



**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: [REDACTED] 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

**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 §

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF FORT BEND §

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

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.

State of Texas
County of Harris

ss:

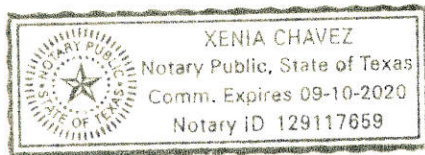


SURETEC INSURANCE COMPANY

By:

John Knox Jr., CEO

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
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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.

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

FOR FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT No. 192

INDEX OF DRAWINGS

<u>SHEET No.</u>	<u>TITLE</u>
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

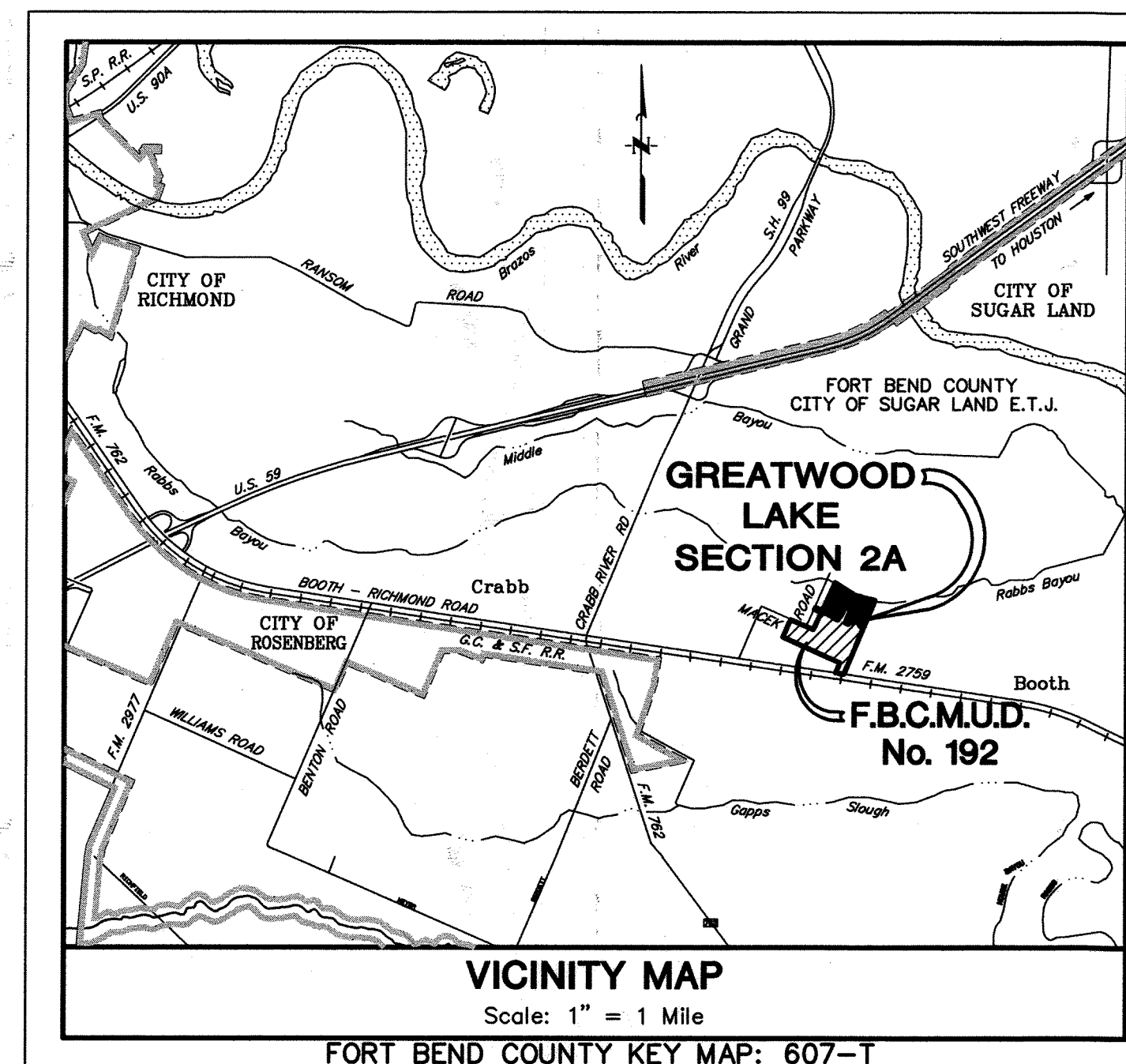
	<u>STREET NAME</u>	<u>STATION</u>
9	MESQUITE HILL LANE	6+79.11 TO 11+59.03
	PECAN PLACE LANE	11+59.03 TO 13+00.00
10	PECAN PLACE LANE	13+00.00 TO 19+22.11
	KNUCKLE	0+47.50 TO 2+17.29
11	CYPRESS CREEK LANE	5+51.29 TO 10+09.59
12	YAUPON CREEK LANE	4+52.27 TO 7+29.11
	OFFSITE WATER	7+29.11 TO 10+08.90
13	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	6+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	TxDOT PED-12A

DIG-TESS NOTIFICATION SYSTEM
CALL BEFORE YOU DIG!!!
www.digless.org/
Texas811 or 1-800-DIG-TESS
1-800-344-8377

ISSUED FOR
CONSTRUCTION



FEBRUARY 2018

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 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
for LYNDsay J. EVANS, P.E. DEVELOPMENT COORDINATOR

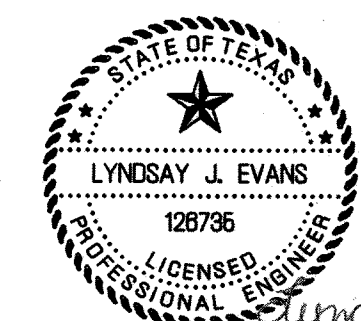
DATE: 4-20-18

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.
City Engineer Date 10 April 2018



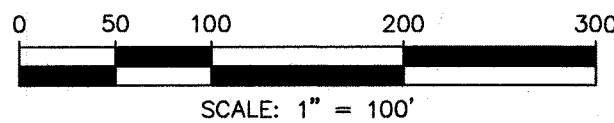
Lyndsay J. Evans
2/28/18

SHEET No.
1
OF 28

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

JONES|CARTER
KATY, TEXAS

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



GREATWOOD BEND
SLIDE No. 13124
P.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 HGSD72, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.6 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 9239.
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 MACEK RD AND APPROXIMATELY 1860 FEET EAST OF THE INTERSECTION OF RABBS CROSSING AND MACEK RD.
ELEVATION = 81.13' (NAVD 88 Adjustment)

100-YEAR FLOOD PLAIN
THIS TRACT LIES WITHIN ZONES "AE, X, & X SHADED" OF THE FLOOD INSURANCE RATE MAP NUMBER 4815700245J, PANEL 245 OF 550, 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 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 1% 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 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.

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

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: 4/18/18

NO.	DATE	REVISIONS	APP.

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

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

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 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.

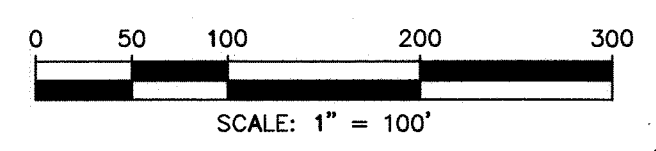
SHEET NO. 2 OF 28

Lyndsay J. Evans
2/28/18
LYNSAY J. EVANS
120736
LICENSED PROFESSIONAL ENGINEER

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
		GRADE BREAK LINE
		LOT NUMBER
		BLOCK NUMBER

ISSUED FOR
CONSTRUCTION



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

GREATWOOD BEND
SLIDE No. 1312A
P.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 HGS072, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.6 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 8239.
ELEVATION = 78.65' (NAVD 88 Adjustment)

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100-YEAR FLOOD PLAIN
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APPROVED: *CAB* 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. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=100' DGN. BY: KCM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO. _____
SUBMITTED: SURV. BY: _____
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Lindsay J. Evans
2/28/18
SHEET NO. 3 OF 28

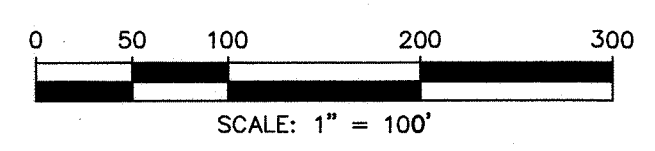
Prop Lift Station
(By Separate
JC Contract)

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 |
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| | | WATERLINE EASEMENT |
| | | SANITARY SEWER EASEMENT |
| | | STORM SEWER EASEMENT |
| | | DRAINAGE EASEMENT |
| | | AERIAL EASEMENT |
| | | INLET |
| | | STORM SEWER |
| | | DRAINAGE AREA IN ACRES |
| | | RUNOFF IN C.F.S. |
| | | DRAINAGE AREA LINE |
| | | DRAINAGE AREA NUMBER |
| | | EXTREME EVENT SHEET FLOW |
| | | GRADE BREAK LINE |

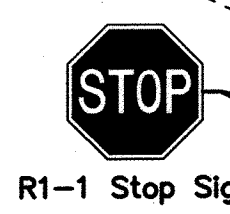
GREATWOOD LAKE
SECTION ONE
C.C.F. 20140242,
O.P.R.F.B.C.T.

ISSUED FOR
CONSTRUCTION



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

2-Name
Street Sign
MESQUITE HILL LANE
PECAN PLACE LANE



FH Blue ReflectORIZED
Button Placed 6" Off
Cl Of Road Towards
Hydrant At FH Station

OFFSITE SANITARY SEWER
SHEET 15

MESQUITE HILL LANE
(50' ROW)

Exist Type
III Barricade
(To Be Removed
and Disposed)

2-Name Street Sign
LOBLOLLY LANE
YAUPOON CREEK LANE

LOBLOLLY LANE
YAUPOON CREEK LANE

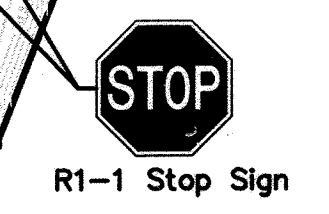
GREATWOOD LAKE
SECTION ONE
C.C.F. 20140242
O.P.R.F.B.C.T.

FH Blue ReflectORIZED
Button Placed 6" Off
Cl Of Road Towards
Hydrant At FH Station

Exist Type
III Barricade
(To Be Removed
and Disposed)

OUTFALL A
OUTFALL B
SHEET 14

R1-1 Stop Sign
& 2-Name Street Sign
CYPRUS CREEK LANE
CHESTNUT COVE LANE



FH Blue ReflectORIZED
Button Placed 6" Off
Cl Of Road Towards
Hydrant At FH Station

Prop ReflectORIZED
Traffic Buttons
See Notes on
Sheet 24

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

CURB NOTE

- CONTRACTOR TO CONSTRUCT 6" CONCRETE CURB ON PAVEMENT FRONTING LANDSCAPE RESERVES, SIDE LOTS AND ESPLANADES 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 8" 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.

LEGEND

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

SIGN LOCATION DETAIL
NTS

COMBINATION STREET NAME SIGN AND
REGULATORY SIGN INSTALLATION DETAIL
NTS

BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT HGSD72, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.6 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 8239.
ELEVATION = 78.65' (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 MACEK RD AND APPROXIMATELY 1660 FEET EAST OF THE INTERSECTION OF RABBS CROSSING AND MACEK RD.
ELEVATION = 81.13' (NAVD 88 Adjustment)

100-YEAR FLOOD PLAIN
THIS TRACT LIES WITHIN ZONES "AE, X, & X SHADED" OF THE FLOOD INSURANCE RATE MAP NUMBER 48157C0245J, PANEL 245 OF 550, 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 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 1% 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 VAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MON-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: *[Signature]* DEVELOPMENT COORDINATOR
DATE: 4-20-18

NO.	DATE	REVISIONS	APP.

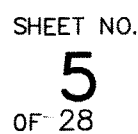
FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS
GREATWOOD LAKE SECTION 2A
GENERAL CONSTRUCTION LAYOUT
SIGNING & PAVEMENT MARKING PLAN

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 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.
[Signature: Lyndsay J. Evans]
LYNSAY J. EVANS
126736
STATE OF TEXAS
REGISTERED PROFESSIONAL ENGINEER
SHEET NO. 4 OF 28

HGL Starting Elevation = 25-YR WSE 72.72'
Design Storm = 100-YEAR STORM
a = 32.77
b = 0.99959
c = 0.49

[illegible]

DATE: 4-20-18

F.B. NO. _____

PLOT TIME:

GENERAL NOTES:

1. CONTACT THE ENGINEERING INSPECTORS WITH THE CITY'S ENGINEERING DEPARTMENT AT (281) 275-2780 PRIOR TO STARTING WORK TO SCHEDULE A PRE-CONSTRUCTION MEETING.
2. CONTRACTOR IS RESPONSIBLE FOR HAVING ALL BURIED UTILITIES IDENTIFIED, PROTECTED, REPLACED AND/OR PROPERLY REPAIRED IF DAMAGED. REPAIRS/REPLACEMENT SHALL BE AT CONTRACTOR'S EXPENSE.
3. CONTRACTOR SHALL OBTAIN AND MAINTAIN ON SITE ALL APPLICABLE PERMITS AND AN APPROVED COPY OF THE PLANS AND SPECIFICATIONS. NOTIFY THE CITY'S ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
4. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE CITY'S ENGINEERING DEPARTMENT 24 HOURS PRIOR TO WEEKDAY WORK REQUIRING INSPECTION INCLUDING, BUT NOT LIMITED TO, LIMING, PAVING OPERATIONS, CONCRETE PLACEMENT, FORMING AND SET-UP, DENSITIES, PIPE INSTALLATION, AND ANY TESTING BY LABORATORIES. THE ENGINEERING DEPARTMENT MAY BE REACHED AT 281-275-2780 OR BY CONTACTING THE ASSIGNED INSPECTOR.
5. ALL SATURDAY WORK SHALL BE REQUESTED, IN WRITING, WITH THE CITY'S ENGINEERING DEPARTMENT AT LEAST 48-HOURS IN ADVANCE. SUNDAY AND HOLIDAY WORK REQUIRES 72 HR. WRITTEN REQUESTS AND MUST BE APPROVED BY THE CITY ENGINEER. FAXES MAY BE SENT TO (281) 275-2771. REQUIRED INSPECTIONS MAY BE SUBJECT TO INSPECTION FEES. NON-NOTIFICATIONS MAY RESULT IN NON-COMPLIANCE, WORK ORDERED STOPPAGE AND DOUBLE INSPECTION FEES.
6. FULL-TIME RESIDENT INSPECTION BY THE PROJECT ENGINEER'S REPRESENTATIVE SHALL BE PROVIDED AT ALL CRITICAL POINTS OF CONSTRUCTION OR AS DEEMED NECESSARY BY THE CITY OF SUGAR LAND.
7. FOLLOW-UP INSPECTIONS OF ALL PUBLIC INFRASTRUCTURE SHALL BE SCHEDULED WITHIN 60 DAYS OF THE INITIAL INSPECTION. A COMPLETE RE-INSPECTION AND A NEW PUNCH LIST MAY BE REQUIRED AFTER THE 60 DAY PERIOD.
8. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS, THE CITY OF SUGAR LAND DESIGN MANUAL (ISSUED 2007), AND THE CITY OF SUGAR LAND STANDARD DETAIL SHEETS. THE CITY OF SUGAR LAND DESIGN STANDARDS SHALL BE ACQUIRED (AND USED) FROM THE ENGINEERING DEPARTMENT. THE LATEST REVISIONS AND/OR AMENDMENTS SHALL BE OBSERVED. WHERE CONFLICT MAY ARISE BETWEEN INFORMATION ON APPROVED CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS AND CITY OF SUGAR LAND STANDARDS, THEN THE CITY DESIGN STANDARDS SHALL GOVERN.
9. ALL STATIONS ARE CENTERLINE OF STREET RIGHT-OF-WAY UNLESS OTHERWISE NOTED ON THE PLANS. EXCEPT IN SIDE OR BACK LOT EASEMENTS WHERE CENTERLINE IS CENTER OF PIPE. IN EASEMENTS WHERE SANITARY AND STORM SEWER ARE PRESENT PARALLEL, STATIONS SHALL BE BASED ON CENTERLINE OF STORM SEWER PIPING.
10. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. ANY DRAINAGE AREA OR STRUCTURE DISTURBED, DURING CONSTRUCTION, SHALL BE RESTORED TO THE SATISFACTION OF THE CITY OF SUGAR LAND. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF SUGAR LAND DESIGN STANDARDS. IF NON-COMPLIANCE OCCURS, CONTRACTOR SHALL REMEDY IMMEDIATELY AT HIS OWN EXPENSE.
11. ANY POLLUTION CONTROL DEVICE, SOD, OR SEEDED AREA DAMAGED, DISTURBED, OR REMOVED SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR WATERING ANY SEED OR SOD WHICH HE HAS INSTALLED UNTIL ADEQUATE GROWTH IS ACHIEVED TO PREVENT EROSION.
12. STORM WATER POLLUTION PROTECTION SHALL BE DESIGNED, CONSTRUCTED, MAINTAINED AND SHALL BE IN TOTAL COMPLIANCE WITH THE STORM WATER QUALITY MANUAL OF THE CITY OF SUGAR LAND.
13. ANY MATERIALS OR WORKMANSHIP NOT MEETING OR EXCEEDING CITY OF SUGAR LAND STANDARDS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
14. THE CONTRACTOR SHALL KEEP THE STREETS, RIGHT-OF-WAY, AND WORK AREA CLEAN OF DIRT, MUD, AND DEBRIS AS NEEDED OR AS REQUIRED BY CITY STAFF.
15. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL REQUIRED TRAFFIC SAFETY CONTROL DEVICES UP TO AND INCLUDING FLAGMEN OR POLICE OFFICERS, IF DEEMED NECESSARY BY THE CITY OF SUGAR LAND.
16. THE CONTRACTOR SHALL CONTACT THE CITY OR LOCAL MUD AS APPROPRIATE TO OPERATE EXISTING UTILITIES AND PRIOR TO MAKING TIE-INS.
17. ALL BACKFILL WITHIN PUBLIC RIGHTS-OF-WAY OR EASEMENTS SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY (IN 8 INCH LIFTS) AND TESTED FOR ±2% OPTIMUM MOISTURE BY AN APPROVED LAB.
18. IT IS PERMISSIBLE TO USE A BACKHOE FOR TRENCH EXCAVATION IN LIEU OF A TRENCHING MACHINE.
19. THE CONTRACTOR SHALL NEVER UNLOAD ANY TRACK-TYPE VEHICLE OR EQUIPMENT ON ANY EXISTING PAVEMENT OR CROSS OVER ANY EXISTING PAVEMENT OR CURB.
20. ALL FINISH GRADES ARE TO CONFORM TO A MINIMUM SLOPE OF 6" PER 100 FT. POSITIVE DRAINAGE IS DEPICTED BY ARROWS.
21. CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT ALL "POINTS OF CROSSING" TO DETERMINE IF CONFLICTS EXIST BEFORE COMMENCING ANY CONSTRUCTION. NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICT.
22. ALL FINISHED GRADES SHALL VARY UNIFORMLY BETWEEN FINISHED ELEVATIONS.
23. ALL TESTING PROCEDURES SHALL CONFORM TO THE CITY OF SUGAR LAND STANDARDS. THE INITIAL TESTING EXPENSE SHALL BE BORNE BY THE OWNER. IF ANY OF THE TESTS DO NOT MEET THE TESTING STANDARDS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE OR REPLACE SUCH MATERIAL SO THE TESTING STANDARDS CAN BE MET. ADDITIONAL TESTING TO MEET COMPLIANCE SHALL BE AT THE CONTRACTOR'S EXPENSE.
24. CONTRACTOR SHALL PROVIDE SHEETING, SHORING, AND BRACING AS NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION AS PER O.S.H.A. REQUIREMENTS.
25. ALL MATERIALS AND WORKMANSHIP NOT GOVERNED BY CITY STANDARDS SHALL CONFORM TO THE LATEST VERSION OF THE TXDOT STANDARD SPECIFICATIONS AND THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND ANY REVISIONS THERETO.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIALS AND EQUIPMENT STORED ON THE JOBSITE IN A SAFE AND WORKMAN-LIKE MANNER (DURING AND AFTER WORKING HOURS), UNTIL JOB COMPLETION.
27. THE LOADING AND UNLOADING OF ALL PIPE, VALVES, HYDRANTS, MANHOLES, AND OTHER ACCESSORIES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PRACTICES AND SHALL BE PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE MATERIAL. THE CONTRACTOR SHALL LOCATE AND PROVIDE THE NECESSARY STORAGE AREAS FOR MATERIAL AND EQUIPMENT.
28. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR FOR EXCAVATION, INSTALLATION, AND COMPLETION OF THE PROJECT AS SHOWN ON THE PLANS AND SPECIAL PROVISIONS TO COMPLY WITH CITY OF SUGAR LAND STANDARDS.
29. NO PRIVATE UTILITIES (I.E., PHONE, CABLE T.V., ELECTRICITY, ETC.) SHALL BE INSTALLED WITHIN 4 FEET BACK OF CURB.
30. PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THE PLANS. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING CURRENT OSHA STANDARDS FOR TRENCH SAFETY SYSTEMS, SEALED BY A LICENSED PROFESSIONAL ENGINEER. APPROPRIATE TRENCH SAFETY PLANS SHALL BE SUBMITTED BY THE CONTRACTOR PRIOR TO EXECUTION OF A CONTRACT FOR HIS WORK.
31. FOR TRAFFIC SIGNAL CONSTRUCTION, CONTACT THE CITY OF SUGAR LAND INFORMATION TECHNOLOGY DEPARTMENT TO OBTAIN IP ADDRESSES FOR SIGNAL CABINET EQUIPMENT. ALLOW 5 WORKING DAYS FOR THE ADDRESS. ONCE EQUIPMENT HAS BEEN INSTALLED AND COMMUNICATIONS ESTABLISHED WITH THE TRAFFIC MANAGEMENT CENTER, IT WILL COMMISSION THE COMMUNICATION LINK. ALLOW 10 WORKING DAYS FOR COMMISSIONS.

ISSUED FOR
CONSTRUCTION

CONCRETE/PAVING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND AUTHORIZATION REQUIRED BY CITY OF SUGAR LAND.
2. CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED PRIOR TO CONSTRUCTION AND WILL REPAIR OR REPLACE ANY DAMAGE AT CONTRACTOR'S EXPENSE.
3. PAVING CONTRACTOR SHALL PROTECT WATER, SEWER, AND DRAINAGE FACILITIES AND WILL REPLACE ANY DAMAGED FACILITIES AT HIS OWN EXPENSE. ALL MANHOLES AND VALVES WITHIN THE PAVEMENT AREA SHALL BE ADJUSTED TO FINISH GRADE BY THE PAVING CONTRACTOR WITH THE USE OF APPROVED BLOCKOUTS.
4. WHEN THE TOP OF CURB OR BOTTOM OF SIDEWALK SLAB ELEVATION VARIES FROM THE NATURAL GROUND, THE PAVING CONTRACTOR SHALL BACKFILL IN LAYERS NOT EXCEEDING 8-INCHES IN DEPTH. EACH LAYER WILL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY. THE DISTURBED AREA SHALL BE SEEDED, SODDED, FERTILIZED, AND/OR SILT BARRIER FENCED WITHIN 10 WORKING DAYS. THE TYPE OF POLLUTION CONTROL WILL BE DETERMINED BY THE APPROVED PLANS AND/OR THE CITY OF SUGAR LAND CITY ENGINEER.
5. ALL PAVING SHALL BE IN ACCORDANCE WITH THE CITY OF SUGAR LAND DESIGN STANDARDS, APPROVED PLANS AND SPECIFICATIONS WITH THE LATEST REVISIONS OR AMENDMENTS. IN THE EVENT OF A CONFLICT, THE CITY OF SUGAR LAND DESIGN STANDARDS GOVERNS.
6. PAVING CONTRACTOR SHALL PROVIDE AND MAINTAIN SILT PROTECTION FENCES ON ALL STAGE 1 CURB INLETS. THE PAVING CONTRACTOR SHALL MAINTAIN ANY OTHER POLLUTION CONTROLS ESTABLISHED, I.E., ADDITIONAL SILT BARRIERS, SAND BAGS, ETC., FOR THE DURATION OF THE PROJECT. ANY DAMAGED OR MISSING DEVICES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
7. EXISTING PAVEMENTS, CURBS, SIDEWALKS, DRIVEWAYS, ETC., DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO THE CITY OF SUGAR LAND STANDARDS AT THE CONTRACTOR'S EXPENSE.
8. POSITIONING OF WORK AREA (INCLUDING ROADS, RIGHT-OF-WAYS, ETC.) UPON COMPLETION OF THE JOB SHALL BE AS GOOD OR BETTER THAN THE CONDITION PRIOR TO STARTING THE WORK.
9. ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.
10. REDWOOD AND KEYSHALLS SHALL NOT INTERSECT WITHIN 2 FEET OF AN INLET.
11. AT FINAL INSPECTIONS THE PAVEMENT WILL BE FLOODED TO CHECK FOR BIRDBATHS AND CRACKS. FLOODING OF STREETS SHALL OCCUR 1 HOUR PRIOR TO INSPECTION.
12. ALL CONCRETE PLACED SHALL BE UNIFORMLY SPRAYED WITH A MEMBRANE CURING COMPOUND AS DESCRIBED IN 1B-52S IN THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. IMPROPER APPLICATION WILL RESULT IN THE REJECTION OF THE CONCRETE.
13. SIX (6) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 REBAR, 24" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE CONSTRUCTION FOR LOCAL STREETS.
14. SEVEN (7) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 REBAR, 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR COLLECTOR STREETS.
15. EIGHT (8) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR ARTERIAL STREETS.
16. WHEN CONCRETE PAVEMENT INTERSECTS THICKER PAVEMENT, THE THICKER PAVEMENT SHALL BE CONSTRUCTED TO THE ENDS OF ALL CURB RETURNS.
17. ALL RETURNS SHALL HAVE A MIN. 25 FT. RADIUS AT THE FACE OF CURB UNLESS OTHERWISE NOTED.
18. ALL INTERSECTIONS SHALL BE CONSTRUCTED WITH WHEELCHAIR RAMPS IN ACCORDANCE WITH THE TEXAS ACCESSIBILITY STANDARD, THE AMERICAN DISABILITIES ACT, AND THE CITY OF SUGAR LAND STANDARDS (LATEST REVISIONS). (NO BLOCKOUTS)
19. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED WITHIN EACH STREET RIGHT-OF-WAY IN ACCORDANCE WITH CITY OF SUGAR LAND, THE A.D.A., AND THE T.A.S. STANDARDS (LATEST REVISIONS).
20. CRACKS LARGER THAN 1/16-INCH ARE NOT ACCEPTABLE IN NEW PAVEMENT. CRACKS 1/16-INCH OR LESS SHALL BE ADDRESSED ON AN INDIVIDUAL BASIS BY DRILL AND EPOXY INJECTION, SUBJECT TO APPROVAL OR REJECTION.
21. PROPER TESTING AND LAB DOCUMENTATION IS REQUIRED. FAILURE TO MEET THE MINIMUM PAVEMENT REQUIREMENTS WILL RESULT IN THE REJECTION OF SAID PAVEMENT. IMMEDIATE REMOVAL AND REPLACEMENT OF SUBSTANDARD PAVEMENT SECTIONS WILL BE NECESSARY TO SATISFY THESE REQUIREMENTS.
22. 4-CONCRETE CYLINDERS, SLUMP, AND AIR ENTRAINMENT TESTS ARE REQUIRED FOR EACH 100 CUBIC YARDS OF CONCRETE PAVING WITH A MINIMUM OF ONE SET OF 4 PER PLACEMENT. THE CITY OF SUGAR LAND RESERVES THE RIGHT TO REQUEST ANY ADDITIONAL TESTS AT THE CONTRACTOR'S EXPENSE, IF ANY MATERIAL APPEARS BELOW STANDARDS.
23. NO. 3 REBAR, 18-INCH C.C. E.W. IS THE MINIMUM ACCEPTABLE FOR SIDEWALKS, NUMBER 4-REBAR, 24-INCH C-C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR COMMERCIAL APPROACHES, HANDICAP RAMPS, RESIDENTIAL APPROACHES AND DRIVEWAYS.
24. COLD WEATHER PRECAUTIONS: CONCRETE PAVEMENT SHALL NOT BE PLACED WHEN THE AMBIENT TEMPERATURE IS 40°F AND FALLING. CONCRETE MAY BE PLACED IF THE AMBIENT TEMPERATURE IS 35° AND RISING. CONTRACTOR SHALL PROVIDE AN APPROVED COVERING MATERIAL (COTTON MATS, POLYETHYLENE SHEETING, ETC.) IN THE EVENT TEMPERATURE SHOULD FALL BELOW 32°F. NO SALT OR OTHER CHEMICALS SHALL BE ADDED TO CONCRETE TO PREVENT FREEZING.
25. HOT WEATHER: NO CONCRETE PAVEMENT MIXTURE SHALL BE PLACED IF THE MIXTURE TEMPERATURE IS ABOVE 95°F. AIR AND WATER REDUCER ARE REQUIRED IF MIXTURE TEMPERATURE REACHES 85°F OR ABOVE.
26. IF NO AIR AND WATER REDUCER HAS BEEN ADDED, NO CONCRETE SHALL BE PLACED IF MORE THAN 60 MINUTES PAST BATCH TIME. IF AIR AND WATER REDUCER HAS BEEN ADDED, NO CONCRETE SHALL BE PLACED IF MORE THAN 90 MINUTES PAST BATCH TIME.
27. STRUCTURE TEMPERATURES AND TIMING FOR CONCRETE PLACEMENT MAY VARY. REFER TO TXDOT STANDARDS ITEM 420 FOR DETAILS.
28. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS. MAXIMUM SPACING SHALL BE 200' AND BE SEALED WITH SEALANT CONFORMING TO TXDOT ITEM 360 (& ITEM 438) AND TXDOT DMS-6310, CLASS-2.
29. CONTROL JOINTS SHALL BE PLACED AT 20' C-C.
30. EXPANSION JOINT LAYOUT FOR INTERSECTIONS SHALL BE PROVIDED BY ENGINEER FOR CITY APPROVAL.
31. NO WIRE MESH IS ALLOWED IN ANY CONCRETE WITHIN THE CITY LIMITS OR ETJ.
32. ALL REBAR SHALL BE 100% TIED. OVERLAPS SHALL BE DOUBLE TIED MINIMUM. REINFORCED STEEL BE A MINIMUM 60% COVERAGE.
33. ALL NEW CURB REQUIRES 3,000 P.S.I. @ 28-DAYS. 4 CONCRETE CYLINDERS, SLUMP, AND AIR ENTRAINMENT TESTS ARE REQUIRED FOR EACH 50 CUBIC YARDS OF CONCRETE CURB WITH A MINIMUM OF ONE SET OF 4 PER PLACEMENT.
34. A CITY INSPECTOR MUST BE PRESENT ON ALL PROOF ROLLS, LIME DEPTH CHECKS AND DENSITY TESTS AND MUST BE CONTACTED AT LEAST 24 HOURS PRIOR TO THE TEST.
35. CONCRETE MIX DESIGN MUST BE SENT TO THE CITY FOR APPROVAL A MINIMUM 72 HOURS BEFORE THE FIRST CONCRETE POUR.
36. FOR A REGULAR MIX, SLUMP SHALL BE A MAXIMUM OF 5". FOR A MIX WITH A WATER REDUCER, SLUMP SHALL BE A MAXIMUM OF 6".
37. VEHICLES OF ALL TYPES ARE PROHIBITED FROM DRIVING ON NEW PAVEMENTS SEVEN (7) DAYS AFTER THE CONCRETE POUR AND UNTIL THE CONCRETE HAS REACHED A MINIMUM OF 3,000 PSI. TAVELTIE PROTECTION SUCH AS A DIRT LAYER OF AT LEAST 12" IS REQUIRED FOR TRACK EQUIPMENT AT PAVEMENT CROSSINGS.
38. IN LIEU OF MECHANICALLY CONTROLLED VIBRATORS CONTROLLED BY A SLIP-FORM PAVING MACHINE, HAND MANIPULATED MECHANICAL VIBRATORS SHALL BE USED FOR PROPER CONSOLIDATION OF CONCRETE IN ALL PLACEMENT AREAS (ALONG FORMS, AT JOINTS, ETC.).
39. ALL CONCRETE STREETS AND BRIDGE SURFACES SHALL HAVE A "BAKER BROOM" FINISH, WHILE ALL OTHER CONCRETE PLACEMENT SHALL HAVE A MEDIUM BROOM FINISH.
40. ALL PAVEMENT MARKINGS TO BE DONE IN CONFORMANCE WITH THE LATEST VERSION OF TWUTCD AND TXDOT STANDARD SPECIFICATIONS AND ANY REVISIONS THERETO.
41. REFER TO GENERAL NOTES.

CEMENT STABILIZED SAND:

1. ALL STABILIZED SAND SHALL BE A MINIMUM OF 1.5 SK PER CUBIC YARD.
2. CEMENT STABILIZED SAND (C.S.S.) SHALL ACHIEVE A MINIMUM OF 100 PSI WITHIN 48 HOURS.
3. A MINIMUM OF 2 RANDOM SAMPLES SHALL BE TAKEN EACH WEEK. (FOR SMALLER PROJECTS, ONE SAMPLE MAY SUFFICE WITH CITY OF SUGAR LAND APPROVAL.) THE CITY OF SUGAR LAND RESERVES THE RIGHT TO REQUIRE ADDITIONAL TESTS, AT THE CONTRACTORS EXPENSE IF IT IS DEEMED NECESSARY.
4. ANY C.S.S. NOT MEETING CITY OF SUGAR LAND STANDARDS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
5. BOTH CEMENT CONTENT AND COMPRESSIVE TESTS SHALL BE CONDUCTED ON C.S.S. SAMPLES.
6. ALL C.S.S. SHALL BE COMPACTED IN MAXIMUM OF 8-INCH LIFTS AND REQUIRED TO REACH A MINIMUM DENSITY OF 95%. 7. REFER TO GENERAL NOTES.

BANK SAND:

1. BANK SAND IS DEFINED AS A WELL-GRADED SAND, FREE OF SILT, CLAY, FRIABLE OR SOLUBLE MATERIALS AND ORGANIC WATER, MEETING THE UNIFIED SOILS CLASSIFICATIONS SYSTEM GROUP SYMBOL SW CRITERIA WITH A PLASTICITY INDEX OF LESS THAN 10. NO MORE THAN 12% OF MATERIAL CAN PASS THE No. 200 SIEVE.

ASPHALT -- OILS AND EMULSIONS:

1. CONTRACTOR SHALL VERIFY LINES AND GRADES AND THAT COMPACTED BASE IS READY TO SUPPORT LOADS.
2. BASE MATERIAL SHALL BE DRY AND THOROUGHLY CLEAN OF LOOSE MATERIAL PRIOR TO APPLICATION.
3. OILS & EMULSION SHALL BE DISTRIBUTED EVENLY AND SMOOTHLY UNDER PRESSURE NECESSARY FOR PROPER DISTRIBUTION.
4. MAINTAIN REQUIRED SURFACE CONDITIONS UNTIL ACCEPTED BY THE CITY OF SUGAR LAND.
5. PRIME COAT SHALL BE M.C.-30, M.C.-70 OR E.P.R-1 PRIME AND SHALL COMPLY WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES (1993) AND ITS LATEST REVISIONS.
6. TACK COAT SHALL BE SS-1 AND SHALL COMPLY TO TXDOT, S.S.C.H.S. & B. (1993) AND ITS LATEST REVISIONS.
7. M.C.-30 AND M.C.-70 AND EPR-1 PRIME SHALL BE DISTRIBUTED AT A RATE OF .25 TO .35 GALLONS PER SQUARE YARD, AND MAY NOT BE APPLIED WHEN AMBIENT TEMPERATURE IS 50°F AND FALLING. (NOTICE: CUTBACK ASPHALTS MAY NOT BE USED DURING THE PERIOD OF APRIL 16 THROUGH SEPT. 15 AS PER ASTM D-244).
8. EPR-1 MAXIMUM WATER DILUTION IS 3 PARTS WATER TO ONE PART EPR-1.
9. SS-1 TACK COAT SHALL BE APPLIED AT A RATE UP TO EXCEED 0.06 GAL. PER SQUARE YARD OF SURFACE AREA. CONTACT JOINTS, CURBS, ETC. SHALL BE PAINTED WITH AN EVEN THIN COAT APPLIED BY BRUSH OR BROOM. COATING MATERIAL SHALL BE HEATED TO 125°F TO 180°F WHEN APPLIED. TACK COAT MAY BE APPLIED WHEN AMBIENT TEMPERATURES ARE 40°F AND RISING. TACK COAT MAY NOT BE APPLIED IF AMBIENT AIR IS 50°F AND FALLING.

LIMING SUBGRADE:

1. LIME SHALL BE A "SLURRY" AS PER TXDOT 260 UNLESS SPECIFICALLY RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY ENGINEER.
2. ALL LIME SLURRIES SHALL BE FURNISHED AT OR ABOVE THE MINIMUM "DRY SOLIDS" CONTENTS AS APPROVED BY THE ENGINEER.
3. SUBGRADES SHALL BE STABILIZED WITH A MINIMUM SIX PERCENT (6%) LIME BY WEIGHT, EIGHT INCHES (8") THICK THE INITIAL MIX TO REDUCE PLASTICITY INDEX (PI) TO 20 OR LESS AS DETERMINED BY THE LIME SERIES. THE FINAL MIX SHALL BE AT SIX INCHES (6") THICK.
4. LIME DRY SOLID CONTENT TESTS SHALL BE CONDUCTED ON SITE, ONCE PER ONE-HUNDRED (100) TONS OF MATERIAL DISTRIBUTED, UNLESS OTHERWISE NOTED.
5. THE SUBGRADE SHALL BE SHAPED AND GRADED TO CONFORM TO THE TYPICAL SECTIONS, AS SHOWN ON THE PLANS, PRIOR TO TREATING THE EXISTING MATERIAL.
6. UNLESS APPROVED BY THE CITY ENGINEER, LIME OPERATIONS SHALL NOT BE STARTED WHEN THE AMBIENT AIR TEMPERATURE IS BELOW 40°F AND FALLING. LIMING MAY, WITH APPROVAL, BE STARTED WHEN THE AMBIENT AIR TEMPERATURE IS 35°F AND RISING. LIME SHALL NOT BE PLACED WHEN WEATHER CONDITIONS, IN THE ENGINEER'S OPINION, ARE UNSUITABLE.
7. THE SUBGRADE MATERIAL AND SLURRY SHALL BE THOROUGHLY MIXED, BROUGHT TO THE PROPER MOISTURE CONTENT (±2) AND LEFT TO CURE USUALLY 3 DAYS (72 HRS.) MINIMUM AS APPROVED BY THE CITY ENGINEER.
8. AFTER CURING, THE SUBGRADE SHALL BE REMIXED UNTIL PULVERIZATION REQUIREMENTS ARE MET, AS PER TXDOT:
TEX-101-E, PART III:
PERCENT MINIMUM PASSING 1-3/4" SIEVE.....100
PERCENT MINIMUM PASSING 3/4" SIEVE.....85
PERCENT MINIMUM PASSING No.4 SIEVE.....60
9. SIEVE TESTS SHALL BE CONDUCTED EVERY 150 LF ON ALTERNATING LANES OF TRAFFIC OR EVERY 300 LF ON SINGLE LANES AS REQUIRED. AT LEAST ONE TEST SHALL BE CONDUCTED ON EACH ROADWAY OR CUL-DE-SAC.
10. THE MATERIAL SHALL BE AERATED OR MOISTENED TO + OR -2% OPTIMUM PRIOR TO COMPACTION. COMPACTION TO A MINIMUM 95% DENSITY SHALL BEGIN IMMEDIATELY AFTER ALL PULVERIZATION AND MOISTURE REQUIREMENTS ARE MET. THROUGHOUT THIS ENTIRE OPERATION, THE SURFACE SHALL BE SMOOTH AND IN CONFORMITY WITH THE LINES AND GRADES ON THE PLANS.
11. WHEN THE SUBGRADE FAILS TO MEET DENSITY REQUIREMENTS OR SHOULD IT LOSE THE REQUIRED STABILITY, DENSITY OR FINISH, IT SHALL BE REMOVED IN ACCORDANCE WITH TXDOT SUBARTICLE 260.4(7) "REWORKING A SECTION", WHICH MAY REQUIRE AN ADDITIONAL 25% OF THE SPECIFIED LIME AMOUNT.
12. THE TREATED SUBGRADE SHALL BE KEPT MOIST AND PREVENTED FROM DRYING. IN THE EVENT OF A ONE-HALF (1/2) INCH RAINFALL AND/OR IF THE MATERIAL BECOMES DRY AND IS NOT IN COMPLIANCE WITH THE ±2% OPTIMUM MOISTURE, DENSITY AND MOISTURE TESTS SHALL BE RETAKEN.
13. LIME DEPTH DETERMINATIONS WILL BE CONDUCTED AT EACH LOCATION OF DENSITY TESTING. LIME-STABILIZED SUBGRADE SHALL BE A MINIMUM OF 6" AT 8" UNLESS OTHERWISE DIRECTED BY CITY ENGINEER. DENSITY TESTING SHALL BE DONE IMMEDIATELY PRIOR TO PLACEMENT OF REINFORCING STEEL AND SHALL BE COMPACTED TO A MINIMUM OF 95% LIME DEPTH TESTS SHALL BE CONDUCTED AT EVERY 150 LF OF ROADWAY ON ALTERNATING LANES OR EVERY 300 LF OF SINGLE LANE. AT LEAST ONE TEST SHALL BE CONDUCTED ON EACH ROADWAY AND/OR CUL-DE-SAC.
14. NO SUBGRADE SHALL BE COVERED WITH ANOTHER MATERIAL UNLESS APPROVED BY THE CITY OF SUGAR LAND AND LIME DEPTH TESTS HAVE BEEN COMPLETED.

HOT MIX ASPHALTIC BASE COURSE:

1. NO HOT MIX ASPHALTIC BASE MAY BE INSTALLED UNTIL THE SUBGRADE HAS BEEN PROPERLY PREPARED AND TESTED AS PER THE PLANS AND SPECIFICATIONS. THE SUBGRADE SHALL BE INSPECTED AND APPROVED BY THE CITY OF SUGAR LAND BEFORE ANY BASE MATERIALS ARE INSTALLED.
2. HOT MIX ASPHALTIC BASE MATERIALS, HANDLING, AND INSTALLATION SHALL COMPLY WITH TXDOT STANDARDS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES 1995 (SECTION 02711) AND ITS LATEST REVISIONS.
3. HOT MIX ASPHALTIC MATERIALS SHALL BE AT TEMPERATURES BETWEEN 250°F AND 325°F, WHEN PLACED.
4. MATERIALS MAY NOT BE PLACED IN WET CONDITIONS OR IF THE AMBIENT TEMPERATURE IS BELOW 50°F AND FALLING. MATERIALS MAY BE INSTALLED IF THE AMBIENT TEMPERATURE IS TAKEN IN THE SHADE AND IS 40°F AND RISING.
5. PLACE BASE COURSES 4 INCHES OR GREATER IN THICKNESS IN TWO OR MORE LAYERS, EACH HAVING A COMPACTED THICKNESS OF NOT GREATER THAN 4 INCHES.
6. BASE MATERIAL MAY ONLY BE PLACED AGAINST CLEAN, STRAIGHT EDGES. SAW CUTTING, FULL DEPTH, IS REQUIRED IF EXISTING EDGES ARE ROUGH OR UNEVEN.
7. COMPACTION SHALL BEGIN WHILE MATERIAL IS STILL HOT AND AS SOON AS IT WILL BEAR THE ROLLER OR COMPACTOR WEIGHT WITHOUT UNDUE DISPLACEMENT OR HAIR CRACKING.
8. COMPACT SURFACE UNIFORMLY WITH ROLLERS OR TAMPERS IN LOCATIONS NOT READILY ACCESSIBLE (I.E., ALONG CURBS, WALLS, ETC.).
9. UNLESS OTHERWISE SPECIFIED, COMPACT DENSITY TO NOT LESS THAN 95% OF MAXIMUM POSSIBLE DENSITY.
10. A CERTIFIED LAB SHALL BE ON SITE AT ALL TIMES TO TEST AND PROPERLY DOCUMENT THE CONSTRUCTION METHODS AND QUALITY OF MATERIALS.
11. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY TO A.S.T.M. ASPHALT INSTITUTE AND CITY OF SUGAR LAND REQUIREMENTS. FAILURE TO COMPLY WILL RESULT IN REJECTION OF SAID MATERIALS AND SUCH SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
12. DO NOT OPEN BASE TO TRAFFIC UNTIL IT CAN BE MAINTAINED IN GOOD CONDITION AND IS CAPABLE OF SUPPORTING VEHICLE WEIGHT WITHOUT DAMAGE OR DEGRADATION.
13. DENSITIES SHALL BE TAKEN AT A MINIMUM OF AT LEAST ONCE PER 300 LF OF DRIVE LANE OR ONCE PER 250 SQ. YD., WHICHEVER MAY APPLY AND SHALL BE STAGGERED RELATIVE TO TESTING SITES IN ABUTTING TRAFFIC LANES. FAILURE TO MEET MINIMUM REQUIREMENTS SHALL RESULT IN THE REPLACEMENT OF SAID MATERIAL AT CONTRACTOR'S EXPENSE.

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

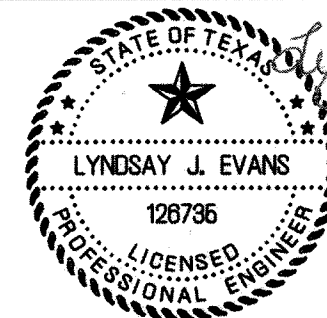
GREATWOOD LAKE SECTION 2A

GENERAL CONSTRUCTION
NOTES I

 JONES & CARTER

Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

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. _____



SHEET NO.
6
OF 28

PLOT TIME:

- PLOT DATE:

ISSUED FOR
CONSTRUCTION

- STORM SEWER 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 SEWERAGE SYSTEMS".
2. A CONFLICT ARISE BETWEEN INFORMATION DEPICTED 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 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.
3. STACKS SHALL BE BUILT IN ACCORDANCE WITH THE CITY OF SUGAR LAND STANDARD DETAIL DRAWING NUMBER 100-01. EXCEPT WHERE SHOWN OTHERWISE, THE CITY ENGINEER OF SUGAR LAND BY THE PROJECT ENGINEER ON SEALED AS-BUILT DRAWINGS. AT COMPLETION OF CONSTRUCTION, ALL STACKS SHALL BE INSTALLED WITHIN 3% OF PLUMB RELATIVE TO VERTICAL PLANE AND WILL BE CAPPED AND TERRACED AT A DEPTH OF 4 FEET BELOW FINISHED GRADE, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
4. EACH SANITARY SEWER SERVICE LINE STUB, PLUNGED WYE BRANCH OUTLET AND STACK SHALL BE MARKED IN ACCORDANCE WITH THE DETAIL NUMBER 100-01. THE MARKING SHALL BE LOCATED AT THE END OF THE STUB OR WYE AND EXTENDING TWO FEET BELOW THE CAPPED TERMINATION POINT OF THE STACK AND EXTENDING TWO FEET ABOVE FINISHED GRADE.
5. SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED AS PER DRAWINGS INCORPORATED IN CITY OF SUGAR LAND STANDARD CONSTRUCTION DETAILS SHEETS. SUCH MANHOLES SHALL BE CONSTRUCTED A MINIMUM OF ONE FOOT FROM CURB OF CURB ON CURB AND GUTTER ROADWAYS AND THREE FEET FROM EDGE OF TRAVELLED ROADWAY ON THOSE THOROUGHFARES HAVING NO CURBING. MEASURED FROM OUTSIDE DIAMETER OF MANHOLE. ALL SANITARY SEWER MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF SUGAR LAND STANDARD CONSTRUCTION DETAILS SHEETS. MANHOLES SHALL NOT BE INSTALLED BENEATH STREET PAVING EXCEPT WHERE SPECIFICALLY AUTHORIZED BY CITY ENGINEER AND SO DESIGNATED ON APPROVED CONSTRUCTION DRAWINGS, BRICK MANHOLES AND CONCRETE MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF SUGAR LAND STANDARD CONSTRUCTION DETAILS SHEETS.
6. SANITARY SEWER MANHOLE COVERS SHALL BE MINIMUM OF 32 INCHES IN DIAMETER. ALL SUCH MANHOLE COVERS SHALL HAVE THE CITY OF SUGAR LAND EMBLEM AND THE WORDS "SUGAR LAND" AND "SANITARY SEWER" CAST IN RAISED RELIEF AS DEPICTED IN CITY OF SUGAR LAND STANDARD CONSTRUCTION DETAILS SHEETS.
7. MANHOLE RIM ELEVATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY. UTILITY CONTRACTORS SHALL ADJUST RIM ELEVATIONS TO 0.4 FEET ABOVE FINISHED GRADE, AND 0.5 FEET ABOVE NATURAL GROUND WITHIN ONE FOOT OF THE WAY AND ONE FOOT OF THE CURB. LOCATIONS OF ALL MANHOLES SHALL BE COMPLETED FINAL GRADING. THE AREA ADJACENT TO SANITARY SEWER MANHOLE LOCATIONS SHALL BE GRADED AWAY FROM SUCH MANHOLES SO AS PREVENT ENTRY OF STORM WATER RUNOFF TO THE SANITARY SEWER SYSTEM.
8. MINIMUM SEPARATION DISTANCES AS REQUIRED BY TCEQ SECTION 317.13, APPENDIX E MUST BE MAINTAINED BETWEEN ALL INSTALLATIONS OF SANITARY SEWER SYSTEMS AND ALL OTHER UTILITIES. ALL OTHER WASTEWATER TREATMENT PLANTS, INSTALLATION OF FIRE HYDRANTS WITHIN NINE FEET OF A SANITARY SEWER SYSTEM IS PROHIBITED. REFER TO THE CITY OF SUGAR LAND INFRASTRUCTURE STANDARDS AND CORRESPONDING STANDARD CONSTRUCTION DETAILS SHEETS FOR THE MINIMUM SEPARATION DISTANCES. FOR OTHER INSTALLATIONS WHERE SEPARATION DISTANCES OF GREATER THAN NINE FEET CANNOT BE MAINTAINED.
9. TESTING OF SANITARY SEWERS, FORCE MAINS, MANHOLES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS SHALL CONDUCTED IN ACCORDANCE WITH THE CITY OF SUGAR LAND STANDARD CONSTRUCTION DETAILS SHEETS, STANDARDS AND AS PER THE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY "DESIGN CRITERIA FOR SEWERAGE SYSTEMS".
10. ALL SANITARY SEWER PIPING AND BENDING SHALL BE INSPECTED BY CITY CONSTRUCTION INSPECTOR FOR COMPLIANCE WITH THE CITY OF SUGAR LAND STANDARD CONSTRUCTION DETAILS SHEETS. PRIOR TO BACKFILLING OF PIPING IN TRENCH, CONTRACTOR SHALL NOT COVER PIPING UNTIL SUCH TIME AS INSPECTOR HAS NOTIFIED CONTRACTOR THAT 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. CONTRACTOR SHALL NOTIFY INSPECTOR 24-HOURS PRIOR TO INSPECTION.
11. ALL COMMERCIAL DEVELOPMENTS WITH A FAR SIDE SANITARY SERVICE LEAD ACROSS THE STREET SHALL PROVIDE A MINIMUM 10' CLEARANCE AND CLEARCUT ON THE PROPERTY SIDE. PUBLIC MAINTENANCE OF THE FAR SIDE LEAD SHALL END AT THIS RISER.

3. 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 DEPICTED ON APPROVED CONSTRUCTION DRAWINGS AND/OR INFORMATION INCLUDED IN PROJECT SPECIFICATIONS, CITY OF SUGAR LAND DESIGN STANDARDS SHALL GOVERN.
2. 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.
3. ALL GATE VALVES INSTALLED BELOW GRADE SHALL BE OF NON-IRISING STEM DESIGN.
4. ALL FIRE HYDRANTS SHALL BE PAINTED AND/OR REPAINTED WITH GEO-GLN 301 BRIGHT SILVER POLYURETHANE ENAMEL MANUFACTURED BY GEO-GLN ENTERPRISES, INC. SURFACE PREPARATION SHALL INCLUDE REMOVAL OF ALL EXISTING COATINGS, FOLLOWED BY MEDIA BLASTING TO SSPC-SP15-10-63 SPECIFICATIONS (NEAR WHITE METAL). AS PER MANUFACTURER'S RECOMMENDATIONS, PRIME BARE METAL WITH TP-251 EPOXY PRIMER EPOXY PRIMER OR WITH TP-221, TP-231 OR TP-241 UNIVERSAL PRIMER. 80% AND 50% 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 5' ABOVE THE DEW POINT IN ORDER TO PREVENT MOISTURE FROM CONDENSING ON THE SURFACE TO BE PRIMED AND/OR PAINTED. A BLUE TRAFFIC BUTTON SHALL BE INSTALLED ON THE STREET 12" OFF THE CENTER LINE FOR EACH HYDRANT.
5. MINIMUM SEPARATION DISTANCES AS REQUIRED BY TCEQ SECTION 17.13, AND ANY OTHER EFC MUST BE MAINTAINED BETWEEN POTABLE WATER LINES AND SANITARY SEWERS, FORCE MAINS, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS. INSTALLATION OF FIRE HYDRANTS WITHIN 9' (FT) 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.
6. EACH WATER SERVICE LEAD STUD SHALL BE MARKED WITH A PRESSURE TREATED 4 X 4 TIMBER OR PVC PIPE AT THE TIME OF CONSTRUCTION, BEGINNING AT THE INVERT ELEVATION OF THE STUD AND EXTENDING TWO FEET ABOVE THE INVERT. EACH SUCH TIMBER MARKER SHALL BE PAINTED BLUE AND LABELED "POTABLE WATER" WITH PIPE SIZE NOTED.
7. TESTING OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE CONDUCTED AS PER REQUIREMENTS OF AWWA C605-94.
8. DISINFECTION OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE CONDUCTED AS PER REQUIREMENTS OF AWWA C651 AND TCEQ. NO CONNECTIONS SHALL BE MADE TO EXISTING WATER LINES UNTIL NEWLY CONSTRUCTED WATER LINES HAVE BEEN THOROUGHLY DISINFECTED, TESTED, FLUSHED, AND SAMPLED AND CONNECTION HAS BEEN AUTHORIZED BY THE CITY ENGINEER.
9. 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 TIME AS INSPECTOR HAS NOTIFIED CONTRACTOR THAT 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.
10. ALL MECHANICALLY RESTRAINED FITTINGS MUST BE MEGALUG RESTRAINED JOINTS OR APPROVED EQUAL.
11. 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 RESCHEDULED.

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: C. S.
DEVELOPMENT COORDINATOR

DATE:

NO.	DATE	REVISIONS	APP.

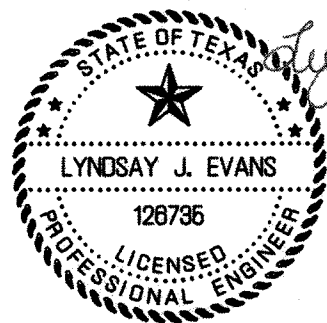
FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A

GENERAL CONSTRUCTION NOTES II



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. _____



SHEET NO.
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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@FORTBENDCOUNTYTX.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 WAYS.
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 SUBDIVISIONS" 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 1/2 SACK CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MAXIMUM SPACING OF 60 FEET.
8. ALL WEATHER ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
9. 4" X 12" REINFORCED CONCRETE CURB SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE 6" REINFORCED CONCRETE CURB.
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 FLAGMEN, SIGNING, STRIPING AND WARNING DEVICES, ETC., DURING CONSTRUCTION - BOTH DAY AND NIGHT.
14. ALL R1-1 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 9" HIGH SIGN FLAT BLADE 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 003301), 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 003301), 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 A615 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 PROVIDING 18 INCH LONG DRILL IN DOWELS ARE INSTALLED AT A SPACING TO MATCH EXISTING WITH A MINIMUM 6 INCH EMBEDMENT.
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 ($\pm$ 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-33 OR M-213 BETWEEN SIDEWALK AND CURB, AROUND FIRE HYDRANTS AND UTILITY POLES.

	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	✓3,4		✓4,7		✓6			
PROVIDE DIP FOR SMALL DIAMETER WL (LESS THAN 24 INCHES). PVC PIPE IS ONLY ALLOWED IF ENCASED PER TAC 280.44, AND USE RESTRAINED JOINTS FOR BOTH DIP AND PVC PIPE			✓	✓	✓6	✓		
EMBED 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 AUGERED WL UNLESS THERE IS EVIDENCE OF LEAKAGE; COMPLETELY FILL AUGERED HOLE WITH BENTONITE/CLAY MIXTURE
5. NOT REQUIRED FOR AUGERED SS; COMPLETELY FILL AUGERED HOLE WITH BENTONITE/CLAY MIXTURE
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 AWWA C600 STANDARDS.

ISSUED FOR
CONSTRUCTION

CONTRACTOR NOTES:

1. CONTRACTOR TO COORDINATE ALL WORK WITHIN MAKEK ROAD RIGHT-OF-WAY WITH FORT BEND COUNTY ROAD AND BRIDGE DEPARTMENT (281) 342-4513.
2. CONTRACTOR SHALL NOTIFY WESLEY CRAWFORD AT FORT BEND COUNTY ENGINEERING DEPARTMENT AT CONSTRUCTION@FORTBENDCOUNTYTX.GOV. 24 HOURS PRIOR TO COMMENCING PAVING OPERATIONS INCLUDING SUBGRADE PREPARATION, LIME, AND CONCRETE PLACEMENT.

ADDITIONAL NOTES:

1. ALL PENETRATIONS INTO A SEWER MANHOLE, INCLUDING SERVICE LEADS, SHALL BE SERVED BY AN INVERT. ALL INVERTS SHALL EXTEND ALL THE WAY TO THE WALLS OF THE MANHOLE.
2. SANITARY SEWER LEADS 2' ABOVE MANHOLE INLET SHALL TIE INTO PROPOSED MANHOLE WITH EXTERNAL DROP.(SEE DETAIL SHEET 18)

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: *for* DEVELOPMENT COORDINATOR

DATE: 4-2018

NO.	DATE	REVISIONS	APP.

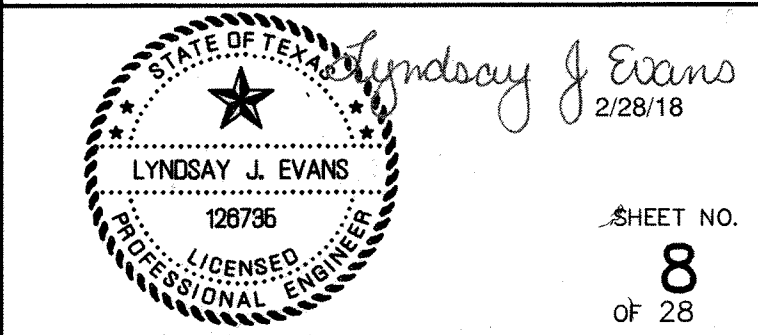
FORT BEND COUNTY MUD No. 192
FORT BEND COUNTY, TEXAS

GREATWOOD LAKE SECTION 2A

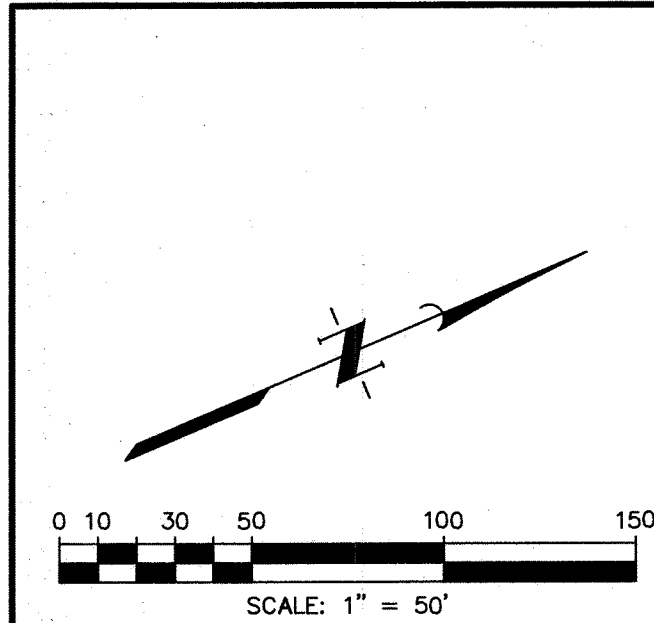
GENERAL CONSTRUCTION
NOTES III



SCALE: N.T.S. DGN. BY: KCM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO.
SUBMITTED: SURV. BY:
F.B. NO.
LYNDAY J. EVANS
2/28/18



SHEET NO.
8
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 Spoil Banks In Maximum 8" Loose Lifts 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 Cleaned, Mucked Out and Scarified to a Minimum Depth of 6" and Filled as Specified Above in Fill Note No. 1. No Separate Pay.
- 3.) ROADWAY EMBANKMENT: Strip 3" of Vegetation From Area to Be Filled and Re-Compact Soil to 95% 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.

Center a Minimum 18 LF Joint of PVC Pressure Pipe (Min Pressure Rating 150 psi @ 5% Deflection) and Encase with Cement Stabilized Sand (Typ 8 Loc. This Sheet) (No Separate Pay)

IDENTICAL POINT

MESQUITE HILL LANE
PECAN PLACE LANE

Curve Data
 $\Delta = 97^{\circ}24'12''$
 $R = 300.00'$
 $T = 341.50'$
 $L = 510.00'$

BENCH MARK

ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT HSD72, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.6 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 8239.

ELEVATION = 78.65' (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 MACK RD AND APPROXIMATELY 1660 FEET EAST OF THE INTERSECTION OF RABBS CROSSING AND MACK RD.

ELEVATION = 81.13' (NAVD 88 Adjustment)

KEY-MAP

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.

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

FOR ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE: For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground lines can be marked. This Verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

CenterPoint Energy/Natural Gas Facilities Verification ONLY.
(This Signature verifies that you have shown CPE Natural Gas lines correctly - not to be used for conflict verification.) (See service lines are not shown.)
Signature Valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)
Signature Valid for six months.

Date:

Approved for AT&T Texas/SBT underground conduit facilities only.
Signature Valid for one year.

Date:

Signature Valid for one year.

Signature Valid for one year.

Signature Valid for one year.

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CORNER OF THE INTERSECTION OF FM 2759 AND A
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ELEVATION = 78.65' (NAVD 88 Adjustment)

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NORTHEAST OF A 90 DEGREE BEND IN MACEK RD AND
APPROXIMATELY 1660 FEET EAST OF THE INTERSECTION
OF RABBS CROSSING AND MACED RD.

ELEVATION = 81.13' (NAVD 88 Adjustment)

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

APPROVED: Bar DEVELOPMENT COORDINATOR
DATE: 4-20-18

NOTICE:
For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date: _____

CenterPoint Energy/Natural Gas Facilities Verification ONLY.
(This Signature verifies that you have shown CXP Natural Gas lines correctly -- not to be used for conflict verification.) (Gas service lines are not shown.)
Signature Valid for six months.

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)
Signature Valid for six months.

		Date:	
Approved for AT&T Texas/SWBT underground conduit facilities only.			
Signature Valid for one year.			

NO.	DATE	REVISIONS

NO.	DATE	REVISIONS
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

J/C JONES | CARTE
Texas Board of Professional Engineers Registration No.
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-1111

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. _____

STATE OF TEXAS
Lyndsey J. Evan
2/28/18

LYNDSEY J. EVANS
126735
PROFESSIONAL ENGINEER

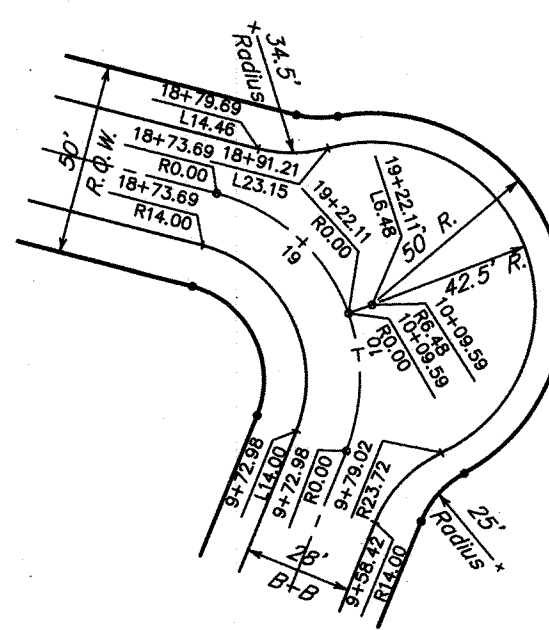
SHEET
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OF 28

SHEET
10

OF 28

K:\z_HO\PROJECTS\05537 FBCMUD Na. 192\0008-01 -Greatwood Lakes Section 2 & 3 Paving & Platting\ReDesign Information\CAD\Plans\GREATWOOD LAKES SEC 2A.dwg Feb 28,2018 - 5:21pm KCM



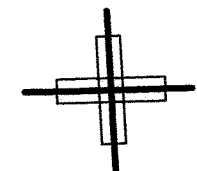
KNUCKLE DETAIL

1"=50'

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 Spoil Banks in Maximum 8" Loose Lifts and Compacted to 95% Proctor Density as Per AASHTO Test Method T-99.
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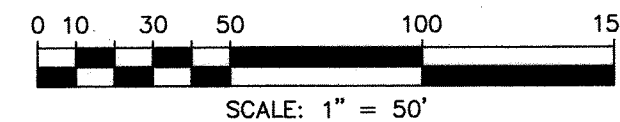
SANITARY-WATERLINE CROSSING

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

Curve Data

$\Delta = 97.26^\circ 21'$
 $R = 50.00'$
 $T = 56.95'$
 $L = 85.03'$



SCALE: 1" = 50'

BENCH MARK

ELEVATIONS SHOWN HEREON ARE BASED ON NGS
MONUMENT HGS072, LOCATED 50.5 FEET NORTHWEST
OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6'
SOUTHWEST OF THE CENTER OF GATE 6, WITH A
PUBLISHED ELEVATION OF 69.6 FEET (NAVD88).

TBM "A"

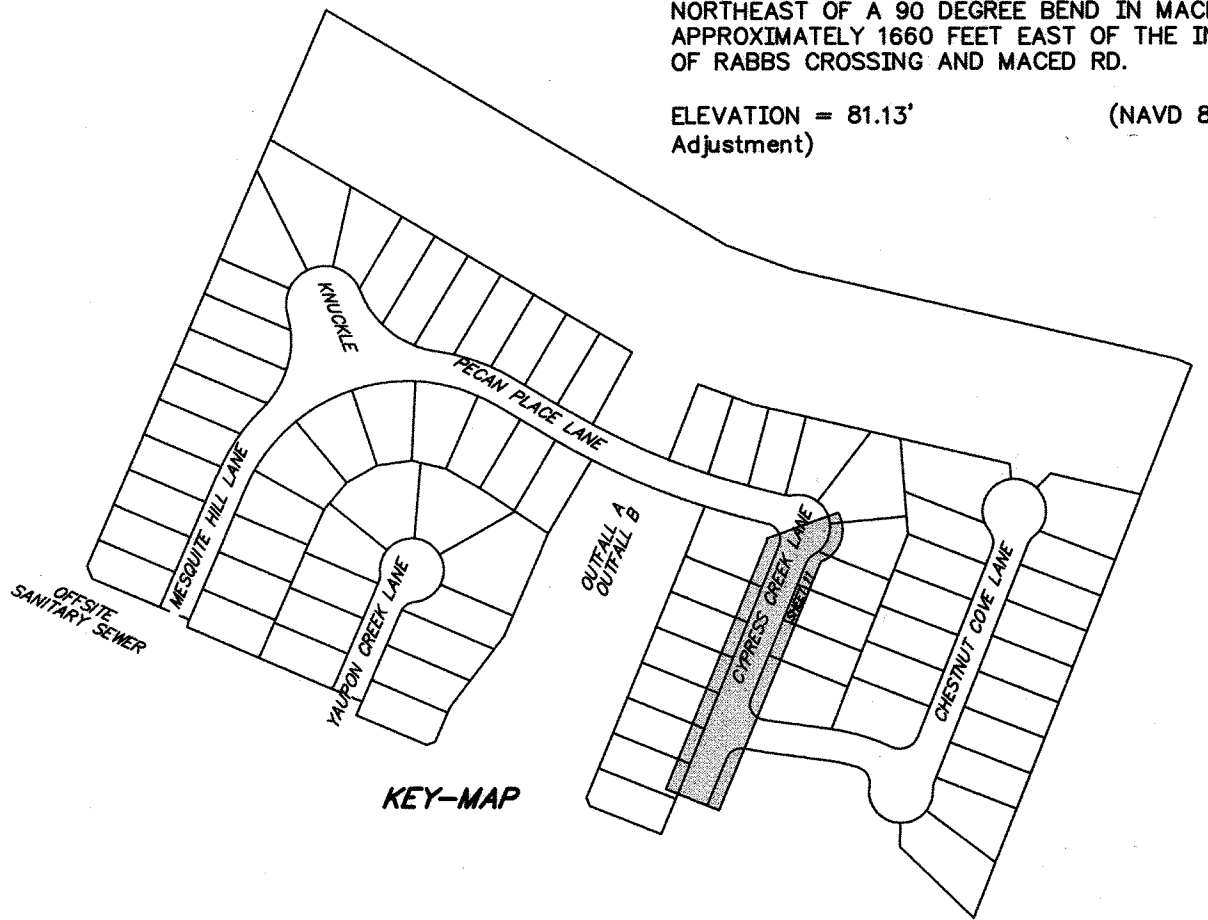
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CORNER OF THE INTERSECTION OF FM 2759 AND A
GRAVEL DRIVEWAY WITH ADDRESS 8239.

ELEVATION = 78.65' (NAVD 88 Adjustment)

TBM "B"

TEMPORARY BENCHMARK B BEING A 60 D NAIL IN A
POWER POLE LOCATED APPROXIMATELY 50 FT
NORTHEAST OF A 90 DEGREE BEND IN MACK RD AND
APPROXIMATELY 1600 FEET EAST OF THE INTERSECTION
OF RABBS CROSSING AND MACED 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: PROPOSED TOP OF CURB GRADES ARE
BASED ON 6" CURBS. WHERE 4"x12" CURBS
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BE 0.17 FEET BELOW PLAN GRADE. REFER TO
SHEET 4 FOR CURB LAYOUT.

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

TRAFFIC BUTTON PLACEMENT

Proposed Reflectorized Traffic Buttons to be Placed
as Follows:

1. Place Double Row of Yellow Reflectorized Traffic Buttons
at 8' C-C, Spaced 3' C-C From C/R to C/R.
2. Place Single Row of White Reflectorized Traffic Buttons
at 3' C-C, From C/R to C/R.

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

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VERIFICATION OF PRIVATE UTILITY LINES

Date:

CenterPoint Energy/Natural Gas Facilities Verification ONLY. (This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (One service line is not shown.) Signature Valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY. (This Signature verifies existing underground facilities - not to be used for conflict verification.) Signature Valid for six months.

Date:

Approved for AT&T Texas/SBT underground conduit facilities only. Signature Valid for one year.

Date:

NO. DATE REVISIONS APP.

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

GREATWOOD LAKE
SECTION 2A

CYPRESS CREEK LANE
5+51.29 TO 10+09.59

JONES CARTER

Texas Board of Professional Engineers Registration No. F-4399
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

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.

LYNDAY J. EVANS 2/28/18

STATE OF TEXAS

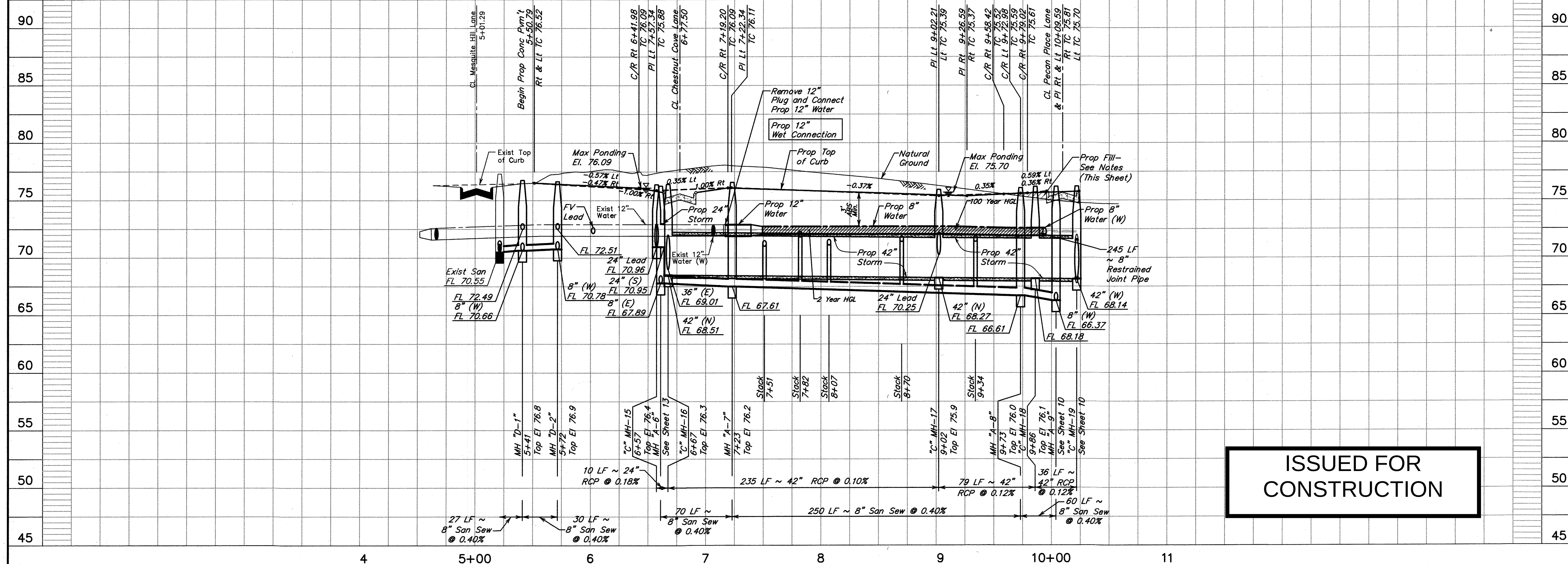
LYNDAY J. EVANS

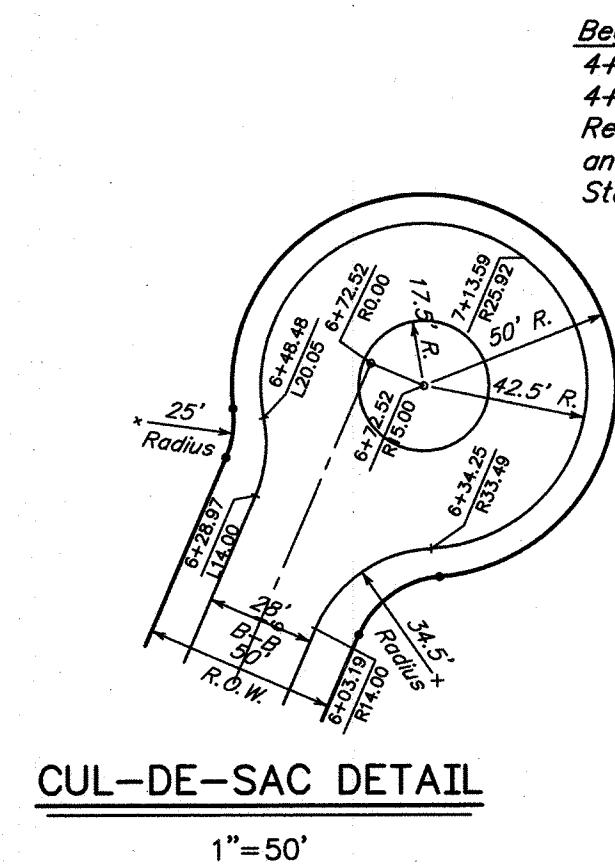
128736

PROFESSIONAL ENGINEER

SHEET NO. 11 OF 28

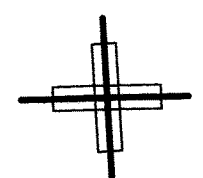
ISSUED FOR
CONSTRUCTION





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

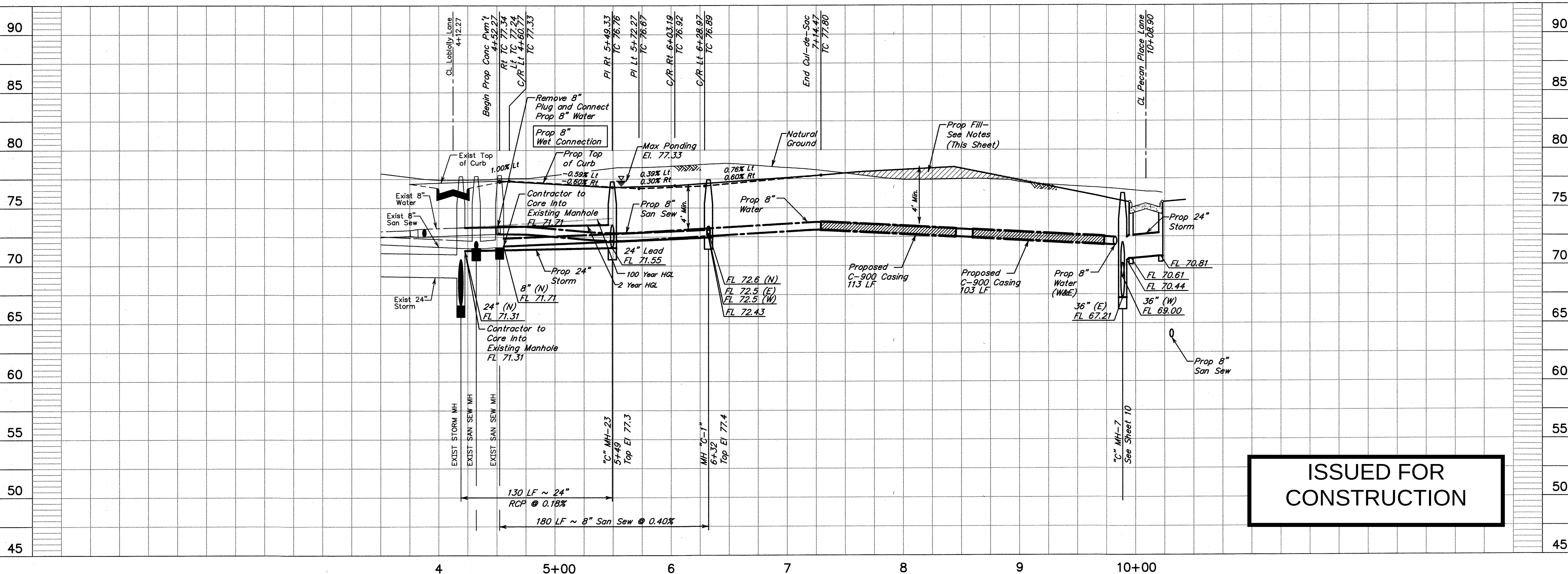
CONTRACTOR SHALL CAREFULLY BREAK
INTO SIDE OF EXISTING SEWER
MANHOLE AND CONNECT PROPOSED STORM
SEWER AT THE FLOWLINE ELEVATION SHOWN.
CONTRACTOR MUST GROUT IN AND
BACKFILL THE EXCAVATION AROUND THE
EXISTING MANHOLE WITH CEMENT-SAND.



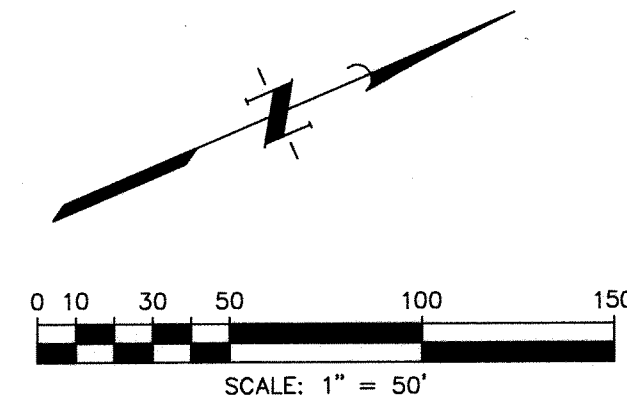
SANITARY-WATERLINE CROSSING
1-18" PVC SANITARY JOINT CENTERED OVER/UNDER
1-18" PVC WATERLINE JOINT. REFER TO PROTECTION
REQUIREMENTS CHART FOR WATERLINE AND SANITARY
CROSSING PER CITY OF HOUSTON INFRASTRUCTURE
DESIGN MANUAL.

YAUPON CREEK LANE

OFFSITE WATER



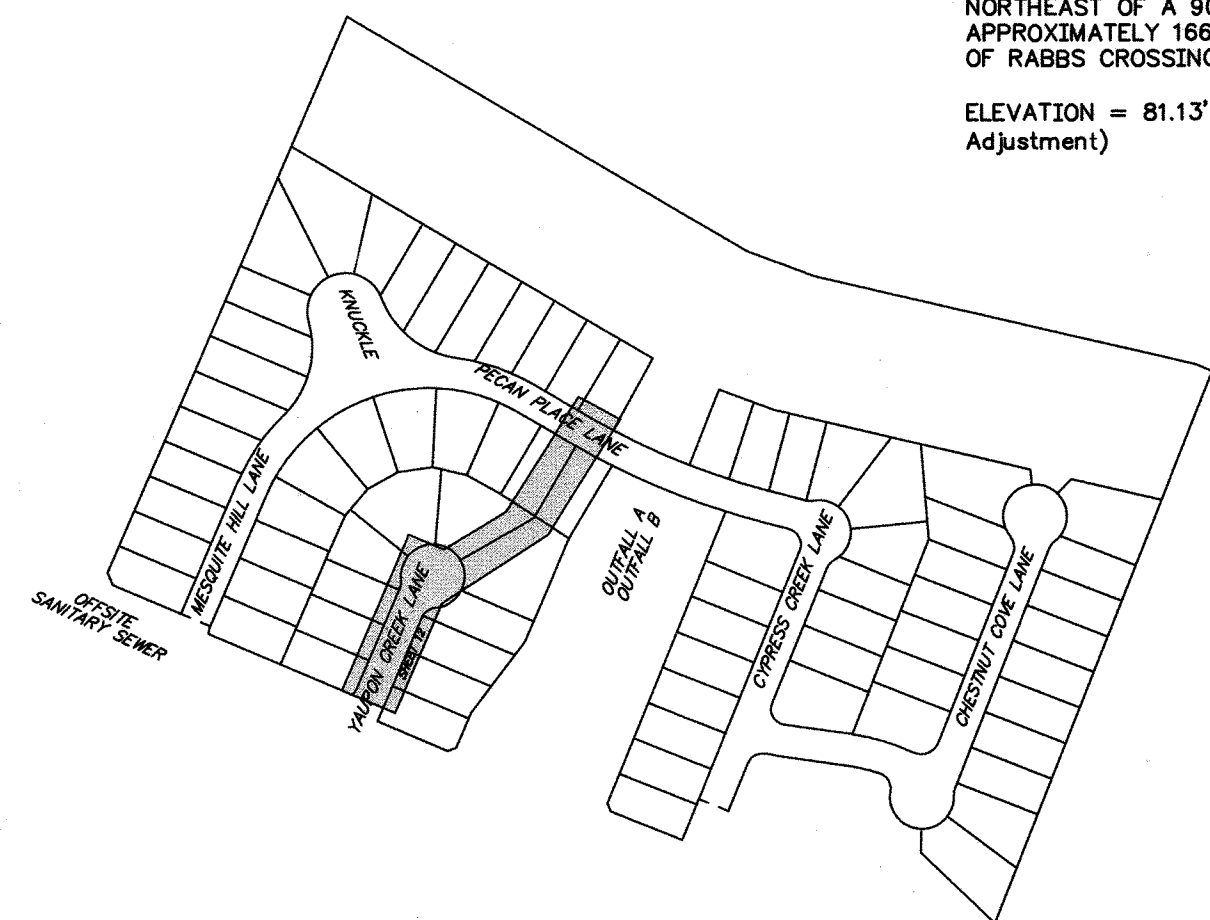
ISSUED FOR
CONSTRUCTION



BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS
MONUMENT HGSD72, LOCATED 50.5 FEET NORTHWEST
OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6'
SOUTHWEST OF THE CENTER OF GATE 6, WITH A
PUBLISHED ELEVATION OF 69.6 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 8239.
ELEVATION = 78.65' (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 MACEK RD. AND
APPROXIMATELY 1860 FEET EAST OF THE INTERSECTION
OF RABBS CROSSING AND MACEK RD.
ELEVATION = 81.13' (NAVD 88
Adjustment)



KEY-MAP

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.

NOTE: SEE WATERLINE CASING DETAIL ON
SHEET 20 FOR NOMINAL CASING SIZE AND
THICKNESS PER SUGAR LAND SPECIFICATION

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 ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222
NOTICE:
For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig
so that underground lines can be marked. This Verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date:

CenterPoint Energy/Natural Gas Facilities Verification ONLY.
(This Signature verifies that you have shown CPE Natural Gas lines correctly - not to be used for
conflict verification.) (See service lines are not shown.)
Signature Valid for six months.

Date:

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)
Signature Valid for six months.

Date:

Approved for AT&T Texas/SBT underground conduit facilities only.
Signature Valid for one year.

Date:

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
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

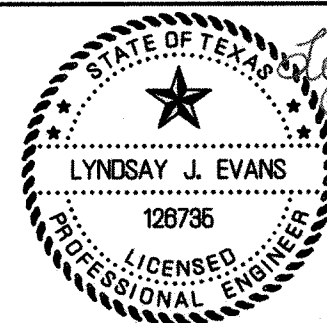
SCALE: 1"=50' H., 1"=5' V. DGN. BY: KCM

DATE: FEBRUARY 2018 DWN. BY: EPV

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

SUBMITTED: SURV. BY:

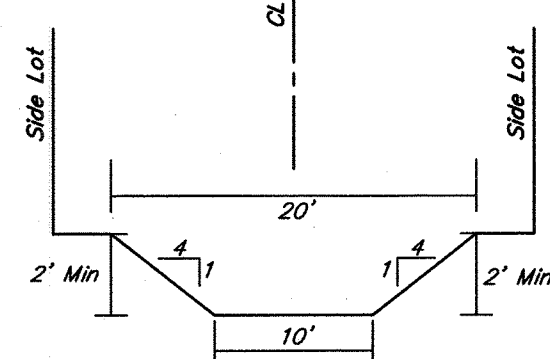
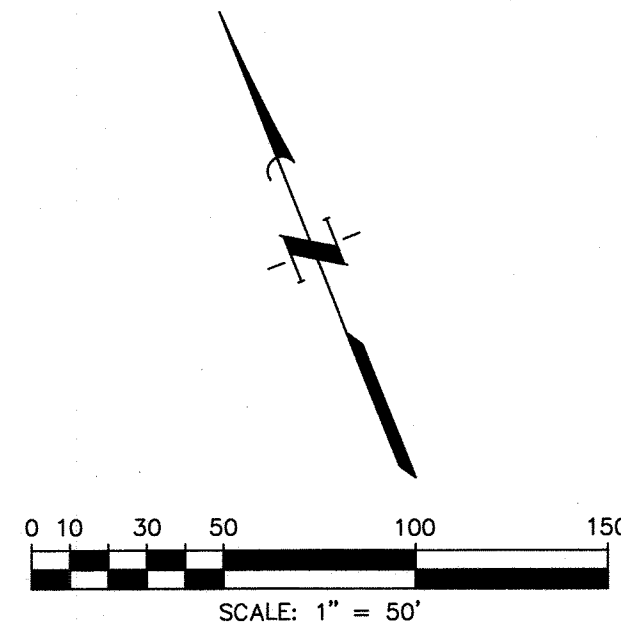
F.B. NO.



Lyndsay J. Evans
2/28/18

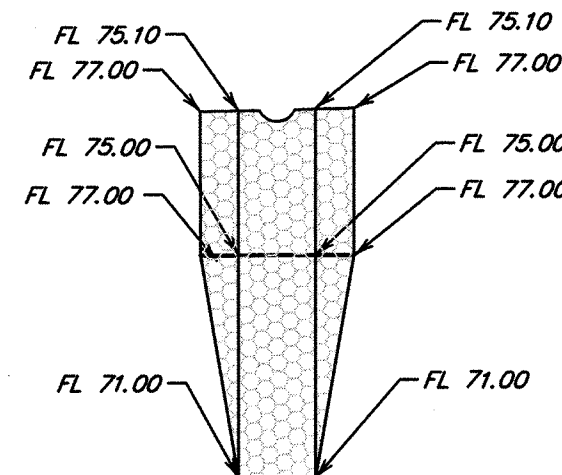
SHEET NO.
12
OF 28



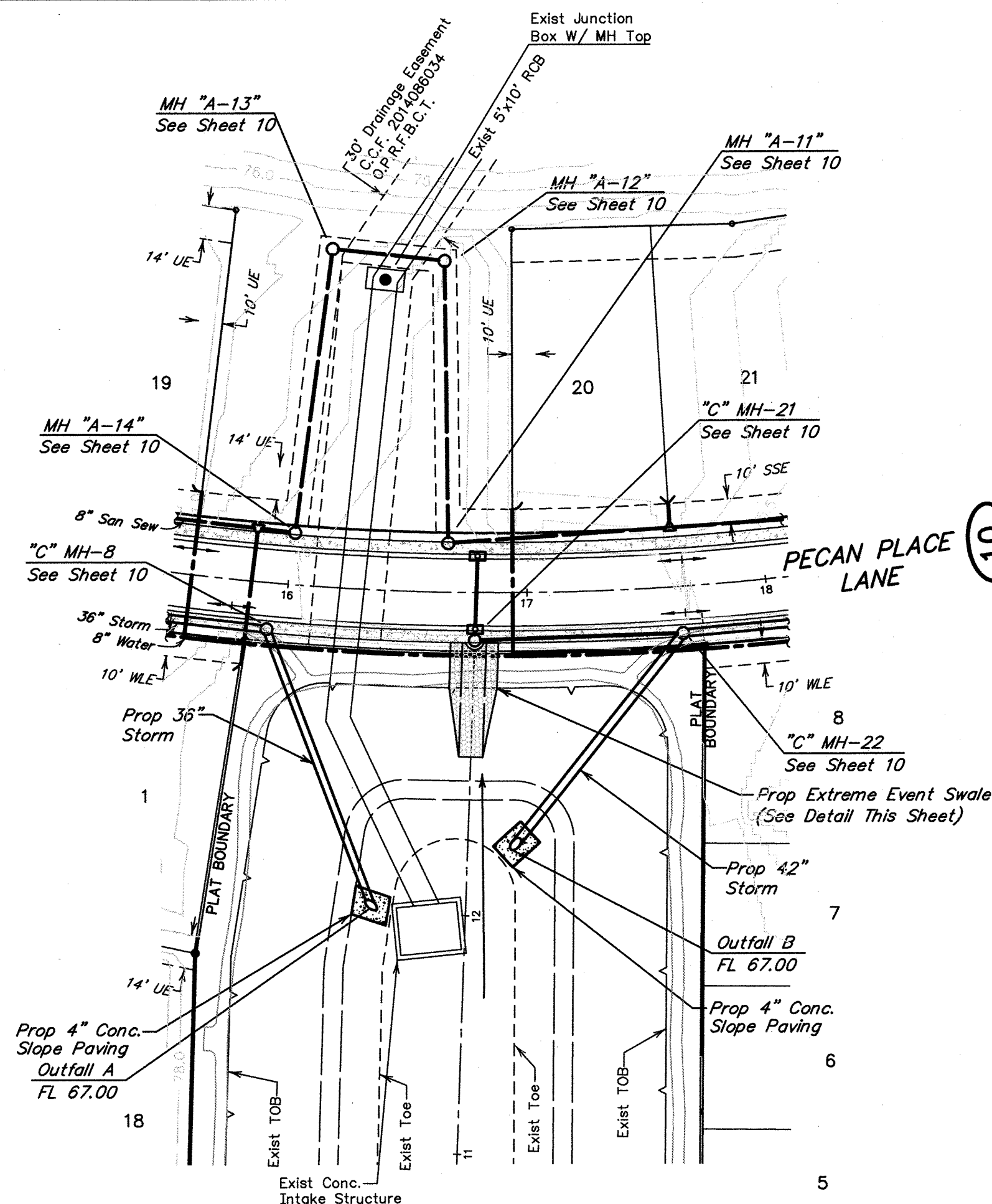


**TYPICAL SECTION
EXTREME EVENT SWALE**
NTS

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

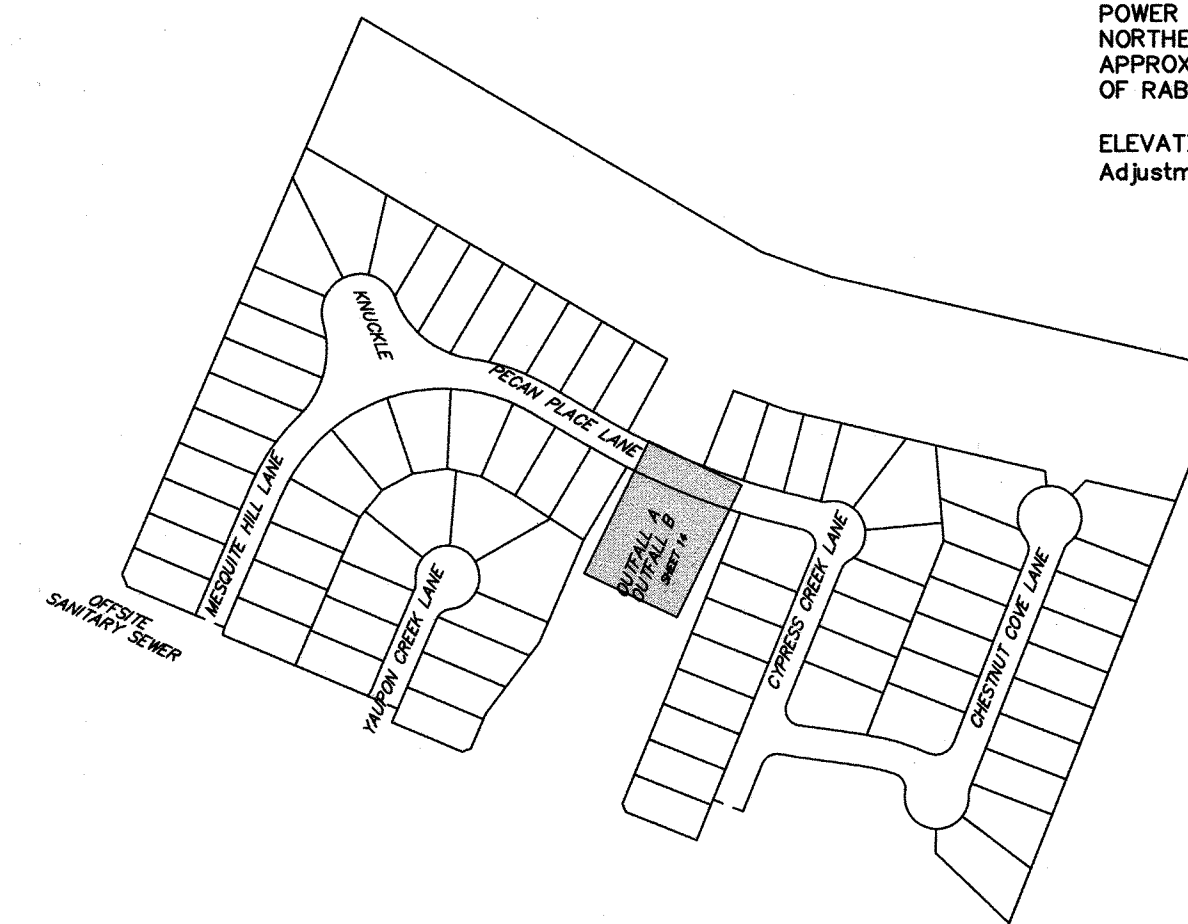


*Prop Interlocking Slope
Pavers ~ 110 SY*



OUTFALL A

OUTFALL B



BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT HGSD72, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.6 FEET (NAVD88).

TBM "A"
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ELEVATION = 78.65' (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 MACEK RD AND APPROXIMATELY 1660 FEET EAST OF THE INTERSECTION OF RABBS CROSSING WITH MACEK 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

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Date:			
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Date:			
Approved for AT&T Trench/SMIT underground conduit facilities only. Signature Valid for one year.			
Date:			
NO.	DATE	REVISIONS	APP.

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

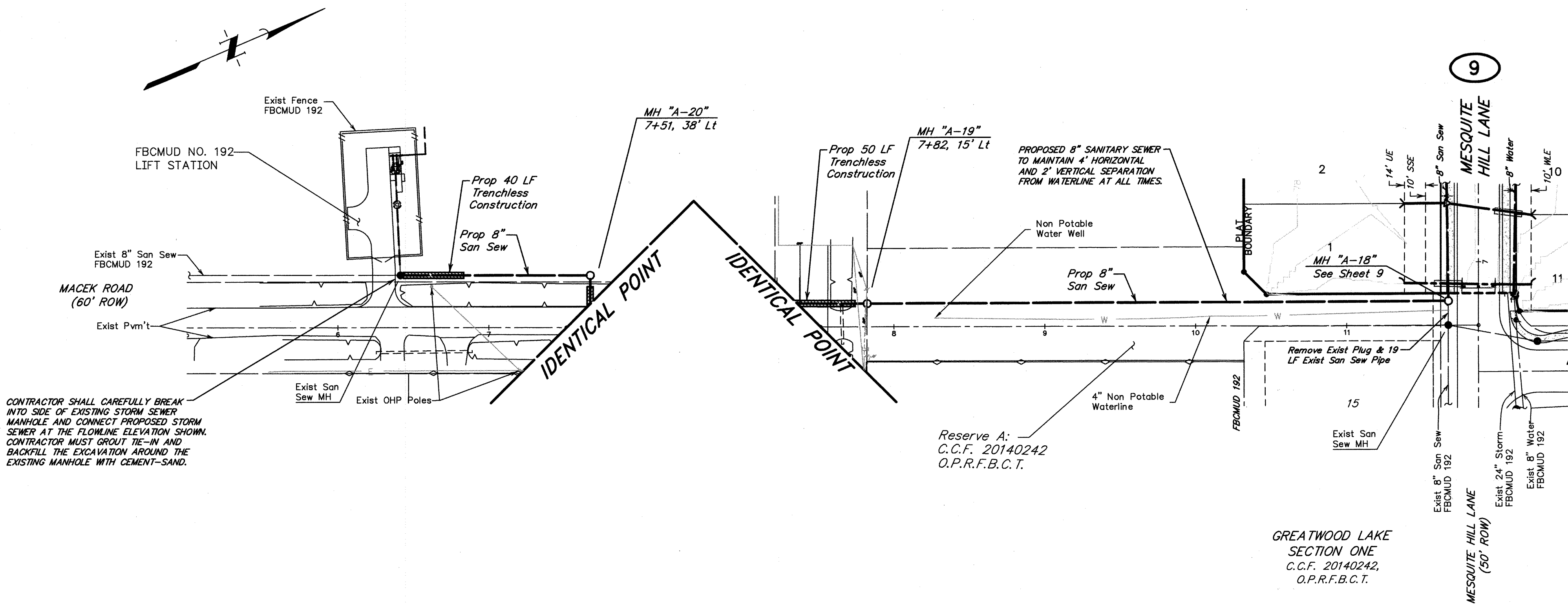
**GREATWOOD LAKE SECTION 2A
OUTFALL A
OUTFALL B**

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

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. _____

Lyndsay J. Evans
2/28/18
LYNDSAY J. EVANS
128736
LICENSED PROFESSIONAL ENGINEER
SHEET NO. 14 OF 28

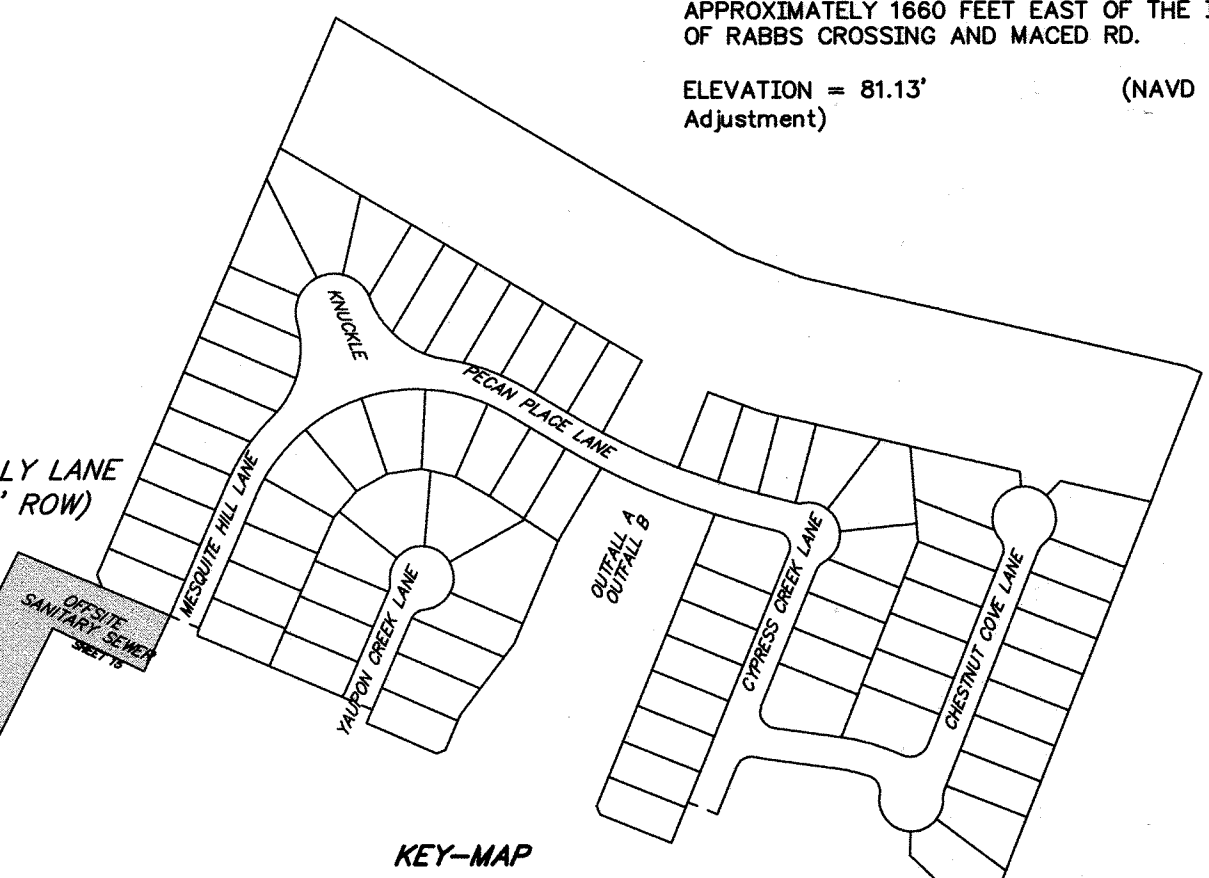
**ISSUED FOR
CONSTRUCTION**



BENCH MARK
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ELEVATION = 78.65' (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 MACEK RD AND APPROXIMATELY 1660 FEET EAST OF THE INTERSECTION OF RABBS CROSSING AND MACEK RD.
ELEVATION = 81.13' (NAVD 88 Adjustment)

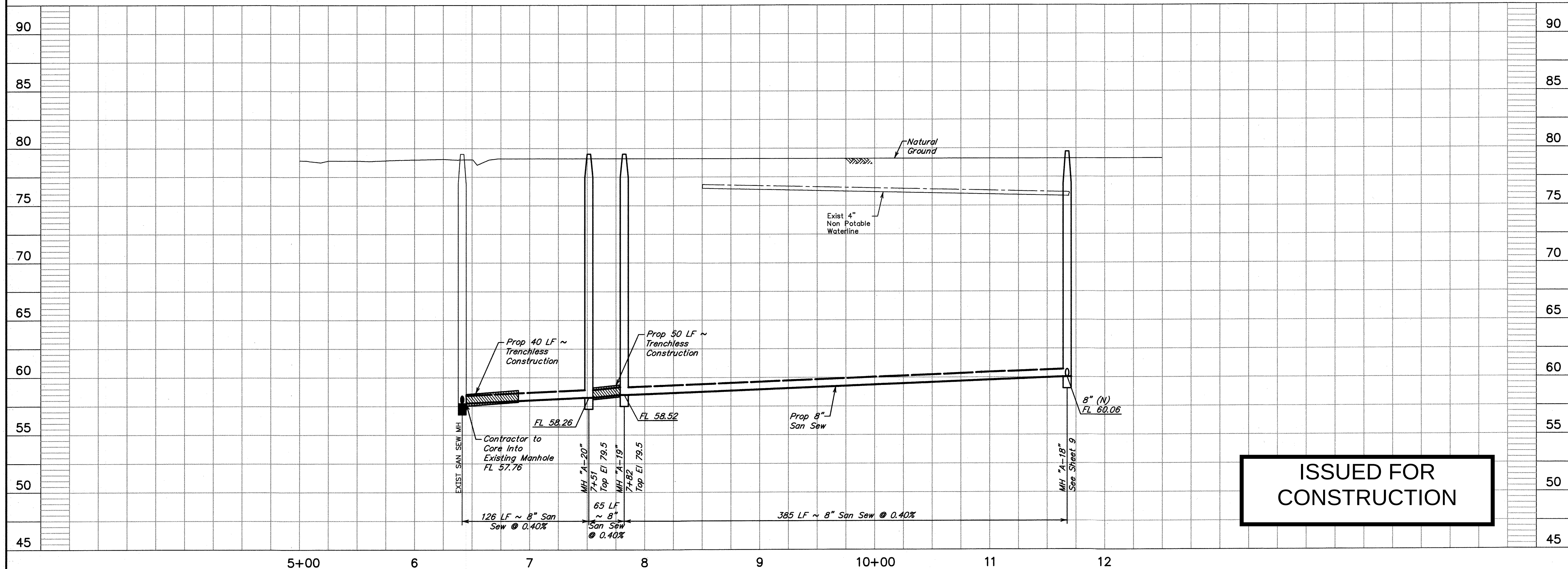


STANDARD MANHOLE CONNECTION NOTE:
CONTRACTOR SHALL CAREFULLY CORE INTO THE SIDE OF EXISTING SAN SEWER MANHOLE AND CONNECT PROPOSED

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

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: 4/2018

OFFSITE SANITARY SEWER



ISSUED FOR CONSTRUCTION

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:
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VERIFICATION OF PRIVATE UTILITY LINES

Date: _____

CenterPoint Energy/Natural Gas Facilities Verification ONLY.
(This Signature verifies that you have shown OGP Natural Gas lines correctly - not to be used for conflict verification.) (One service line are not shown.)
Signature Valid for six months.

Date: _____

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)
Signature Valid for six months.

Date: _____

Approved for AT&T Texas/SWBT underground conduit facilities only.
Signature Valid for one year.

NO.	DATE	REVISIONS	APP.

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

GREATWOOD LAKE SECTION 2A

OFFSITE SANITARY SEWER
6+41.48 TO 11+67.33

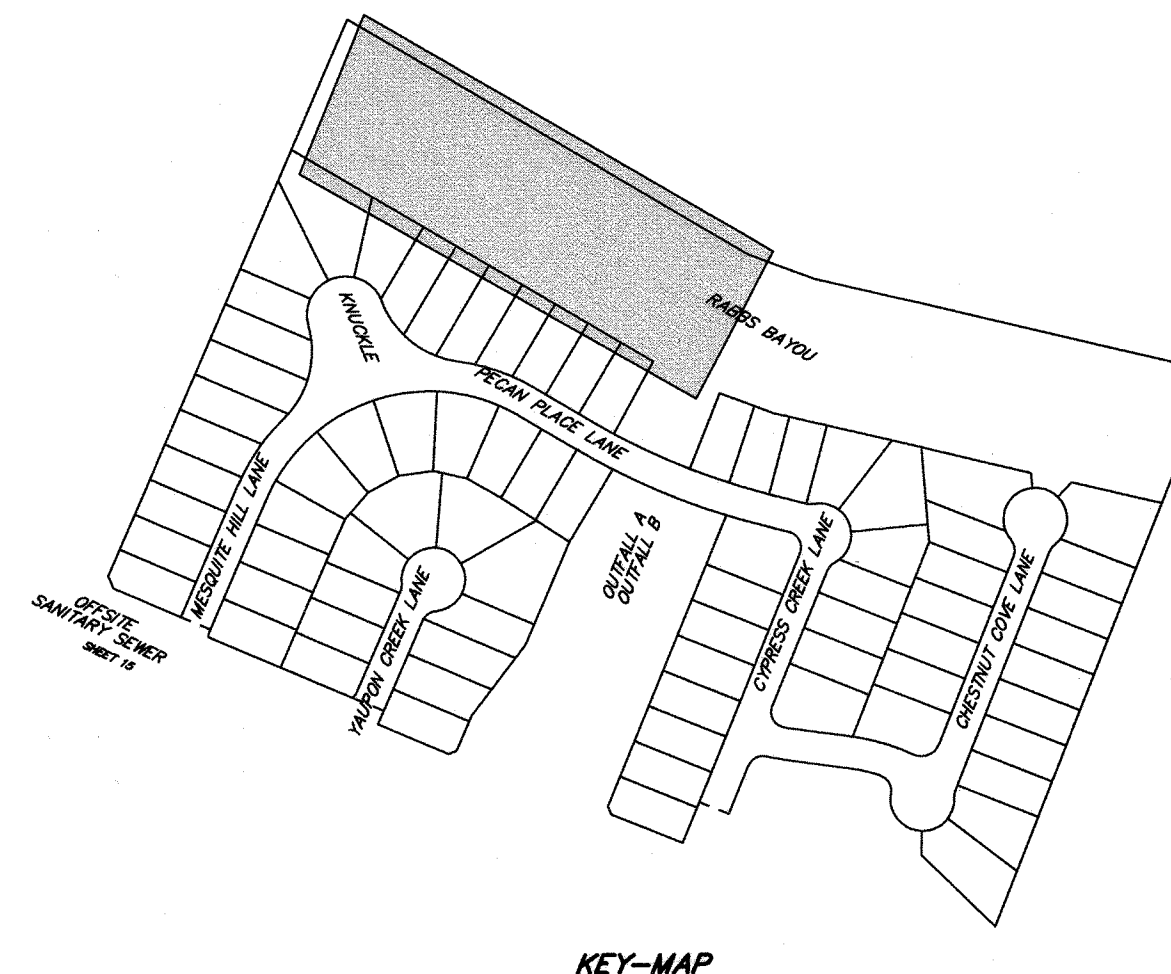
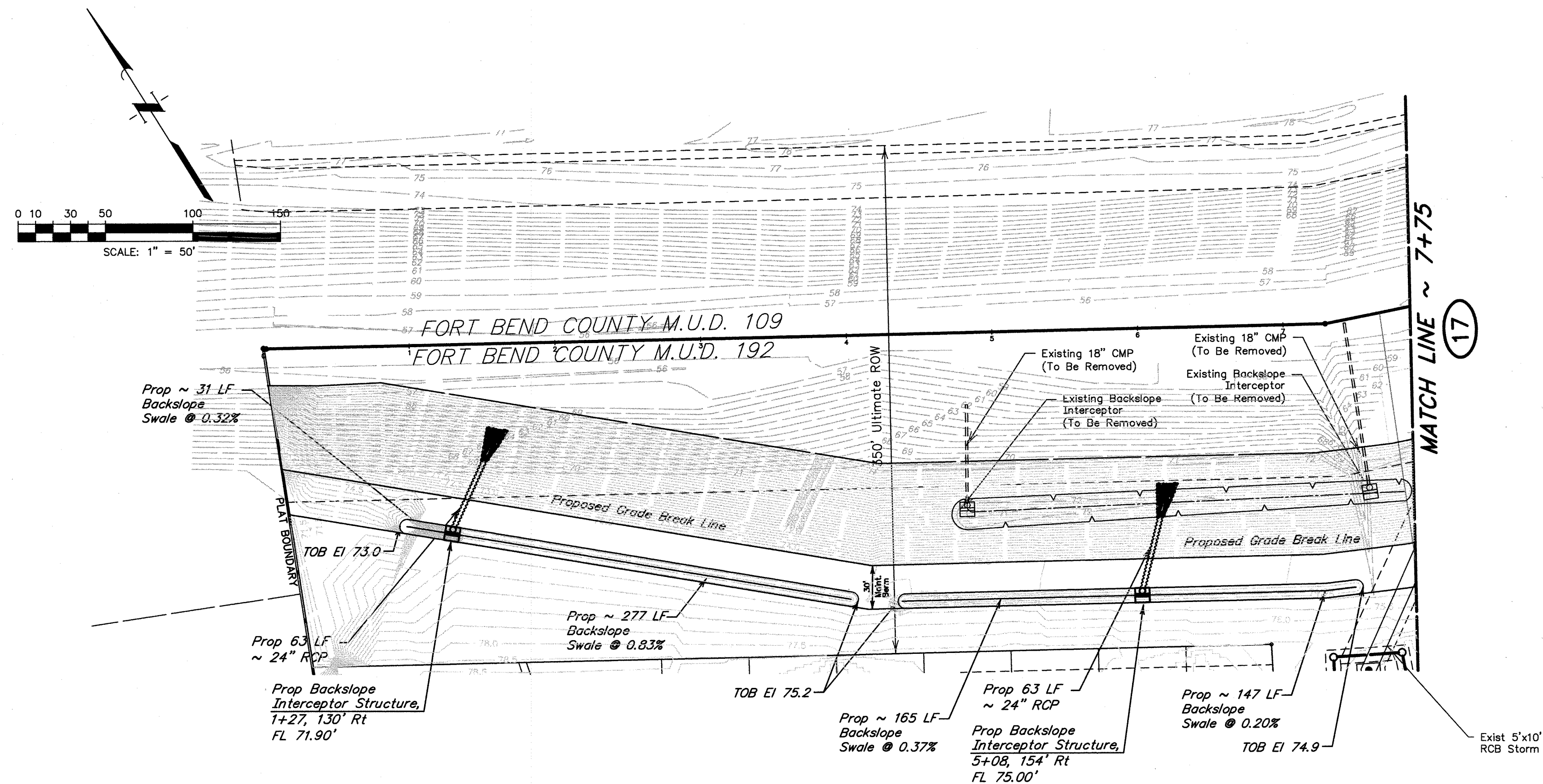
JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

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]
LYNDAY J. EVANS
2/28/18

STATE OF TEXAS
LYNDAY J. EVANS
128736
LICENSED PROFESSIONAL ENGINEER

SHEET NO.
15
OF 28



BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT HGSD72, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.6 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 8239.
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APPROVED: *[Signature]* DEVELOPMENT COORDINATOR

DATE: 4/20/18

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NOTICE:
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Date: _____

CenterPoint Energy/Natural Gas Facilities Verification ONLY.
(This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (Gas service lines are not shown.)
Signature Valid for six months.

Date: _____

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)
Signature Valid for six months.

Date: _____

Approved for AT&T Texas/SWBT underground conduit facilities only.
Signature Valid for one year.

NO.	DATE	REVISIONS	APP.

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

GREATWOOD LAKE SECTION 2A

**RABBS BAYOU
GRADING I
0+80.35 TO 6+00.00**

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

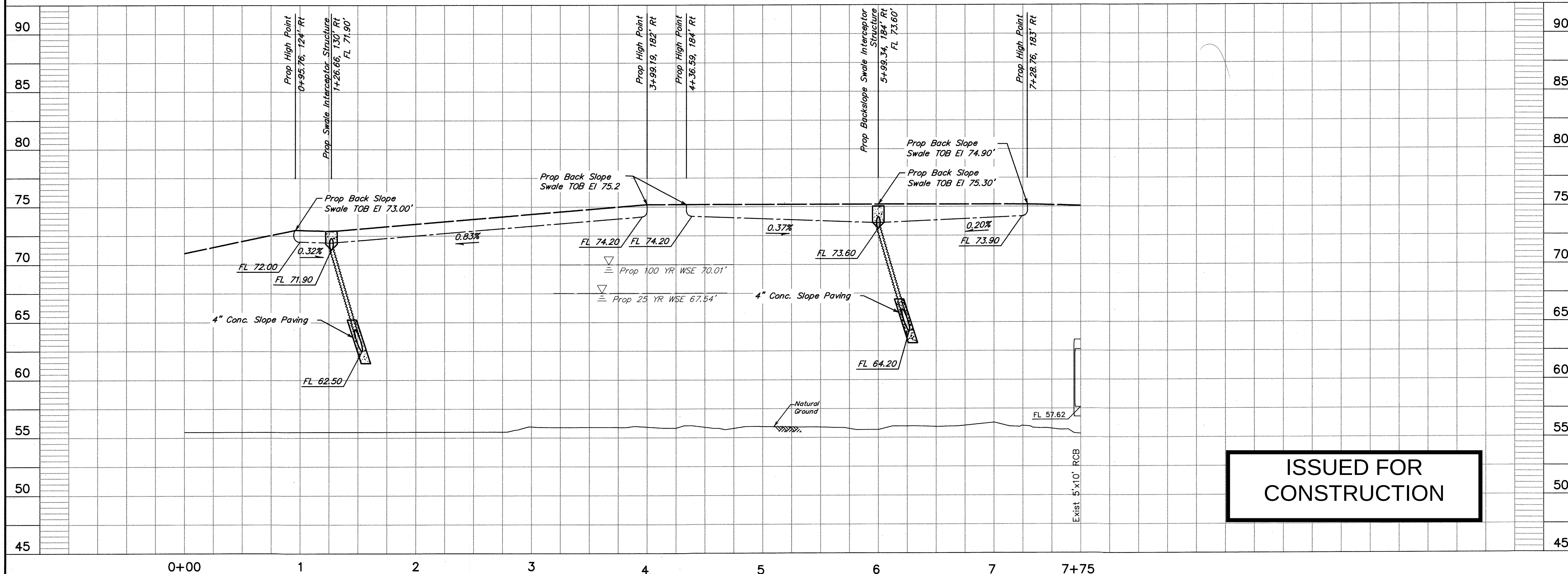
SCALE: 1"=50' H., 1"=5' V. DGN. BY: KCM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO. _____
SUBMITTED: _____ SURV. BY: _____
F.B. NO. _____

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

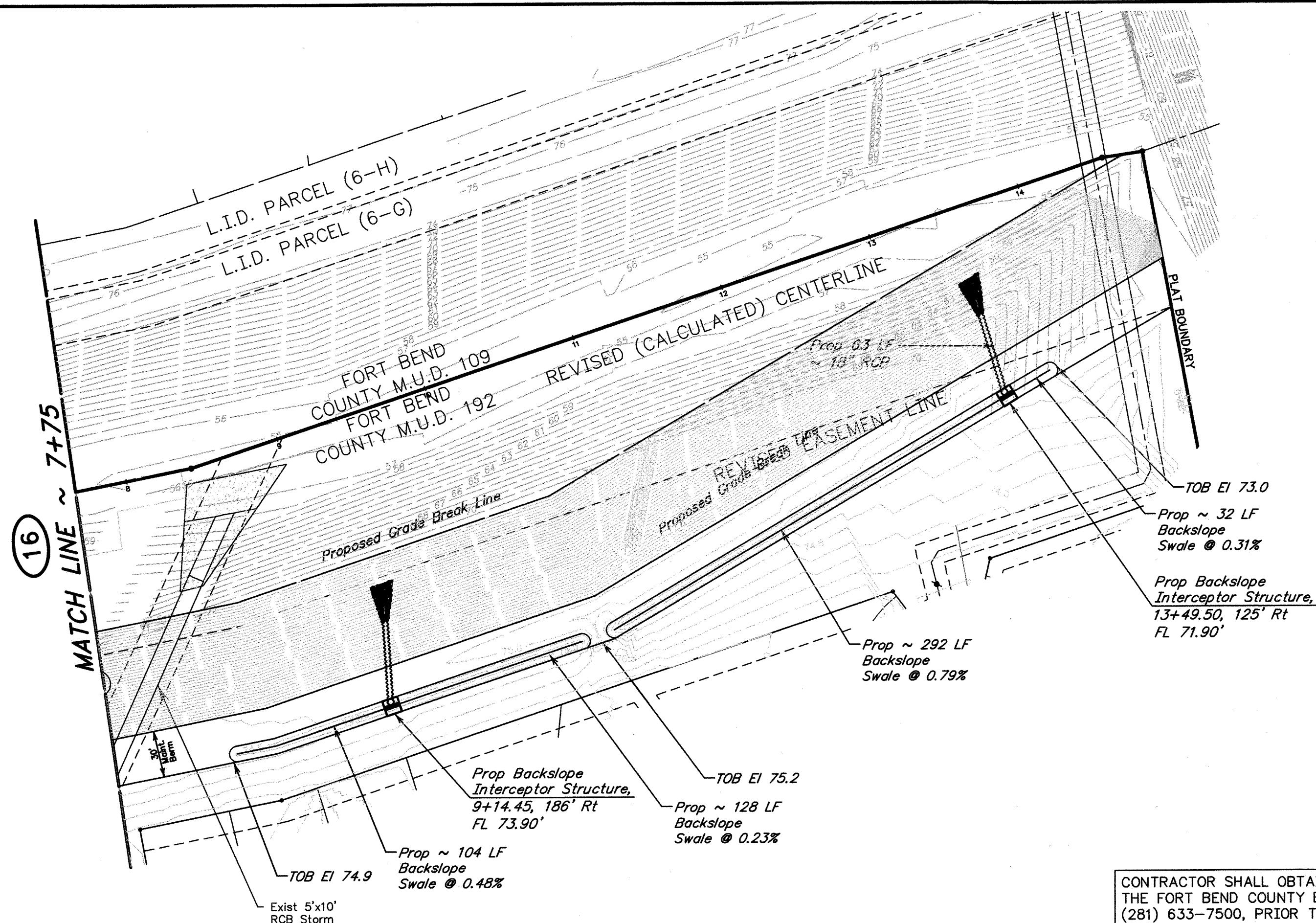
LYNDAY J. EVANS
126736
LICENSED PROFESSIONAL ENGINEER

SHEET NO. 16 OF 28

RABBS BAYOU GRADING I



ISSUED FOR
CONSTRUCTION



NORTHEAST OF A 90 DEGREE
APPROXIMATELY 1660 FEET
OF RABBIT CROSSING AND M.

ELEVATION = 81.13'
Adjustment)

RABBIT BAYOU

PINEW PLANT LANE

WINDY HILL LANE

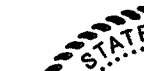
KILPATRICK LANE

CYPRESS CREEK LANE

CROSBY LANE

OPPOSITE CANTANT SUMNER
2007-12

[illegible]


 Lyndsay J Evans
 2/28/18

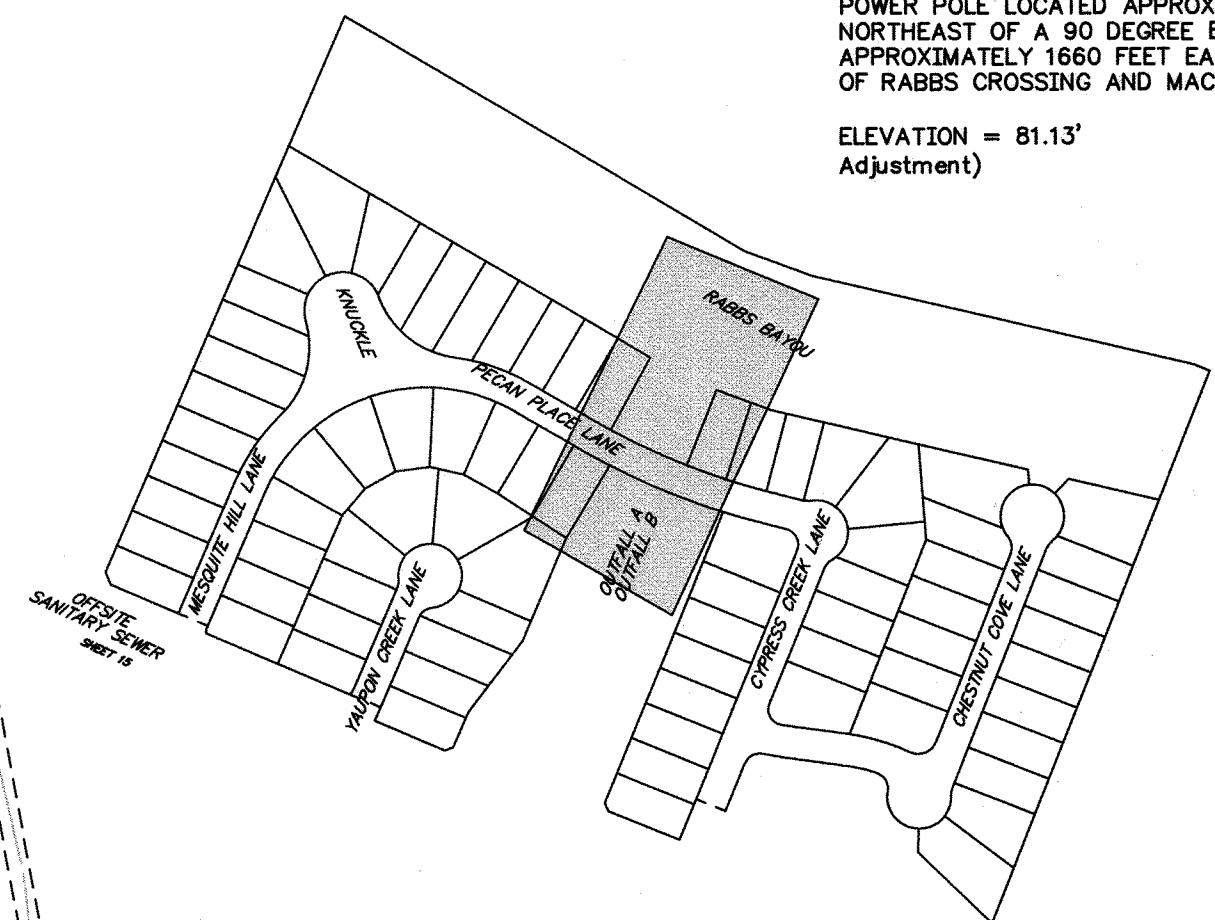
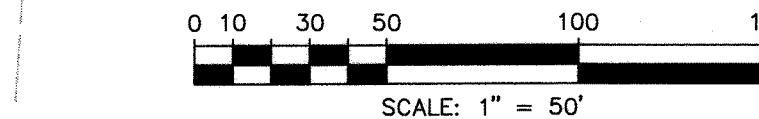
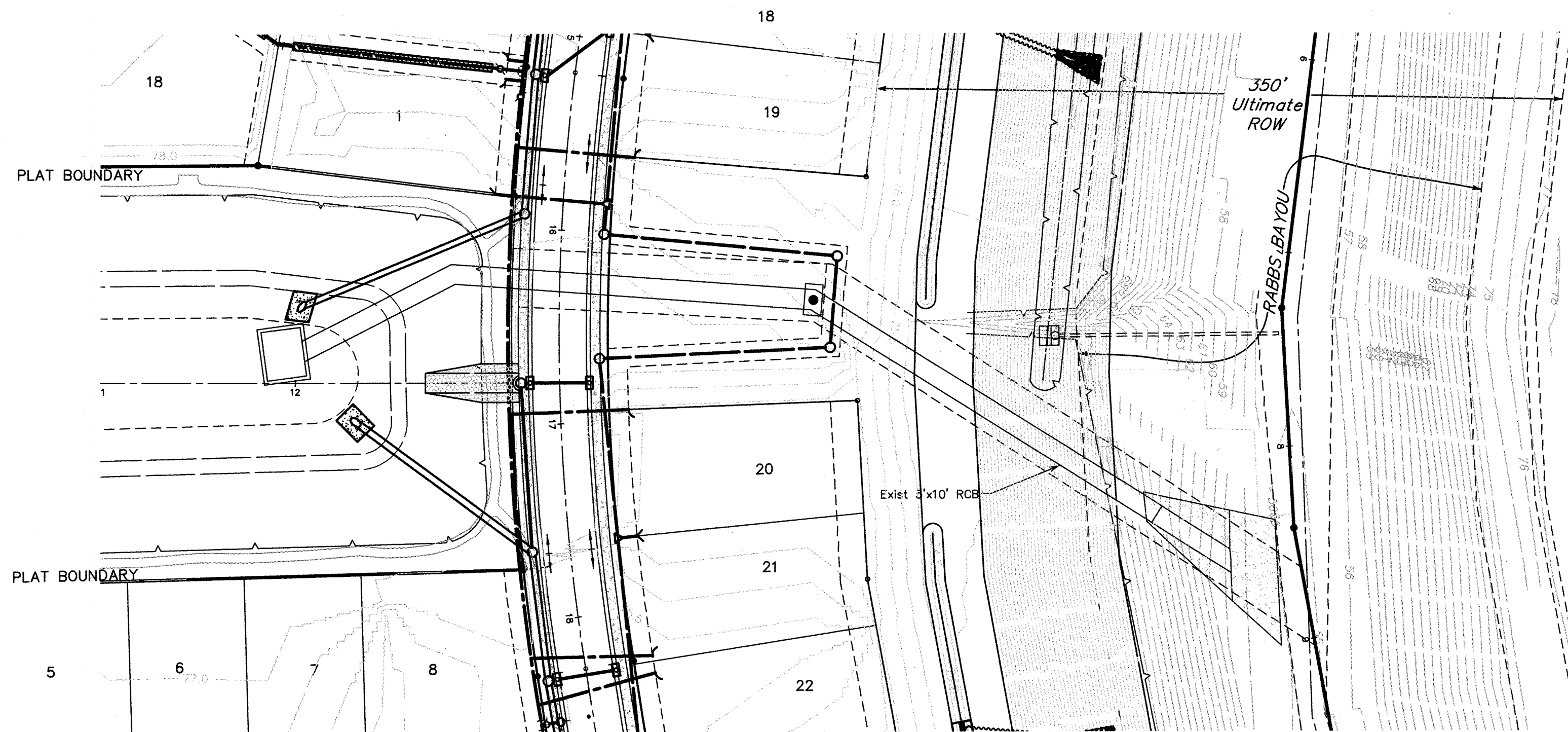
SHEET NO.
 17
 OF 28

SHEET NO.
17
OF 28

RABBS BAYOU GRADING II

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 RABBS BAYOU RIGHT-OF-WAY.





BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT HGS072, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.6 FEET (NAVD88).

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KEY-MAP

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.

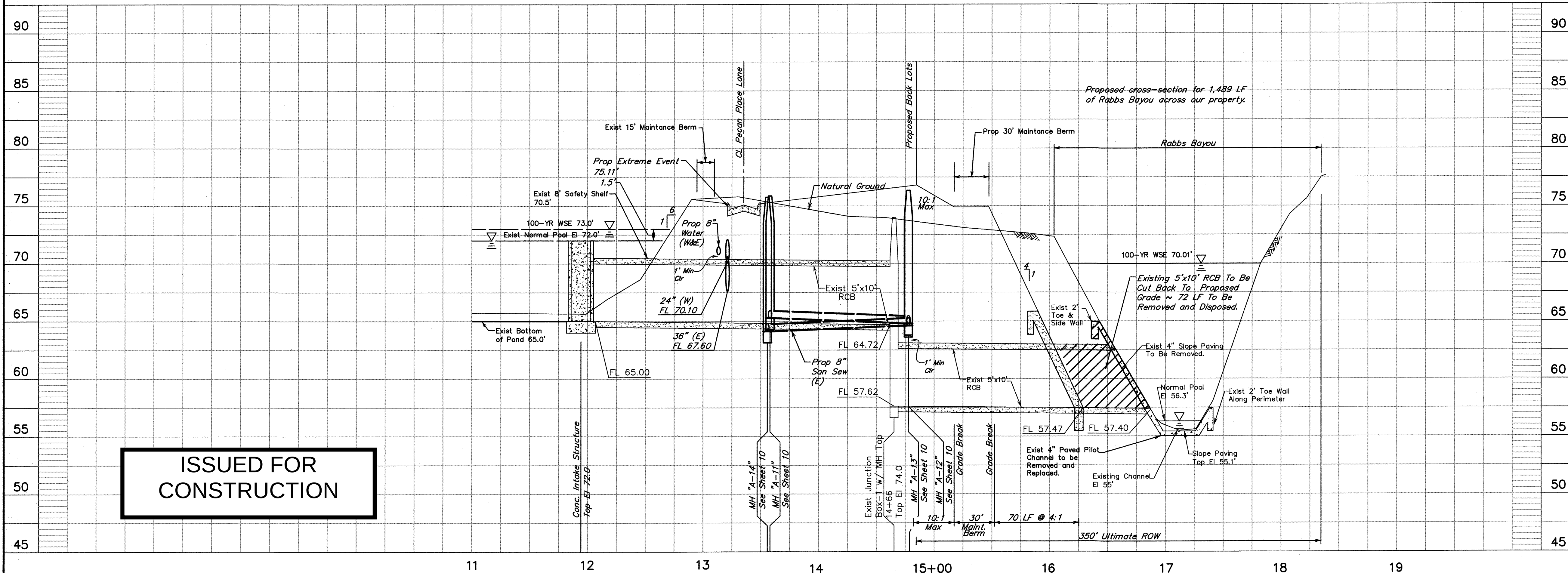
APPROVED: *[Signature]* DEVELOPMENT COORDINATOR

DATE: 4-20-18

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

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EXISTING BASELINE A



ISSUED FOR CONSTRUCTION

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Date:			
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Approved for AT&T TDS/MSB underground conduit facilities only. Signature Valid for one year.			
Date:			
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

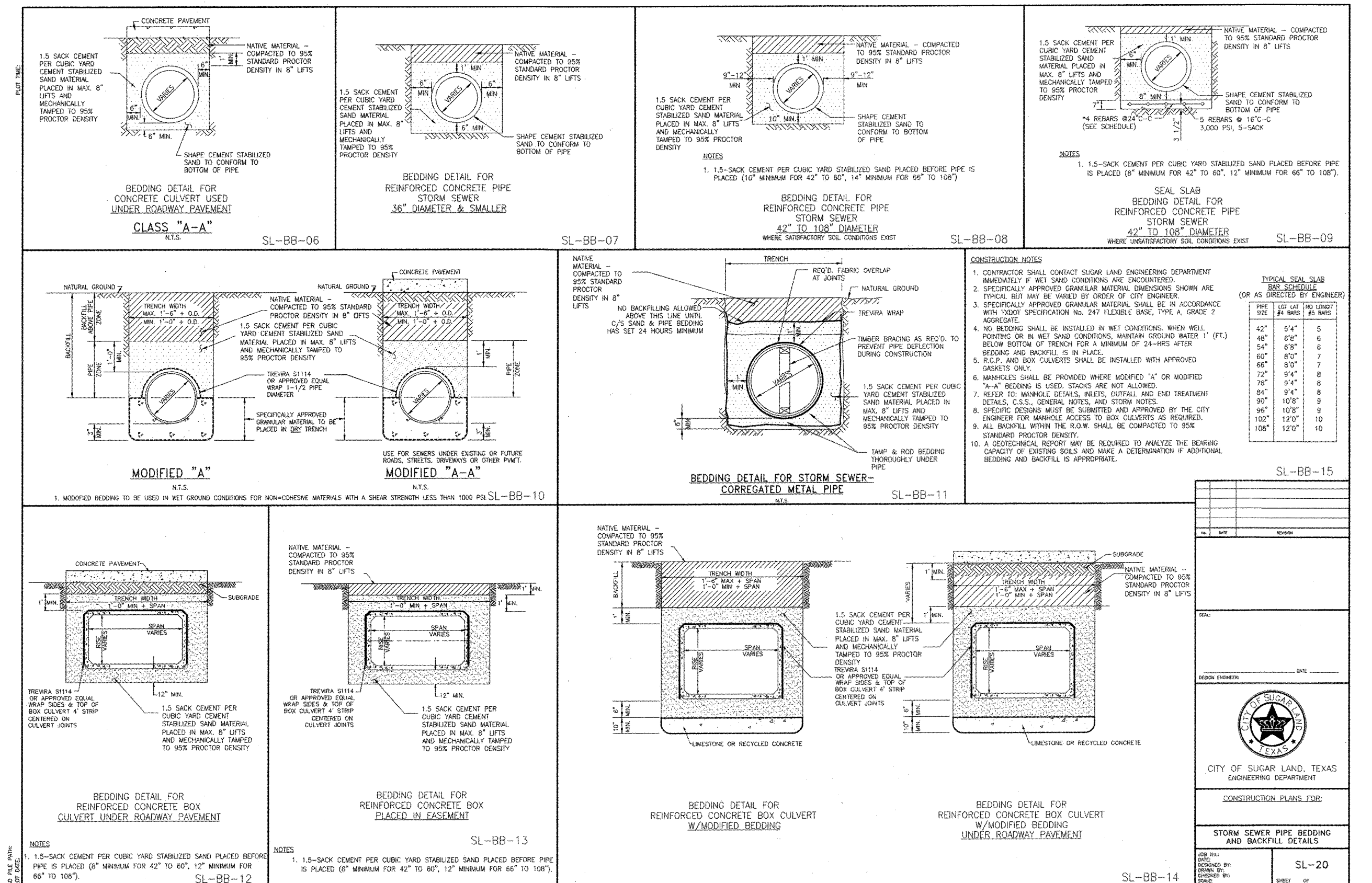
JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

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. _____

Lyndsay J. Evans
2/28/18

LYNDSAY J. EVANS
126796
LICENSED PROFESSIONAL ENGINEER

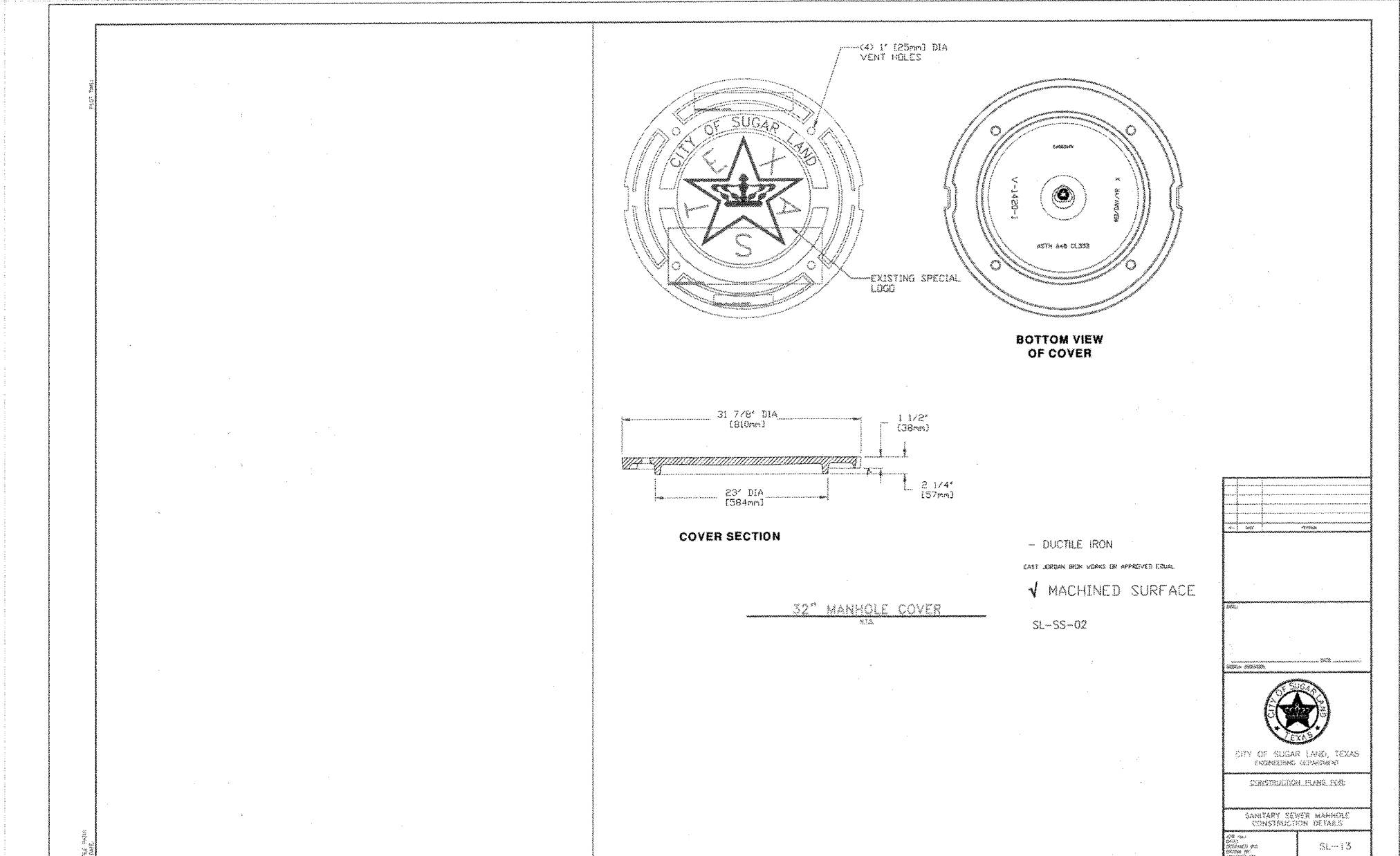
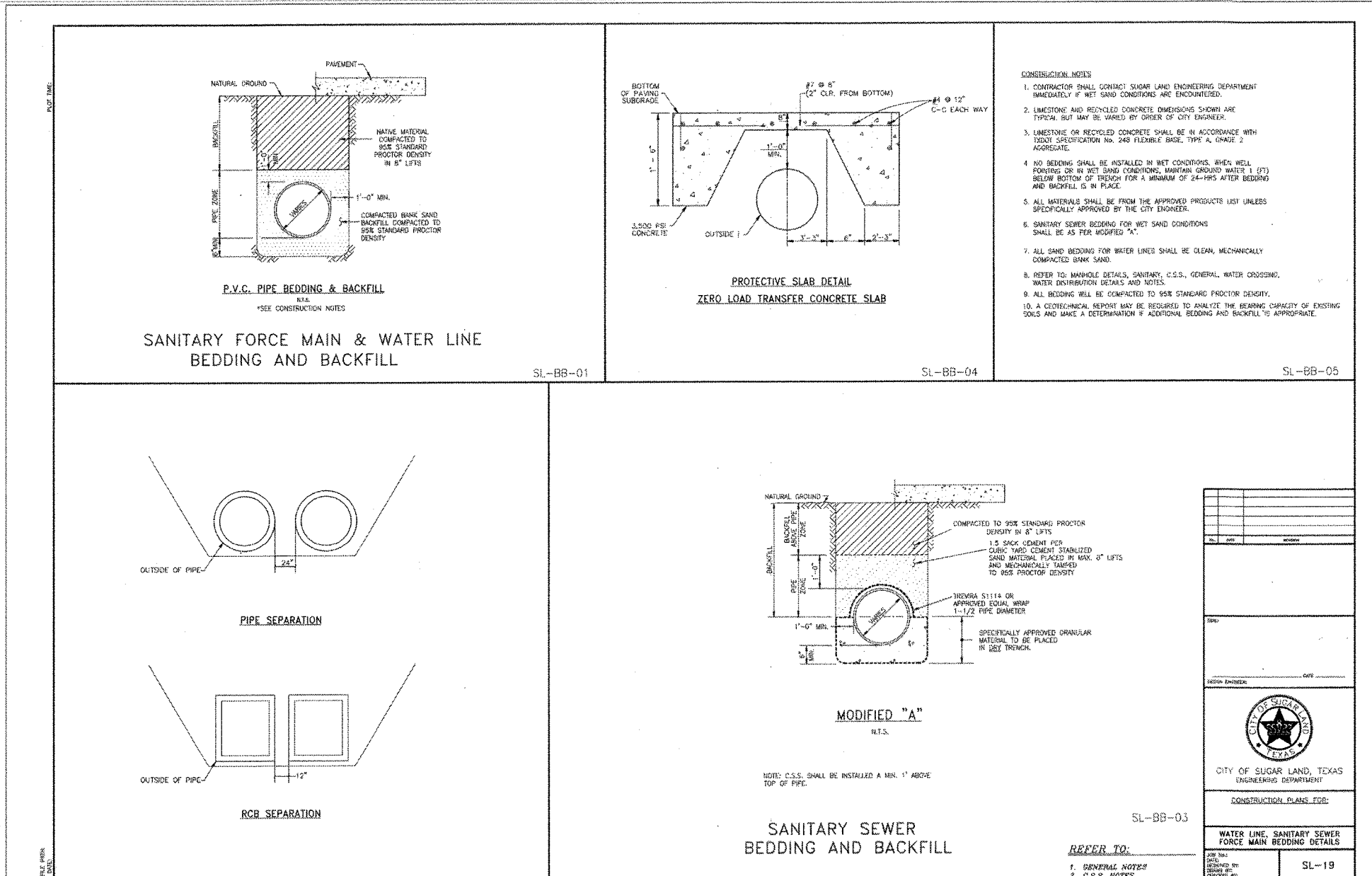
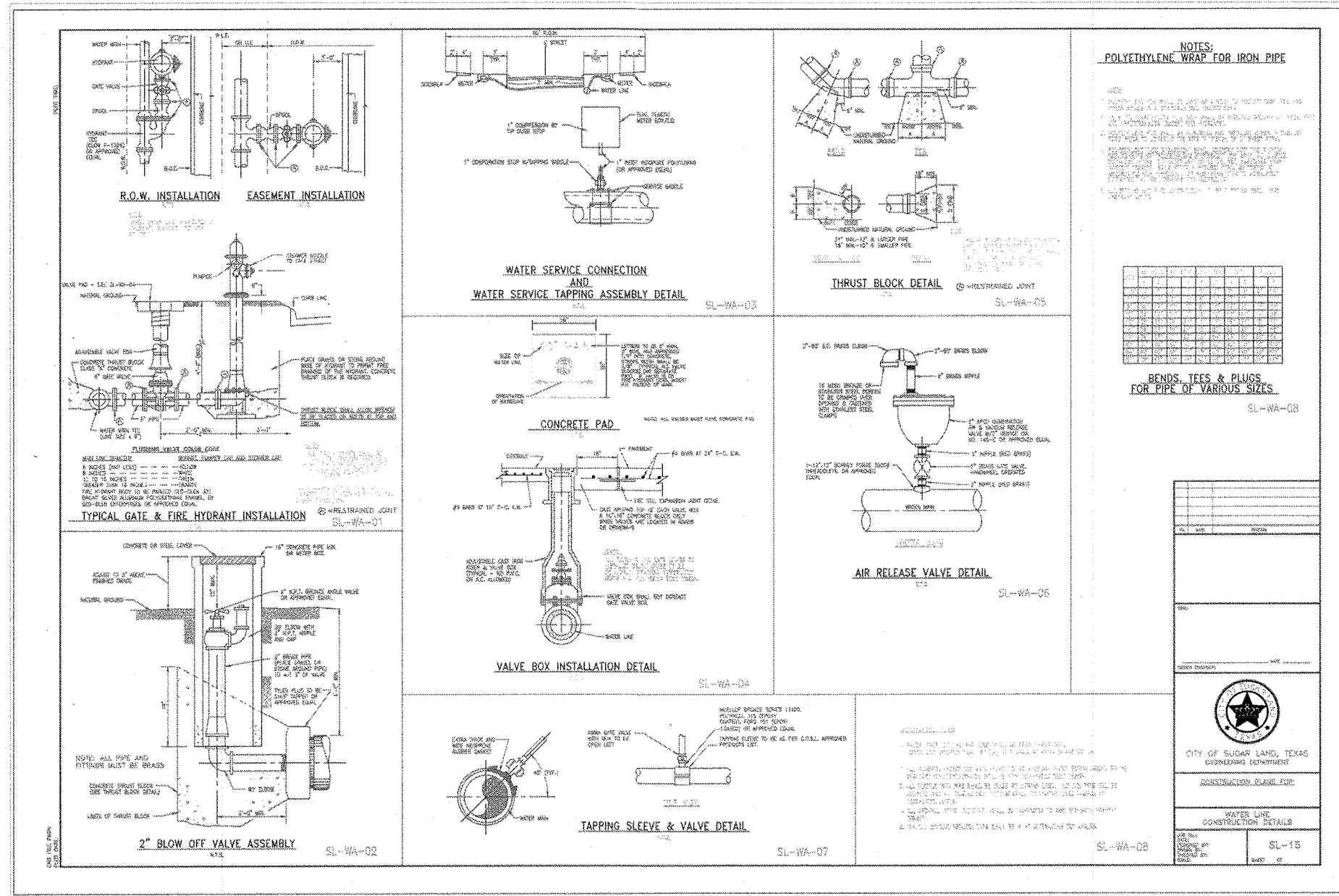
SHEET NO.
18
OF 28



STATE OF TEXAS
★
LYNDSEY J. EVANS
128736
LICENSED
PROFESSIONAL ENGINEER

Lyndsey J Evans
2/28/18

SHEET NO.
19
OF 28



ISSUED FOR
CONSTRUCTION

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: *CAD*
DEVELOPMENT COORDINATOR

DATE: 4-2018

NO.	DATE	REVISIONS	APP.

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

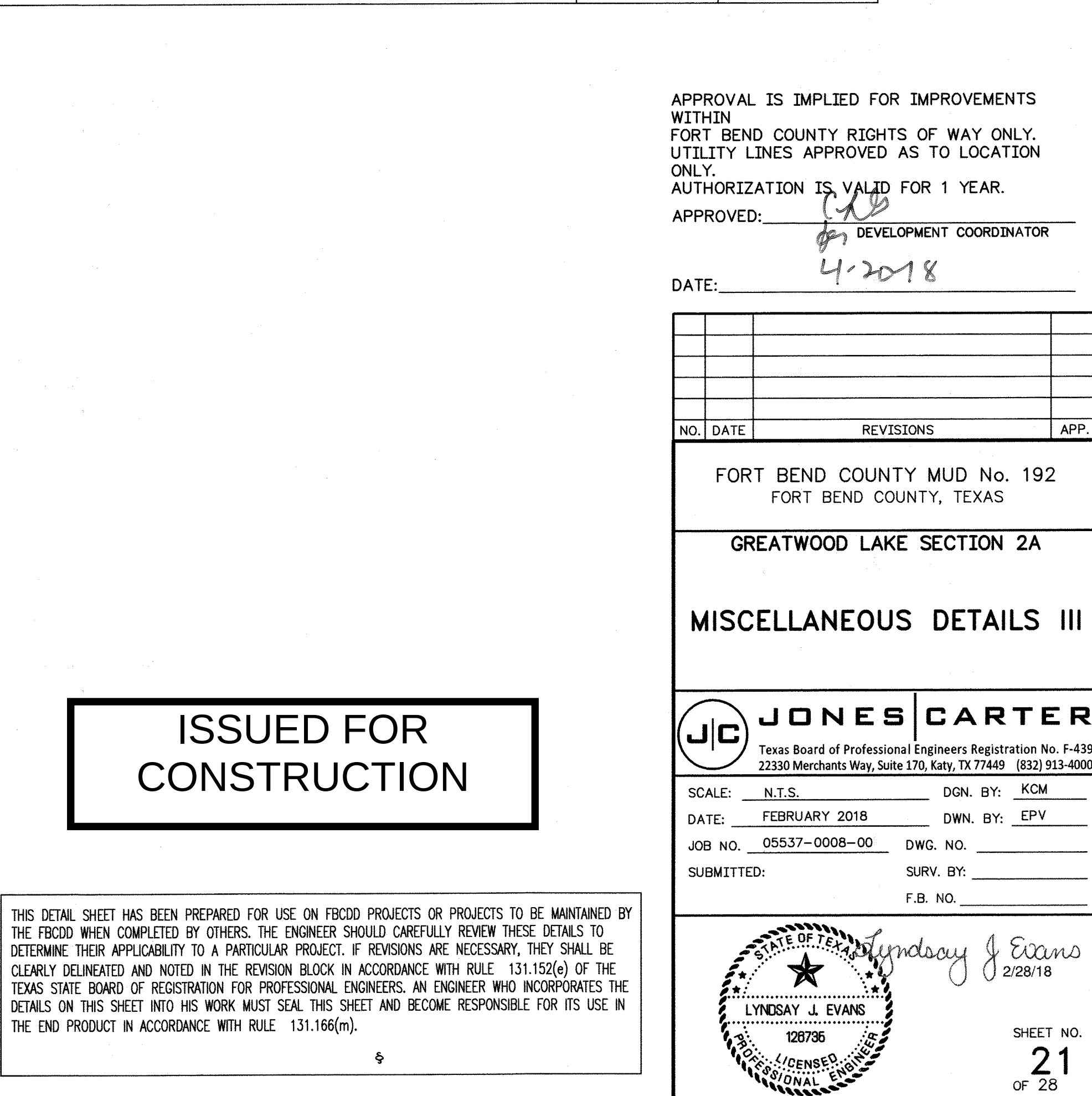
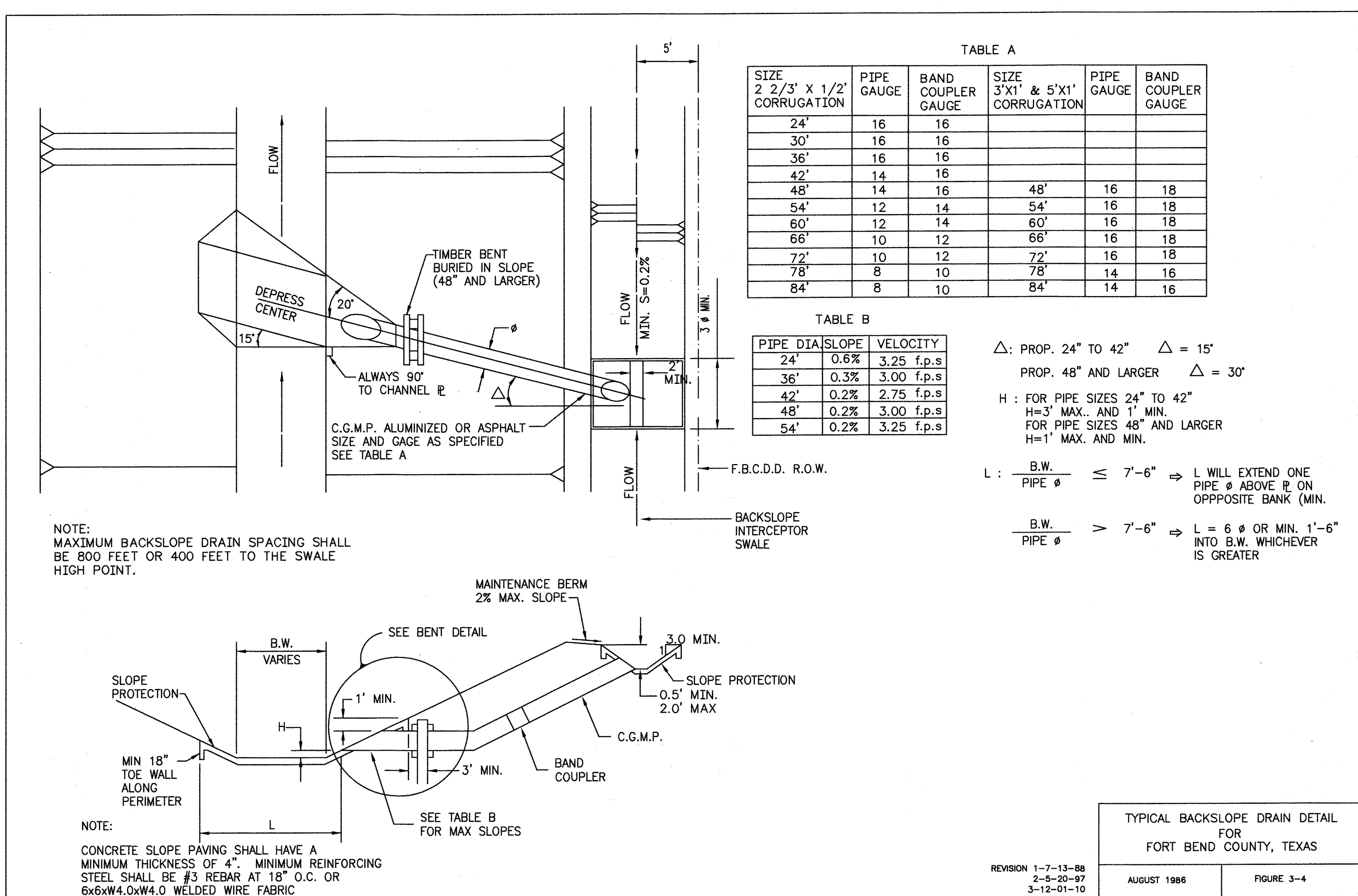
GREATWOOD LAKE SECTION 2A

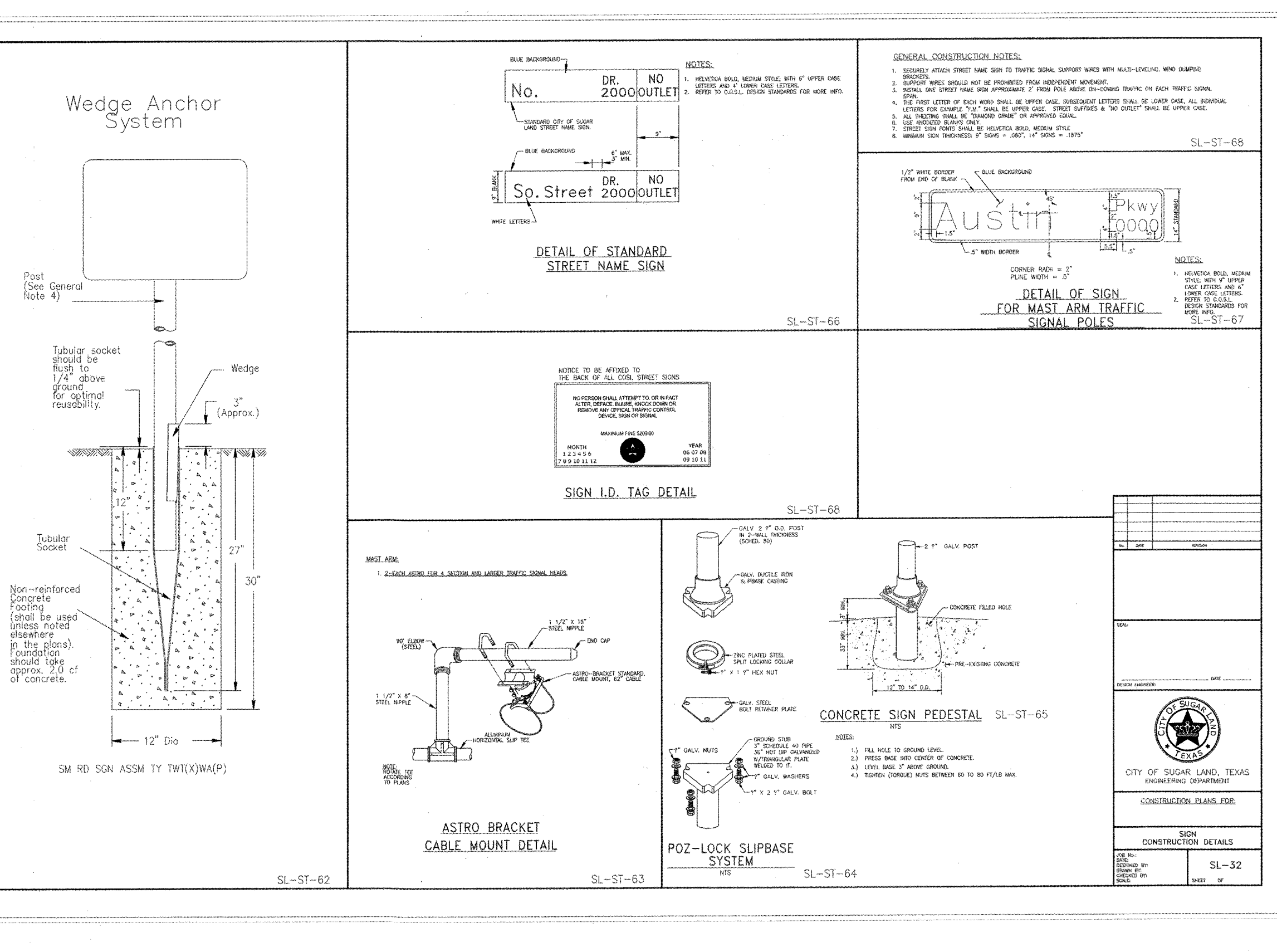
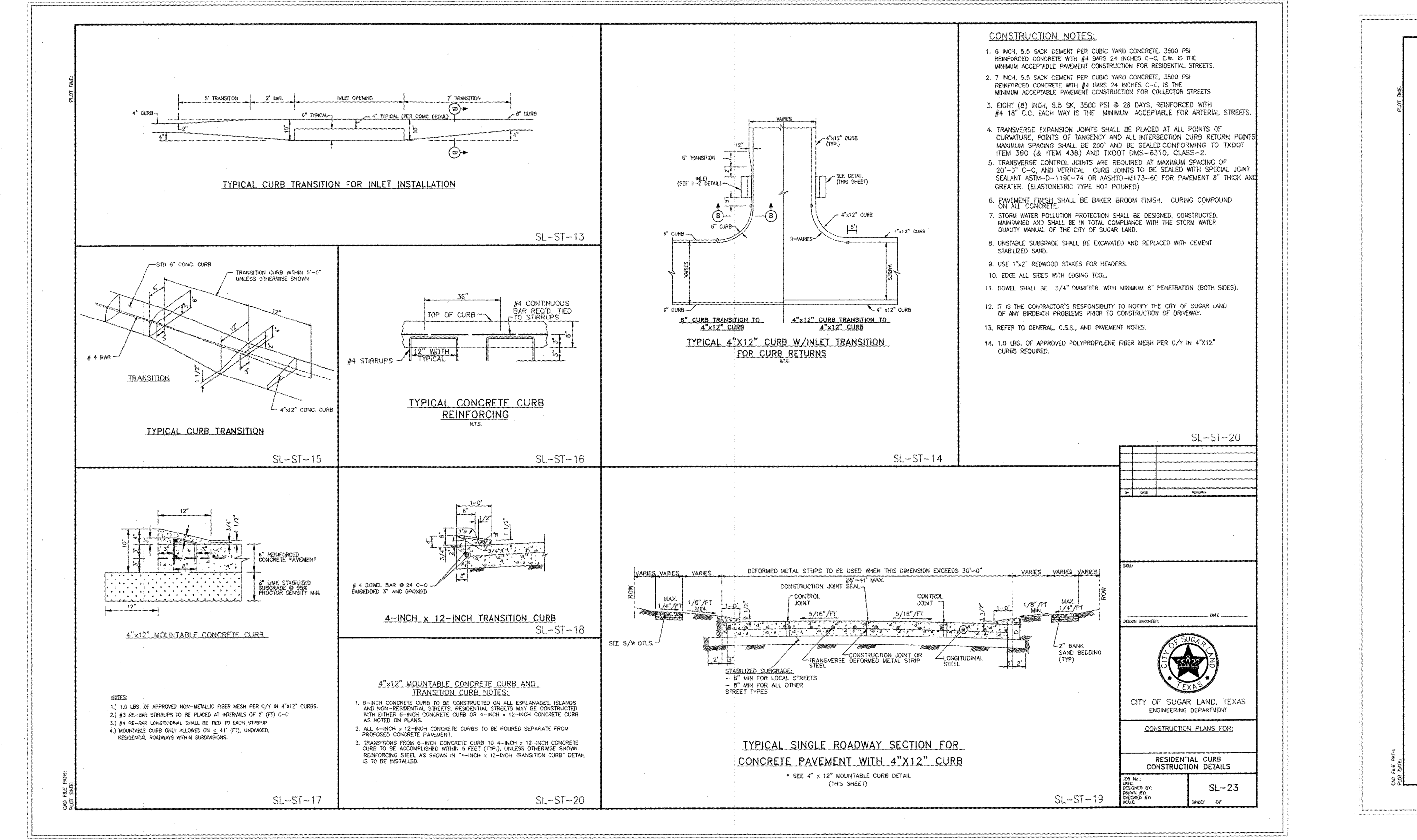
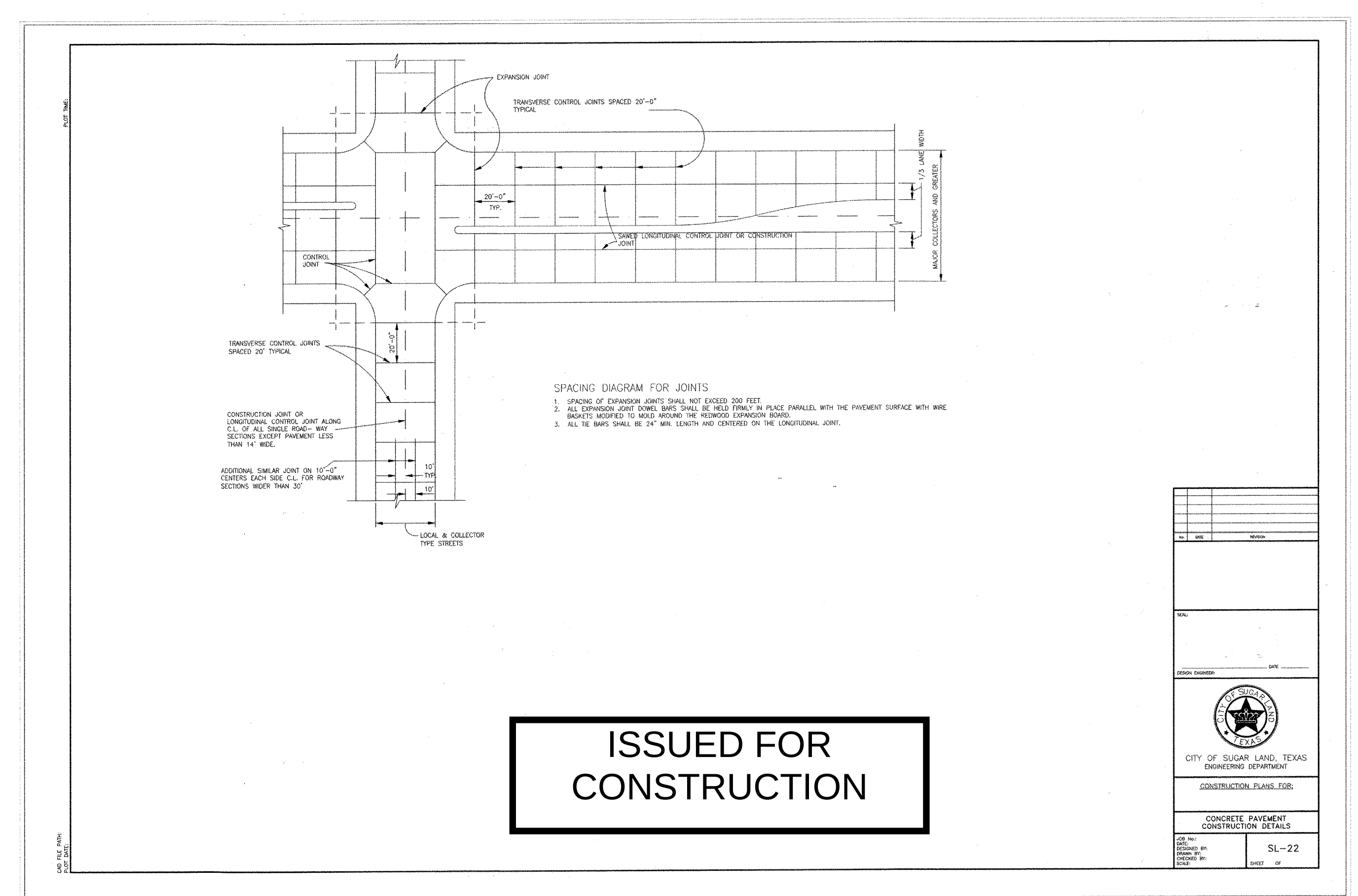
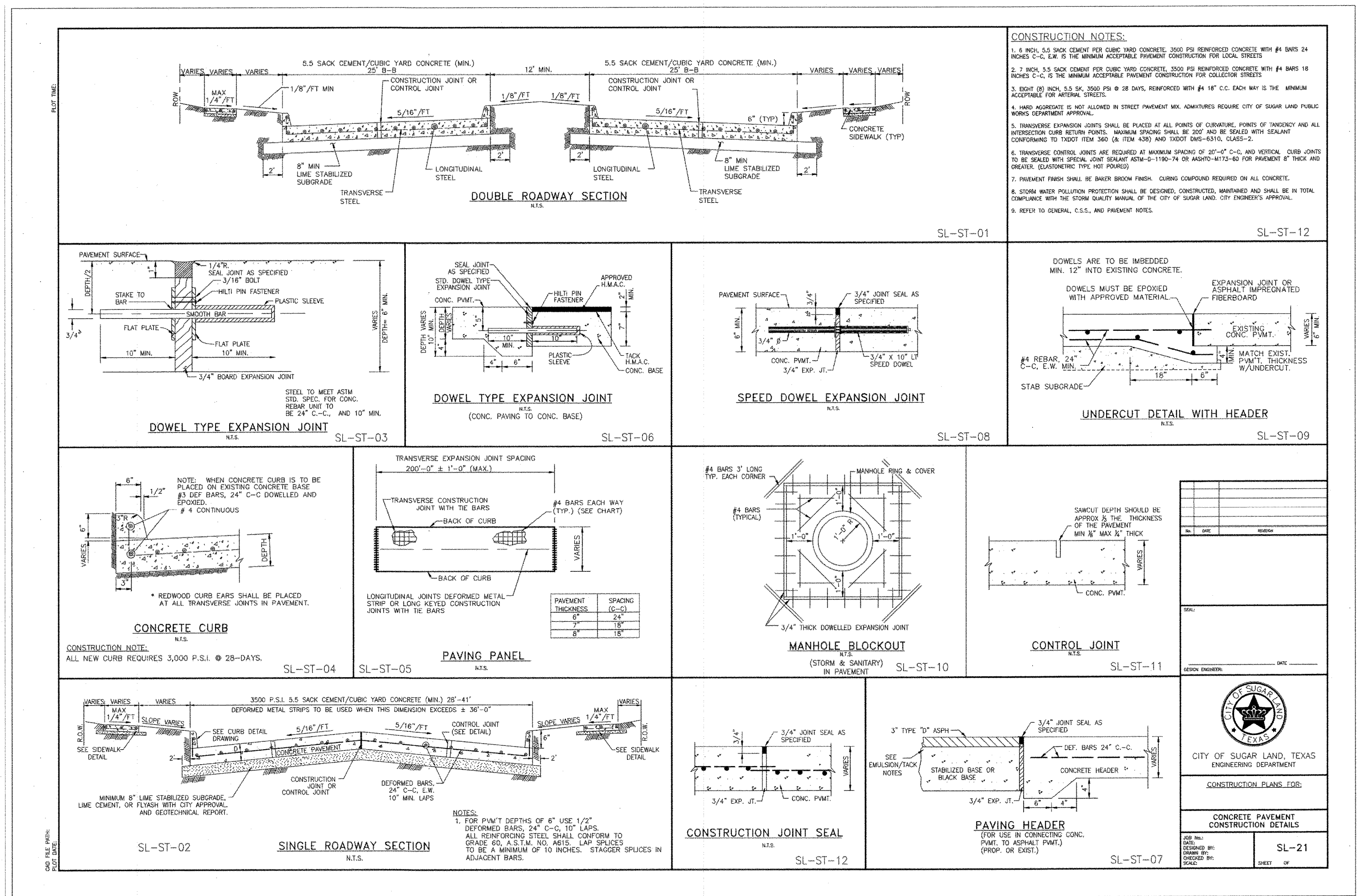
MISCELLANEOUS DETAILS II

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: N.T.S. DGN. BY: KCM
DATE: FEBRUARY 2018 DWN. BY: EPV
JOB NO. 05537-0008-00 DWG. NO. 1
SUBMITTED: SURV. BY: F.B. NO.

STATE OF TEXAS
LYNDSEY J. EVANS
2/28/18
128736
PROFESSIONAL ENGINEER
SHEET NO. 20
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

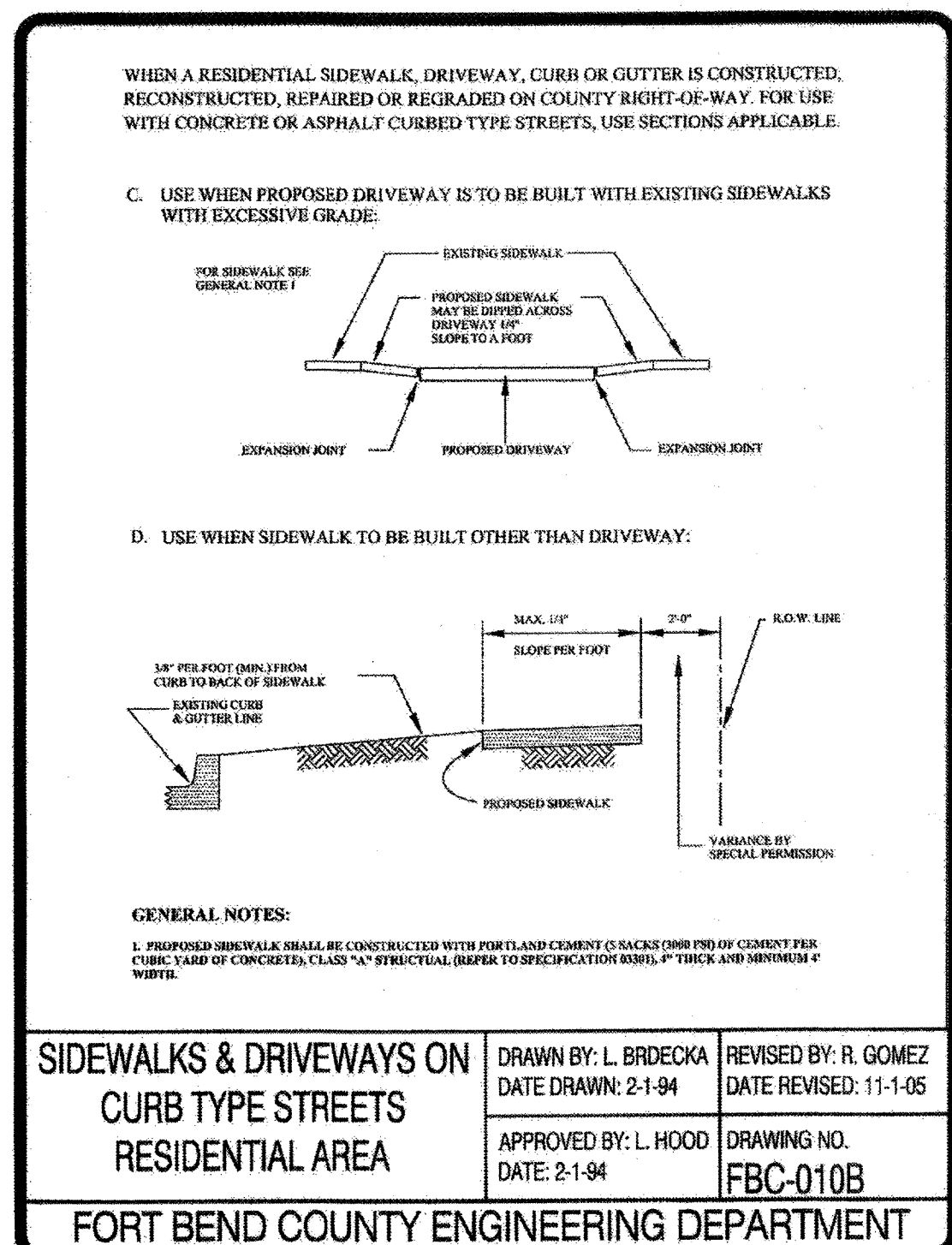
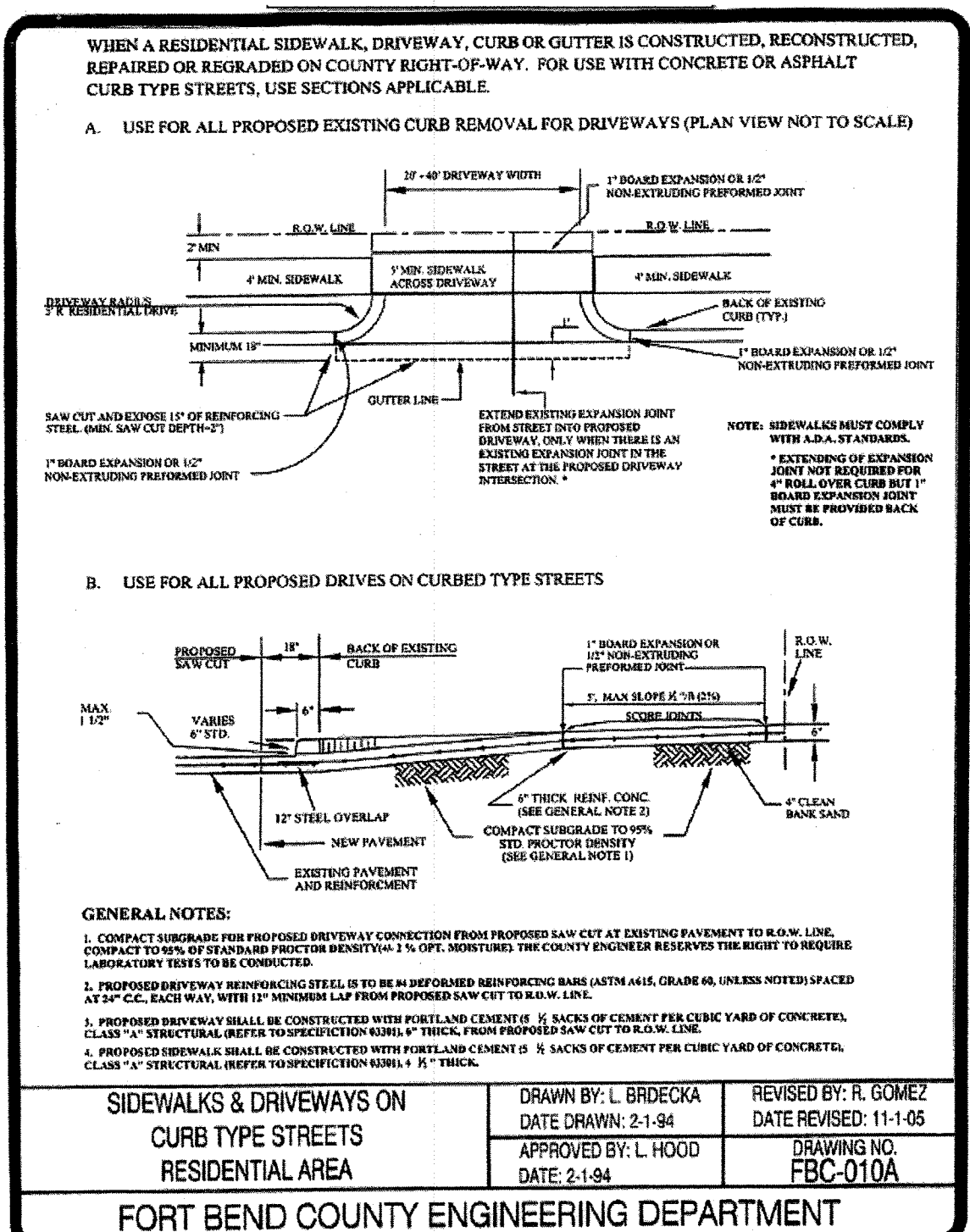
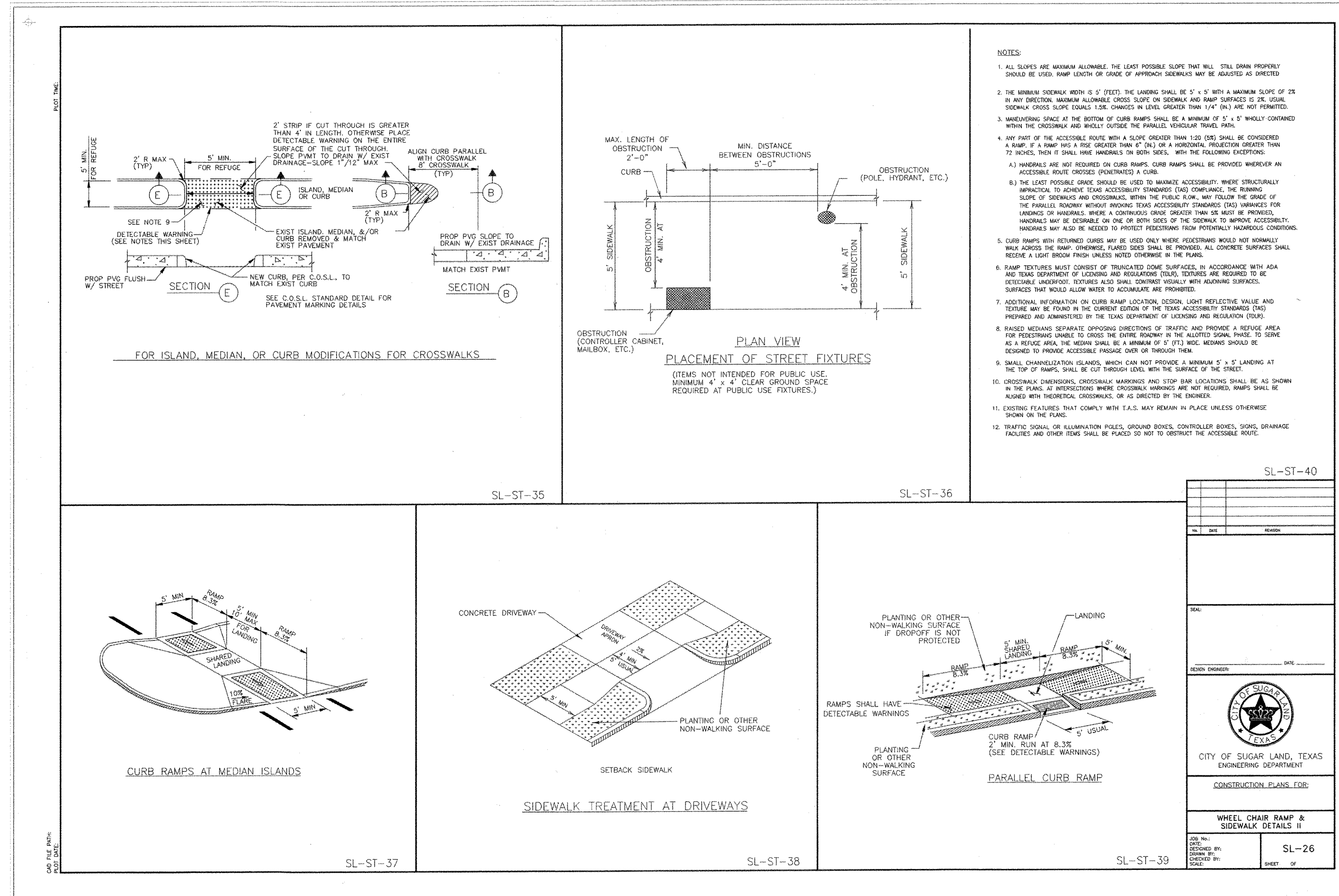
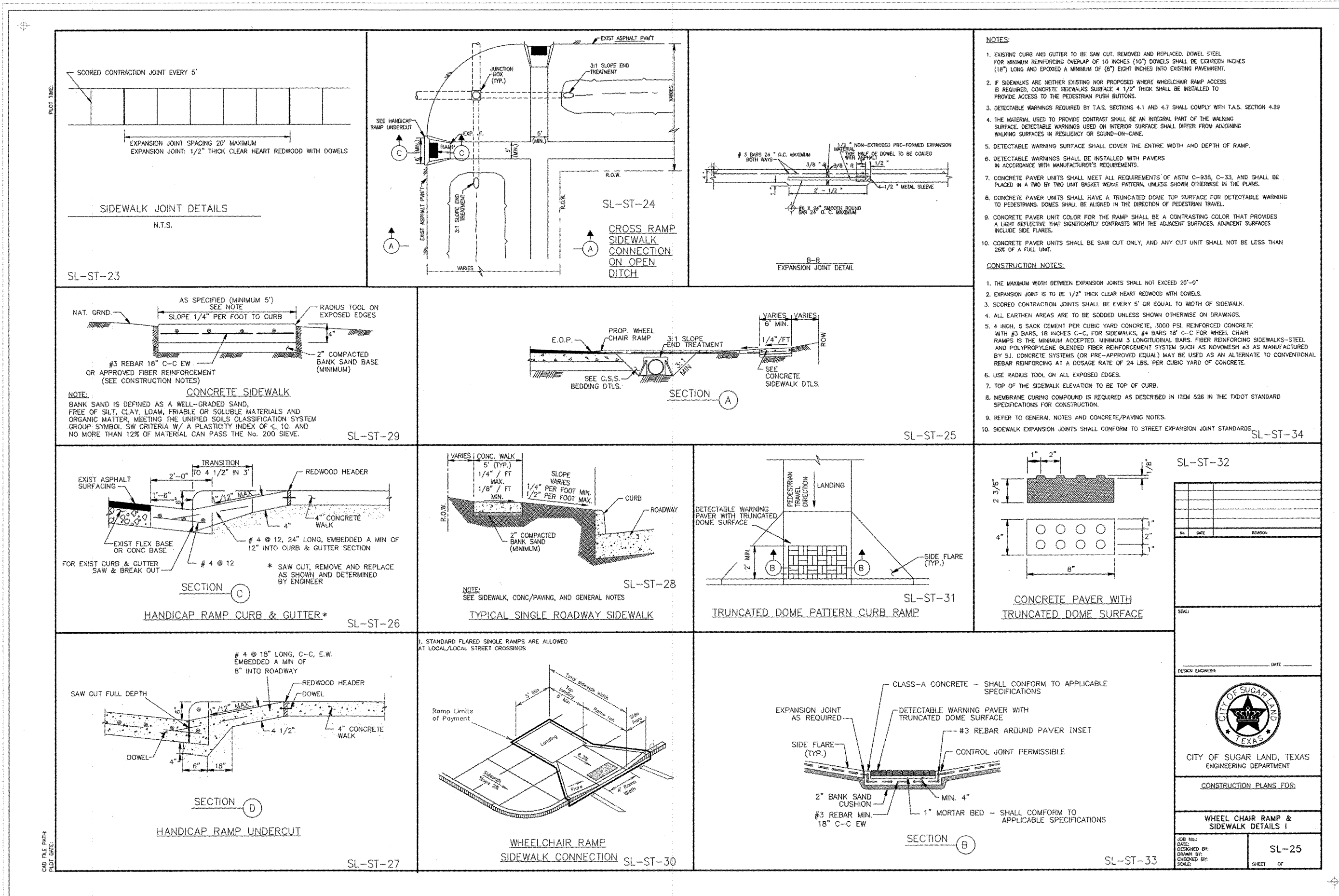
GREATWOOD LAKE SECTION 2A

PAVING DETAILS I

JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

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.
LYNDASAY J. EVANS
128736
PROFESSIONAL ENGINEER

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

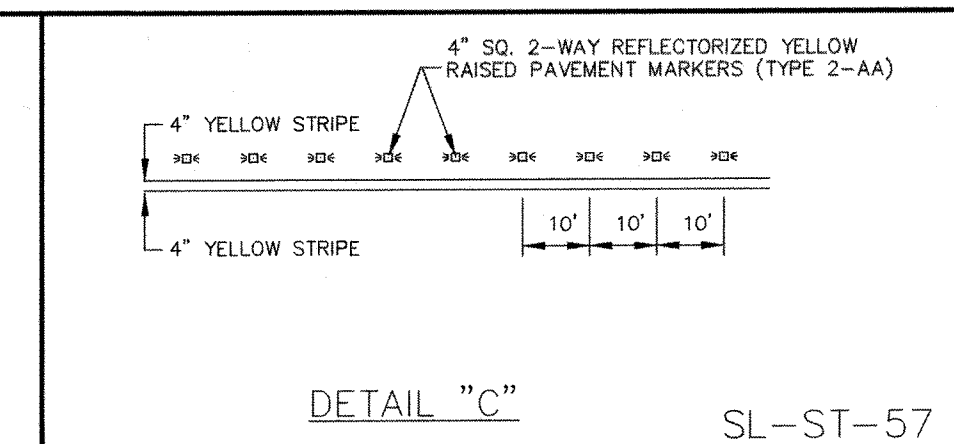
JONES CARTER
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22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

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DATE: FEBRUARY 2018 DWN. BY: EPV
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SUBMITTED: SURV. BY:
F.B. NO.
F.B. NO.
F.B. NO.

LYNDAY J. EVANS
128796
LICENSED PROFESSIONAL ENGINEER

ISSUED FOR CONSTRUCTION

SHEET NO. 23 OF 28

SL-ST-58

SL-ST-58

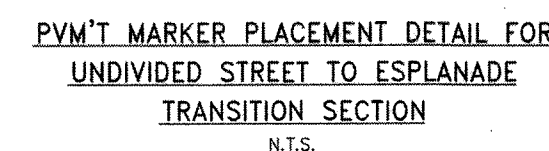


DETAIL "D" SL-ST-58

12. PAVEMENT SURFACE AREAS PRIOR TO PLACEMENT OF PAVEMENT MARKINGS, AND/OR RAISED PAVEMENT MARKERS SHALL BE CLEANED IN ACCORDANCE WITH THE C.O.S.L. STANDARDS. CONCRETE SURFACES SHALL BE CLEANED BY ABRASIVE BLASTING MEDIUM. ASPHALT PAVEMENT SURFACES SHALL BE CLEANED BY BRUSHING, WASHING, COMPRESSED AIR, AND/OR HIGH-PRESSURE WATER. AREAS MUST BE FREE OF CURING MEMBRANE, DIRT, GRAPE, LOOSE AND/OR FLAKING EXISTING MARKERS AND OTHER FORMS OF DEBRIS.
13. ALL ESPALANDE NOSES, AND CURBS IN LEFT TURN BAY'S 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.
14. ALL ROADWAYS WITHOUT CURB SHALL HAVE A SOLID 4" WHITE REFLECTORIZED STRIPE 12" INSIDE THE EDGE OF PAVEMENT.
15. WITHIN A TANGENT SECTION THE TYPE "C" PAVEMENT MARKERS CAN BE PLACED AT 40'-C/O ON ROADWAYS WITHOUT CURB AND GUTTERS.
16. ALL STREET CROSSINGS SHALL COMPLY WITH T.A.S. AND A.D.A., SEE HANDICAP CROSS DETAIL.
17. 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.
18. ALL MARKINGS SHALL HAVE A UNIFORM CROSS-SECTION, AND THE DENSITY AND QUALITY OF THE MARKING SHALL BE UNIFORM THROUGHOUT THEIR THICKNESS.
19. PAVEMENT MARKINGS PLACED THAT ARE NOT IN ALIGNMENT OR SEQUENCE, AS SHOWN ON THE PLANS OR STATED IN THE PROJECT SPECIFICATIONS SHALL BE REMOVED AND REPLACED AT THE OWNER'S EXPENSE.
20. FOR SKW INTERSECTIONS AND STREET WIDTHS NOT SHOWN, COORDINATE WITH THE C.O.S.L., ENGINEERING DEPARTMENT (281) 275-2780
21. PRIOR TO PLACING MARKING, CONTACT COSL TO COORDINATE AND REVIEW IN THE FIELD COORDINATE WITH THE C.O.S.L., ENGINEERING DEPARTMENT (281) 275-2780

SL-ST-61

SL-ST-53



TYPICAL BUTTON DETAIL FOR CURVES $\geq 60^\circ$

SL-ST-54



SL-ST-51

TYPICAL TWO-WAY LEFT TURN SECTION

SL-ST-52

Diagram illustrating the placement of a 4" 2-WAY REFLECTORIZED YELLOW RAISED PAVEMENT MARKERS (TYPE II A-A) in a LEFT TURN LANE. The diagram shows the marker's position relative to the lane width (12' MIN.) and the distance from the curb (80').

CAD FILE PATH:

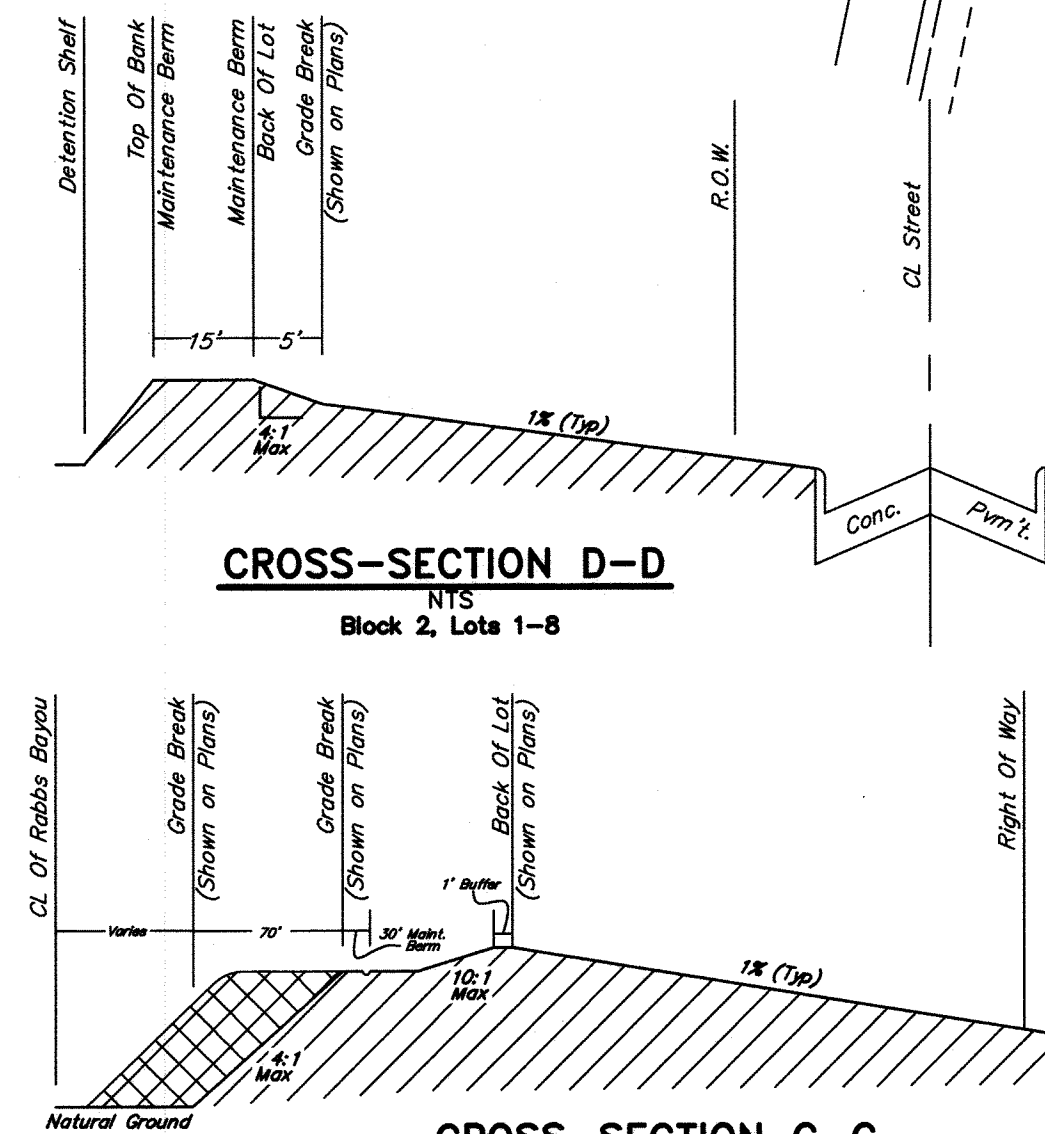
SL-28

SHEET NO.
24
OF 28

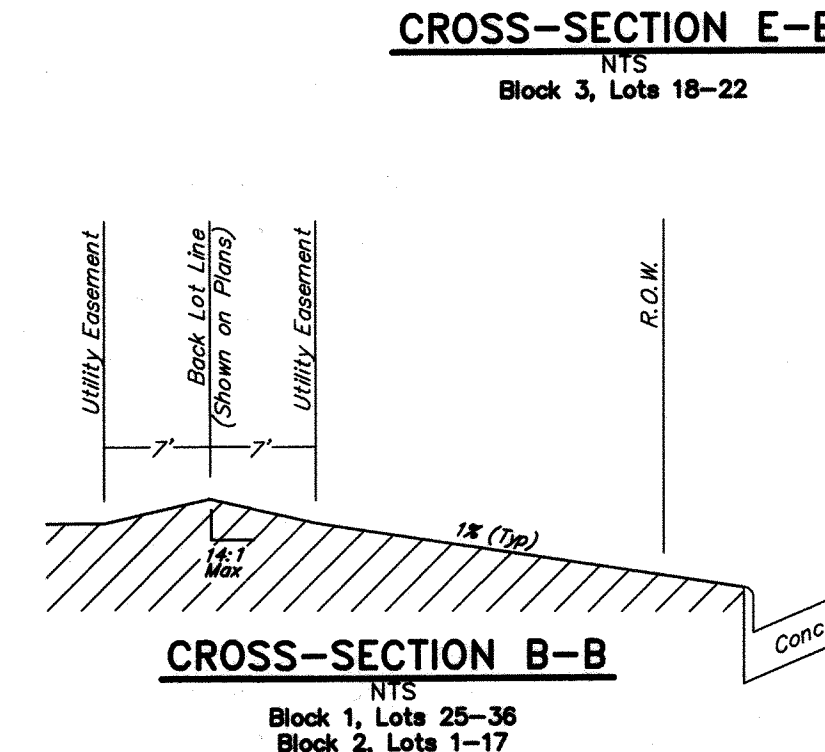
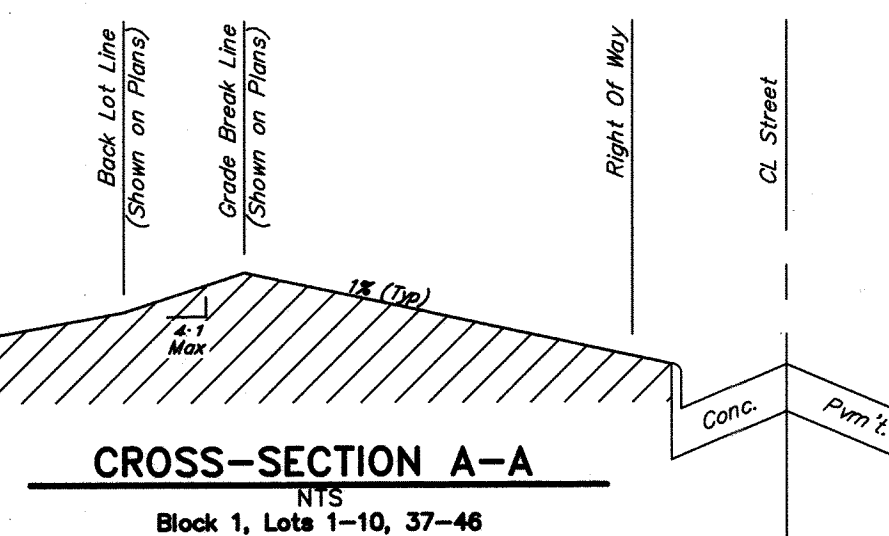
ISSUED FOR
CONSTRUCTION

ISSUED FOR
CONSTRUCTION

- 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 GRADED FROM ELEVATION TO ELEVATION AS SHOWN. THE FINISHED SURFACE SHALL BE REASONABLY SMOOTH AND FREE FROM IRREGULARITIES.
 - 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 STAKES.
 - 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 STRIPPING SPREAD ON GRADED AREAS. STRIPPINGS PLACED WITHIN FUTURE BUILDING PADS 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 PROOF ROLLED. THE NATIVE SOIL SHALL BE ROLLED WITH SUFFICIENT INTENSITY TO BRING 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 150 PSI. A MINIMUM OF TWO COVERS 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 2 AND 5 MPH. SHOULD 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 LIFTS OF 8 INCHES OF LESS AND COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM TO +5% 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 MUCKED OUT TO SUITABLE SUBGRADE MATERIAL AND THEN FILLED AS SHOWN WITH EXCAVATION MATERIAL IN MAXIMUM 8 INCH LOOSE LIFTS, WITH EACH LIFT 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 TIED TO PROJECT BENCHMARK. 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 "A" 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 RABBS BAYOU RIGHT-OF-WAY.



CROSS-SECTION E-E
Block 3, Lots 18-22

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

BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT HGS072, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.6 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 8239.
ELEVATION = 78.65' (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 MACEK RD AND APPROXIMATELY 1660 FEET EAST OF THE INTERSECTION OF RABBS CROSSING AND MACEK RD.
ELEVATION = 81.13' (NAVD 88 Adjustment)

100-YEAR FLOOD PLAIN
THIS TRACT LIES WITHIN ZONES "AE, X, & X SHADED" OF THE FLOOD INSURANCE RATE MAP NUMBER 48157C0245L, PANEL 245 OF 550, 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 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 1% 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 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.

- LEGEND**
- 194.0 EXIST GROUND CONTOUR
 - 193.05 PROPOSED TOP OF CURB
 - 193.05 EXISTING TOP OF CURB
 - 148.00 FINISH ELEVATIONS
 - GRADE BREAK LINE
 - SLOPE OF FINISHED GRADE
 - STREET MAX PONDING DEPTH
 - MINIMUM FINISHED SLAB ELEVATION

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

GRADING PLAN

JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

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.
128736

[Signature]
LYNDAY J. EVANS
4/2/2018
25
OF 28

ISSUED FOR
CONSTRUCTION

BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS
MONUMENT HGS072, LOCATED 50.5 FEET NORTHWEST
OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6'
SOUTHWEST OF THE CENTER OF GATE 6, WITH A
PUBLISHED ELEVATION OF 69.6 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 8239.

ELEVATION = 78.65' (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 WACEK RD AND
APPROXIMATELY 1660 FEET EAST OF THE INTERSECTION
OF RABBS CROSSING AND MACEK RD.

ELEVATION = 81.13' (NAVD 88 Adjustment)

100-YEAR FLOOD PLAIN
THIS TRACT LIES WITHIN ZONES "AE, X, & X SHADED"
OF THE FLOOD INSURANCE RATE MAP NUMBER
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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 SHADED" IS DEFINED AS AREAS
OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL
CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1
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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. ON RARE OCCASIONS 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.

LEGEND

- IPB INLET PROTECTION BARRIERS
FOR STAGE I & II INLETS
- SC STABILIZED
CONSTRUCTION ACCESS
- CTW CONCRETE TRUCK WASHOUT AREA
- RFB 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: *[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

STORM WATER POLLUTION PREVENTION PLAN

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 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. _____

[Signature]
LYNDAY J. EVANS
128736
PROFESSIONAL ENGINEER
SHEET NO.
26
OF 28

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

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

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

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 CONVEYANCE SYSTEMS. CONTRACTOR SHALL USE SILT FENCING, HAY BALES, OR BERMS 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 BEFORE RELIEVING CONTRACTOR OF HIS MAINTENANCE RESPONSIBILITIES.
- IF EROSION AND SEDIMENTATION CONTROL SYSTEM IS EXISTING FROM PRIOR CONTRACTS, OWNER AND/OR OWNER'S REPRESENTATIVES 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 DIRT DEPOSITED ON THE EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY.
- IF PAVING CONTRACTOR REMOVES OR PUNCTURES TIMBER GRATE TO ESTABLISH DRAINAGE, INLET MUST BE SURROUNDED BY FILTER FABRIC FENCE AS SHOWN IN DETAIL ON THIS SHEET.

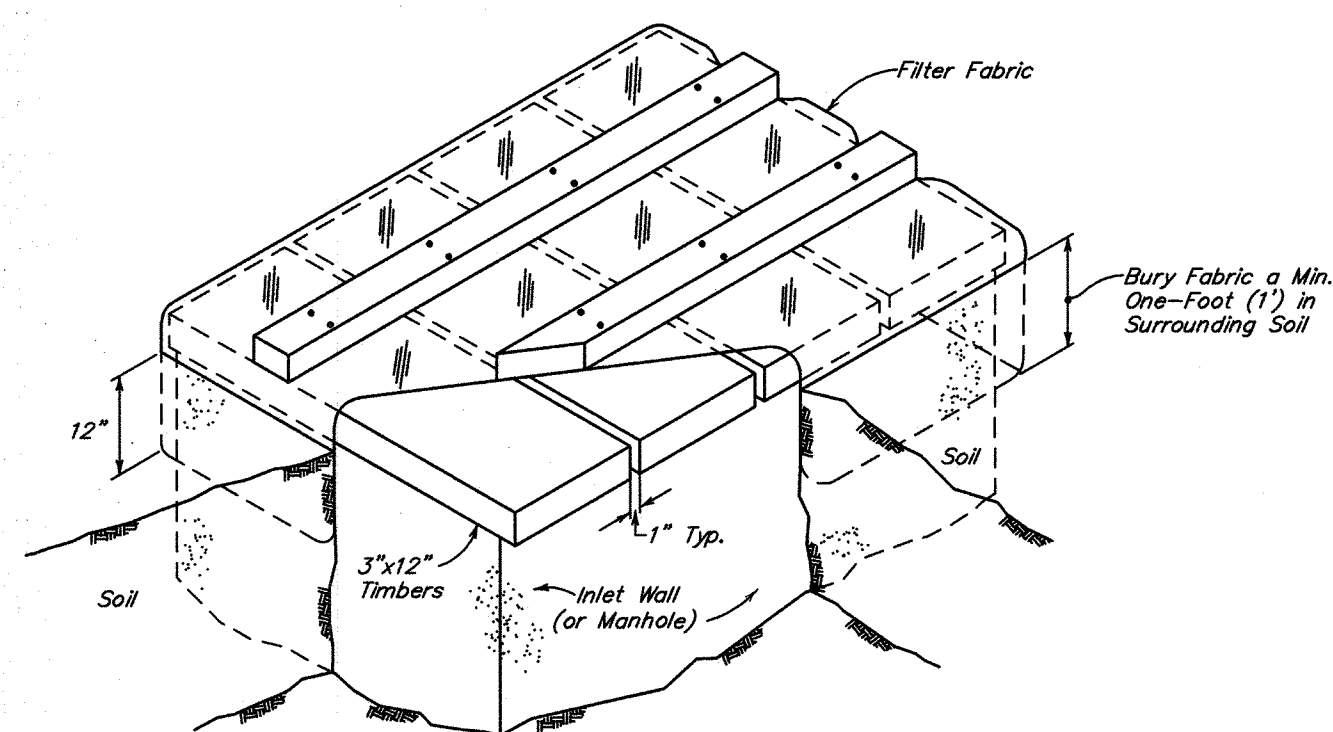
- CONTRACTOR TO PROVIDE SOD AND FILTER FABRIC BEHIND BACK OF CURB 1' (NOT SHOWN).
- CONTRACTOR TO PROVIDE FILTER FABRIC IN FRONT OF EXISTING SIDEWALK AT DETENTION POND (NOT SHOWN).

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 (EXXON GTF 100s, PHILLIPS SUPAC 4WS(UV) OR APPROVED EQUAL) HELD IN PLACE WITH 1/2" STAPLES. TIMBERS SHALL BE HELD IN PLACE WITH TWO (2) 2x4's NAILED SECURELY TO EACH TIMBER OVER THE FILTER FABRIC. THE FILTER FABRIC SHALL EXTEND BEYOND THE PERIMETER 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.

TYPICAL INLET PROTECTION UPPER STAGE - AFTER REMOVAL OF TIMBER COVER

NTS



TYPICAL INLET AND MANHOLE PROTECTION - LOWER STAGE

NTS

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

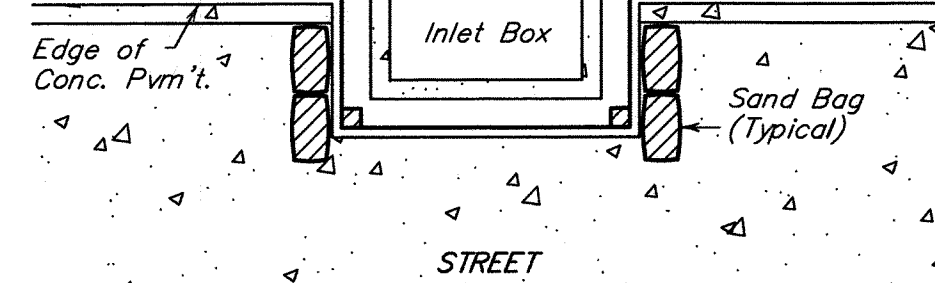
REINFORCED FILTER FABRIC BARRIER
TO BE PLACED ALONG ADJACENT
PROPERTY AND ROADWAYS

0 50 100 200 300
SCALE: 1" = 100'

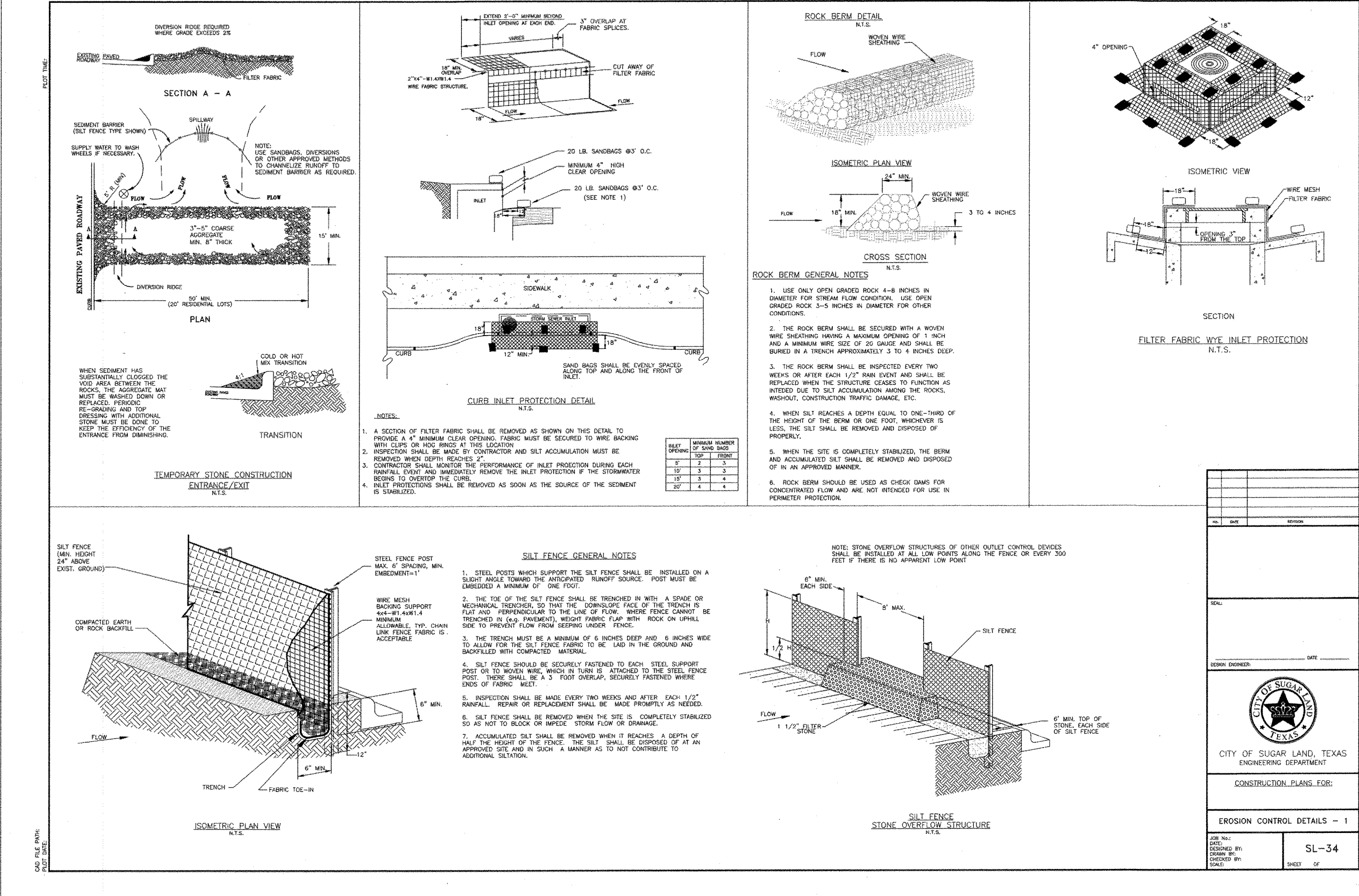
REINFORCED FILTER FABRIC
BARRIER TO BE PLACED
BEHIND ALL BACK OF CURB

Prop Lift Station
(By Separate
JC Contract)

Filter Fabric Fence
(See Note 13)



ISSUED FOR
CONSTRUCTION



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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

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

GREATWOOD LAKE SECTION 2A

STORM WATER POLLUTION PREVENTION PLAN DETAILS

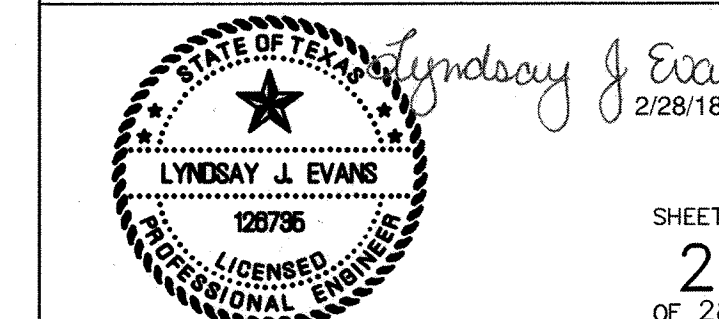


SCALE: 1"=100' DGN. BY: KCM

DATE: FEBRUARY 2018 DWN. BY: EPV

JOB NO 05537-0008-00 DWG NO

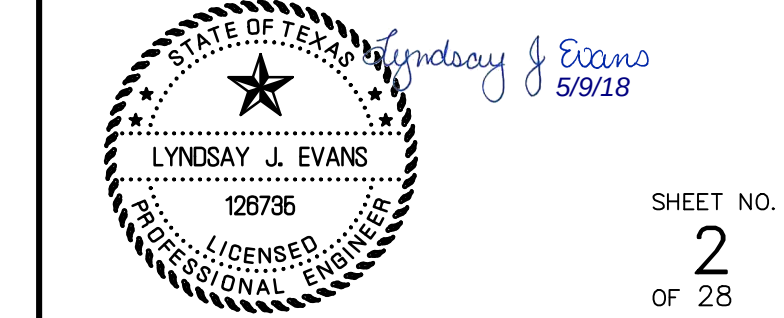
SUBMITTED: _____ SURV BY: _____

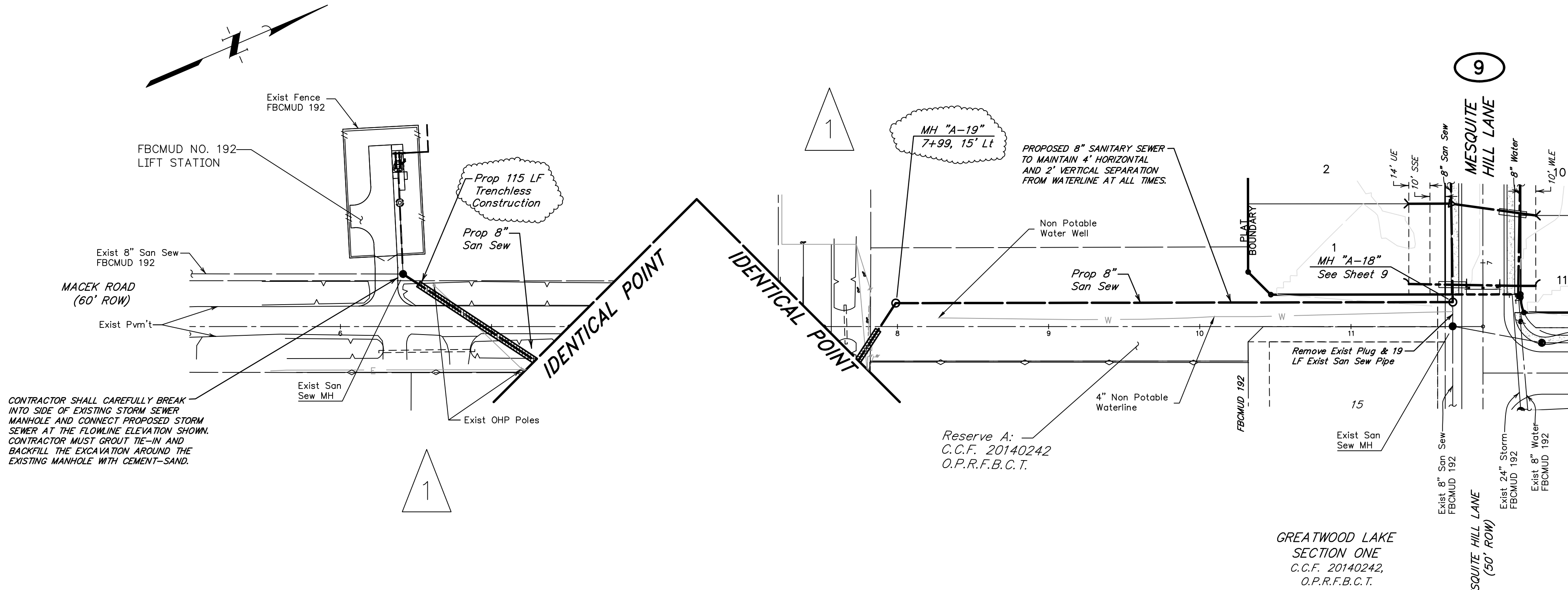
SUBMITTED: _____ SERV. BY: _____
 ER NO. _____

SHEET

2

2
OF 2

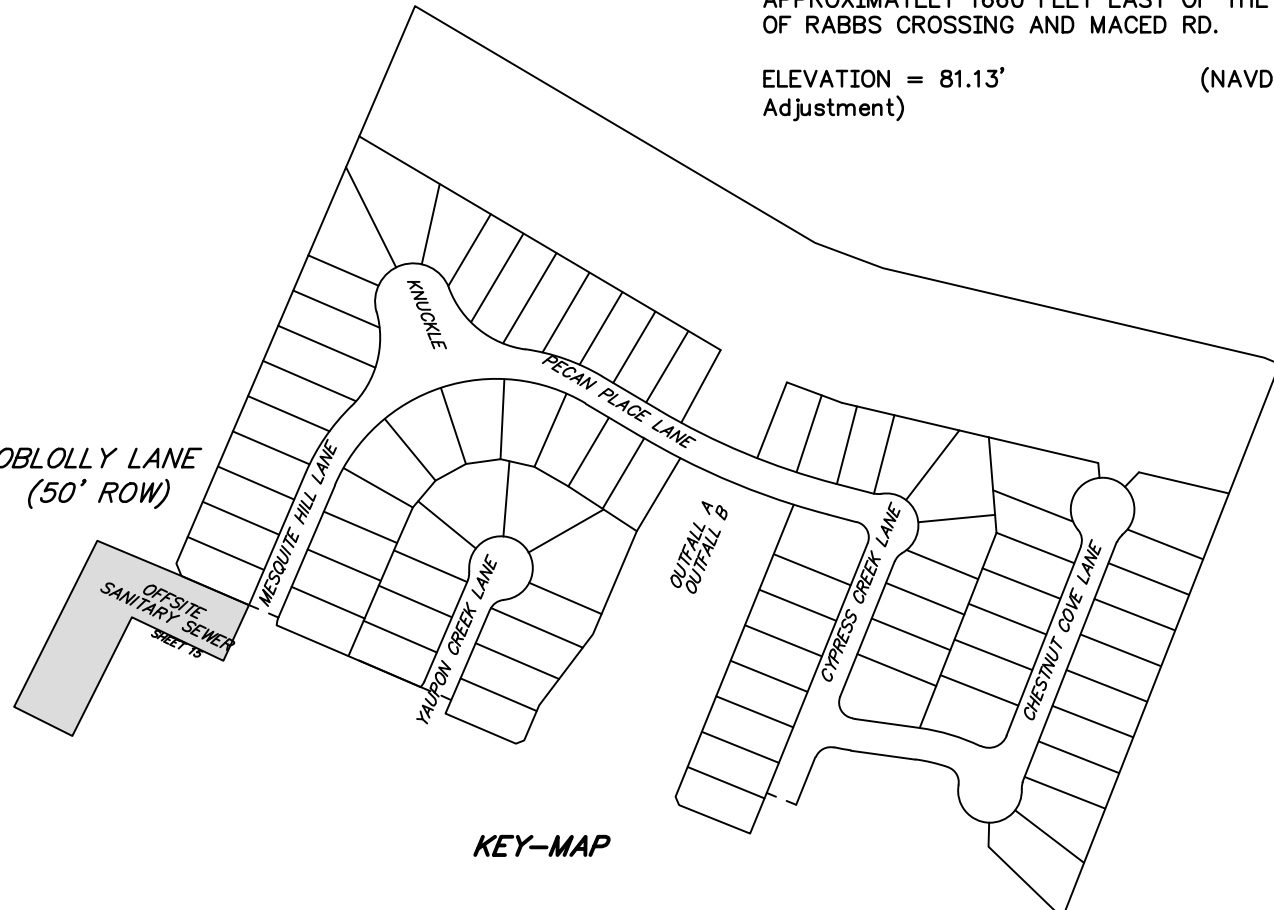




BENCH MARK
ELEVATIONS SHOWN HEREON ARE BASED ON NGS MONUMENT HGS072, LOCATED 50.5 FEET NORTHWEST OF THE CENTERLINE OF SMITHERS LAKE ROAD, 26.6' SOUTHWEST OF THE CENTER OF GATE 6, WITH A PUBLISHED ELEVATION OF 69.6 FEET (NAVD88).

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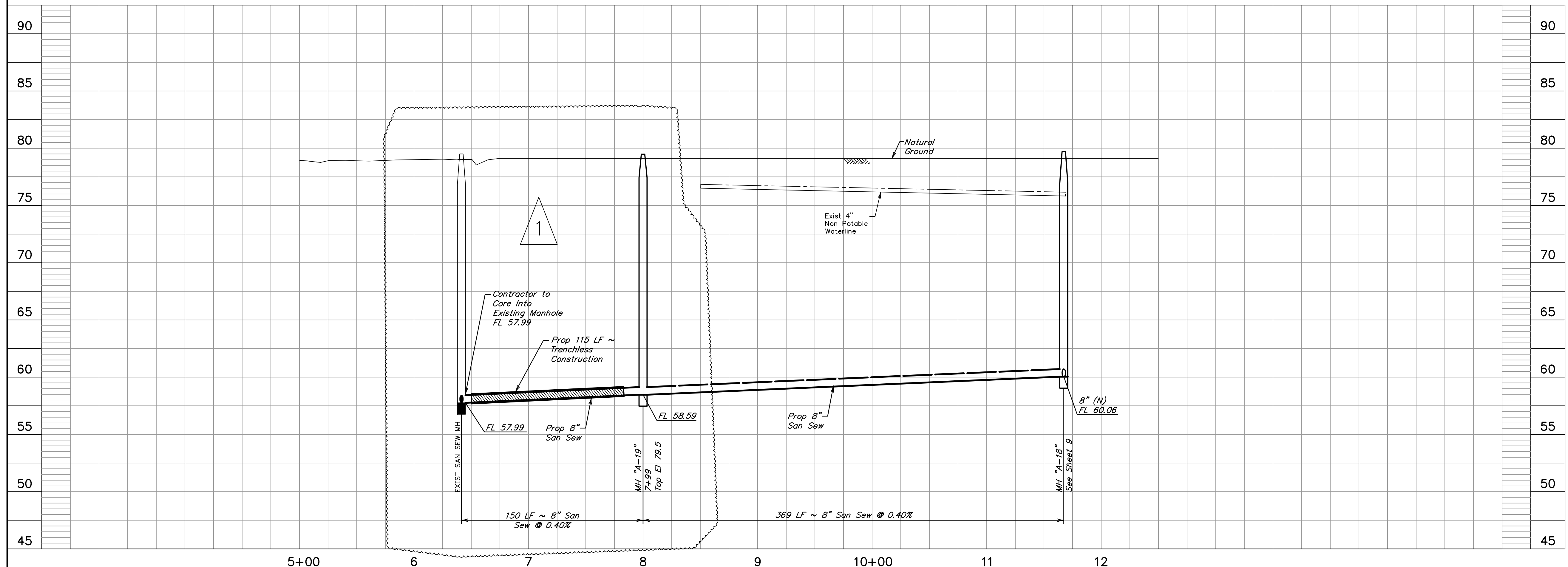
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APPROVED: _____
DEVELOPMENT COORDINATOR

STANDARD MANHOLE CONNECTION NOTE:
CONTRACTOR SHALL CAREFULLY CORE 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



DATE: _____

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date: _____

CenterPoint Energy/Natural Gas Facilities Verification ONLY.
(This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (Gas service lines are not shown.)
Signature valid for six months.

Date: _____

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This Signature verifies existing underground facilities - not to be used for conflict verification.)
Signature valid for six months.

Date: _____

Approved for AT&T Texas/SBT underground conduit facilities only.
Signature valid for one year.

NO.	DATE	REVISIONS	APP.
1	5/9/18	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

JC JONES CARTER
Texas Board of Professional Engineers Registration No. F-439
22330 Merchants Way, Suite 170, Katy, TX 77449 (832) 913-4000

SCALE: 1"=50' H., 1"=5' V. DGN. BY: KCM
DATE: MAY 2018 DWN. BY: EPV
JOB NO. 05542-0012-00 DWG. NO. _____
SUBMITTED: _____ SURV. BY: _____
F.B. NO. _____

LYNDSEY J. EVANS
128736
LICENSED PROFESSIONAL ENGINEER

SHEET NO. **15**
OF 28