

**REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT**

On this 1st day of September, 2015, Commissioners Court came on to be heard and reviewed the accompanying notice of Triple B Services  
 Job Location 23440 Cinco Ranch Blvd, Ditch VA3B  
 Date 8/24/2015 Bond No. 022-051-800, Permit No. 2015-2563 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 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 Statutes. Upon Motion of Commissioner Meysie, seconded by Commissioner Patterson, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

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

Presented to Commissioners Court and approved.  
 Recorded in Volume 9/1/15  
 Minutes of Commissioners Court

By: [Signature]  
 Drainage District Engineer/Manager

Clerk of Commissioners Court

By: [Signature]  
 Deputy  
**RENEE MICHULKA**

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

AUTHORIZED

BOND NO 022-051-800

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 RD., 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 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 PENNSYLVANIA and Whose address is 8350 N. CENTRAL EXPRESSWAY, #850, DALLAS, TX, 75208 after 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 AND no/00/100ths \$ 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.

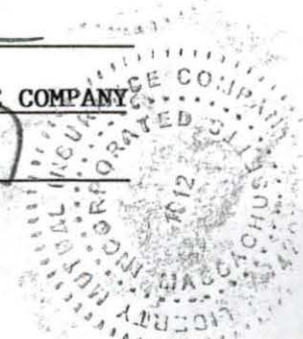
EXECUTED this 17th day of AUGUST, 2015.

TRIPLE B SERVICES, LLP  
PRINCIPAL

Donna Kurbe  
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. 6891587

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 3rd day of March, 2015.



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 3rd day of March, 2015, 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.



COMMONWEALTH OF PENNSYLVANIA  
Notarial Seal  
Teresa Pastella, Notary Public  
Plymouth Twp., Montgomery County  
My Commission Expires March 28, 2017  
Member, Pennsylvania Association of Notaries

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 19<sup>th</sup> day of August, 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](mailto: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](mailto: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.

**County of Fort Bend**  
Engineering Department

301 Jackson Street  
Richmond, Texas 77469

Johnny Ortega  
Permit Administrator

Phone: (281) 633-7500

**Permit Application Review Form For  
Cable, Conduit, and Pole Line Activity  
In Fort Bend County**

Permit No.      2015-2563

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

       X      (1) Complete Application Form:

           X      a. Name of road, street, and/or drainage ditch affected.

           X      b. Vicinity map showing course of directions

           X      c. Plans and specifications

       X      (2) Bond:

           District Attorney, approval when applicable.

           Perpetual bond currently posted.

           No: \_\_\_\_\_

           Amount: \_\_\_\_\_

       X      Performance bond submitted.

           No: 022-051-800

           Amount: \$5,000.00

           Cashier's Check

           No: \_\_\_\_\_

           Amount: \_\_\_\_\_

       (3) Verbal permission given for emergencies, to start construction before approved in Commissioner's Court.

           Precinct Engineer Acknowledgment                 Date

           Precinct Commissioner Acknowledgment                 Date

       (4)

       X      Drainage District Approval when applicable

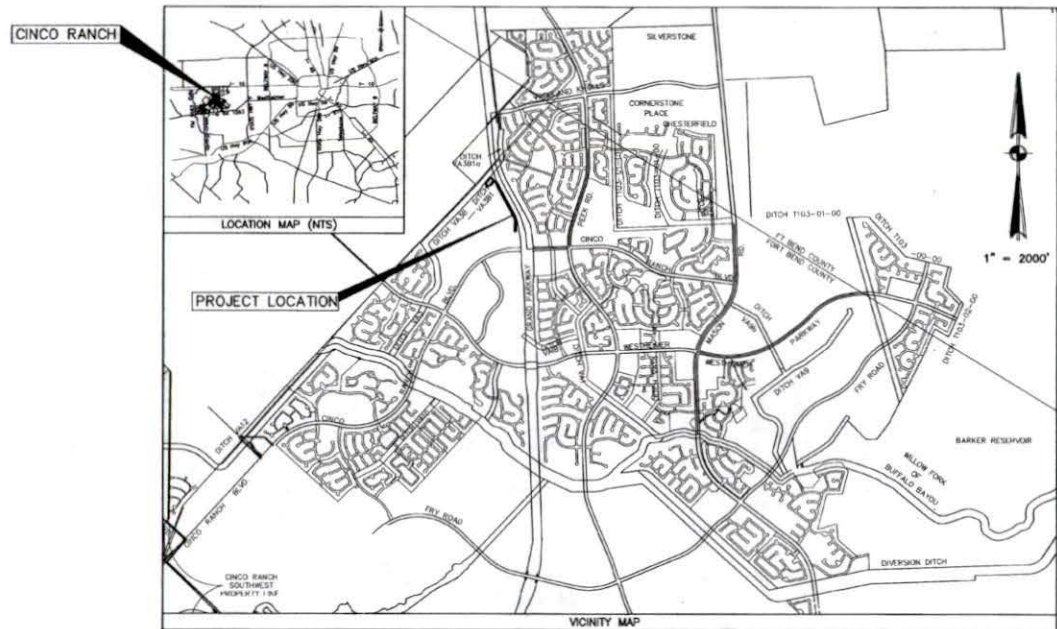
**We have reviewed this project and agree it meets minimum requirements.**

 CFM  
\_\_\_\_\_  
Johnny Ortega CFM/Permit Administrator

           08/25/2015  
\_\_\_\_\_  
Date

**WILLOW FORK DRAINAGE DISTRICT**  
**PLANS**  
**FOR CONSTRUCTION OF PROPOSED**  
**DRAINAGE AND PAVING FACILITIES**  
**FOR**  
**KATY ISD PARKING AND DRAINAGE IMPROVEMENTS**  
**FORT BEND COUNTY, TEXAS**  
**A PROJECT FOR**  
**WILLOW FORK DRAINAGE DISTRICT**  
 FBCAD MAP#: Z-012  
 KEY MAP REF: 485P  
 ZIP CODE : 77494

\*NO WATER OR SANITARY FACILITIES ARE PROPOSED IN THIS PLAN SET



ONE-CALL NOTIFICATION SYSTEM  
 CALL BEFORE YOU DIG!!!  
 (713)223-4567 (in Houston)  
 (New Statewide Number Outside Houston)  
 1-800-545-0505

\*NO PROPOSED WASTEWATER WORK IS SHOWN ON THIS PLAN SET NOR INCLUDED IN THIS WORK SCOPE.

CONTRACTOR SHALL NOTIFY THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING, OFFICE OF THE CITY ENGINEER, 48 HOURS BEFORE STARTING WORK ON THIS PROJECT.

| SHEET NO. | SHEET TITLE  |
|-----------|--|
| 1 OF 22   | COVER SHEET  |
| 2 OF 22   | CONSTRUCTION NOTES                                 |
| 3 OF 22   | OVERALL LAYOUT                                     |
| 4 OF 22   | DRAINAGE AREA, SHEET FLOW AND PONDING LAYOUT       |
| 5 OF 22   | STORM SEWER CALCULATIONS                           |
| 6 OF 22   | PAVING AND TRAFFIC CONTROL LAYOUT                  |
| 7 OF 22   | HORIZONTAL CONTROL LAYOUT                          |
| 8 OF 22   | GRADING LAYOUT                                     |
| 9 OF 22   | SITE MAP FOR STORM WATER POLLUTION PREVENTION PLAN |
| 10 OF 22  | P&P-PARK ROAD (0+00 TO 4+00)                       |
| 11 OF 22  | P&P-PARK ROAD (4+00 TO 8+00)                       |
| 12 OF 22  | P&P-PARK ROAD (8+00 TO 12+00)                      |
| 13 OF 22  | P&P-PARK ROAD (12+00 TO 16+00)                     |
| 14 OF 22  | P&P-PARK ROAD (16+00 TO 20+00)                     |
| 15 OF 22  | P&P-PARK ROAD (20+00 TO 23+00)                     |
| 16 OF 22  | MISCELLANEOUS DETAILS SHEET                        |
| 17 OF 22  | STORM WATER POLLUTION PREVENTION DETAILS           |
| 18 OF 22  | STANDARD PAVING DETAILS                            |
| 19 OF 22  | P&P-V&A (1 OF 4)                                   |
| 20 OF 22  | P&P-V&A (2 OF 4)                                   |
| 21 OF 22  | P&P-V&A (3 OF 4)                                   |
| 22 OF 22  | P&P-V&A (4 OF 4)                                   |

REVISIONS PER LANDSCAPE ARCHITECT AND ACCOMMODATION OF EXIST W/L  
 A- Center line for road shifted per county request 5/7/14 B&B

*Richard W. Stollers* 8/29/14  
 RICHARD W. STOLLERS, P.E.  
 FORT BEND COUNTY ENGINEERING  
 SIGNATURE VALID FOR ONE YEAR ONLY  
 8/29/14

\*NOTES TO THE CONSTRUCTION OF THESE FACILITIES WITHIN OR BY THE DISTRICT, THE DISTRICT OR ITS ENGINEER WILL GIVE WRITTEN NOTICE BY REGISTERED OR CERTIFIED MAIL TO THE DIRECTOR OF PUBLIC WORKS AND ENGINEERING CITY OF HOUSTON STATING THE DATE SUCH CONSTRUCTION WILL BE COMMENCED.

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES.

SURVEYED BY: COH LOG NO.: 13-1485  
 FB NO. ILM NO.: 13124861

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DATE: 8-26-14  
 REVISIONS: 8-7-14  
 5-1-14  
 8/17/14

PROJECT NO.: 60308851-#1, CONTRACT NO. 1

CITY ENGINEER: [Signature]  
 CITY DRAWING NO.: 51702

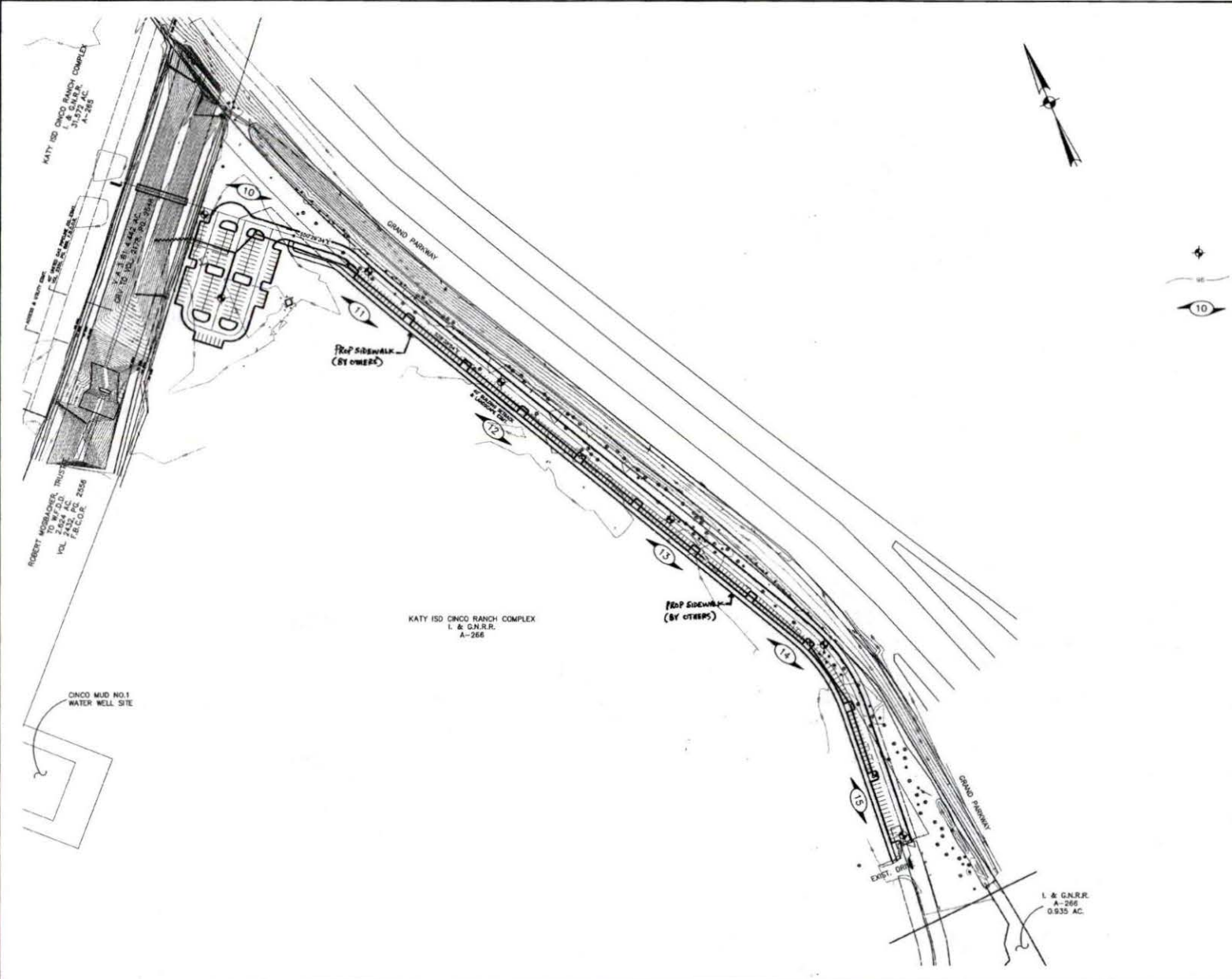
DIRECTOR OF PUBLIC WORKS AND ENGINEERING: [Signature]  
 SHEET: 1 OF 18

|  |   |
|--|---|
| AECOM<br>ALCON TECHNOLOGICAL SERVICES INC.<br>3444 WINTERSHIRE RD, SUITE 200<br>HOUSTON, TEXAS 77057<br>WWW.AECOM.COM<br>TEL: 832.974.1300 | PROJECT NO. 60308851-#1, CONTRACT NO. 1   |
|  | SHEET NO. 1 OF 22<br>SHEET TITLE COVER SHEET  |
| STATE OF TEXAS<br>ROBERT S. WEAVER<br>65000<br>LICENSED PROFESSIONAL ENGINEER<br>1/29/14   | PROJECT NO. 60308851-#1, CONTRACT NO. 1   |
| WILLOW FORK DRAINAGE DISTRICT<br>KATY ISD PARKING AND DRAINAGE IMPROVEMENTS<br>COVER SHEET   | PROJECT NO. 60308851-#1<br>CAD FILE: JE<br>DESIGNED BY: JE<br>DRAWN BY: JE<br>REVISIONS:<br>CHECKED:<br>DATE: JANUARY 2013<br>SCALE: 1" = 200'<br>SHEET 1 OF 22 |

P:\PROJECTS\14\14010\KATY ISD PARKING AND DRAINAGE IMPROVEMENTS\14010-01-01\14010-01-01.dwg  
 DATE PLOTTED: 8/29/14 10:23:14 AM  
 PLOTTER: HP DesignJet T1100PS  
 PLOT SCALE: 1" = 200'  
 PLOT SHEET: 1 OF 22



APPROVED FOR THE CITY OF HOUSTON BY THE ENGINEER OF RECORD AND THE CITY ENGINEER OF RECORD. THE CITY ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. THE CITY ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT. THE CITY ENGINEER OF RECORD IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF THE PROJECT.



**BENCHMARK INFORMATION:**  
 TBM BM-674  
 1"7 IRON ROD LOCATED ON WEST ROW OF GRAND PARKWAY APPROX 230' NORTH OF CINCO RANCH BLVD. ADJUSTMENT  
 ELEV. 123.81 NAVD 1929 DATUM (1978)  
 N=3,024,051.43, Y=709,859.32  
 TBM BM-672  
 1"7 IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 447' WILLOW FORD DRAINAGE DITCH ADJUSTMENT  
 ELEV. 138.98 NAVD 1929 DATUM (1978)  
 N=3,023,489.82, Y=710,887.88  
 TBM BM-670  
 1"7 IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 485' WILLOW FORD DRAINAGE DITCH ADJUSTMENT  
 ELEV. 123.28 NAVD 1929 DATUM (1978)  
 N=3,023,128.25, Y=711,904.91

**FLOOD PLAIN:**  
 PROJECT LIES IN UNDESIGNED ZONE X. THE NEAREST 100 YEAR BASE FLOOD ELEVATION = 711.0 AT THE INTERSECTION OF WILLOW FORD DIVERSION CHANNEL (WFD) AND GRAND PARKWAY AS PER EFFECTIVE FIRM PAGE NO. 485300002 DATED JANUARY 31, 1997, NOV. 1988 (2001 ADJUSTMENT).

**LEGEND:**  
 FROM NAVD 1988 (2001 ADJUSTMENT) AND 8.84'  
 (1978 ADJUSTMENT) AND 8.84'

SOIL BORING (APPROXIMATE LOCATION)  
 EXISTING CONTOUR  
 SHEET REFERENCE NUMBER

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS-OF-WAY ONLY. UTILITY LINES APPROVED AS TO LOCATION ONLY. AUTHORIZATION IS VALID FOR 1 YEAR.  
 APPROVED: [Signature]  
 DATE: 8/20/14

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

MAKER: [Signature] DATE: 8/20/14  
 CHECKED: [Signature] DATE: 8/20/14  
 DRAWN: [Signature] DATE: 8/20/14  
 STREET & BRIDGE

FILE NO: 13-1485  
 DRAWING SCALE: [Blank]  
 HORIZ: 1" = 100'  
 VERT: [Blank]  
 SHEET No: 3 OF 18



**AECOM**  
 ACTION TECHNICAL SERVICES, INC.  
 10000 WESTHELL DRIVE, SUITE 200  
 HOUSTON, TEXAS 77036  
 WWW.AECOM.COM  
 DATE: 08/20/14

PROJECT NO. 1308851-A1, CONTRACT NO. 1

**KATY ISD PARKING AND DRAINAGE IMPROVEMENTS OVERALL LAYOUT**

FILE NO: 13-1485  
 LOD ENG FILE: CP6-BASE  
 DESIGNED BY: JE  
 DRAWN BY: JE  
 TEXT CHECKED: [Blank]  
 PROJ CHECKED: [Blank]  
 DATE: JANUARY 2013  
 SCALE: 1" = 100'

SHEET 3 OF 22

PROJECT: KATY ISD CINCO RANCH COMPLEX  
 DRAWING NO. 13-1485  
 SHEET NO. 4 OF 18  
 DATE: JANUARY 2013

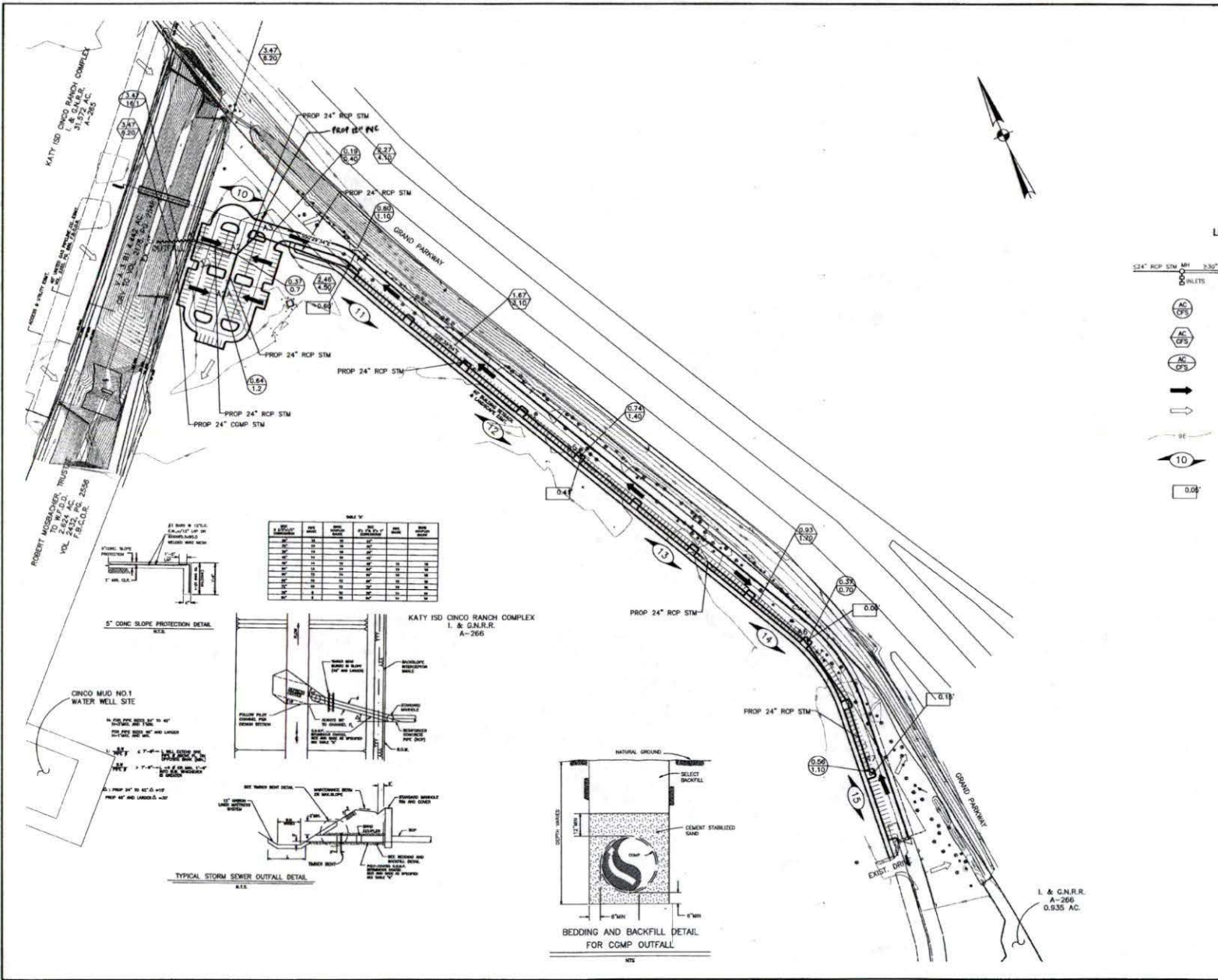
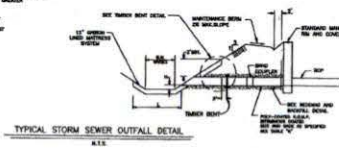


TABLE 1  
MANHOLE DATA

| MANHOLE NO. | TYPE    | INVERT ELEVATION | OUTLET ELEVATION | DIAMETER | LENGTH | LOCATION      |
|-------------|---------|------------------|------------------|----------|--------|---------------|
| M-1         | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 1+00  |
| M-2         | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 1+10  |
| M-3         | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 1+20  |
| M-4         | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 1+30  |
| M-5         | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 1+40  |
| M-6         | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 1+50  |
| M-7         | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 1+60  |
| M-8         | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 1+70  |
| M-9         | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 1+80  |
| M-10        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 1+90  |
| M-11        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 2+00  |
| M-12        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 2+10  |
| M-13        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 2+20  |
| M-14        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 2+30  |
| M-15        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 2+40  |
| M-16        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 2+50  |
| M-17        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 2+60  |
| M-18        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 2+70  |
| M-19        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 2+80  |
| M-20        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 2+90  |
| M-21        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 3+00  |
| M-22        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 3+10  |
| M-23        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 3+20  |
| M-24        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 3+30  |
| M-25        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 3+40  |
| M-26        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 3+50  |
| M-27        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 3+60  |
| M-28        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 3+70  |
| M-29        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 3+80  |
| M-30        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 3+90  |
| M-31        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 4+00  |
| M-32        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 4+10  |
| M-33        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 4+20  |
| M-34        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 4+30  |
| M-35        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 4+40  |
| M-36        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 4+50  |
| M-37        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 4+60  |
| M-38        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 4+70  |
| M-39        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 4+80  |
| M-40        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 4+90  |
| M-41        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 5+00  |
| M-42        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 5+10  |
| M-43        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 5+20  |
| M-44        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 5+30  |
| M-45        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 5+40  |
| M-46        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 5+50  |
| M-47        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 5+60  |
| M-48        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 5+70  |
| M-49        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 5+80  |
| M-50        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 5+90  |
| M-51        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 6+00  |
| M-52        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 6+10  |
| M-53        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 6+20  |
| M-54        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 6+30  |
| M-55        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 6+40  |
| M-56        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 6+50  |
| M-57        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 6+60  |
| M-58        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 6+70  |
| M-59        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 6+80  |
| M-60        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 6+90  |
| M-61        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 7+00  |
| M-62        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 7+10  |
| M-63        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 7+20  |
| M-64        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 7+30  |
| M-65        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 7+40  |
| M-66        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 7+50  |
| M-67        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 7+60  |
| M-68        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 7+70  |
| M-69        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 7+80  |
| M-70        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 7+90  |
| M-71        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 8+00  |
| M-72        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 8+10  |
| M-73        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 8+20  |
| M-74        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 8+30  |
| M-75        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 8+40  |
| M-76        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 8+50  |
| M-77        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 8+60  |
| M-78        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 8+70  |
| M-79        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 8+80  |
| M-80        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 8+90  |
| M-81        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 9+00  |
| M-82        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 9+10  |
| M-83        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 9+20  |
| M-84        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 9+30  |
| M-85        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 9+40  |
| M-86        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 9+50  |
| M-87        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 9+60  |
| M-88        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 9+70  |
| M-89        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 9+80  |
| M-90        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 9+90  |
| M-91        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 10+00 |
| M-92        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 10+10 |
| M-93        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 10+20 |
| M-94        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 10+30 |
| M-95        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 10+40 |
| M-96        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 10+50 |
| M-97        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 10+60 |
| M-98        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 10+70 |
| M-99        | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 10+80 |
| M-100       | 24" RCP | 1.10             | 1.10             | 24"      | 10'    | Station 10+90 |



**BENCHMARK INFORMATION:**

TM 104-874  
 1/4" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 830' NORTH OF CINCO RANCH BLVD.  
 ELEV: 123.81 NOV 1928 DATUM (1978 ADJUSTMENT)  
 X=3,051,951.43, Y=709,826.32  
 TM 104-871  
 1/4" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 447' WILLOW FORK DRAINAGE DIST.  
 ELEV: 124.30 NOV 1928 DATUM (1978 ADJUSTMENT)  
 X=3,023,485.92, Y=710,867.88  
 TM 104-870  
 1/4" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 805' WILLOW FORK DRAINAGE DIST.  
 ELEV: 123.28 NOV 1928 DATUM (1978 ADJUSTMENT)  
 X=3,023,126.28, Y=711,924.81

**FLOOD PLAIN:**  
 PROJECT SITE IS IN FLOOD ZONE 1, THE NEAREST 100 YEAR BASE FLOOD ELEVATION = 88.5' NAV. DINE. INTERSECTION OF WILLOW FORK DIVERSION CHANNEL AND WAGON ROAD AS PER EFFECTIVE FIRM PANEL NO. 15120D03 DATED JANUARY 3, 1997, MAID 1998 (2001 ADJUSTMENT).

**LEGEND:**  
 (S) CONVERT FROM NAVD 1988 (2001 ADJUSTMENT) TO NAVD 83 DATUM (1978 ADJUSTMENT) AND 8.58'

**PROPOSED DRAINAGE DIVIDE**

- 12" RCP STM MH 3-30" RCP STM
- PROPOSED STORM SEWER
- AC OPS
- DRAINAGE AREA AND FLOW
- CUMULATIVE DRAINAGE AREA AND FLOW
- EXTREME EVENT AREA AND FLOW
- EXIST/PROP 100-YR SHEET FLOW ROUTING
- EXISTING DRAINAGE TOPOGRAPHY
- EXISTING CONTOUR
- 10 SHEET REFERENCE NUMBER
- 0.00 PONDING ABOVE CURB

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

APPROVED: [Signature]  
 DATE: 1/14/14

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DESIGNED BY: [Signature]  
 CHECKED BY: [Signature]  
 DATE: 1/14/14

PROJECT NO: 6330881-#1  
 SHEET NO: 4 OF 18

FILE NO: 13-1485  
 DRAWING SCALE: [Blank]  
 HORIZ: 1" = 100'  
 VERT: [Blank]

DESIGNED BY: JE  
 DRAWN BY: JE  
 PROJ CHECK: [Blank]  
 DATE: JANUARY 2013  
 SCALE: 1" = 100'

51702

**AECOM**

ACORN TECHNICAL SERVICES, INC.  
 10000 WESTHELL DRIVE, SUITE 200  
 HOUSTON, TEXAS 77066  
 TEL: 281.833.4000  
 FAX: 281.833.4000

PROJECT NO: 6330881-#1, CONTRACT NO. 1

DATE: [Blank] MADE BY: [Blank] APPROVED: [Blank]

EXCEPTION: [Blank]

STATE OF TEXAS  
 ROBERT S. WEMPE  
 LICENSED PROFESSIONAL ENGINEER  
 74114

KATY ISD PARKING AND DRAINAGE IMPROVEMENTS DRAINAGE AREA, SHEET FLOW AND PONDING LAYOUT

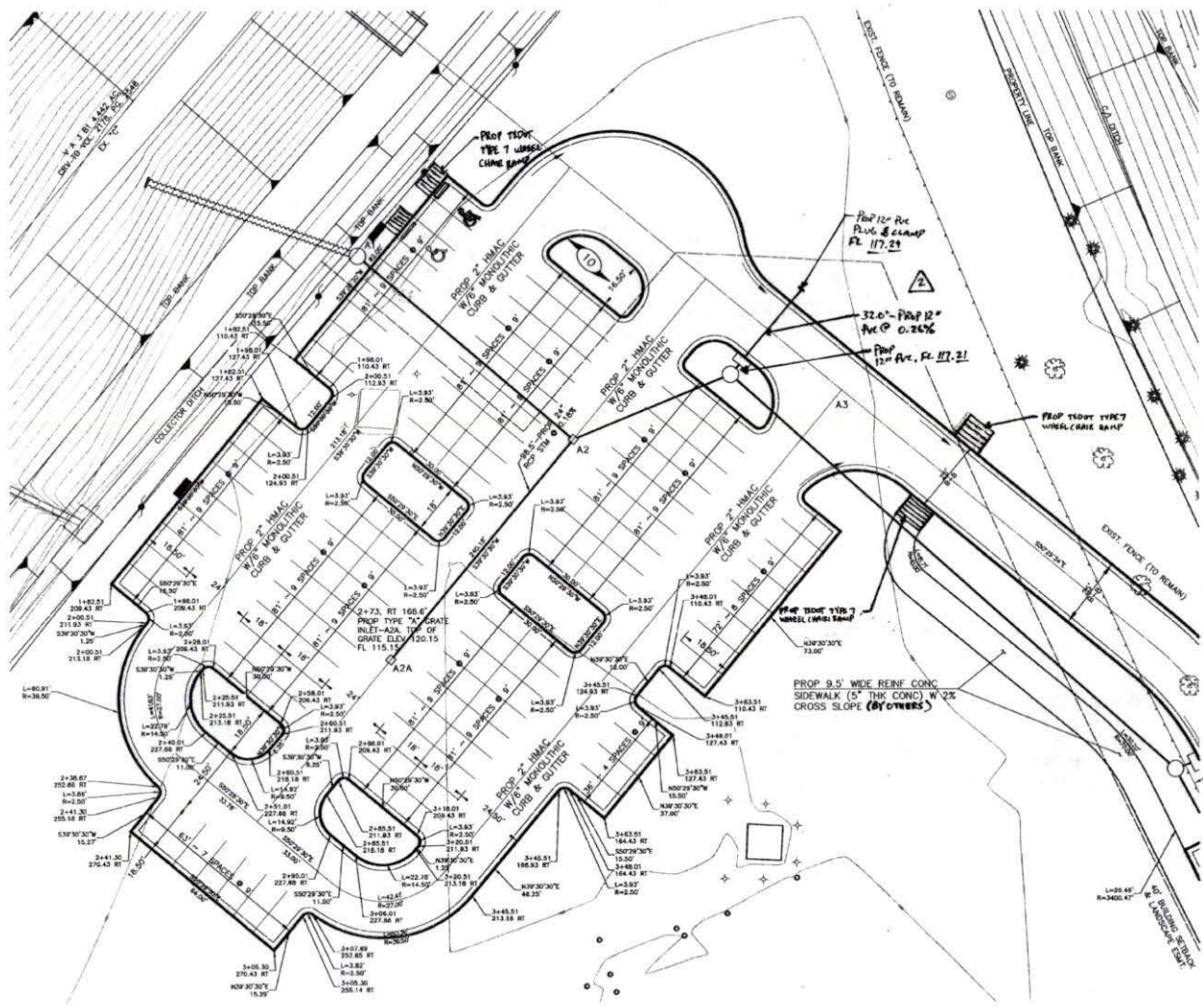
PROJECT NO: 6330881-#1  
 DND DWG FILE: CDR-BASE  
 DESIGNED BY: JE  
 DRAWN BY: JE  
 PROJ CHECK: [Blank]  
 DATE: JANUARY 2013  
 SCALE: 1" = 100'

SHEET 4 OF 22





PROJECT NAME: PLANNING AND DESIGN SERVICES FOR THE IMPROVEMENTS TO PARKING AND DRAINAGE AT KATY ISD. DRAWING NO: 13-1485. DATE: JANUARY 2013. SHEET NO: 7 OF 18. PROJECT LOCATION: KATY ISD, HOUSTON, TEXAS. PROJECT START DATE: JANUARY 2013. PROJECT END DATE: JANUARY 2013.



**BENCHMARK INFORMATION:**

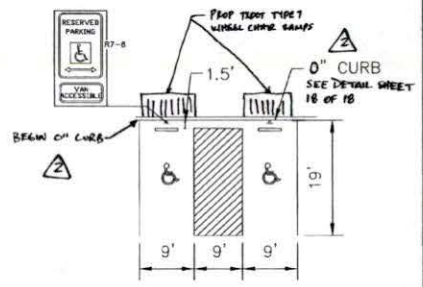
BM IRM-674  
 1/4" IRON REEL LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 230' NORTH OF CHINA BAKER BLVD.  
 ELEV. 123.81 NAVD 1929 DATUM (1978 ADJUSTMENT)  
 X=3,024,051.43, Y=709,828.32

BM IRM-672  
 1/4" IRON REEL LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 447' WILLLOW FROM DRAINAGE DIST.  
 ELEV. 134.36 NAVD 1929 DATUM (1978 ADJUSTMENT)  
 X=3,023,485.92, Y=710,867.89

BM IRM-670  
 1/4" IRON REEL LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 898' WILLLOW FROM DRAINAGE DIST.  
 ELEV. 123.12 NAVD 1929 DATUM (1978 ADJUSTMENT)  
 X=3,023,134.28, Y=711,459.91

**FLOOD PLAIN:**  
 PROJECT LIES IN UNIMPAVED ZONE X, THE NEAREST 100 YEAR BASE FLOOD ELEVATION = 89.0' AT THE INTERSECTION OF WILLLOW FROM DIVISION CHANGEL AND MAISON ROAD AS LATER EFFECTIVE FROM FLOOD NO. REVISIONS DATED JANUARY 3, 1997, NAVD 1929 (2001 ADJUSTMENT).  
 TO CONVERT FROM NAVD 1983 (2001 ADJUSTMENT) TO NAVD 1929 DATUM (1978 ADJUSTMENT) ADD 0.36'.

- NOTES**
- TREES WITHIN PAVING AREA TO BE REMOVED BY OTHERS.
  - TREES WITHIN 10' OF PROJECT AREA TO BE PROTECTED.
  - POSTS AND CONCRETE PAD IN PAVING AREA TO BE REMOVED.
  - SHOT PUT FACILITIES TO BE REMOVED BY OTHERS.



APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN FORT BEND COUNTY RIGHTS-OF-WAY ONLY. UTILITY LINES APPROXIMATE TO LOCATION ONLY.

APPROVED: *[Signature]*  
 DATE: 1/24/13

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DESIGNED BY: *[Signature]*  
 DRAWN BY: *[Signature]*  
 CHECKED BY: *[Signature]*  
 DATE: JANUARY 2013

FILE NO: 13-1485  
 DRAWING SCALE: AS SHOWN  
 HORIZ: 1" = 30'  
 VERT: 1" = 30'

SHEET No: 7 of 18

**AECOM**

STATE OF TEXAS  
 HOUSTON, TEXAS  
 LICENSED PROFESSIONAL ENGINEER  
 NO. 35888  
 EXPIRES 12/31/14

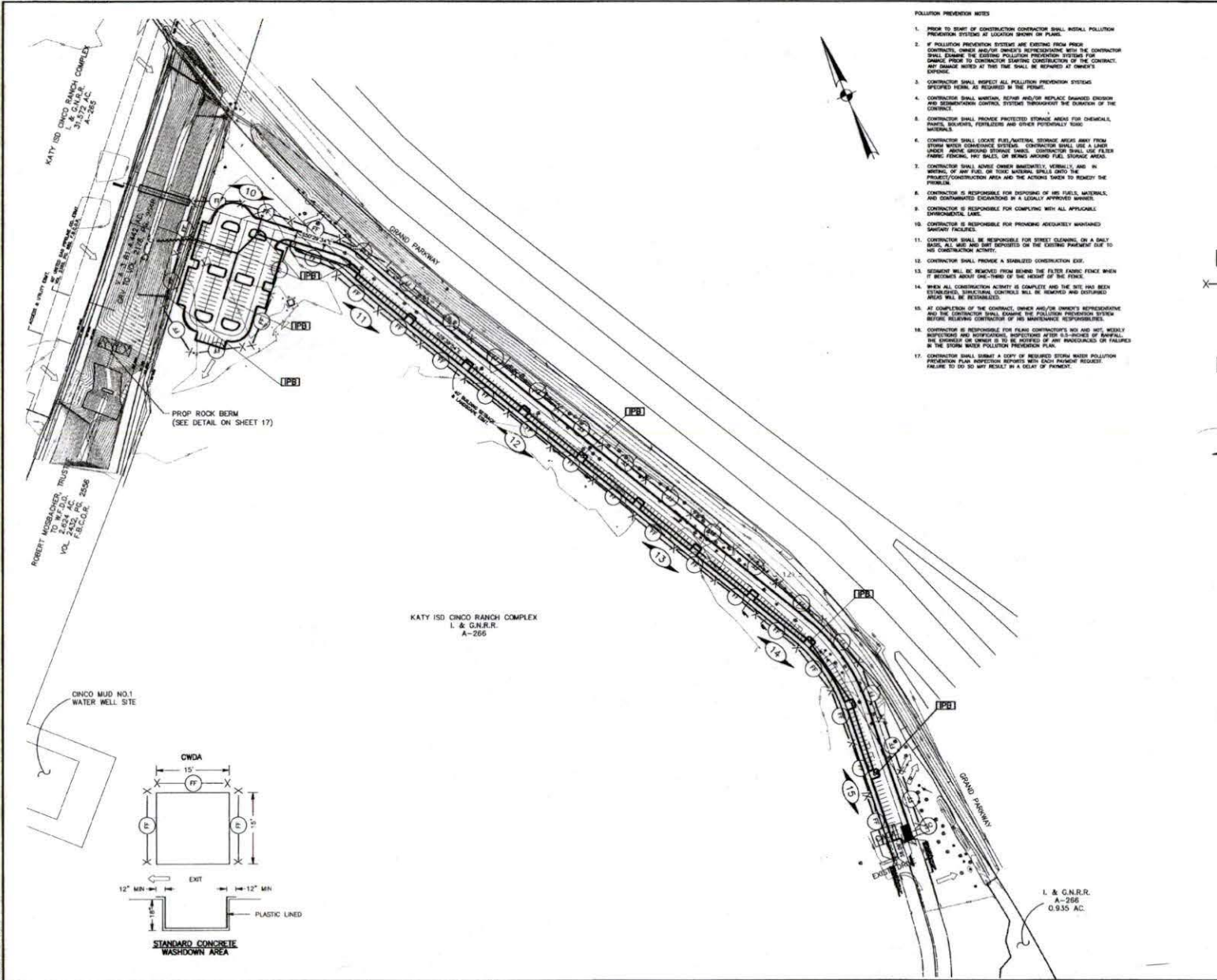
PROJECT NO. 60300001-01, CONTRACT NO. 1

PROJECT NO. 60300001-01  
 CAD DWG FILE: CPM-BASE  
 DESIGNED BY: JH  
 DRAWN BY: JH  
 CHECKED BY: JH  
 DATE: JANUARY 2013  
 SCALE: 1" = 30'

SHEET 7 of 22



PROJECT NAME: P.L. L&N CINCO RANCH COMPLEX L&N C&N.R. COMPLEX  
 LAST UPDATE: November, July 23, 2014, 4:12:20 PM  
 PLOT DATE: Thursday, July 24, 2014, 8:55:58 AM  
 ANS D - 22-1047-14



- POLLUTION PREVENTION NOTES**
1. PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL INSTALL POLLUTION PREVENTION SYSTEMS AT LOCATION SHOWN ON PLAN.
  2. IF POLLUTION PREVENTION SYSTEMS ARE DAMAGED FROM POOR CONTRACTOR, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL FURNISH THE COST OF POLLUTION PREVENTION SYSTEMS FOR DAMAGE PRIOR TO CONTRACTOR STARTING CONSTRUCTION OF THE PROJECT. ANY DAMAGE NOTED AT THIS TIME SHALL BE REPAIRED AT OWNER'S EXPENSE.
  3. CONTRACTOR SHALL INSPECT ALL POLLUTION PREVENTION SYSTEMS SPECIFIED HEREIN AS REQUIRED BY THE PERMITS.
  4. CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EROSION AND SEDIMENTATION CONTROL SYSTEMS THROUGHOUT THE COURSE OF THE PROJECT.
  5. CONTRACTOR SHALL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS AND OTHER POTENTIALLY TOXIC MATERIALS.
  6. CONTRACTOR SHALL LOCATE FUEL/AIRTEL STORAGE AREAS AWAY FROM OTHER CONSTRUCTION SYSTEMS. CONTRACTOR SHALL USE FLEES FABRIC FENCING, 10' SALES, OR BARRIERS AROUND FUEL STORAGE AREAS.
  7. CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY, AND IN WRITING, OF ANY FUEL OR TOXIC MATERIAL SPILLS ONTO THE PROJECT CONSTRUCTION AREA AND THE ACTIONS TAKEN TO REMEDY THE PROBLEM.
  8. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF HIS FUEL, MATERIALS, AND CONTAMINATED EROSIONS IN A LEGALLY APPROVED MANNER.
  9. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE ENVIRONMENTAL LAWS.
  10. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATELY MAINTAINED SANITARY FACILITIES.
  11. CONTRACTOR SHALL BE RESPONSIBLE FOR STREET CLEANING ON A DAILY BASIS. ALL WAYS SHALL BE RESTORED TO THE EXISTING PAVEMENT SURFACE TO HIS CONSTRUCTION ACTIVITY.
  12. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT.
  13. SEDIMENT WILL BE REMOVED FROM BARRIERS THE FILTER FABRIC FENCE WHEN IT BECOMES ABOUT ONE-THIRD OF THE HEIGHT OF THE FENCE.
  14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE HAS BEEN RESTORED, STRUCTURAL CONTROLS SHALL BE REMOVED AND DISTURBED AREAS WILL BE RESTORED.
  15. IF CONTRACTOR OF THE CONTRACT, OWNER AND/OR OWNER'S REPRESENTATIVE AND THE CONTRACTOR SHALL SIGNATURE THE POLLUTION PREVENTION SYSTEM BEFORE BEGINNING CONSTRUCTION OF HIS MAINTENANCE RESPONSIBILITIES.
  16. CONTRACTOR IS RESPONSIBLE FOR FILING CONTRACTOR'S AND NOT WORKSHEET INFORMATION AND INSPECTIONS INFORMATION AT THE 48-HOUR OF BEFORE THE START OF CONSTRUCTION IS TO BE PROVIDED OF THE PARAGRAPHS OR PARAGRAPHS IN THE STORM WATER POLLUTION PREVENTION PLAN.
  17. CONTRACTOR SHALL SUBMIT A COPY OF REQUIRED STORM WATER POLLUTION PREVENTION PLAN INSPECTION REPORTS WITH EACH PAYMENT REQUEST. FAILURE TO DO SO MAY RESULT IN A CLAY OF FURNISH.

**BENCHMARK INFORMATION:**

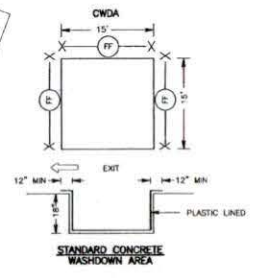
TM 106-674  
 1/4" IRON ROD LOCATED ON WEST RIM OF GRADED PARKWAY APPROX. 820' NORTH OF CINCO RANCH BLVD. (ADJUSTMENT)  
 ELEV. 123.41  
 NAD 1983 DATUM (1978 ADJUSTMENT)  
 X=3,024,091.43, Y=709,826.32

TM 104-672  
 1/4" IRON ROD LOCATED ON WEST RIM OF GRADED PARKWAY APPROX. 447' WILLOW FORK DRAINAGE DIST. (ADJUSTMENT)  
 ELEV. 124.30  
 NAD 1983 DATUM (1978 ADJUSTMENT)  
 X=3,023,486.92, Y=710,867.88

TM 104-670  
 1/4" IRON ROD LOCATED ON WEST RIM OF GRADED PARKWAY APPROX. 865' WILLOW FORK DRAINAGE DIST. (ADJUSTMENT)  
 ELEV. 124.30  
 NAD 1983 DATUM (1978 ADJUSTMENT)  
 X=3,023,126.28, Y=711,804.91

**FLOOD PLAIN:**  
 PROJECT LIES IN UNGRADED ZONE X, THE NEAREST 100 YEAR BASE FLOOD ELEVATION = 88.0'. AT THE INTERSECTION OF WILLOW FORK DIVERSION CHANNEL AND MAIN RIVER AS SHOWN EFFECTIVE FROM FIRM NO. 48180-D-01-DATED JANUARY 3, 1997, REVD 1998 (2001 ADJUSTMENT).  
 TO CONVERT FROM HAVS 1988 (2001 ADJUSTMENT) TO NAD 1983 DATUM (1978 ADJUSTMENT) ADD 0.50'.

- LEGEND**
- ⊗ (SC) STABILIZED CONSTRUCTION EXIT (DRAINAGE AND PAVING CONTRACTOR)
  - ⊗ (FF) FILTER FABRIC FENCE (STORM WATER SOLUTIONS)
  - INLET
  - EXISTING DRAINAGE TOPOGRAPHY
  - (CWA) CONCRETE WASHDOWN AREA
  - ⊗ (IPB) INLET PROTECTION BARRIER ON EXIST PROP INLET
  - EXISTING CONTOUR
  - ⊗ (10) SHEET REFERENCE NUMBER



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

APPROVED: *[Signature]*  
 DATE: 7/20/14

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DESIGNED BY: *[Signature]*  
 DRAWN BY: *[Signature]*  
 CHECKED BY: *[Signature]*  
 DATE: JANUARY 2013

FILE NO: 13-1485  
 DRAWING SCALE: 51708  
 HORIZ: 1" = 100'  
 VERT: 1" = 100'

SHEET No: 9 of 18

**AECOM**

PROJECT NO. 60208851-#1, CONTRACT NO. 1

SHEET 9 of 22

DATE: 1/23/14

DESIGNER: J.E.

DRAWN BY: J.E.

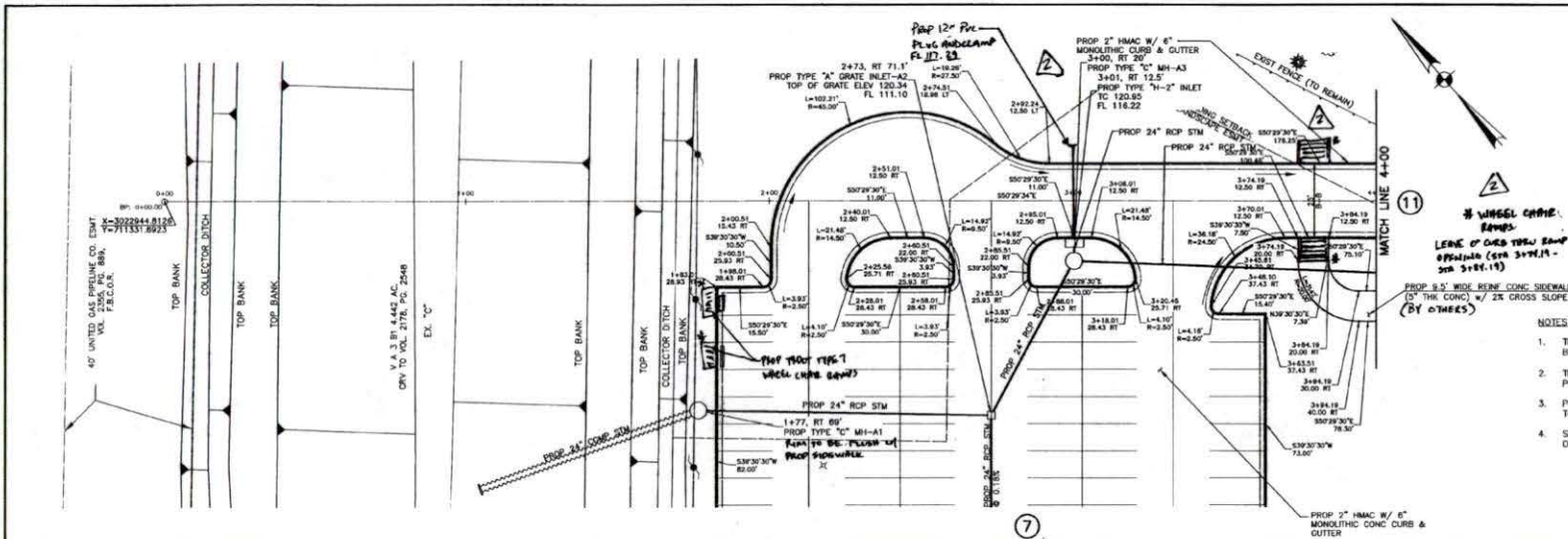
PROJ. CHECK: J.E.

DATE: JANUARY 2013

SCALE: 1" = 100'

SHEET 9 of 22

APPROVED FOR CONSTRUCTION BY THE CITY OF HOUSTON, TEXAS, ON BEHALF OF THE CITY ENGINEER, TEXAS ROAD & BRIDGE DIVISION  
 DATE: JANUARY 24, 2014 4:55:28 PM  
 ANS D - 23-001-14

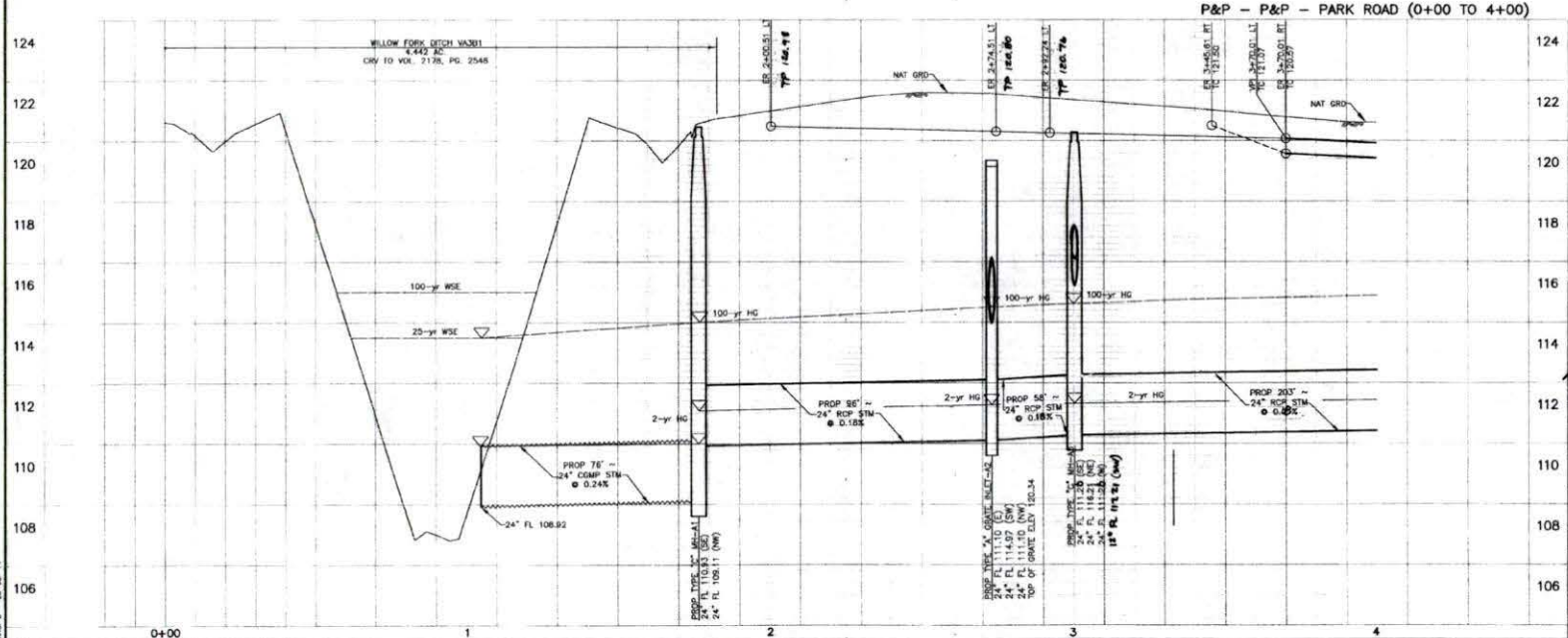
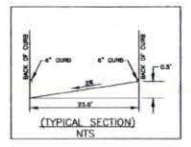


BENCHMARK INFORMATION:  
 TBM 104-474  
 1/2" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 430' NORTH OF CHICO RANCH BLVD.  
 ELEV. 123.81 NAVD 1989 DATUM (1978 ADJUSTMENT)  
 1/2" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 485' WILLIFORD DRAINAGE DIST.  
 ELEV. 124.30' NAVD 1989 DATUM (1978 ADJUSTMENT)  
 1/2" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 447' WILLIFORD DRAINAGE DIST.  
 ELEV. 124.30' NAVD 1989 DATUM (1978 ADJUSTMENT)  
 1/2" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 485' WILLIFORD DRAINAGE DIST.  
 ELEV. 124.30' NAVD 1989 DATUM (1978 ADJUSTMENT)  
 1/2" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 447' WILLIFORD DRAINAGE DIST.  
 ELEV. 124.30' NAVD 1989 DATUM (1978 ADJUSTMENT)

FLUOR PLAIN:  
 PROJECT LIES IN UNSHADED ZONE X FOR NEAREST 100 YEAR BASE FLOOD ELEVATION = 88.0' AT THE INTERSECTION OF WILLIFORD DIVISION CHANNEL AND MAIN ROAD AS FOR EFFECTIVE FIRM PANEL NO. 48132C005 D DATED JANUARY 3, 1997, NAVD 1988 (2001 ADJUSTMENT).

PROP 9.0' WIDE REIN. CONC. SIDEWALK TO CONVERT FROM NAVD 1988 (2001 ADJUSTMENT) TO NAVD 1929 DATUM (1978 ADJUSTMENT) ADD 0.58'

NOTES:  
 1. TREES WITHIN PAVING AREA TO BE REMOVED BY OTHERS.  
 2. TREES WITHIN 10' OF PROJECT AREA TO BE PROTECTED.  
 3. POSTS AND CONCRETE PAD IN PAVING AREA TO BE REMOVED.  
 4. SHOT PUT FACILITIES TO BE REMOVED BY OTHERS.



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

APPROVED: *[Signature]*  
 DATE: 8/7/14

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES.

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 TRAFFIC & TRANSPORTATION

DESIGNED BY: *[Signature]*  
 DATE: 8/7/14

SHOW WATER QUALITY

STATION: 0+00 TO 4+00

FILE NO: 13-1485  
 DRAWING SCALE: 1" = 20'  
 HORIZ: 1" = 20'  
 VERT: 1" = 2'

SHEET NO: 10 OF 18

**AECOM**

PROJECT NO. 0008857-1, CONTRACT NO. 1

APPROVED FOR CONSTRUCTION BY THE CITY OF HOUSTON, TEXAS, ON BEHALF OF THE CITY ENGINEER, TEXAS ROAD & BRIDGE DIVISION  
 DATE: JANUARY 24, 2014 4:55:28 PM  
 ANS D - 23-001-14

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 TRAFFIC & TRANSPORTATION

DESIGNED BY: *[Signature]*  
 DATE: 8/7/14

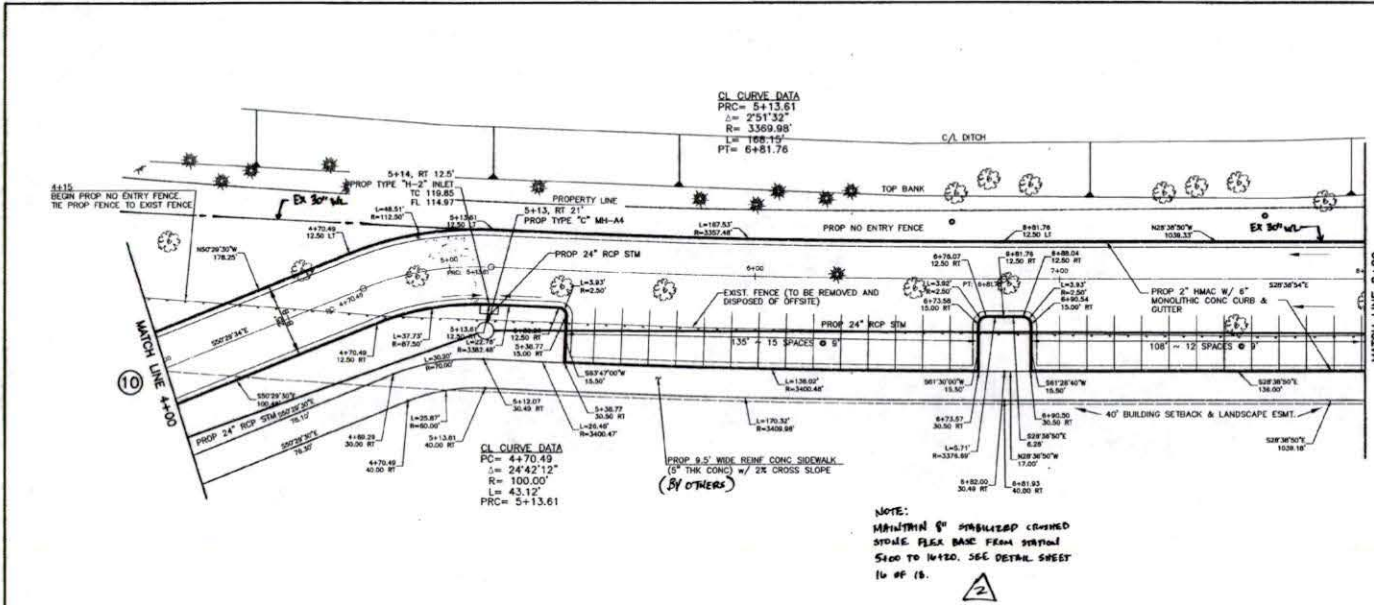
SHOW WATER QUALITY

STATION: 0+00 TO 4+00

FILE NO: 13-1485  
 DRAWING SCALE: 1" = 20'  
 HORIZ: 1" = 20'  
 VERT: 1" = 2'

SHEET NO: 10 OF 18

P&P - PARK ROAD (4+00 TO 8+00)  
 DATE: 1/23/13  
 DRAWN BY: JE  
 CHECKED BY: JE  
 PROJECT NO: 13-1485



**BENCHMARK INFORMATION:**

TM 194-474  
 1/4" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY  
 APPROX. 500' NORTH OF C&A DITCH B.M.D.  
 ELEV. 123.81 NOV 1929 DATUM (1978 ADJUSTMENT)  
 8+2, 824, 851.43, 7+099, 858.33

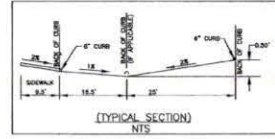
TM 80-672  
 1/4" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY  
 APPROX. 447' WILLOW FARM DRAINAGE DIST.  
 ELEV. 124.30' NOV 1929 DATUM (1978 ADJUSTMENT)  
 8+2, 823, 845.82, 7+710, 867.89

TM 80-671  
 1/4" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY  
 APPROX. 480' WILLOW FARM DRAINAGE DIST.  
 8+2, 823, 128.38, 9+711, 804.91

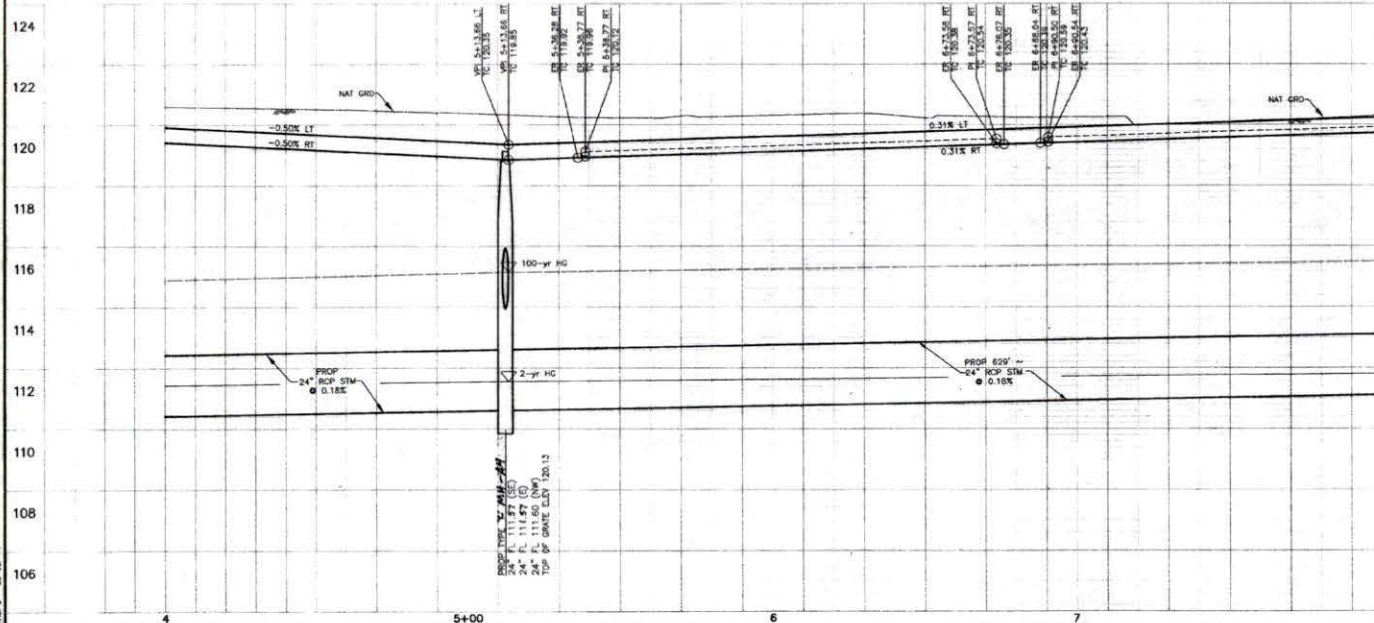
**FLOOD PLANE:**  
 PROJECT LIES IN UNSHADDED ZONE X, THE NEAREST 100 YEAR BASE FLOOD ELEVATION = 58.2' AT THE INTERSECTION OF WILLOW FARM DIVERSION CHANNEL AND WILLOW ROAD AS THIS EFFECTIVE FIRM PANEL NO. 481002023 DATED JANUARY 3, 1997, NAVD 1988 (2001 ADJUSTMENT).

TO CONVERT FROM NAVD 1988 (2001 ADJUSTMENT) TO NAVD 1929 DATUM (1978 ADJUSTMENT) ADD 0.59'.

- NOTES**
- TREES WITHIN PAVING AREA TO BE REMOVED BY OTHERS.
  - TREES WITHIN 10' OF PROJECT AREA TO BE PROTECTED.
  - POSTS AND CONCRETE PAD IN PAVING AREA TO BE REMOVED.
  - SHOT PUT FACILITIES TO BE REMOVED BY OTHERS.



**NOTE:**  
 MAINTAIN 6" DIMENSION CROWN SIDEWALK FROM STATION 5+00 TO 4+120. SEE DETAIL SHEET 10 OF 18.



P&P - P&P - PARK ROAD (4+00 TO 8+00)

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

APPROVED: *[Signature]*  
 DATE: 1/23/13

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES.

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DATE: 1/23/13

APPROVED: *[Signature]*

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DATE: 1/23/13

APPROVED: *[Signature]*

FILE NO: 13-1485

DRAWING SCALE: 1" = 20'

HORIZ : 1" = 20'

VERT : 1" = 2'

SHEET NO: 11 OF 18

**AECOM**

PROJECT NO. 13-1485 - P&P - CONTINUED NO. 1

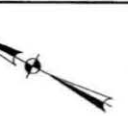
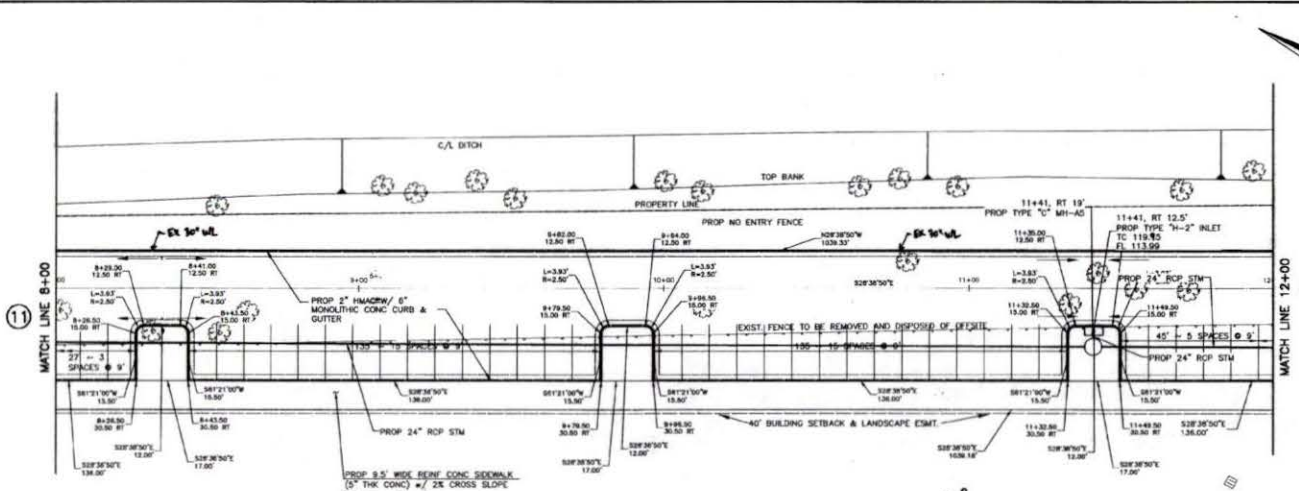
**STATE OF TEXAS**  
 ROBERT S. WEMPE  
 8558  
 LICENSED PROFESSIONAL ENGINEER

**KATY ISD PARKING AND DRAINAGE IMPROVEMENTS**  
 P&P - PARK ROAD (4+00 TO 8+00)

PROJECT NO: 13-1485-01  
 CAD DWG FILE: 13D-845E-01  
 DESIGNED BY: JE  
 DRAWN BY: JE  
 DEPT CHECK: JE  
 PROJ CHECK: JE  
 DATE: JANUARY 2013  
 SCALE: 1" = 20'

SHEET 11 OF 22

PROJECT NO. 13-1485 - P1, CONTRACT NO. 1  
 AECOM CONSULTING SERVICES, INC.  
 444 WESTERN BLVD, SUITE 200  
 HOUSTON, TEXAS 77002  
 PHONE: 713.861.7300  
 FAX: 713.861.7300  
 DATE: 01/17/14



**BENCHMARK INFORMATION:**

TM 106-474  
 5' IRON BBS LOCATED ON WEST ROW OF GRADED PARKWAY  
 NORTH 830' NORTH OF CROSS BANK B.V.D.  
 ELEV: 123.81 NOV 1928 DATUM (1978  
 ADJUSTMENT)  
 N=0.024, 0.0143, 7+709, 829.39

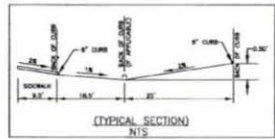
TM 106-472  
 5' IRON BBS LOCATED ON WEST ROW OF GRADED PARKWAY  
 NORTH 830' NORTH OF CROSS BANK B.V.D.  
 ELEV: 124.30' NOV 1928 DATUM (1978  
 ADJUSTMENT)  
 N=0.024, 0.0143, 7+712, 827.81

TM 106-470  
 5' IRON BBS LOCATED ON WEST ROW OF GRADED PARKWAY  
 NORTH 830' NORTH OF CROSS BANK B.V.D.  
 ELEV: 124.30' NOV 1928 DATUM (1978  
 ADJUSTMENT)  
 N=0.024, 0.0143, 7+712, 827.81

**FLOOD PLAIN:**  
 PROJECT LIES IN UNSHADED ZONE V, THE NEAREST 100  
 YEAR BASE FLOOD ELEVATION = 88.0 AT THE  
 INTERSECTION OF WILLOW FORK DIVERSION CHANNEL AND  
 MAIN BANK AS PER EFFECTIVE FIRM PANEL NO.  
 48180101 DATED JANUARY 3, 1997, NAVD 1988  
 (2001 ADJUSTMENT).

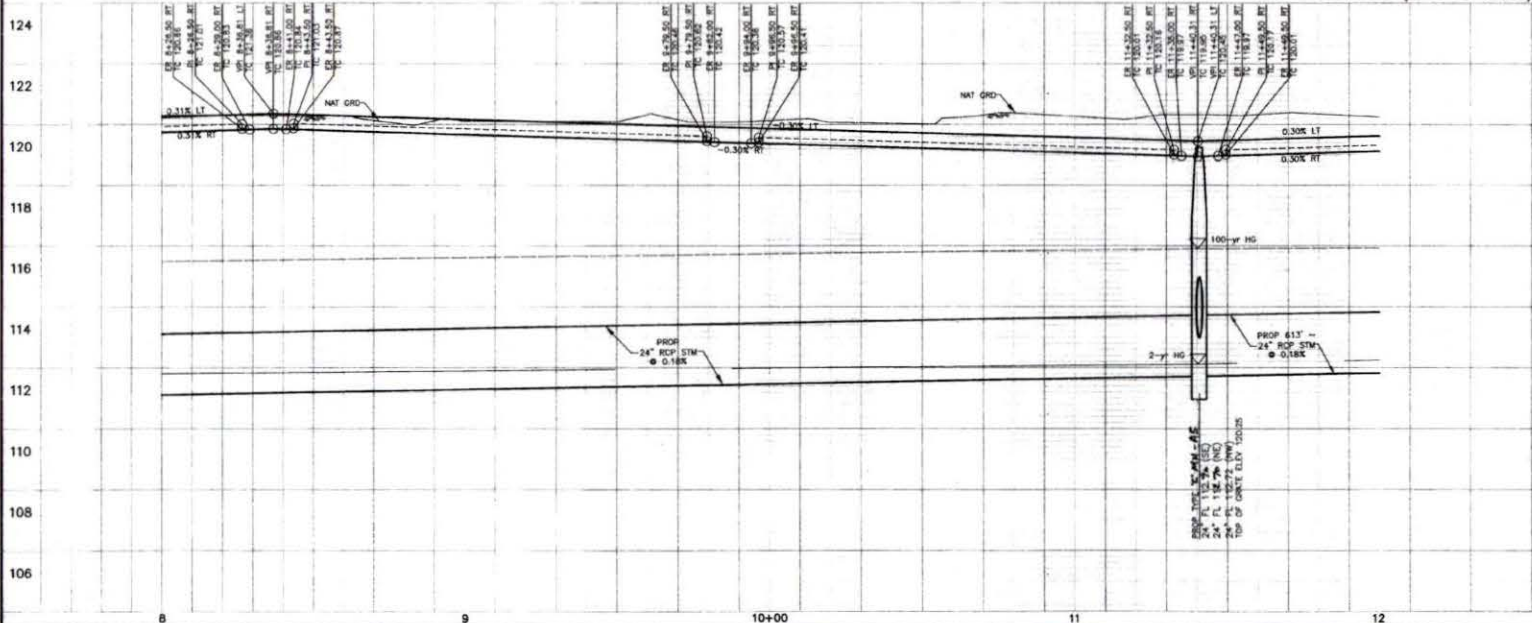
**TO CONVERT FROM NAVD 1988 (2001 ADJUSTMENT) TO NAVD  
 1928 DATUM (1978 ADJUSTMENT) ADD 0.59'.**

- TREES WITHIN PAVING AREA TO BE REMOVED BY OTHERS.
- TREES WITHIN 10' OF PROJECT AREA TO BE PROTECTED.
- POSTS AND CONCRETE PAD IN PAVING AREA TO BE REMOVED.
- SHOT PUT FACILITIES TO BE REMOVED BY OTHERS.



**NOTE:**  
 MAINTAIN 6" STABILIZED CRUSHED  
 STONE FLEX BASE FROM SURFACE  
 5' TO 8+20. SEE DETAIL  
 SHEET K. OF 11.

P&P - PARK ROAD (8+00 TO 12+00)



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

APPROVED: *[Signature]*  
 DATE: 01/17/14

NOTICE: CITY SIGNATURES VALID FOR ONE YEAR ONLY  
 AFTER DATE OF SIGNATURES

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DESIGNED BY: *[Signature]*  
 DRAWN BY: *[Signature]*  
 DATE: 01/17/14

FILE NO:  
 13-1485

DRAWING SCALE:  
 HORIZ: 1" = 20'  
 VERT: 1" = 2'

SHEET No: 12 OF 18



**AECOM**

PROJECT NO. 13-1485 - P1, CONTRACT NO. 1

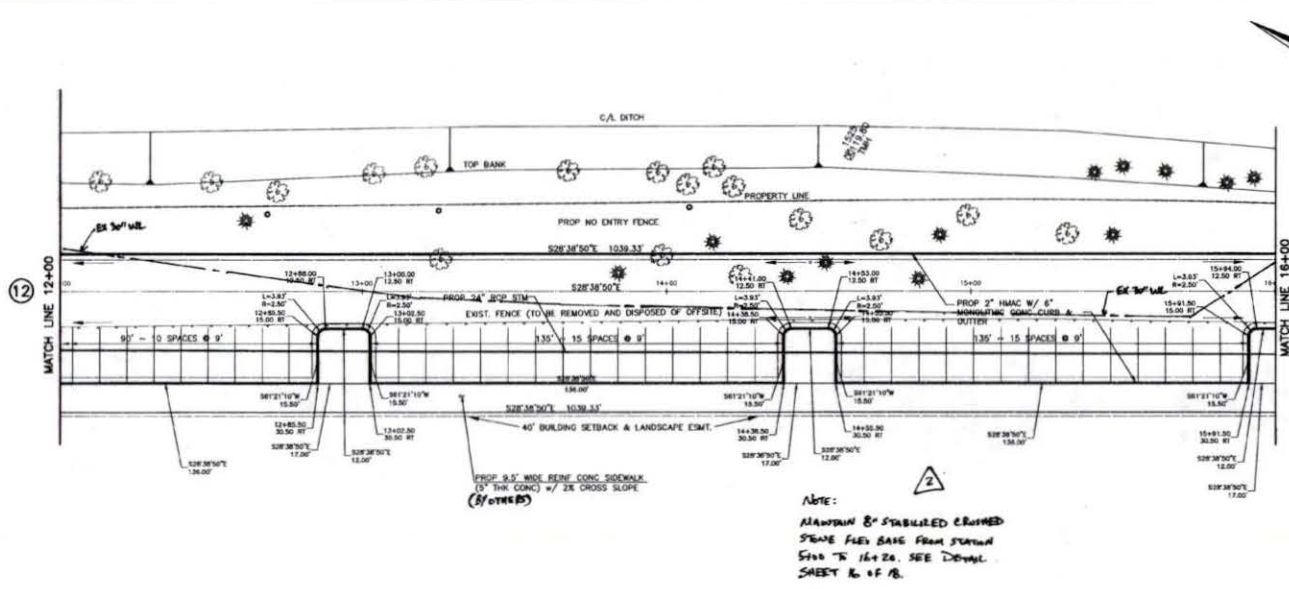
**KATY ISD PARKING AND DRAINAGE IMPROVEMENTS**

P&P - PARK ROAD (8+00 TO 12+00)

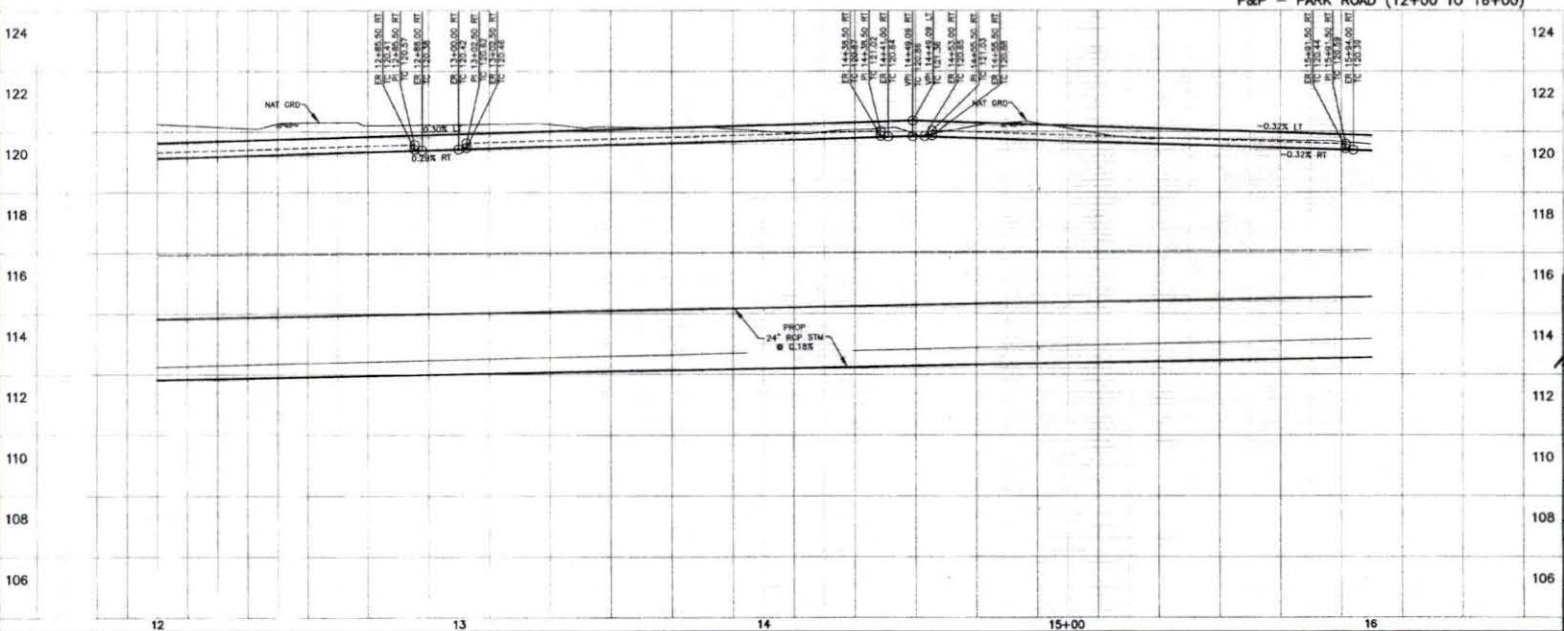
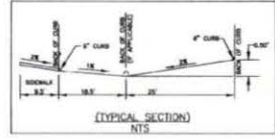
SHEET 12 OF 22

| NO. | DATE | MADE BY | APPROVED | DESCRIPTION |
|-----|------|---------|----------|-------------|
|     |      |         |          |             |

PROJECT: P&P - PARK ROAD (12+00 TO 16+00) - WILLOW FORE DRAINAGE DISTRICT  
 DATE: JAN 23, 2014 4:53:28 PM  
 PLOT DATE: Thursday, July 24, 2014 8:08:32 AM  
 AND B - 23-101-14



**NOTE:**  
 MAINPAIN 8\"/>



**BENCHMARK INFORMATION:**  
 TM 104-474  
 1\"/>

- NOTES:**
- TREES WITHIN PAVING AREA TO BE REMOVED BY OTHERS.
  - TREES WITHIN 10' OF PROJECT AREA TO BE PROTECTED.
  - POSTS AND CONCRETE PAD IN PAVING AREA TO BE REMOVED.
  - SHOT PUT FACILITIES TO BE REMOVED BY OTHERS.

APPROVAL IS IMPLIED FOR IMPROVEMENTS WITHIN  
 FORT BEND COUNTY BOUNDARIES OF MAY ONLY. UTILITY  
 LINES APPROVED AS TO LOCATION ONLY.  
 AUTHORIZATION IS VALID FOR 1 YEAR.  
 APPROVED: [Signature]  
 DATE: 7/24/14

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 DATE: 7/24/14  
 SIGNATURE: [Signature]

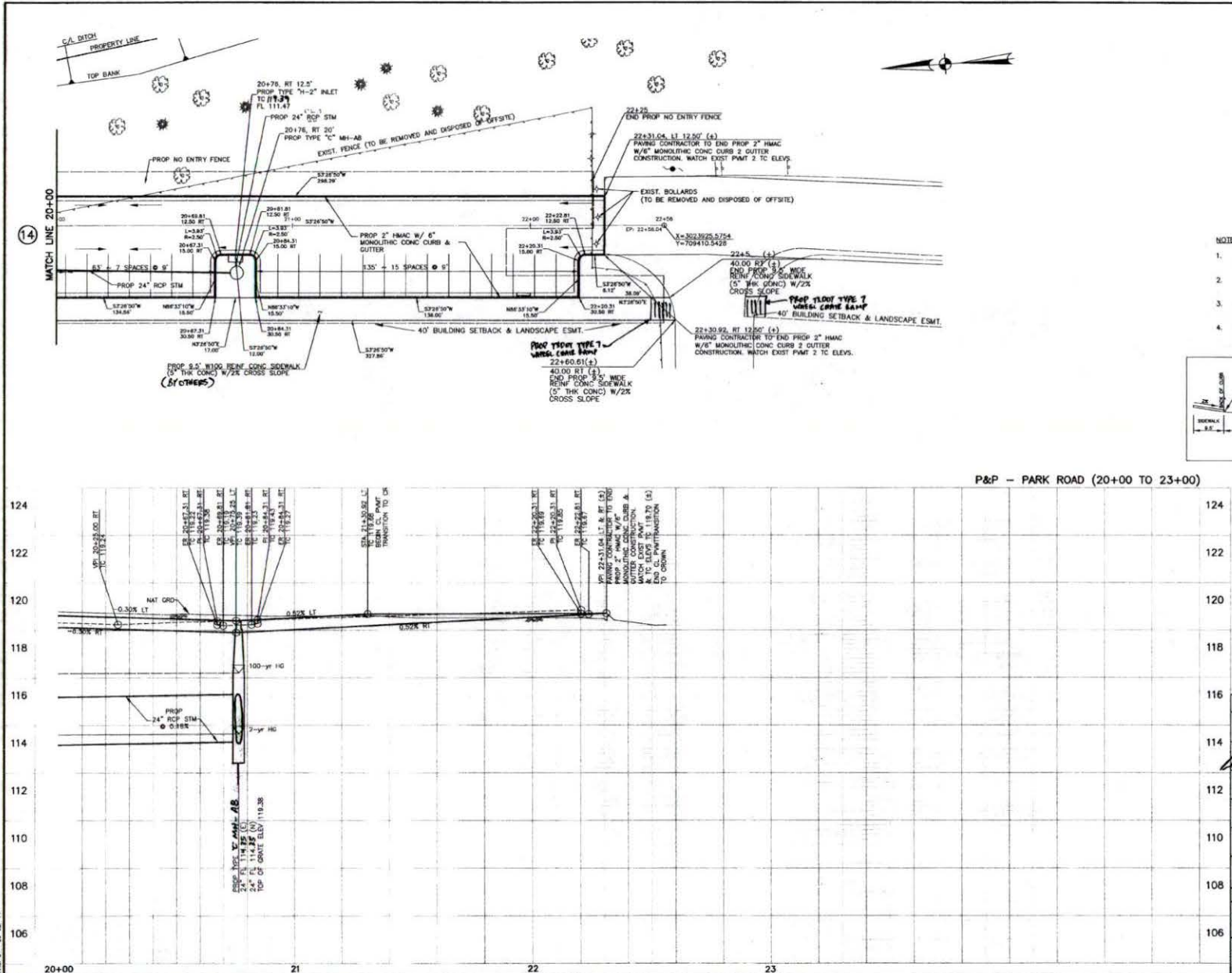
FILE NO:  
**13-1485**  
 DRAWING SCALE:  
 HORIZ : 1" = 30'  
 VERT : 1" = 2'  
 SHEET NO: 13 OF 18



**AECOM**  
 PROJECT NO. A00000001-01, CONTRACT NO. 1  
 KATY ISD PARKING AND DRAINAGE IMPROVEMENTS  
 P&P - PARK ROAD (12+00 TO 16+00)  
 SHEET 13 OF 22



PROJECT: P&P - PARK ROAD (20+00 TO 23+00)  
 DATE: 01/14/14  
 DRAWN BY: J.E.  
 CHECKED BY: J.E.  
 DATE: 01/14/14  
 SCALE: 1" = 20'



**BENCHMARK INFORMATION:**

BM 104-874  
 1/2" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 80' NORTH OF CHASE BANK BLDG.  
 ELEV. 123.81 NAVD 1929 DATUM (1978 ADJUSTMENT)  
 X=3,024,001.43, Y=709,824.33

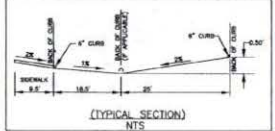
BM 104-872  
 1/2" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 447' WILLIAM FORK DRAINAGE DIST.  
 ELEV. 124.30' NAVD 1929 DATUM (1978 ADJUSTMENT)  
 X=3,023,465.92, Y=710,867.88

BM 104-870  
 1/2" IRON ROD LOCATED ON WEST ROW OF GRADED PARKWAY APPROX. 685' WILLIAM FORK DRAINAGE DIST.  
 X=3,023,128.28, Y=711,404.91

**FLOOD PLAIN:**  
 PROJECT LIES IN UNSHADED ZONE X, THE NEAREST 100 YEAR BASE FLOOD ELEVATION = 28.0 FT. THE INTERSECTION OF WILLIAM FORK DIVERSION CHANNEL AND MASON ROAD AS PER EFFECTIVE FIRM PANEL NO. 48320C02 DATED JANUARY 2, 1987, NAVD 1988 (2001 ADJUSTMENT).

**TO CONVERT FROM NAVD 1988 (2001 ADJUSTMENT) TO NAVD 1929 DATUM (1978 ADJUSTMENT) ADD 0.58'**

- NOTES**
- TREES WITHIN PAVING AREA TO BE REMOVED BY OTHERS.
  - TREES WITHIN 10' OF PROJECT AREA TO BE PROTECTED.
  - POSTS AND CONCRETE PAD IN PAVING AREA TO BE REMOVED.
  - SHOT PUT FACILITIES TO BE REMOVED BY OTHERS.



P&P - PARK ROAD (20+00 TO 23+00)

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

APPROVED: *[Signature]*  
 DATE: 01/14/14

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DESIGNED BY: *[Signature]*  
 DRAWN BY: *[Signature]*  
 DATE: 01/14/14

PROJECT & TITLE: KATY ISD PARKING AND DRAINAGE IMPROVEMENTS  
 SHEET NO.: 15 OF 22



**AECOM**

PROJECT NO. 0008851-4, CONTRACT NO. 1

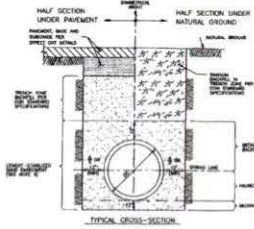
STATE OF TEXAS  
 ROBERT S. WEMYER  
 LICENSE NO. 81888  
 CIVIL ENGINEER

KATY ISD PARKING AND DRAINAGE IMPROVEMENTS  
 P&P - PARK ROAD (20+00 TO 23+00)

PROJECT NO. 0008851-4  
 CAD FILE: KSD-BSE-81  
 DESIGNED BY: J.E.  
 DRAWN BY: J.E.  
 DEPT. CHECK: J.E.  
 FIELD CHECK: J.E.  
 DATE: JANUARY 2013  
 SCALE: 1" = 20'

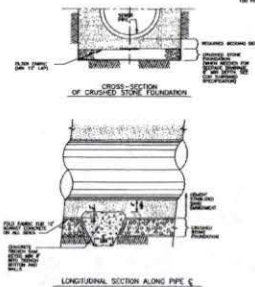
SHEET 15 OF 22

- NOTES**
1. SEE PLAN FOR LOCATION OF THIS DETAIL.
  2. SEE PLAN FOR DIMENSIONS OF THIS DETAIL.
  3. SEE PLAN FOR MATERIALS TO BE USED IN THIS DETAIL.
  4. SEE PLAN FOR FINISHES TO BE USED IN THIS DETAIL.
  5. SEE PLAN FOR TOLERANCES TO BE USED IN THIS DETAIL.
  6. SEE PLAN FOR CONSTRUCTION METHODS TO BE USED IN THIS DETAIL.
  7. SEE PLAN FOR SPECIAL NOTES TO BE USED IN THIS DETAIL.
  8. SEE PLAN FOR OTHER INFORMATION TO BE USED IN THIS DETAIL.

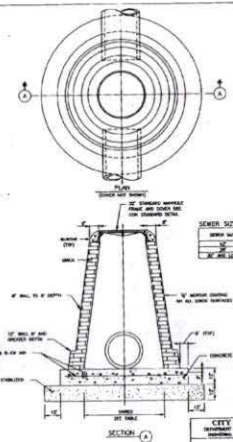


**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 SANITARY OR STORM SEWER  
 SEWER AND INFRASTRUCTURE  
 7301 HWY 290, SUITE 100  
 HOUSTON, TEXAS 77056  
 PROJECT NO. 00000001-01 CONTRACT NO. 02317-01

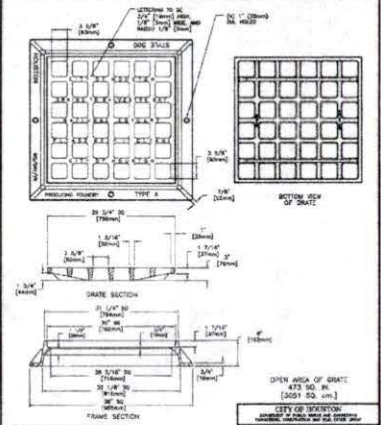
- NOTES**
1. SEE PLAN FOR LOCATION OF THIS DETAIL.
  2. SEE PLAN FOR DIMENSIONS OF THIS DETAIL.
  3. SEE PLAN FOR MATERIALS TO BE USED IN THIS DETAIL.
  4. SEE PLAN FOR FINISHES TO BE USED IN THIS DETAIL.
  5. SEE PLAN FOR TOLERANCES TO BE USED IN THIS DETAIL.
  6. SEE PLAN FOR CONSTRUCTION METHODS TO BE USED IN THIS DETAIL.
  7. SEE PLAN FOR SPECIAL NOTES TO BE USED IN THIS DETAIL.
  8. SEE PLAN FOR OTHER INFORMATION TO BE USED IN THIS DETAIL.



**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 SANITARY OR STORM SEWER  
 CRUSHED STONE FOUNDATION  
 FOR W-8 STABLE BRANCH  
 7301 HWY 290, SUITE 100  
 HOUSTON, TEXAS 77056  
 PROJECT NO. 00000001-01 CONTRACT NO. 02317-02

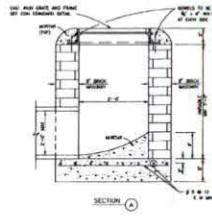
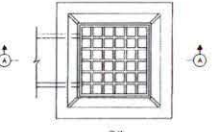


**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 SANITARY OR STORM SEWER  
 STORM SEWER  
 MANHOLE TYPE "C" FOR 48" DIAMETER RCP AND SMALLER  
 SEE PLAN FOR DIMENSIONS  
 7301 HWY 290, SUITE 100  
 HOUSTON, TEXAS 77056  
 PROJECT NO. 00000001-01 CONTRACT NO. 02317-01

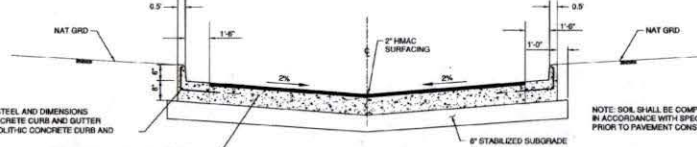


**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 SANITARY OR STORM SEWER  
 STORM SEWER TYPE "A" INLET GRATE AND FRAME  
 7301 HWY 290, SUITE 100  
 HOUSTON, TEXAS 77056  
 PROJECT NO. 00000001-01 CONTRACT NO. 02317-01

- 1) NOTE: APPROXIMATE WEIGHTS:  
 GRATE - 185 LBS (84kg)  
 FRAME - 235 LBS (107kg)  
 UNIT - 420 LBS (190kg)  
 2) MATERIAL - GRAY IRON 20% MIN. CLASS 30  
 3) FINISH TO MEET AASHTO M 198 SPECIFICATION  
 4) LHM V-4880 48" OR APPROVED EQVA.



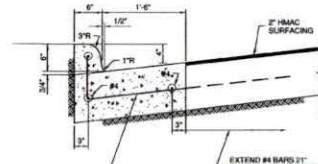
**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
 SANITARY OR STORM SEWER  
 TYPE "A" GRATE INLET  
 7301 HWY 290, SUITE 100  
 HOUSTON, TEXAS 77056  
 PROJECT NO. 00000001-01 CONTRACT NO. 02317-01



FOR REINFORCING STEEL AND DIMENSIONS OF MONOLITHIC CONCRETE CURB AND GUTTER SEE DETAIL OF MONOLITHIC CONCRETE CURB AND GUTTER.

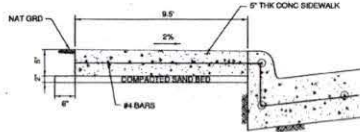
NOTE: SOIL SHALL BE COMPACTED IN ACCORDANCE WITH SPECIFICATIONS PRIOR TO PAVEMENT CONSTRUCTION.

WITH 6" STABILIZED CRUSHED STONE FLEXIBLE BASE OR 6" SEPARATED CRUSHED STONE FLEXIBLE BASE WHERE SPECIFIED AND PLANS TO ACCOMPANY CONSTRUCTION. CURB SHALL HAVE 1" MIN. SLOPE AND 1" MIN. FINISH HEIGHT.



#4 4'-6" LONG WITH 9" RC BARS AT EACH END, SPACED 5'-0" INTO STABILIZED CRUSHED STONE FLEXIBLE BASE.

NOTE: FINISH TO BE ACCOMPLISHED BY FLOATING STEEL THROUWELLING AND THEN BRUSHING. HAND FINISH NOT REQUIRED WHEN CURB AND GUTTER IS POURED BY A MACHINE, BUT CURB WILL HAVE THE SAME OUTSIDE DIMENSIONS, AND HAVE A BRUSHED FINISH.



**SIDEWALK DETAIL**

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

APPROVED: [Signature]  
 DATE: [Date]

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES.

**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

DATE: 01.30.14  
 DESIGNER: [Signature]  
 CHECKER: [Signature]

STATION: 0+00 TO 0+10  
 SHEET NO. 16 OF 18



PROJECT NO. 00000001-01 CONTRACT NO. 02317-01

DATE: [Date]

SCALE: [Scale]

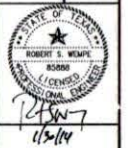
DESIGNED BY: [Name]

DRAWN BY: [Name]

CHECKED BY: [Name]

DATE: [Date]

SCALE: [Scale]



**KATY ISD PARKING AND DRAINAGE IMPROVEMENTS**

MISCELLANEOUS DETAILS SHEET

PROJECT NO. 00000001-01

DATE: 01.30.14

SCALE: 1/8" = 1'-0"

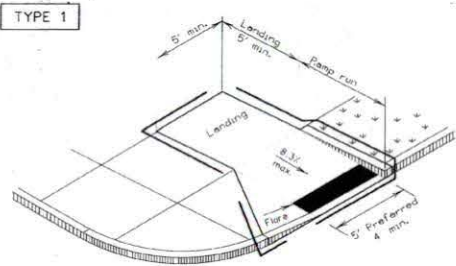
SHEET 16 OF 22

P:\PROJECTS\2014\KATY ISD PARKING AND DRAINAGE IMPROVEMENTS\DWG\KATY ISD PARKING AND DRAINAGE IMPROVEMENTS - 02317-01.dwg  
 LAST DATE: Thursday, January 23, 2014 4:54:13 PM  
 CLOT DATE: Thursday, January 23, 2014 12:50:00 PM  
 DWG NO. 02317-01-01

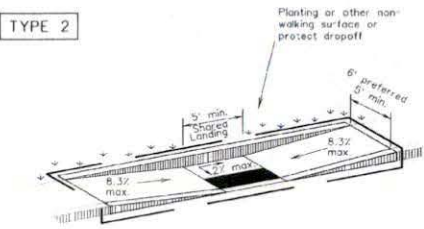




DISCLAIMER: The use of this standard is governed by the Texas Engineering Practices Act. No warranty of any kind is made by the Board of Standards for the use of this standard or for incorrect results or damages resulting from its use.

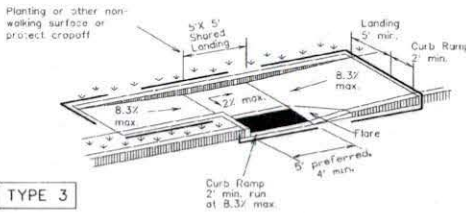


PERPENDICULAR CURB RAMP

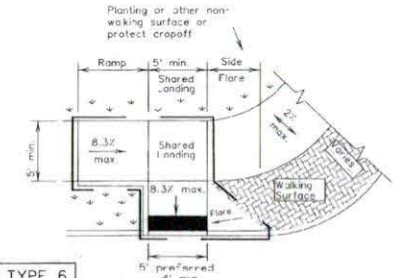


PARALLEL CURB RAMP

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

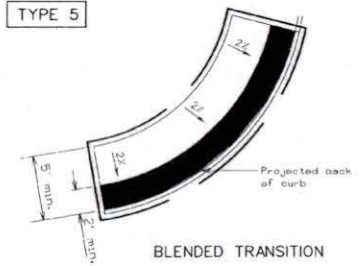


TYPE 3



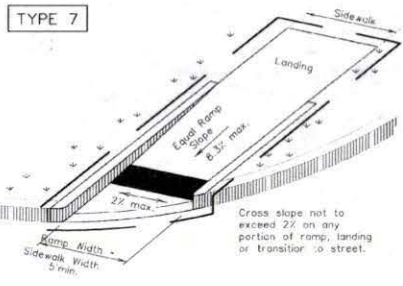
TYPE 6

COMBINATION CURB RAMPS



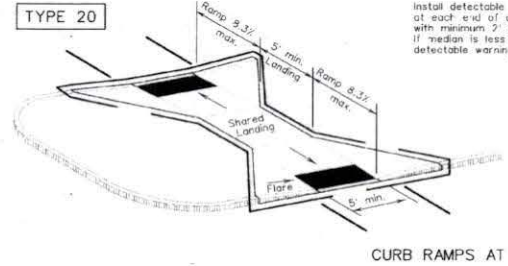
TYPE 5

BLENDED TRANSITION



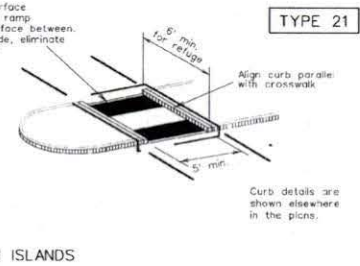
TYPE 7

(Sidewalk set back from curb)

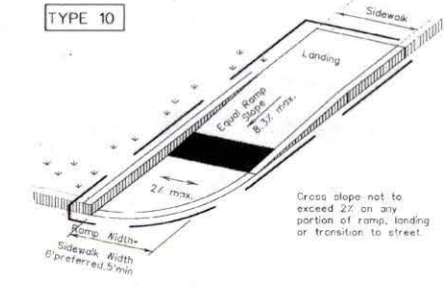


TYPE 20

CURB RAMPS AT MEDIAN ISLANDS



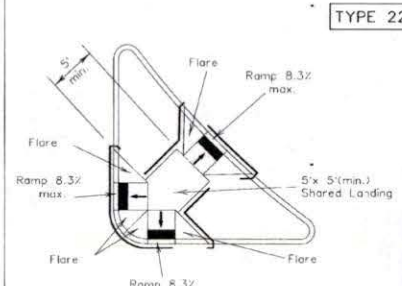
TYPE 21



TYPE 10

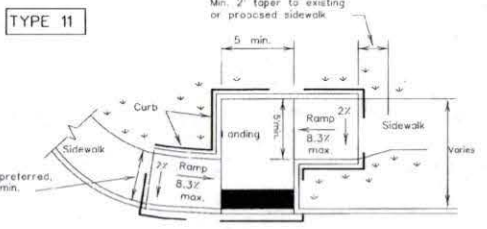
(Sidewalk adjacent to curb)

DIRECTIONAL RAMPS WITHIN RADIUS



TYPE 22

COMBINATION ISLAND RAMPS



TYPE 11

OFFSET PARALLEL CURB RAMP

NOTES / LEGEND:

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

v. v. Denotes planting or non-walking surface not part of pedestrian circulation path.

— Ramp Limits of Payment

■ Detectable Warning Surface

SHEET 1 OF 4



PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

|                    |                |         |           |        |
|--------------------|----------------|---------|-----------|--------|
| FILE: ped12a.dgn   | DW: 1-d01      | OK: RM  | GW: 1-d01 | OK: VP |
| © 2001 March, 2002 | DATE: 12/01    | JOB:    | HIGHWAY   |        |
| REVISIONS:         |                |         |           |        |
| VP June 13, 2012   | DIST:          | COUNTY: | SHEET NO. |        |
|                    | ---FT. BEND--- |         |           | 19     |

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B71-106  
 B71-106  
 B71-106

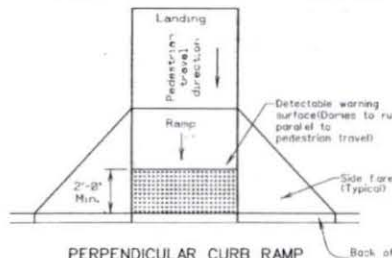
**General Notes**

**Curb Ramps**

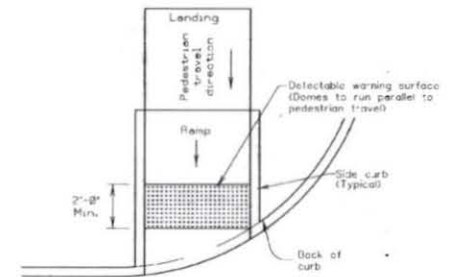
1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Lesser slopes that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. The minimum sidewalk width is 5'. Where the sidewalk 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 at 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 68.182.
9. To serve as a pedestrian refuge area, the median should be a minimum of 5' 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 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**

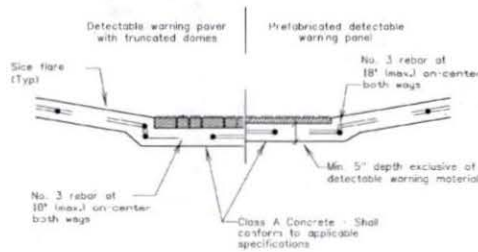
18. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the TAS. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
19. Detectable Warning Materials must meet ICCBI 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.



Typical placement of detectable warning surface on sloping ramp run.



Typical placement of detectable warning surface on sloping ramp run.



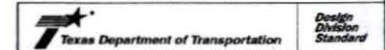
**DETECTABLE WARNINGS**

**Detectable Warning Pavers**

24. Furnish detectable warning paver 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 paver 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. Hand-rail 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.

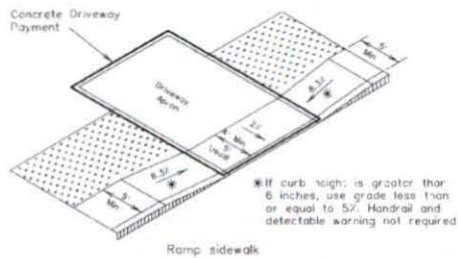
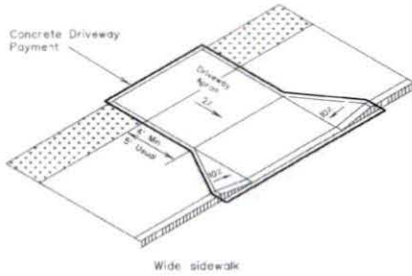
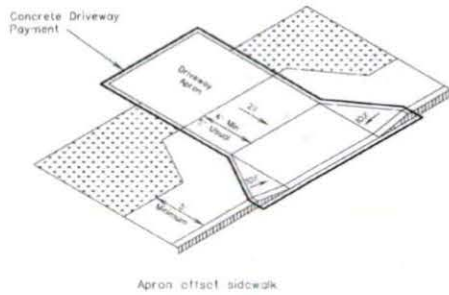
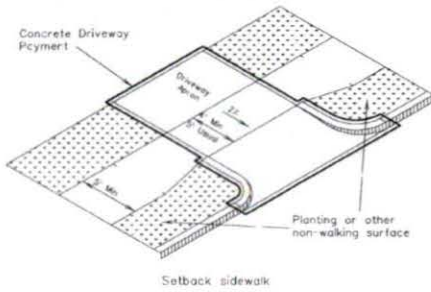


**PEDESTRIAN FACILITIES  
CURB RAMPS**

**PED-12A**

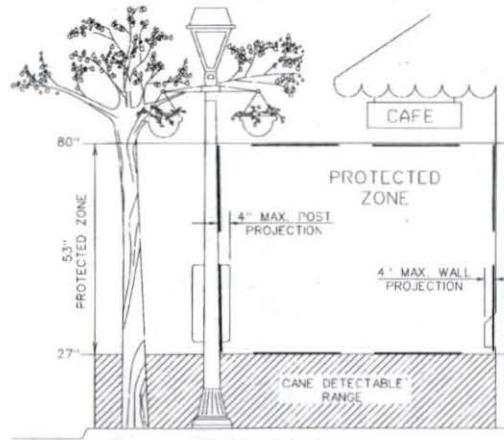
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| FILE: ped12a.dwg   | BY: TADOT | OR: RM      | DATE: TADOT | BY: VP    |
| © TADOT March 2022 | CONST     | SECT        | JOB         | HIGHWAY   |
| REVISIONS          | DATE      | DESCRIPTION | COUNTY      | SHEET NO. |
| VP June 13, 2017   | ---       | ---         | FT BEND     | 20        |

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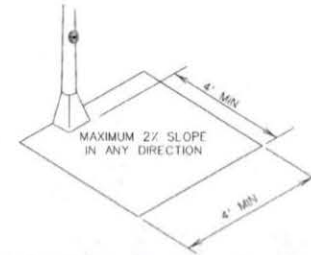
SIDEWALK TREATMENT AT DRIVEWAYS

\* If curb height is greater than 6 inches, use grade less than or equal to 5%. Handrail and detectable warning not required.

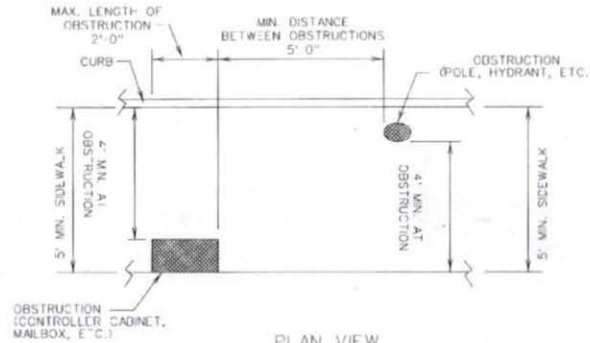


PROTECTED ZONE

In pedestrian circulation area, maximum 4" projection for post or wall mounted objects between 27" and 80" above the surface.



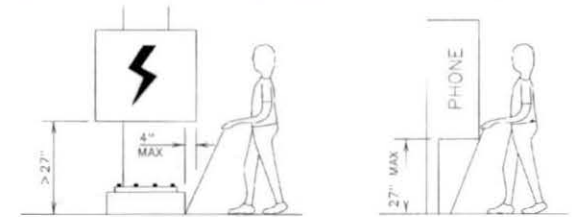
CLEAR GROUND SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



PLAN VIEW

PLACEMENT OF STREET FIXTURES

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



When an obstruction of a height greater than 27" from the surface would create a protrusion of more than 4" into the pedestrian circulation area, construct additional curb or foundation at the bottom to provide a maximum 4" overhang.

Protruding objects of a height > 27" are detectable by cane and do not require additional treatment.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

SHEET 3 OF 4

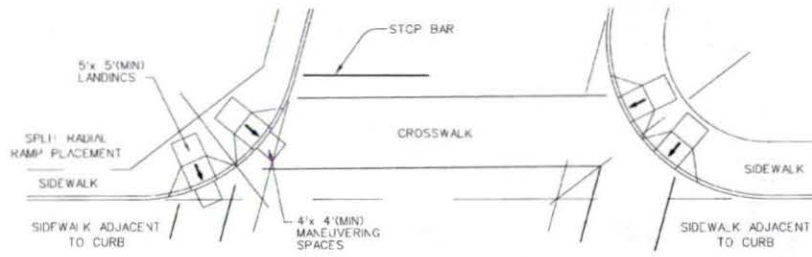


PEDESTRIAN FACILITIES  
CURB RAMPS

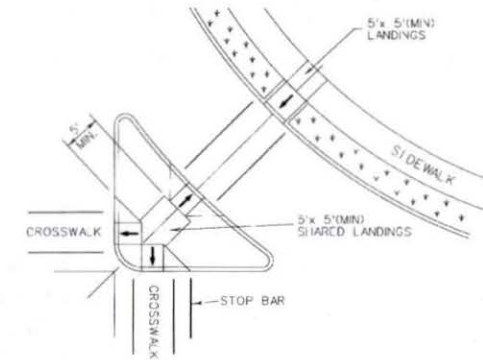
PED-12A

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| © 1401 March, 2002 | DATE: 06/13/02 | BY: TAD01      | NO: VP    |
| VP June 13, 2012   | COUNTY:        | CITY:          | SHEET NO: |
|                    | FT BEND        |                | 21        |

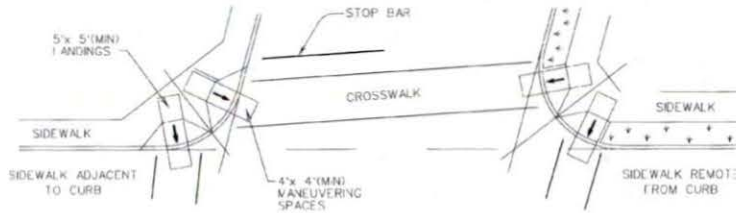
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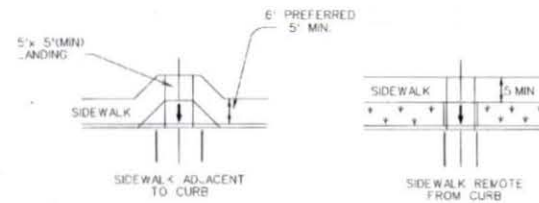
SKewed INTERSECTION WITH "LARGE" RADIUS



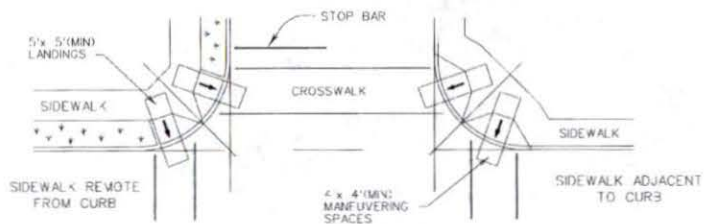
AT INTERSECTION  
W/FREE RIGHT TURN & ISLAND



SKewed INTERSECTION WITH "SMALL" RADIUS



MID-BLOCK PLACEMENT  
PERPENDICULAR RAMPS



NORMAL INTERSECTION WITH "SMALL" RADIUS

TYPICAL CROSSING LAYOUTS

SHEET 4 OF 4



PEDESTRIAN FACILITIES  
CURB RAMPS

PED-12A

|                   |            |            |          |           |
|-------------------|------------|------------|----------|-----------|
| REV: ped12a.dwg   | DATE: 1/00 | BY: JWB    | CHK: JWB | APP: VP   |
| © 1/00            | REVISED    | DATE       | BY       | APP       |
| VP: June 13, 2012 |            | COUNTY     |          | SHEET NO. |
|                   |            | J. J. BEHN |          | 22        |

8/12/08  
 8/12/08  
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