

REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT

10C

On this 10 day of MARCH, 2015, Commissioners Court came on to be heard and reviewed the accompanying notice of TRIPLE B SERVICES, LLP

Job Location GREENBUSCH ROAD

Dated 02/27/15 BOND NO. 022-050-883, Permit No. 84786

to make use of certain Fort Bend County property subject to, "A Revised Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas, date the 3rd day of August, 1987, recorded in Volume _____ of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Article 1436a, Vernon's Texas Civil Statues. Upon Motion of Commissioner Meyers, seconded by Commissioner Prestage, duly put and carried, it is ORDERED, ADJUGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Notes:

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
 - a. 48 hours in advance of construction start up, and
 - b. When construction is completed and ready for final inspection

Mail notices to: Permit Administrator
Fort Bend County Engineering
301 JACKSON STREET
RICHMOND, Texas 77469
281-633-7500

3. This permit expires one (1) year from date of permit if construction has not commenced.

By [Signature]
County Engineer

By N/A
Drainage District Engineer/Manager

Presented to Commissioners Court and approved.
Recorded in Volume 3-10-15
Minutes of Commissioners Court.

Clerk of Commissioners Court
By [Signature]
Deputy

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

AUTHORIZED

BOND NO 022-050-883

THE STATE OF TEXAS

§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF FORT BEND

§

THAT WE, Triple B Services, LLP whose address is 820 Old Atascocita Road Huffman, TX 77336 Texas, hereinafter called the Principal, And Liberty Mutual Insurance Company, a Corporation existing under and by virtue of the laws of the state of Massachusetts and authorized to do an indemnifying business in the state of Texas, and whose principal office is located at Plymouth Meeting, Pennsylvania, whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought whining said state is and Whose address is Bill Ballinger, 8350 N. Central Expressway, Suite 850, 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 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 24th day of February, 2015.

Triple B Services, LLP

PRINCIPAL

Donna Burk

BY

Liberty Mutual Insurance Company

SURETY

Robert M. Overbey, Jr.

BY Robert M. Overbey, Jr.
Attorney in Fact

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6786049

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

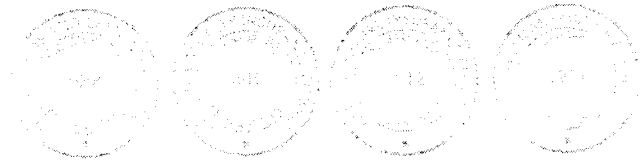
KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Carol E. Hock; Robert M. Overbey, Jr.; Suzonne D. Lawrence

all of the city of Houston, state of TX each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 14th day of November, 2014.

American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: David M. Carey
David M. Carey, Assistant Secretary



STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 14th day of November, 2014, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year first above written.



By: Teresa Pastella
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

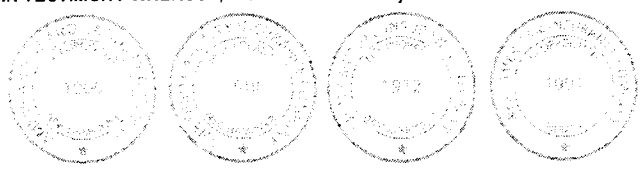
ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Gregory W. Davenport, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 24th day of February, 2015.



By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.



Important Notice

TO OBTAIN INFORMATION OR TO MAKE A COMPLAINT:

You may write to Liberty Mutual Surety at:

Liberty Mutual Surety
Interchange Corporate Center
450 Plymouth Road, Suite 400
Plymouth Meeting, PA 19462-8284

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at:

1-800-252-3439

You may write the Texas Department of Insurance:

P. O. Box 149104
Austin, TX 78714-9104
Fax: (512) 475-1771
Web: <http://www.tdi.state.tx.us>
E-mail: ConsumerProtection@tdi.state.tx.us

Premium or Claim Disputes

Should you have a dispute concerning a premium, you should contact the agent first. If you have a dispute concerning a claim, you should contact the company first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

Attach This Notice To Your Policy:

This notice is for information only and does not become a part or condition of the attached document.



NOTIFICACION IMPORTANTE

PARA OBTENER INFORMACION O REALIZAR UNA QUEJA:

Usted puede escribir la notificación y dirigirla a Liberty Mutual Surety en la siguiente dirección:

Liberty Mutual Surety
Interchange Corporate Center
450 Plymouth Road, Suite 400
Plymouth Meeting, PA 19462-8284

Usted puede contactar al Departamento de Seguros de Texas para obtener información acerca de las compañías, coberturas, derechos o quejas:

1-800-252-3439

Usted puede escribir al Departamento de Seguros de Texas a la siguiente dirección:

P. O. Box 149104
Austin, TX 78714-9104
Fax: (512) 475-1771
Web: <http://www.tdi.state.tx.us>
E-mail: ConsumerProtection@tdi.state.tx.us

Disputas acerca de primas o reclamos

En caso de que usted quiera elevar una disputa concerniente al tema de primas, por favor contacte en primer lugar a su agente. Si el tema de la disputa es relativo a un reclamo, por favor contacte a la compañía de seguros en primer término. Si usted considera que la disputa no es apropiadamente resuelta en estas instancias, entonces usted puede contactar al Departamento de Seguros de Texas..

Adjunte esta notificación a su póliza:

Esta notificación es a los solos fines de su información y la misma no forma parte o condiciona de manera alguna el documento adjunto.

**NOTICE OF PROPOSED CABLE, CONDUIT AND/OR POLE LINE ACTIVITY
IN, UNDER, ACROSS OR ALONG ROADS, STREETS, HIGHWAYS AND DRAINAGE DITCHES
IN FORT BEND COUNTY**

APPLICANT'S JOB NO. _____
 PERMIT No. 84786 PCT. No. 3
 BOND No. 022-050-883

Formal notice is hereby given that _____
 proposes to lay, construct, maintain and/or repair cable, conduit and/or pole line, in, under, across, or along roads, streets, highways and
 drainage ditches in Fort Bend County, as follows:

In, Under, or Across Roads and/or Drainage Ditches

Road or Ditch Name	Distance & Direction From Nearest Intersection	Length of Crossing	Type of Construction			
			Bored	Jacked	Driven	Cased
Greenbusch	220 ft. East	265	✓			
Greenbusch	220 ft. East	60	✓			

Along Roads and/or Drainage Ditches

Road or Ditch Name	Distance & Direction From Nearest Intersection	To	Distance

General Description

The Location and description of the proposed installation and appurtenances is more fully shown on the attached detail drawings. The laying, construction, maintenance and/or repair of the proposed installation shall be subject to "A Revised Order Regulating the Laying, Construction, Maintenance and/or Repair of Cables, Conduits, and/or Pole Lines, In, Under, Across, or Along Roads, Streets, Highways and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by Commissioners Court of Fort Bend County, Texas, dated the 3rd. day of August, 1987, recorded in Volume 639 of the Minutes of the Commissioners Court of Fort Bend County, Texas.

Written notices are required: 1) 48 hours in advance of start of construction and
 2) when construction is complete and ready for final inspection.

Mail to: Permit Administrator/Fort Bend County Engineering
 301 Jackson Richmond, TX 77469.

Violation of Requirements shall constitute grounds for job shut down.

As of 9/1/2014, we will no longer mail out permits. Instead, we will email them.

Please complete:

Name:
Anna Norman

Email address:
a.norman@triplebservices.com

COMPANY NAME: Triple B Services, LLP
 AGENT AND/OR OWNER

NAME & TITLE: Anna Norman / Project Manager
 (Signature)

DATE: 2/26/2015

ADDRESS: 820 Old Atascocita Road

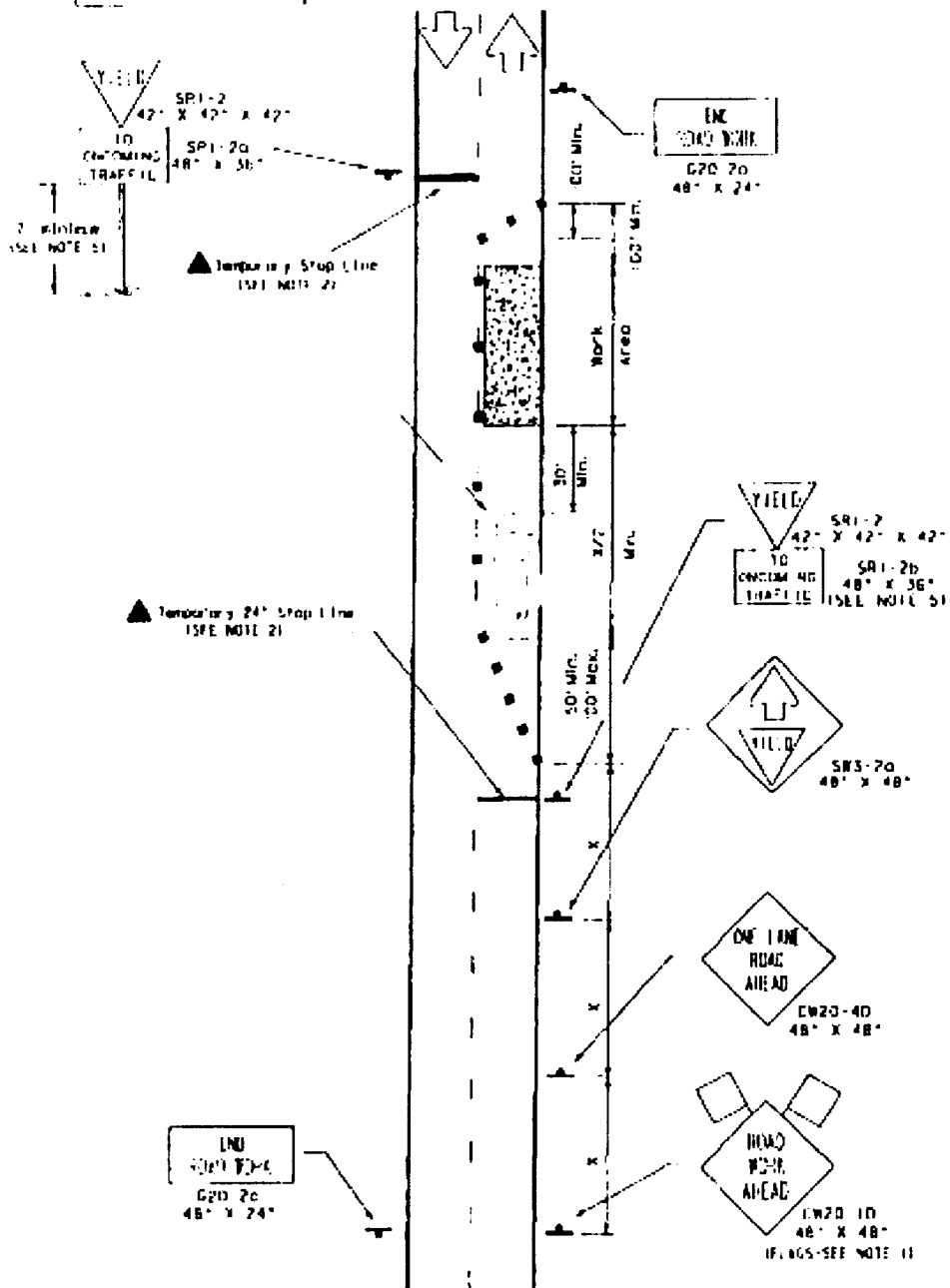
Huffman TX 77336
 City State Zip

TELEPHONE No. 281-324-3264

(Accessible 24hrs/day, 7 days/week)

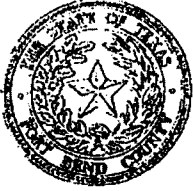
Pin Oak Enclave Traffic Control

Following Sign Sequence in Opposite Direction same as below.



TCP (2-2a)

2-Lane Roadway Without Paved Shoulders
 One Lane Closed
 Adequate Field of View



COMMISSIONER PRECINCT 3
Fort Bend County, Texas

W.A. "Andy" Meyers
Commissioner

December 8, 2014

Mr. Ricardo Rodriguez, PE
23560 Coons Road
Tomball, TX 77375

RE: Pin Oak Enclave Early Start Utility Construction Request

Dear Mr. Rodriguez:

I have no objection to your request for Early Start Utility Construction in the Pin Oak Enclave.

Should you need additional assistance please contact our office.

Sincerely,

A handwritten signature in black ink, appearing to read "W.A. Meyers", is written over a horizontal line.

Andy Meyers
Commissioner Precinct 3

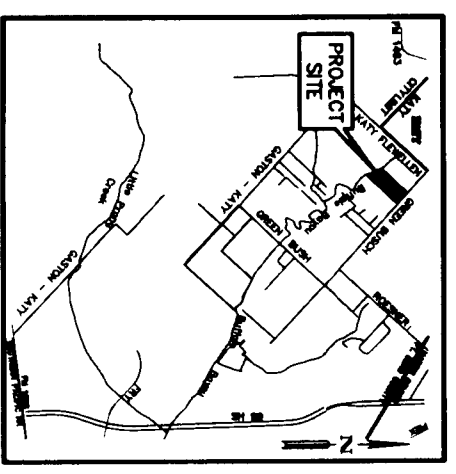
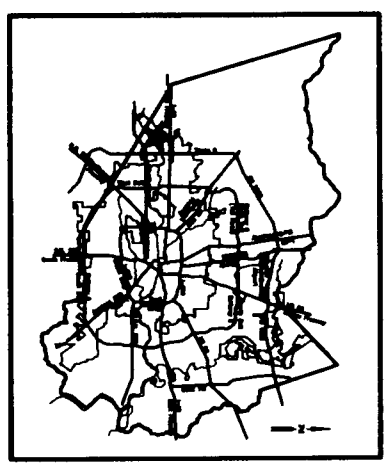
CC – Nathan Hatcher

FORT BEND COUNTY M.U.D. 185

PIN OAK ENCLAVE

CONSTRUCTION PLANS OF PROPOSED WATER DISTRIBUTION SYSTEM SANITARY COLLECTION SYSTEM, FORCEMAIN STORM DRAINAGE SYSTEM STREET PAVING DETENTION

NOVEMBER 2014



CONTRACTOR SHALL NOTIFY THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING, 48 HOURS BEFORE STARTING WORK ON THIS PROJECT. TELEPHONE NO. 832-394-8088, FAX NO. 832-395-4424

NO.	DESCRIPTION
1.	COVER SHEET
2.	GENERAL CONSTRUCTION NOTES
3.	SANITARY SEWER AND WATER OVERALL
4.	STORM SEWER, PAVING AND TRAFFIC CONTROL OVERALL
5.	DRAINAGE AREA MAP
6.	DRAINAGE CALCULATIONS
7.	GRAVING PLAN
8.	STORM WATER POLLUTION PREVENTION PLAN
9.	PLAN AND PROFILE - PIN OAK ENCLAVE DR (STA. 1+00 TO 2+32.35) WOODGLEN HOLLOW LN (STA. 1+00 TO 4+72.38)
10.	PLAN AND PROFILE - MEADOWBROOK CREST LN/BRIDGETON MEADOW LN (STA. 0+61.28 TO 13+00)
11.	PLAN AND PROFILE - SUNDANCE PARK LN/BRIDGETON MEADOW LN (STA. 1+05 TO 8+00)
12.	PLAN AND PROFILE - BRIDGETON MEADOW LN (STA. 9+00 TO 13+49.66)
13.	PLAN AND PROFILE - DUNBROOK SPRINGS LN (STA. 1+00 TO 3+14.48)
14.	PLAN AND PROFILE - 54" STYL SEWER (STA. 1+00 TO 3+68.68)
15.	PLAN AND PROFILE - 30" STYL SEWER (STA. 1+00 TO 4+38.11)
16.	PLAN AND PROFILE - EX. GRENDSBURGH RD OFFSITE UTILITIES (STA. 1+00 TO 8+24.01)
17.	SANITARY SEWER DETAILS
18.	STORM SEWER INLET DETAILS
19.	STORM SEWER DETAIL DETAILS
20.	WATER AND MISCELLANEOUS DETAILS
21.	STORM WATER POLLUTION PREVENTION PLAN DETAILS
22.	PAVING DETAILS
23.	TPOOT PEDESTRIAN FACILITIES CURB RAMPS
24.	TPOOT PEDESTRIAN FACILITIES GENERAL NOTES & DETECTABLE WARNINGS
25.	TPOOT PEDESTRIAN FACILITIES SIDEWALKS
26.	TPOOT PEDESTRIAN FACILITIES INTERSECTION LAYOUTS
27.	PRELIME APPROVAL LETTER HPL
28.	PRELIME APPROVAL LETTER KINDER MORGAN

ONE-CALL NOTIFICATION SYSTEM:
CALL BEFORE YOU DIG!!!
(713) 223-4567 (IN HOUSTON)
(NEW STATEWIDE NUMBER OUTSIDE HOUSTON)
1-800-545-6005

FORT BEND COUNTY
APPROVED: *Richard W. Stolleis*
RICHARD W. STOLLEIS, P.E.
FORT BEND COUNTY ENGINEER
DATE: 11/15

DEVELOPMENT COORDINATOR: *11/15*
DATE: 11/15

NOTES:
1. CONSTRUCTION SHALL BE MONITORED BY A REGISTERED PROFESSIONAL ENGINEER AND SHALL BE IN COMPLIANCE WITH THE CONSTRUCTION PLANS AND SPECIFICATIONS.
2. THESE PLANS WERE PREPARED TO MEET OR EXCEED TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND FORT BEND COUNTY REGULATIONS AS CURRENTLY ADOPTED.
3. APPROVAL BY THE CITY OF HOUSTON AND FORT BEND COUNTY WILL BE OBTAINED. VOID IF CONSTRUCTION HAS NOT BEGUN WITHIN ONE YEAR OF APPROVAL.

THE PROPERTY LIES IN ZONE "A" AND PARTIALLY IN ZONE "C". AS SHOWN ON THE CITY OF HOUSTON ZONING MAP, DATED APRIL 2, 2014. THE 100-YEAR FLOOD PLAN ELEVATION IS 128.84 (NOVEMBER 2001 ADL).

LWS # 14087906
LOG NO. 14-1392

REV. NO.	DATE	DESCRIPTION	DATE

PRE
CIVIL ENGINEERING
CONSULTANTS

23800 Coons Road, Terminal 1A 77376
Tel: (281) 407-6018
Email: info@pre-engineering.com
TPE Registration No. P-15840

FOR ENGINEERING
FOR THE CITY OF HOUSTON

SEARCHED BY: GRI PARTNERS, L.P. FB NO.: 11/15/14

ONE: CITY REGULATIONS VALID FOR ONE YEAR ONLY FROM DATE OF ISSUANCE

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER: *11/15/14*

TRAFFIC & TRANSPORTATION: *11/15/14*

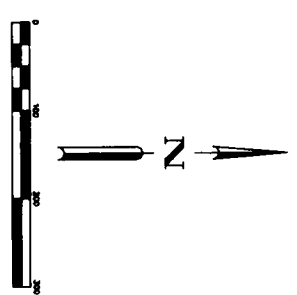
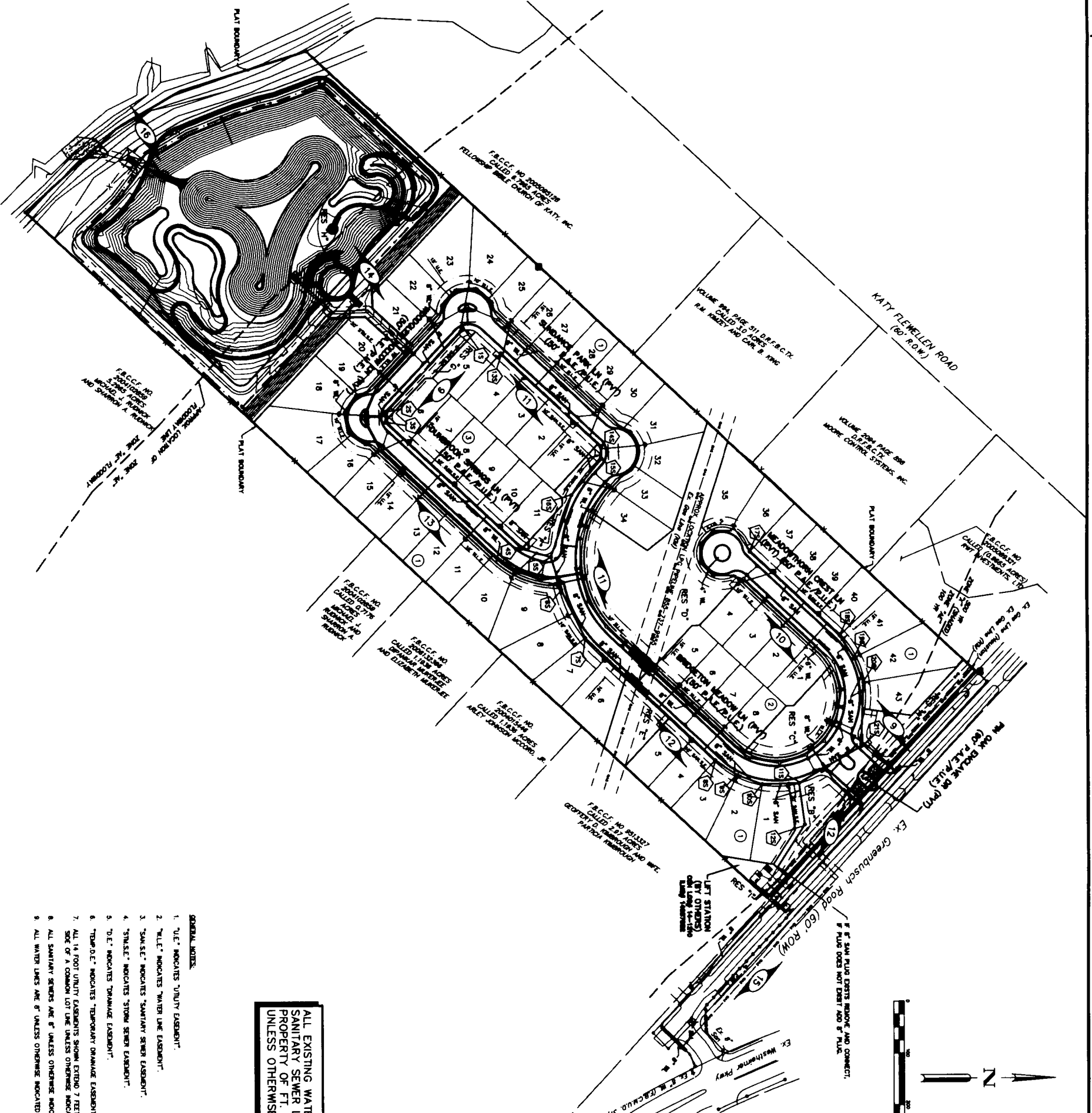
STORM WATER QUALITY: *11/15/14*

STORM SEWER: *11/15/14*

SWEEPER & BRIDGE: _____

CITY ENGINEER: _____ DATE: _____

FOR CITY OF HOUSTON USE ONLY
58161



BENCHMARK:
 HARRIS COUNTY FLOOD CONTROL DISTRICT BENCH MARK OF CENTERPOINT BUILDING 4-1.10 MET WEST OF THE INTERSECTION OF INTERSTATE 10 AND HIGHWAY 80 ELEVATION=140.44 (NAVD 88, 2001 ADJ.)
 TEMPORARY BENCHMARK: BOX CUT ON SOUTHWEST END OF BACK OF DAM LOCATED AT THE INTERSECTION OF GREENBUSH ROAD AND PIN OAK DRIVE (ELEVATION=150.49 (NAVD 88, 2001 ADJ.))

LEGEND

- PROPOSED WATER LINE, 6" & BOX WITH FIRE HYDRANT
- EXISTING WATER LINE, 6" & BOX WITH FIRE HYDRANT
- PROPOSED SANITARY SEWER LINE, MANHOLE AND STACK
- EXISTING SANITARY SEWER LINE, MANHOLE AND STACK
- PROPOSED FAR SIDE SERVICE LEAD WITH STACK
- EXISTING SANITARY SEWER LINE, MANHOLE AND STACK
- PROPOSED STORM SEWER LINE, MANHOLE AND B-B INLETS
- EXISTING STORM SEWER LINE, MANHOLE AND B-B INLETS
- EXISTING FORCE MAIN
- EXISTING CENTERPOINT ENERGY HUMP CONDUIT
- EXISTING CENTERPOINT ENERGY HUMP OVERHEAD LINE
- EXISTING CENTERPOINT ENERGY GAS LINE
- EXISTING CONSOLIDATED COMMUNICATIONS CONDUIT
- SANITARY SEWER MANHOLE
- SHEET REFERENCE NUMBER

ALL EXISTING WATER LINES AND SANITARY SEWER LINES ARE PROPERTY OF FT. BEND M.U.D. 185, UNLESS OTHERWISE INDICATED.

- GENERAL NOTES:**
1. "U.E." INDICATES UTILITY EASEMENT.
 2. "W.L.E." INDICATES WATER LINE EASEMENT.
 3. "S.W.S.E." INDICATES SANITARY SEWER EASEMENT.
 4. "S.S.E." INDICATES STORM SEWER EASEMENT.
 5. "D.E." INDICATES DRAINAGE EASEMENT.
 6. "T.D.E." INDICATES TEMPORARY DRAINAGE EASEMENT.
 7. ALL 14 FOOT UTILITY EASEMENTS SHOW EXTEND 7 FEET ON EACH SIDE OF A COMMON LOT LINE UNLESS OTHERWISE INDICATED.
 8. ALL SANITARY SEWERS ARE 8" UNLESS OTHERWISE INDICATED.
 9. ALL WATER LINES ARE 8" UNLESS OTHERWISE INDICATED.

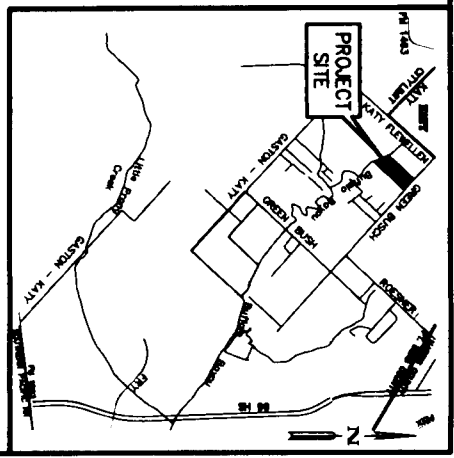
THE PROPERTY LIES IN ZONE "AE" AND PARTIALLY IN SHADDED ZONE "X" AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR FORT BEND COUNTY, TEXAS. THE 100-YEAR FLOOD PLAIN ELEVATION IS 128.84 (NAVD, 2001 ADJ.).

NOTICE
 FOR LOCATION OF NEIGHBORING UTILITY LINES, CALL (713)223-4667 OR TOLL FREE 1-800-246-5344 48 HOURS BEFORE EXCAVATION.

PERMIT NOTES:

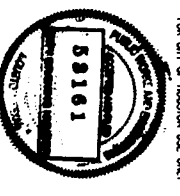
1. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY FORT BEND COUNTY, TEXAS PRIOR TO STARTING CONSTRUCTION OF UTILITIES AND/OR CULVERTS WITHIN THE DISTRICT JURISDICTION. THE PERMIT IS TO BE ISSUED IN THE OWNER'S NAME.
2. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY REGULATION OF FORT BEND COUNTY, TEXAS FOR FLOOD PLAN MANAGEMENT PRIOR TO STARTING CONSTRUCTION.

WATER USAGE NOTE:
 CONTRACTOR SHALL NOTIFY DISTRICT OPERATOR 24 HOURS PRIOR TO UTILIZING ANY AMOUNT OF DISTRICT HYDRANTS OR APPURTENANCES OF THE DISTRICT WATER SUPPLY, STORAGE OR DISTRIBUTION SYSTEM.



FORT BEND COUNTY ENGINEERING DEPARTMENT
 APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS-OF-WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VOID FOR ONE YEAR ONLY.
 APPROVED: *[Signature]* DATE: 11/9/14

<p>FOR CITY OF HOUSTON USE ONLY</p> <p>DATE: 11/12/14</p> <p>JOB NUMBER: PIN100</p> <p>DESIGNER: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>DATE: 11/12/14</p>		<p>FOR CITY OF HOUSTON USE ONLY</p> <p>DATE: 11/12/14</p> <p>JOB NUMBER: PIN100</p> <p>DESIGNER: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>DATE: 11/12/14</p>
<p>FOR CITY OF HOUSTON USE ONLY</p> <p>DATE: 11/12/14</p> <p>JOB NUMBER: PIN100</p> <p>DESIGNER: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>DATE: 11/12/14</p>		<p>FOR CITY OF HOUSTON USE ONLY</p> <p>DATE: 11/12/14</p> <p>JOB NUMBER: PIN100</p> <p>DESIGNER: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>DATE: 11/12/14</p>
<p>FOR CITY OF HOUSTON USE ONLY</p> <p>DATE: 11/12/14</p> <p>JOB NUMBER: PIN100</p> <p>DESIGNER: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>DATE: 11/12/14</p>		<p>FOR CITY OF HOUSTON USE ONLY</p> <p>DATE: 11/12/14</p> <p>JOB NUMBER: PIN100</p> <p>DESIGNER: <i>[Signature]</i></p> <p>CHECKED: <i>[Signature]</i></p> <p>DATE: 11/12/14</p>



PRR CIVIL ENGINEERING
 23800 Cypress Bend, Houston, TX 77058
 P. R. R. E. (281) 407-6218
 1800-246-5344 (48 HOURS BEFORE EXCAVATION)

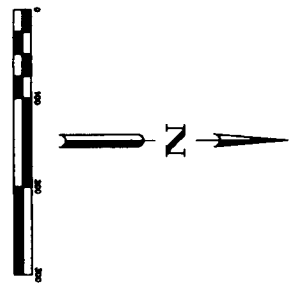
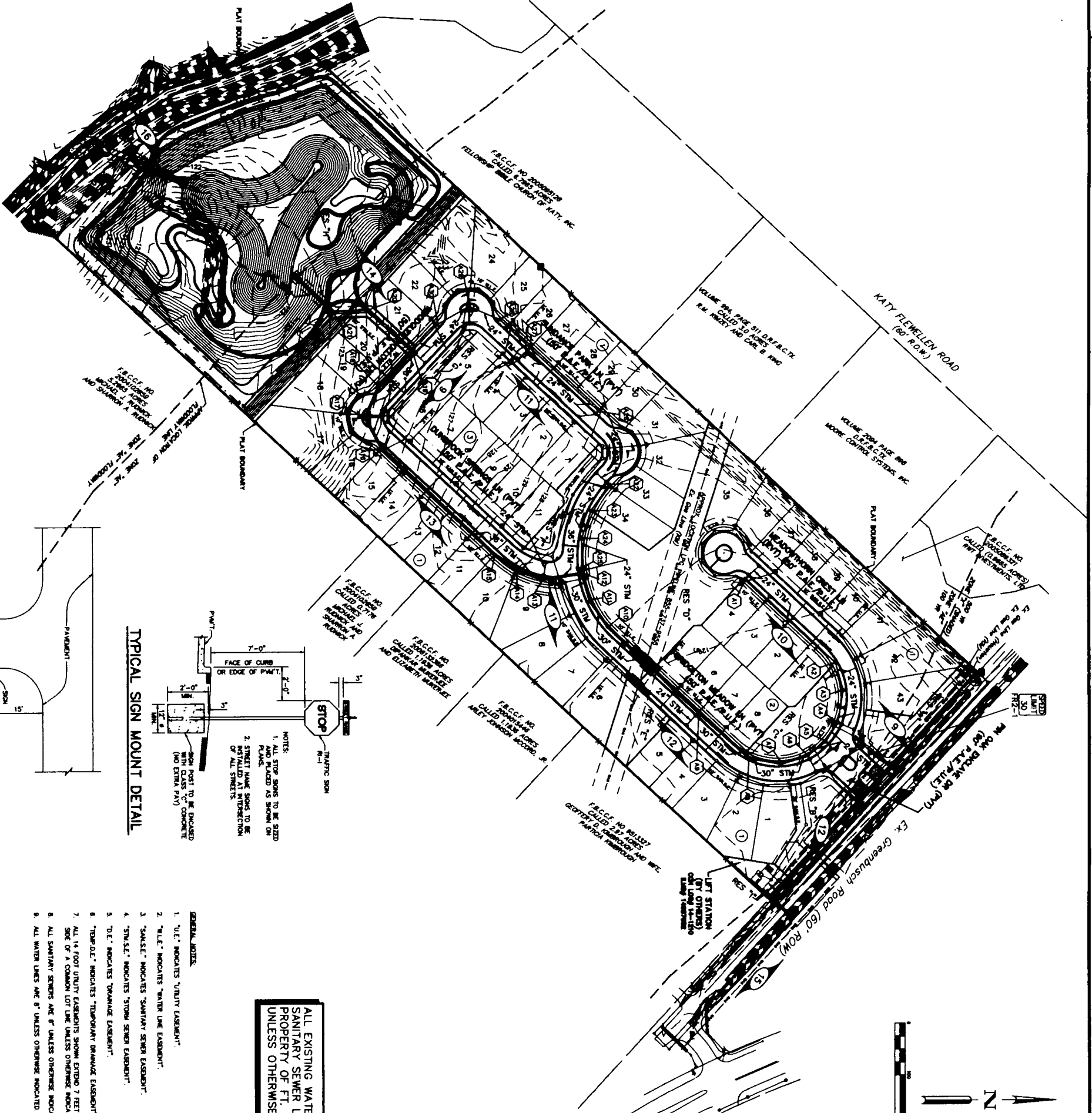
FORT BEND COUNTY MUD 185

PIN OAK ENCLAVE

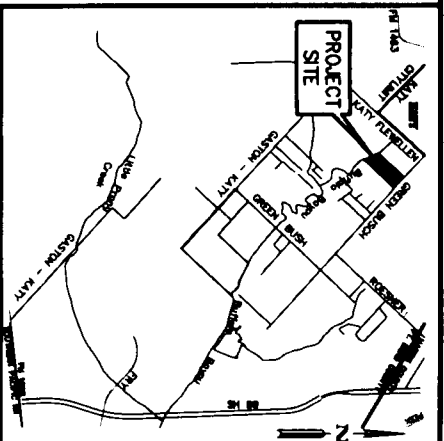
SANITARY SEWER AND WATER OVERALL

DRIVING SCALE: HORIZ: 1"=100'

SHEET 3 OF 28



BENCHMARK:
 HARRIS COUNTY FLOOD CONTROL REFERENCE MARK
 CENTERPOINT BUILDING 4'-1.0' EAST OF THE
 INTERSECTION OF INTERSTATE 10 AND HIGHWAY 90
 ELEVATION=140.44 (NAVD 88, 2001 ADJ.)
 TEMPORARY BENCHMARK: BOX CUT ON SOUTHWEST END
 OF BACK OF CURB LOCATED AT THE INTERSECTION OF
 GREENBUSH ROAD AND KATY FLEWELAN ROAD
 ELEVATION=130.46 (NAVD 88, 2001 ADJ.)



LEGEND

- PROPOSED WATER LINE, GV & BOX WITH FIRE HYDRANT
- EXISTING WATER LINE, GV & BOX WITH FIRE HYDRANT
- PROPOSED SANITARY SEWER LINE, MANHOLE AND STACK
- EXISTING SANITARY SEWER LINE, MANHOLE AND STACK
- PROPOSED SANITARY SEWER LINE, MANHOLE AND STACK
- EXISTING SANITARY SEWER LINE, MANHOLE AND B-B INLETS
- PROPOSED STORM SEWER LINE, MANHOLE AND B-B INLETS
- EXISTING STORM SEWER LINE, MANHOLE AND B-B INLETS
- PROPOSED FORCE MAIN
- EXISTING FORCE MAIN
- PROPOSED STOP SIGN
- EXISTING STOP SIGN
- PROPOSED STOP SIGN WITH STREET SIGN
- EXISTING CENTERPOINT ENERGY HUMP CONDUIT
- EXISTING CENTERPOINT ENERGY HUMP OVERHEAD LINE
- EXISTING CENTERPOINT ENERGY GAS LINE
- EXISTING CONSOLIDATED COMMUNICATION CONDUIT
- EXISTING CONTOUR LINE
- STORM SEWER MANHOLE
- SHEET REFERENCE NUMBER
- STREET NAME CHANGE

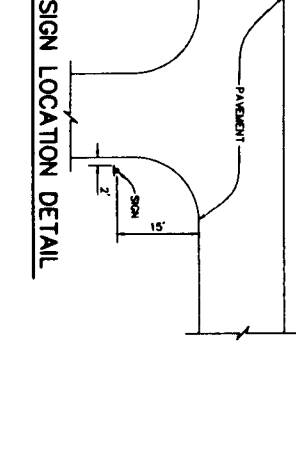
**ALL EXISTING WATER LINES AND
 SANITARY SEWER LINES ARE
 PROPERTY OF FT. BEND M.U.D. 185,
 UNLESS OTHERWISE INDICATED.**

NOTES:
 FOR LOCATION OF UNDERGROUND UTILITY
 LINES, CALL (713)223-6977 OR TOLL FREE
 1-800-246-4545, 48 HOURS BEFORE
 EXCAVATION.

PERMIT NOTES:
 1. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY
 FORT BEND COUNTY, TEXAS PRIOR TO STARTING
 CONSTRUCTION OF UTILITIES AND/OR CONCRETE
 FOUNDATIONS. THE PERMIT IS TO BE
 ISSUED IN THE OWNER'S NAME.
 2. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY
 FORT BEND COUNTY, TEXAS FOR FLOOD
 PLAN MANAGEMENT PRIOR TO STARTING
 CONSTRUCTION.

WATER USAGE NOTE:
 CONTRACTOR SHALL NOTIFY DISTRICT OPERATOR 24
 HOURS PRIOR TO UTILIZING ANY AMOUNT OF DISTRICT
 HYDRANTS OR APPURTENANCES OF THE DISTRICT WATER
 SUPPLY, STORAGE OR DISTRIBUTION SYSTEM.

- GENERAL NOTES:**
- "UL" INDICATES UTILITY EASEMENT.
 - "WLE" INDICATES WATER LINE EASEMENT.
 - "SSE" INDICATES SANITARY SEWER EASEMENT.
 - "SSE" INDICATES STORM SEWER EASEMENT.
 - "DE" INDICATES DRAINAGE EASEMENT.
 - "TEMP.D.E" INDICATES TEMPORARY DRAINAGE EASEMENT.
 - ALL 14 FOOT UTILITY EASEMENTS SHOW EXTEND 7 FEET ON EACH
 SIDE OF A COMMON LOT LINE UNLESS OTHERWISE INDICATED.
 - ALL SANITARY SEWERS ARE 8" UNLESS OTHERWISE INDICATED.
 - ALL WATER LINES ARE 8" UNLESS OTHERWISE INDICATED.



THE PROPERTY LIES IN ZONE "M" AND PARTIALLY IN SHADDED ZONE "X" AS
 SHOWN ON THE RELEVANT MAPS. THE DISTRICT OPERATOR SHALL BE NOTIFIED
 24 HOURS PRIOR TO UTILIZING ANY AMOUNT OF DISTRICT HYDRANTS OR
 APPURTENANCES OF THE DISTRICT WATER SUPPLY, STORAGE OR DISTRIBUTION
 SYSTEM. THE 100-YEAR FLOOD PLAIN ELEVATION IS 128.84 (NAVD88, 2001 ADJ.)

FORT BEND COUNTY ENGINEERING DEPARTMENT
 APPROVAL IS IMPLIED FOR APPROVEMENTS WITHIN
 FORT BEND COUNTY RIGHTS-OF-WAY ONLY.
 UTILITY LINES APPROVED AS TO LOCATION ONLY.
 AUTHORIZATION IS VALID FOR ONE YEAR ONLY.
 APPROVED: *[Signature]*
 ASSISTANT TO THE COUNTY ENGINEER DATE: 11/26/15

PRE CIVIL ENGINEERING CONSULTANTS 485 Springdale 25000 Creekside Road, Houston, TX 77078 Tel: (281) 477-4018 Fax: (281) 477-4019 www.pre-engineers.com Project Registration No. 9-10000		
FORT BEND COUNTY MUD 185 PIN OAK ENCLAVE STORM SEWER, PAVING AND TRAFFIC CONTROL OVERALL		
DATE: NOVEMBER 2014 JOB NUMBER: PIN100 SHEET NO.: 4 OF 28	DRAWN BY: <i>[Signature]</i> CHECKED BY: <i>[Signature]</i> DATE: 11/19/14	FOR CITY OF HOUSTON USE ONLY FILE NO.: DRAWING SCALE: HORIZ: 1" = 100' VERT: 1" = 100' SHEET NO. 4 OF 28

2-YEAR STORM CALCULATIONS

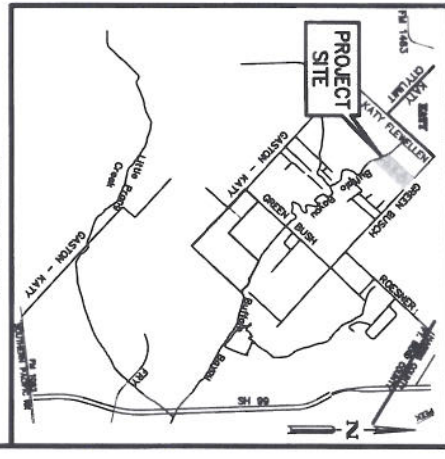
CITY OF HOUSTON 2 YEAR STORM SEWER FREQUENCY - b=75.01 d=16.2 e=0.315

Station	Flow	Depth	Velocity	Time	TC	Flowline	Flowline
	(cfs)	(ft)	(ft/s)	(min)	Upstream	Downstream	Upstream
1	2.34	0.55	2.34	1.20	3.30	4.25	26.61
2	2.34	0.55	2.34	1.20	3.30	4.25	26.61
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.82	0.55	1.27	0.70	6.90	8.90	25.43
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	1.15	0.55	1.97	1.08	3.37	3.65	26.61
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	1.75	0.55	3.02	1.60	3.31	6.50	26.43
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00

100-YEAR STORM CALCULATIONS

CITY OF HOUSTON 2 YEAR STORM SEWER FREQUENCY - b=125.4 d=21.8 e=0.75

Station	Flow	Depth	Velocity	Time	TC	Flowline	Flowline
	(cfs)	(ft)	(ft/s)	(min)	Upstream	Downstream	Upstream
1	2.34	0.55	2.34	1.20	6.83	6.79	26.61
2	2.34	0.55	2.34	1.20	6.79	6.79	26.61
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.82	0.55	1.27	0.70	7.05	3.18	24.66
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	1.15	0.55	1.97	1.08	6.94	7.52	25.61
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	1.75	0.55	3.02	1.60	6.89	11.35	26.61
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00



CIVIL ENGINEERING CONSULTANTS

2500 GULF DRIVE, SUITE 1000
HOUSTON, TEXAS 77057
Tel: (713) 477-0111
Fax: (713) 477-0111
Email: info@prre.com
www.prre.com

FOR ENGINEERING BY: [Signature]
DATE: 11/3/2024

PIN OAK ENCLAVE

DRAINAGE CALCULATIONS

FORT BEND COUNTY MUD 185

JOB NUMBER: PIN100

DATE: November 2024

DESIGNED BY: [Signature]

CHECKED BY: [Signature]

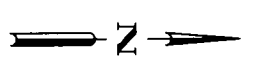
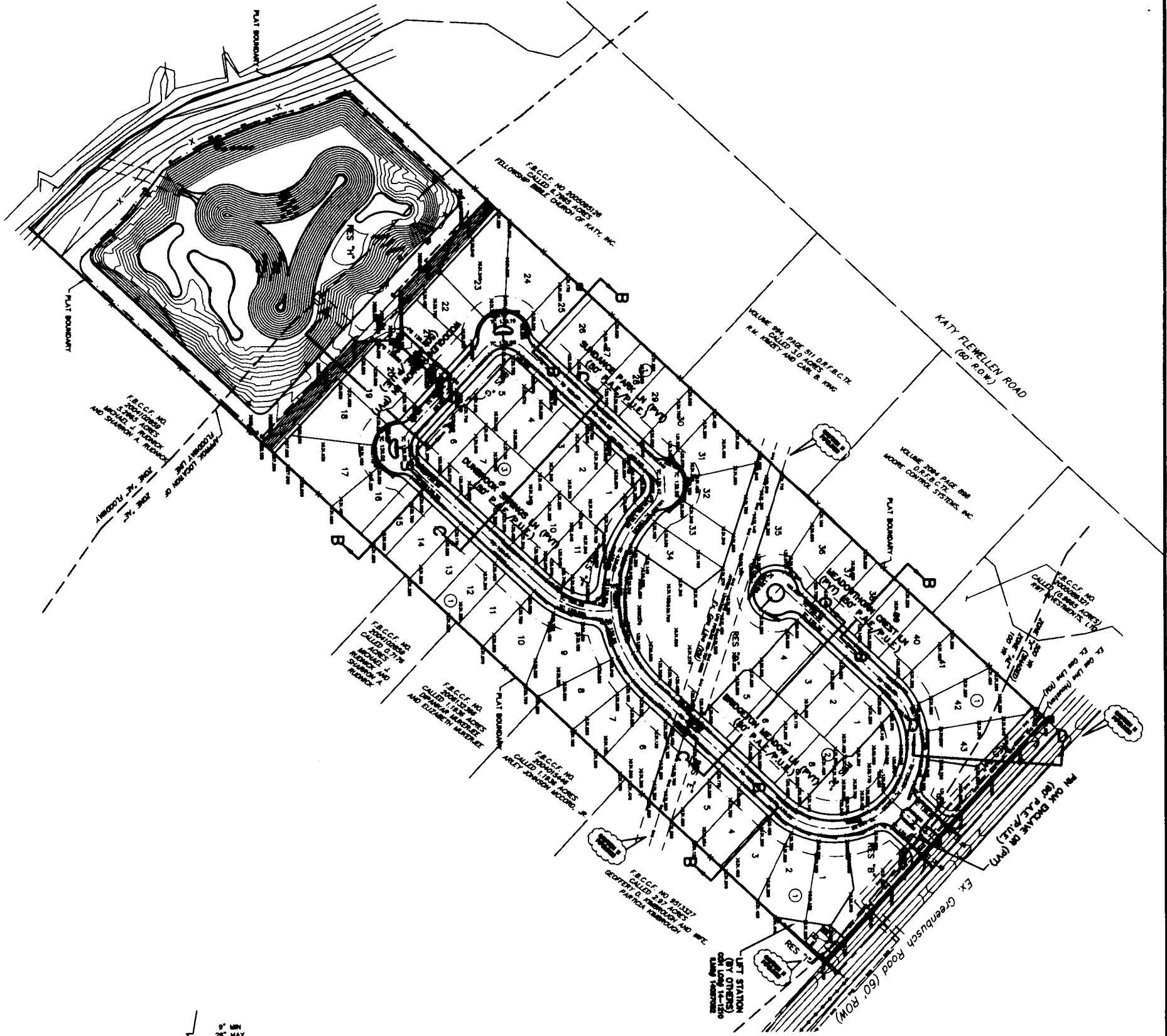
SCALE: AS SHOWN

PROJECT: FORT BEND COUNTY MUD 185

DATE: 11/3/2024

APPROVED: [Signature] ASSISTANT TO THE COUNTY ENGINEER DATE: 11/21/24

SHEET NO. 6 OF 28



LEGEND

EXISTING CONTOUR LINE ———

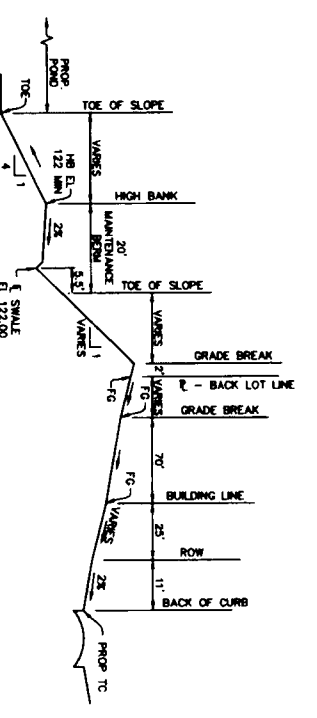
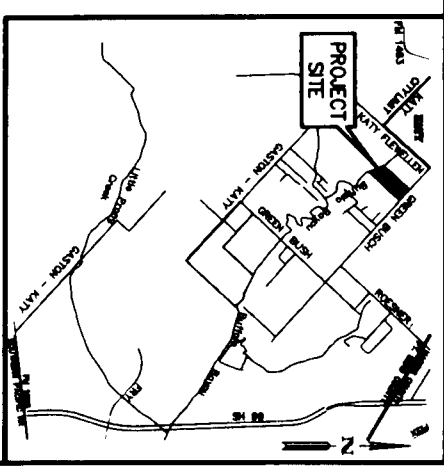
FINISHED GRADE ELEVATION ———

EXISTING FINISHED GRADE ELEVATION - - - - -

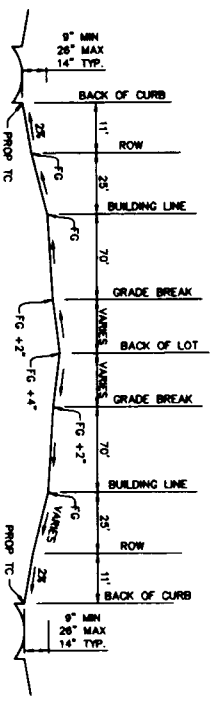
FO77.5

FO78.2

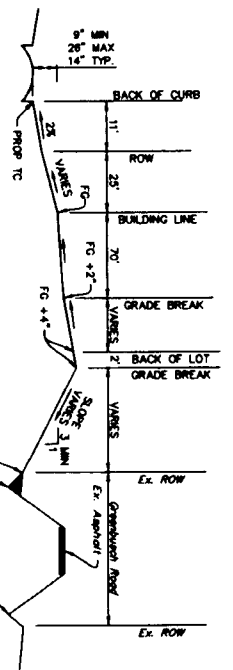
BOUNDARY FLOOD CONTROL REFERENCE MARK NUMBER 100185, 800' W. SLICE LOCATED IN FRONT OF IDENTIFIED BUILDING +/- 1.0' EAST WEST OF THE INTERSECTION OF FINISHED TO ONE BOUNDARY 80' ELEVATION 102.44 (NAVD 88, 2001 AD).
 BOUNDARY FLOOD CONTROL REFERENCE MARK NUMBER 100186, 800' CUT ON SOUTHWEST END OF ELBERT AND GREENBUSH +/- 100' NORTHWEST OF WESTEMER PARKWAY (AS ILLUSTRATED HEREON) ELEVATION 102.48 (NAVD 88, 2001 AD).



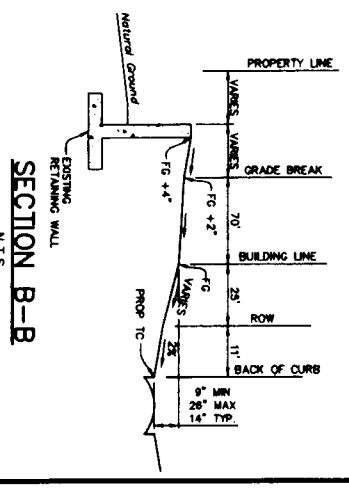
SECTION A-A
N.T.S.



SECTION C-C
N.T.S.



SECTION D-D
N.T.S.




SECTION B-B
N.T.S.

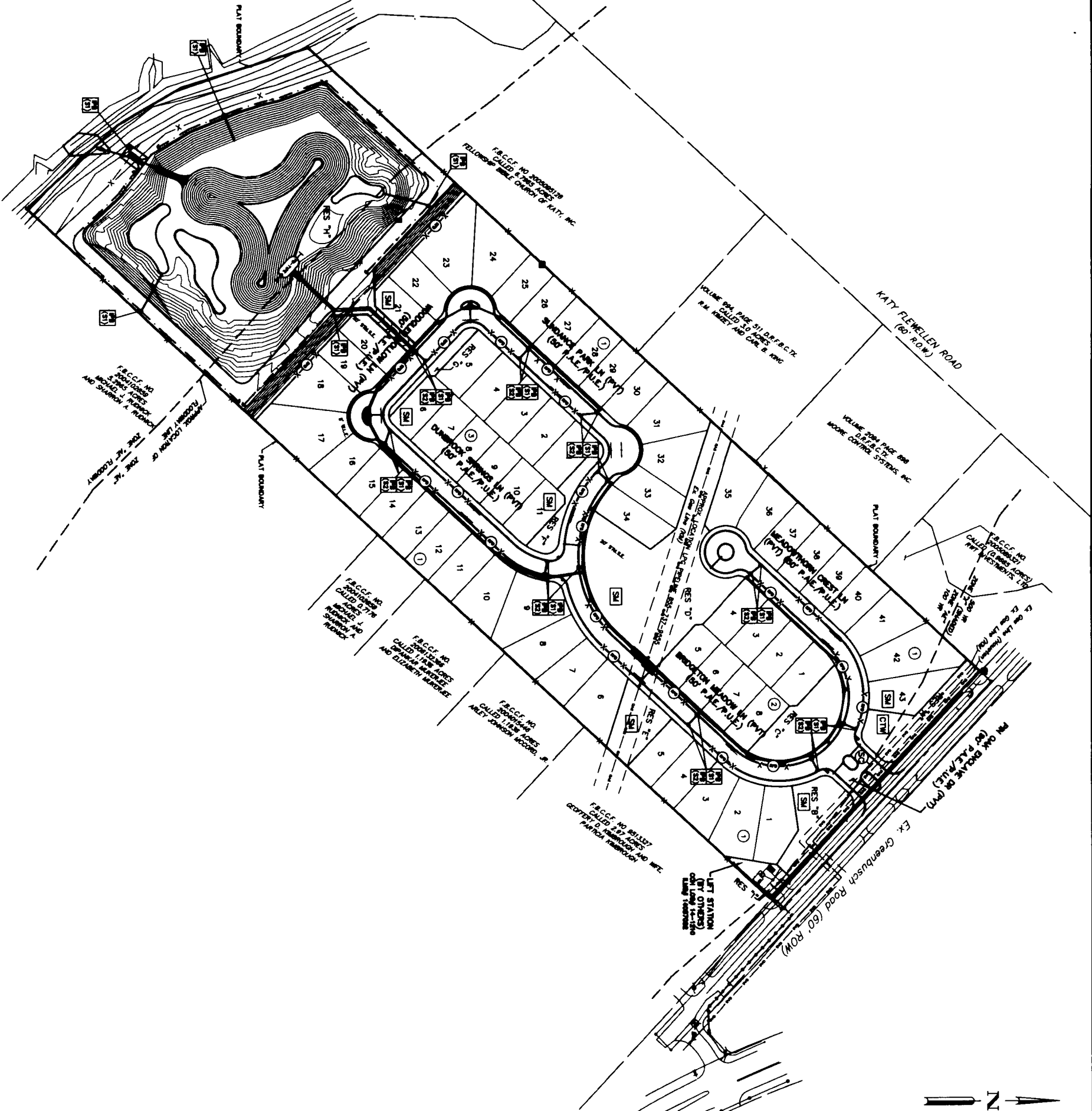
THE PROPERTY LIES IN ZONE "C" AND PARTIALLY IN SWAZED ZONE "C" AS SHOWN ON THE FORT BEND COUNTY ZONING MAP, DATED APRIL 2, 2014. THE 100-YEAR FLOOD PLAIN ELEVATION IS 128.84 (NAVD, 2001 AD).

NATURAL GROUND MAY HAVE CHANGED FROM WHAT IS SHOWN ON THE PLANS TO BOUND.

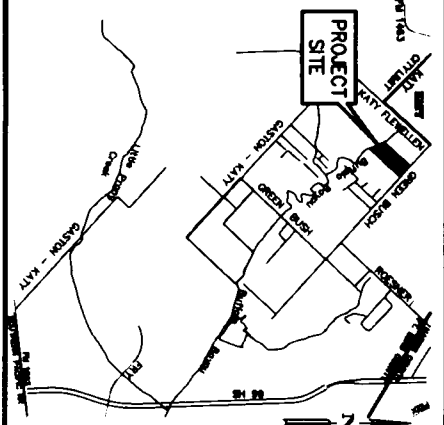
APPROVED: [Signature] DATE 11/21/15

ASSISTANT TO THE COUNTY ENGINEER

<p>RR ENGINEERING CENTRAL CONSULTANTS 2200 Center Road, Fort Bend, TX 77429 Tel: 281-291-0000 Fax: 281-291-0001 www.rr-engineering.com</p>		<p>FOR THE CITY OF HOUSTON  DEPARTMENT OF PUBLIC WORKS AND ENGINEERING CIVIL ENGINEERING DIVISION</p>	
<p>FORT BEND COUNTY MUD 185</p>		<p>PIN OAK ENCLAVE</p>	
<p>GRADING PLAN</p>		<p>DATE: NOVEMBER 2014 JOB NUMBER: PH1100 SHEET NO. 7 OF 28</p>	
<p>FILE NO. FOR CITY OF HOUSTON USE ONLY</p>		<p>DRAWING SCALE: AS SHOWN HORIZ: 1" = 100' VERT: 1" = 100'</p>	
<p>58161</p>		<p>FOR CITY OF HOUSTON USE ONLY</p>	



REFERENCE: THE PROPERTY FLOOD CONTROL REFERENCE MARK NUMBERED TOWER, ROD IN SLEEVE LOCATED IN FRONT OF CENTERPOINT BUILDING +/- 7.10 MET WEST OF THE ELEVATION 102.44 (1985 BR. 2001 ADJ) AND DEPARTMENT RECORD: BOX 014 ON SOUTHWEST END OF GREENBUSH ROAD +/- 100' NORTHWEST OF ELEVATION 102.44 (1985 BR. 2001 ADJ) AND WESTERN PARKWAY +/- 100' NORTHWEST OF ELEVATION 102.44 (1985 BR. 2001 ADJ)



LEGEND

- PROPOSED STORM SEWER LINE, MANHOLE AND B-B INLETS ---
- EXISTING STORM SEWER LINE, MANHOLE AND B-B INLETS ---
- INLET PROTECTION BARRIER FOR STAGE I INLETS (SEE SPEC. ITEM 4311) ---
- INLET PROTECTION BARRIER FOR STAGE II INLETS (SEE SPEC. ITEM 4311) ---
- HYDRO-MULCH SEEDING (SEE SPEC. ITEM 4241) ---
- REINFORCED FILTER FABRIC BARRIER (SEE SPEC. ITEM 4311) ---
- STABILIZED CONSTRUCTION ACCESS (SEE SPEC. ITEM 4211) ---
- CONCRETE TRUCK WASHOUT AREA ---
- FILTER DAM ---

POLLUTION PREVENTION NOTES:

1. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. POLLUTION PREVENTION MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. ALL CONSTRUCTION SHALL COMPLY WITH THE TEXAS POLLUTION DISCHARGE EXAMINATION SYSTEM (TPDES) REQUIREMENTS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DEPENDENT OF THESE REQUIREMENTS PER GENERAL REQUIREMENTS FOR PERMIT TDS150000.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND MAINTAINING GENERAL SOURCE CONTROLS PER SPECIAL SPEC. ITEM 4411.
4. THE LOCATION OF THE STABILIZED CONSTRUCTION ACCESS IS TO BE DETERMINED BY THE CONTRACTOR.
5. ALL RESERVOIRS AND AREAS SETBACK FROM CURB AND FRONT OF LOT SHALL BE REVEGETATED PER SPECIAL SPEC. ITEM 4241. ALL AREAS AND OTHER AREAS DESTROYED DURING CONSTRUCTION SHALL BE REVEGETATED PER SPECIAL SPEC. ITEM 4240.

THE PROPERTY LIES IN ZONE "A-1" AND PARTIALLY IN SHADOWED ZONE "X-1" AS SHOWN ON THE FLOOD CONTROL REFERENCE MAP. THE PROPERTY IS LOCATED IN THE 100-YEAR FLOOD PLAIN ELEVATION IS 128.84 (NAVD. 2001 ADJ).

APPROVED: ASSISTANT TO THE COUNTY ENGINEER DATE 11/21/15

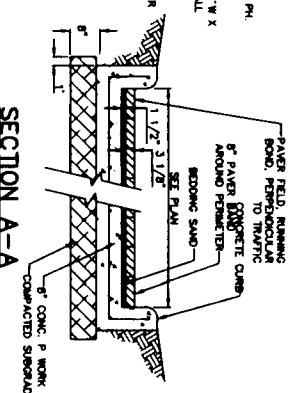
<p>FOR THE CITY OF HOUSTON USE ONLY</p> <p>FILE NO. _____</p> <p>DRAWING SCALE _____</p> <p>HORIZ. : 1" = 100'</p> <p>VERT. : _____</p> <p>SHEET 8 OF 28</p>		<p>CITY OF HOUSTON</p> <p>DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p> <p>DATE: 11/13/15</p> <p>PROJECT: STORM WATER POLLUTION PREVENTION PLAN</p> <p>DESIGNED BY: [Signature]</p> <p>CHECKED BY: [Signature]</p>	<p>FOR THE COUNTY ENGINEER USE ONLY</p> <p>DATE: 11/21/15</p> <p>PROJECT: STORM WATER POLLUTION PREVENTION PLAN</p> <p>DESIGNED BY: [Signature]</p> <p>CHECKED BY: [Signature]</p>
<p>STORM WATER POLLUTION PREVENTION PLAN</p> <p>PIN OAK ENCLAVE</p> <p>FORT BEND COUNTY MUD 185</p>		<p>PRE</p> <p>CIVIL ENGINEERING</p> <p>23400 Crown Road, Houston, TX 77075</p> <p>Phone: 281-488-8888</p> <p>Website: www.pre-engineering.com</p> <p>Professional Seal: [Seal]</p>	

CURVE RADIUS	LENGTH	DELTA	CH. BEARING	CH. DISTANCE
C1	147.00	46.81°	S45°50'28"W	284.00'
C2	50.00	78.54°	S01°36'36"E	70.71'
C3	50.00	78.54°	S00°00'00"E	70.71'

CURVE RADIUS	LENGTH	DELTA	CH. BEARING	CH. DISTANCE
C7	10.00	30.85°	S47°02'48"E	20.00'
C8	10.00	30.85°	S45°50'28"W	20.00'
C9	10.00	30.85°	S47°02'48"E	20.00'
C10	10.00	30.85°	S45°50'28"W	20.00'

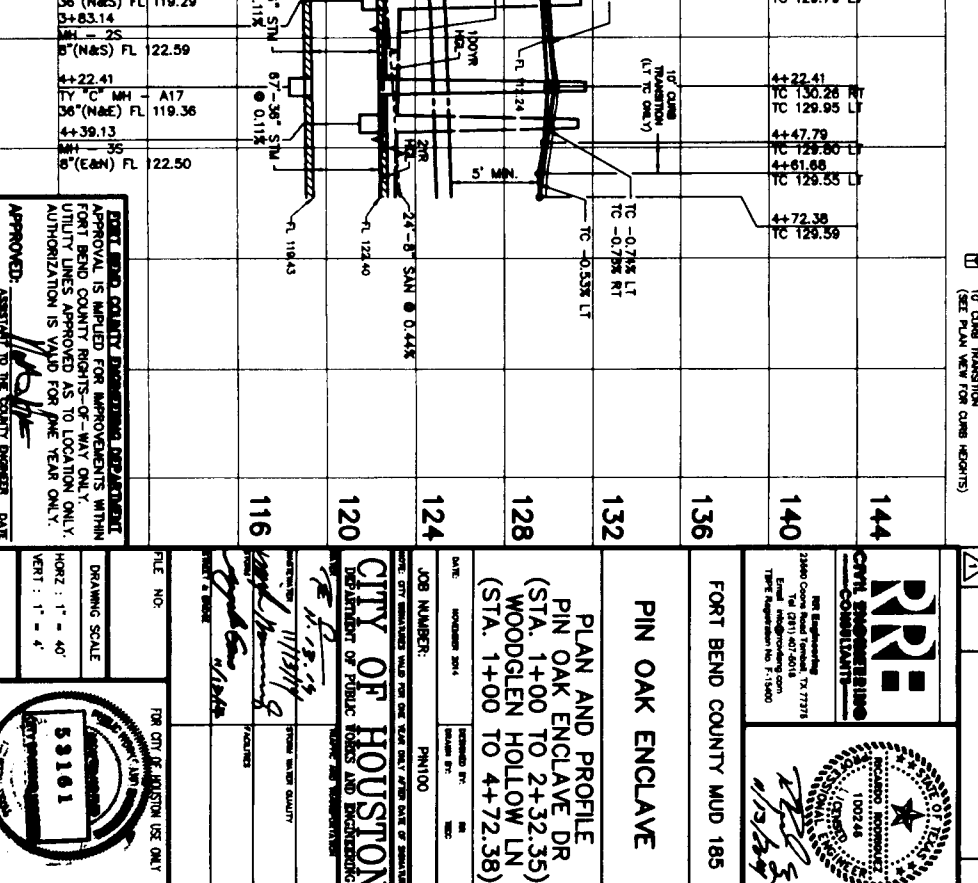
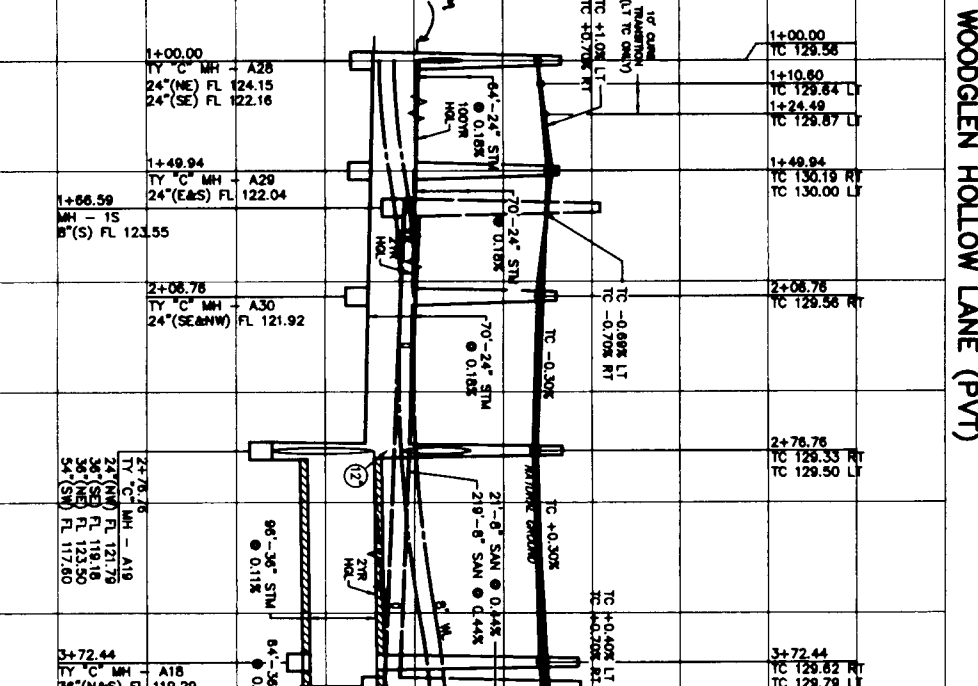
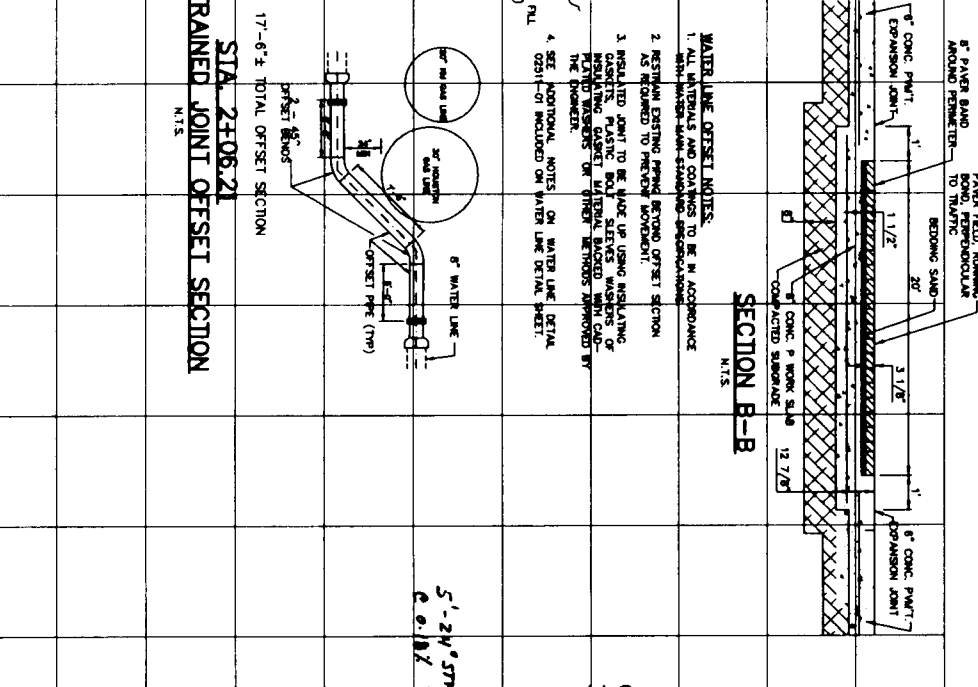
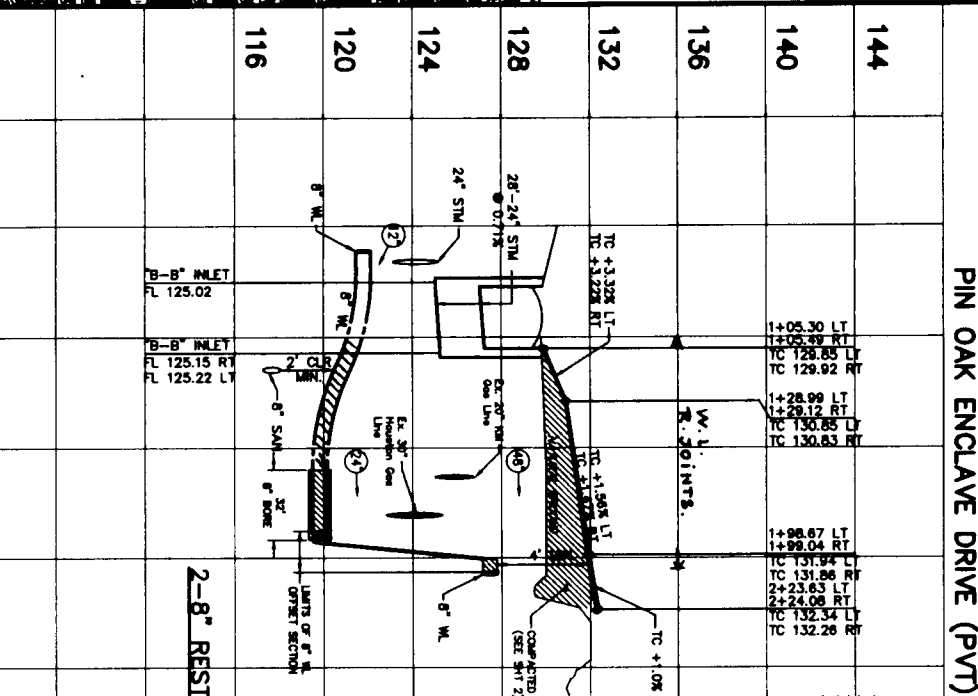
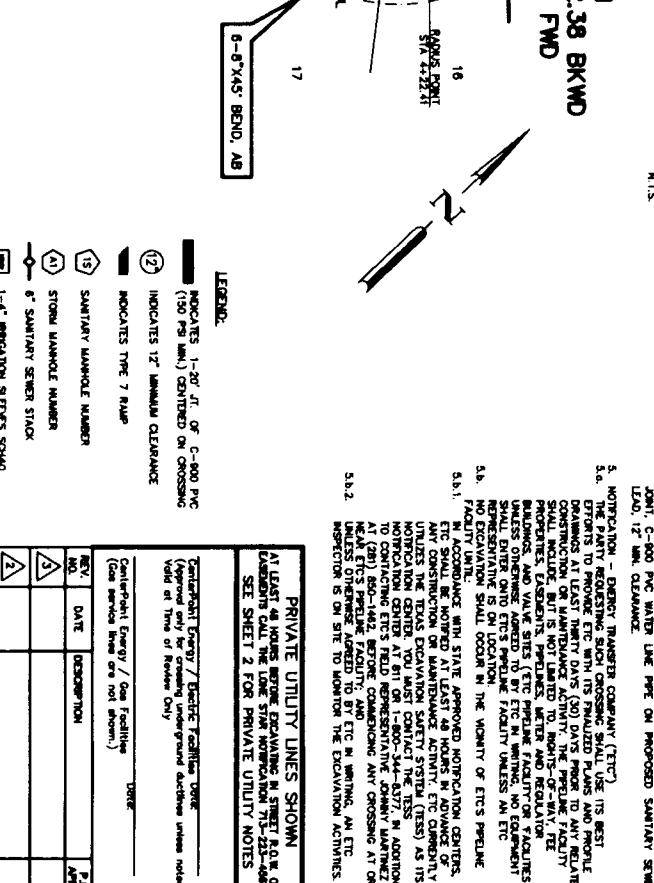
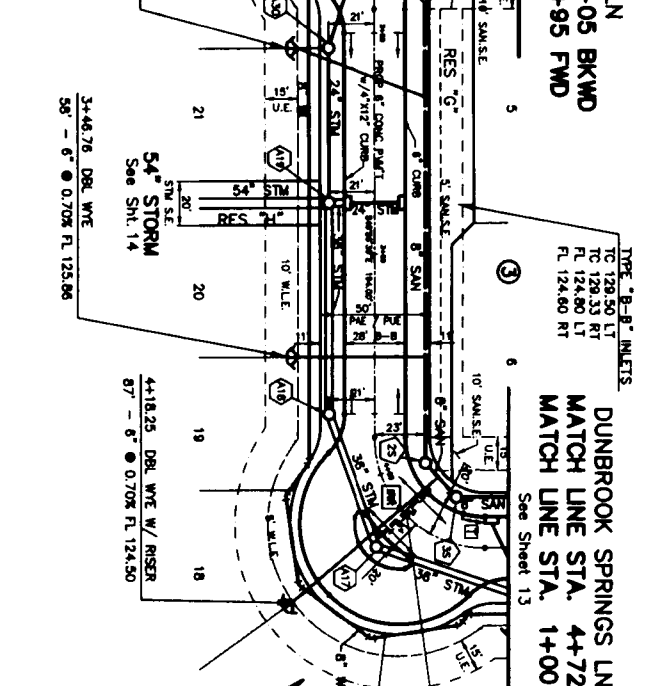
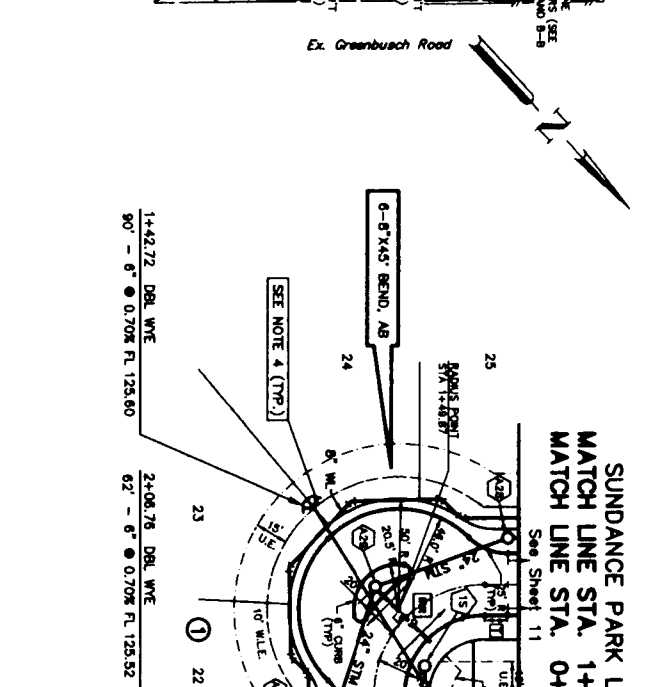
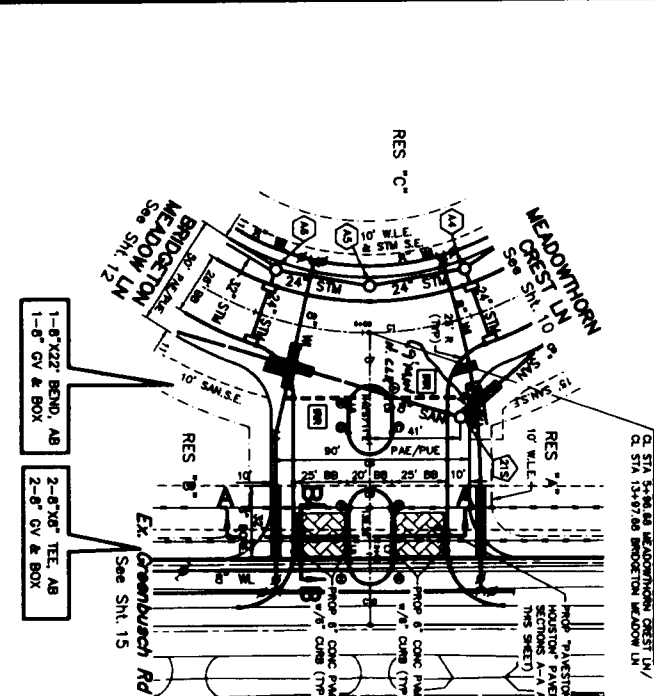
STATION	OFFSET
A	+13.818
B	+13.818
C	+14.403
D	+14.403
E	+14.841
F	+14.841
G	+24.036
H	+24.036

LINE	BEARING	DISTANCE
L1	S45°50'28"W	11.30'
L2	S45°50'28"W	23.43'
L3	S45°50'28"W	23.43'



NOTES:

- SAINTARY SENSERS SHALL BE PROPOSED 30W-26 P.C. UNLESS OTHERWISE INDICATED.
- STORM SENSERS SHALL BE PROPOSED REINFORCED CONCRETE PIPE C-7.5 CLASS UNLESS OTHERWISE INDICATED. ALL JOINTS SHALL BE NUMBERED.
- ALL WATER LINES TO BE PROPOSED P.C. CLASS 150, DN-18, AWWA C-900 UNLESS OTHERWISE INDICATED.
- WHENEVER POSSIBLE, CENTER 1'-20" JOINT C-900 P.C. PIPE, CLASS 150, 12" MIN. COVERANCE.
- WHENEVER POSSIBLE, CENTER 1'-20" JOINT C-900 P.C. PIPE, CLASS 150, 12" MIN. COVERANCE.
- NOTIFICATION - ENERGY TRANSMISSION COMPANY (ETC) SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY CONSTRUCTION OR MAINTENANCE ACTIVITY. ETC COMPANY SHALL BE NOTIFIED AT LEAST 72 HOURS IN ADVANCE OF ANY CONSTRUCTION OR MAINTENANCE ACTIVITY. ETC COMPANY SHALL BE NOTIFIED AT LEAST 72 HOURS IN ADVANCE OF ANY CONSTRUCTION OR MAINTENANCE ACTIVITY. ETC COMPANY SHALL BE NOTIFIED AT LEAST 72 HOURS IN ADVANCE OF ANY CONSTRUCTION OR MAINTENANCE ACTIVITY.



LINE	BEARING	DISTANCE
L1	S45°50'28"W	11.30'
L2	S45°50'28"W	23.43'
L3	S45°50'28"W	23.43'

APPROVED: ASSISTANT TO THE COUNTY ENGINEER DATE 11/26/15

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET, A.O.C. OR LANDSCAPE CALL THE UTILITY STAKE INFORMATION 713-251-4667. SEE SHEET 2 FOR PRIVATE UTILITY NOTES.

Fort Bend County MUD 185

Pin Oak Enclave

Plan and Profile

Pin Oak Enclave Dr (Sta. 1+00 to 2+32.35)

Woodglen Hollow Ln (Sta. 1+00 to 4+72.38)

Job Number: PNT100

City of Houston

Department of Public Works and Engineering

City Engineer: [Signature]

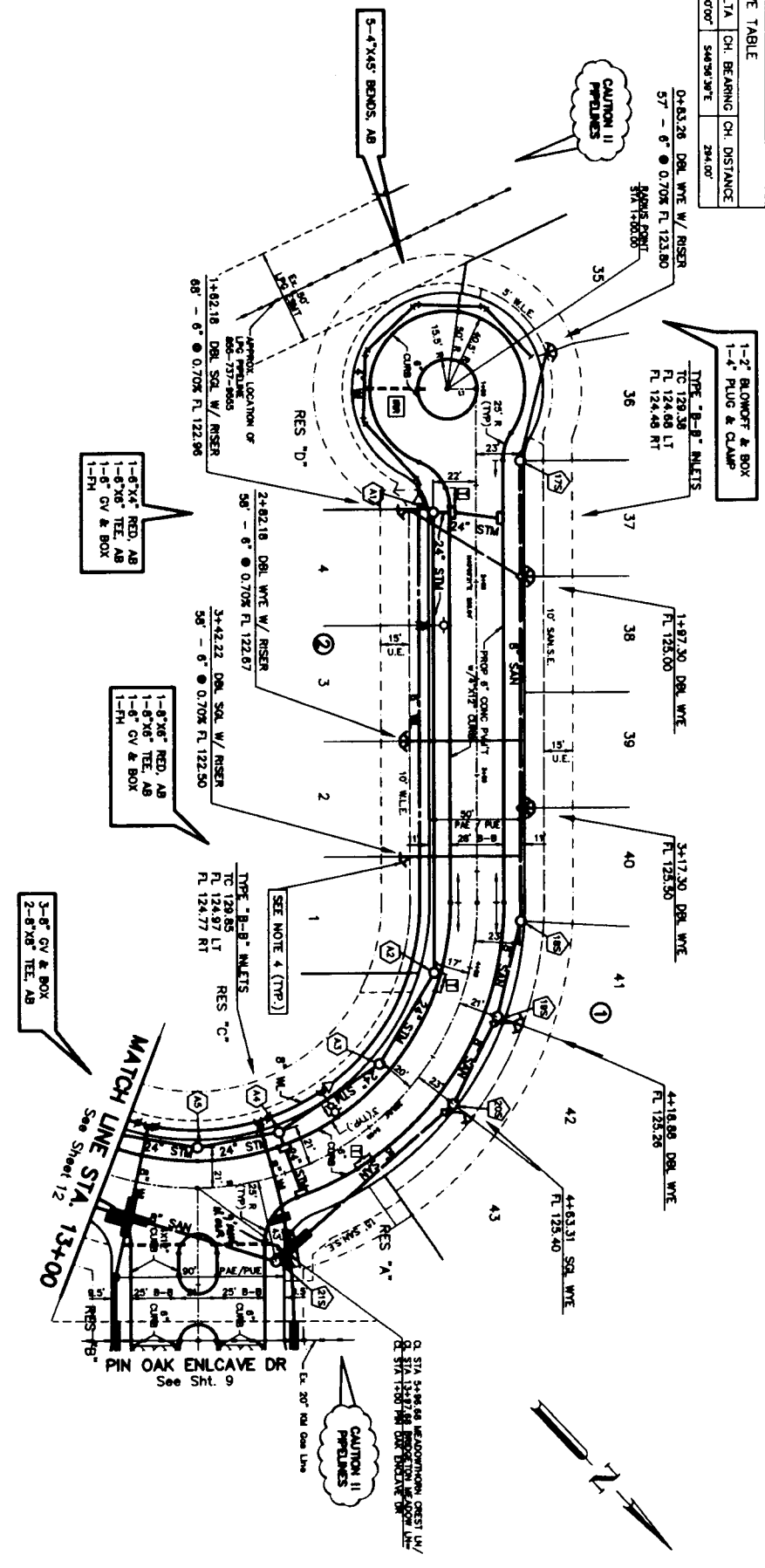
Project Engineer: [Signature]

Scale: 1" = 40'

Sheet: 9 of 28



CURVE TABLE			
CURVE RADIUS	LENGTH	DELTA	CH BEARING CH DISTANCE
147.00	481.81	180.00°	545.94 W/E
147.00	481.81	180.00°	284.00°



MEADOWTHORN CREST LANE (PVT)/BRIDGETON MEADOW LANE (PVT)

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
144			144		
140			140		
136			136		
132			132		
128			128		
124			124		
120			120		
116			116		

6" RESTRAINED JOINT OFFSET SECTION
STA. 2+08.53
N.T.S.

DEPT. ROAD COUNTY ENGINEERING DEPARTMENT
APPROVAL IS GRANTED FOR IMPROVEMENTS WITHIN
FORT BEND COUNTY RIGHTS-OF-WAY ONLY.
UTILITY LINES APPROVED AS TO LOCATION ONLY.
AUTHORIZATION IS VALID FOR ONE YEAR ONLY.

APPROVED: *[Signature]*
DATE: 12/15

FOR CITY OF HOUSTON USE ONLY

SHEET NO. 10 OF 28

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE
ENGINEER: *[Signature]*
DATE: 12/15

PRC
CONSULTANTS
35000 Coors Road, Houston, TX 77078
Tel: (281) 407-0018
Fax: (281) 407-0019
www.prc-engineers.com

FOR BEND COUNTY MUD 185
PIN OAK ENCLAVE

PLAN AND PROFILE
MEADOWTHORN CREST LN/
BRIDGETON MEADOW LN
(STA. 0+61.29 TO 13+00)

JOB NUMBER: PH100
DATE: NOVEMBER 2014
DESIGNED BY: [Name]
CHECKED BY: [Name]

VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

59161

- NOTES:**
- SANITARY SEWERS SHALL BE PROPOSED 300-24 PVC UNLESS OTHERWISE INDICATED.
 - STORM SEWERS SHALL BE PROPOSED REINFORCED CONCRETE PIPE C-24 CLASS III UNLESS OTHERWISE INDICATED. ALL JOINTS SHALL BE NUMBER GASKETED.
 - ALL WATER LINES TO BE PROPOSED PVC CLASS 150, DN-18, AWWA C-900 UNLESS OTHERWISE INDICATED.
 - WRECKER POSSIBLE, CENTER 1-20' JOINT C-800 PVC PIPE, CLASS 150 SANITARY SEWER LEAD ON PROPOSED WATER LINE AND 1-20' JOINT C-900 PVC WATER LINE PIPE ON PROPOSED SANITARY SEWER LEAD, 12" MIN. CLEARANCE.
 - NOTIFICATION: RELOCATING SIGN, STOPPING SHALL BE THE FIRST EFFORT TO PROTECT THE WORK. THE PROPOSED PLAN AND PROFILE DRAWINGS AT LEAST THIRTY DAYS (30) DAYS PRIOR TO ANY RELATED CONSTRUCTION OR MAINTENANCE ACTIVITY THE PRELIMINARY FACILITY PROTECTIVE, EXISTENTS, PRELINES, WATER AND REGULATIVE BUILDINGS, AND VALUE SITES (ETC) PRELIMINARY FACILITY PROTECTIVE) UNLESS OTHERWISE INDICATED BY ETC IN WRITING. NO TYPED REPRESENTATIVE IS ON LOCATION.
 - NO EXCAVATION SHALL OCCUR IN THE VICINITY OF ETC'S PRELIMINARY FACILITY PROTECTIVE.
 - IN ACCORDANCE WITH STATE APPROVED NOTIFICATION CENTERS, ETC SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY EXCAVATION ACTIVITY. THE NOTIFICATION CENTER SHALL BE THE NOTIFICATION CENTER AT 811 OR 1-800-344-3377. IN ADDITION AT (281) 800-1482, BEFORE COMMENCING ANY CHANGING AT OR NEAR ETC'S PRELIMINARY FACILITY, AND ETC IS WORKING, AN ETC REPRESENTATIVE SHALL BE ON SITE TO SUPERVISE THE EXCAVATION ACTIVITIES.

LEGEND:

- INDICATES 1-20" D. OF C-800 PVC (150 PSI MIN.) CENTERED ON CROSSING
- INDICATES 12" MINIMUM CLEARANCE
- INDICATES TYPE 7 RAMP
- SANITARY MANHOLE NUMBER
- STORM MANHOLE NUMBER
- SANITARY SINKER STACK
- 1-4" IMMOBILIZATION SLEEVES SCHED. 40 (SEE PLAN VIEW FOR CUMP HEIGHTS)

PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET E.A. OR EXCAVATING IN THE LOW STONE NOTIFICATION 713-223-6897
SEE SHEET 2 FOR PRIVATE UTILITY NOTES

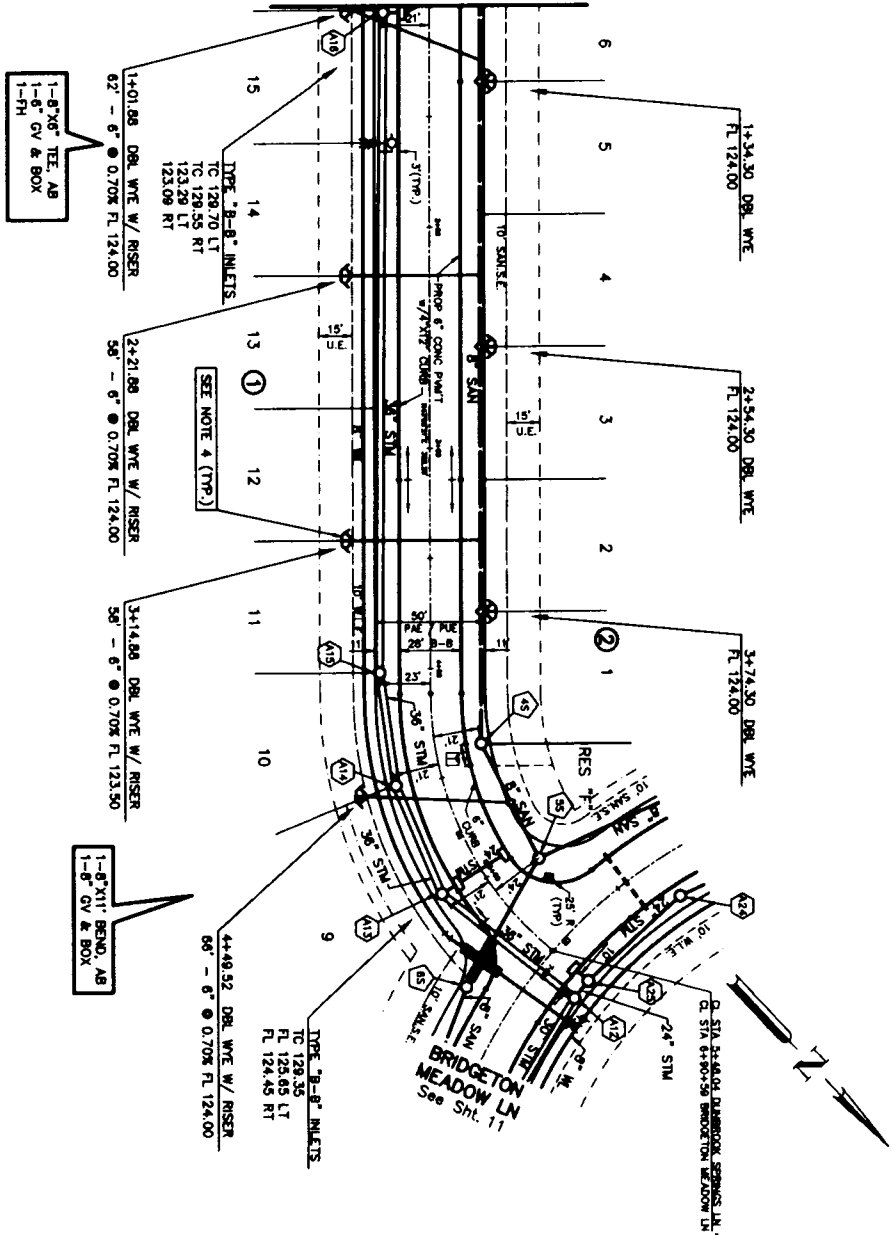
CONTRIBUTOR ENERGY / Electric Facilities (Approved only for existing underground systems unless noted)
INDICATES 12" MINIMUM CLEARANCE

CONTRIBUTOR ENERGY / Gas Facilities (See Facilities) (See service lines on not shown)

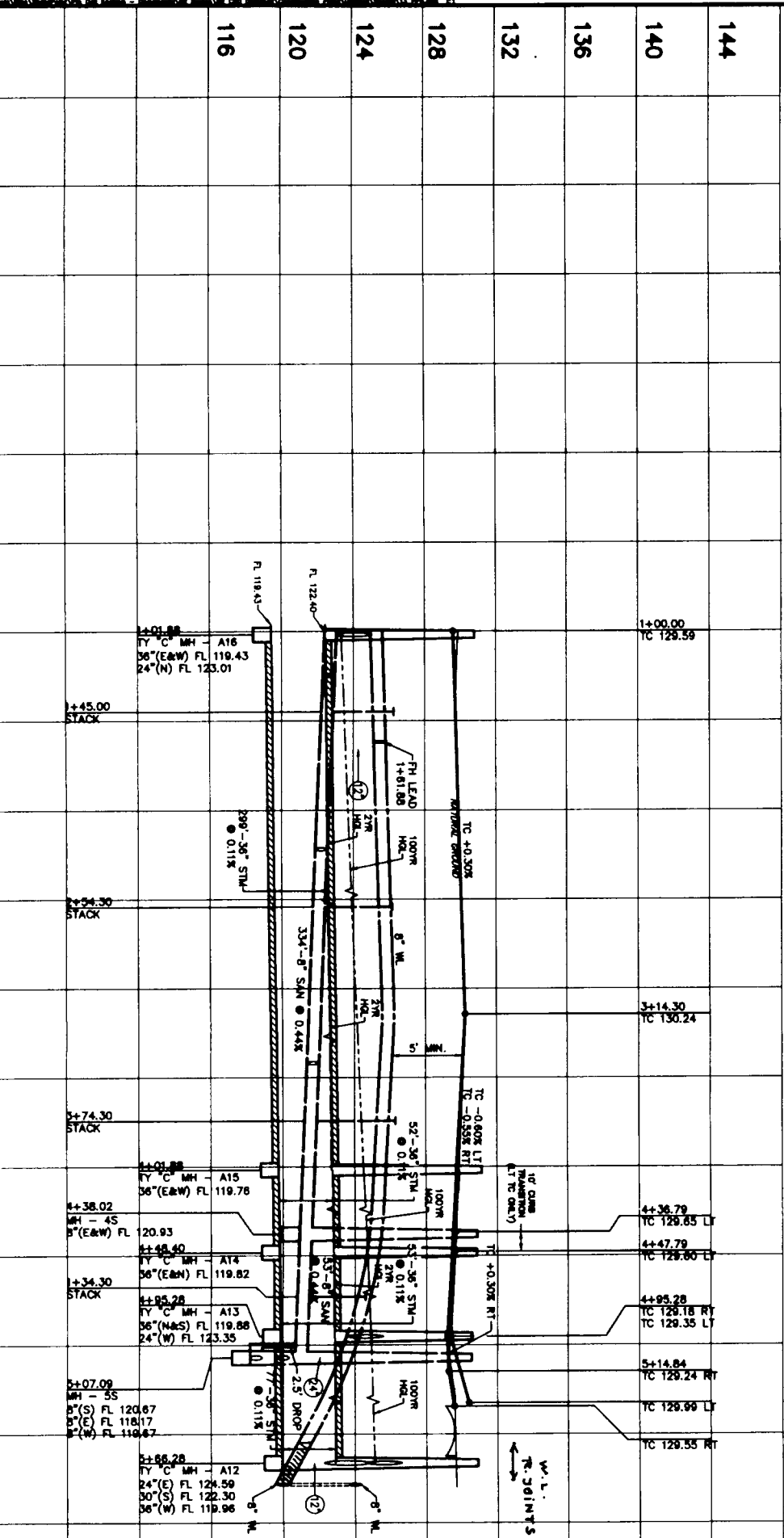
REV.	DATE	DESCRIPTION	BY	CHK.
1				
2				

CURVE TABLE			
CURVE RADIUS	LENGTH	DELTA	CH BEARING
C1	223.00	333.43	S87°21'W
C2	150.00	133.91	S97°09'W

DUNBROOK SPRINGS LN
MATCH LINE STA. 4+72.38 FWD
MATCH LINE STA. 1+00 BKWD
See Sheet 9



DUNBROOK SPRINGS LANE (PVT)



BRONDAK: JAMES COUNTY FLOOD CONTROL DISTRICT, BRONDAK MARK NUMBER 18079R, ROD NUMBER 18079R, BRONDAK ROAD, BRONDAK, TEXAS 77827. BRONDAK ROAD IS LOCATED WEST OF THE INTERSECTION OF BRONDAK ROAD AND HIGHWAY 90 (ELEVATION=140.44 (NAVD BR. 2001 AD)) TEMPORARY BRONDAK ROAD CUT ON SOUTHWEST END OF BACK OF CURB LOCATED AT THE INTERSECTION OF ELSTY AND GREENBUSH (+/-100' NORTHWEST OF WESTERN PANHANDLE (AS ILLUSTRATED HEREON) ELEVATION=130.49 (NAVD BR. 2001 AD))

- NOTES:
- SANITARY SEWERS SHALL BE PROPOSED 30"-36" PVC UNLESS OTHERWISE INDICATED.
 - STORM SEWERS SHALL BE PROPOSED IMPROVED CONCRETE PIPE C-75 CLASS UNLESS OTHERWISE INDICATED. ALL SLEETS SHALL BE NUMBER GASKETED.
 - ALL WATER LINES TO BE PROPOSED PVC CLASS 150, DR-18, AWWA C-900 UNLESS OTHERWISE INDICATED.
 - WASHERS, POCKET, COVER, 1'-20" JUNT C-800 PVC PIPE CLASS 150 SANITARY SLEEVES LEAD ON PROPOSED WATER LINE AND 1'-20" JUNT, C-800 PVC WATER LINE PIPE ON PROPOSED SANITARY SLEEVES LEAD, 12" MIN. CLEARANCE.

- LEGEND:
- INDICATES 1'-20" J. OF C-800 PVC (150 PSI MIN.) CENTERED ON CROSSING
 - INDICATES 12" MINIMUM CLEARANCE
 - INDICATES WELCHMAN TAMP
 - SANITARY MANHOLE NUMBER
 - STORM MANHOLE NUMBER
 - 6" SANITARY SEWER STACK

PRIVATE UTILITY LINES SHOWN
AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET 8:00 A.M. ON DAYBEFORE CALL THE ONE CALL NOTIFICATION 713-253-0877
SEE SHEET 2 FOR PRIVATE UTILITY NOTES

NO.	DATE	DESCRIPTION	DATE
1			
2			

RRE
CIVIL ENGINEERING
CONSULTANTS
180 Engineering
23400 Coors Road, The Woodlands, TX 77380
Tel: (281) 407-0011
Fax: (281) 407-0012
Toll Free: 1-800-855-1100

[Signature]
11/2/14

FORT BEND COUNTY MUD 185
PIN OAK ENCLAVE

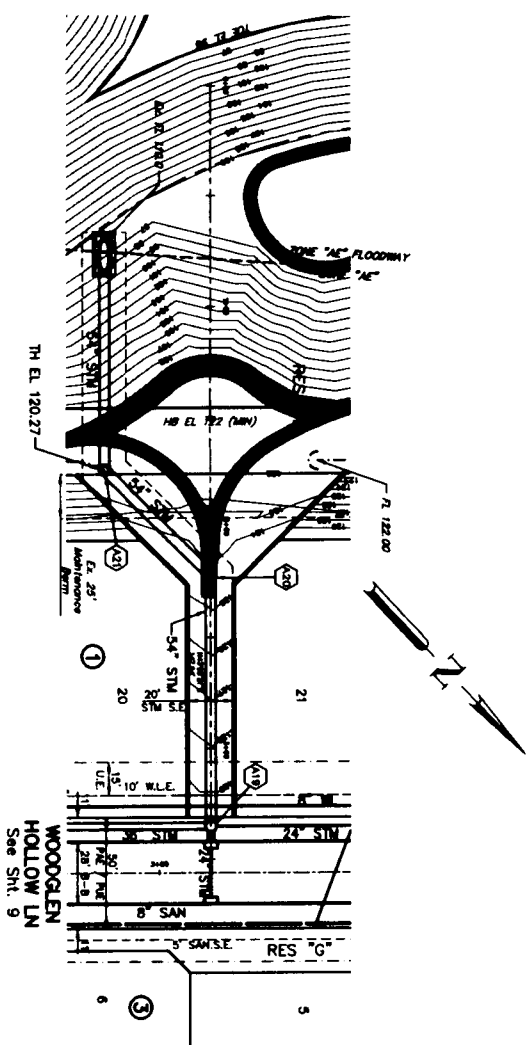
PLAN AND PROFILE
DUNBROOK SPRINGS LN
(STA. 1+00 TO 5+38.04)

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
OFFICE OF THE CITY ENGINEER
1500 WESTHOPE AVENUE, SUITE 1000
HOUSTON, TEXAS 77056
TEL: 713-895-2000
WWW.CITYOFHOUSTON.TX

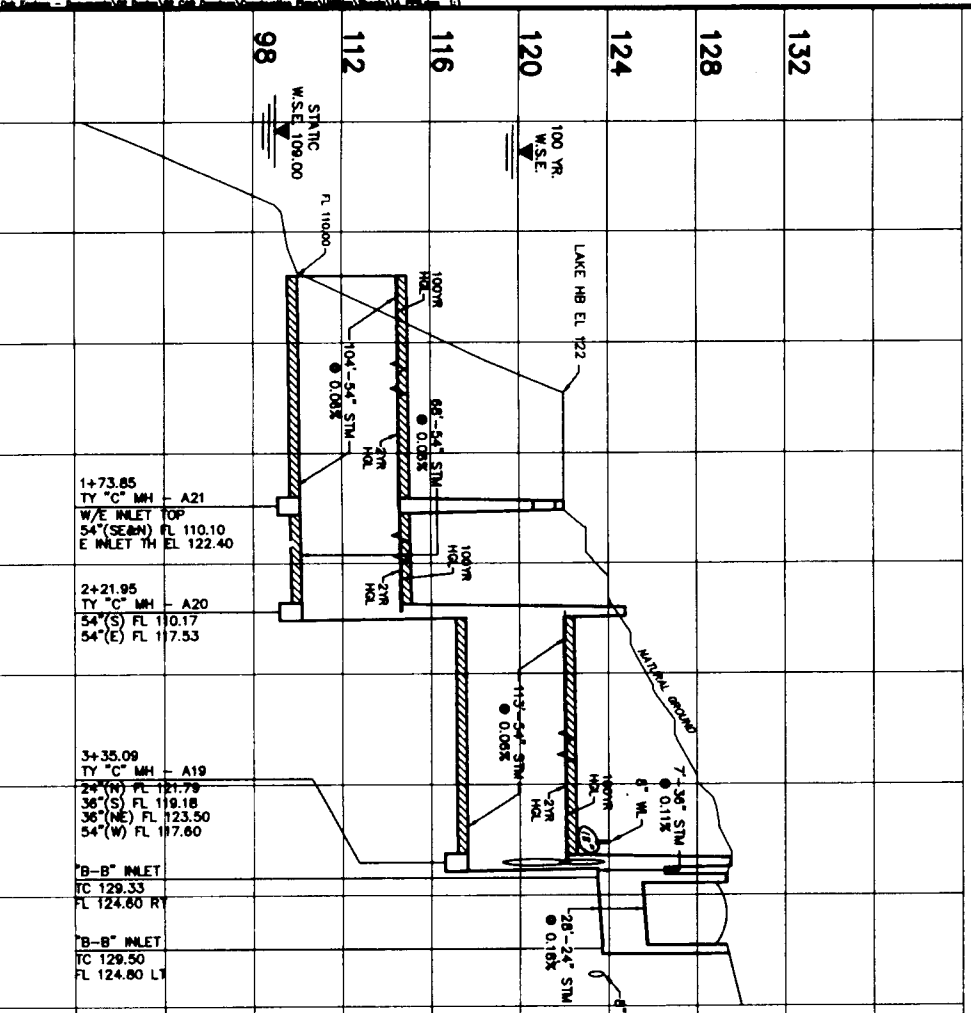
DATE: NOVEMBER 2014
JOB NUMBER: PIN100
SCALE: AS SHOWN
DRAWING SCALE: HORIZ: 1" = 40'
VERT: 1" = 4'

APPROVED: *[Signature]*
ASSISTANT TO THE COUNTY ENGINEER
DATE: 11/2/14

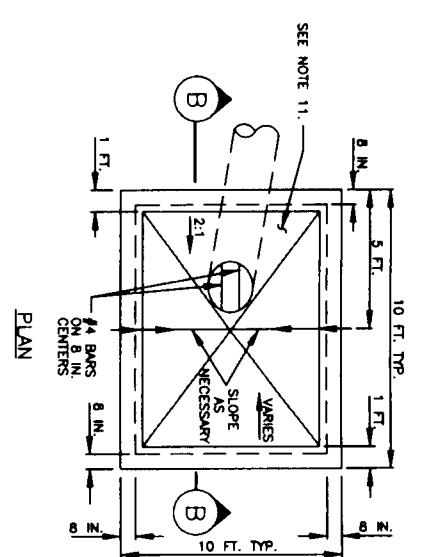
SHEET 13 OF 28



54" STORM SEWER

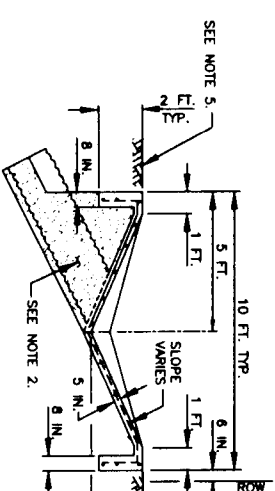


Station	Manhole	W/E Inlet Top	54" (S) FL	54" (E) FL	E Inlet TH EL
1+73.85	A21	110.10	110.17	117.53	122.40
2+21.95	A20	110.17	110.18	117.60	-
3+35.09	A19	110.18	110.18	117.60	-
4+35.09	A19	110.18	110.18	117.60	-
5+35.09	A19	110.18	110.18	117.60	-

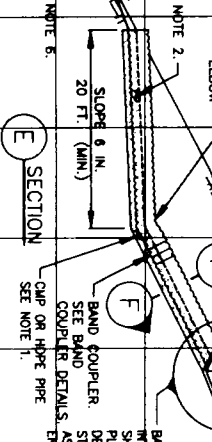


TYPICAL BACKSLOPE INTERCEPTOR STRUCTURE (24 INCH & 30 INCH ONLY)

(B) SECTION



TYPICAL INTERCEPTOR OUTFALL STRUCTURE LAYOUT



PIPE OUT FALL IN CHANNELS

Bottom Width	Pipe Outlet Invert
8 FEET S. BW S. 20 FT	1 FOOT ABOVE FLOWLINE
20 FEET < BW S. 60 FT	AT TOP OF SLOPE

INTERCEPTOR STRUCTURE DETAIL NOTES:

- INTERCEPTOR OUTFALL PIPES WITHIN THE FIELD RIGHT-OF-WAY SHALL BE CMP OR HDPE PIPE IN ACCORDANCE WITH SPECIFICATION SECTION 02642 - CORRUGATED METAL PIPE, HIGH-DENSITY POLYETHYLENE (HDPE) PIPE IN ACCORDANCE WITH SPECIFICATION SECTION 2505 - HIGH DENSITY POLYETHYLENE, OR APPROVED EQUAL. USE TABLE BELOW FOR CORRUGATED GALVANIZED STEEL PIPE.
- PROVIDE AND PLACE CEMENT STABILIZED SAND IN ACCORDANCE WITH SPECIFICATION SECTION 02321 - CEMENT STABILIZED SAND AND SECTION 02318 - STRUCTURAL ENCAVING.
- EXCAVATION, TIE, AND BACKFILL FOR STORM SEWER OUTFALLS SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02310 - CONCRETE.
- CONCRETE SHALL BE STRUCTURAL CONCRETE IN ACCORDANCE WITH SPECIFICATION SECTION 03310 - CONCRETE.
- INTERCEPTOR STRUCTURES:
- ADJUST LENGTH AND WIDTH IN FIELD AS NECESSARY.
- 2-FEET DEEP X 8-INCH WIDE TOE ALL AROUND THE STRUCTURE.
- STEEL REINFORCING - #4 BARS (GRADE 40) AT 12 INCHES ON CENTER EACH WAY.
- ANY INTERCEPTOR OUTFALL PIPE LARGER THAN MAXIMUM SIZE.
- MATCH TOP OF CONCRETE WITH NATURAL GROUND.
- IN ELEVATION INDICATED IN THE TABLE OR 1 FOOT ABOVE NORMAL WATER LEVEL WHICH EVER IS HIGHER.
- SEE CONCRETE CHANNEL LINING DETAIL SHEET FOR CMP OUTFALL DETAILS THROUGH CONCRETE CHANNEL LINING.
- CONCRETE PAD AROUND TYPE 'B' INLET. PAID FOR AS CONCRETE INTERCEPTOR STRUCTURE PER UNIT PRICE SCHEDULE. TYPE 'B' INLET BOX, COH DNG. NO. 02632-02 WITH GRADE OR VULCAN FOUNDRY COMPANY, V-4880-1 OR APPROVED EQUAL, APPROX. 489 SQ. IN.
- BACKSLOPE SWALE AND INTERCEPTOR STRUCTURE ELEVATIONS AND LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. FINAL ELEVATIONS AND LOCATIONS SHALL BE FIELD-VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION.
- STRUCTURAL CONCRETE WITH #4 BARS (GRADE 40) 12 INCH O.C. EACH WAY - FOR EPOXY CLEAN WATER CLEAR CHOICE LOCK BUTON ON INTERCEPTORS. LOCATION TO BE DETERMINED BY THE ENGINEER.

LEGEND:

- 1-30" JUMP C-800 PVC (30 PSF MAX.) CENTERED ON CROSSING
- 12" INDICATES 12" MINIMUM CLEARANCE
- INDICATES WELDOCK BAR PUMP
- 19 SANITARY MANHOLE NUMBER
- 24 STORM MANHOLE NUMBER
- 24" SANITARY SEWER STACK
- 8" SANITARY SEWER STACK
- 1-4" INDICATES SLEEVES

- NOTES:
- SANITARY SEWERS SHALL BE PROPOSED 8" OR 12" PVC, UNLESS OTHERWISE INDICATED.
 - STORM SEWERS SHALL BE PROPOSED REINFORCED CONCRETE PIPE UNLESS OTHERWISE INDICATED. ALL JOINTS SHALL BE NUMBER GASKETS.
 - ALL WATER LINES TO BE PROPOSED PVC CLASS 150, DR-18, UNLESS OTHERWISE INDICATED.
 - RESERVE POSSIBLE CENTER 1'-30" JUMP C-800 PVC PIPE AND 1'-30" JUMP C-800 PVC WATER LINE PIPE ON PROPOSED SANITARY SEWER LEAD, 12" MIN. CLEARANCE.

REMARKS:
 HARRIS COUNTY FLOOD CONTROL REFERENCE MARK NUMBER 180185, NOT IN SET. LOCATED IN FRONT OF CENTERPOINT BUILDING +/- 1.0 MILE WEST OF THE INTERSECTION OF WESTERN BLVD AND HIGHWAY 50. ELEVATION: 104.44 (NAVD 88, 2001 ADJ).

TEMPORARY BENCHMARK: BOX CUT ON SOUTHWEST END OF BACK OF CENTERPOINT BUILDING. BOX CUT CENTERLINE: 104.44 (NAVD 88, 2001 ADJ). ELEVATION: 104.44 (NAVD 88, 2001 ADJ).

4'-100' NORTHWEST OF WESTERN PARKWAY (AS ILLUSTRATED HEREON) ELEVATION: 104.44 (NAVD 88, 2001 ADJ).

PRIVATE UTILITY LINES SHOWN:

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET R.O.W. OR CEMETERIES CALL THE TOLL FREE STATE NOTIFICATION 713-253-4887. SEE SHEET 2 FOR PRIVATE UTILITY NOTES.

CenterPoint Energy / Electric Facilities User:
 (Approved only for existing underground facilities unless noted.)
 Void of This of Reader Only

CenterPoint Energy / Gas Facilities User:
 (One service line at not shown.)

REV	DATE	DESCRIPTION	BY	CHK
1				

RRE
 CIVIL ENGINEERING
 CONSULTANTS

1002248
 LICENSED PROFESSIONAL ENGINEER
 STATE OF TEXAS

32000 Katy Freeway, Suite 1100
 Houston, TX 77078
 Tel: (281) 407-2011
 Fax: (281) 407-2011
 Email: info@rre.com
 Web: www.rre.com

FORT BEND COUNTY MUD 185

PIN OAK ENCLAVE

PLAN AND PROFILE
 54" STORM SEWER
 (STA. 1+00 TO 3+40)
 AND MISCELLANEOUS
 STORM DETAILS

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DATE: 11/18/13
 JOB NUMBER: PH100

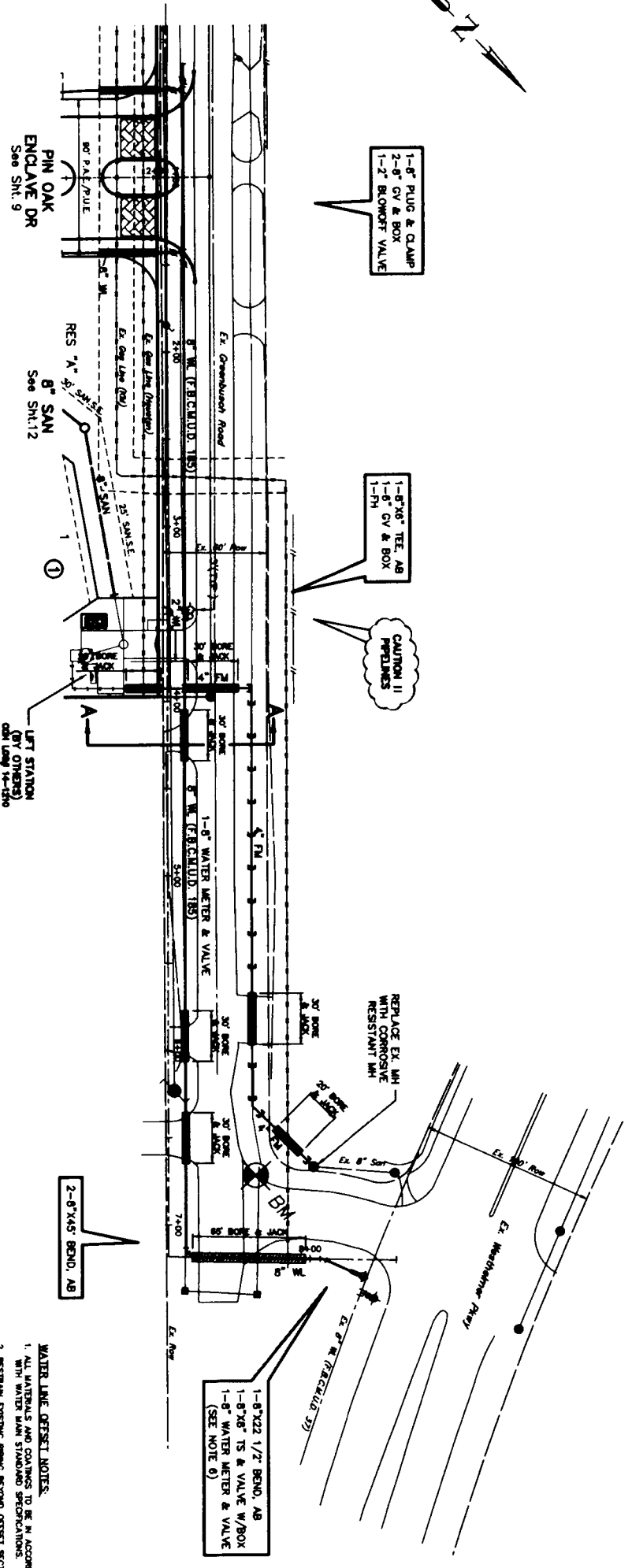
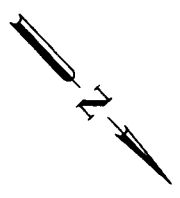
APPROVED: [Signature]
 DATE: 11/18/13

DRAWING SCALE: HORIZ: 1" = 40'

VERT: 1" = 4'

FOR CITY OF HOUSTON USE ONLY

SHEET 14 OF 28



8" OFFSITE WATER LINE AND FORCE MAIN

- WATER LINE OFFSET NOTES:**
1. ALL MATERIALS AND COATINGS TO BE IN ACCORDANCE WITH WATER MAIN STANDARD SPECIFICATIONS.
 2. RESTRAIN EXISTING PIPING BEYOND OFFSET SECTION AS REQUIRED TO PREVENT MOVEMENT.
 3. ISOLATED JOINT TO BE MADE UP USING INSULATING GASKETS, PLASTIC BOLT SLEEVES, WASHERS OR POLYURETHANE GASKETS. WELDING METHODS APPROVED BY THE ENGINEER.
 4. SEE ADDITIONAL NOTES ON WATER LINE DETAIL SHEET.

- LEGEND:**
- INDICATES 1'-0" JT. OF C-900 PVC (150 PSI MIN.) CENTERED ON CROSSING
 - INDICATES 12" MINIMUM CLEARANCE
 - INDICATES TYPE 7 FLAP
 - SANITARY MANHOLE NUMBER
 - STORM MANHOLE NUMBER
 - SANITARY SEWER STACK
 - 1'-0" ANGIOULATION SLEEVES

REVISIONS:

1. SANITARY SEWERS SHALL BE PROPOSED SDR-26 PVC, UNLESS OTHERWISE INDICATED.

2. STORM SEWERS SHALL BE PROPOSED REINFORCED CONCRETE PIPE C-7.5 CLASS B, UNLESS OTHERWISE INDICATED. ALL JOINTS SHALL BE RUBBER GASKETED.

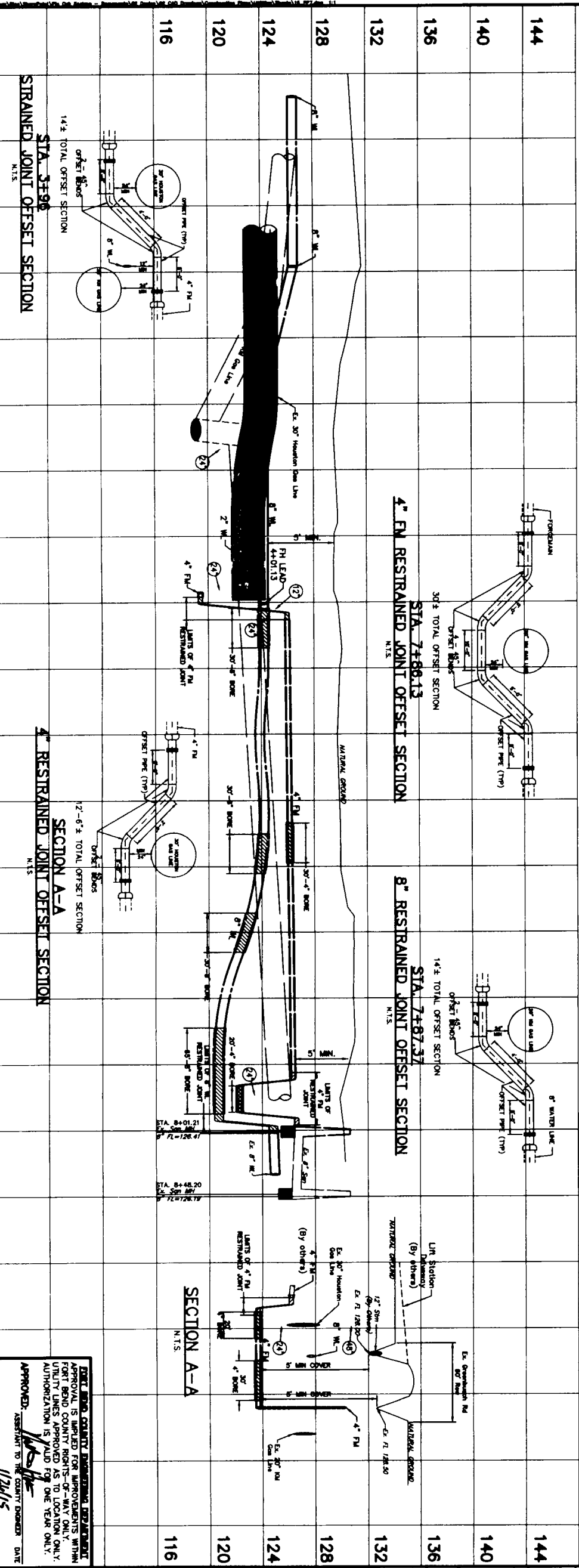
3. ALL WATER LINES TO BE PROPOSED PVC CLASS 150, DR-18, AWWA C-900 UNLESS OTHERWISE INDICATED.

4. WADENER POSSIBLE CENTER 1'-0" JOINT C-900 PVC PIPE, CLASS 150 SANITARY SEWER LEAD ON PROPOSED WATER LINE AND 1'-0" JOINT C-900 PVC WATER LINE PIPE ON PROPOSED SANITARY SEWER LEAD, 12" MIN. CLEARANCE.

5. NOTIFICATION - ENERGY TRANSMISSION COMPANY (ETC) - PREPARE TO REQUEST STORM SEWER AND WATER LINE PERMIT DRAWINGS AT LEAST THIRTY DAYS (30) DAYS PRIOR TO ANY RELATED CONSTRUCTION OR MAINTENANCE ACTIVITY. THE PERMITS FACILITY PROJECTS, EXISTING, PROPOSED, AND RELATED REGULATORY REQUIREMENTS, AND VALVE SITES (ETC) PERMITS FACILITY OR FACILITIES), UNLESS OTHERWISE AGREED TO BY ETC IN WRITING, NO EQUIPMENT REPRESENTATIVE IS ON LOCATION.

5.1. NO EXCAVATION SHALL OCCUR IN THE VICINITY OF ETC'S PERMITS FACILITY, UNLESS APPROVED BY STATE APPROVED NOTIFICATION CENTERS, ETC SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY CONSTRUCTION OR MAINTENANCE ACTIVITY. ETC COMPANY NOTIFICATION CENTER, YOU MUST CONTACT THE ETC NOTIFICATION CENTER AT 817 OR 1-800-344-3377. IN ADDITION AT (281) 800-1482 BEFORE COMMENCING ANY CROSSING AT OR NEAR ETC'S PERMITS FACILITY, AND ETC IN WRITING, NO EQUIPMENT REPRESENTATIVE IS ON SITE TO SUPERVISE THE EXCAVATION ACTIVITIES.

5.2. WATER METER TO BE METERED MODEL, HENKLEY MARK OR APPROVED EQUAL AND ON THE CITY OF HOUSTON APPROVED PRODUCTS LIST.



<p>PRIVATE UTILITY LINES SHOWN</p> <p>AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET, ROAD OR EXISTING DRAINAGE CHANNELS, THE OWNER SHALL NOTIFY THE CITY OF HOUSTON AT (281) 407-5015. SEE SHEET 2 FOR PRIVATE UTILITY NOTES.</p>	
<p>CERTIFICATE OF ENERGY / Electric Facilities</p> <p>(Approved only for crossing underground facilities unless noted.)</p> <p>Field of This Form is to be filled out by the utility owner.</p>	
<p>CERTIFICATE OF ENERGY / Gas Facilities</p> <p>(One service line or more shown.)</p> <p>Field of This Form is to be filled out by the utility owner.</p>	
<p>CONTRACTOR'S CERTIFICATE</p> <p>32000 Green Road, Houston, TX 77058 Tel: (281) 407-5015 Fax: (281) 407-5015 E-mail: info@prc.com</p>	
<p>CITY OF HOUSTON</p> <p>DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p> <p>DATE: 11/26/15</p>	
<p>PIN OAK ENCLAVE</p> <p>PLAN AND PROFILE</p> <p>EX. GREENBUSH ROAD</p> <p>OFFSITE UTILITIES</p> <p>(STA. 1+00 TO 8+24.01)</p>	
<p>JOB NUMBER: PH100</p> <p>DATE: 11/26/15</p> <p>SCALE: HORIZ: 1" = 40'</p> <p>VERT: 1" = 4'</p>	
<p>APPROVED: [Signature]</p> <p>ASSISTANT TO THE COUNTY ENGINEER</p> <p>DATE: 11/26/15</p>	



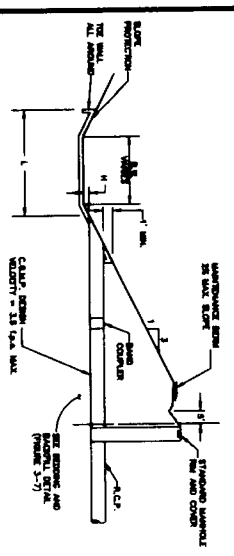
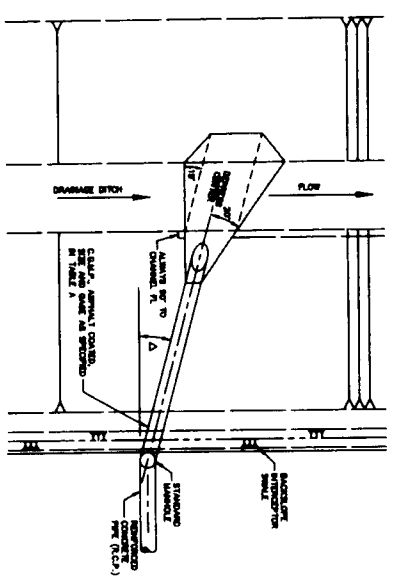
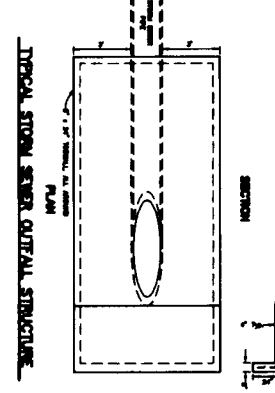
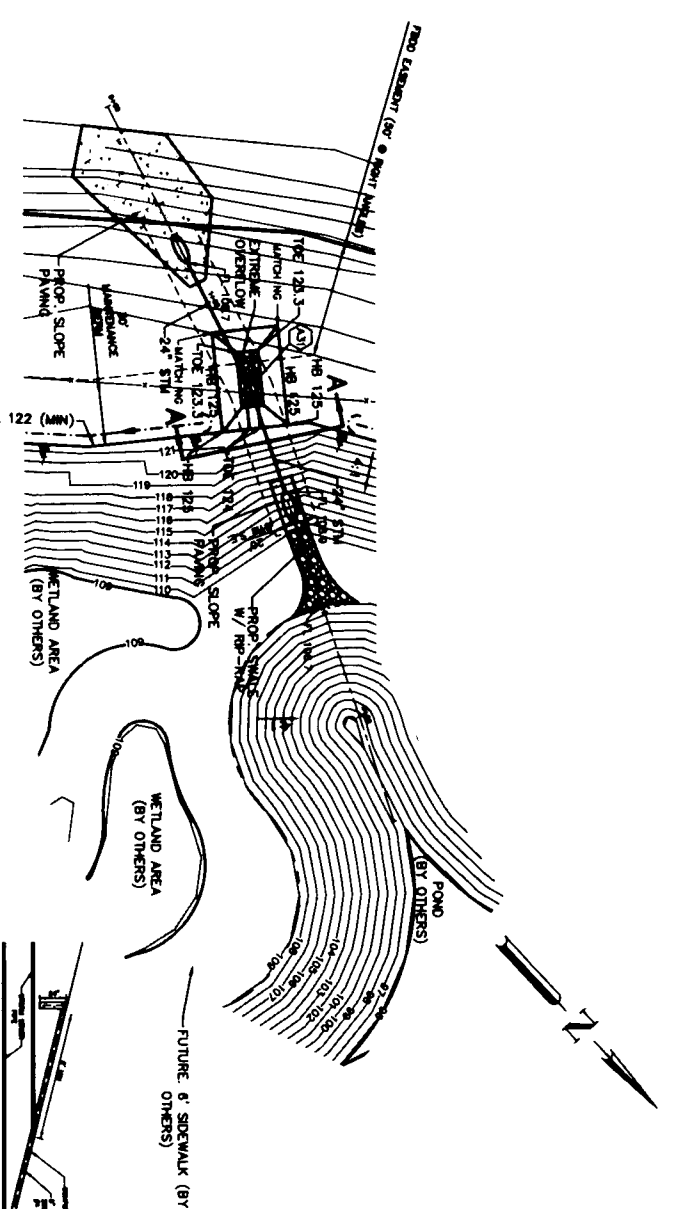
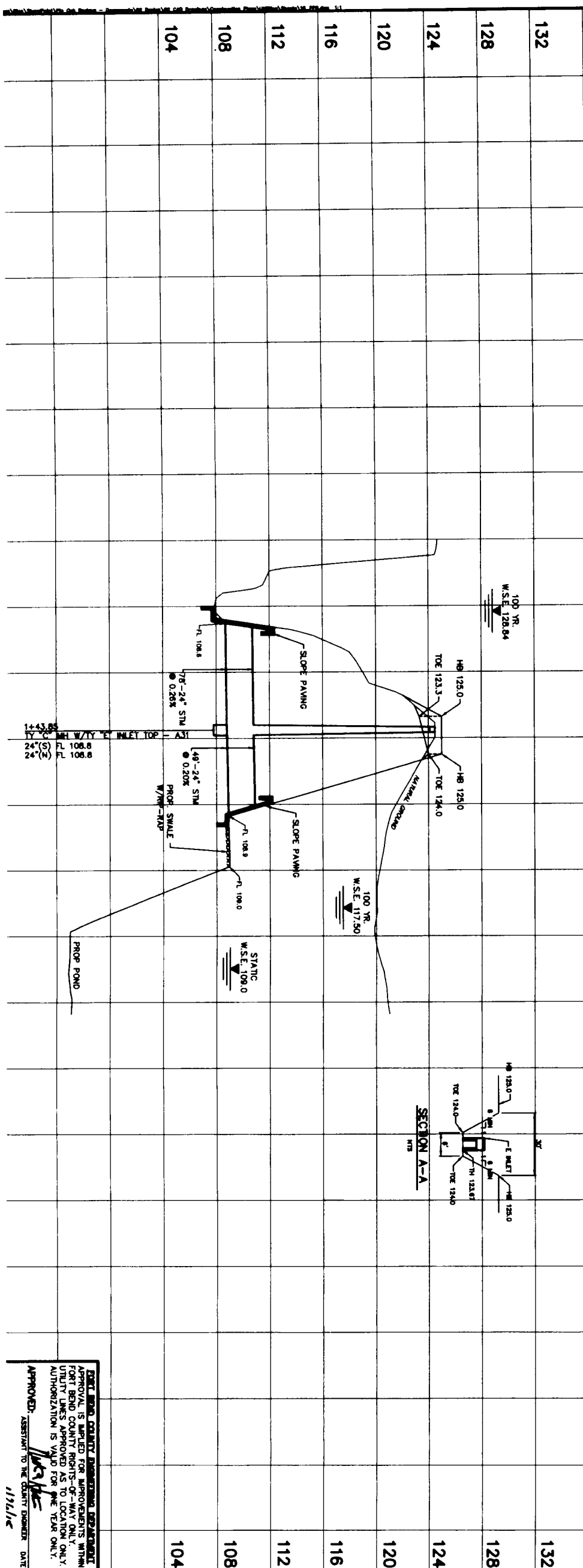


TABLE 1

STATION	INVERT	PIPE SIZE	LENGTH	MANHOLE	INVERT	PIPE SIZE	LENGTH	MANHOLE	INVERT
104	108.8	24"	10	108.8	108.8	24"	10	108.8	108.8
108	108.0	24"	10	108.0	108.0	24"	10	108.0	108.0
112	107.5	24"	10	107.5	107.5	24"	10	107.5	107.5
116	107.0	24"	10	107.0	107.0	24"	10	107.0	107.0
120	106.5	24"	10	106.5	106.5	24"	10	106.5	106.5
124	106.0	24"	10	106.0	106.0	24"	10	106.0	106.0
128	105.5	24"	10	105.5	105.5	24"	10	105.5	105.5
132	105.0	24"	10	105.0	105.0	24"	10	105.0	105.0



DUNBROOK SPRINGS LANE



- LEGEND:
- 1-30" P.C. 8'-0" DIA. (150 PSI MIN.) CENTERED ON CROSSING
 - 2 INDICATES 12" MINIMUM CLEARANCE
 - 3 INDICATES WELDED RAMP
 - 4 STORM MANHOLE NUMBER
 - 5 SANITARY MANHOLE NUMBER
 - 6 6" SANITARY SEWER STICK
 - 7 1'-0" MANHOLE SERVICE

- NOTES:
- SANITARY SEWER SHALL BE PROPOSED 30"-36" P.C. UNLESS OTHERWISE INDICATED.
 - STORM SEWERS SHALL BE PROPOSED REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE INDICATED. ALL JOINTS SHALL BE RUBBER GASKETED.
 - ALL WATER LINES TO BE PROPOSED P.C. CLASS 150, DN-18.
 - ALL SANITARY SEWERS SHALL BE PROPOSED 30"-36" P.C. UNLESS OTHERWISE INDICATED. ALL JOINTS SHALL BE RUBBER GASKETED.

REMARKS:
 HARRIS COUNTY FLOOD CONTROL REFERENCE MARK NUMBER 180795, NO. 180796, NO. 180797, NO. 180798, NO. 180799, NO. 180800, NO. 180801, NO. 180802, NO. 180803, NO. 180804, NO. 180805, NO. 180806, NO. 180807, NO. 180808, NO. 180809, NO. 180810, NO. 180811, NO. 180812, NO. 180813, NO. 180814, NO. 180815, NO. 180816, NO. 180817, NO. 180818, NO. 180819, NO. 180820, NO. 180821, NO. 180822, NO. 180823, NO. 180824, NO. 180825, NO. 180826, NO. 180827, NO. 180828, NO. 180829, NO. 180830, NO. 180831, NO. 180832, NO. 180833, NO. 180834, NO. 180835, NO. 180836, NO. 180837, NO. 180838, NO. 180839, NO. 180840, NO. 180841, NO. 180842, NO. 180843, NO. 180844, NO. 180845, NO. 180846, NO. 180847, NO. 180848, NO. 180849, NO. 180850, NO. 180851, NO. 180852, NO. 180853, NO. 180854, NO. 180855, NO. 180856, NO. 180857, NO. 180858, NO. 180859, NO. 180860, NO. 180861, NO. 180862, NO. 180863, NO. 180864, NO. 180865, NO. 180866, NO. 180867, NO. 180868, NO. 180869, NO. 180870, NO. 180871, NO. 180872, NO. 180873, NO. 180874, NO. 180875, NO. 180876, NO. 180877, NO. 180878, NO. 180879, NO. 180880, NO. 180881, NO. 180882, NO. 180883, NO. 180884, NO. 180885, NO. 180886, NO. 180887, NO. 180888, NO. 180889, NO. 180890, NO. 180891, NO. 180892, NO. 180893, NO. 180894, NO. 180895, NO. 180896, NO. 180897, NO. 180898, NO. 180899, NO. 180900, NO. 180901, NO. 180902, NO. 180903, NO. 180904, NO. 180905, NO. 180906, NO. 180907, NO. 180908, NO. 180909, NO. 180910, NO. 180911, NO. 180912, NO. 180913, NO. 180914, NO. 180915, NO. 180916, NO. 180917, NO. 180918, NO. 180919, NO. 180920, NO. 180921, NO. 180922, NO. 180923, NO. 180924, NO. 180925, NO. 180926, NO. 180927, NO. 180928, NO. 180929, NO. 180930, NO. 180931, NO. 180932, NO. 180933, NO. 180934, NO. 180935, NO. 180936, NO. 180937, NO. 180938, NO. 180939, NO. 180940, NO. 180941, NO. 180942, NO. 180943, NO. 180944, NO. 180945, NO. 180946, NO. 180947, NO. 180948, NO. 180949, NO. 180950, NO. 180951, NO. 180952, NO. 180953, NO. 180954, NO. 180955, NO. 180956, NO. 180957, NO. 180958, NO. 180959, NO. 180960, NO. 180961, NO. 180962, NO. 180963, NO. 180964, NO. 180965, NO. 180966, NO. 180967, NO. 180968, NO. 180969, NO. 180970, NO. 180971, NO. 180972, NO. 180973, NO. 180974, NO. 180975, NO. 180976, NO. 180977, NO. 180978, NO. 180979, NO. 180980, NO. 180981, NO. 180982, NO. 180983, NO. 180984, NO. 180985, NO. 180986, NO. 180987, NO. 180988, NO. 180989, NO. 180990, NO. 180991, NO. 180992, NO. 180993, NO. 180994, NO. 180995, NO. 180996, NO. 180997, NO. 180998, NO. 180999, NO. 181000.

HARRIS COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED: *[Signature]* ASSISTANT TO THE COUNTY ENGINEER DATE: 1/19/16

PRIVATE UTILITY LINES SHOWN

AT LEAST 48 HOURS BEFORE EXCAVATING IN STREET E.O.M. OR EXCAVATION CALL THE ONE CALL NOTIFICATION 713-251-4877. SEE SHEET 2 FOR PRIVATE UTILITY NOTES.

CenterPoint Energy / Electric Facilities (Approved only for existing underground facilities unless noted) (Gas service lines are not shown)

NO.	DATE	DESCRIPTION	DATE
1			
2			
3			

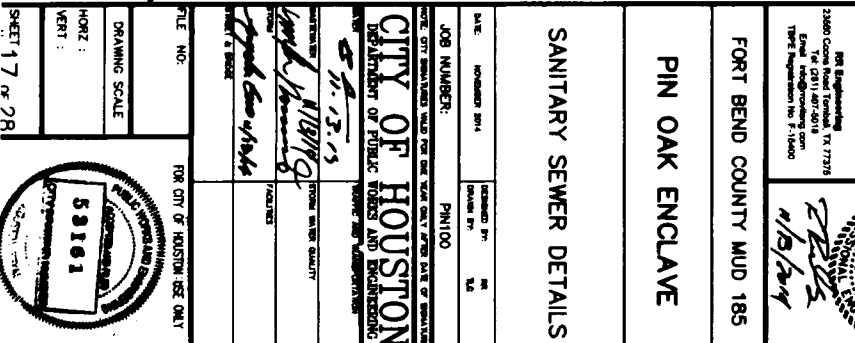
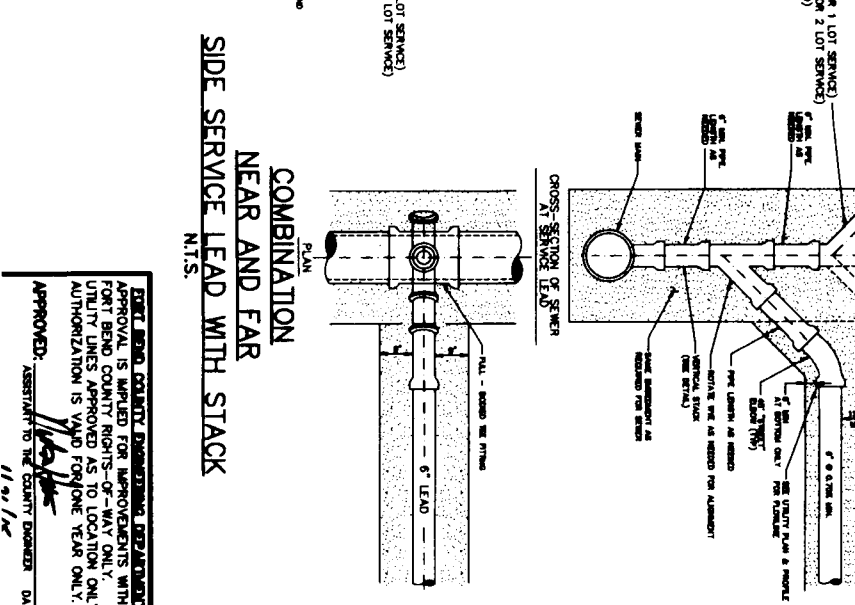
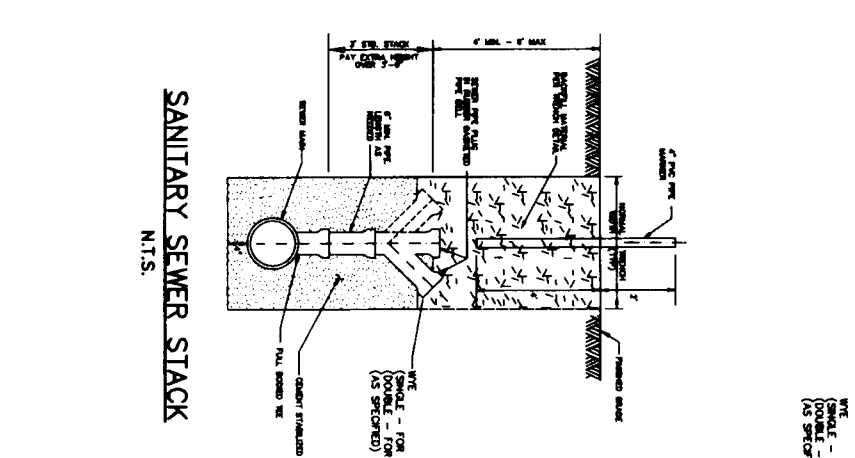
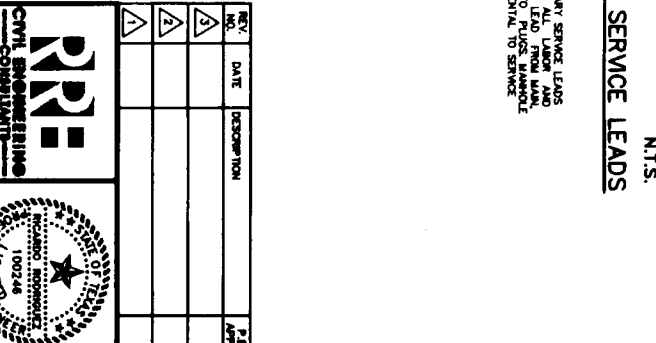
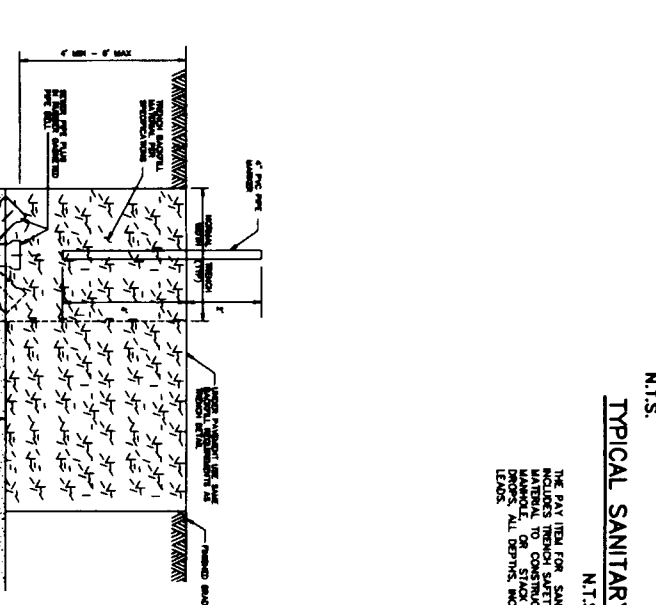
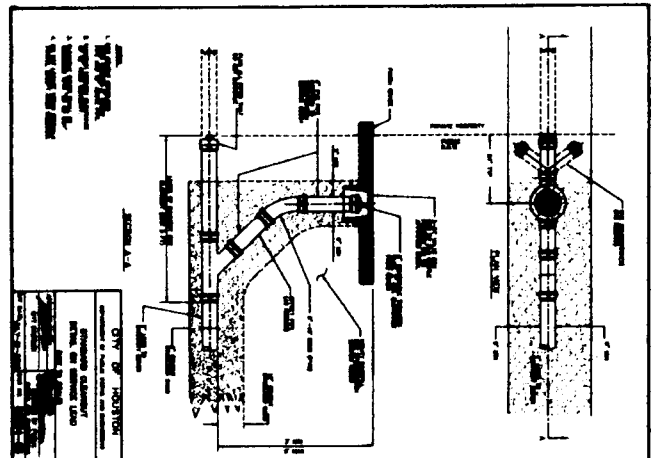
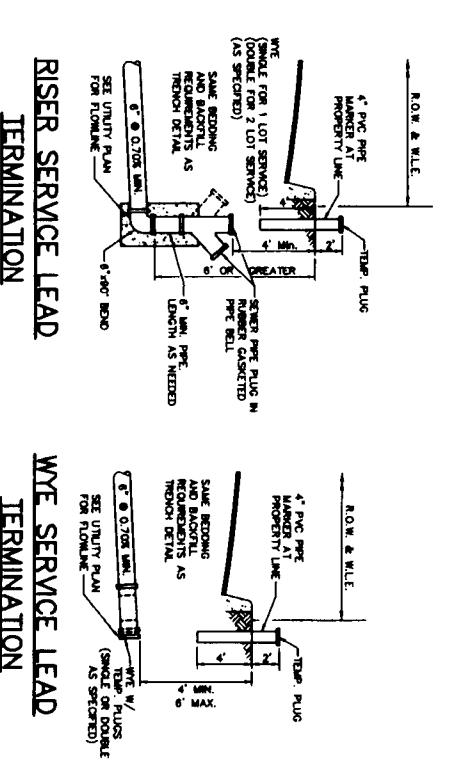
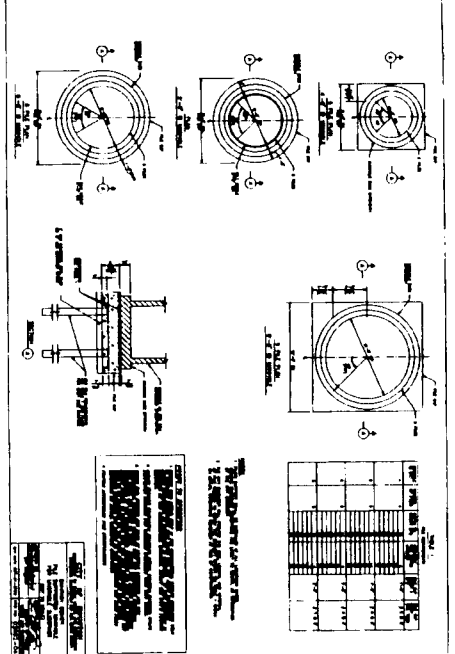
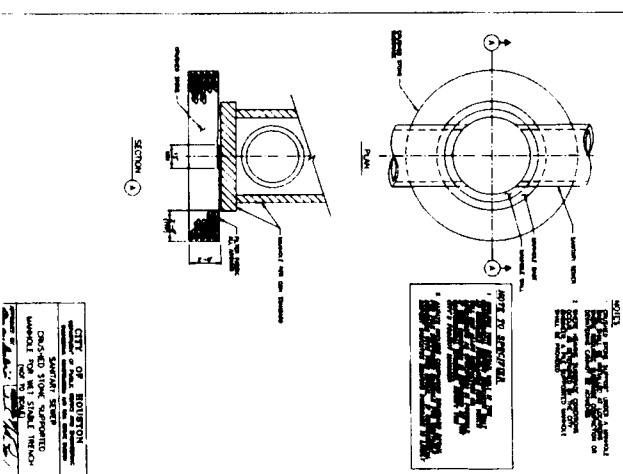
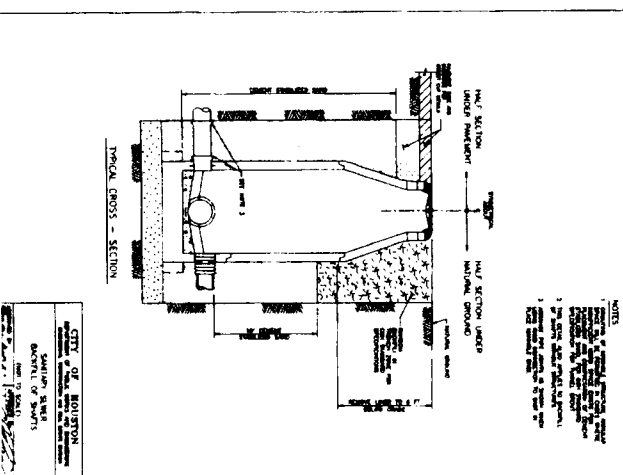
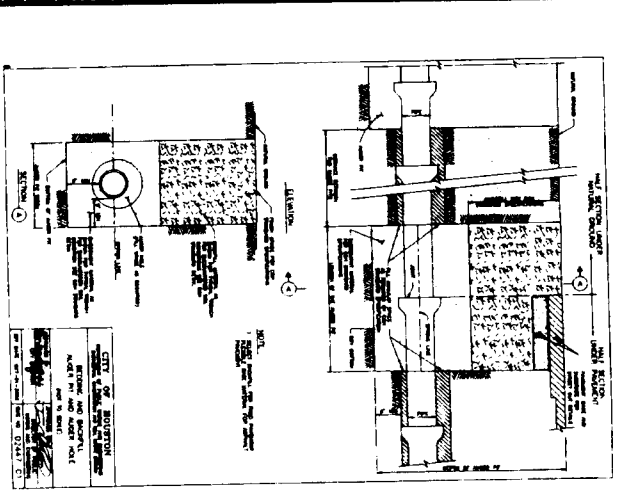
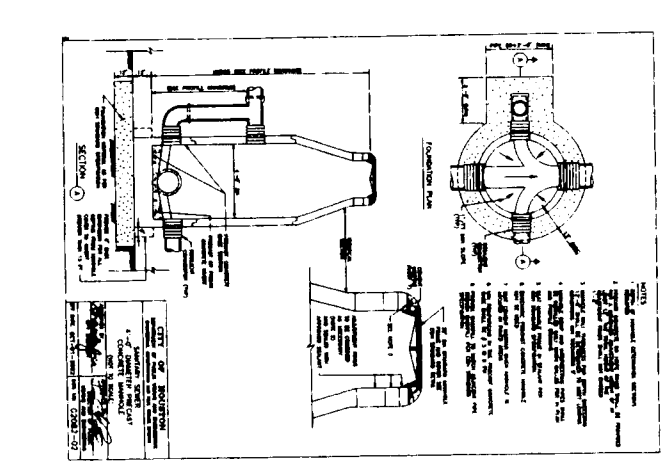
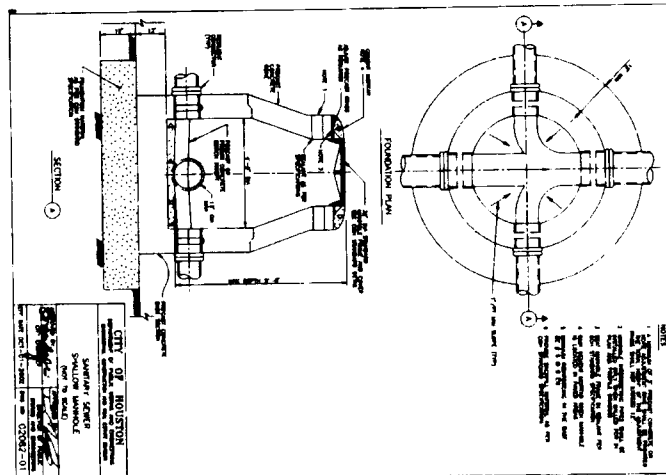
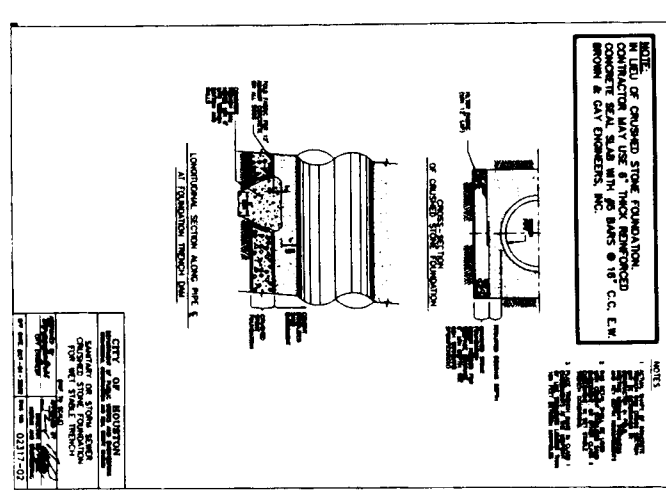
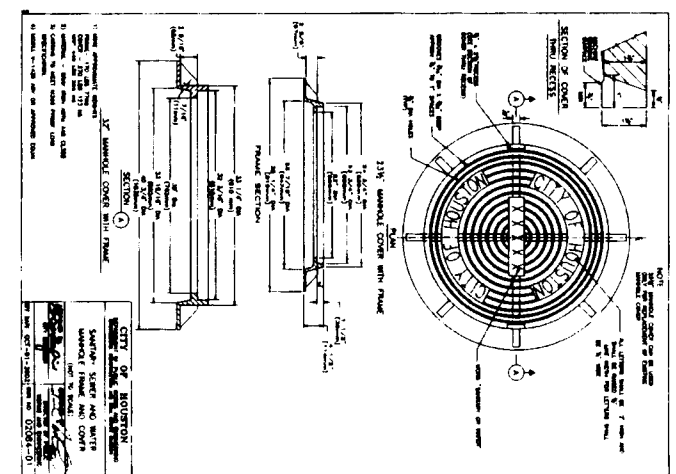
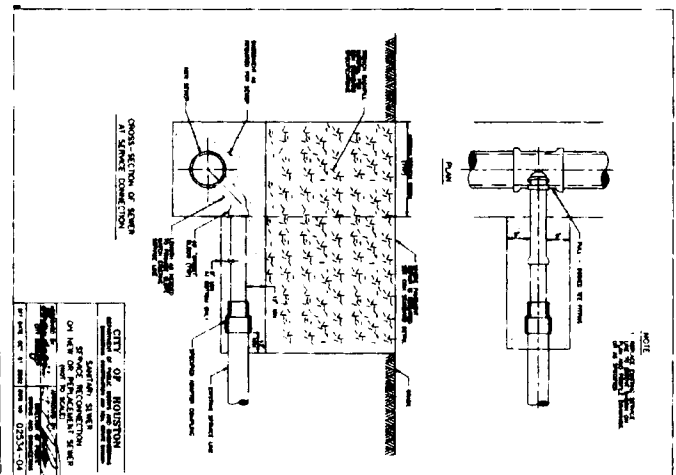
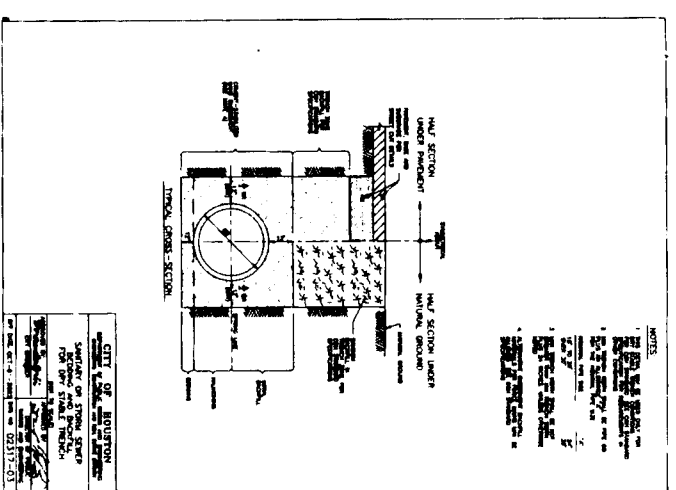
RRP CIVIL ENGINEERING
 23800 Cooper Road, Tarrant, TX 77775
 Tel: (281) 407-2011
 Fax: (281) 407-2012
 TSP Registration No. 151000

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

PIN OAK ENCLAVE

24" STM SEWER OUTFALL

DATE: NOVEMBER 2014
 SHEET NO. 16 OF 28



PRR CIVIL ENGINEERING CONSULTANTS
 23800 Green Brook Forest, TX 77375
 Phone: (281) 497-8818
 Fax: (281) 497-8818
 TDD: (281) 497-8818
 Website: www.prr-engineering.com

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND UTILITIES
 1515 WESTHELL DRIVE, HOUSTON, TX 77002
 Phone: (713) 858-2200
 Fax: (713) 858-2200
 Website: www.houstontx.gov

FOR CITY OF HOUSTON USE ONLY

SANITARY SEWER DETAILS

PIN OAK ENCLAVE

FORT BEND COUNTY MUD 185

JOB NUMBER: PH100

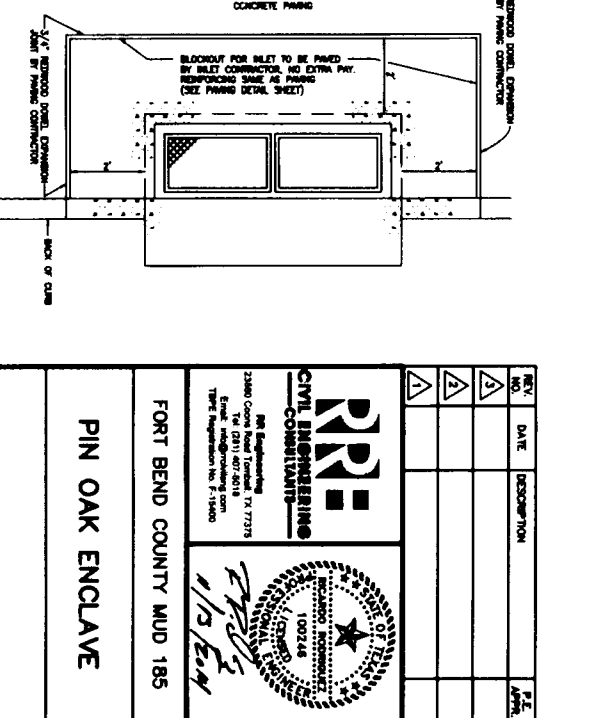
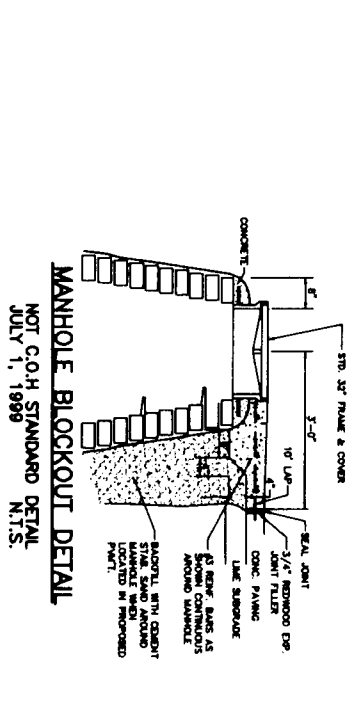
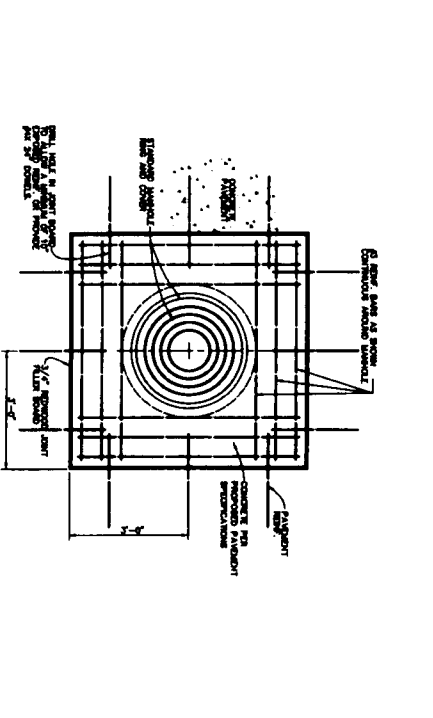
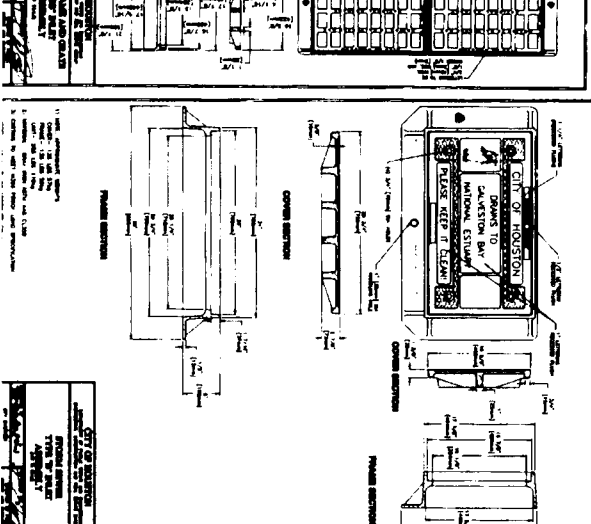
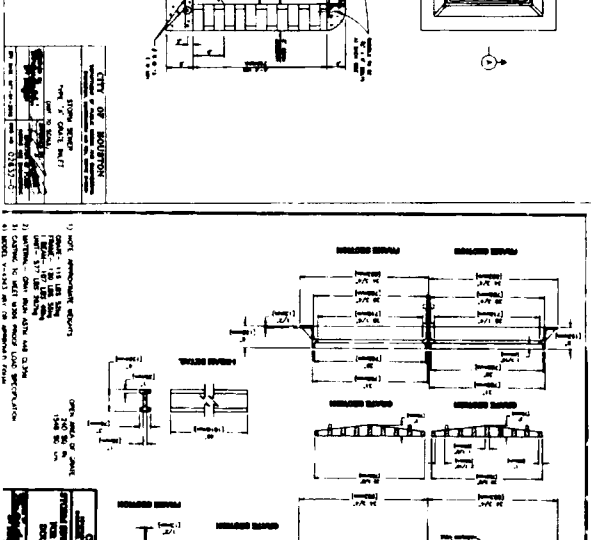
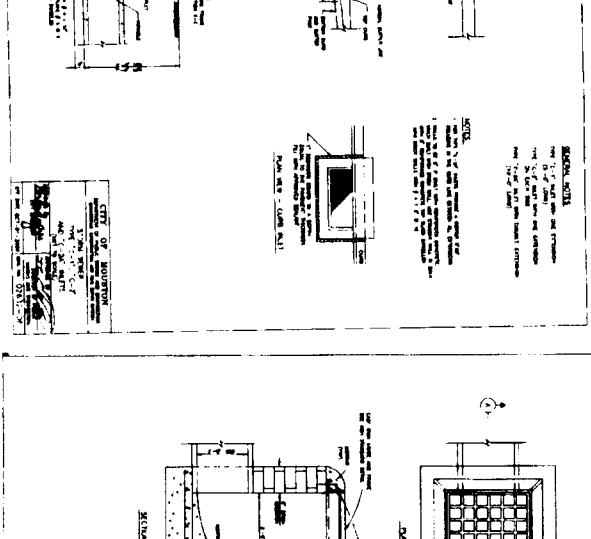
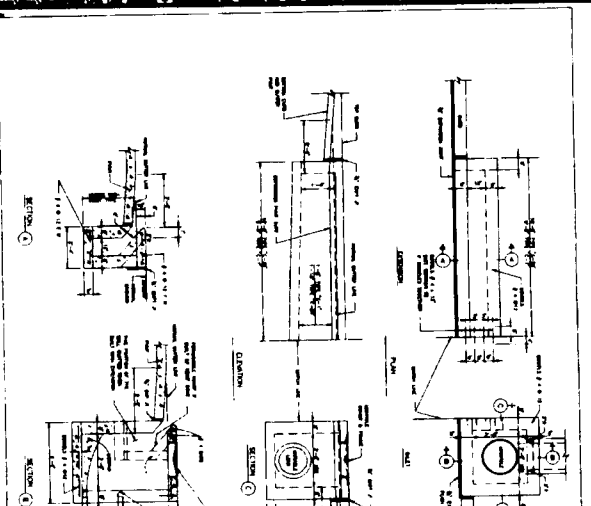
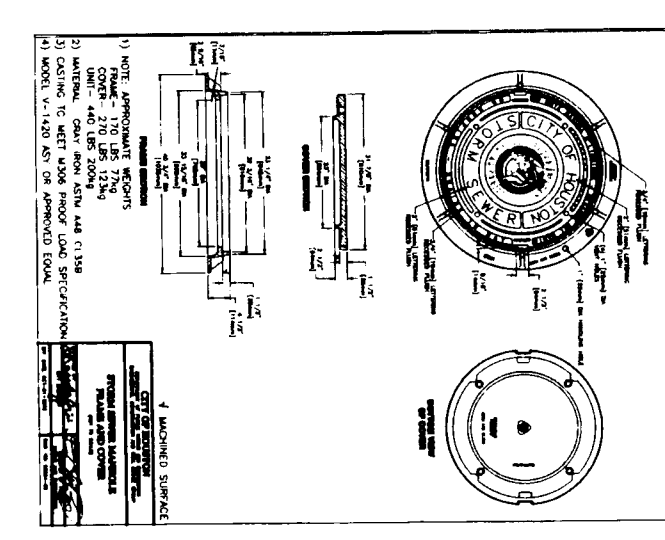
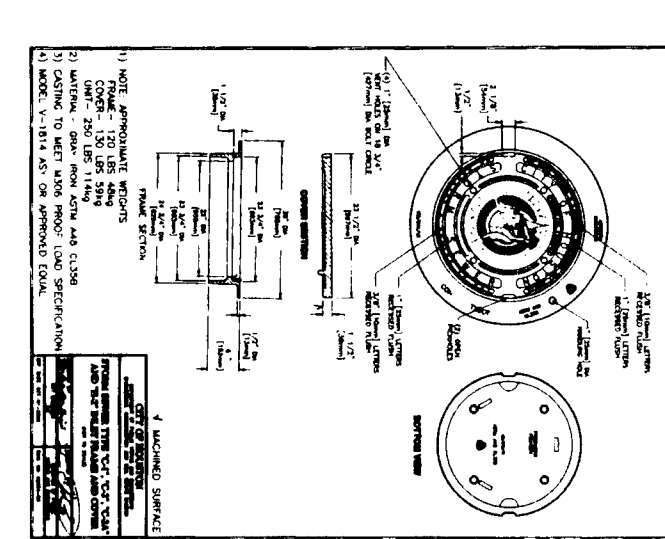
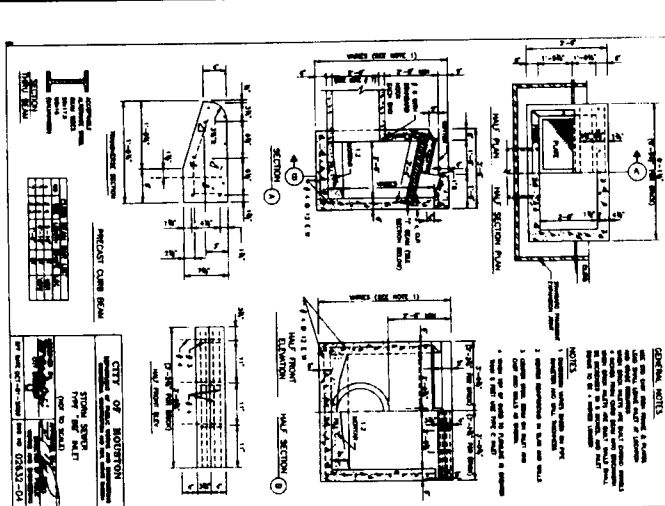
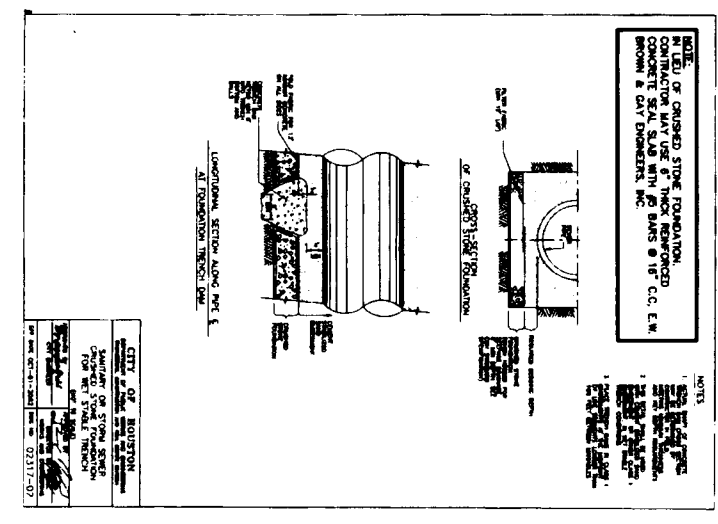
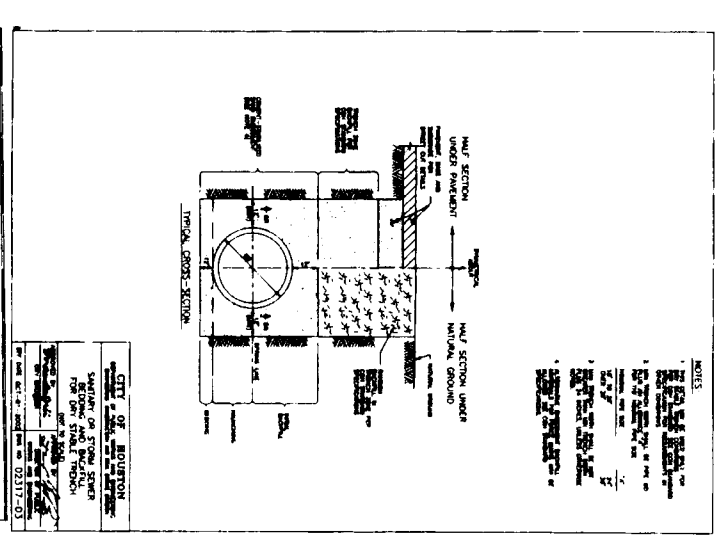
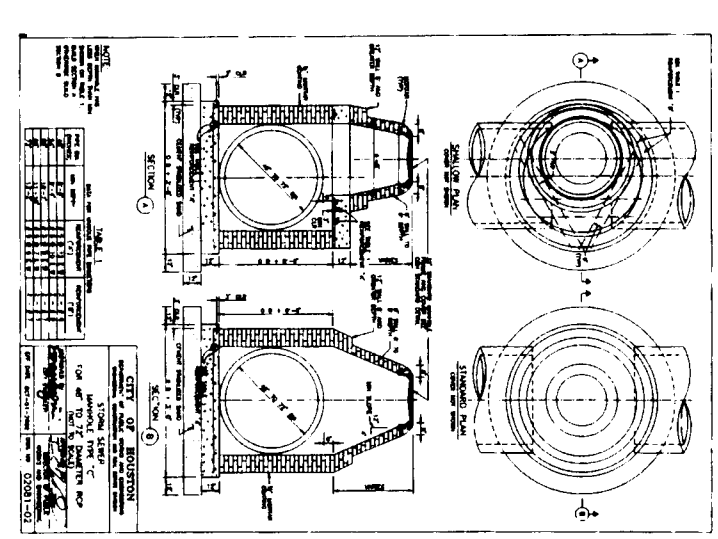
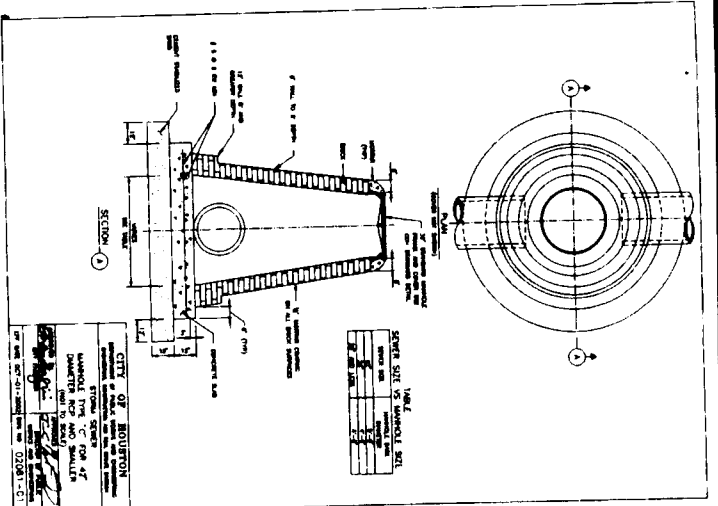
DATE: 11/15/13

SCALE: AS SHOWN

APPROVED: [Signature]

DATE: 11/01/14

SHEET 17 OF 21



INLET BLOCKOUT DETAIL
NOT C.O.H. STANDARD
JULY 1, 1998

MANHOLE BLOCKOUT DETAIL
NOT C.O.H. STANDARD
JULY 1, 1998

STORM SEWER DETAILS

PIN OAK ENCLAVE

FORT BEND COUNTY MUD 185

CIVIL ENGINEERING
RRE
192748

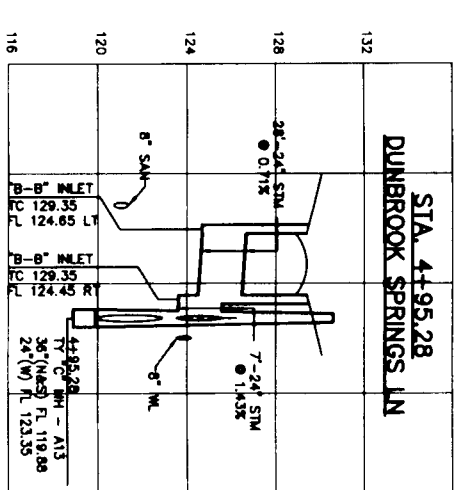
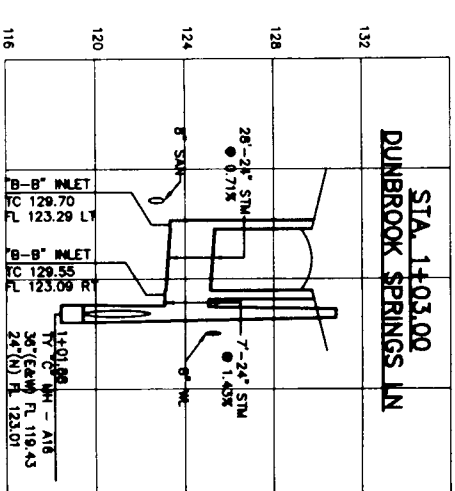
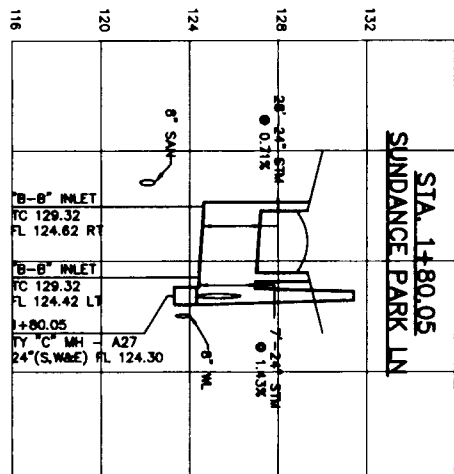
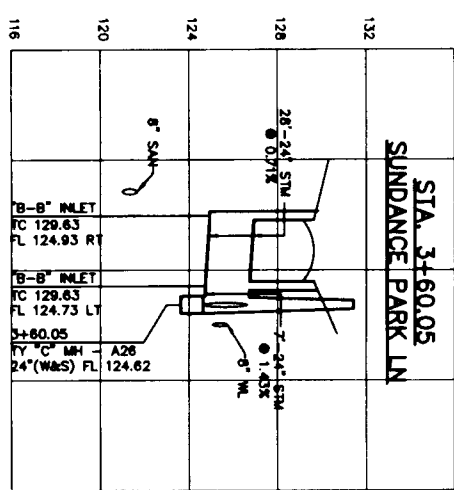
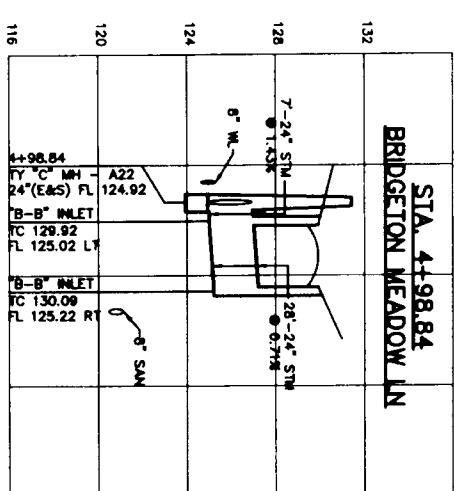
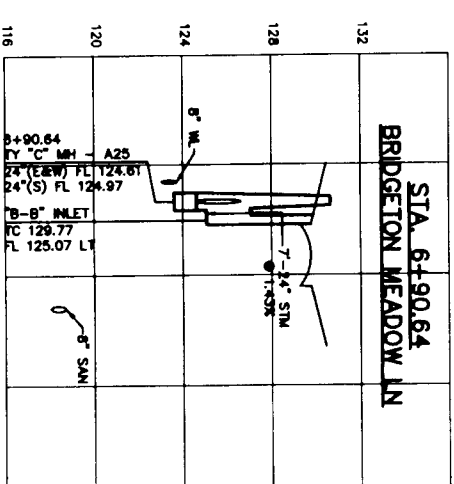
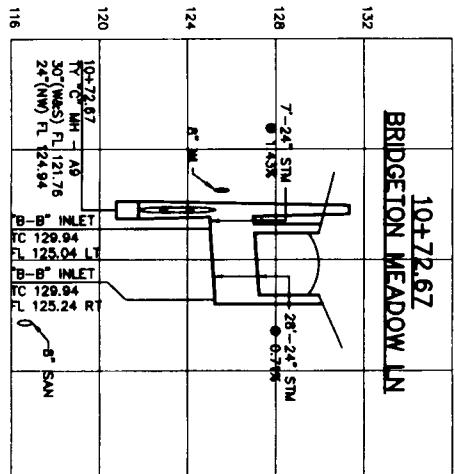
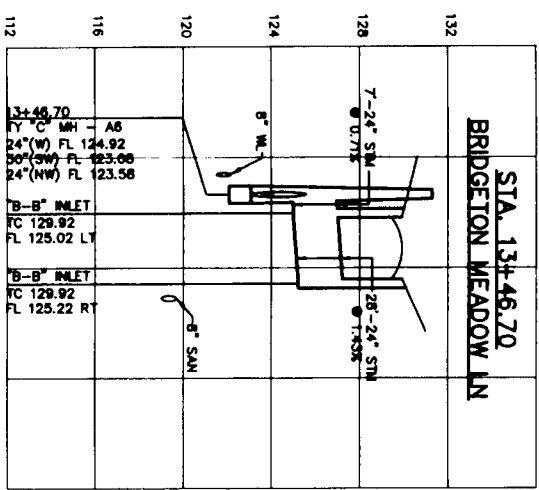
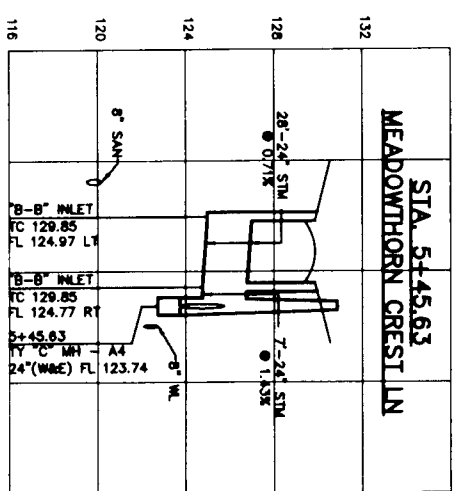
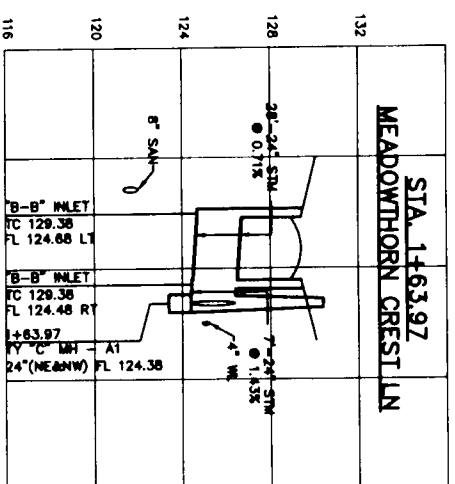
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM SEWER DETAILS

DATE: 11/21/98
JOB NUMBER: PH100
DRAWING SCALE: AS SHOWN
VERT: N.T.S.
APPROVED: [Signature]
DATE: 11/21/98

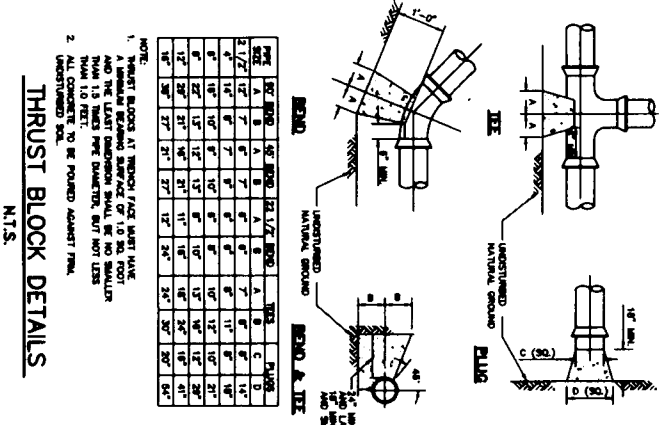
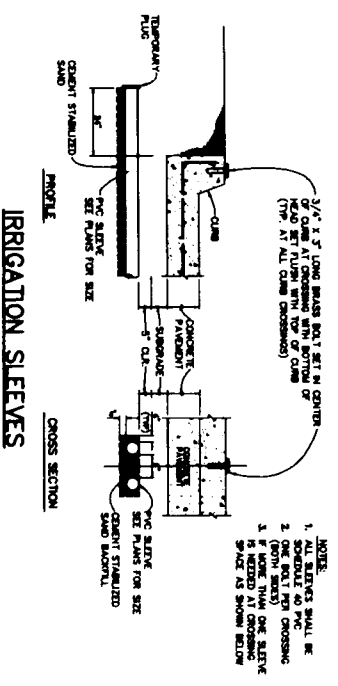
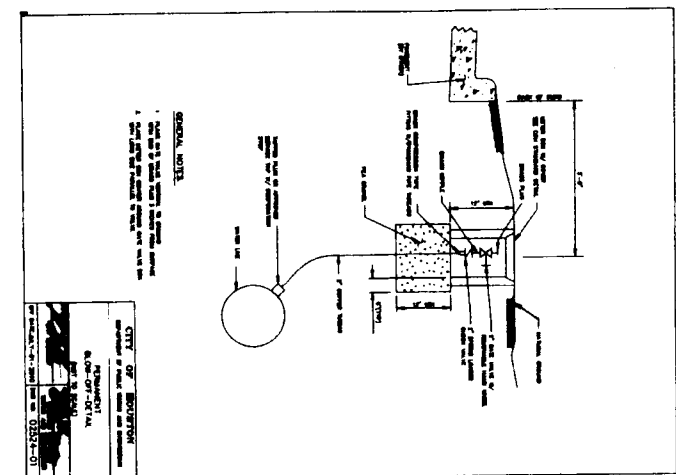
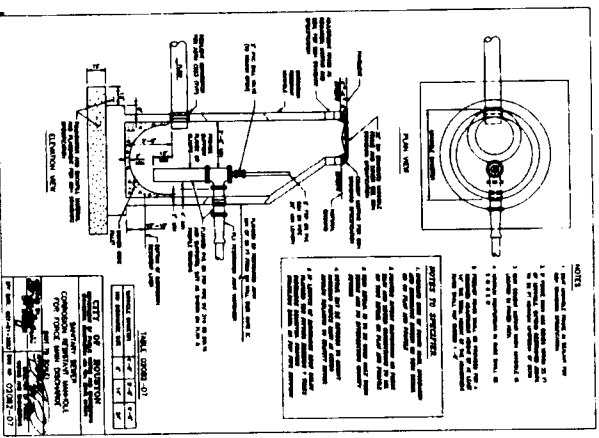
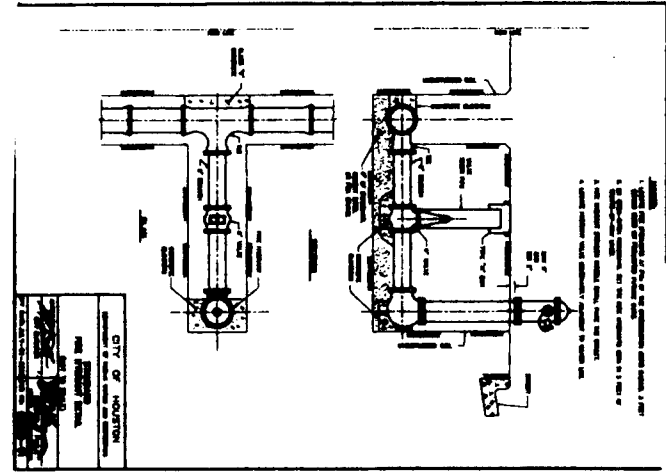
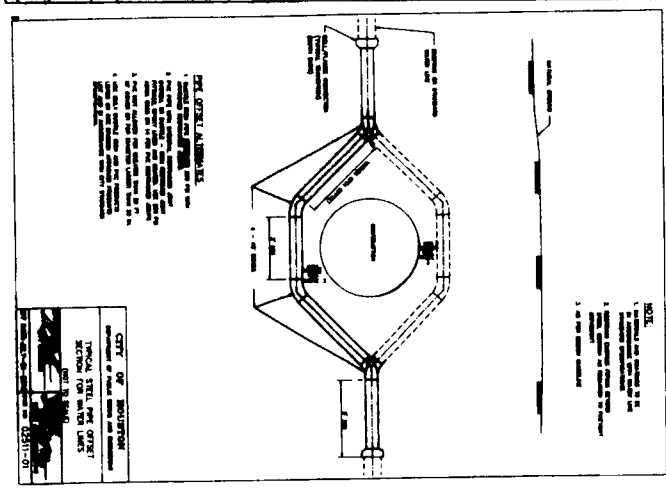
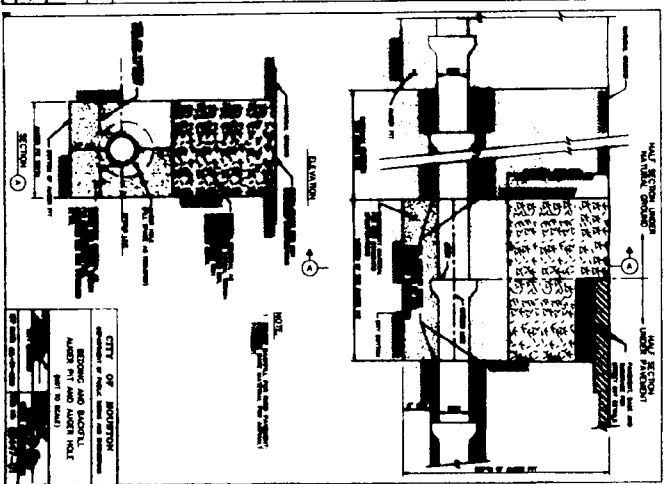
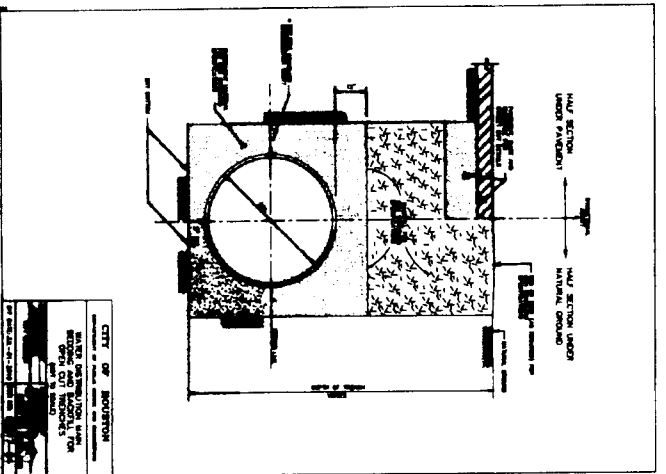
FILE NO: PH 07 OF HOUSTON USE ONLY
SHEET 18 OF 28

\$3101



BEST COPY AVAILABLE
 APPROVED: *[Signature]* DATE: 11/26/15

PRR PUBLIC RELATIONS CONSULTANTS 23000 Clear Lake Drive, Suite 100 Houston, TX 77058 Phone: (281) 407-6016 Fax: (281) 407-6017 Website: www.prrc.com		CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING STORM SEWER INLET DETAILS	
PROJECT: FORT BEND COUNTY MAUD 185 PIN OAK ENCLAVE STORM SEWER INLET DETAILS	JOB NUMBER: PH1100 DATE: NOVEMBER 2014 DRAWING SCALE: AS SHOWN HORIZ: NUTS VERT: AS SHOWN	DESIGNED BY: [Signature] CHECKED BY: [Signature] IN CHARGE: [Signature]	FOR CITY OF HOUSTON USE ONLY SHEET 19 OF 28



PIPE SIZE	HOLE SIZE	12\"/>
12"	1/2"	12"
12"	3/4"	12"
12"	1"	12"
12"	1 1/4"	12"
12"	1 1/2"	12"
12"	1 3/4"	12"
12"	2"	12"
12"	2 1/4"	12"
12"	2 1/2"	12"
12"	2 3/4"	12"
12"	3"	12"
12"	3 1/4"	12"
12"	3 1/2"	12"
12"	3 3/4"	12"
12"	4"	12"
12"	4 1/4"	12"
12"	4 1/2"	12"
12"	4 3/4"	12"
12"	5"	12"
12"	5 1/4"	12"
12"	5 1/2"	12"
12"	5 3/4"	12"
12"	6"	12"
12"	6 1/4"	12"
12"	6 1/2"	12"
12"	6 3/4"	12"
12"	7"	12"
12"	7 1/4"	12"
12"	7 1/2"	12"
12"	7 3/4"	12"
12"	8"	12"
12"	8 1/4"	12"
12"	8 1/2"	12"
12"	8 3/4"	12"
12"	9"	12"
12"	9 1/4"	12"
12"	9 1/2"	12"
12"	9 3/4"	12"
12"	10"	12"
12"	10 1/4"	12"
12"	10 1/2"	12"
12"	10 3/4"	12"
12"	11"	12"
12"	11 1/4"	12"
12"	11 1/2"	12"
12"	11 3/4"	12"
12"	12"	12"

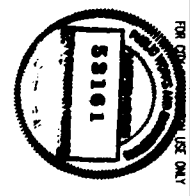
THRUST BLOCK DETAILS
N.T.S.

NOTE:
1. THRUST BLOCKS AT TRENCH FOR LIGHT PIPE SHALL BE 12" X 12" X 12" CONCRETE. ALL OTHERS SHALL BE 18" X 18" X 18" CONCRETE.
2. ALL CONCRETE TO BE FOUNDED AGAINST FINAL UNDISTURBED SOIL.

IRRIGATION SLEEVES
N.T.S.

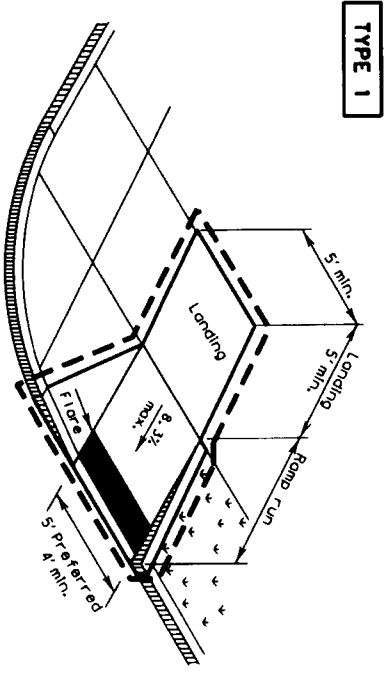
NOTE:
1. ALL SLEEVES SHALL BE 12" O.D. WITH 1/2" I.D. HOLES.
2. HOLES SHALL BE CENTERED.
3. ALL SLEEVES SHALL BE 12" LONG.
4. ALL SLEEVES SHALL BE 1/2" THICK.
5. ALL SLEEVES SHALL BE 1/2" RADIUS.
6. ALL SLEEVES SHALL BE 1/2" RADIUS.
7. ALL SLEEVES SHALL BE 1/2" RADIUS.
8. ALL SLEEVES SHALL BE 1/2" RADIUS.
9. ALL SLEEVES SHALL BE 1/2" RADIUS.
10. ALL SLEEVES SHALL BE 1/2" RADIUS.

<p>PRE CIVIL ENGINEERING CONSULTANTS</p> <p>22800 Coopers Road, Spring, TX 77373 Tel: (281) 467-6016 Fax: (281) 467-6017 Toll Free: 1-800-368-1100</p> <p>11/2/2014</p>	<p>CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING</p> <p>11/2/2014</p>	<p>FORT BEND COUNTY MUD 185</p> <p>PIN OAK ENCLAVE</p> <p>WATER AND MISCELLANEOUS DETAILS</p>	<p>DATE: NOVEMBER 2014</p> <p>DESIGNED BY: [Signature]</p> <p>CHECKED BY: [Signature]</p> <p>SCALE: N.T.S.</p> <p>FILE NO: [Blank]</p> <p>FOR CITY ENGINEER USE ONLY</p>
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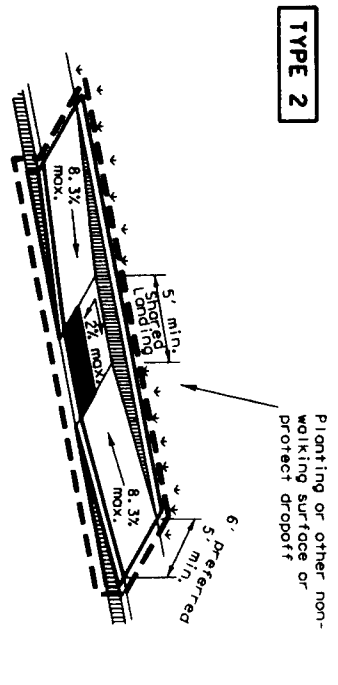


SHEET 20 OF 28

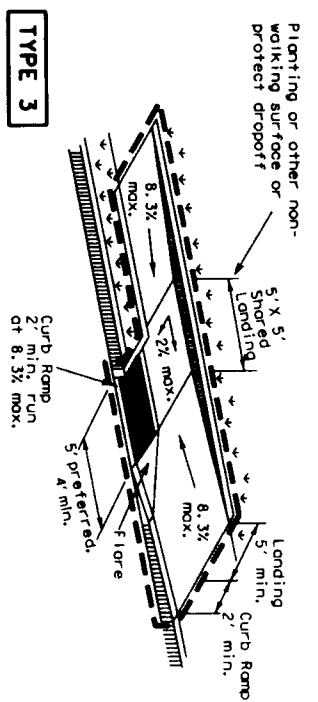
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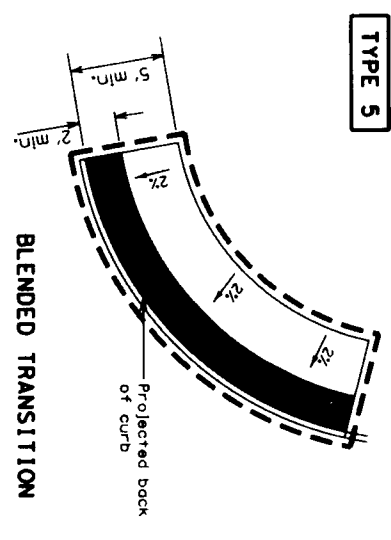
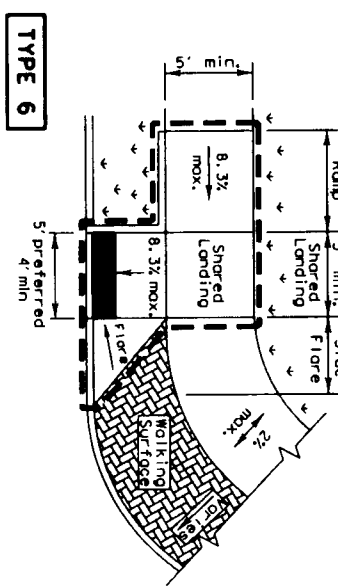
PERPENDICULAR CURB RAMP



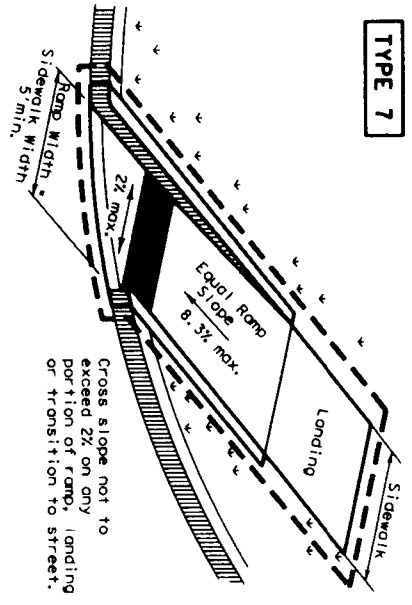
PARALLEL CURB RAMP
 (Use only where water will not pond in the landing.)



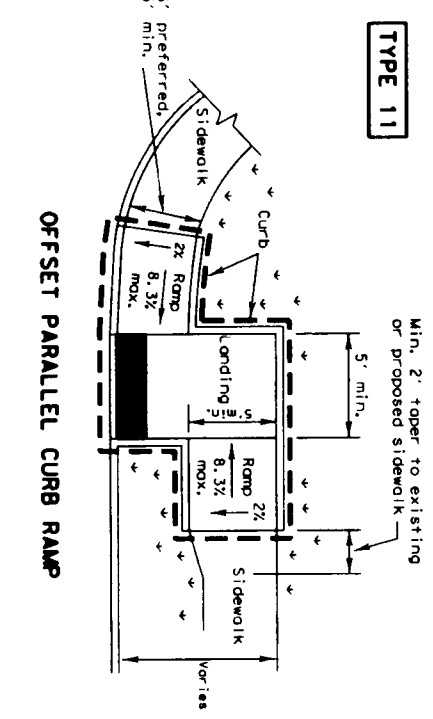
Planting or other non-walking surface or protect dropoff



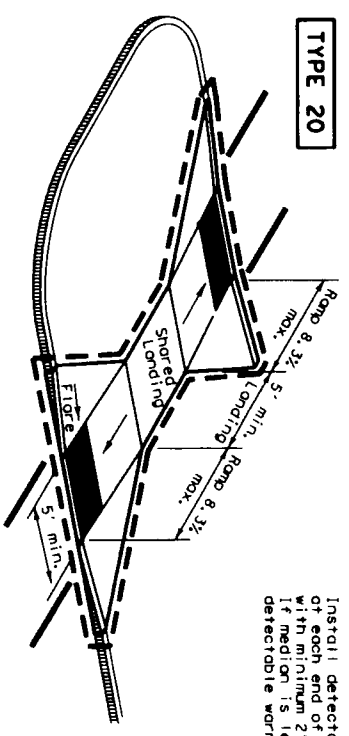
BLENDED TRANSITION



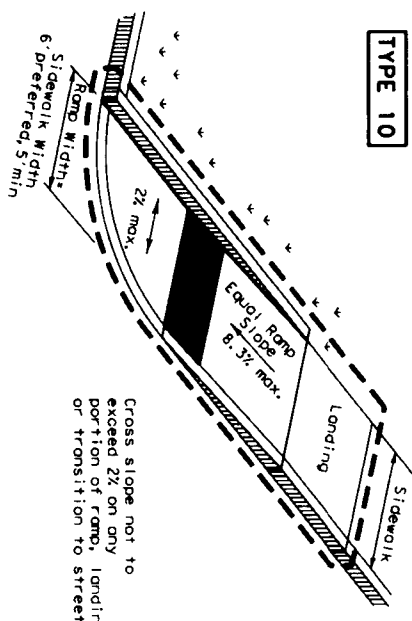
DIRECTIONAL RAMPS WITHIN RADIUS
 (Sidewalk set back from curb)



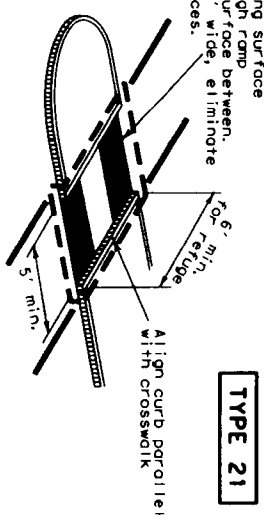
OFFSET PARALLEL CURB RAMP



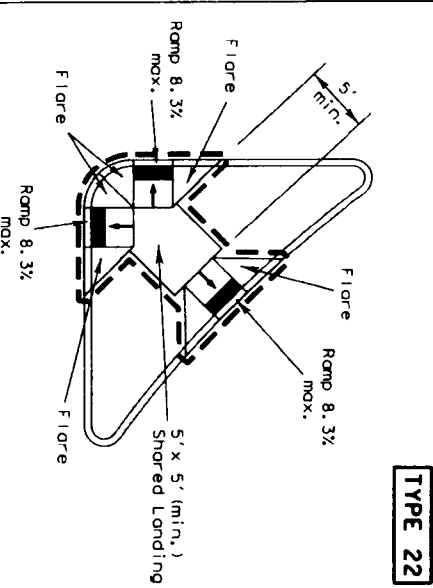
CURB RAMPS AT MEDIAN ISLANDS



DIRECTIONAL RAMPS WITHIN RADIUS
 (Sidewalk adjacent to curb)



TYPE 21



TYPE 22

COMBINATION ISLAND RAMPS

NOTES / LEGEND:

See General Notes on sheet 2 of 4 for more information.

- Planting or other non-walking surface or protect dropoff
- Denotes planting or non-walking surface
- not part of pedestrian circulation path.
- Ramp Limits of Payment
- Detectable Warning Surface



SHEET 1 OF 4

Texas Department of Transportation
Division Standards

PEDESTRIAN FACILITIES
CURB RAMPS

PED-12A

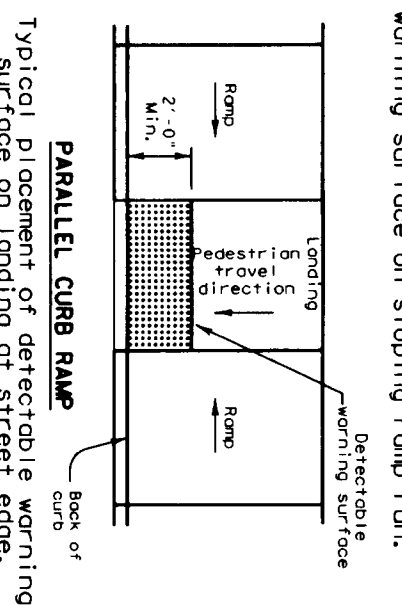
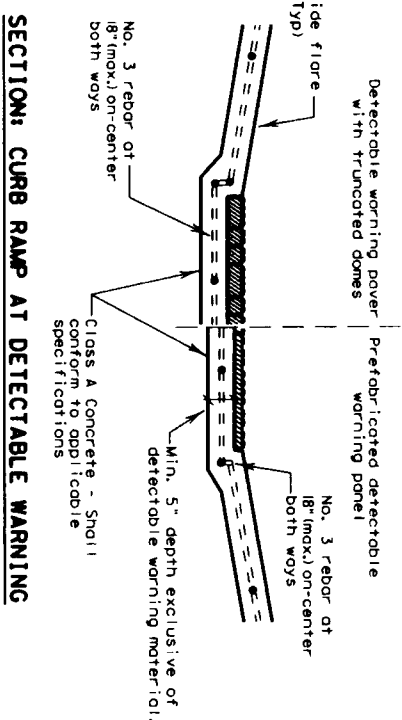
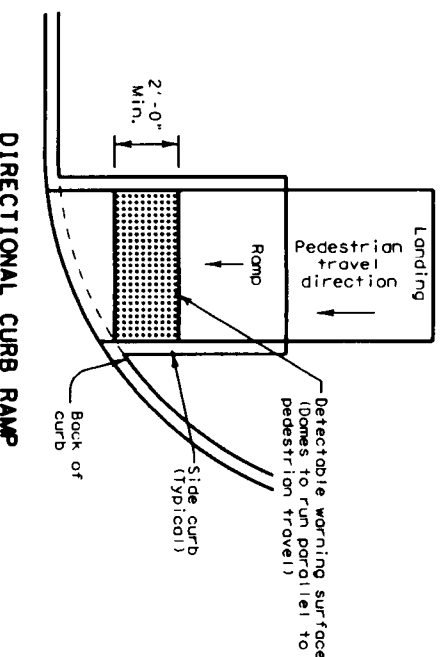
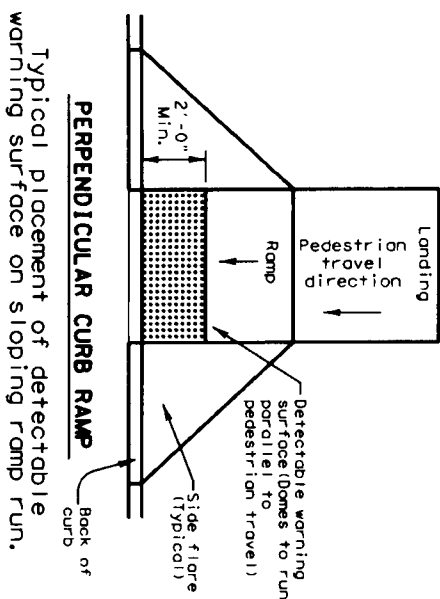
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REVISIONS	DATE	BY	DESCRIPTION	
1	MAR 01 2002	JPB	INITIALS	
2	JUN 13 2012	VP	REVISIONS	

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General Notes

Curb Ramps

1. Install a curb ramp or blended transition at each pedestrian street crossing.
 2. All slopes shown are maximum allowable. Lesser slopes that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
 3. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5' x 5' passing areas or intervals not to exceed 200' are required.
 4. Landings shall be 5' x 5' minimum with a maximum 2% slope in any direction.
 5. Maneuvering space at the bottom of curb ramps shall be a minimum of 4' x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
 6. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
 7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
 8. Additional information on curb ramp location, design, light reflective value and texture may be found in the current edition of the Texas Accessibility Standards (TAS) and 16 TAC 68.102.
 9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
 10. Small channelization islands, which do not provide a minimum 5' x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
 11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
 12. Handrails are not required on curb ramps. Provide curb ramps wherever an accessible route crosses (penetrates) a curb.
 13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
 14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
 15. Provide a smooth transition where the curb ramps connect to the street.
 16. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
 17. Existing features that comply with TAS may remain in place unless otherwise shown on the plans.
- Detectable Warning Material**
18. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the TAS. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install on approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
 19. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
 20. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
 21. Detectable warning surfaces shall be a minimum of 24" in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
 22. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb. Align the rows of domes to be perpendicular to the grade break between the ramp run and the street. Detectable warning surfaces may be curved along the corner radius.
 23. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.



Detectable Warning Covers

24. Furnish detectable warning cover units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
25. Lay full-size units first followed by closure units consisting of at least 25 percent of a full unit. Cut detectable warning cover units using a power saw.

Sidewalks

26. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in TAS 308.
27. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
28. Street grades and cross slopes shall be as shown elsewhere in the plans.
29. Changes in level greater than 1/4 inch are not permitted.
30. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than 5% must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with TAS 505.
31. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
32. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
33. Sidewalk details are shown elsewhere in the plans.

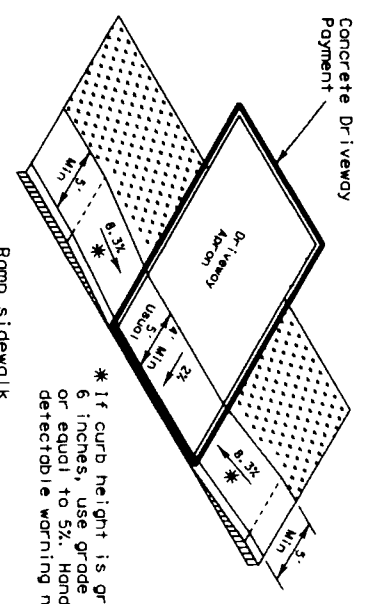
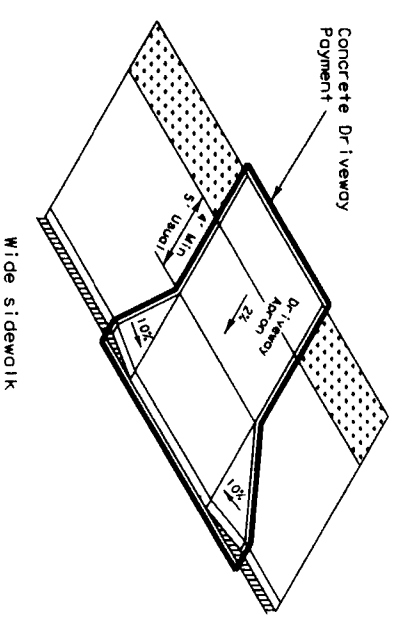
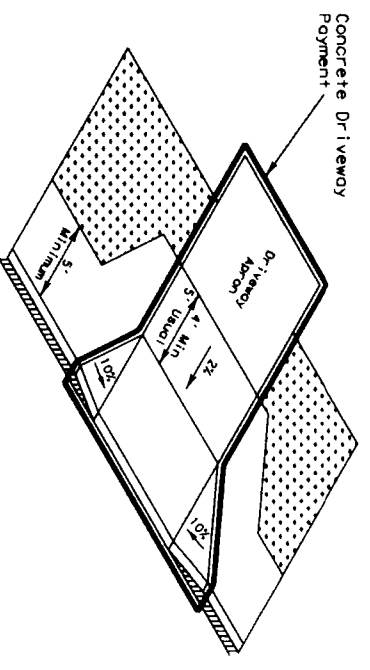
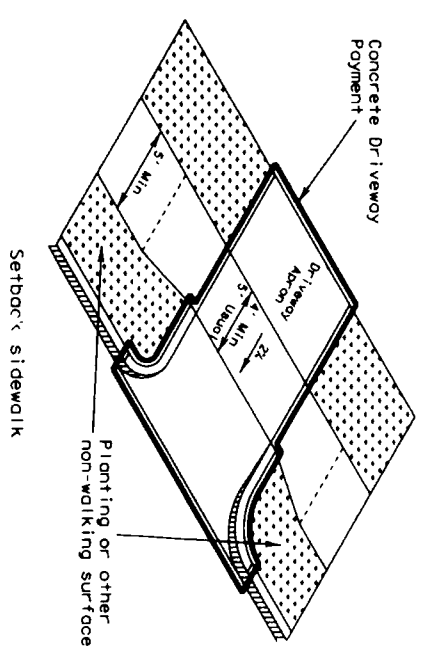


SHEET 2 OF 4

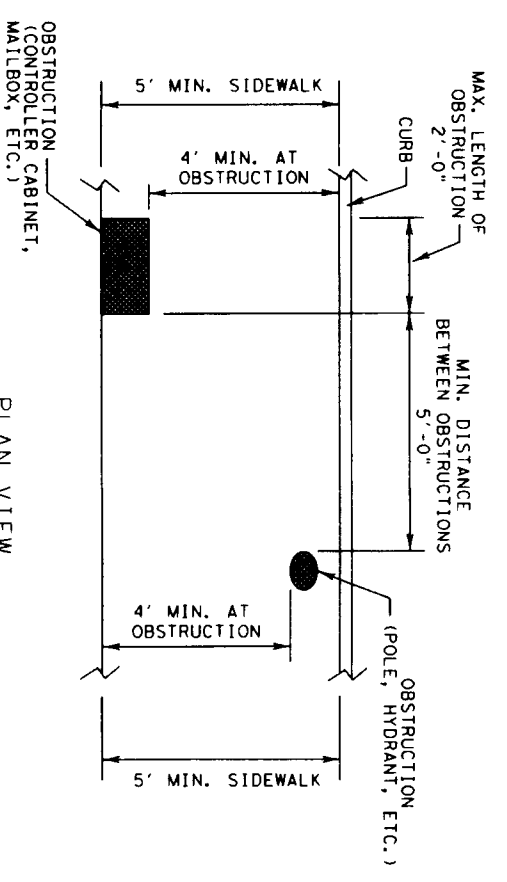
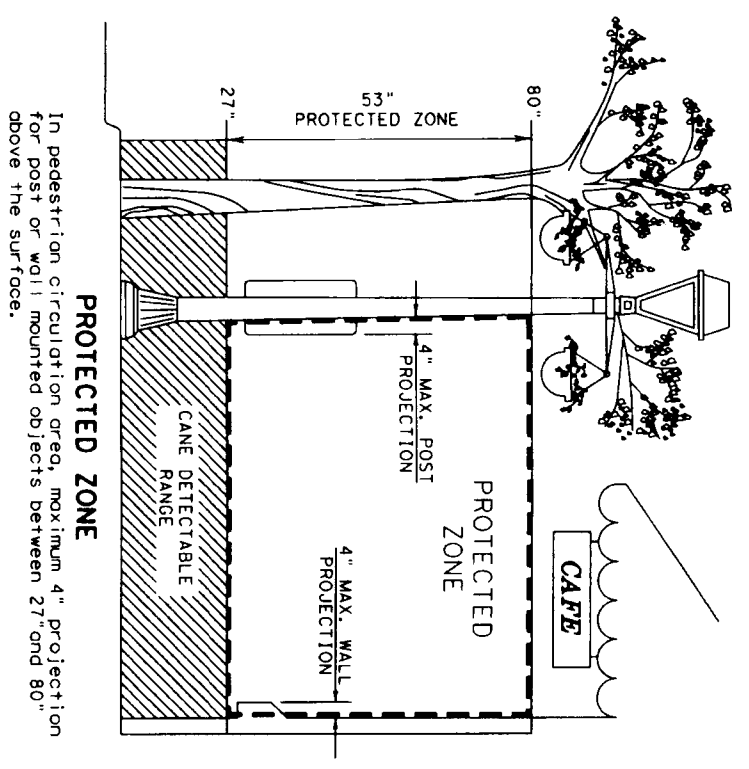
Texas Department of Transportation
Division *Design Standards*
PEDESTRIAN FACILITIES
CURB RAMPS
PED-12A

FILED: PED/24-001	REV: 10/01	REV: 10/01	REV: 10/01	REV: 10/01
REVISIONS	DATE	BY	CHKD	APP'D
VP	JUNE 13, 2012			
SHEET NO.	COMMIT	DATE	SCALE	

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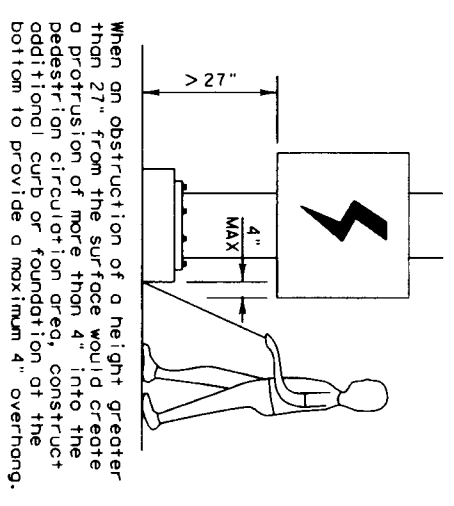
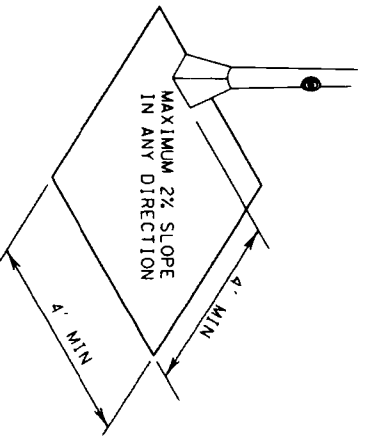
SIDEWALK TREATMENT AT DRIVEWAYS



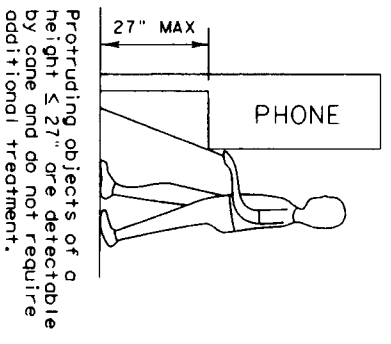
PLACEMENT OF STREET FIXTURES

(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' x 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)

CLEAR GROUND SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

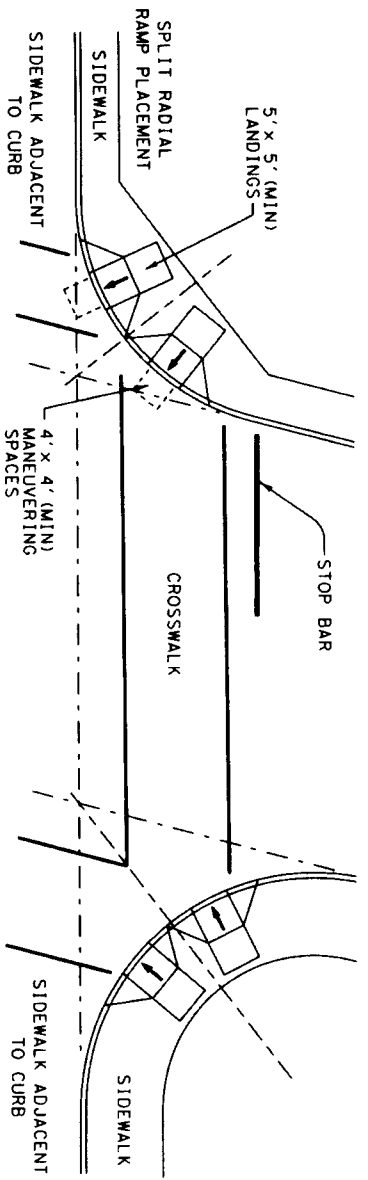


PEDESTRIAN FACILITIES CURB RAMPS

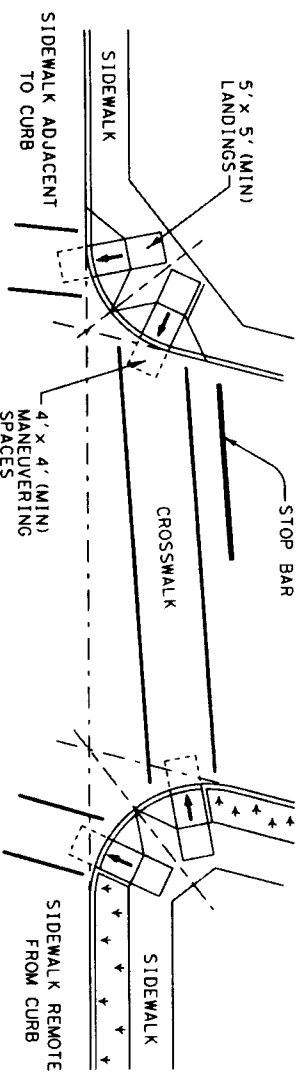
PED-12A

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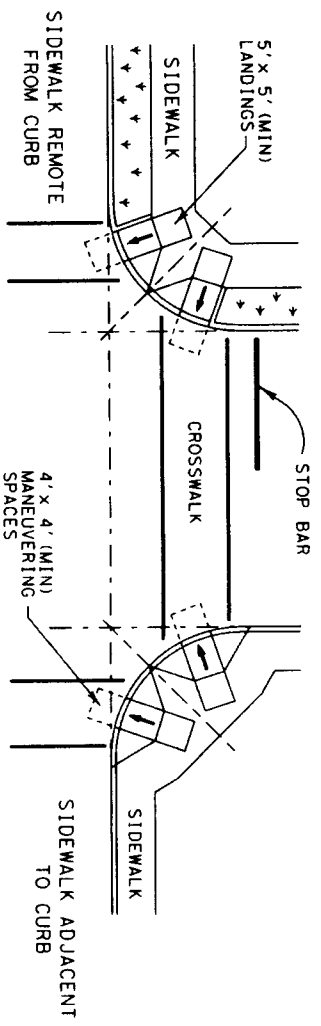
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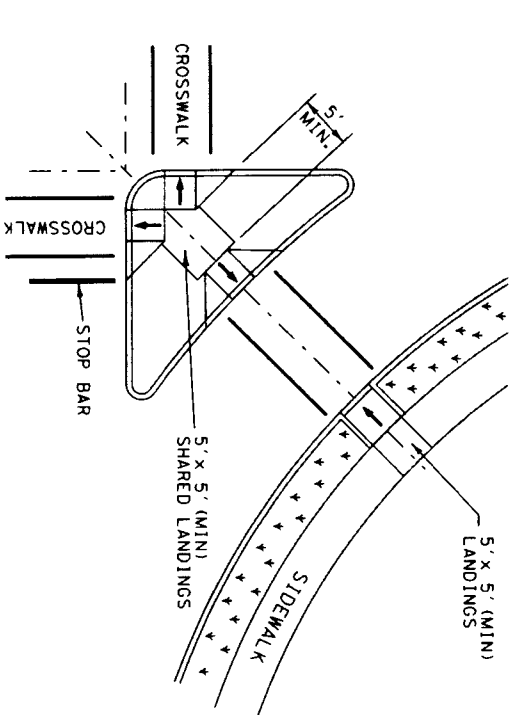
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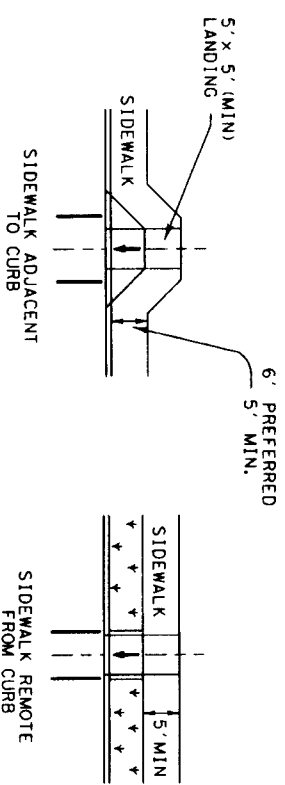
SKewed INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
 W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
 PERPENDICULAR RAMP

TYPICAL CROSSING LAYOUTS



SHEET 4 OF 4

Texas Department of Transportation
PEDESTRIAN FACILITIES
CURB RAMPS

PED-12A

FILE#	DD112C.dgn	DATE	10/1/01	BY	DD
REVISIONS	March 2002	DATE	3/1/02	BY	DD
VP	June 13, 2012	DATE	6/13/12	BY	DD
DESIGNER	DD	CHECKER	DD	DATE	10/1/01
PROJECT	DD	JOB	DD	DATE	10/1/01
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