUND CONTOUR
	PROPOSED TOP OF CURB
	EXISTING TOP OF CURB
	FINISH ELEVATIONS
	GRADE BREAK LINE
	SLOPE OF FINISHED GRADE
	STREET MAX PONDING DEPTH
	MINIMUM FINISHED SLAB ELEVATION

MINH C. NGUYEN, ET UX
CALLED 63.896 AC
P.B.C.C.F. No. 2002140649

- MINIMUM SLAB ELEVATION**
THE MINIMUM SLAB ELEVATION FOR EACH LOT WILL BE THE
HIGHEST ELEVATION OF THE FOLLOWING CRITERIA:
- EXISTENT INCHES (18") ABOVE THE 100-YEAR WATER
SURFACE ELEVATION OF THE ADJACENT DITCH.
 - ONE FOOT (1') ABOVE THE EXTREME EVENT PONDING OR
SHEET FLOW ELEVATION.
 - EXISTENT INCHES (18") ABOVE LOWEST NATURAL GROUND
ELEVATION.

APPROVAL IS IMPLIED FOR IMPROVEMENTS
WITHIN
FORT BEND COUNTY RIGHTS OF WAY ONLY.
UTILITY LINES APPROVED AS TO LOCATION
ONLY.
AUTHORIZATION IS WAIVED FOR 1 YEAR.
APPROVED:

DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD NO. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A

GRADING PLAN

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22386 Mechanics Way, Suite 270, San, TX 77244 (832) 813-8000

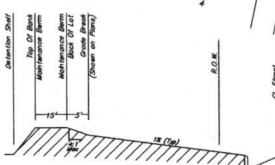
SCALE: 1"=100' DGN. BY: KCM
DATE: MARCH 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO. _____
SUBMITTED: _____ SURV. BY: _____
F.B. NO. _____

Lindsey J. Evans
4/2/2018

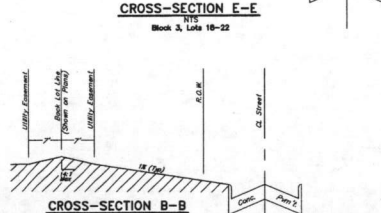
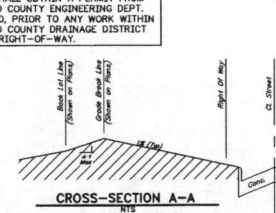
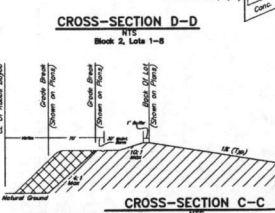
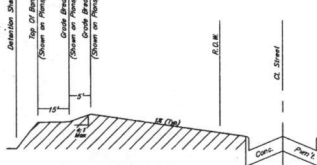
SHEET NO.
25
OF 28

GRADING NOTES

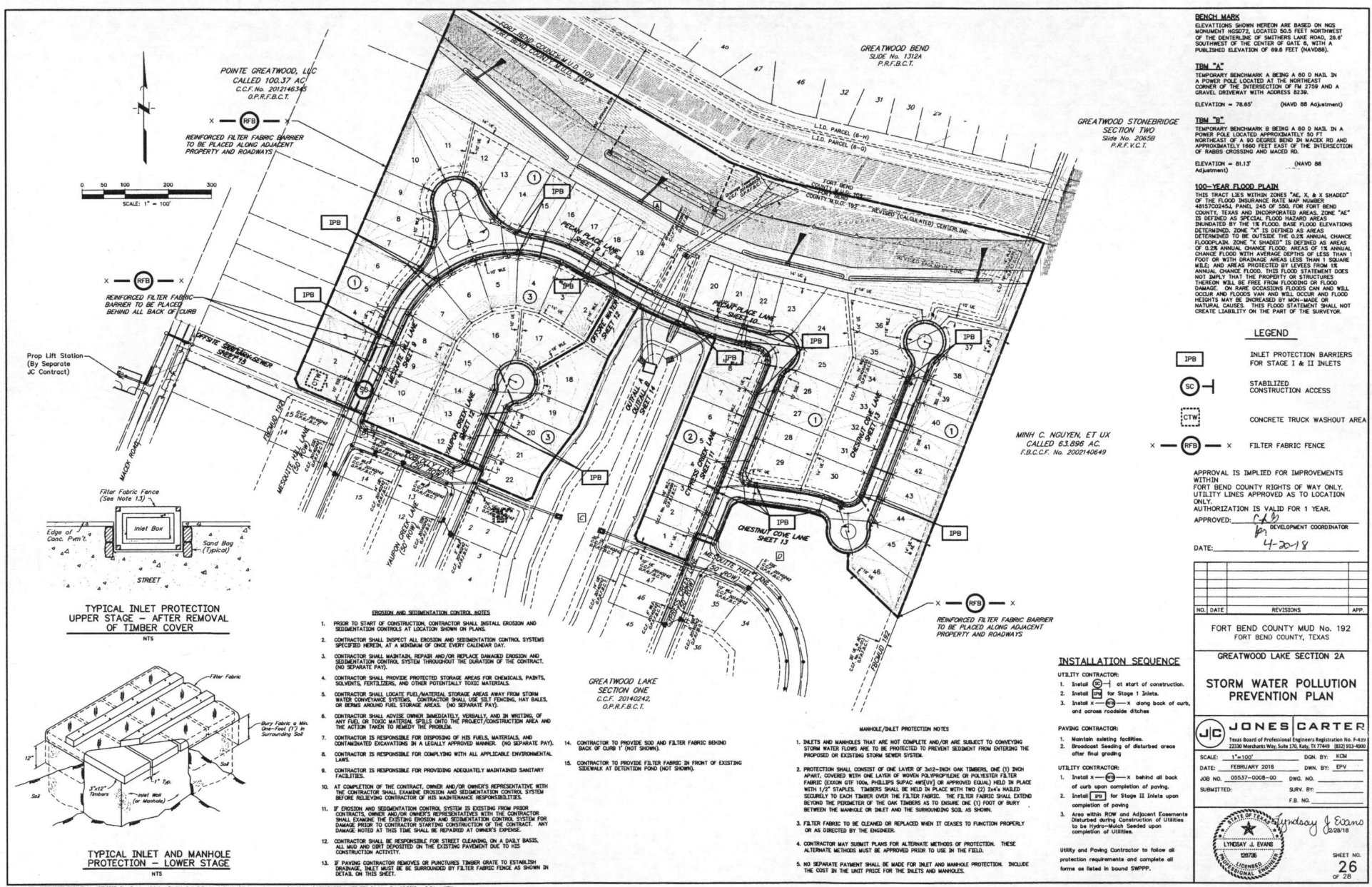
- LINES AND GRADES ON THIS GRADING PLAN DO NOT IMPLY AUTHORIZATION TO PERFORM ANY GRADING WORK ON OTHER PROPERTIES. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN SUCH APPROVALS FROM THE ENGINEER PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL COMPLETE ALL EXCAVATION ACTIVITIES TO THE LINES AND GRADES SHOWN BY THIS PLAN. UNIFORM SMOOTH GRADING OF ALL AREAS SHALL BE ACCOMPLISHED. ALL AREAS TO BE STRAIGHT GRADES FROM ELEVATION TO ELEVATION AS SHOWN. THE FINISHED SURFACE SHALL BE REASONABLY SMOOTH AND FREE FROM BUMPALIMITIES.
- THE CONTRACTOR MAY FIELD ADJUST THE PROPOSED LOCATION AND ROUTING OF SURFACE DRAINAGE SWALES TO OPTIMIZE DRAINAGE, AS REQUIRED. CONTRACTOR TO OBTAIN APPROVAL FROM ENGINEER PRIOR TO MAKING ADJUSTMENTS (NO SEPARATE PAY).
- LOT AREAS THAT ARE TO RECEIVE FILL SHALL BE PREPARED AS FOLLOWS (NO SEPARATE PAY):
• AREAS TO RECEIVE FILL WITH EXISTING GRASS OR SHRUBBERY HIGHER THAN 2 FEET MUST BE MOWED PRIOR TO THE PLACEMENT OF FILL STRALES.
- CLEARING OF SCATTERED TREES UP TO 4 INCH CALIPER IN AREAS DESIGNATED TO RECEIVE FILL IS INCIDENTAL TO THE CONTRACT. INCLUDE COSTS IN PRICE BID FOR LOT GRADING.
- AREAS TO RECEIVE FILL WILL BE STRIPPED TO A DEPTH OF 3 INCHES. STRIPPINGS SHALL BE STOCKPILED AND THEN SPREAD EVENLY ON THE SURFACE OF FILLED AREAS. FINAL LOT ELEVATIONS ARE BASED ON FINISH GRADES WITH STRIPPINGS SPREAD ON GRADED AREAS. STRIPPINGS PLACED WITHIN FUTURE BUILDING FOOTPRINTS TO BE PLACED NO MORE THAN 3 INCHES THICK AND COMPACTED.
- CONTRACTOR TO PROOF ROLL ALL LOTS WITHIN THE PROJECT BOUNDARY AS PART OF LOT GRADING. PRIOR TO THE PLACEMENT OF ANY MATERIAL ON NATIVE EARTH, THE AREA SHALL BE WROG OUT WEAK SPOTS IN THE SUB-GRADE WHICH WOULD OTHERWISE FAIL DURING THE CONSTRUCTION PROCESS. THE PROOF ROLLING SHALL BE COMPLETED WITH EQUIPMENT WEIGHING AT LEAST 20 TONS WITH TIRE PRESSURES BETWEEN 50 PSI AND 100 PSI. A MINIMUM OF TWO CORNERS OF THE PROOF ROLLER WILL BE REQUIRED. EACH SUCCEEDING TRIP OF THE PROOF ROLLER SHALL BE OFFSET BY NOT GREATER THAN ONE TIRE WIDTH. ROLLERS SHALL BE OPERATED AT SPEEDS BETWEEN 5 AND 8 MPH. SOAKS SOFT UNSTABLE AREAS APPEAR IN THE LOTS, THE CONTRACTOR SHALL REMOVE THE UNSTABLE MATERIAL AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL REPLACE THIS WITH A SUITABLE MATERIAL COMPACTED AS REQUIRED (NO SEPARATE PAY FOR A DEPTH UP TO 1.5 FEET).
- PLACEMENT OF FILL SHALL NOT CREATE PONDING ON ADJACENT LOTS OR PROPERTY.
- LOT FILL SHALL BE PLACED IN A MAXIMUM LOOSE LIFT(S) OF 8 INCHES OF LESS AND COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM TO 45% MOISTURE CONTENT AS DETERMINED BY AASHTO TEST METHOD T-99.
- ALL EXISTING DRAINAGE SWALES IN FILL AREAS SHALL BE STRIPPED OF ANY VEGETATION, CLEANED AND MOWED OUT TO SUITABLE SUBGRADE MATERIAL AND THEN FILLED AS SHOWN WITH EXCAVATION MATERIAL. MAXIMUM 8 INCH GRASS LAYER SHALL BE PLACED AND COMPACTED TO AT LEAST 95% PROCTOR DENSITY AS DETERMINED BY AASHTO TEST METHOD T-99.
- ENGINEER WILL PROVIDE APPROXIMATE BACK LOT LINE FINISH ELEVATIONS. CONTRACTOR SHALL VERIFY FINAL LOT GRADES AND ELEVATIONS TIES TO PROJECT BENCH MARKS. CONTRACTOR SHALL INCLUDE COST IN BID ITEM FOR LOT GRADING.
- EROSION CONTROL MEASURES ARE TO BE COMPLETELY IMPLEMENTED PRIOR TO ANY GRADING WORK.
- FINAL PAYMENT SHALL BE CONTINGENT ON THE ENGINEER'S VERIFICATION THAT LOT GRADING IS IN ACCORDANCE WITH THE GRADING PLAN, AND THAT SOIL COMPACTION TESTS WERE PERFORMED AS REQUIRED.
- ALL LOTS SHALL BE GRADED SO THAT NO PORTION OF ANY LOT SHALL DRAIN ONTO OR ACROSS ANY OTHER LOT, BUT SHALL DRAIN DIRECTLY TO STREET UNLESS DESIGNATED OTHER THAN TYPE "X" GRADING.



CONTRACTOR SHALL OBTAIN A PERMIT FROM
THE FORT BEND COUNTY ENGINEERING DEPT.
(281) 633-7500, PRIOR TO ANY WORK WITHIN
THE FORT BEND COUNTY DRAINAGE DISTRICT
RABBIT BAYOU RIGHT-OF-WAY.



Approximately 24,880 C.Y.
of material to be cut
from Robba Bayou and
used on lot 16. See
Sheet 16.



BENCH MARKS
ELEVATIONS SHOWN HEREIN ARE BASED ON MGS MONUMENT HGS272, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SOUTHERN LAKE ROAD, 28.8' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 86.8 FEET (NAVD8).

TBM "A"
TEMPORARY BENCHMARK A BEING A 60 D NAIL IN A POWER POLE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF FM 2759 AND A GRAVEL DRIVEWAY WITH ADDRESS 8230.
ELEVATION = 78.85' (NAVD 88 Adjustment)

TBM "B"
TEMPORARY BENCHMARK B BEING A 60 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHEAST OF A 90 DEGREE BEND IN MACKED RD AND APPROXIMATELY 1800 FEET EAST OF THE INTERSECTION OF BARBS CROSSING AND MACKED RD.
ELEVATION = 81.17' (NAVD 88 Adjustment)

100-YEAR FLOOD PLAIN
THIS TRACT LIES WITHIN ZONES "AE, X & X SHADED" OF THE FLOOD INSURANCE RATE MAP NUMBER HISTORICAL PANEL 245 OF 500 FOR FORT BEND COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "AE" IS DEFINED AS SPECIAL FLOOD HAZARD AREAS DRAINATED BY THE 1% FLOOD. BASE FLOOD ELEVATIONS DETERMINED. ZONE "X" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. ZONE "X SHADED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD. AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE AND AREAS PROTECTED BY LEVEES FROM AN ANNUAL CHANCE FLOOD. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE, OR RISE OR INCREASED FLOODS CAN AND WILL OCCUR AND FLOODS VAN AND WILL OCCUR AND FLOOD DEBITS MAY BE INCREASED BY NON-NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

LEGEND

	INLET PROTECTION BARRIERS FOR STAGE I & II INLETS
	STABILIZED CONSTRUCTION ACCESS
	CONCRETE TRUCK WASHOUT AREA
	FILTER FABRIC FENCE

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.
APPROVED: DEVELOPMENT COORDINATOR
DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD NO. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A

STORM WATER POLLUTION PREVENTION PLAN

JONES CARTER
Texas Board of Professional Engineers Registration No. F-429
2338 Meridian Way, Suite 170, Katy, TX 77705 (832)913-8000

SCALE: 1"=100'
DATE: FEBRUARY 2018
JOB NO. 05537-0008-00
SUBMITTED:

UTILITY CONTRACTOR:
1. Maintain existing facilities.
2. Broadcast seeding of disturbed areas after final grading.

UTILITY CONTRACTOR:
1. Install behind all back of curb upon completion of paving.
2. Install for Stage II Inlets upon completion of paving.
3. Area within flow and adjacent easements disturbed during construction of utilities to be Hydro-Mulch Seeded upon completion of Utilities.

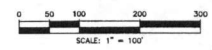
Utility and Paving Contractor to follow all protection requirements and complete all forms as listed in bound SWPPP.

LYSGAY J. EVANS
18078
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS

26
OF 28

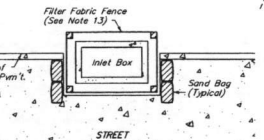
POINTE GREATWOOD, LLC
CALLED 100.37 AC
C.C.F. No. 2012146345
O.P.R.F.B.C.T.

REINFORCED FILTER FABRIC BARRIER TO BE PLACED ALONG ADJACENT PROPERTY AND ROADWAYS

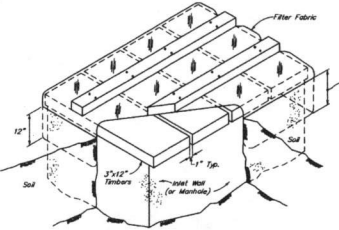


REINFORCED FILTER FABRIC BARRIER TO BE PLACED BEHIND ALL BACK OF CURB

Prop Lift Station
(By Separate
JC Contract)



TYPICAL INLET PROTECTION
UPPER STAGE - AFTER REMOVAL
OF TIMBER COVER

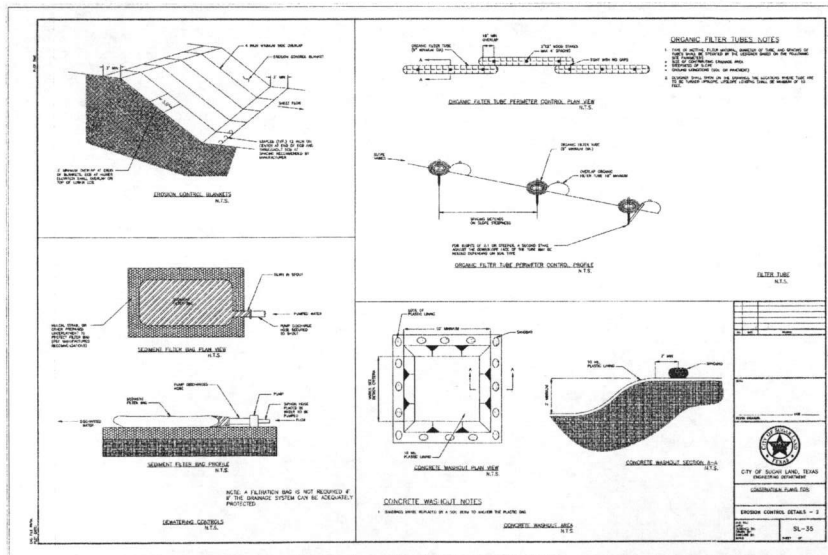
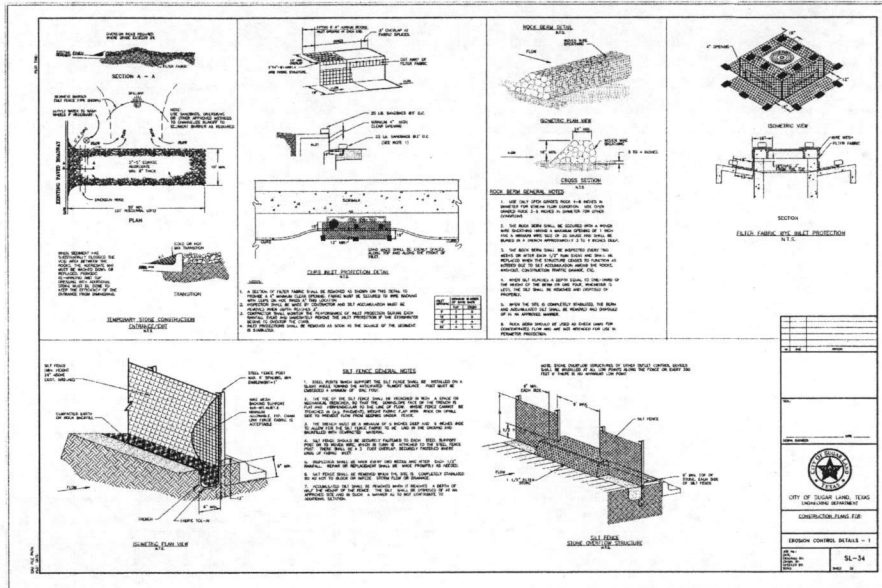


TYPICAL INLET AND MANHOLE
PROTECTION - LOWER STAGE

- EROSION AND SEDIMENTATION CONTROL NOTES**
- PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS AT LOCATION SHOWN ON PLANS.
 - CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENTATION CONTROL SYSTEMS SPECIFIED HEREIN, AT A MINIMUM OF ONCE EVERY CALENDAR DAY.
 - CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EROSION AND SEDIMENTATION CONTROL SYSTEM THROUGHOUT THE DURATION OF THE CONTRACT. (NO SEPARATE PAY)
 - CONTRACTOR SHALL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
 - CONTRACTOR SHALL LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONDUCHANCE SYSTEMS. CONTRACTOR SHALL USE SUE FOUNDING, HAY BALES, OR BENSAS AROUND FUEL STORAGE AREAS. (NO SEPARATE PAY)
 - CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY AND IN WRITING, OF ANY FUEL OR TOXIC MATERIAL SPILLS ONTO THE PROJECT/CONSTRUCTION AREA AND THE ACTION TAKEN TO REMEDY THE PROBLEM.
 - CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF HIS FUELS, MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER. (NO SEPARATE PAY).
 - CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE ENVIRONMENTAL LAWS.
 - CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATELY MAINTAINED SANITARY FACILITIES.
 - AT COMPLETION OF THE CONTRACT, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL EXAMINE EROSION AND SEDIMENTATION CONTROL SYSTEM FOR DAMAGE PRIOR TO CONTRACTOR STARTING CONSTRUCTION OF THE CONTRACT. ANY DAMAGE NOTED AT THIS TIME SHALL BE REPAIRED AT OWNER'S EXPENSE.
 - IF EROSION AND SEDIMENTATION CONTROL SYSTEM IS EXISTING FROM PRIOR CONTRACTS, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEM FOR DAMAGE PRIOR TO CONTRACTOR STARTING CONSTRUCTION OF THE CONTRACT. ANY DAMAGE NOTED AT THIS TIME SHALL BE REPAIRED AT OWNER'S EXPENSE.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR STREET CLEANING ON A DAILY BASIS. ALL MUD AND GRT DEPOSITED ON THE EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY.
 - IF PAVING CONTRACTOR REMOVES OR DAMAGES TIMBER GRATE TO ESTABLISH DRAINAGE, THEY MUST BE SURROUNDED BY FILTER FABRIC FENCE AS SHOWN IN DETAIL ON THIS SHEET.

GREATWOOD LAKE
SECTION ONE
C.C.F. 20140242
O.P.R.F.B.C.T.

- MANHOLE/INLET PROTECTION NOTES**
- INLETS AND MANHOLES THAT ARE NOT COMPLETE AND/OR ARE SUBJECT TO CONVEYING STORM WATER FLOWS ARE TO BE PROTECTED TO PREVENT SEDIMENT FROM ENTERING THE PROPOSED OR EXISTING STORM SEWER SYSTEM.
 - PROTECTION SHALL CONSIST OF ONE LAYER OF 3x12-INCH OAK TIMBERS, ONE (1) INCH APART, COVERED WITH ONE LAYER OF WOVEN POLYPROPYLENE OR POLYESTER FILTER FABRIC (EXON DT 100A, PHILLIPS SUPAC #910V) OR APPROX EQVA) HELD IN PLACE WITH 1/2" STAPLES. TIMBERS SHALL BE HELD IN PLACE WITH TWO (2) 2x4x8 NAILS, SECURELY TO EACH TIMBER OVER THE FILTER FABRIC. THE FILTER FABRIC SHALL EXTEND BEYOND THE FRONTIER OF THE OAK TIMBERS AS TO ENSURE ONE (1) FOOT OF BURY BETWEEN THE MANHOLE OR INLET AND THE SURROUNDING SOIL AS SHOWN.
 - FILTER FABRIC TO BE CLEANED OR REPLACED WHEN IT CEASES TO FUNCTION PROPERLY OR AS DIRECTED BY THE ENGINEER.
 - CONTRACTOR MAY SUBMIT PLANS FOR ALTERNATE METHODS OF PROTECTION. THESE ALTERNATE METHODS MUST BE APPROVED PRIOR TO USE IN THE FIELD.
 - NO SEPARATE PAYMENT SHALL BE MADE FOR INLET AND MANHOLE PROTECTION. INCLUDE THE COST IN THE UNIT PRICE FOR THE INLETS AND MANHOLES.



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.

APPROVED: *[Signature]*
DEVELOPMENT COORDINATOR

DATE: 4-22-18

NO.	DATE	REVISIONS	APP.

FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A

STORM WATER POLLUTION PREVENTION PLAN DETAILS

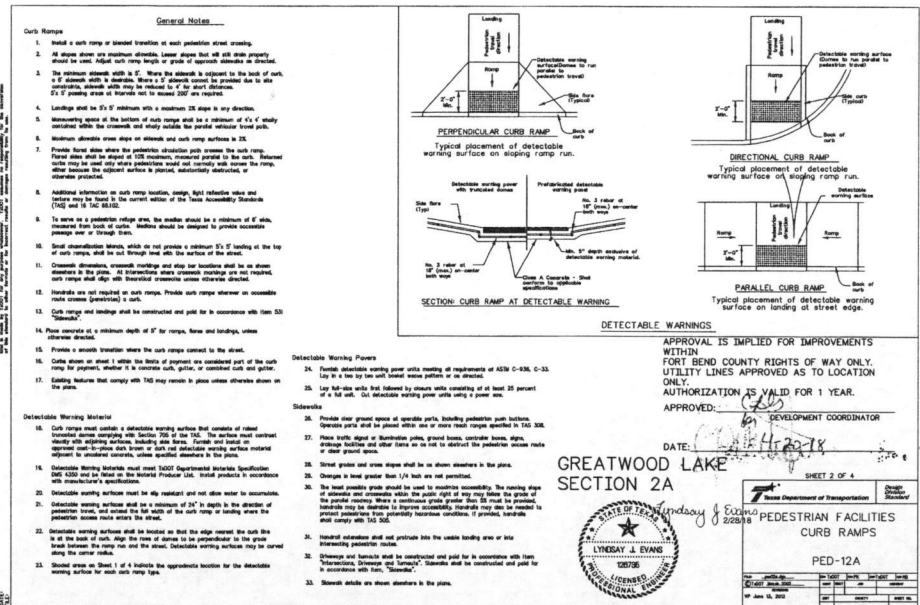
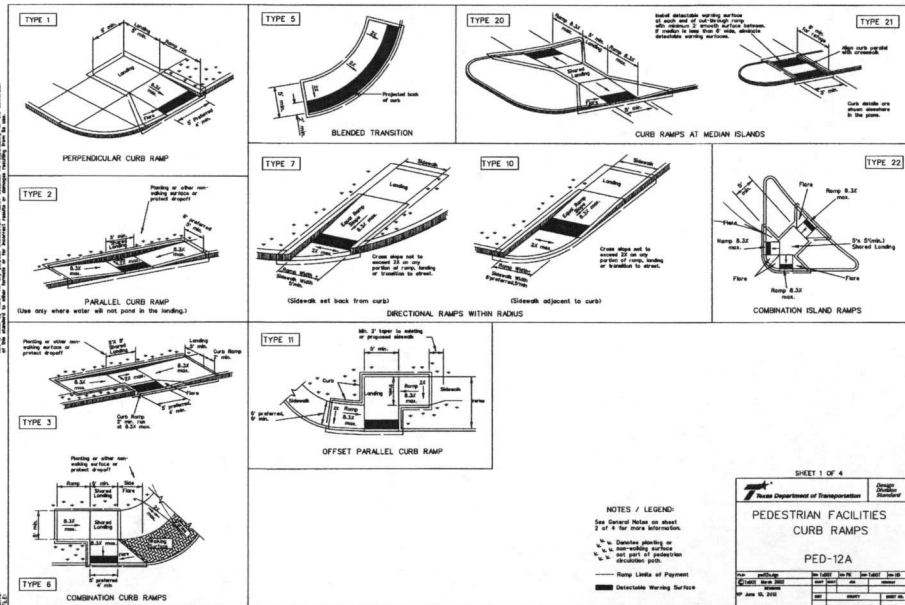
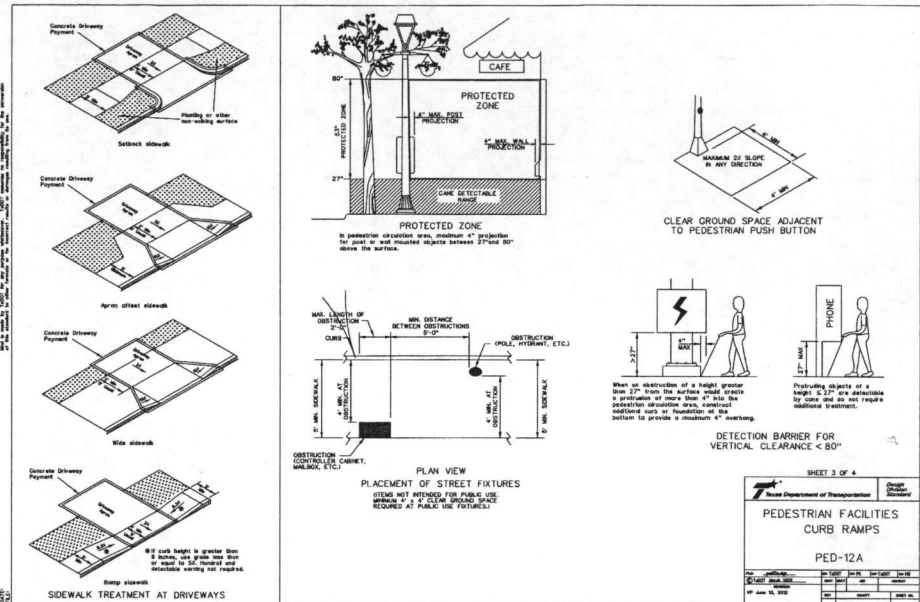
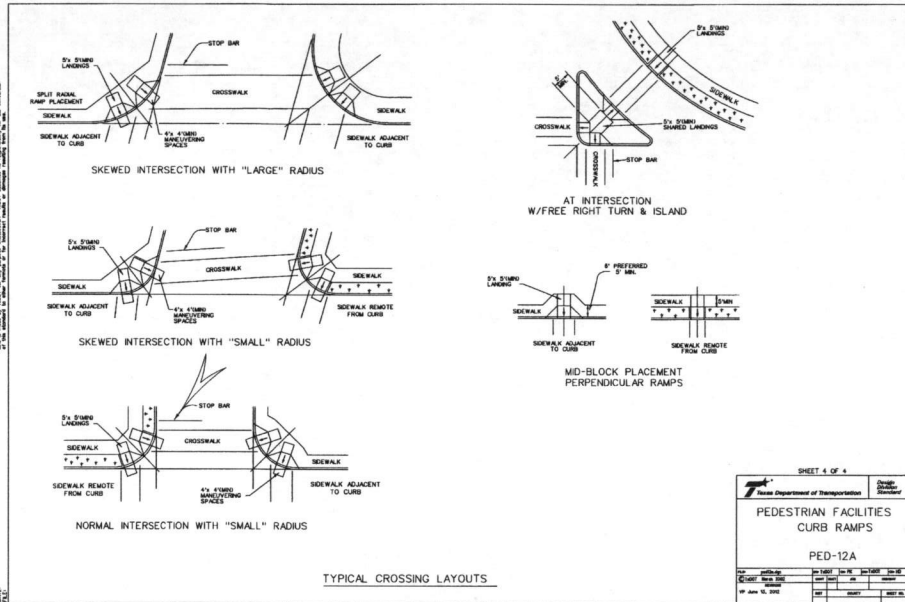
JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
2250 Mechanics Way, Suite 101, Katy, TX 77459 (832) 614-4800

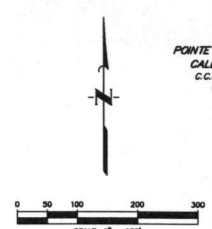
SCALE: 1"=100' DWN. BY: KCM
DATE: FEBRUARY 2018 DWN. BY: EPY
JOB NO. 05537-0008-00 DWG. NO. _____
SUBMITTED: _____ SURV. BY: _____
F.B. NO. _____

Lindsay J. Evans
2/28/18

LYNDSAY J. EVANS
25786
REGISTERED PROFESSIONAL ENGINEER

SHEET NO. 27 OF 28





POINTE GREATWOOD, LLC
 CALLED 100.37 AC
 C.C.F. No. 202146345
 D.P.R.F.B.C.T.

GREATWOOD BEND
 SLICE No. 1312A
 P.R.F.B.C.T.

GREATWOOD STONEBRIDGE
 SECTION TWO
 Slice No. 2065B
 P.R.F.B.C.T.

MINY C. NGUYEN, ET UX
 CALLED 63.896 AC
 F.B.C.C.F. No. 2002140649

GREATWOOD LAKE
 SECTION ONE
 C.C.F. 20140242
 D.P.R.F.B.C.T.

BENCH MARK
 ELEVATIONS SHOWN HEREON ARE BASED ON NOS MONUMENT HORSTZ, LOCATED 80.8 FEET NORTHWEST OF THE CENTERLINE OF SUTHERS LAKE ROAD, 38.4' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 88.8 FEET (NAVD83).

TBM "A"
 TEMPORARY BENCHMARK A BEING A 80 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 80 FT. NORTHWEST OF THE INTERSECTION OF FA 2706 AND A GRAVEL DRIVEWAY WITH ADDRESS 8236.
 ELEVATION = 78.60' (NAVD 88 Adjustment)

TBM "B"
 TEMPORARY BENCHMARK B BEING A 80 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 80 FT. NORTHEAST OF A 90 GEORGE BEND IN MAGDE RD AND APPROXIMATELY 1900 FEET EAST OF THE INTERSECTION OF RABBS CROSSING AND MAGDE RD.
 ELEVATION = 81.13' (NAVD 88 Adjustment)

100-YEAR FLOOD PLAIN
 THIS TRACT LIES WITHIN ZONES "A", "X", & "X SHADDED" OF THE FLOOD INSURANCE RATE MAP NUMBER 480520000A, PANEL 240 OF 260, FOR FORT BEND COUNTY, TEXAS AND INCORPORATED AREAS. ZONE "A" IS DEFINED AS SPECIAL FLOOD HAZARD AREAS DEMONSTRATED BY THE 1% FLOOD. BASE FLOOD ELEVATIONS DETERMINED. ZONE "X" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 1% ANNUAL CHANCE FLOODPLAIN. ZONE "X SHADDED" IS DEFINED AS AREAS OF 0.2% ANNUAL CHANCE FLOOD AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED BY LEVEES FROM THE ANNUAL CHANCE FLOOD. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASIONS FLOODS CAN AND WILL OCCUR AND FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

Prop Lift Station
 (By Separate
 JC Contract)

Exlet Robbs
 Boys Top
 Of Bank

Exlet 12"
 Water
 FBCMUD 192

Zone "A"
 Shaded Zone "X"
 Unshaded Zone "X"

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS OF WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.
 APPROVED: _____ DEVELOPMENT COORDINATOR

DATE: _____

1	5/8/18	Sanitary Sewer, Manholes, Relocated.	J.C.
NO. DATE	REVISIONS		APP.

FORT BEND COUNTY MUD No. 142
 FORT BEND COUNTY, TEXAS

CREEKSIDE RANCH SECTION 6
 GENERAL CONSTRUCTION LAYOUT
 WATER & SANITARY SEWER

JONES CARTER
 Texas Board of Professional Engineers Registration No. 4493
 2330 Merchants Way, Suite 120, Katy, TX 77449 (832) 931-4000

SCALE: 1"=100' DGN. BY: KCM
 DATE: MAY 2018 DWN. BY: EPV
 JOB NO. 02542-0012-00 DWG. NO. _____
 SUBMITTED: _____ SURV. BY: _____
 F.B. NO. _____

STATE OF TEXAS
 LYNBET J. EVANS
 06/07/2018
 FORT BEND COUNTY

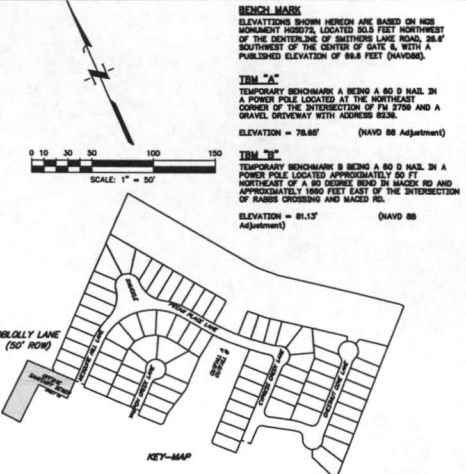
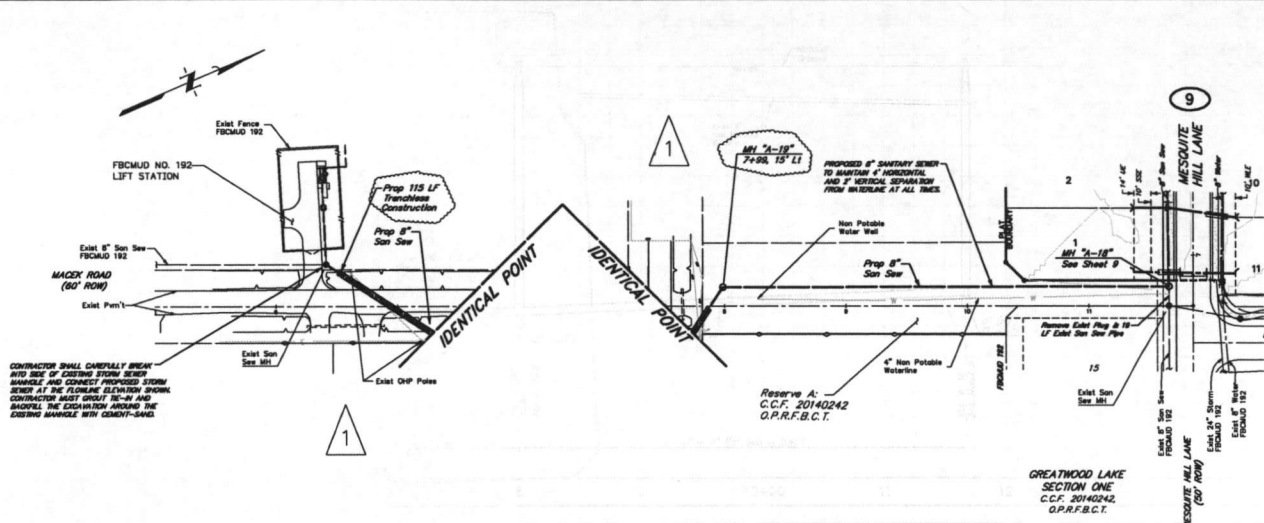
SHEDD 8 2018

SHET NO. 2 OF 28

LEGEND

		WATERLINE w/ GATE VALVE
		FLUSH VALVE w/ GATE VALVE
		PLUG & CLAMP w/ BLOW OFF
		WATERLINE LEAD
		SANITARY SEWER w/ MANHOLE
		SANITARY STACK
		SANITARY LEAD
		STORM SEWER w/ MANHOLE
		STORM SEWER w/ INLET
		SWALE CENTERLINE
		NATURAL GROUND CONTOUR
		UTILITY EASEMENT
		WATERLINE EASEMENT
		SANITARY SEWER EASEMENT
		STORM SEWER EASEMENT
		DRAINAGE EASEMENT
		AERIAL EASEMENT
		GRADE BREAK LINE
		LOT NUMBER
		BLOCK NUMBER

OFFSITE SANITARY SEWER



BENCH MARKS
 ELEVATIONS SHOWN HEREIN ARE BASED ON NGS MONUMENT 102072, LOCATED 80.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LANE, 28.1' SOUTHWEST OF THE CENTER OF GATE 5 WITH A PUBLISHED ELEVATION OF 86.6 FEET (NAVD8S).

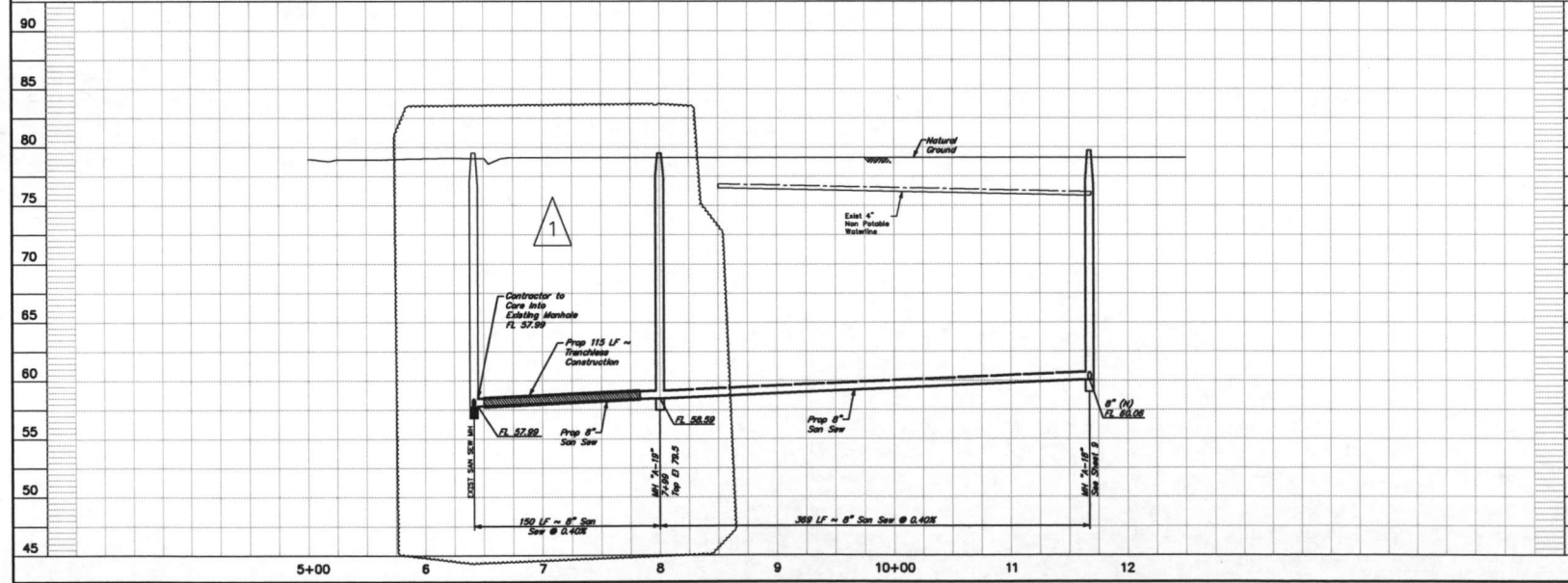
TBM "A"
 TEMPORARY BENCHMARK A BEING A 80 D NAIL IN A POWER POLE LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF FM 2700 AND A GRAVEL DRIVEWAY WITH ADDRESS 8281.
 ELEVATION = 78.85' (NAVD 88 Adjustment)

TBM "B"
 TEMPORARY BENCHMARK B BEING A 80 D NAIL IN A POWER POLE LOCATED APPROXIMATELY 50 FT NORTHWEST OF A 90 DEGREE BEND IN MACEK RD AND APPROXIMATELY 1000 FEET EAST OF THE INTERSECTION OF RABBS CROSSING AND MACEK RD.
 ELEVATION = 81.13' (Adjustment)

STANDARD MANHOLE CONNECTION NOTE:
 CONTRACTOR SHALL CAREFULLY CUT INTO THE SIDE OF EXISTING SAN SEWER MANHOLE AND CONNECT PROPOSED

NOTE: CONTRACTOR TO VERIFY ELEVATION AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION

OFFSITE SANITARY SEWER



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DEVELOPMENT COORDINATOR

DATE: _____

TO VERIFY THE LINES TO BE TIEED OFF TO EXIST. ALL UTILITY LOCATIONS AT 100-200-000

NOTICE:
 The plan and specifications are prepared by Jones Carter & Associates, Inc. and are intended for the use of the client. The contractor shall verify the location and depth of all utilities before construction.

VERIFICATION OF PRIVATE UTILITY LINES

Date:	Remarks:

Approved by: _____
 Date: _____

Approved by: _____
 Date: _____

Approved by: _____
 Date: _____

NO.	DATE	REVISIONS	APP.
1	5/9/13	Sanitary Sewer Manholes Relocated.	LJE

FORT BEND COUNTY MUD No. 142
 FORT BEND COUNTY, TEXAS

CREEKSIDE RANCH SECTION 6

OFFSITE SANITARY SEWER
6+41.48 TO 11+67.33

JONES CARTER
 Texas Board of Professional Engineers Registration No. 1-439
 22310 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=50' H, 1"=50' V. DGN: BY: KCM
 DATE: MAY 2013 DWN: BY: EPY
 JOB NO.: 09042-0012-00 DWS: BY: _____
 SUBMITTED: _____ SUR: BY: _____
 F.B. NO.: _____

STATE OF TEXAS
 LINDRAY J. EVANS
 ENGINEER
 LICENSE NO. 55910

SHEET NO. 15 OF 28