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

REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT

[X] **Right of Way Permit**

[ ] **Commercial Driveway Permit**

Permit No: 2017-12969

Applicant: **Ryan Companies US Inc./Big Red Dog, Inc.**

Job Location Site: **20055 Beechnut Road, Richmond, TX 77407**

Bond No. [redacted] **Date of Bond:** _____ **Amount:** **$5,000.00**

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

Notes:

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

On this 25th day of April, 2017, Upon Motion of Commissioner Meyers, seconded by Commissioner Morales, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Signature

By: Charly O. Ay
for County Engineer

By: N/A
Drainage District Engineer/Manager

Presented to Commissioners Court and approved.

Date Recorded 5-8-2017 Comm. Court No. 13W

Clerk of Commissioners Court

By: Linda Willis
Deputy

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

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

[X] **Right of Way Permit**

[ ] **Commercial Driveway Permit**

Permit No: 2017-12969

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

(1) COMPLETE APPLICATION FORM:

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

[X] b. Vicinity map showing course of directions

[X] c. Plans and specifications

(2) BOND:

[ ]	County Attorney, approval when applicable.		
[ ]	Perpetual bond currently posted.	Bond No:	Amount:
[ ]	Performance bond submitted.	Bond No:	Amount:
[X]	Cashier's Check	Check No: 1026524910	Amount: $5,000.00

(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):

Drainage District Approval

Date

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

Charly O. [illegible]

Permit Administrator

4/18/17

Date

5-3-15
4-25-17

DATE	DOLLARS	CENTS
CURRENCY		
COINS		
TOTAL CASH		
CHECKS		
1 Cashier's	5,000	00
2 Check#		
3 1026524910		
4		
5		
6 Ryan Company		
7 US Inc		
8 Big Red		
9 Dog Inc		
10		
11		
12		
13 Permit #		
14 2017-12469		
15		
16		
17 CCM		
18 4-25-17		
19 # 13N		
20		
21		
22		
23		
24		
25		
26		
27		
28		
TOTAL FROM OTHER SIDE OR ATTACHED LIST		
PLEASE RE-ENTER TOTAL HERE — TOTAL	5,000	00

DEPOSIT TICKET

TOTAL ITEMS

DEPOSITS MAY NOT BE AVAILABLE FOR IMMEDIATE WITHDRAWAL.

88-2265/1131-111

RE-ENTER GRAND TOTAL IN SCREENED BOXES

FORT BEND COUNTY CLERK
REGISTRY FUND
301 JACKSON
RICHMOND, TX 77469

PROSPERITY BANK®
SUGAR LAND BANKING CENTER
14060 SOUTHWEST FREEWAY • SUGAR LAND, TX 77478
281-269-7200 www.prosperitybankusa.com

$ 5000.00

[redacted]

USE ROUTING NUMBER FROM YOUR CHECKS FOR AUTOMATIC PAYMENTS. || CHECKS AND OTHER ITEMS ARE RECEIVED FOR DEPOSIT SUBJECT TO THE PROVISIONS OF THE UNIFORM COMMERCIAL CODE AND ANY APPLICABLE COLLECTION AGREEMENT.

usbank

CASHIER'S CHECK

No. 1026524910

93-38
929

DATE: APRIL 17, 2017

PAY FIVE THOUSAND DOLLARS AND 00 CENTS

$ 5,000.00

TO THE ORDER OF: FORT BEND COUNTY

PURPOSE/REMITTER:

Location: 1026 US Bank Plaza

U.S. Bank National Association
Minneapolis, MN 55480

AUTHORIZED SIGNATURE

Security Features Included Details on Back

[redacted]

Texas CLASS®

PRINT

Order Confirmation

Fort Bend County, Office of County Clerk
301 Jackson Street
Richmond, TX 77469
U.S.A.

TXCLASS

Order Date:	5/8/2017	Order Number:	TXO01695229
Participant Name:	Fort Bend County, Office of County Clerk		
Account Name:	CCM2017-12969 RyanCo/BigRedDog		
Account Number:	TXCLASS [redacted]	Authorized	Linda Willis
Transaction Type:	Contribution		
Transaction Amount:	$5,000.00		
Bank Name:	PROSPERITY BANK		
Bank Account No:	XXXXXXXX-7036		
Payment Type:	ACH		
ABA:	[redacted]		
Payment Instructions:			
Memo:			

Please note you have made an ACH Contribution, these funds will not be available for withdrawal until the following business day.

Email: clientservices@texasclass.com Tel: (800) 707-6242 Fax: (855) 848-9910 www.texasclass.com

DEPOSIT

PERMIT #	**2017-12969**
STYLE:	**Ryan Companies US Inc/Big Red Dog, Inc**
NAME PUT INTO TEXAS CLASS AS:	**CCM2016-9429 Mohle RyanCo/BigRedDog**
TEXAS CLASS ACCOUNT NUMBER	[redacted]
DEPOSIT AMOUNT:	**$5,000.00**
DATE RECEIVED:	**4/25/2017**
DATE TRANSFERRED TO TEXAS CLASS:	**5/8/2017**

SITE DEVELOPMENT CONSTRUCTION PLANS
FOR
INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TX 77407

PROJECT CONTACTS

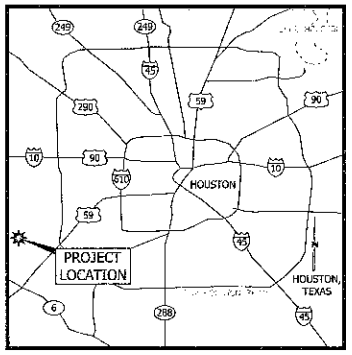
OWNER / DEVELOPER:
ATHLOS ACADEMIES
416 S. 19TH STREET, SUITE 201
BOISE, ID 83702
CONTACT: MATT KOTTER

ARCHITECT:
BRS ARCHITECTS
1010 S. ALLANTE PL.
BOISE, ID 83709
PHONE: (208) 336-8370
CONTACT: CURTIS CRYSTAL

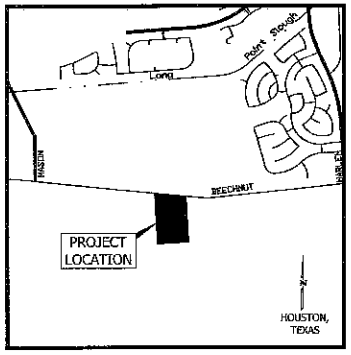
ENGINEER:
BIG RED DOG ENGINEERING | CONSULTING
2500 SUMMER STREET, SUITE 2100
HOUSTON, TX 77019
PHONE: (832) 730-1901
CONTACT: JAMES ROMAN, P.E.

LANDSCAPE ARCHITECT:
STACK WOOD GROUP
404 S. 8TH STREET, SUITE 154
BOISE, ID 83702
PHONE: (208) 345-0500
CONTACT: KILEY R. GARDINER

SURVEYOR:
WINDROSE LAND SURVEYING & PLATTING
3000 WILCREST, SUITE 325
HOUSTON, TX 77042
PHONE: (713) 458-2281
CONTACT:



LOCATION MAP
NOT TO SCALE



VICINITY MAP
SCALE: NTS

KEYMAP NO. 526P
FBCAD ACOUNT #:0171-00-000-0118-907
ZIP CODE NO. 77407

SHEET INDEX

48 HOUR NOTICE:

1. CONTRACTOR SHALL NOTIFY HARRIS COUNTY PRIOR TO COMMENCING CONSTRUCTION AND/OR BACKFILLING ANY UTILITIES. CONTRACTOR(S) TO CONTACT MARC BARGE WITH PUBLIC REVIEW DEPARTMENT AT (713-325-3931).

CAUTION:

CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

THIS PLAN SET HAS BEEN PREPARED FOR PERMITTING ONLY AND IS NOT RELEASED BY BRD FOR CONSTRUCTION. PLEASE CONTACT BRD TO OBTAIN A COPY OF THE ISSUED FOR CONSTRUCTION SET PRIOR TO ANY CONSTRUCTION RELATED ACTIVITIES COMMENCING ON THE SUBJECT SITE.

811
Know what's below.
Call before you dig.

GRAND MISSION MUD NO. 2 ENGINEER DATE
SIGNATURE VALID FOR (1) YEAR

FORT BEND COUNTY ENGINEER

ENGINEER: Richard W. Stolleis, PE, PMP
FVR RICHARD W. STOLLEIS, P.E.

DATE: 1/5/17

THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN (1) YEAR FROM DATE OF APPROVAL.

APPROVED: Maggie Dalton
(DEVELOPMENT COORDINATOR)

DATE: 1/5/17

SITE INFORMATION:

ADDRESS: 20055 BEECHNUT ROAD
RICHMOND, TX 77047

MUD NAME: GRAND MISSION MUD 2
UTILITY PROVIDER: MUNICIPAL DISTRICT SERVICES (UTILITY PHONE #: 281-290-6507)

GENERAL NOTES

1. SURVEYOR BIG RED DOG ENGINEERING | CONSULTING WAS PREPARED WITH INFORMATION CONTAINED IN TITLE COMMITMENT OF NO. 1815784527 OF STEWART TITLE GUARANTY COMPANY, EFFECTIVE DATE OF AUGUST 18, 2016, ISSUED DATE OF SEPTEMBER 07, 2016, AND IS SUBJECT TO THE LIMITATIONS OF THAT COMMITMENT.

2. BEARINGS WERE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (NAD 83). ALL DISTANCES SHOWN HEREON ARE SURFACE DISTANCES AND MAY BE BROUGHT TO GRID BY APPLYING THE FOLLOWING SCALE FACTOR: 0.9998814448.

3. READILY VISIBLE IMPROVEMENTS AND UTILITIES WERE LOCATED WITH THIS SURVEY, NO SUBSURFACE PROBING, EXCAVATION OR EXPLORATION WAS PERFORMED BY WINDROSE LAND SERVICES.

4. ENVIRONMENTAL AND DRAINAGE ISSUES ARE BEYOND THE SCOPE OF THIS SURVEY.

5. THE SQUARE FOOTAGE TOTALS SHOWN HEREON ARE BASED ON THE MATHEMATICAL CLOSURE OF THE COURSES AND DISTANCES REFLECTED ON THE SURVEY. IT DOES NOT INCLUDE THE TOLERANCES THAT MAY BE PRESENT DUE TO THE POSITIONAL ACCURACY OF THE BOUNDARY MONUMENTATION.

6. FENCES SHOWN HEREON WITH DIMENSIONAL TIES ARE SHOWN WHERE THEY ARE PHYSICALLY MEASURED. THE FENCE MAY MEANDER BETWEEN MEASURED LOCATIONS.

LEGAL DESCRIPTION:

A TRACT OR PARCEL CONTAINING 21.30 ACRES OR 927,835 SQUARE FEET OF LAND, BEING OUT OF A CALLED 143.034 ACRE TRACT OF LAND CONVEYED TO SSS DEVELOPMENT, INC. AS RECORDED IN FORT BEND COUNTY CLERKS FILE (F.B.C.C.F.) NO. 2007134085, SITUATED IN THE JOHN FREDERICK SURVEY, ABSTRACT NO. 171, FORT BEND COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS, WITH ALL BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (NAD 83):

FLOODPLAIN:

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), FLOOD INSURANCE RATE MAP (FIRM) FOR FORT BEND COUNTY, TEXAS, MAP NO. 48157C0140L REVISED/DATED APRIL 2, 2014, THE SUBJECT TRACT APPEARS TO LIE WITHIN UNSHADED ZONE "X". THIS DETERMINATION WAS DONE BY GRAPHIC PLOTTING AND IS APPROXIMATE ONLY, AND HAS NOT BEEN FIELD VERIFIED. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASIONS FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF WINDROSE LAND SERVICES.

PUBLISHED ELEVATION - 88.41'

BENCHMARK

HARRIS COUNTY FLOODPLAIN REFERENCE MARK NUMBER 210450, BEING A BRASS DISK STAMPED "210450" LOCATED ON THE WEST SIDE OF HARLEM ROAD ON A CULVERT, APPROX. 0.5 MILES SOUTH OF FM 1093. ELEV. 88.41', NAVD88, 2001 ADJUSTMENT.

TEMPORARY BENCHMARK "A" ELEVATION - 95.20'

BEING LETTERS "USA" ON A FIRE HYDRANT LOCATED ON THE SOUTH SIDE OF BEECHNUT ROAD, APPROX. 100 FEET NORTHWEST FROM THE NORTHEAST CORNER OF THE SUBJECT TRACT AND 8.8 FEET SOUTH OF THE BACK OF CURB. (AS SHOWN HEREON)

TEMPORARY BENCHMARK "B" ELEVATION - 92.37'

BEING LETTERS "USA" ON A FIRE HYDRANT LOCATED ON THE SOUTH SIDE OF BEECHNUT ROAD, APPROX. 100 FEET NORTHWEST FROM THE NORTHEAST CORNER OF THE SUBJECT TRACT AND 8.8 FEET SOUTH OF THE BACK OF CURB. (AS SHOWN HEREON)

LAND USE SUMMARY:

GROSS ACREAGE: 21.30 ACRES
LIMITS OF CONSTRUCTION: ±21.58 ACRES

NOTES:

1. BY THE ACT OF SUBMITTING A BID FOR THE PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS AND SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS AND MATERIAL SUPPLIERS KNOWLEDGE ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.
2. IT IS THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND SUB CONTRACTORS TO FURNISH MATERIALS AND PRODUCTS WHICH ARE ACCEPTABLE TO CITY OF HOUSTON, HARRIS COUNTY, TXDOT, AND TO COMPLETE THE WORK ACCORDING TO THE SPECIFICATIONS OF THESE JURISDICTIONAL AUTHORITIES.
3. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORED INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT THE "CALL BEFORE YOU DIG" SYSTEM @ 811, OR THE OWNER OF EACH INDIVIDUAL UTILITY, FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITY CROSSING PRIOR TO BEGINNING CONSTRUCTION.
4. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
5. CONTRACTOR SHALL RESTORE ALL SIGNS AND PAVEMENT MARKINGS TO EXISTING CONDITIONS FOLLOWING THE COMPLETION OF EACH PHASE OF CONSTRUCTION. CONTRACTORS SHALL REFER TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) FOR SIGN AND MARKING DIMENSIONS AND COLORS.
6. AN EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED IN THIS PLAN SET. A SWPPP HAS ALSO BEEN PREPARED. BOTH DOCUMENTS MUST BE UTILIZED AND ADHERED TO BY THE CONTRACTOR(S) DURING CONSTRUCTION.

NO.	DATE	REVISION
1	11/14/2016	RESUBM TRAC. FOR AGENCY REVIEW
2	11/22/2016	INTERNAL TWT
3	12/20/2016	AND COMMENTS
4	1/5/2017	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
5	2/10/2017	RESUBM TRAC. TO FORT BEND COUNTY FOR FINAL APPROVAL

WWW.BIGREDDOG.COM
TEXAS REG. NO. F-11201
832.730.1901
BIG RED DOG
ENGINEERING | CONSULTING
2500 SUMMER STREET, SUITE 2100 HOUSTON, TEXAS 77007
TEXAS REG. NO. F-11201

JAMES S. ROMAN
117768
LICENSED
PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

COVER SHEET

SHEET
C001
1 OF 33

GENERAL CONSTRUCTION NOTES (OUTSIDE CITY LIMITS) 01-07-2013:

1. CONSTRUCT WASTEWATER COLLECTION SYSTEMS, WATER LINES AND STORM DRAINAGE IN ACCORDANCE WITH THE LATEST EDITION OF THE PUBLICATIONS STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE AND STREET PAVING, AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING PUBLISHED BY THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING.
2. UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION. CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS IN THE FIELD PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL NOTIFY TEXAS ONE CALL AT 713-223-4567/811 OR 800-344-8377 AND LONE STAR NOTIFICATION CENTER AT 800-669-8344 AT LEAST 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING WATER, WASTEWATER, STORM WATER LINES AND TRAFFIC CONTROL DEVICES. DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE CITY OF HOUSTON, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING'S STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEM, WATER LINES, STORM DRAINAGE, AND STREET PAVING AND STANDARD CONSTRUCTION DETAILS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, AND STREET PAVING, REFERENCED ABOVE, AT NO ADDITIONAL COST.
4. CONTRACTOR SHALL NOTIFY THE OFFICE OF THE CITY ENGINEER, DEPARTMENT OF PUBLIC WORKS AND ENGINEERING IN WRITING PRIOR TO COMMENCING CONSTRUCTION.
5. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER.
6. CONTRACTOR SHALL COMPLY WITH LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF TEXAS LAWS CONCERNING EXCAVATION.

SANITARY SEWER NOTES:

1. ALL SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARD CONSTRUCTION SPECIFICATIONS FOR WASTEWATER COLLECTION SYSTEMS, WATER LINES, STORM DRAINAGE, STREET PAVING, AND TRAFFIC AND ALL CURRENT AMENDMENTS THERETO AND BE SUBJECT TO A STANDARD EXFILTRATION TEST. TESTS ARE TO BE PERFORMED ON THE TOTAL FOOTAGE OF SEWER LINE INCLUDED IN THE PROJECT. REQUIREMENTS OF TEXAS ADMINISTRATIVE CODE, TITLE 30 CHAPTER 317, DESIGN CRITERIA FOR SEWERAGE SYSTEMS SHALL GOVERN WHERE CONFLICTS EXIST EXCEPT WHERE CITY REQUIREMENTS ARE MORE STRINGENT.
2. ALL MANHOLES ARE TO BE PER CITY OF HOUSTON STANDARD DETAILS DRAWING NUMBERS 02082-01, 02082-02, 02082N-02, 02082-03, AND 02082N-03 UNLESS OTHERWISE NOTED. USE 2010 VERSION AS APPLICABLE.
3. SANITARY SEWER MANHOLES WILL HAVE BEDDING AND BACKFILL PER CITY OF HOUSTON STANDARD DETAILS DRAWING NO. 02317-08 UNLESS OTHERWISE NOTED.
4. SANITARY SEWER PIPE 6" AND SMALLER SHALL BE SCHEDULE 40 PVC. SANITARY SEWER PIPE 8" AND LARGER SHALL BE SDR-26 PVC.
5. ALL SDR-26 PVC PIPE SHALL MEET ASTM SPECIFICATION D3034 AND USE 'FULL BODIED' SDR-26 PVC FITTINGS WITH APPROPRIATE ADAPTERS AND SHALL HAVE A CELL CLASSIFICATION OF 12364-B AS DEFINED IN ASTM D-1784 AND SHALL HAVE DIP SIZE OD AND RUBBER GASKET BELL-AND-SPIGOT TYPE JOINT ENDS, UNLESS OTHERWISE NOTED.
6. AWWA C-900 DR-18 PVC PIPE USES EITHER AWWA C900 DR-18 PVC FITTINGS OR DIP FITTINGS.
7. ALL SANITARY SEWER LINES UNDER PROPOSED OR FUTURE PAVEMENT AND TO A POINT ONE (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL HAVE BEDDING PER CITY OF HOUSTON STANDARD DETAILS DRAWING NUMBERS 02317-01, 02317-02, OR 02317-03 AS APPLICABLE, WITH 1 ½ SACK CEMENT/CY STABILIZED SAND BACKFILL UP TO THE BOTTOM OF THE PAVEMENT SUBGRADE. 100 PSI PERFORMANCE RESULTS ARE STILL REQUIRED.
8. ALL SANITARY SEWERS CROSSING WATER LINES WITH A CLEARANCE BETWEEN 12 INCHES AND 9 FEET SHALL HAVE A MINIMUM OF ONE 18' JOINT OF 150 PSI DUCTILE IRON OR (GREEN) C900 PVC PIPE MEETING ASTM SPECIFICATION D2241 CENTERED ON WATER LINE. WHEN WATER LINE IS BELOW SANITARY SEWER PROVIDE MINIMUM 2 FOOT SEPARATION.
9. CONTRACTOR SHALL PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF 9' FEET BETWEEN WATER LINES AND SANITARY SEWER MANHOLES AND LINES.
10. SANITARY SEWER MANHOLE RIMS OUTSIDE OF PROPOSED PAVING WILL BE SET 3" - 6" ABOVE THE SURROUNDING LEVEL FINISHED GRADE AFTER PAVING WITH SLOPED BACKFILL ADDED FOR STORM WATER TO DRAIN AWAY FROM MANHOLE RIM.
11. IN WET STABLE TRENCH AREAS USE BEDDING PER CITY OF HOUSTON STANDARD DETAILS DRAWING NUMBER 02317-02 (2002).
12. DEFLECTION TEST: DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE AND SEMI-RIGID SEWER PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF 5% IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED AS PER 30 TAC 317.2 LATEST AMENDMENT AND WITHOUT MECHANICAL PULLING DEVICES. NO BALL-TYPE MANDREL IS ALLOWED.
13. INFILTRATION, EXFILTRATION OR LOW-PRESSURE AIR TEST: EITHER OF THE FOLLOWING TESTS SHALL BE PERFORMED AS PER TAC, TITLE 30 317.2 WITHIN THE SPECIFIED TOLERANCES ON ALL GRAVITY SEWERS.
    - A. INFILTRATION OR EXFILTRATION TEST: TOTAL LEAKAGE AS DETERMINED BY A HYDROSTATIC HEAD TEST SHALL NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO (2) FEET.
    - B. LOW-PRESSURE AIR TEST: PERFORM TEST ACCORDING TO UNI-B-6-90 OR OTHER APPROPRIATE PROCEDURES. FOR SECTIONS OF PIPE LESS THAN 36" (INCH) AVERAGE INSIDE DIAMETER, THE MINIMUM ALLOWABLE TIME FOR PRESSURE DROP FROM 3.5 P.S.I.G. TO 2.5 P.S.I.G. SHALL BE AS FOLLOWS:

      6" 340 SECONDS OR 0.855(L) FOR TEST LENGTHS GREATER THAN 398'

      8" 454 SECONDS OR 1.520(L) FOR TEST LENGTHS GREATER THAN 298'

      10" 567 SECONDS OR 2.374(L) FOR TEST LENGTHS GREATER THAN 239'

      15" 850 SECONDS OR 5.342(L) FOR TEST LENGTHS GREATER THAN 159'

      18" 1020 SECONDS OR 7.693(L) FOR TEST LENGTHS GREATER THAN 133'

      WHERE L = LENGTH OF LINE OF SAME PIPE SIZE IN FEET.
14. "SAN. S. E." INDICATES "SANITARY SEWER EASEMENT"
15. FOR SANITARY MANHOLE (MH) RIMS SET INSIDE OF OR @ CURB & GUTTER PAVEMENT AND/OR BELOW T.C., MH RIMS WILL BE SET FLUSHED WITH AN ABUTTING PAVED SURFACE. THE (VALCON, NEENAH OR EQUAL) HEAVY DUTY BOLTED SOLID MH COVER SHALL BE PROPERLY (AND SECURELY) ATTACHED AND SEALED TO ITS COMPATIBLE GASKETED FRAME BY USING BOTH A NEOPRENE GASKET AND (AT LEAST) 4 COUNTER-SUNK HEX-HEAD COARSE THREADED ½"-13 UNC STAINLESS STEEL BOLTS. THE HEAVY DUTY FRAME MH COVER SHALL BE SOLID (NO AIR HOLES). SAID FRAME SHALL BE BOTH EMBEDDED INTO THE MH'S TOP ALSO SECURELY ANCHORED TO THE UNDERLYING MH STRUCTURE WITH EITHER SECURELY ATTACHED EMBEDDED ANCHOR BOLTS OR THE CONCRETE MH'S EXPOSED REBARS WELDED TO THE FRAME OR OTHER EQUALLY SECURED METHODS TO PREVENT MH COVER/FRAME BLOW-OFFS/EJECTIONS.

GRADING NOTES:

1) GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.

2) BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.

3) CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS AND NO PONDING IN PAVED AREAS, AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.

4) CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.

5) ALL EXISTING CONCRETE PAVING, SIDEWALK, AND CURB DEMOLITION SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. DISPOSAL SHALL BE AT AN APPROVED OFF SITE, LAWFUL LOCATION, UNLESS DIRECTED OTHERWISE BY THE OWNER.

WATER LINE NOTES:

1) WATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST CITY OF HOUSTON INFRASTRUCTURE DESIGN MANUAL, STANDARD SPECIFICATION, AND CONSTRUCTION DETAILS.

2) 4" THRU 12" WATER LINES SHALL BE P.V.C. CLASS 150, DR-18, AWWA C-900 AND 1" THRU 3" WATER LINES SHALL BE PVC SCHEDULE 40. 4" THRU 54" D.I.P. WATER LINES SHALL BE AWWA C151 (ANSI A21.51) AND DOUBLE WRAPPED IN 8-MIL POLYETHYLENE. PIPE SHALL BE LINED IN ACCORDANCE WITH AWWA C104 (ANSI A21.4).

3) CONCRETE THRUST BLOCKS SHALL BE PROVIDED AS NECESSARY TO PREVENT PIPE MOVEMENT. USE RESTRAINED JOINTS WHERE PREVENTING MOVEMENT OF 16" OR GREATER PIPE IS NECESSARY DUE TO THRUST.

4) ALL WATER LINES UNDER PROPOSED OR FUTURE PAVING AND TO A POINT OF ONE (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE ENCASED IN BANK SAND TO 12" OVER PIPE AND BACKFILLED WITH CEMENT STABILIZED SAND TO WITHIN ONE (1) FOOT OF SUBGRADE.

5) ALL WATER LINE AND SEWER LINE CROSSINGS SHALL BE CONSTRUCTED PER CITY OF HOUSTON AND TCEQ REGULATIONS.

6) ALL WATER VALVES SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C-500 AND SHALL BE OF THE RESILIENT SEAT TYPE.

7) ALL WATER LINES TO BE DISINFECTED IN CONFORMANCE WITH AWWA C-651 AND THE TEXAS STATE DEPARTMENT OF HEALTH. AT LEAST ONE BACTERIOLOGICAL SAMPLE SHALL BE COLLECTED FOR EVERY 1,000 LINEAR FEET OF WATER LINE AND SHALL BE REPEATED IF CONTAMINATION PERSISTS.

8) ALL BELOW GRADE VALVES SHALL BE GASKETED, HUB-END GATE VALVES WITH A CAST IRON BOX, EXCEPT WHERE FLANGES ARE CALLED OUT ON THE PLANS.

9) 4" THRU 12" FITTINGS SHALL BE CEMENT MORTAR LINED COMPACT DUCTILE IRON PRESSURE FITTINGS PER ANSI A21.53, OR PUSH ON FITTINGS PER ANSI A21.10 PRESSURE RATED AT 250 PSIG.

10) HYDROSTATIC TESTING: ALL WATER PIPE SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH THE LATEST CITY OF HOUSTON STANDARD CONSTRUCTION SPECIFICATIONS. TESTS ARE TO BE PERFORMED ON THE ENTIRE FOOTAGE OF WATER PIPE LINE INCLUDED IN THE PROJECT.

11) ALL WATER LINES TO HAVE 4' MINIMUM COVER TO FINISHED GRADE AND MINIMUM 12" CLEARANCE TO OTHER UTILITIES AT CROSSING UNLESS OTHERWISE NOTED ON PLANS. ALL WATER LINE INSTALLED OVER 8' DEEP SHALL UTILIZE RESTRAINED JOINT FITTINGS.

12) CONTRACTOR SHALL KEEP WATER PIPE CLEAN AND CAPPED (OR OTHERWISE EFFECTIVELY COVERED) OPEN PIPE ENDS TO EXCLUDE INSECTS, ANIMALS OR OTHER SOURCES OF CONTAMINATION FROM UNFINISHED PIPE LINES AT TIMES WHEN CONSTRUCTION IS NOT IN PROGRESS.

STORM SEWER NOTES:

1. STORM SEWER WITHIN R.O.W. SHALL BE REINFORCED CONCRETE PIPE (C-76, CLASS III), AND SHALL BE INSTALLED, BEDDED, AND BACK FILLED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARD DETAILS DRAWING NOS. 02317-02, 02317-3, 02317-05, 02317-06, AND 02317-07 (OCT. 2002) AS APPLICABLE UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
2. ALL STORM SEWER CONSTRUCTED IN SIDE LOT EASEMENT SHALL BE AS NOTED ON PLANS AND SHALL BE EMBEDDED IN ACCORDANCE WITH THE CITY OF HOUSTON STANDARD DETAILS DRAWING NOS. 02317-02, 02317-03, 02317-05, 02317-06, AND 02317-07 AS APPLICABLE.
3. ALL SEWER UNDER PROPOSED OR FUTURE PAVEMENT AND TO A POINT ONE (1) FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE BACKFILLED WITH 1-1/2 SACK CEMENT/C.Y. STABLIZED SAND TO WITHIN ONE (1) FOOT OF SUBGRADE. THE REMAINING DEPTH OF TRENCH SHALL BE BACKFILLED WITH SUITABLE EARTH MATERIAL.
4. ALL TRENCH BACKFILL SHALL BE IN 8" LIFTS, WITH TESTS TAKEN AT 100 FOOT INTERVALS IN EACH LIFT, AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASHTO T99).
5. CIRCULAR AND ELLIPTICAL REINFORCED CONCRETE PIPE SHALL BE INSTALLED USING RUBBER GASKET JOINT CONFORMING TO ASTM C443 AND ASTM C877 RESPECTIVELY.
6. ALL STORM SEWER PIPES AND INLET LEADS SHALL BE 24" AND LARGER R.C.P. (C-76, CLASSIII).
7. ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES AND INLET LEADS ARE TO BE PLUGGED WITH 6" BRICK WALLS UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL PROVIDE 12" MINIMUM VERTICLE CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.
9. ADJUST MANHOLE COVERS TO GRADE CONFORMING TO REQUIREMENTS OF SECTION 02086-ADJUSTING MANHOLES, INLETS, AND VALVE BOXES TO GRADE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACK SLOPE DRAINAGE SYSTEM DISTURBED AS A RESULT OF THIS WORK.
11. ALL DITCHES SHALL BE GRADED TO PROPOSED ELEVATIONS TO ENSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED. ALL DISTURBED AREA SHALL BE REGRADED, SEEDED, AND FERTILIZED.
12. ALL DRIVEWAYS SHALL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURE.

GRADING AND PAVING CONSTRUCTION NOTES (PRIVATE FACILITIES):

1. PROJECT AREA TO BE STRIPPED OF TOP SOIL TO DEPTH AS INDICATED BY SOILS ENGINEER (APPROXIMATELY 36 INCHES). TOP SOIL RUBBISH, DEBRIS, AND OTHER OBJECTIONABLE MATERIAL TO BE DISPOSED OF OFF PROJECT SITE BY CONTRACTOR.
2. PAVING AND EARTHWORK MATERIALS AND PROCEDURES SHALL BE IN CONFORMANCE WITH THE SOILS REPORT, PROJECT SPECIFICATIONS, AND DETAILS IN ARCHITECTURAL PLANS.
3. CONTRACTOR SHALL CUT AND FILL SITE AS REQUIRED TO OBTAIN FINISHED ELEVATIONS SHOWN ON PLANS. COMPACT SELECT BACKFILL MATERIAL TO 95% STANDARD PROCTOR DENSITY AS PER ASTM D-698 AND IN CONFORMANCE WITH SOILS REPORT REQUIREMENTS. MAXIMUM SIDE SLOPES TO BE 3:1. ALL REQUIREMENTS OF PROJECT SPECIFICATIONS FOR EARTHWORK SHALL BE MET.
4. CONTRACTOR TO PROVIDE TEMPORARY MEASURES TO CONTROL STORM WATER RUN-OFF DURING CONSTRUCTION AS REQUIRED TO MINIMIZE EROSION AND TO MEET TPDES REQUIREMENTS.
5. SEE SITE ELECTRICAL AND PLUMBING FOR POWER, GAS AND TELEPHONE CONDUIT DETAILS AND ALIGNMENT.
6. DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TXDOT DETAILS & SPECIFICATIONS.
7. WHERE PROPOSED PAVEMENT IS TO BE CONSTRUCTED IN PUBLIC EASEMENTS, CONSTRUCTION JOINTS SHALL BE PLACED ALONG THE ENTIRE EASEMENT LINE OF THE ENCROACHMENT AND TRANSVERSE THE EASEMENT AT LEAST EVERY 10-FEET. MANHOLES, CLEANOUTS, VALVE BOXES, ETC., SHALL BE ADJUSTED TO FINISH GRADE. SAW CUTS ARE AN ACCEPTABLE ALTERNATIVE TO CONSTRUCTION JOINTS.
8. MAXIMUM CROSS SLOPES FOR SIDEWALKS AND A.D.A. ACCESS ROUTES SHALL NOT EXCEED 2.0%. RAMP SLOPES SHALL NOT EXCEED 1-INCH PER FOOT (8.33%). MAXIMUM SLOPES FOR HANDICAP PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0% IN ANY DIRECTION. SEE ARCHITECTURAL AND SITE PLAN DRAWINGS FOR A.D.A. RAMP AND SIGNAGE DETAILS.

GENERAL CONSTRUCTION NOTES:

1. THESE NOTES APPLY TO UTILITIES CONSTRUCTION INCLUDED IN THIS CONTRACT, INCLUDING WATERLINE FACILITIES, SANITARY SEWER FACILITIES, STORM SEWER AND OPEN CHANNEL DRAINAGE FACILITIES AND INCIDENTAL WORK ASSOCIATED WITH THOSE FACILITIES.
2. CONTRACTOR SHALL NOTIFY THE "UNDERGROUND UTILITY COORDINATING COMMITTEE" (TELEPHONE NO. 713-223-4567 OR 800-669-8344), "TEXAS ONE CALL" (TELEPHONE NO. 800-245-4545) AND THOSE ORGANIZATIONS INDICATED IN NOTE 18 BELOW, TWO (2) WORKING DAYS BEFORE STARTING WORK IN STREET RIGHTS-OF-WAY OR EASEMENTS.
3. CONTRACTOR SHALL CONSTRUCT ALL GRAVITY SEWER LINES COMMENCING AT THE LOWEST GRADE ELEVATION AND PROCEED IN THE UPSTREAM DIRECTION. CONTRACTOR SHALL VERIFY CLEARANCES WITH ALL UNDERGROUND OBSTRUCTIONS BEFORE LAYING PIPE.
4. LOCATIONS OF EXISTING UTILITIES FOR WATERLINE, STORM SEWERS, SANITARY SEWERS, GAS LINES AND UNDERGROUND TELEPHONE CABLE AND POWER LINES ARE APPROXIMATE AND ARE BASED UPON INFORMATION OBTAINED FROM SURVEY & UTILITY MAPS.
5. CONTRACTOR SHALL VERIFY THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION AND SHALL REPORT DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
6. CONTRACTOR SHALL PROTECT ALL EXISTING FACILITIES, PROPERTY, AND UNDERGROUND UTILITIES, AND SHALL REPAIR ANY DAMAGE TO THE SATISFACTION OF THE INJURED PARTY AT NO ADDITIONAL COST TO THE OWNER.
7. ALL MATERIALS FOR PROPOSED CONSTRUCTION OR REPAIR OF EXISTING FACILITIES SHALL BE NEW PRODUCTS DIRECT FROM THE FACTORY AND FREE FROM DEFECTS.
8. PROVIDE ALL TEST PLUGS, RISERS, GAUGES, GAUGE CALIBRATION DEVICES, TEST PUMPS AND COMPRESSORS AS NECESSARY TO MAKE TESTS (NO SEPARATE PAY).
9. WASTE MATERIALS INCLUDING PAVEMENT REMOVED DURING CONSTRUCTION, WASTE PIPING AND SUPPLIES, CONSTRUCTION DEBRIS AND EXCESS EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR AT NO SEPARATE PAY UNLESS OTHERWISE NOTED.
10. PROVIDE TEMPORARY DRAINAGE FACILITIES TO DIRECT SURFACE DRAINAGE AWAY FROM TRENCHES AND TOWARDS OFF SITE DRAINAGE FACILITIES. PREVENT WATER FROM PONDING ON SITE AND DO NOT BLOCK DRAINAGE FROM OR DIRECT EXCESS DRAINAGE ON TO ADJACENT PROPERTY.
11. EXCAVATE ALL TRENCHES EVENLY TO LINE AND GRADE SHOWN.
12. CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING EXCAVATION, TRENCHING AND SHORING AS SPECIFIED IN CITY OF HOUSTON ORDINANCE #87-1457.
13. KEEP TRENCH DRY AT ALL TIMES. PROVIDE AUTOMATIC OR CONTINUOUS TRENCH PUMPS, AND WELL POINTS, IF NECESSARY TO OBTAIN DRY BEDDING CONDITIONS (NO EXTRA PAY).
14. KEEP TRENCHES, PIPE BEDDING AND BACKFILL FREE OF DEBRIS.
15. OVERHEAD ELECTRIC POWER LINES MAY EXIST ON THE PROPERTY. CENTERPOINT ELECTRIC HAS NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT THE CONTRACTOR SHALL LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES, AND OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN TEN (10) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ELECTRIC AT 713-207-2222.
16. LOCATIONS OF CENTERPOINT ENERGY GAS MAIN LINES (TO INCLUDE UNIT GAS TRANSMISSION, AND/OR INDUSTRIAL GAS SUPPLY CORPORATION WHERE APPLICABLE) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. CENTERPOINT ENERGY'S SIGNATURE ON THESE PLANS ONLY INDICATES THAT THEIR FACILITIES ARE SHOWN IN AN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 713-223-4567 OR 1-800-669-8344 A MINIMUM OF TWO WORKING DAYS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.
    - A. WHEN CENTERPOINT GAS PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713) 967-8037 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
    - B. WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT GAS FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
    - C. WHEN CENTERPOINT GAS FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.

    THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.
17. THE LOCATIONS OF AT&T TEXAS/SWBT FACILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.

THE CONTRACTOR SHALL CALL 1-800-344-8377, A MINIMUM OF FORTY-EIGHT (48) PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED.

WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18-IN.) OF THE INDICATED LOCATION OF AT&T TEXAS/SWBT FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE AT&T TEXAS/SWBT FACILITIES.

WHEN AT&T TEXAS/SWBT FACILITIES ARE EXPOSED, THE CONTRACTOR SHALL PROVIDE SUPPORT TO PREVENT DAMAGE TO THE CONDUIT DUCTS OR CABLES. WHEN EXCAVATING NEAR TELEPHONE POLES, THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT.

THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWBT UNDERGROUND CONDUIT FACILITIES OR BURIED CABLE FACILITIES SHOWN ON THESE PLANS DOES NOT MEAN THAT THERE ARE NO DIRECT BURIED CABLES OR OTHER CABLES IN CONDUIT IN THE AREA.

PLEASE CONTACT THE AT&T TEXAS DAMAGE PREVENTION MANAGER MR. ROOSEVELT LEE JR. AT 713-567-4552 OR EMAIL HIM AT RL7259@ATT.COM, IF THERE ARE QUESTIONS ABOUT BORING OR EXCAVATING NEAR OUR AT&T TEXAS/SWBT FACILITIES.

18. CONTRACTOR SHALL GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, AND PERSONS IN CHARGE OF PUBLIC AND PRIVATE UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO STARTING WORK.
19. CONTRACTOR SHALL HAVE A COPY OF ALL DRIVEWAY PERMITS ON SITE AT ALL TIMES DURING CONSTRUCTION OF DRIVES AND DRIVEWAY CULVERTS.
20. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.

GENERAL CONSTRUCTION NOTES (CONT'D):

21. CONTRACTOR SHALL FURNISH AND INSTALL A PROJECT SIGN AT THE PROJECT SITE ON WHICH THE CONTRACTOR WILL POST AND MAINTAIN THE NOTICE OF INTENT (NOI) FOR THE STORM WATER POLLUTION PREVENTION PLAN IN A CLEAR, ALL-WEATHER ENCLOSURE/CONTAINER. CONTRACTOR MAY MAINTAIN OTHER INFORMATION SUCH AS PROJECT PERMITS, INSURANCE INFORMATION, ET CETERA, AT HIS DISCRETION AND SUBJECT TO THE OWNER'S APPROVAL. CONTRACTOR SHALL PREPARE AND SUBMIT FABRICATION SHOP DRAWINGS AND A DESCRIPTION OF THE PROPOSED LOCATION TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLING THE SIGN. THE SIGN SHALL BE INSTALLED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY. NO PAY REQUESTS SHALL BE APPROVED FOR PAYMENT UNTIL SUCH TIME AS AN ACCEPTABLE PROJECT SIGN WITH NOI IS INSTALLED AT AN ACCEPTABLE LOCATION. CONTRACTOR SHALL MAINTAIN THE SIGN AND NOI IN GOOD CONDITION THROUGHOUT THE DURATION OF THE CONTRACT AT NO ADDITIONAL COST TO OWNER.

SEQUENCE OF CONSTRUCTION:

1. LOCATE ALL EXISTING UTILITIES IN THE FIELD PRIOR TO SITE CLEARING.
2. INSTALL EROSION CONTROLS PER APPROVED PLAN.
3. BEGIN SITE CLEARING. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING.
4. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR SHALL REFER TO SWPPP DOCUMENT FOR GUIDANCE.
5. ROUGH-CUT PONDS, PARKING AREAS, BUILDING AREAS AND UTILITY CUTS AS REQUIRED PER PLAN.
6. FURNISH PONDS, CONSTRUCT UTILITIES, BUILDING AND PARKING AREAS PER PLAN.
7. PERMANENT CONTROLS WILL BE CLEANED OUT AND FILTER MEDIA WILL BE INSTALLED PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE.
8. COMPLETE CONSTRUCTION AND INSTALL LANDSCAPING.
9. REVEGETATE DISTURBED AREA.
10. PROJECT ENGINEER CONDUCTS WALK THRU AND SUBMITS CONCURRENCE LETTER TO THE CITY. FINAL INSPECTION IS SCHEDULED UPON RECEIPT OF LETTER.
11. COMPLETE PERMANENT EROSION CONTROL AND SITE RESTORATION. REMOVE TEMPORARY EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION. RESTORE ANY AREAS DISTURBED DURING REMOVAL OF EROSION/SEDIMENTATION CONTROLS.

FORT BEND COUNTY CONSTRUCTION GENERAL NOTES:

1. FORT BEND COUNTY MUST BE INVITED TO THE PRE-CONSTRUCTION MEETING.
2. CONTRACTOR SHALL NOTIFY FORT BEND COUNTY ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AND 48 HOUR NOTICE TO ANY CONSTRUCTION ACTIVITY WITHIN THE LIMITS OF THE PAVING AT CONSTRUCTION@FORTBENDCOUNTYTX.GOV .
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FROM FORT BEND COUNTY PRIOR TO COMMENCING CONSTRUCTION OF ANY IMPROVEMENTS WITHIN COUNTY ROAD RIGHT OF WAYS.
4. ALL PAVING IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FORT BEND COUNTY "RULES, REGULATIONS AND REQUIREMENTS RELATING TO THE APPROVAL AND ACCEPTANCE OF IMPROVEMENTS IN SUBDIVISIONS AS CURRENTLY AMENDED.
5. ALL ROAD WIDTHS, CURB RADII AND CURB ALIGNMENT SHOWN INDICATES BACK OF CURB.
6. A CONTINUOUS LONGITUDINAL REINFORCING BAR SHALL BE USED IN THE CURBS.
7. ALL CONCRETE PAVEMENT SHALL BE 5 ½ SACK CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MAXIMUM SPACING OF 60 FEET.
8. ALL WEATHER ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
9. 4" X 12" REINFORCED CONCRETE CURB SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE 6" REINFORCED CONCRETE CURB.
10. AT ALL INTERSECTIONS, TYPE 7 RAMPS SHALL BE PLACED IN ACCORDANCE WITH TXDOT PED-12a STANDARD DETAIL SHEET. A.D.A. - HANDICAP RAMPS SHALL BE INSTALLED WITH STREET PAVING AT ALL INTERSECTIONS AND COMPLY WITH CURRENT A.D.A. REGULATIONS.
11. CURB HEADERS ARE REQUIRED AT CURB CONNECTIONS TO HANDICAP RAMPS, WITH NO CONSTRUCTION JOINT WITHIN 5' OF RAMPS.
12. ALL INTERSECTIONS UTILIZING TRAFFIC CONTROL MEASURES SHALL HAVE A.D.A. WHEEL CHAIR RAMPS INSTALLED.
13. GUIDELINES ARE SET FORTH IN THE TEXAS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS CURRENTLY AMENDED, SHALL BE OBSERVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, SIGNING, STRIPING, AND WARNING DEVICES, ETC., DURING CONSTRUCTION - BOTH DAY AND NIGHT.
14. ALL R1-1 STOP SIGNS SHALL BE 30" X 30" WITH DIAMOND GRADE SHEETING PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
15. STREET NAME SIGNAGE SHALL BE ON A 9" HIGH SIGN FLAT BLADE W/REFLECTIVE GREEN BACKGROUND. STREET NAMES SHALL BE UPPER AND LOWERCASE LETTERING WITH UPPERCASE LETTERS OF 6" MINIMUM AND LOWERCASE LETTERS OF 4.5" MINIMUM. THE LETTERS SHALL BE REFLECTIVE WHITE. STREET NAME SIGNS SHALL BE MOUNTED ON STOP SIGN POST.
16. A BLUE DOUBLE REFLECTORIZED BUTTON SHALL BE PLACED AT ALL FIRE HYDRANT LOCATIONS. THE BUTTON SHALL BE PLACED 12 INCHES OFF THE CENTERLINE OF THE STREET ON THE SAME SIDE AS THE HYDRANT.

NOTE: FORT BEND COUNTY NOTES SUPERSEDE ANY CONFLICTING NOTES.

INSPECTION. THE PROJECT AND ALL PARTS THEREOF SHALL BE SUBJECT TO INSPECTION FROM TIME TO TIME BY INSPECTORS DESIGNATED BY FORT BEND COUNTY. NO SUCH INSPECTIONS SHALL RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS HEREUNDER. NEITHER FAILURE TO INSPECT NOR FAILURE TO DISCOVER OR REJECT ANY OF THE WORK AS NOT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, REQUIREMENTS AND SPECIFICATIONS OF FORT BEND COUNTY OR ANY PROVISION OF THIS PROJECT SHALL BE CONSTRUED TO IMPLY AN ACCEPTANCE OF SUCH WORK OR TO RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS HEREUNDER.

APPROVED: Maggi
DEVELOPMENT COORDINATOR
DATE: 1/5/17

NO.	DATE	REVISION	BY
1	11/8/2016	RESUBMITTAL FOR AGENCY REVIEW	JA
2	11/22/2016	ADDENDUM TWO	JA
3	12/01/2016	MUC COMMENTS	JA
4	12/27/2016	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW	JA
5	01/03/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL	JA

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TEXAS REG. NO. F-11201

117108
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

GENERAL NOTES

SHEET
C002
2 OF 33

STATE OF TEXAS
COUNTY OF FORT BEND

We, the Charter School Fund, LLC, acting by and through Justin Nelson, President, and Ryan Van Alfen, President of Charter School Fund, LLC, being sole owner (owner) hereinafter referred to as Dedicatory, of the land shown on this plat, KATY WESTPARK HIGH SCHOOL, to be known as the KATY WESTPARK HIGH SCHOOL, do hereby make and establish said subdivision and development plan of said property according to all lots, dedications, restrictions and conditions on said plan of plat and hereby declare to the use of the public forever, all streets (except those streets designated as private streets, or permanent access easements), alleys, parks, water courses, drains, easements and public places shown thereon for the purposes and considerations therein expressed, and do hereby bind ourselves, our heirs, successors and assigns to warrant and forever defend the title on the land so dedicated.

FURTHER, Owners have dedicated and by these presents do dedicate to the use of the public for public utility purposes forever unobstructed aerial easements. The aerial easements shall extend horizontally an additional ten feet (10'-0") for ten feet (10'-0") perimeter ground easements or seven feet, six inches (7'-6") for twenty feet (20'-0") perimeter ground easements or for the full width of the roadway (60'-0") for 60' roadways. Aerial easements shall extend horizontally an additional ten feet (10'-0") for ten feet (10'-0") perimeter ground easements or seven feet, six inches (7'-6") for twenty feet (20'-0") perimeter ground easements or for the full width of the roadway (60'-0") for 60' roadways. Aerial easements shall extend vertically an unlimited distance above the ground level of the easement upon which the aerial easements are designated with said easements (U.E. and A.E.) as indicated and depicted hereon, whereby the aerial easement totals thirty feet (30'-0") in width.

FURTHER, Owners have dedicated and by these presents do dedicate to the use of the public for public utility purpose forever unobstructed aerial easements. The aerial easements shall extend horizontally an additional ten feet (10'-0") for ten feet (10'-0") back-to-back ground easements, or eight feet (8'-0") for twenty feet (20'-0") back-to-back ground easements or seven feet (7'-0") for eleven feet (11'-0") back-to-back ground easements, from a plane sixteen feet (16'-0") above ground level upward, located adjacent to both sides and adjoining said public utility easements that are designated with dashed lines marked U.E. and A.E. as indicated and depicted hereon, whereby the aerial easement totals thirty feet (30'-0") in width.

FURTHER, Owners do hereby covenant and agree that all of the property within the boundaries of this plat is hereby restricted to prevent the drainage of any septic tank into any public or private street, permanent access easement, road or alley, or any drainage ditch, either directly or indirectly.

FURTHER, Owners do hereby dedicate to the public a strip of land fifteen feet (15'-0") plus an each side of the center line of any and all gullies, ravines, drains, streams or other natural drainage courses located in said plat, as easements for drainage purposes, giving the City of Houston, Harris County, or any other governmental agency, the right to enter upon said easement at any and all times for the purpose of construction and maintenance of drainage facilities and structures.

FURTHER, Owners do hereby covenant and agree that all of the property within the boundaries of this plat and adjacent to any drainage easement, ditch, gully, creek or natural drainage way shall hereby be restricted to keep such drainage ways and easements clear of fences, buildings, plantings and other obstructions to the operations and maintenance of the drainage facility and that such ditch, easement, property and shall not be permitted to drain directly into this easement except by means of an approved drainage structure.

FURTHER, Owners certify and covenant that they have complied with or will comply with existing Harris County Road Law, Section 31-C as amended by Chapter 614, Acts of 1993, 63rd Legislature and all other regulations heretofore in effect with the Harris County Engineer and adopted by the Commissioners' Court of Harris County.

FURTHER, we do hereby acknowledge the receipt of the "Orders for Regulations of Outdoor Lighting in the unincorporated areas of Fort Bend County, Texas", and do hereby covenant and agree that we will comply with the lighting requirements as adopted by Fort Bend County Commissioners' Court on March 23, 2004, and any subsequent amendments.

AT TESTIMONY WHEREOF, the Charter School Fund, LLC has caused these presents to be signed by Justin Kahler, its Principal, thereunto authorized, attested by its Principal, Ryan Van Alfen, this ____ day of _____ 2016.

By:Charter School Fund, LLC

Attest: By: _____
Justin Kahler
Principal

_____
Ryan Van Alfen
Principal

STATE OF TEXAS

COUNTY OF _____

BEFORE ME, the undersigned authority, on this day personally appeared Justin Kahler and Ryan Van Alfen, Principal, respectively, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and considerations therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this _____ day of _____ 2016.

_____
Notary Public in and for the
State of Texas

My Commission Expires:

I, Paul A. Jurica, Jr., am authorized under the laws of the State of Texas to practice the profession of surveying and hereby certify that the above subdivision is true and accurate; was prepared from an actual survey of the property made under my supervision on the ground; that, except as shown, all boundary corners, angle points, points of curvature and other points of reference have been marked with iron or other objects of a permanent nature; pipes or rods having an outside diameter of not less than five eighths (5/8) inch and a length of not less than three (3) feet; and that the plat boundary corners have been tied to the Texas Coordinate System of 1983, south central zone.

STATE OF TEXAS
REGISTERED
4264
PAUL A. JURICA JR.
PROFESSIONAL
LAND SURVEYOR

Paul A. Jurica, Jr.
Registered Professional Land Surveyor
Texas Registration No. 4264

This is to certify that the Planning Commission of the City of Houston, Texas, has approved this plat and subdivision of KATY WESTPARK HIGH SCHOOL in conformance with the laws of the State of Texas and the ordinances of the City of Houston as shown hereon and authorized recording of this plat this _____ day of _____, 2016.

By: _____
Martha L. Stein
Chair

M. Sonny Garza
Vice Chairman

By: _____
Patrick Walsh, P.E.
Secretary

I, Lawrence S. Bowen, registered under the laws of the State of Texas to practice the profession of Engineering, do hereby certify that this plat meets all requirements of Fort Bend County, Texas, to the best of my knowledge.

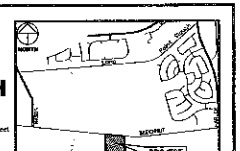
STATE OF TEXAS
LAWRENCE S. BOWEN
117136
LICENSED
PROFESSIONAL
ENGINEER

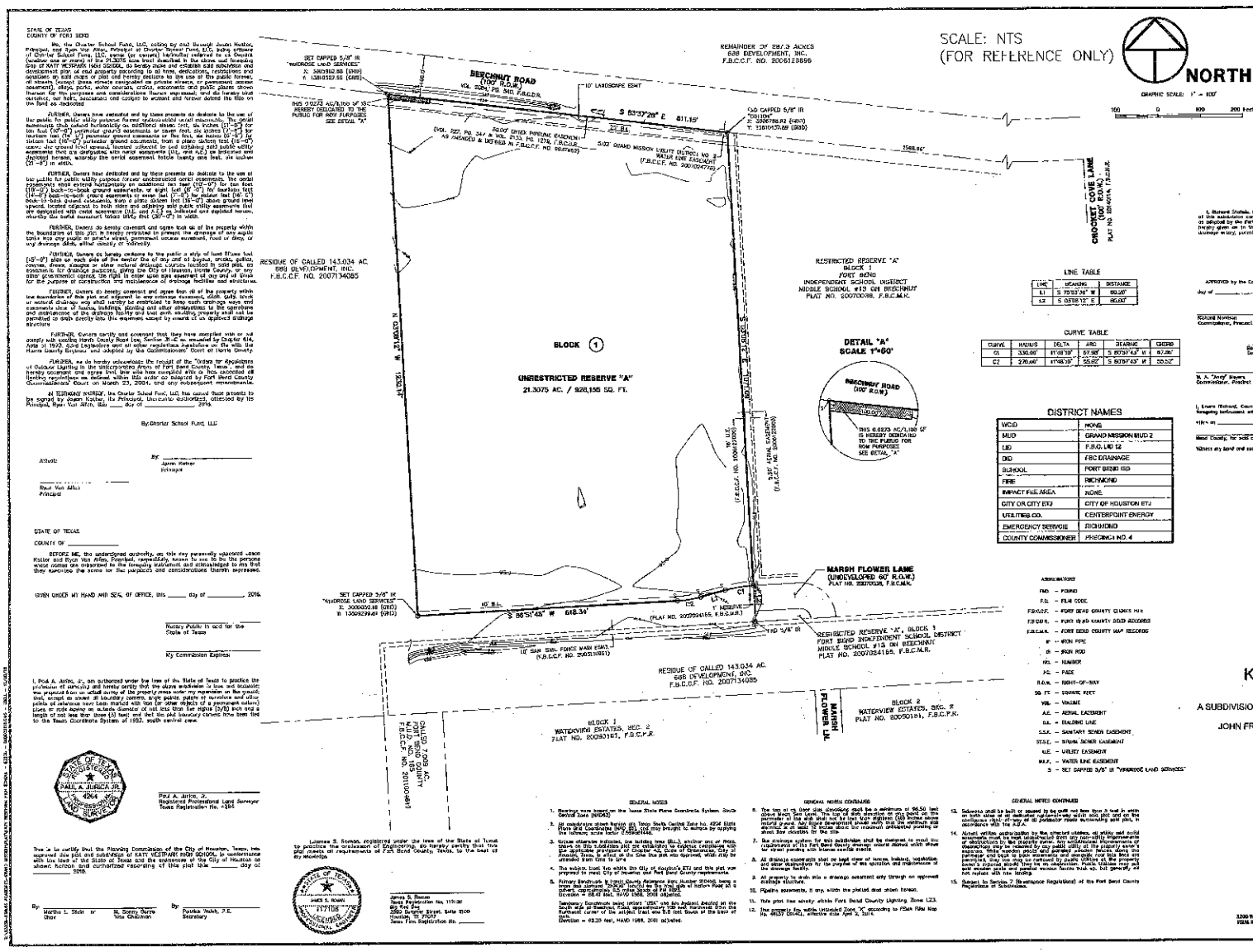
James S. Bowen
Texas Registration No. 117136
WD Tex Dev
2500 Summer Street, Suite 5100
Houston, TX 77007
Texas Firm Registration No. _____

SCALE: NTS
(FOR REFERENCE ONLY)

NORTH

GRAPHIC SCALE: 1" = 100'





LINE TABLE

LINE	BEARING	DISTANCE
L1	S 73°03'36" W	60.00'
L2	S 03°58'12" E	60.00'

CURVE TABLE

CURVE	RADIUS	DELTA	ARC	BEARING	CHORD
C1	330.00'	11°18'19"	67.59'	S 80°57'43" W	67.48'
C2	270.00'	11°48'19"	55.62'	S 80°57'43" W	55.52'

DISTRICT NAMES

WCID	HCWA
MUD	GRAND MISSION MUD 2
LID	F.B.C.D. LID 12
DID	FBC DRAINAGE
SCHOOL	FORT BEND ISD
FIRE	RICHMOND
IMPACT FEE AREA	NONE
CITY OR CITY ETJ	CITY OF HOUSTON ETJ
UTILITIES CO.	CENTERPOINT ENERGY
EMERGENCY SERVICE	RICHMOND
COUNTY COMMISSIONER	PRECINCT NO. 4

ABBREVIATIONS

FND.	– FOUND
F.C.	– FILM CODE
F.B.C.O.R.	– FORT BEND COUNTY OFFICIAL RECORDS
F.B.C.D.R.	– FORT BEND COUNTY DEED RECORDS
F.B.C.M.R.	– FORT BEND COUNTY MAP RECORDS
IP	– IRON PIPE
IR	– IRON ROD
HC	– HUNDRED
PG.	– PAGE
R.O.W.	– RIGHT-OF-WAY
SQ. FT.	– SQUARE FEET
VOL.	– VOLUME
A.E.	– AERIAL EASEMENT
B.L.	– BUILDING LINE
S.S.E.	– SANITARY SEWER EASEMENT
STS.E.	– STORM SEWER EASEMENT
U.E.	– UTILITY EASEMENT
W.L.E.	– WATER LINE EASEMENT
S	– SET CAPPED 5/8" IR "WINDROSE LAND SERVICES"

GENERAL NOTES

1. Bearings were based on the Texas State Plane Coordinate System, South Central Zone (NAD83).
2. All coordinates shown hereon are Texas State Capital Zone No. 4204 State Plane grid coordinates (NAD 83), and may be brought to surface by applying the following scale factor (0.99987466).
3. Water utilities shall be installed along the south side of the street shown on this subdivision and are intended to replace conditions with the particular provisions of Chapter 42, Code of Ordinances, City of Houston, Texas, in effect at the time the plat was approved, which may be utilized when data is [illegible].
4. The subject tract lies within the City of Houston's ETJ and this plat was prepared to meet City of Houston and Fort Bend County requirements.
5. Primary Benchmark is Harris County Reference Mark Number 21D4A3, being a brass disk stamped "24DF24" located on the west side of Kolbe Road at a culvert, approximately 0.5 miles South of FM 1093.
   Elevation = 68.42 feet, NAVD 1988, 2001 adjusted.
   Temporary Benchmark bears 245°41' USA and are located located on the South side of Beechnut, about approximately 700 feet Westerlyd from the Northeast corner of the subject tract and 0.8 feet South of the base of a fire hydrant.
   Elevation = 69.29 feet, NAVD 1988, 2001 adjusted.

GENERAL NOTES CONTINUED

6. The top of all floor slab shoulding shall be a minimum of 18.50 feet above Mean Sea Level. The top of slab elevation of any house in the subdivision shall be at least 18 inches above the adjacent natural ground, and at least 18 inches above the centerline of the adjacent street or at least 18 inches above the minimum slab elevation of a slab to house above for minimum anticipated ponding on street for disorder for the site.
7. The drainage system for this subdivision shall be designed to meet the requirements of the Fort Bend County drainage criteria manual which shall have for street ponding with minor rainfall events.
8. All drainage easements shall be kept free of fences, buildings, vegetation and other obstructions for the purpose of the operation and maintenance of the drainage facility.
9. All property to drain into a drainage easement only through an approved drainage structure.
10. Pipeline easements, if any, within the platted area shown hereon.
11. This plat has ainety within Fort Bend County Lighting Zone L23.
12. The property has within Unshaded Zone "X" according to FEMA Flood Map No. 48157 C0415J, effective date April 2, 2014.

GENERAL NOTES CONTINUED

13. Sidewalks shall be built or caused to be built not less than 4 feet in width on both sides of all dedicated rights-of-way within this plat and on the contiguous right-of-way of all perimeter roads surrounding said plat, in accordance with the F.B.C.C.
14. Access utilities authorization by the affected citizens, or utility and public easements must be kept unobstructed from any non-utility improvements or obstructions by the property owner. Any unauthorized improvements or obstructions placed in easements may be removed by the utility company, at the expense, their sole discretion and without notice thereto. Upon the drainage and trees in both easements and alongside Fort Bend Road are permitted. Any tree or shrub, located in the front of the property, and other improvements and landscaping, shall be maintained by the property owner and homeowner's association. Damaged or dead trees, bushes, etc. but generally, are not replaced with the utility.
15. Subject to Section 7 (Streetscape Regulations) of the Fort Bend County Regulations of Subdivisions.

I, Richard Stolzer, P.E., Fort Bend County Engineer, do hereby certify that the plat of this subdivision complies with all the existing rules and regulations of the Commissioners Court, as adopted by the Fort Bend County Commissioners' Court. However, no certification is hereby given as to the effect of drainage from this subdivision on the intercepting drainage artery, parallel streets, or any other area or subdivision within the watershed.

_____
Richard Stolzer, P.E.
Fort Bend County Engineer

APPROVED by the Commissioners' Court of Fort Bend County, Texas this the _____ day of _____, 2016.

_____
Richard Nordman
Commissioner, Precinct 1

_____
Grady Prestage
Commissioner, Precinct 2

_____
Robert E. Hebert, Ph.D
County Judge

_____
K. A. "Andy" Meyers
Commissioner, Precinct 3

_____
James Patterson
Commissioner, Precinct 4

I, Laura Richard, County Clerk in and for Fort Bend County, in my capacity that the foregoing instrument with its certificate of authentication was filed for recordation in my office on _____, 2016, at _____ o'clock ___.m., and duly recorded on _____, 2016, in Plat No. _____ of the Map Records of Fort Bend County, for said county.

Witness my hand and seal of office, at Richmond, Texas, the day and date last above written.

_____
Laura Richard
Clerk of the County Court
of Fort Bend County, Texas

By: _____
Deputy

KATY WESTPARK HIGH SCHOOL

A SUBDIVISION OF 21.3075 AC. / 928,155 SQ. FT. OF LAND
SITUATED IN THE
JOHN FREDERICK SURVEY, ABSTRACT NO. 171
FORT BEND COUNTY, TEXAS

1 BLOCK 1 RESERVE 0 LOTS

NOVEMBER 2016

Owner
Charter School Fund, LLC
416 S. Van Ness, Suite 201
Boise, Idaho 83702
208-905-5548

Surveyor

WINDROSE
LAND SURVEYING | PLATTING
3200 WILCREST, SUITE 325 | HOUSTON, TX 77042 | 713.468.5281
FIRM REGISTRATION NO. 10106600 | WINDROSELAND.COM

APPROVED: _____
DEVELOPMENT COORDINATOR
DATE: 1/5/17

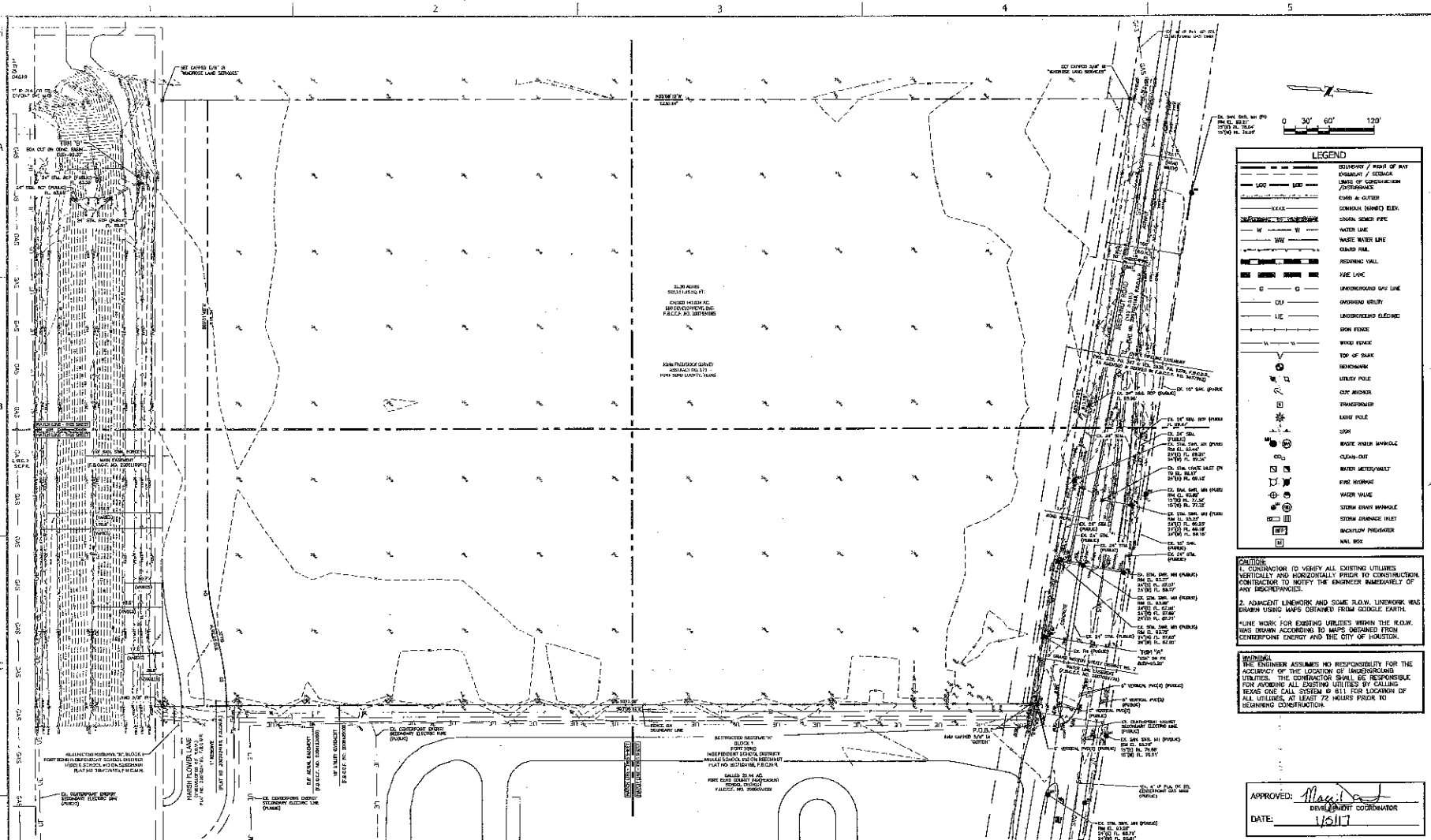
NO.	DATE	REVISION
0	11/18/16	PRELIMINARY FOR AGENCY REVIEW
1	12/21/16	ADD COMMENTS
2	12/27/16	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
3	1/5/17	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

BIG RED DOG
ENGINEERING | CONSULTING
2500 SUMMER STREET, SUITE 5100
HOUSTON, TEXAS 77007
TBPE REG. NO. F-1121
WWW.BIGREDDOG.COM
TEXAS REG. NO. F-11211
832.730.1901

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

PLAT

SHEET
C003
3 OF 33



CAUTION:

1. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

2. ADJACENT LINEWORK AND SOME R.O.W. LINEWORK WAS DRAWN USING MAPS OBTAINED FROM GOOGLE EARTH.

*LINE WORK FOR EXISTING UTILITIES WITHIN THE R.O.W. WAS DRAWN ACCORDING TO MAPS OBTAINED FROM CENTERPOINT ENERGY AND THE CITY OF HOUSTON.

WARNING!
THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING ALL EXISTING UTILITIES BY CALLING TEXAS ONE CALL SYSTEM @ 811 FOR LOCATION OF ALL UTILITIES, AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.

APPROVED: DEVELOPMENT COORDINATOR
DATE: 1/6/17

CURVE TABLE FOR FACE OF CURB

CURVE	RADIUS	LENGTH	DELTA	CHORD	CHORD BEARING
C2	330.00'	67.96'	11°48'10"	67.85'	S80°57'43"W
C4	270.00'	55.62'	11°48'10"	55.52'	S80°57'43"W

SITE INFORMATION:

ADDRESS: 20055 BEECHNUT ROAD
RICHMOND, TX 77047

MUD NAME: GRAND MISSION MUD 2
UTILITY PROVIDER: MUNICIPAL DISTRICT SERVICES (UTILITY PHONE #: 281-290-6807)

GENERAL NOTES

1. SURVEYOR DID NOT ABSTRACT SUBJECT PROPERTY. THIS SURVEY WAS PREPARED WITH INFORMATION CONTAINED IN TITLE COMMITMENT GF NO. 1615704527 OF STEWART TITLE GUARANTY COMPANY, EFFECTIVE DATE OF AUGUST 18, 2016, ISSUED DATE OF SEPTEMBER 07, 2016, AND IS SUBJECT TO THE LIMITATIONS OF THAT COMMITMENT.

2. BEARINGS WERE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (NAD 83). ALL DISTANCES SHOWN HEREON ARE SURFACE DISTANCES AND MAY BE BROUGHT TO GRID BY APPLYING THE FOLLOWING SCALE FACTOR: 0.999951449.

3. READILY VISIBLE IMPROVEMENTS AND UTILITIES WERE LOCATED WITH THIS SURVEY, NO SUBSURFACE PROBING, EXCAVATION OR EXPLORATION WAS PERFORMED BY WINDROSE LAND SERVICES.

4. ENVIRONMENTAL AND DRAINAGE ISSUES ARE BEYOND THE SCOPE OF THIS SURVEY.

5. THE SQUARE FOOTAGE TOTALS SHOWN HEREON ARE BASED ON THE MATHEMATICAL CLOSURE OF THE COURSES AND DISTANCES REFLECTED ON THIS SURVEY. IT DOES NOT INCLUDE THE TOLERANCES THAT MAY BE PRESENT DUE TO THE POSITIONAL ACCURACY OF THE BOUNDARY MONUMENTATION.

6. FENCES SHOWN HEREON WITH DIMENSIONAL TIES ARE SHOWN WHERE THEY ARE PHYSICALLY MEASURED. THE FENCE MAY MEANDER BETWEEN MEASURED LOCATIONS.

LEGAL DESCRIPTION:

A TRACT OR PARCEL CONTAINING 21.39 ACRES OR 927,525 SQUARE FEET OF LAND, BEING OUT OF A CALLED 143.034 ACRE TRACT OF LAND CONVEYED TO GRG DEVELOPMENT, INC. AS RECORDED IN FORT BEND COUNTY CLERKS FILE (F.B.C.C.F.) NO. 2007134080, SITUATED IN THE JOHN FREDENICK SURVEY, ABSTRACT NO. 171, FORT BEND COUNTY, TEXAS, AND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS, WITH ALL BEARINGS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (NAD 83).

FLOODPLAIN:

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), FLOOD INSURANCE RATE MAP (FIRM) FOR FORT BEND COUNTY, TEXAS, MAP NO. 48157C0140K REVISED/DATED APRIL 2, 2014, THE SUBJECT TRACT APPEARS TO LIE WITHIN UNSHADED ZONE "X". THIS DETERMINATION WAS DONE BY GRAPHIC PLOTTING AND IS APPROXIMATE ONLY, AND HAS NOT BEEN FIELD VERIFIED. THIS FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY OR STRUCTURES THEREON SHALL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON RARE OCCASIONS FLOODS CAN AND WILL OCCUR AND NEIGHBORS MAY BE INCREASED BY MAN-MADE OR NATURAL CAUSES. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF WINDROSE LAND SERVICES.

BENCHMARK

PUBLISHED ELEVATION - 88.41'

HARRIS COUNTY FLOODPLAIN REFERENCE MARK NUMBER 2104A0. BEING A BRASS DISK STAMPED "2104A0" LOCATED ON THE WEST SIDE OF HARLEM ROAD ON A CONCRETE. APPROX. 0.8 MILES SOUTH OF FM 1093. ELEV. 88.41', NAVD88, 2001 ADJUSTMENT.

TEMPORARY BENCHMARK "A"

ELEVATION - 95.20'

BEING LETTERS "USA" ON A FIRE HYDRANT LOCATED ON THE SOUTH SIDE OF BEECHNUT ROAD. APPROX. 100 FEET NORTHWEST FROM THE NORTHEAST CORNER OF THE SUBJECT TRACT AND 6.8 FEET SOUTH OF THE BACK OF CURB. (AS SHOWN HEREON)

TEMPORARY BENCHMARK "B"

ELEVATION - 92.37'

BEING LETTERS "USA" ON A FIRE HYDRANT LOCATED ON THE SOUTH SIDE OF BEECHNUT ROAD. APPROX. 100 FEET NORTHWEST FROM THE NORTHEAST CORNER OF THE SUBJECT TRACT AND 4.8 FEET SOUTH OF THE BACK OF CURB. (AS SHOWN HEREON)

LAND USE SUMMARY:

GROSS ACREAGE: 21.39 ACRES
LIMITS OF CONSTRUCTION: ±21.39 ACRES

NO.	DATE	REVISION
1	11/14/2016	RESUBMITTAL FOR REVIEW
2	11/28/2016	ADDENDUM TWO
3	12/12/2016	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
4	1/05/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

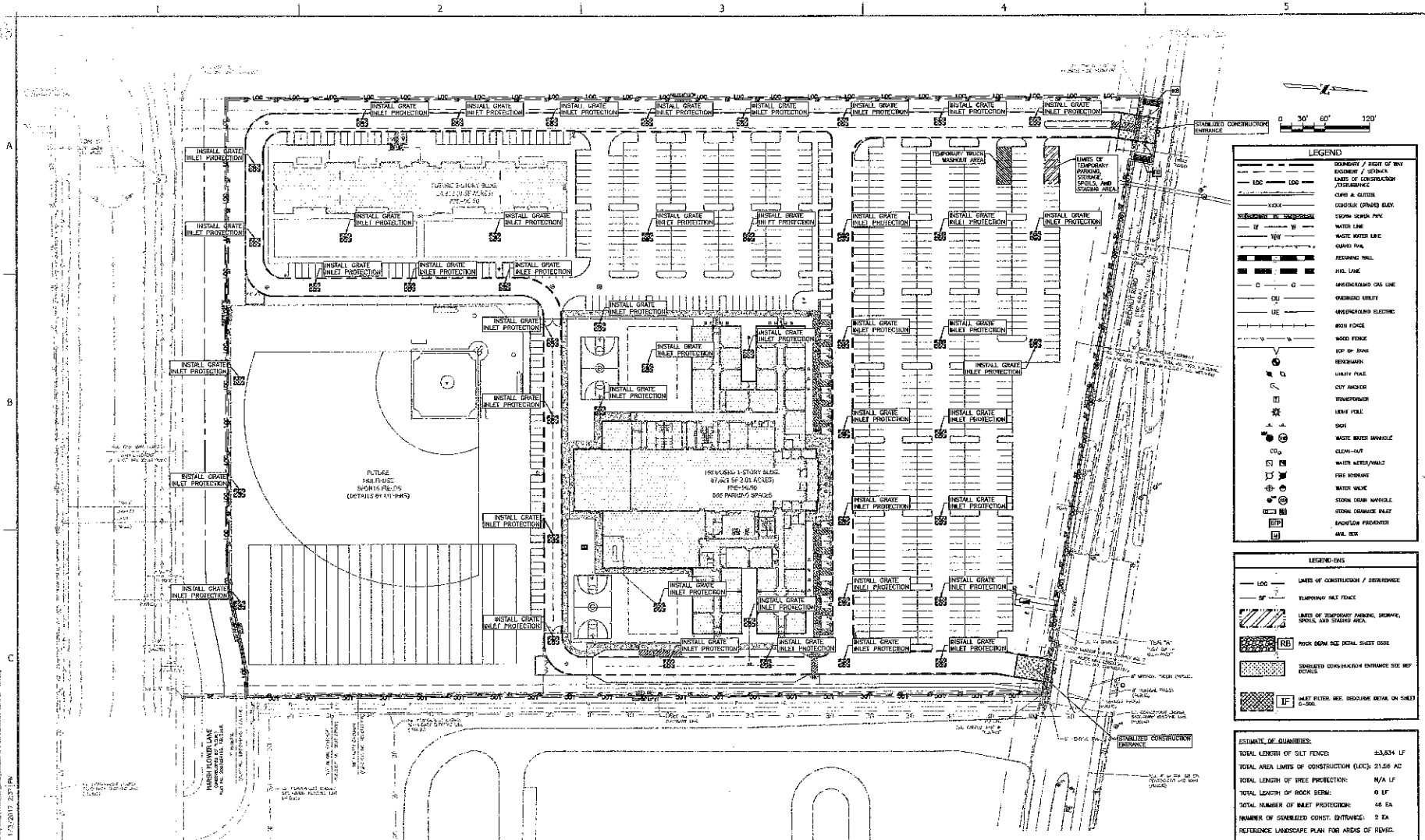
BIG RED DOG ENGINEERING | CONSULTING
TEXAS REG. NO. F-11201
WWW.BIGREDDOG.COM
2203 SUMMER STREET, SUITE 2103 • HOUSTON, TEXAS 77007
833.798.1901

JAMES E. BIRKIN
117108
LICENSED
PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

EXISTING CONDITIONS PLAN

SHEET
C100
4 OF 33



LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- LOC — LIMITS OF CONSTRUCTION /DISTURBANCE
- CURB & GUTTER
- XXXX — CONCRETE (FINISH) ELEV.
- STORM SEWER PIPE
- W — WATER LINE
- WW — WASTE WATER LINE
- GUARD RAIL
- RETAINING WALL
- FIRE LANE
- G — UNDERGROUND GAS LINE
- OU — OVERHEAD UTILITY
- UE — UNDERGROUND ELECTRIC
- IRON FENCE
- WOOD FENCE
- TOP OF BANK
- BENCHMARK
- UTILITY POLE
- GUY ANCHOR
- TRANSFORMER
- LIGHT POLE
- SIGN
- WASTE WATER MANHOLE
- CO — CLEAN-OUT
- WATER METER/VAULT
- FIRE HYDRANT
- WATER VALVE
- STORM DRAIN MANHOLE
- STORM DRAINAGE INLET
- BFP — BACKFLOW PREVENTER
- MAIL BOX

LEGEND-ENS

- LOC — LIMITS OF CONSTRUCTION / DISTURBANCE
- SF — TEMPORARY SILT FENCE
- LIMITS OF TEMPORARY PARKING, STORAGE, SPOILS, AND STAGING AREA.
- RB — ROCK BERM SEE DETAIL SHEET C600
- STABILIZED CONSTRUCTION ENTRANCE SEE REF DETAILS
- IF — INLET FILTER. REF. RESOURCE DETAIL ON SHEET C-500.

ESTIMATE OF QUANTITIES:

TOTAL LENGTH OF SILT FENCE:	±3,834 LF
TOTAL AREA LIMITS OF CONSTRUCTION (LOC):	21.56 AC
TOTAL LENGTH OF TREE PROTECTION:	N/A LF
TOTAL LENGTH OF ROCK BERM:	0 LF
TOTAL NUMBER OF INLET PROTECTION:	46 EA
NUMBER OF STABILIZED CONST. ENTRANCE:	2 EA

REFERENCE LANDSCAPE PLAN FOR AREAS OF REVEG.

CURVE TABLE FOR FACE OF CURB

CURVE	RADIUS	LENGTH	DELTA	CHORD	CHORD BEARING
C1	30.00'	47.12'	90°00'00"	42.43'	S45°00'00"W
C2	30.00'	47.12'	90°00'00"	42.43'	S45°00'00"E

NOTE:
A. CONTRACTOR TO SUBMIT COPIES OF CONSTRUCTION SITE NOTICE (CSN) AND/OR NOTICE OF INTENT (NOI) TO BLAIR BIZZOARTH (blaizzoarth@jonescarter.com) WITH JONES|CARTER AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

CAUTION!
1. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. ADJACENT LINEWORK AND SOME R.O.W. LINEWORK WAS DRAWN USING MAPS OBTAINED FROM GOOGLE EARTH.
*LINE WORK FOR EXISTING UTILITIES WITHIN THE R.O.W. WAS DRAWN ACCORDING TO MAPS OBTAINED FROM CENTERPOINT ENERGY AND THE CITY OF HOUSTON.

WARNING!
THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING ALL EXISTING UTILITIES BY CALLING TEXAS ONE CALL SYSTEM @ 811 FOR LOCATION OF ALL UTILITIES, AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO THE START OF DEMOLITION. REPAIR AND REPLACE DAMAGED EROSION CONTROL AFTER DEMOLITION/PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REGARDING EXCAVATION IN PUBLIC RIGHT-OF-WAY FROM TXDOT AND HARRIS COUNTY AS REQUIRED.
3. CONTRACTOR SHALL CLEAN UP SPOILS THAT MIGRATE INTO EXISTING RIGHT-OF-WAY A MINIMUM OF ONCE PER DAY.
4. ALL STORMWATER LEAVING THE SITE DURING CONSTRUCTION ACTIVITIES MUST PASS THROUGH THE SILT FENCE OR ROCK BERMS.
5. REFER TO GENERAL NOTES SHEETS FOR EROSION CONTROL NOTES & SEQUENCE OF CONSTRUCTION.
6. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING.
7. REFERENCE LANDSCAPE SHEETS FOR SODDING & SEEDING NOTES.
8. REFERENCE CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
9. CONTRACTOR SHALL FURNISH & INSTALL ALL MATERIALS AND APPURTENANCES AS CALLED OUT ON PLANS.

APPROVED: DEVELOPMENT COORDINATOR
DATE: 1/5/17

NO.	DATE	
C	11/14/2016	RESUBMITTAL FOR AGENCY REVIEW
B	11/7/2016	ADDENDUM TWO
A	10/20/2016	BID COPIES TO DOR BASIS COURTS FOR REVIEW
1	8/24/2016	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

WWW.BIGREDDOG.COM
TEXAS REG. NO. F-11201
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BIG RED DOG
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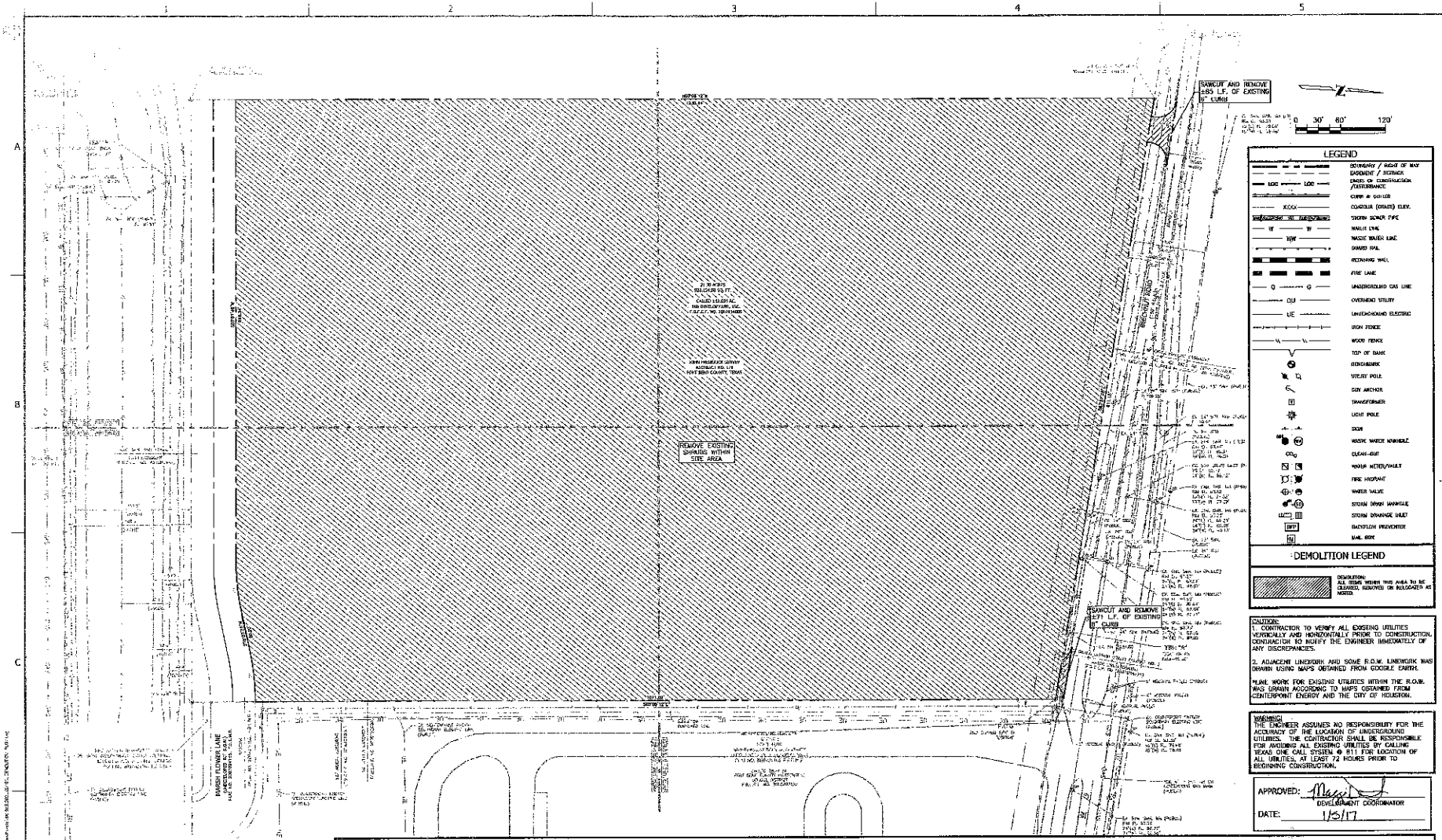
2500 SUMMER STREET, SUITE 210 HOUSTON, TEXAS 77007
TBPE REG. NO. F-11201

JAMES E. ROHAN
117108
LICENSED PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

EROSION AND SEDIMENTATION CONTROL PLAN

SHEET
C200
5 OF 33



SITE DEMOLITION NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING REGULATING AUTHORITY, AND "TXU TEST" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN PER THE APPROPRIATE REMEDIAL ACTION AGREED UPON BY THE ENGINEER.
2. WHERE A STATE OR LOCAL MUNICIPAL STANDARD DETAIL DUPLICATES A DETAIL SHOWN IN THE PLANS, THE MORE STRINGENT DETAIL, AS DETERMINED BY THE REVIEWING AGENCY, SHALL APPLY.
3. NO SITE DISTURBANCE SHALL OCCUR UNTIL THE PRE-CONSTRUCTION MEETING WITH THE GOVERNING JURISDICTION INSPECTOR IS HELD.
4. BEFORE REMOVING ANY UTILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT THE UTILITY TO BE REMOVED IS NOT SERVING ANY OTHER SITE.
5. CONTRACTOR SHALL COORDINATE WITH AND ALLOW THE VARIOUS UTILITY PROVIDERS ON SITE TO DESIGNATE AND COORDINATE THE REMOVAL OF THEIR ABANDONED SERVICES WITHIN THIS PROJECT FENCE.
6. CONTRACTOR SHALL ARRANGE FOR AND COORDINATE THE DISCONNECTION AND REMOVAL/RELOCATION OF OVERHEAD AND UNDERGROUND ELECTRIC SERVICES, ELECTRIC LINES, ELECTRIC VAULTS/MANHOLES, TRANSFORMERS, AND POLES WITHIN THE LIMIT OF CONSTRUCTION WITH THE LOCAL ELECTRIC SERVICE PROVIDER AND THE OWNER.
7. CONTRACTOR SHALL ARRANGE FOR AND COORDINATE THE DISCONNECTION AND REMOVAL OF ANY GAS SERVICES, GAS LINES, AND METERS WITHIN THE LIMIT OF CONSTRUCTION WITH THE GAS PROVIDER.
8. CONTRACTOR TO FURNISH AND INSTALL EROSION & SEDIMENTATION CONTROLS PRIOR TO ANY DEMOLITION WORK. AN EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED IN THIS PLAN SET. A SWPPP HAS ALSO BEEN PREPARED. BOTH DOCUMENTS MUST BE UTILIZED AND ADHERED TO BY THE CONTRACTOR(S) DURING CONSTRUCTION.
9. DISPOSAL OF ALL DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS.
10. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
11. ALL DEMOLITION OF EXISTING PAVEMENT AND UTILITIES MUST BE DONE BY HAND WHEN WORKING WITHIN THE 1/2 CRITICAL ROOT ZONE OF EXISTING TREES.
12. CONTRACTOR TO INSTALL TREE PROTECTION FENCE AROUND EXISTING GROWING IN PAVING, AND EXTEND TREE FENCE TO 75% OF DRIP LINE IMMEDIATELY AFTER DEMOLITION IS COMPLETED. ANY WORK DONE WITHIN THE TREE PROTECTION FENCE AREA MUST NOT IMPACT TREE: NO ROOT DAMAGE AND NO BRANCH OR TRUNK DAMAGE. ADD A 12" LAYER OF MULCH WITHIN THE TREE PROTECTION FENCE AREA PRIOR TO CONDUCTING ANY WORK INSIDE FENCE AREA.
13. NO WORK SHALL BE PERFORMED OUTSIDE THE LIMITS OF CONSTRUCTION. LIMITS OF CONSTRUCTION ARE SHOWN ON EROSION & SEDIMENTATION CONTROL PLAN.
14. REFERENCE GENERAL NOTES SHEET C-002 FOR SEQUENCE OF CONSTRUCTION AND ADDITIONAL DEMOLITION NOTES.
15. VOIDS CREATED BY INLET AND UNDERGROUND UTILITY PIPE REMOVAL SHALL BE BACKFILLED AND COMPACTED IN LIFTS PER GEOTECHNICAL RECOMMENDATIONS.
16. THE GEOTECHNICAL ENGINEER MUST BE PRESENT DURING ALL EXISTING BUILDING FOUNDATION DEMOLITION ACTIVITIES TO DETERMINE THE IMPACT ON SUBGRADE PREPARATION.

NO.	DATE	REVISION
3	11/16/2016	RESUBMITTAL FOR AGENCY REVIEW
4	11/28/2016	DEVELOPER REVIEW
5	12/12/2016	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
6	12/27/2016	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

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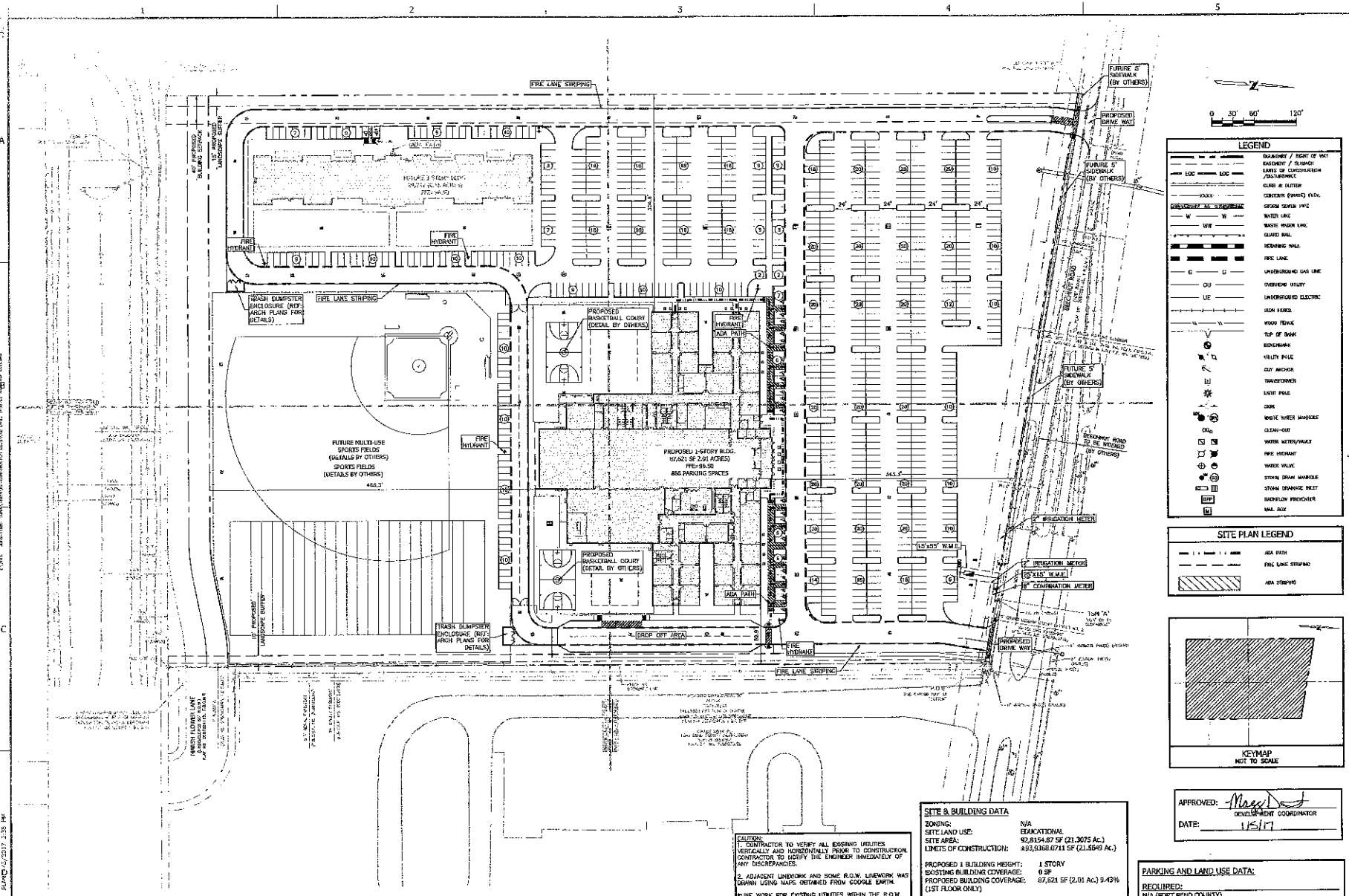
832.790.1901

JAMES S. BOWER
117108
LICENSED
PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

DEMOLITION PLAN

SHEET
CD100
6 OF 33



LEGEND

	BOUNDARY / RIGHT OF WAY
	EASEMENT / SETBACK
LOC LOC	LIMITS OF CONSTRUCTION /DISTURBANCE
	CURB & GUTTER
100.00	CONTOUR (GRADE) ELEV.
	STORM SEWER PIPE
W W	WATER LINE
WW	WASTE WATER LINE
	GUARD WALL
	RETAINING WALL
	FIRE LANE
G G	UNDERGROUND GAS LINE
OU	OVERHEAD UTILITY
UE	UNDERGROUND ELECTRIC
	IRON FENCE
	WOOD FENCE
	TOP OF BANK
	BENCHMARK
	UTILITY POLE
	GUY ANCHOR
	TRANSFORMER
	LIGHT POLE
	SIGN
	WASTE WATER MANHOLE
	CLEAN-OUT
	WATER METER/VAULT
	FIRE HYDRANT
	WATER VALVE
	STORM DRAIN MANHOLE
	STORM DRAINAGE INLET
BFP	BACKFLOW PREVENTER
	MAIL BOX

SITE PLAN LEGEND

	ADA PATH
	FIRE LANE STRIPING
	ADA STRIPING

KEYMAP
NOT TO SCALE

APPROVED: Mary Dodd
DEVELOPMENT COORDINATOR
DATE: 1/5/17

CAUTION:
1. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

2. ADJACENT LINEWORK AND SOME R.O.W. LINEWORK WAS DRAWN USING MAPS OBTAINED FROM GOOGLE EARTH.

*LINE WORK FOR EXISTING UTILITIES WITHIN THE R.O.W. WAS DRAWN ACCORDING TO MAPS OBTAINED FROM CENTERPOINT ENERGY AND THE CITY OF HOUSTON.

WARNING!
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SITE & BUILDING DATA

ZONING:	N/A
SITE LAND USE:	EDUCATIONAL
SITE AREA:	92,8154.87 SF (21.3075 Ac.)
LIMITS OF CONSTRUCTION:	±93,6368.0711 SF (21.5049 Ac.)
PROPOSED 1 BUILDING HEIGHT:	1 STORY
EXISTING BUILDING COVERAGE:	0 SF
PROPOSED BUILDING COVERAGE: (1ST FLOOR ONLY)	87,621 SF (2.01 Ac.) 9.43%
PROPOSED 2 BUILDING HEIGHT:	3 STORIES
EXISTING BUILDING COVERAGE:	0 SF
PROPOSED BUILDING COVERAGE: (1ST FLOOR ONLY)	24,212 SF (0.55 Ac.) 2.59%
GROSS BUILDING FLOOR AREA:	111,833 (2.56 Ac) GROSS SF
EXISTING IMPERVIOUS COVER:	0% (0 Ac)
PROPOSED IMPERVIOUS COVER:	62% (13.3 Ac.)

PARKING AND LAND USE DATA:

REQUIRED:
N/A (FORT BEND COUNTY)

PROVIDED:

TYPE	SPACES
OPEN SPACES	862 SPACES
OPEN HANDICAP CAR	23 SPACES
OPEN HANDICAP VAN	1 SPACES
TOTAL PROVIDED PARKING:	886 SPACES

NO	DATE	REVISION
1	11/15/2016	REVISED PER COMMENTS FOR ACDNC REVIEW
2	11/22/2016	REVISED PER COMMENTS
3	12/07/2016	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
4	12/23/2016	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

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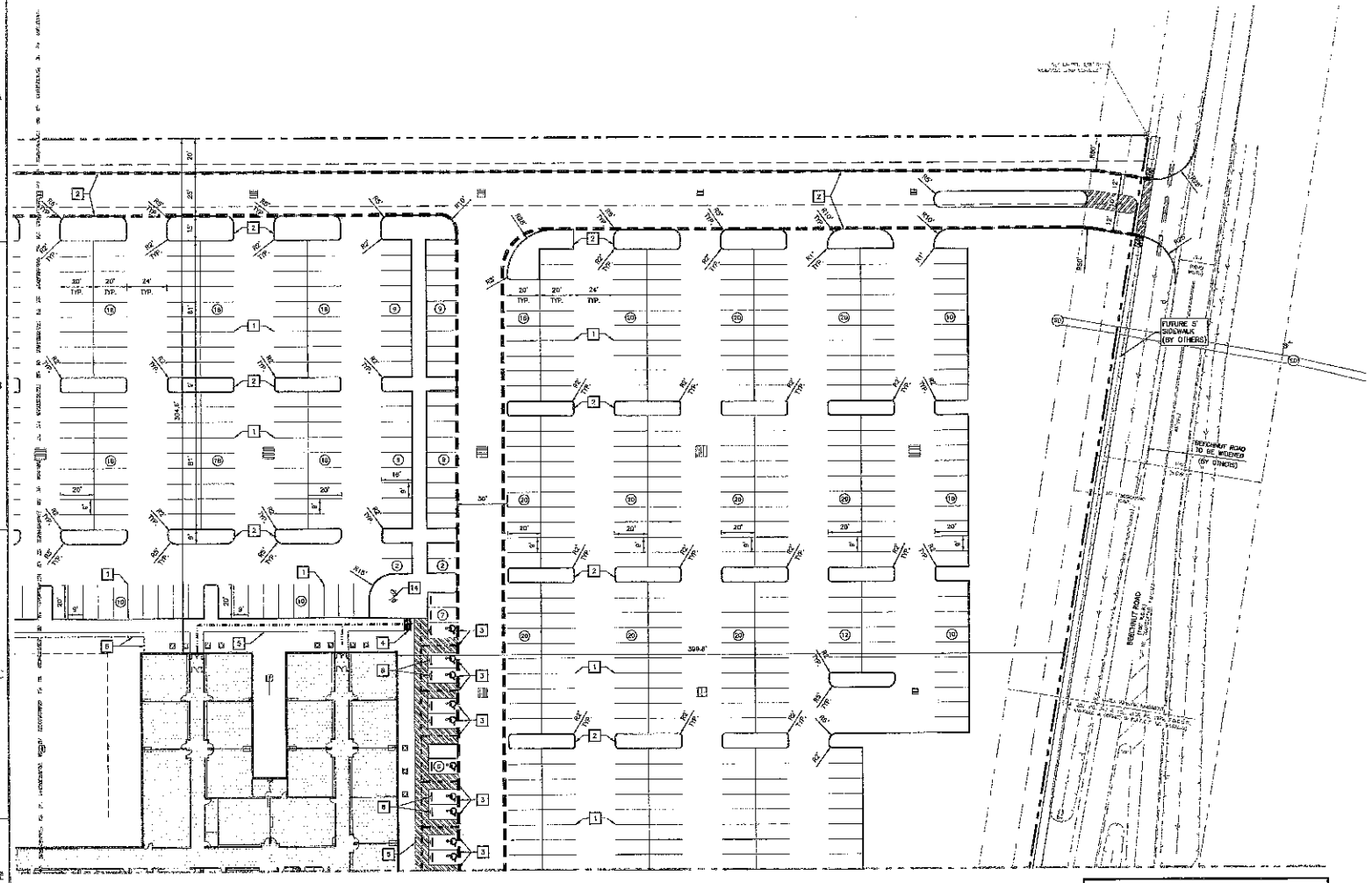
2500 SUMMER STREET, HOUSTON, TEXAS 77007
TEXAS REG. NO. F-11801
JAMES S. ADAMS
117708
LICENSED
PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

OVERALL SITE PLAN

SHEET
CS100
7 OF 33



LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- LOC — LIMITS OF CONSTRUCTION /DISTURBANCE
- CURB & GUTTER
- 100.00 — CONTOUR (GRADE) ELEV.
- STORM SEWER PIPE
- W — WATER LINE
- WW — WASTE WATER LINE
- GUARD RAIL
- RETAINING WALL
- FIRE LANE
- G — UNDERGROUND GAS LINE
- OU — OVERHEAD UTILITY
- UE — UNDERGROUND ELECTRIC
- IRON FENCE
- WOOD FENCE
- TOP OF BANK
- BENCHMARK
- UTILITY POLE
- GUY ANCHOR
- TRANSFORMER
- LIGHT POLE
- SIGN
- WASTE WATER MANHOLE
- CLEAN-OUT
- WATER METER/VAULT
- FIRE HYDRANT
- WATER VALVE
- STORM DRAIN MANHOLE
- STORM DRAINAGE INLET
- BFP — BACKFLOW PREVENTER
- LEGEND-PAVEMENT
- SIDEWALK
- 3" LIGHT DUTY REINFORCED CONCRETE PAVEMENT. REFERENCE GEO TECH. BY GEOTECH ENGINEERING & TESTING SERVICING.
- 6" HEAVY DUTY REINFORCED CONCRETE PAVEMENT. REFERENCE GEO TECH. BY GEOTECH ENGINEERING & TESTING SERVICING.
- 7" HEAVY DUTY REINFORCED CONCRETE PAVEMENT. REFERENCE GEO TECH. BY GEOTECH ENGINEERING & TESTING SERVICING.
- ADA STRIPING
- ADA PATH

KEYMAP
NOT TO SCALE

CAUTION:
1. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

2. ADJACENT LINEWORK AND SOME R.O.W. LINEWORK WAS DRAWN USING MAPS OBTAINED FROM GOOGLE EARTH.

*LINE WORK FOR EXISTING UTILITIES WITHIN THE R.O.W. WAS DRAWN ACCORDING TO MAPS OBTAINED FROM CENTERPOINT ENERGY AND THE CITY OF HOUSTON.

WARNING!
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1	PAVEMENT STRIPING (TYPICAL). SEE DETAIL SHEET C500.
2	6" CONCRETE CURB (TYPICAL). SEE DETAIL SHEET C501.
3	ACCESSIBLE PARKING SPACE AND STRIPING. SEE DETAIL SHEET C500.
4	ADA CURB RAMP. SEE DETAIL SHEET C502.
5	PROPOSED SIDEWALK (TYP). SEE DETAIL SHEET C502
6	PROPOSED FENCE (DETAILS BY OTHERS).
7	[illegible]
8	ACCESSIBLE PARKING SIGN. (REF: SHEET C500)
9	[illegible]
10	ACCESSIBLE PARKING SIGN. (REF. SHEET C500)
11	8" DOUBLE DETECTOR CHECK VALVE ASSEMBLY W/FIRE FLOW DETECTOR
12	2" IRRIGATION METER
13	2" [illegible] METER
14	FIRE HYDRANT. SEE DETAIL SHEET C500
15	[illegible]
16	[illegible]
17	[illegible]
18	2" BACK FLOW PREVENTOR
19	[illegible]
20	[illegible]
21	[illegible]
22	[illegible]

SITE & BUILDING DATA

ZONING:	N/A
SITE LAND USE:	EDUCATIONAL
SITE AREA:	92,8154.87 SF (21.3075 Ac.)
LIMITS OF CONSTRUCTION:	932,9368.0711 SF (21.5649 Ac.)
PROPOSED 1 BUILDING HEIGHT:	1 STORY
EXISTING BUILDING COVERAGE:	0 SF
PROPOSED BUILDING COVERAGE: (1ST FLOOR ONLY)	87,621 SF (2.01 Ac.) 9.43%
PROPOSED 2 BUILDING HEIGHT:	3 STORIES
EXISTING BUILDING COVERAGE:	0 SF
PROPOSED BUILDING COVERAGE: (1ST FLOOR ONLY)	24,212 SF (0.55 Ac.) 2.58%
GROSS BUILDING FLOOR AREA:	111,833 (2.56 Ac) GROSS SF
EXISTING IMPERVIOUS COVER:	0% (0 Ac)
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APPROVED: [signature]
DEVELOPMENT COORDINATOR
DATE: 1/5/17

PARKING AND LAND USE DATA:

REQUIRED:
N/A (FORT BEND COUNTY)

PROVIDED:

TYPE	SPACES
OPEN SPACES	862 SPACES
OPEN HANDICAP CAR	23 SPACES
OPEN HANDICAP VAN	1 SPACES
TOTAL PROVIDED PARKING:	886 SPACES

NO.	DATE	REVISION
1	11/16/2016	RESUBMITTAL FOR REVIEW
2	11/29/2016	ADDED COMMENTS
3	12/07/2016	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
4	12/27/2016	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

BIG RED DOG ENGINEERING | CONSULTING
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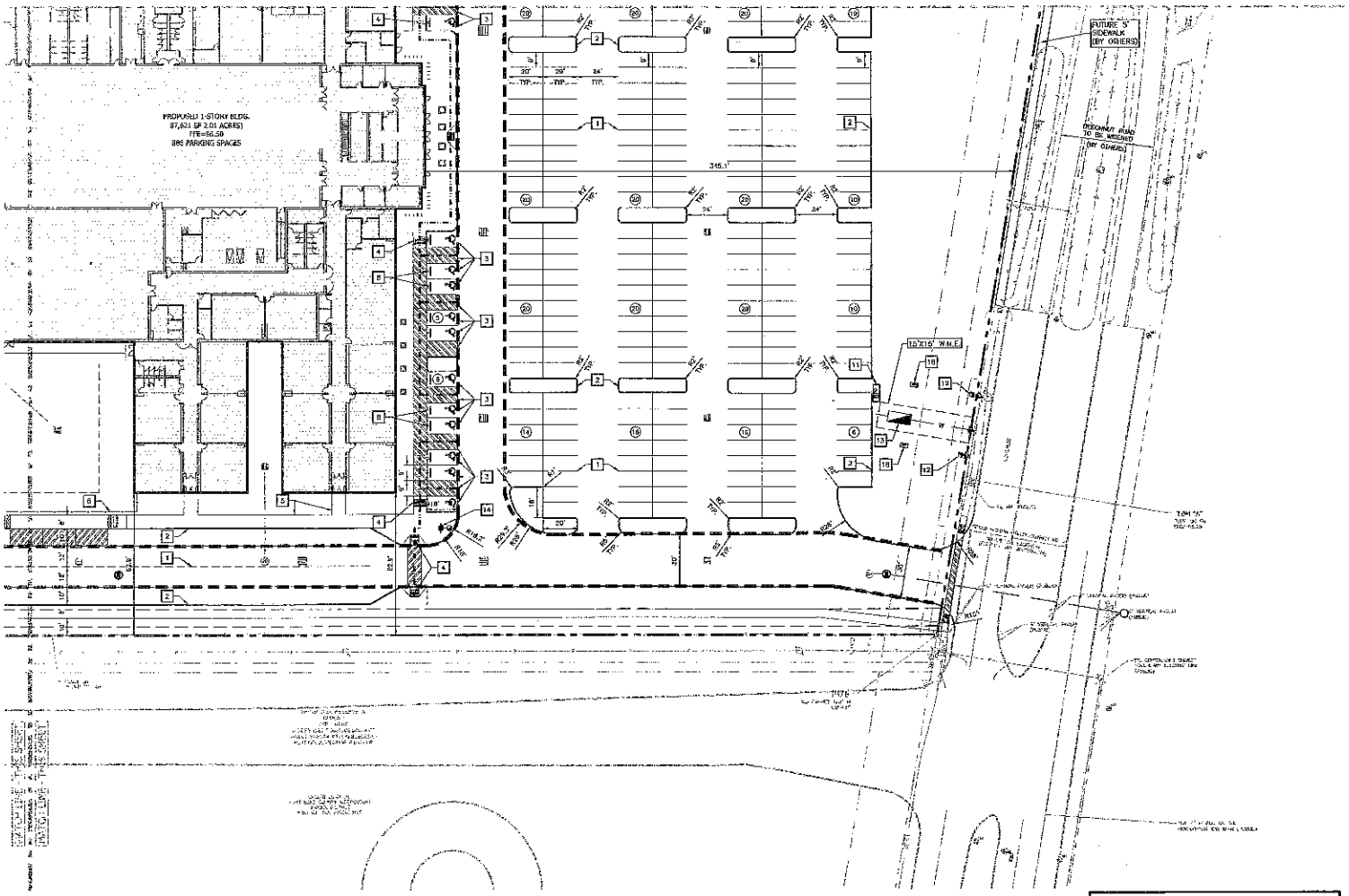
JAMES E. HUNT
117106
LICENSED PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

DETAILED SITE PLAN (NW)

SHEET
CS101
8 OF 33



0 15' 30' 60'

LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- LOC — LOC — LIMITS OF CONSTRUCTION /EASEMENT
- CURB & GUTTER
- XXXX — CONTOUR (GRADE) ELEV.
- STORM SEWER PIPE
- W — W — WATER LINE
- WW — WASTE WATER LINE
- GUARD RAIL
- RETAINED WALL
- FIRE LANE
- G — G — UNDERGROUND GAS LINE
- OU — OVERHEAD UTILITY
- UE — UNDERGROUND ELECTRIC
- WOOD FENCE
- TOP OF BANK
- BENCHMARK
- UTILITY POLE
- GUY ANCHOR
- TRANSFORMER
- LIGHT POLE
- SIGN
- WASTE WATER MANHOLE
- CLEAN-OUT
- WATER METER/VAULT
- FIRE HYDRANT
- WATER VALVE
- STORM DRAIN MANHOLE
- STORM DRAINAGE INLET
- BACKFLOW PREVENTER
- SAN. SEW.

SITE PLAN LEGEND

- ADA PATH
- FIRE LANE STRIPING
- ADA STRIPING

KEYMAP
NOT TO SCALE

APPROVED: DEVELOPMENT COORDINATOR
DATE: 1/5/17

CAUTION:
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1	PAVEMENT STRIPING (TYPICAL). SEE DETAIL SHEET C500.
2	6" CONCRETE CURB (TYPICAL). SEE DETAIL SHEET C501.
3	ACCESSIBLE PARKING SPACE AND STRIPING. SEE DETAIL SHEET C500.
4	ADA CURB RAMP. SEE DETAIL SHEET C502.
5	PROPOSED SIDEWALK (TYP). SEE DETAIL SHEET C502
6	PROPOSED FENCE (DETAILS BY OTHERS).
7	TRUCK DUMPSTER (SEE GRADING PLAN) (TYP. OF 2)
8	ACCESSIBLE PARKING SIGN (REF: SHEET C500)
9	PROPOSED BICYCLE RACK (SEE DETAIL SHEET C500)

10	ACCESSIBLE PARKING SIGN. (REF: SHEET C500)
11	6" DOUBLE DETECTOR CHECK VALVE ASSEMBLY W/LOW FLOW DETECTOR.
12	2" IRRIGATION METER.
13	6" COMBINATION WATER METER (FIRE/DOMESTIC)
14	FIRE HYDRANT. SEE DETAIL SHEET C505
15	GREASE TRAP. SEE MEP PLANS
16	PYLON MOUNTED SIGN (BY OTHERS)
17	PROPOSED BUS STOP RELOCATION (BY OTHERS)

18	2" BACK FLOW PREVENTOR
19	PROPOSED GATE PLAN LINE. REF SHEET C5100 FOR DETAILS AND COORDINATION
20	PROPOSED WHEELCHAIR TO ACCESS TERMINAL POLE.
21	PROPOSED CONCRETE SIDEWALK. REF ARCH PLANS FOR DETAILS.
22	RAMP TO TERMINAL PLAY AREAS. REF ARCH. PLANS FOR DETAILS

SITE & BUILDING DATA

ZONING:	N/A
SITE LAND USE:	EDUCATIONAL
SITE AREA:	92,8154.87 SF (21.3075 Ac.)
LIMITS OF CONSTRUCTION:	493,9368.0711 SF (21.5649 Ac.)
PROPOSED 1 BUILDING HEIGHT:	1 STORY
EXISTING BUILDING COVERAGE:	0 SF
PROPOSED BUILDING COVERAGE: (1ST FLOOR ONLY)	87,621 SF (2.01 Ac.) 9.43%
PROPOSED 2 BUILDING HEIGHT:	3 STORIES
EXISTING BUILDING COVERAGE:	0 SF
PROPOSED BUILDING COVERAGE: (1ST FLOOR ONLY)	24,212 SF (0.55 Ac.) 2.58%
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EXISTING IMPERVIOUS COVER:	0% (0 Ac)
PROPOSED IMPERVIOUS COVER:	62% (13.3 Ac.)

PARKING AND LAND USE DATA:

REQUIRED:
N/A (FORT BEND COUNTY)

PROVIDED:

TYPE	SPACES
OPEN SPACES	862 SPACES
OPEN HANDICAP CAR	23 SPACES
OPEN HANDICAP VAN	1 SPACES
TOTAL PROVIDED PARKING:	886 SPACES

NO.	DATE	REVISION
5	11/7/2016	REVISIONS PER AGENCY REVIEW
4	11/2/2016	ADDITIONAL INFO
3	10/26/2016	RESUBMITTAL TO - DRI FBCO COUNTY SDP REVIEW
2	10/7/2016	RESUBMITTAL TO - DRI FBCO COUNTY FOR FINAL APPROVAL
1	9/14/2016	RESUBMITTAL TO - DRI FBCO COUNTY FOR FINAL APPROVAL

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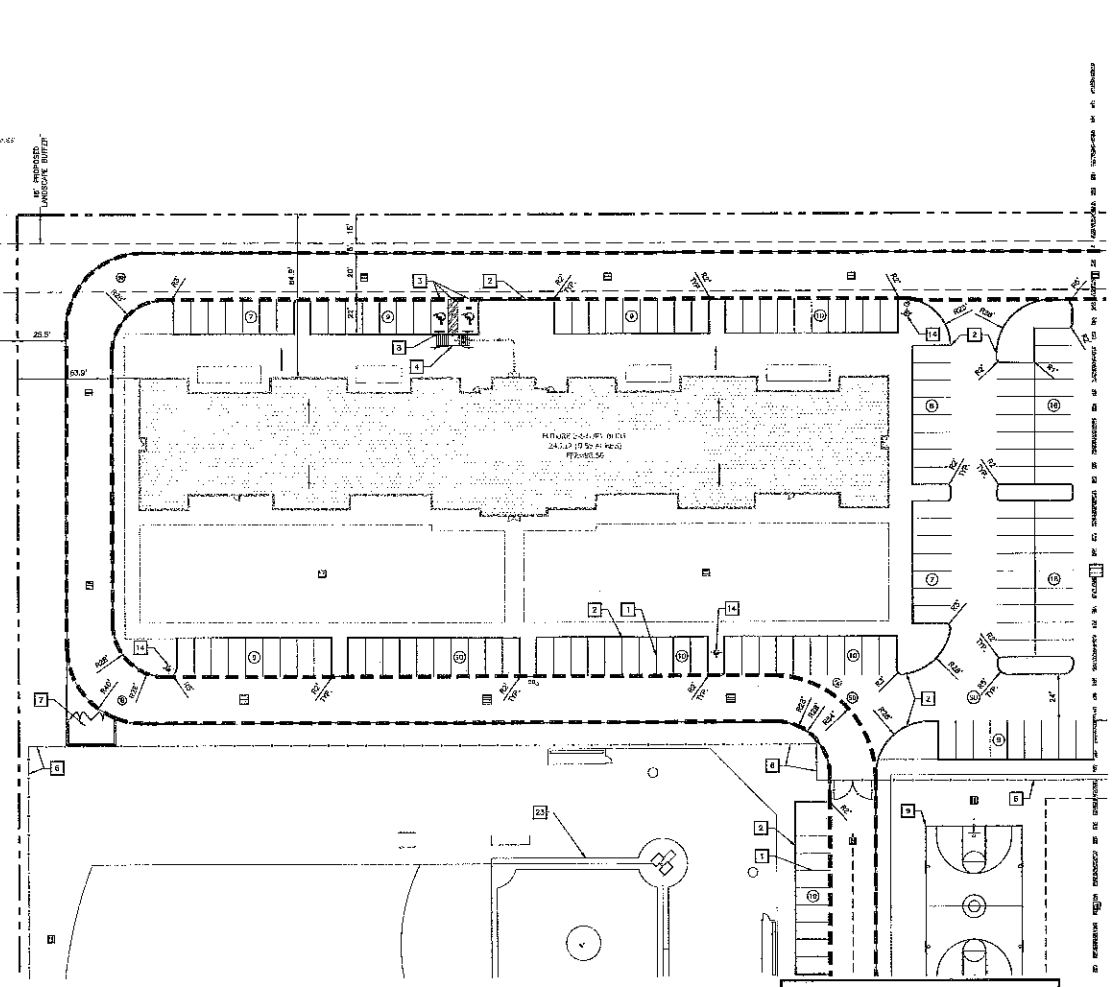
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

DETAILED SITE PLAN (NE)

SHEET
CS102
9 OF 33



LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- LOC — LIMITS OF CONSTRUCTION /DISTURBANCE
- CURB & GUTTER
- CONTOUR (GRADE) ELEV.
- SD — STORM SEWER PIPE
- W — WATER LINE
- WW — WASTE WATER LINE
- GUARD RAIL
- RETAINING WALL
- FIRE LANE
- G — UNDERGROUND GAS LINE
- OU — OVERHEAD UTILITY
- UE — UNDERGROUND ELECTRIC
- IRON FENCE
- WOOD FENCE
- TOP OF BANK
- BENCHMARK
- UTILITY POLE
- GUY ANCHOR
- TRANSFORMER
- LIGHT POLE
- SIGN
- WASTE WATER MANHOLE
- CO — CLEAN-OUT
- WATER METER/VALVE
- FIRE HYDRANT
- WATER VALVE
- STORM DRAIN MANHOLE
- STORM DRAINAGE INLET
- BFP — BACKFLOW PREVENTER
- MB — MAIL BOX

SITE PLAN LEGEND

- ADA PATH
- FIRE LANE STRIPING
- ADA STRIPING

KEYMAP
NOT TO SCALE

CAUTION:
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1	PAVEMENT STRIPING (TYPICAL). SEE DETAIL SHEET C500.
2	6" CONCRETE CURB (TYPICAL). SEE DETAIL SHEET C501.
3	ACCESSIBLE PARKING SPACE AND STRIPING. SEE DETAIL SHEET C500.
4	ADA CURB RAMP. SEE DETAIL SHEET C502.
5	PROPOSED SIDEWALK (TYP). SEE DETAIL SHEET C502
6	PROPOSED FENCE (DETAILS BY OTHERS).
7	TRASH DUMPSTER (REF: ARCH PLANS FOR DETAILS)
8	ACCESSIBLE PARKING SIGN (REF: SHEET C500)
9	PROPOSED BASKETBALL COURT (DETAILS BY OTHERS)
10	ACCESSIBLE PARKING SIGN. (REF: SHEET C500)
11	8" DOUBLE DETECTOR CHECK VALVE ASSEMBLY W/WATER FLOW INDICATOR
12	2" IRRIGATION METER.
13	3" COMBINATION WATER METER (FIRE/DOMESTIC)
14	FIRE HYDRANT. SEE DETAIL SHEET C505
15	GREASE TRAP. REF. ARCH PLANS
16	PYLON MOUNTED SIGN BY OTHERS
17	PAINTED ADA SIGN. REF. ARCH PLANS
18	2" BACK FLOW PREVENTER
19	PROPOSED 10' FIRE LANE. SEE SHEET C510 FOR DETAILS AND CONSTRUCTION
20	PROPOSED APPROACH TO ACCESS HYDRANT POLE
21	PROPOSED CONCRETE SIDEWALK. REF. ARCH PLANS FOR DETAILS.
22	SEAL TO SUITFALL PLAN AREAS. REF. ARCH PLANS FOR DETAILS.
23	PROPOSED BASEBALL FIELD (DETAILS BY OTHERS)

SITE & BUILDING DATA

ZONING:	N/A
SITE LAND USE:	EDUCATIONAL
SITE AREA:	92,8154.87 SF (21.3075 Ac.)
LIMITS OF CONSTRUCTION:	493,9368.0711 SF (21.5649 Ac.)
PROPOSED 1 BUILDING HEIGHT:	1 STORY
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APPROVED: Maggie Dent
DEVELOPMENT COORDINATOR
DATE: 1/5/17

PARKING AND LAND USE DATA:

REQUIRED:
N/A (FORT BEND COUNTY)

PROVIDED:

TYPE	SPACES
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3	12/20/2016	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
4	12/27/2016	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
5	1/4/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL
6	1/5/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL
7	1/6/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

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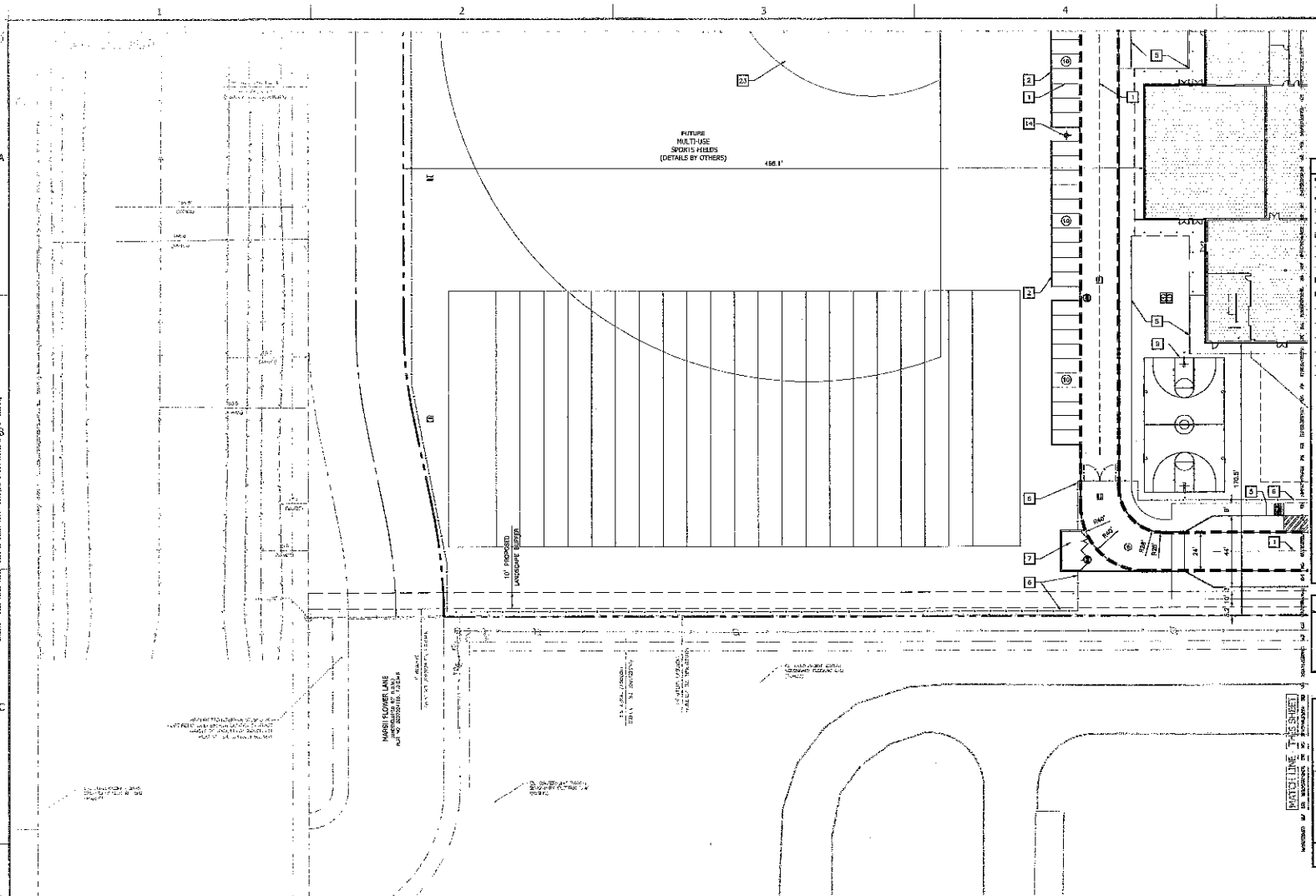
JAMES S. FRAME
117108
LICENSED
PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

DETAILED SITE PLAN (SW)

SHEET
CS103
10 OF 33



LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- LIMITS OF CONSTRUCTION /DISTURBANCE
- CURB & GUTTER
- CONTOUR (GRADE) ELEV.
- STORM SEWER PIPE
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- GUARD RAIL
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- FIRE LANE
- UNDERGROUND GAS LINE
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- BENCHMARK
- UTILITY POLE
- GUY ANCHOR
- TRANSFORMER
- LIGHT POLE
- SIGN
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- CLEAN-OUT
- WATER METER/VALVE
- FIRE HYDRANT
- WATER VALVE
- STORM DRAIN MANHOLE
- STORM DRAINAGE INLET
- BACKFLOW PREVENTER
- MAIL BOX

SITE PLAN LEGEND

- ADA PATH
- FIRE LANE STRIPING
- ADA STRIPING

KEYMAP
NOT TO SCALE

CAUTION:
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1. PAVEMENT STRIPING (TYPICAL). SEE DETAIL SHEET C5001.
2. 6" CONCRETE CURB (TYPICAL). SEE DETAIL SHEET C5001.
3. ACCESSIBLE PARKING SPACE AND STRIPING. SEE DETAIL SHEET C5001.
4. ADA CURB RAMP. SEE DETAIL SHEET C5002.
5. PROPOSED SIDEWALK (TYP). SEE DETAIL SHEET C5002
6. PROPOSED FENCE (DETAILS BY OTHERS).
7. TRASH DUMPSTER (REF: ARCH PLANS FOR DETAILS)
8. HOUSELID PLAY GROUND (DETAILS BY OTHERS)
9. PROPOSED BASKETBALL COURT (DETAILS BY OTHERS)
10. ACCESSIBLE PARKING SIGN. (REF: SHEET C5001)
11. 18" DUCTILE UNIFORCED CHECK VALVE PREDAMPT BACKFLOW PREVENTOR.
12. 2" IRRIGATION METER
13. 2" DOMESTIC WATER METER
14. FIRE HYDRANT. SEE DETAIL SHEET C5005
15. FIRE RAMP. REF. ARCH PLANS
16. BACKFLOW PREVENTER (DETAILS BY OTHERS)
17. PROPOSED BIKE RACK (DETAILS BY OTHERS)
18. 2" BACK FLOW PREVENTOR
19. PROPOSED LEFT TURN LANE. REF SHEET C5100 FOR DETAILS AND CONSTRUCTION.
20. PROPOSED APPROACH TO ACCESS TERMINAL POLE
21. PROPOSED GRANITE SIDEWALK. REF. ARCH. PLANS FOR DETAILS.
22. RAMP TO SOFTBALL PLAY AREAS. REF. ARCH. PLANS FOR DETAILS.
23. PROPOSED BASEBALL FIELD (DETAILS BY OTHERS)

SITE & BUILDING DATA

ZONING:	N/A
SITE LAND USE:	EDUCATIONAL
SITE AREA:	92,8154.87 SF (21.3079 Ac.)
LIMITS OF CONSTRUCTION:	±93,9358.0711 SF (21.5649 Ac.)
PROPOSED 1 BUILDING HEIGHT:	1 STORY
EXISTING BUILDING COVERAGE:	0 SF
PROPOSED BUILDING COVERAGE: (1ST FLOOR ONLY)	87,621 SF (2.01 Ac.) 9.43%
PROPOSED 2 BUILDING HEIGHT:	3 STORIES
EXISTING BUILDING COVERAGE:	0 SF
PROPOSED BUILDING COVERAGE: (1ST FLOOR ONLY)	24,212 SF (0.55 Ac.) 2.58%
GROSS BUILDING FLOOR AREA:	111,833 (2.56 Ac) GROSS SF
EXISTING IMPERVIOUS COVER:	0% (0 Ac)
PROPOSED IMPERVIOUS COVER:	62% (13.3 Ac.)

APPROVED: _____ DEVELOPMENT COORDINATOR
DATE: 1/5/17

PARKING AND LAND USE DATA:

REQUIRED:
N/A (FORT BEND COUNTY)

PROVIDED:

TYPE	SPACES
OPEN SPACES	862 SPACES
OPEN HANDICAP CAR	23 SPACES
OPEN HANDICAP VAN	1 SPACES
TOTAL PROVIDED PARKING:	886 SPACES

NO.	DATE	REVISION
1	11/16/2016	RESUBMITTAL FOR AGENCY REVIEW
2	11/29/2016	ADDRESS NCS
3	12/07/2016	PER COMMENTS FROM FORT BEND COUNTY FOR REVIEW
4	01/05/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

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JAMES S. HOWAT
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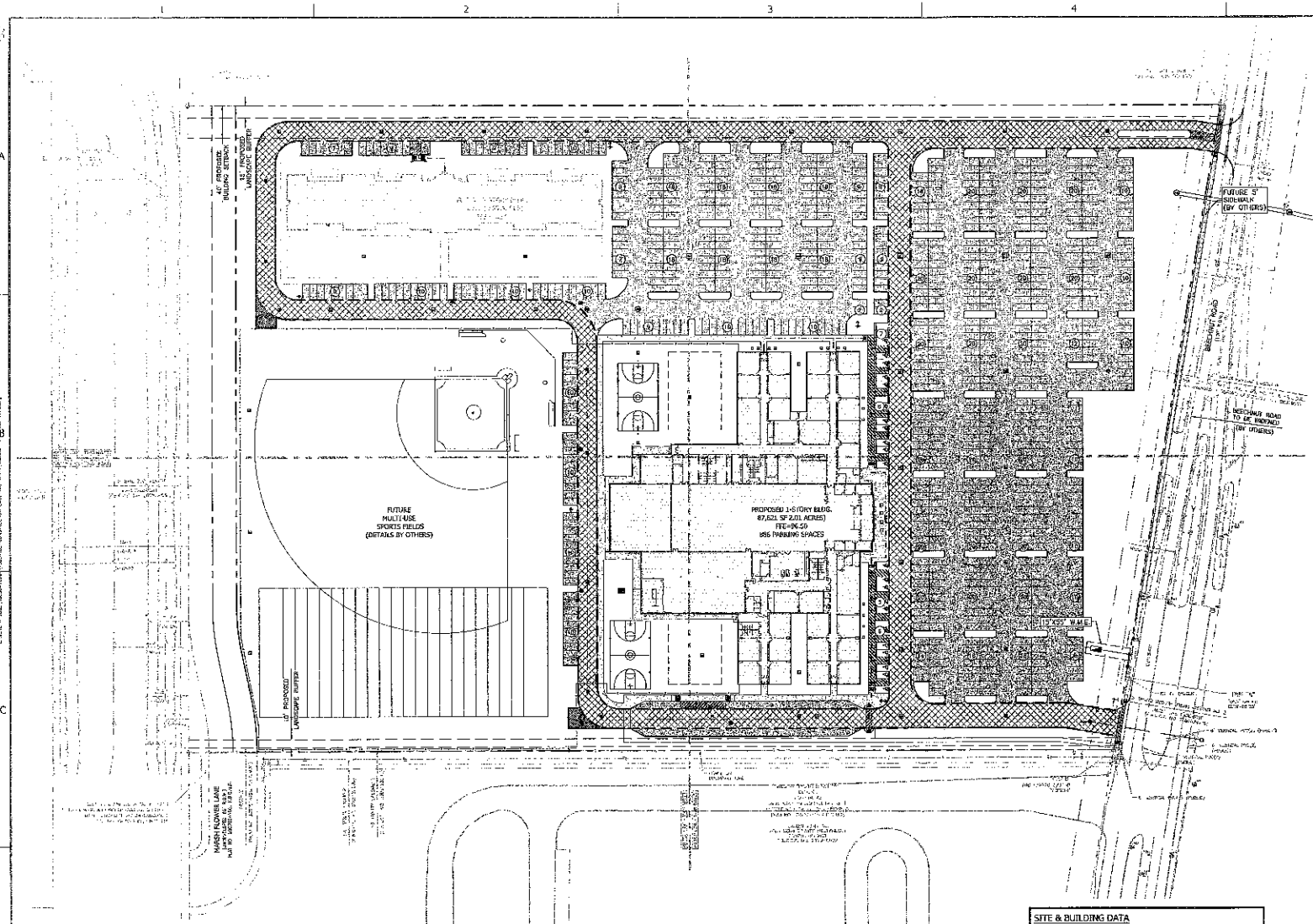
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

DETAILED SITE PLAN (SE)

SHEET
CS104
11 OF 33

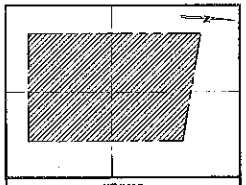


LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- LIMITS OF CONSTRUCTION (FUTURE)
- CURB & GUTTER
- CONTOUR (MINOR) ELEV.
- STORM SEWER PIPE
- WATER LINE
- WASTE WATER LINE
- GUARD RAIL
- RETAINING WALL
- FIRE LANE
- UNDERGROUND GAS LINE
- OVERHEAD UTILITY
- UNDERGROUND ELECTRIC
- IRON FENCE
- WOOD FENCE
- TOP OF BANK
- BENCHMARK
- UTILITY POLE
- GUY ANCHOR
- TRANSFORMER
- LIGHT POLE
- SIGN
- WASTE WATER MANHOLE
- CLEAN-OUT
- WATER METER/VAULT
- FIRE HYDRANT
- WATER VALVE
- STORM DRAIN MANHOLE
- STORM DRAINAGE INLET
- BACKFLOW PREVENTER
- MAIL BOX

LEGEND-PAVEMENT

- SIDEWALK
- 5" LIGHT DUTY REINFORCED CONCRETE PAVEMENT. REFERENCE GEO TECH. BY GEOTECH ENGINEERING & TESTING SUBGRADE.
- 6" HEAVY DUTY REINFORCED CONCRETE PAVEMENT. REFERENCE GEO TECH. BY GEOTECH ENGINEERING & TESTING SUBGRADE.
- 7" HEAVY DUTY REINFORCED CONCRETE PAVEMENT. REFERENCE GEO TECH. BY GEOTECH ENGINEERING & TESTING SUBGRADE.
- ADA STRIPING
- ADA TRUCK



KEYMAP
NOT TO SCALE

CAUTION!
1. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

2. ADJACENT LINEWORK AND SOME R.O.W. LINEWORK WAS DRAWN USING MAPS OBTAINED FROM GOOGLE EARTH.

*LINE WORK FOR EXISTING UTILITIES WITHIN THE R.O.W. WAS DRAWN ACCORDING TO MAPS OBTAINED FROM CENTERPOINT ENERGY AND THE CITY OF HOUSTON.

WARNING!
THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING ALL EXISTING UTILITIES BY CALLING TEXAS ONE CALL SYSTEM @ 811 FOR LOCATION OF ALL UTILITIES, AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION.

SITE & BUILDING DATA

ZONING:	N/A
SITE LAND USE:	EDUCATIONAL
SITE AREA:	92,8154.87 SF (21.3075 Ac.)
LIMITS OF CONSTRUCTION:	±93,8368.0711 SF (21.5649 Ac.)
PROPOSED 1 BUILDING HEIGHT:	1 STORY
EXISTING BUILDING COVERAGE:	0 SF
PROPOSED BUILDING COVERAGE: (1ST FLOOR ONLY)	87,621 SF (2.01 Ac.) 9.43%
PROPOSED 2 BUILDING HEIGHT:	3 STORIES
EXISTING BUILDING COVERAGE:	0 SF
PROPOSED BUILDING COVERAGE: (1ST FLOOR ONLY)	24,212 SF (0.55 Ac.) 2.88%
GROSS BUILDING FLOOR AREA:	111,833 (2.55 Ac) GROSS SF
EXISTING IMPERVIOUS COVER:	0% (0 Ac)
PROPOSED IMPERVIOUS COVER:	62% (13.3 Ac.)

APPROVED: DEVELOPMENT COORDINATOR
DATE: 1/5/17

PARKING AND LAND USE DATA:

REQUIRED:
N/A (FORT BEND COUNTY)

PROVIDED:

TYPE	SPACES
OPEN SPACES	862 SPACES
OPEN HANDICAP CAR	23 SPACES
OPEN HANDICAP VAN	1 SPACES
TOTAL PROVIDED PARKING:	886 SPACES

NO.	DATE	REVISION
3	1/18/2016	RESUBMITTAL FOR AGENCY REVIEW
2	11/18/2016	CONDITIONAL TWC
1	7/11/2016	FOR PARK BOARD COMMENTS
0	01/03/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

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January 3, 2017

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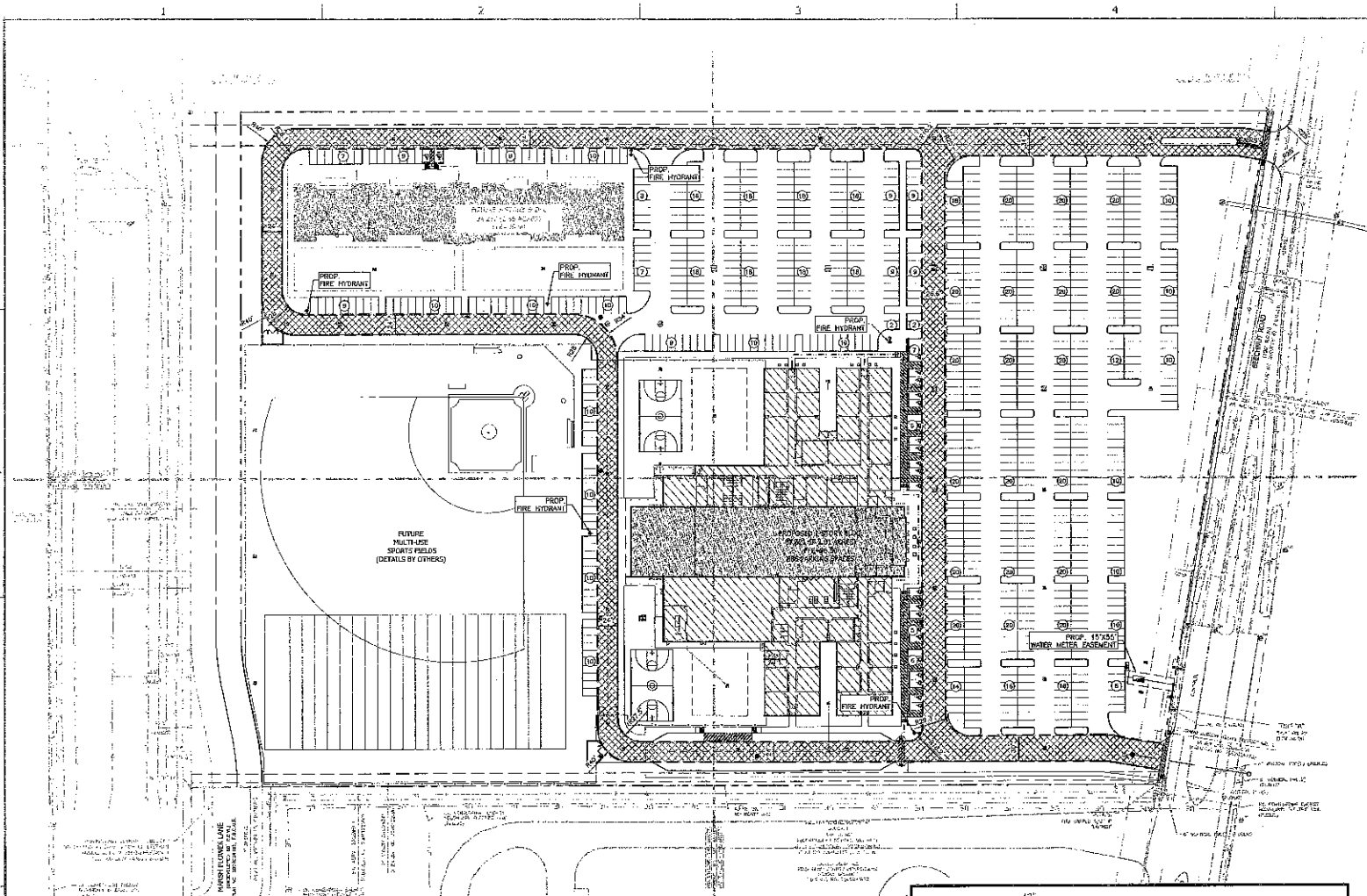
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

SITE PAVING PLAN

SHEET
CS105
12 OF 33



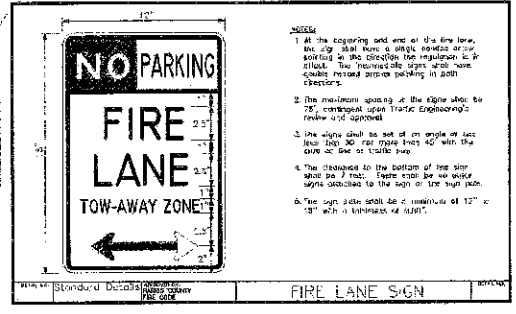
LEGEND

- RIGHT OF WAY / EASEMENT / SETBACK
- LIMITS OF CONSTRUCTION / DISTURBANCE
- CURB & GUTTER
- CONTOUR (GRADE) ELEV.
- STORM SEWER PIPE
- WATER LINE
- WASTE WATER LINE
- GUARD RAIL
- RETAINING WALL
- FIRE LANE
- UNDERGROUND GAS LINE
- OVERHEAD UTILITY
- UNDERGROUND ELECTRIC
- IRON FENCE
- WOOD FENCE
- TOP OF BANK
- BENCHMARK
- UTILITY POLE
- GUY ANCHOR
- TRANSFORMER
- LIGHT POLE
- SIGN
- WASTE WATER MANHOLE
- CLEAN-OUT
- WATER METER/VAULT
- FIRE HYDRANT
- WATER VALVE
- STORM DRAIN MANHOLE
- STORM DRAINAGE INLET
- BACKFLOW PREVENTOR
- MAIL BOX

SITE PLAN LEGEND

- FIRE LANE STRIPING
- FIRE ACCESS ROAD
- PORTION OF BUILDING UNDER 30' IN HEIGHT
- PORTION OF BUILDING OVER 30' IN HEIGHT

APPROVED: Mary Dodd
DEVELOPMENT COORDINATOR
DATE: 1/5/17



NOTES:

1. At the beginning and end of the fire lane, the sign shall have a single reverse arrow pointing in the direction the regulation is in effect. The intermediate signs shall have double reversed arrows pointing in both directions.
2. The maximum spacing of the signs shall be 75', contingent upon Traffic Engineering's review and approval.
3. The signs shall be set at an angle of less than 30 nor more than 45° with the curb or line of traffic flow.
4. The distance to the bottom of the sign shall be 7 feet. Place sign be on either signs attached to the sign or the sign pole.
5. The sign plate shall be a minimum of 12" x 18" with a thickness of (.080").

Detail Ref. Standard Details | AS REQUIRED BY HARRIS COUNTY FIRE CODE | FIRE LANE SIGN | REVISION

NOTES:

1. FIRE ACCESS ROAD TO BE ALL WEATHER AND SUPPORT A FIRE APPARATUS WEIGHING SEVENTY-FIVE THOUSAND (75,000) POUNDS.
2. FIRE ACCESS ROAD TO MAINTAIN UNOBSTRUCTED VERTICAL CLEARANCE OF AT LEAST THIRTEEN AND ONE-HALF (13.5) FEET.
3. FIRE ACCESS ROAD SHALL BE LOCATED NO FURTHER THAN TWENTY (20) FEET FROM THE MAIN ENTRANCE OF THE BUILDING.
4. FIRE ACCESS ROAD SHALL BE TWENTY-SIX (26) FEET IN WIDTH IN THE IMMEDIATE VICINITY OF ANY BUILDING EXCEEDING THIRTY (30) FEET IN HEIGHT.
5. *CURBS LOCATED ON EITHER SIDE OF A FIRE LANE SHALL BE PAINTED RED OR A RED STRIP SHALL BE PLACED ALONG THE PAVEMENT WHERE THERE IS NO CURB. WHERE A FIRE LANE PASSES BETWEEN HEAD-IN PARKING SPACES, THE RED STRIP SHOULD BE PLACED ALONG THE REAR OF THESE SPACES CLEARLY DEFINING THE FIRE LANE. PAINTED CURBS AND FIRE LANE STRIPS SHALL ALSO BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "FIRE LANE-TOW AWAY ZONE" IN WHITE LETTERS AT LEAST THREE (3) INCHES IN HEIGHT, AT INTERVALS NOT EXCEEDING FIFTY (50) FEET. WHERE FIRE LANES ARE CLEARLY DEFINED BY CURB/PAVEMENT STRIPING, FIRE LANE SIGNS ARE NOT REQUIRED. FIRE LANE SIGNS SHOULD BE PLACED EVERY (75) FEET ALONG ANY FIRE LANE WHERE PAVEMENT OR CURB STRIPING IS NOT PRACTICAL.

NO.	DATE	REVISIONS
1	11/17/16	RESIDENTIAL FOR AGENCY REVIEW
2	1/03/17	REDESIGN WO
3	1/03/17	R.O.'S COMMENTS
4	1/05/17	RESIDENTIAL TO DRAFT AND COLLECT FIRE RING APPROVAL

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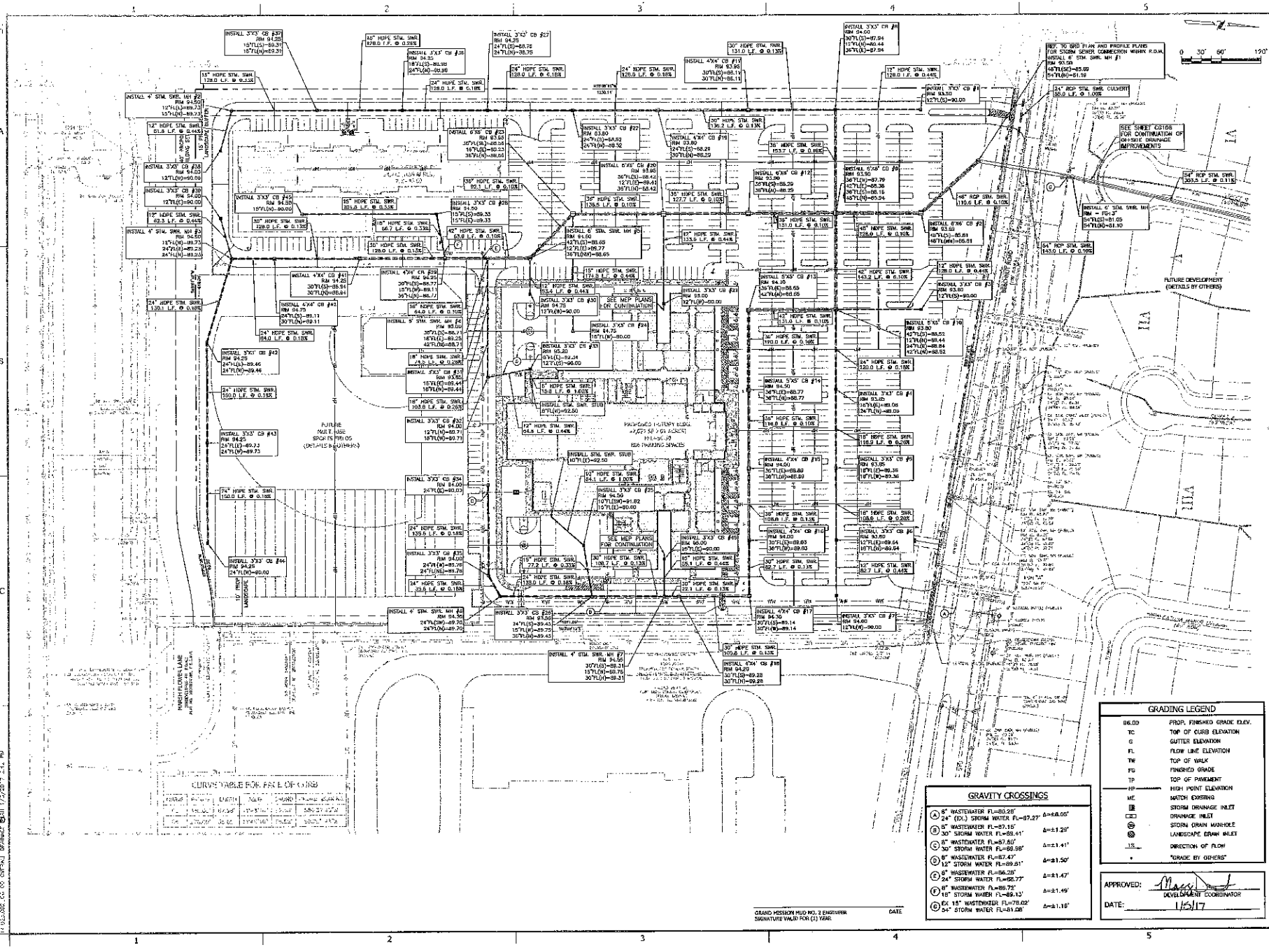
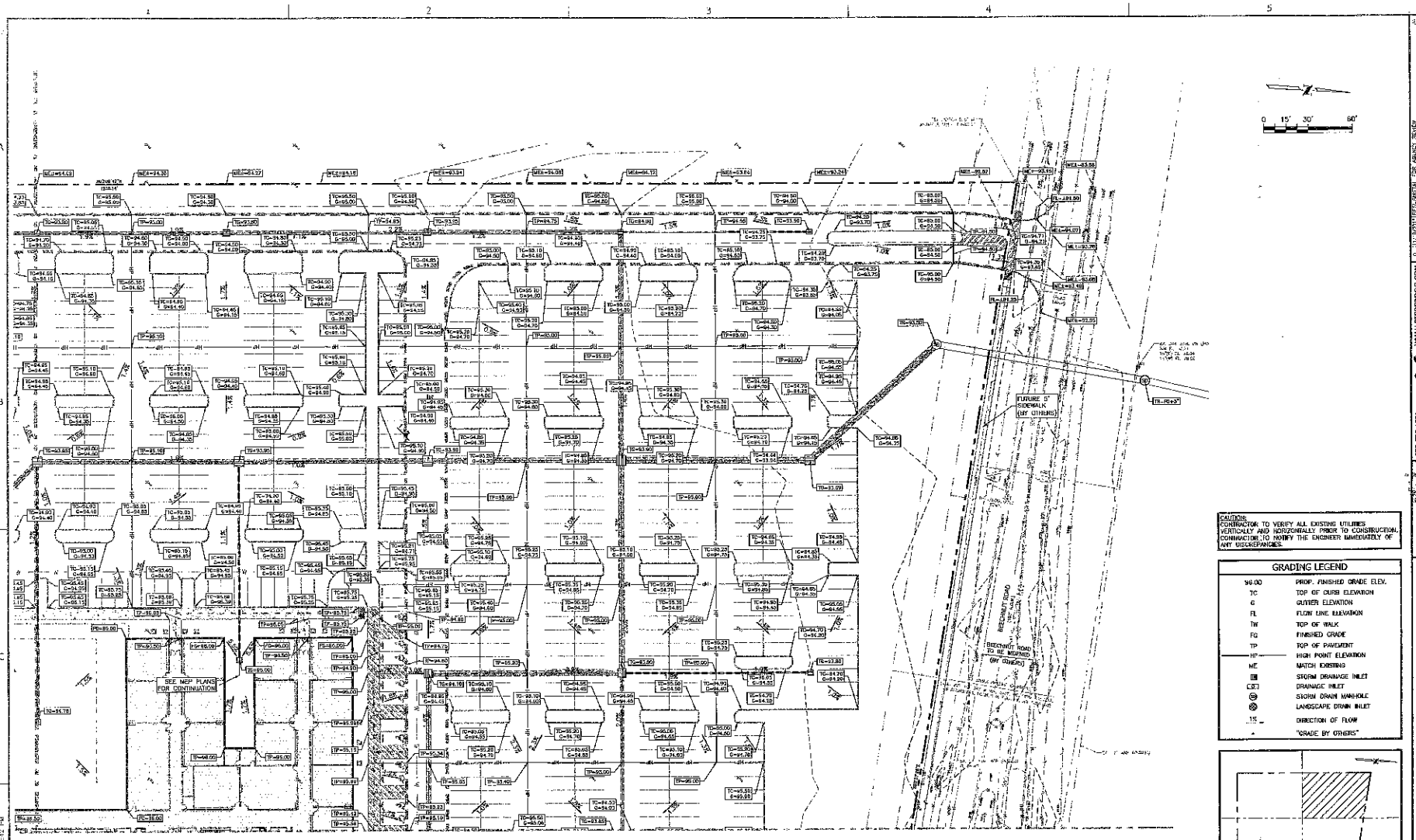
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

FIRE ACCESS ROAD AND FIRE LANE LAYOUT PLAN

SHEET
CS106
13 OF 33


FUTURE DEVELOPMENT (DETAILS BY OTHERS)
FUTURE MULTI-USE SPORTS FIELDS (DETAILS BY OTHERS)
SEE SHEET CG108 FOR CONTINUATION OF OFFSITE DRAINAGE IMPROVEMENTS
REF. TO GRD PLAN AND PROFILE PLANS FOR STORM SEWER CONNECTION WITHIN R.O.W.
SEE MEP PLANS FOR CONTINUATION
CURVE TABLE FOR FACE OF CURB
GRADING LEGEND
GRAVITY CROSSINGS
APPROVED:
DEVELOPMENT COORDINATOR
DATE: 1/5/17
GRAND MISSION MUD NO. 2 ENGINEER SIGNATURE VALID FOR (1) YEAR
DATE
BIG RED DOG
ENGINEERING & CONSULTING
TEXAS REG. NO. F-11201
2202 SAWMILL STREET, SUITE 210, HOUSTON, TEXAS 77008
TEXAS REG. NO. F-11201
www.bigreddog.com
832.736.1901
January 3, 2017
INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407
OVERALL DRAINAGE PLAN
SHEET
CG100
14 OF 33



CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

GRADING LEGEND

98.00	PROP. FINISHED GRADE ELEV.
TC	TOP OF CURB ELEVATION
G	GUTTER ELEVATION
FL	FLOW LINE ELEVATION
TW	TOP OF WALK
FG	FINISHED GRADE
TP	TOP OF PAVEMENT
HP	HIGH POINT ELEVATION
ME	MATCH EXISTING
	STORM DRAINAGE INLET
	DRAINAGE INLET
	STORM DRAIN MANHOLE
	LANDSCAPE DRAIN INLET
.15	DIRECTION OF FLOW
*	"GRADE BY OTHERS"

KEYMAP
NOT TO SCALE

APPROVED: _____ DEVELOPMENT COORDINATOR
DATE: 1/3/17

NO.	DATE	REVISION
0	11/30/2016	ISSUED FOR - FOR AGENCY REVIEW
1	11/29/2016	PER COMMENTS
2	12/20/2016	ISSUED FOR - FOR BOND COUNTY FOR REVIEW
3	01/03/2017	ISSUED FOR - TO FORM BOND COUNTY FOR FINAL APPROVAL

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TEXAS REG. NO. F-11801
SZE-790-1901

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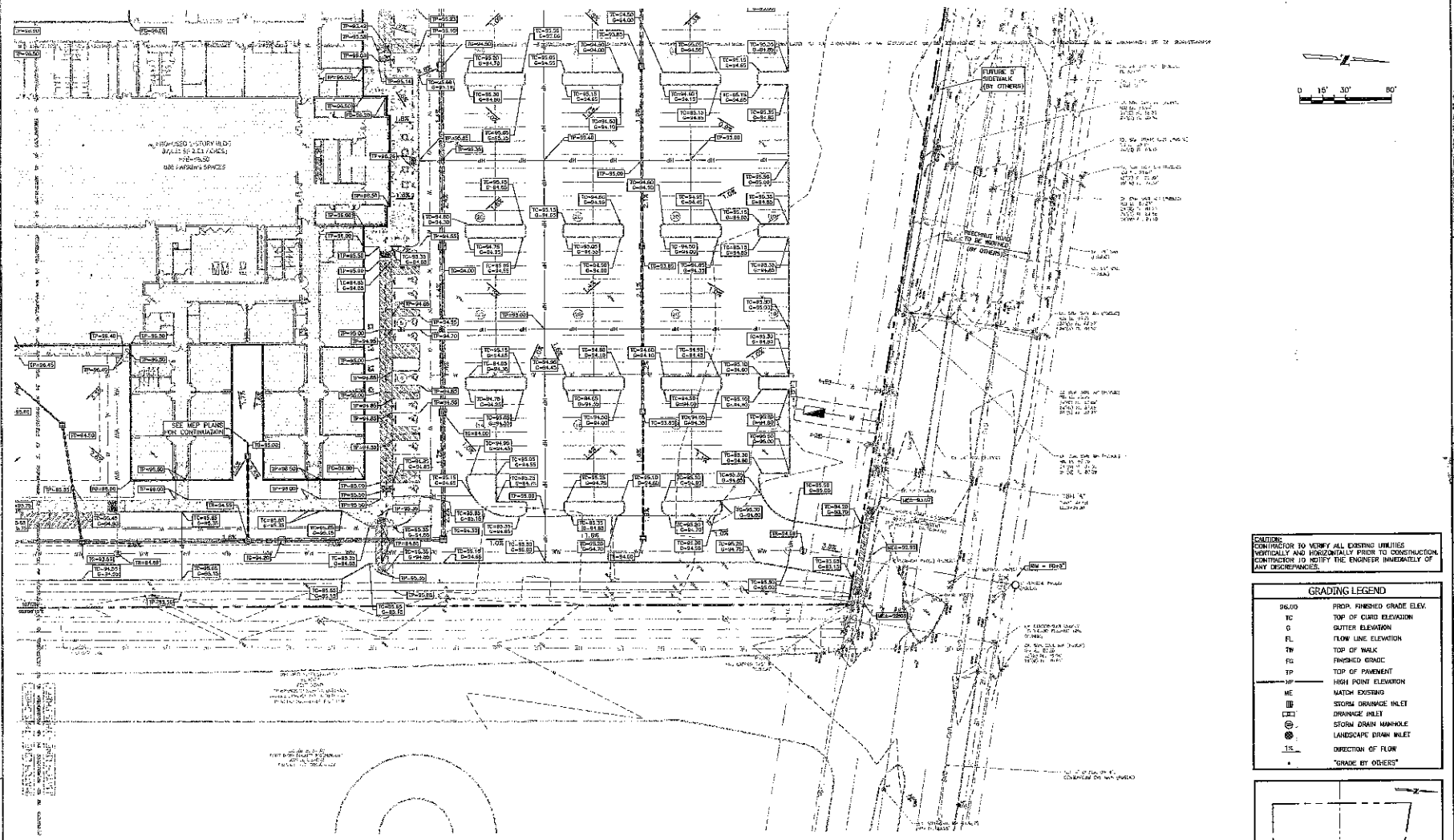
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
28055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

DETAILED GRADING PLAN (NW)

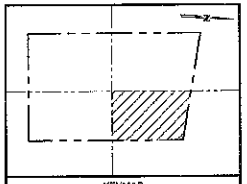
SHEET
CG101
15 OF 33



CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

GRADING LEGEND

96.00	PROP. FINISHED GRADE ELEV.
TC	TOP OF CURB ELEVATION
G	GUTTER ELEVATION
FL	FLOW LINE ELEVATION
TW	TOP OF WALK
FG	FINISHED GRADE
TP	TOP OF PAVEMENT
HP	HIGH POINT ELEVATION
ME	MATCH EXISTING
	STORM DRAINAGE INLET
	DRAINAGE INLET
	STORM DRAIN MANHOLE
	LANDSCAPE DRAIN INLET
1%	DIRECTION OF FLOW
*	"GRADE BY OTHERS"



KEYMAP
NOT TO SCALE

APPROVED: Maggie
DEVELOPMENT COORDINATOR
DATE: 1/5/17

NO.	DATE	REVISION
1	11/28/2016	RESUBMITTAL FOR AGENCY REVIEW
2	11/27/2016	ADDENDUM NO. 1
3	12/20/2016	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
4	1/5/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

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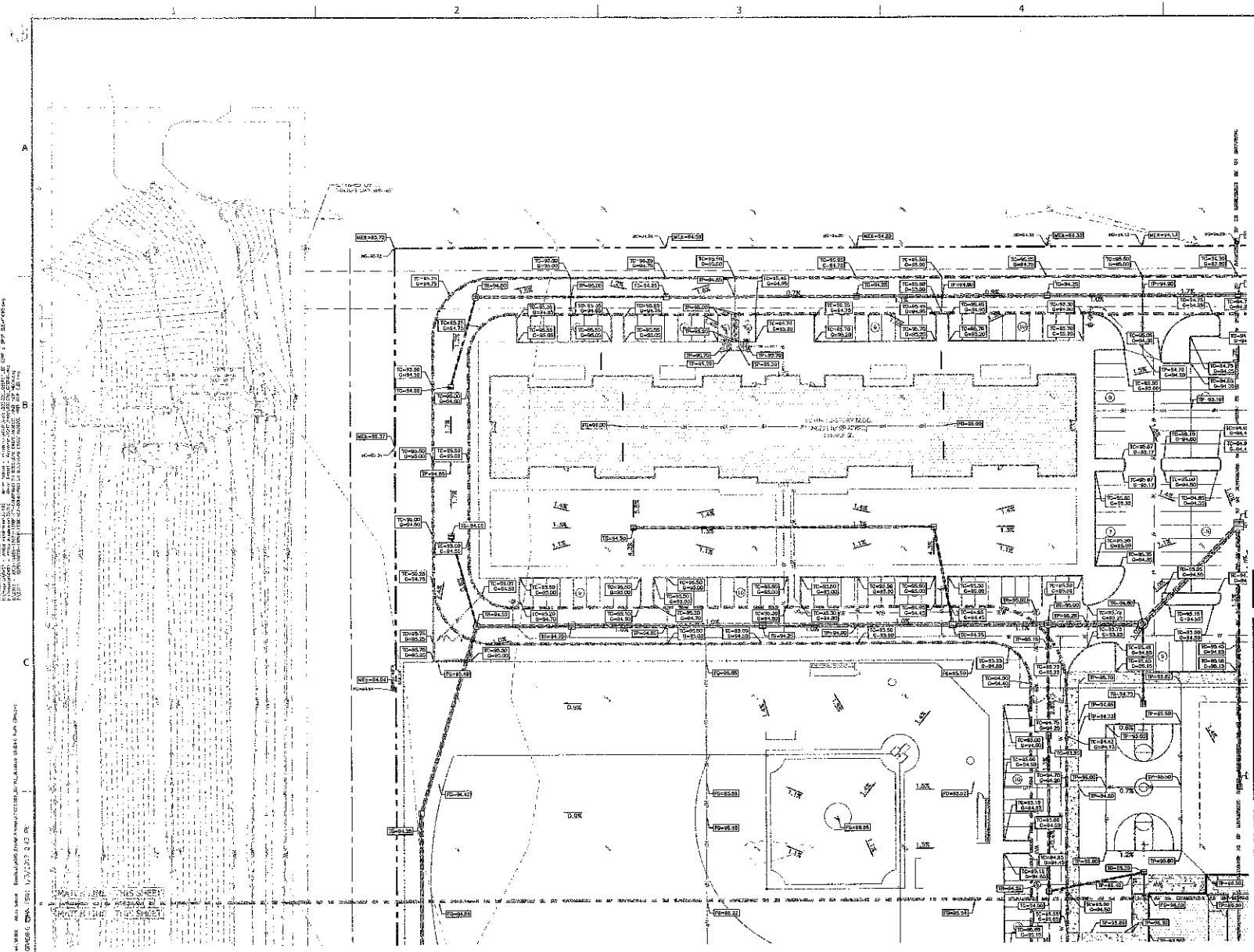
STATE OF TEXAS
117106
LICENSED
PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

DETAILED GRADING PLAN (NE)

SHEET
CG102
16 OF 33



CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

GRADING LEGEND

96.00	PROP. FINISHED GRADE ELEV.
TC	TOP OF CURB ELEVATION
G	GUTTER ELEVATION
FL	FLOW LINE ELEVATION
TW	TOP OF WALK
FG	FINISHED GRADE
TP	TOP OF PAVEMENT
HP	HIGH POINT ELEVATION
ME	MATCH EXISTING
	STORM DRAINAGE INLET
	DRAINAGE INLET
	STORM DRAIN MANHOLE
	LANDSCAPE DRAIN INLET
	DIRECTION OF FLOW
*	"GRADE BY OTHERS"

KEYMAP
NOT TO SCALE

APPROVED: Maggie Dowdell
DEVELOPMENT COORDINATOR
DATE: 1/5/17

NO.	DATE	REVISION
1	11/28/2016	RESIDENTIAL FOR AGENCY REVIEW
2	12/22/16	ADDENDUM TWO
3	1/3/2017	REQUIRED REQUIREMENTS TO TCEQ SWQ COUNTY FOR REVIEW
4	1/3/2017	REQUIRED REQUIREMENTS TO FORT BEND COUNTY FOR FINAL APPROVAL

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TEXAS REG. NO. F-1391
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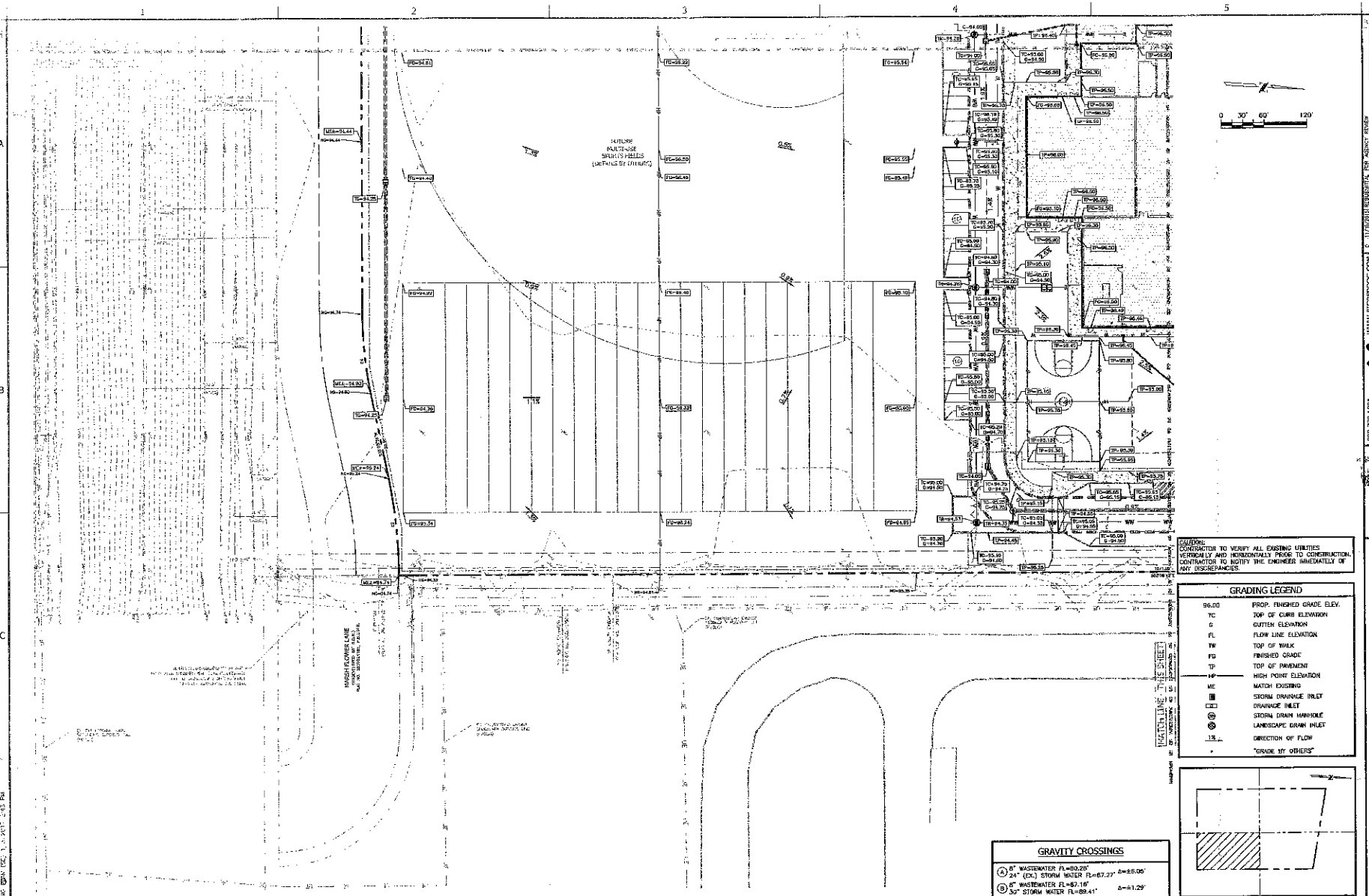
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

DETAILED GRADING PLAN (SW)

SHEET
CG103
17 OF 33



CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

GRADING LEGEND

96.00	PROP. FINISHED GRADE ELEV.
TC	TOP OF CURB ELEVATION
G	GUTTER ELEVATION
FL	FLOW LINE ELEVATION
TW	TOP OF WALK
FG	FINISHED GRADE
TP	TOP OF PAVEMENT
HP	HIGH POINT ELEVATION
ME	MATCH EXISTING
	STORM DRAINAGE INLET
	DRAINAGE INLET
	STORM DRAIN MANHOLE
	LANDSCAPE DRAIN INLET
1%	DIRECTION OF FLOW
•	"GRADE BY OTHERS"

GRAVITY CROSSINGS

(A)	8" WASTEWATER FL=80.28' 24" (EX.) STORM WATER FL=87.27'	Δ=±6.05'
(B)	6" WASTEWATER FL=87.18' 30" STORM WATER FL=89.41'	Δ=±1.29'
(C)	8" WASTEWATER FL=87.60' 30" STORM WATER FL=89.98'	Δ=±1.41'
(D)	6" WASTEWATER FL=87.47' 12" STORM WATER FL=89.81'	Δ=±1.50'
(E)	8" WASTEWATER FL=86.28' 24" STORM WATER FL=88.77'	Δ=±1.47'
(F)	8" WASTEWATER FL=86.72' 18" STORM WATER FL=89.13'	Δ=±1.48'
(G)	EX. 15" WASTEWATER FL=76.02' 54" STORM WATER FL=81.08'	Δ=±1.16'

KEYMAP
NOT TO SCALE

APPROVED: Margit Dot
DEVELOPMENT COORDINATOR
DATE: 1/5/17

NO.	DATE	REVISION
0	11/16/2016	RESUBMITTAL FOR AGENCY REVIEW
1	11/22/2016	ADDENDUM NO. 1
2	12/20/2016	SUBMITTAL FOR BID COUNTY FOR REVIEW
3	01/03/2017	RESUBMITTAL NO. FOUR BID COUNTY FOR FINAL APPROVAL

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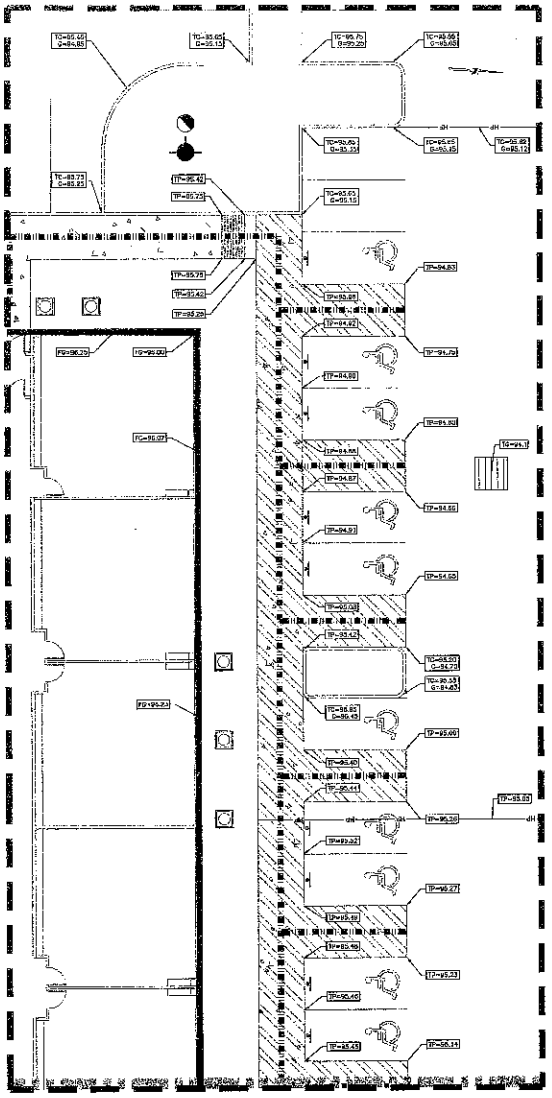
January 5, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

DETAILED GRADING PLAN (SE)

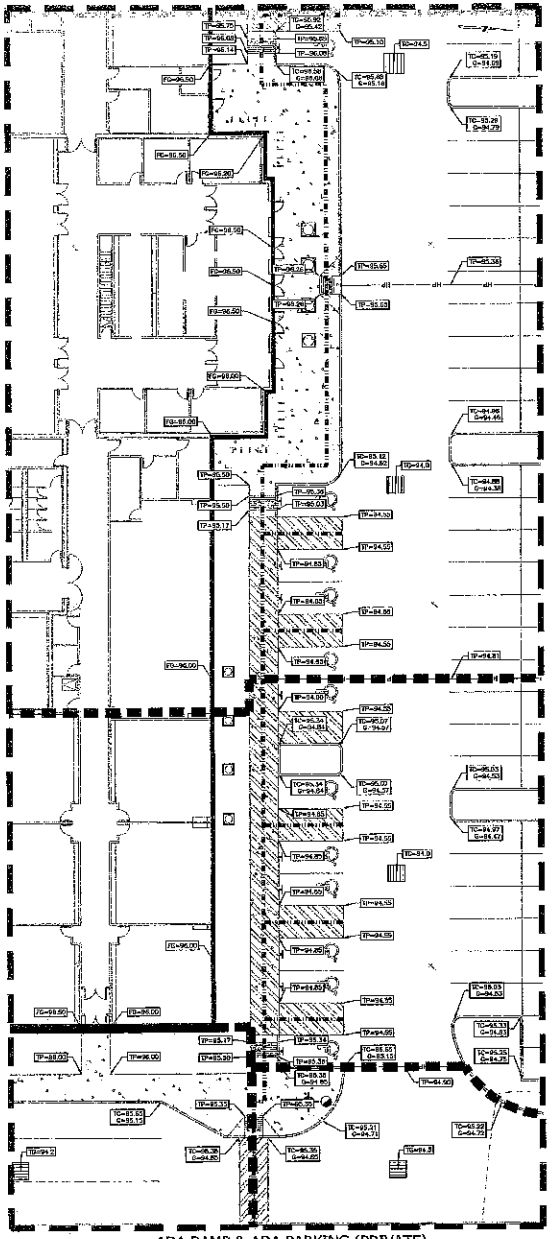
SHEET
CG104
18 OF 33



ADA RAMP & ADA PARKING (PRIVATE)

REF. CITY OF HOUSTON DETAILS SHEET CS02 (ADA RAMPS)

1"=10'



ADA RAMP & ADA PARKING (PRIVATE)

REF. CITY OF HOUSTON DETAILS SHEET CS02 (ADA RAMPS)

1"=10'

GRADING LEGEND

96.00	PROP. FINISHED GRADE ELEV.
TC	TOP OF CURB ELEVATION
G	GUTTER ELEVATION
FL	FLOW LINE ELEVATION
TW	TOP OF WALK
FG	FINISHED GRADE
TP	TOP OF PAVEMENT
HP	HIGH POINT ELEVATION
MG	MATCH EXISTING
	STORM DRAINAGE INLET
	DRAINAGE INLET
	STORM DRAIN MANHOLE
	LANDSCAPE DRAIN INLET
	DIRECTION OF FLOW
*	"GRADE BY OTHERS"

CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

NOTE:
MAXIMUM CROSS SLOPES FOR SIDEWALKS AND A.D.A. ACCESS ROUTES SHALL NOT EXCEED 2.0%. RAMP SLOPES SHALL NOT EXCEED 1-INCH PER FOOT (8.333%). MAXIMUM SLOPES FOR HANDICAP PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0% IN ANY DIRECTION. SEE ARCHITECTURAL AND SITE PLAN DRAWINGS FOR A.D.A. RAMP AND SIGNAGE DETAILS.

*NOTE: GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.

APPROVED: _____ DEVELOPMENT COORDINATOR

DATE: 1/5/17

NO.	DATE	REVISION
1	11/18/2016	RESUBMITTAL FOR AES-C REVIEW
2	11/22/2016	ADDITIONAL TWO
3	12/20/2016	RESUBMITTAL TO FORT BEND COUNTY FOR BIDDING
4	1/5/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

BIG RED DOG
ENGINEERING | CONSULTING
3200 SUMMER STREET, SUITE 2100 HOUSTON, TEXAS 77007
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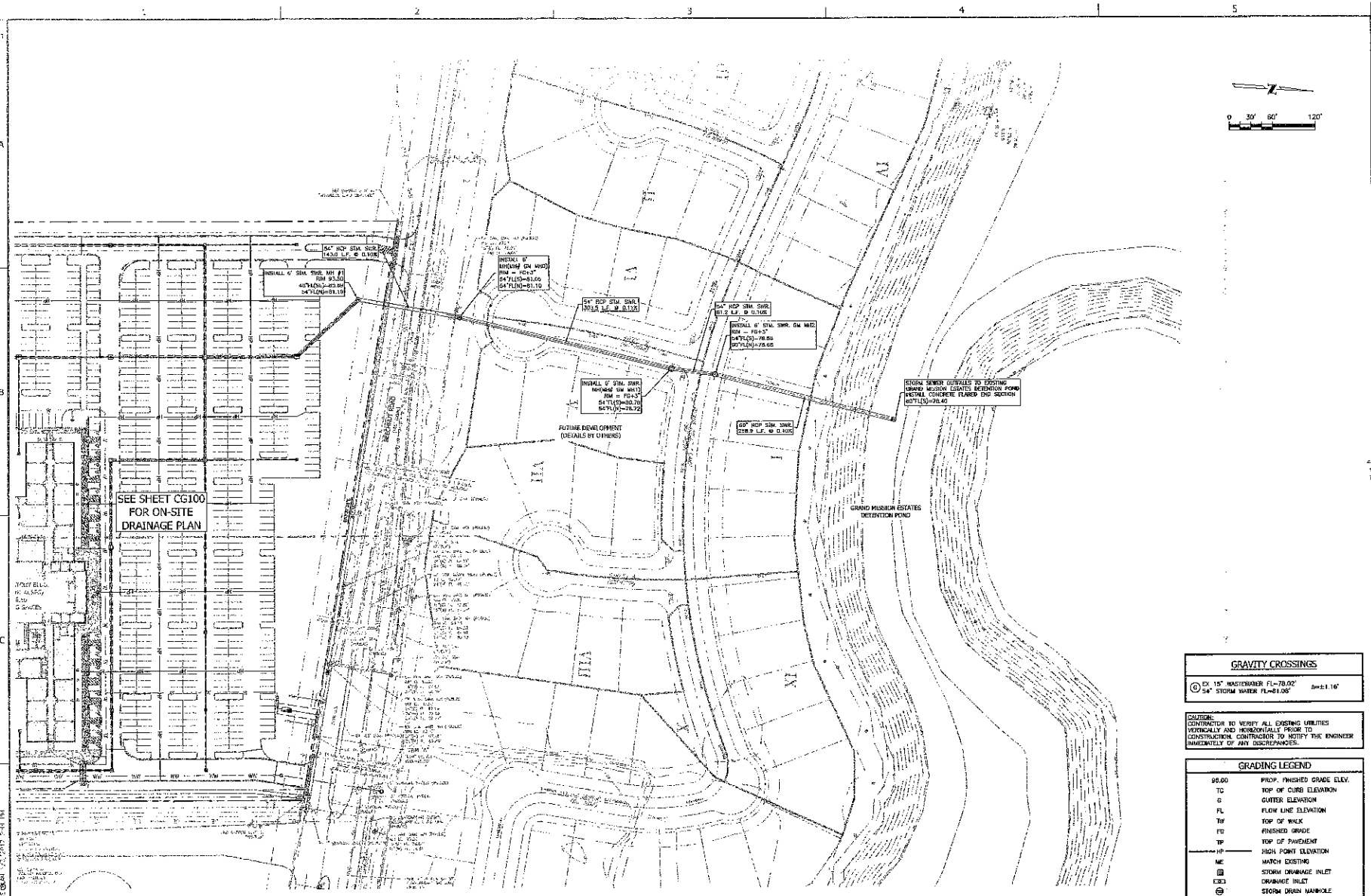
JAMES G. REGAN
117106
LICENSED
PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

ENLARGED GRADING DETAILS

SHEET
CG105
19 OF 33



GRAVITY CROSSINGS

⑥ EX. 15" WASTEWATER FL=78.02' 54" STORM WATER FL=81.06'	Δ=±1.16'

CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

GRADING LEGEND

98.00	PROP. FINISHED GRADE ELEV.
TC	TOP OF CURB ELEVATION
G	GUTTER ELEVATION
FL	FLOW LINE ELEVATION
TW	TOP OF WALK
FG	FINISHED GRADE
TP	TOP OF PAVEMENT
HP	HIGH POINT ELEVATION
ME	MATCH EXISTING
	STORM DRAINAGE INLET
	DRAINAGE INLET
	STORM DRAIN MANHOLE
	LANDSCAPE DRAIN INLET
1%	DIRECTION OF FLOW
•	"GRADE BY OTHERS"

APPROVED: DEVELOPMENT COORDINATOR

DATE: 1/5/17

NO.	DATE	REVISION
1	1/4/2016	FOR CAPITAL FOR AGENCY REVIEW
2	1/27/2016	CONTRACTS WD
3	10/07/2016	ADD DRAINAGE TO SOPP, SCS COMMENTS FOR REVIEW
4	11/02/2016	RESUBMITTAL TO TCEQ, SCS COMMENTS FOR FINAL APPROVAL

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JAMES G. KERR
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LICENSED
PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

OFFSITE STORM DRAINAGE PLAN

SHEET
CG106
20 OF 33

STORM SEWER CALCULATION FORM - 100 YR

PROJECT: ILT-TX-022 - Beechnut
PROJ. NO.: HCB.002
PREPARED BY: MK DATE: 12/7/16
CHECKED BY: JSR DATE: 12/7/16

100 YR
"b" [illegible]
"d" 21.80
"e" 0.7500

* Includes Frequency Factor (Cf) = 1.25

PRINTED: 12/7/2016 at 8:24 AM

LINE	MANHOLE FROM	MANHOLE TO	AREA INCR ac.	AREA TOTAL ac.	"C"	"CA"	"TC" min.	"I"	Q* cfs	L FT	LINE SIZE IN.	LINE SLOPE %	"N" VALUE	DESIGN Q cfs	DESIGN V fps	FALL FT	OTHER LOSS FT	FLOWLINE UPSTM	FLOWLINE DNSTM	ACT V fps	HYD GRAD %	H	ELEV HYD GRAD UPSTM	ELEV HYD GRAD DNSTM	TOP OF PIPE DNSTM	GRATE ELEV. UPSTM	GRATE ELEV. DNSTM	PONDING AT INLET (FT)
P	38	MH2	0.35	0.35	0.59	0.21	23.30	7.30	1.86	61.8	12	0.44	0.013	2.37	3.0	0.27	0	90.00	89.73	2.37	0.273	0.167	93.84	93.67	90.73	94.00	94.50	-0.16
P	MH2	37	0.00	0.35	0.59	0.21	23.31	7.2	1.86	128	15	0.33	0.013	3.72	3.0	0.42	0	89.73	89.31	1.52	0.082	0.105	93.67	93.56	90.56	94.50	94.25	-0.83
P	37	36	0.30	0.65	0.59	0.38	24.27	7.09	3.40	126	18	0.26	0.013	5.37	3.0	0.33	0	89.31	88.97	1.97	0.104	0.133	93.56	93.43	90.47	94.25	94.25	-0.69
P	36	27	0.38	1.03	0.59	0.61	25.09	7	5.32	128	24	0.15	0.013	9.62	3.1	0.23	0	88.97	88.74	1.69	0.029	0.070	93.43	93.36	90.74	94.25	94.25	-0.82
P	27	22	0.36	1.39	0.59	0.82	25.60	6.94	7.13	126	24	0.18	0.013	9.62	3.1	0.23	0	88.74	88.51	2.27	0.088	0.125	93.36	93.23	90.51	94.25	93.80	-0.89
P	22	19	0.32	1.71	0.59	1.01	25.99	6.9	8.70	128	24	0.18	0.013	9.62	3.1	0.23	0	88.51	88.28	2.77	0.147	0.189	93.23	93.04	90.28	93.80	93.80	-0.57
P	19	11	0.41	2.12	0.59	1.25	26.41	6.85	10.71	136	30	0.13	0.013	14.82	3.0	0.18	0	88.28	88.10	2.18	0.068	0.092	93.04	92.95	90.60	93.80	93.95	-0.76
P	11	8	0.27	2.39	0.59	1.41	26.65	6.83	12.04	131	30	0.13	0.013	14.82	3.0	0.17	0	88.10	87.93	2.45	0.086	0.122	92.95	92.84	90.43	93.95	94.00	-1.00
P	8	9	0.32	3.08	0.59	1.82	27.19	6.77	15.40	155	36	0.10	0.013	21.14	3.0	0.15	0	87.93	87.78	2.78	0.063	0.081	92.84	92.76	90.78	94.00	93.90	-1.16
P	9	2	0.47	19.63	0.59	11.58	31.83	6.32	91.50	126	48	0.10	0.013	45.52	3.6	0.13	1.80	85.98	85.85	7.20	0.401	0.517	92.76	92.24	89.65	93.90	93.89	-1.14
P	2	MH1	0.35	19.98	0.59	11.79	31.94	6.32	93.13	106	48	0.10	0.013	45.52	3.6	0.11	0	85.85	85.75	7.41	0.428	0.452	92.24	91.79	89.75	93.90	93.86	-1.65
P	MH1	GMMH0	0.00	19.98	0.59	11.79	31.94	6.32	93.13	141	54	0.10	0.013	62.32	3.9	0.14	4.50	81.25	81.10	5.66	0.223	0.315	91.79	91.48	85.60	93.86	95.00	-2.07
P	GMMH0	GMMH1	0.00	22.82	0.59	13.46	32.35	6.26	105.66	322	54	0.10	0.013	62.32	3.9	0.32	0	81.10	80.78	6.65	0.288	0.926	91.48	90.55	86.18	95.00	95.00	-3.57
P	GMMH1	GMMH2	2.22	25.04	0.59	14.77	32.63	6.26	115.50	61	54	0.10	0.013	62.32	3.5	0.06	2.06	78.72	78.66	7.27	0.344	0.210	90.55	90.34	83.16	95.00	95.00	-4.45
P	GMMH2	POND	9.69	34.73	0.59	20.49	33.68	6.17	158.00	259	60	0.10	0.013	82.54	4.2	0.26	0	78.66	78.40	8.06	0.367	0.949	90.34	89.39	83.40	95.00	93.20	-4.66
																					25YR WSE In POND =		89.39					
P	44	43	0.92	0.92	0.59	0.54	24.65	7.08	4.77	150	24	0.18	0.013	9.62	3.1	0.27	0	90.00	89.73	3.52	0.044	0.066	94.56	94.49	91.73	94.25	94.25	0.31
P	43	42	0.69	1.61	0.59	0.95	25.87	6.91	8.20	130	24	0.18	0.013	9.62	3.1	0.23	0	89.73	89.46	2.87	0.140	0.196	94.49	94.30	91.46	94.25	94.25	0.24
P	42	MH3	0.84	2.45	0.59	1.45	26.71	6.82	12.32	130.1	24	0.18	0.013	9.62	3.1	0.23	0	89.46	89.23	3.92	0.285	0.384	94.30	93.95	91.23	94.25	94.25	0.05
P	MH3	40	0.00	2.45	0.59	1.45	26.71	6.82	12.32	64	24	0.18	0.013	9.62	3.1	0.12	0	89.23	89.11	3.92	0.285	0.189	93.91	93.72	91.11	94.50	94.25	-0.59
P	40	41	0.18	2.72	0.59	1.64	26.97	6.79	13.92	128	30	0.13	0.013	14.82	3.0	0.17	0	89.11	88.94	2.84	0.115	0.147	93.72	93.58	91.44	94.25	94.25	-0.53
P	41	29	0.36	3.14	0.59	1.85	27.23	6.77	15.68	128	30	0.13	0.013	14.82	3.0	0.17	0	88.94	88.78	3.20	0.145	0.186	93.58	93.39	91.28	94.25	94.25	-0.67
P	29	MH4	0.41	4.49	0.59	2.65	28.03	6.69	22.15	64	36	0.10	0.013	21.14	3.0	0.06	0	88.78	88.71	3.14	0.130	0.086	93.39	93.30	91.71	94.25	95.00	-0.85
P	MH4	MH5	0.00	5.62	0.59	3.32	28.55	6.65	27.48	63.6	36	0.10	0.013	21.14	3.0	0.06	0	88.71	88.65	3.89	0.190	0.107	93.32	93.21	91.65	95.00	94.80	-1.68
P	MH5	23	0.00	5.80	0.59	3.42	28.60	6.63	28.36	92.1	36	0.10	0.013	21.14	3.0	0.09	0	88.65	88.56	4.03	0.180	0.166	93.21	93.05	91.56	94.80	93.95	-1.59
P	23	20	0.66	7.03	0.59	4.15	29.10	6.58	34.11	136.5	36	0.10	0.013	21.14	3.0	0.14	0	88.56	88.42	4.83	0.260	0.356	93.05	92.69	91.42	93.95	93.90	-0.90
P	20	12	0.65	7.97	0.59	4.70	29.42	6.55	38.50	127.8	36	0.10	0.013	21.14	3.0	0.13	0	88.42	88.29	5.45	0.332	0.424	92.69	92.27	91.29	93.90	93.90	-1.21
P	12	9	0.39	8.36	0.59	4.93	29.53	6.54	40.32	131	36	0.10	0.013	21.14	3.0	0.13	0	88.29	88.16	5.71	0.364	0.477	92.27	91.79	91.16	93.90	93.89	-1.63
P	34	35	1.36	1.36	0.59	0.80	25.56	6.95	6.97	135.6	24	0.18	0.013	9.62	3.1	0.24	0	90.00	89.76	2.22	0.095	0.128	94.31	93.98	91.76	94.00	94.00	0.31
P	35	MH6	0.82	2.18	0.59	1.29	26.47	6.85	11.01	35.8	24	0.18	0.013	9.62	3.3	0.06	0	89.76	89.69	3.51	0.246	0.088	93.98	93.90	91.69	94.00	94.50	-0.02
P	MH6	26	0.00	2.18	0.59	1.29	26.47	6.85	11.01	138	24	0.18	0.013	9.62	3.1	0.25	0	89.69	89.44	3.51	0.236	0.326	93.90	93.57	91.44	94.50	93.80	-0.60
P	26	18	0.28	3.11	0.59	1.83	27.21	6.77	15.53	150.8	30	0.13	0.013	14.82	3.0	0.17	0	89.44	89.27	3.16	0.143	0.187	93.57	93.38	91.77	94.00	94.25	-0.43
P	18	17	0.32	3.43	0.59	2.02	27.42	6.75	17.07	105.8	30	0.13	0.013	14.82	3.0	0.14	0	89.27	89.14	3.48	0.173	0.183	93.38	93.20	91.64	94.25	94.00	-0.87
P	17	16	0.16	3.59	0.59	2.12	27.52	6.74	17.84	82.7	30	0.13	0.013	14.82	3.0	0.11	0	89.14	89.03	3.64	0.186	0.156	93.20	93.04	91.53	94.30	94.00	-1.10
P	16	15	0.44	4.03	0.59	2.38	27.78	6.71	19.90	106	30	0.13	0.013	14.82	3.0	0.14	0	89.03	88.89	4.06	0.239	0.254	93.04	92.79	91.39	94.00	94.00	-0.96
P	15	14	0.67	4.70	0.59	2.77	28.23	6.66	23.05	116.9	36	0.10	0.013	21.14	3.0	0.12	0	88.89	88.77	3.28	0.120	0.140	92.79	92.65	91.77	94.00	94.50	-1.21
P	14	13	0.65	5.35	0.59	3.16	28.44	6.63	26.24	120	36	0.10	0.013	21.14	3.0	0.12	0	88.77	88.65	3.71	0.154	0.185	92.65	92.47	91.65	94.50	94.10	-1.85
P	13	10	0.29	5.64	0.59	3.33	28.56	6.63	27.58	131	36	0.10	0.013	21.14	3.0	0.13	0	88.65	88.52	4.00	0.170	0.223	92.47	92.24	91.52	94.10	94.10	-1.63
P	10	9	0.35	7.72	0.59	4.55	29.33	6.50	37.35	143	36	0.10	0.013	21.14	3.0	0.14	0	88.52	88.38	5.29	0.312	0.446	92.24	91.79	91.38	94.10	93.89	-1.86
P	7	6	0.22	0.22	0.59	0.13	22.66	7.29	1.18	82.7	12	0.44	0.013	2.37	3.0	0.36	0	90.00	89.64	1.50	0.109	0.091	93.86	93.77	90.64	94.00	93.80	-0.14
P	6	5	0.44	0.66	0.59	0.39	24.29	7.09	3.45	108	18	0.26	0.013	5.37	3.0	0.28	0	89.64	89.36	1.96	0.107	0.116	93.77	93.65	90.86	93.80	93.85	-0.03
P	5	4	0.40	1.06	0.59	0.63	25.10	7	5.47	116.9	18	0.26	0.013	5.37	3.0	0.30	0	89.36	89.06	3.10	0.270	0.316	93.65	93.34	90.56	93.85	93.80	-0.20
P	4	10	0.45	1.51	0.59	0.89	25.75	6.93	7.72	120	24	0.18	0.013	9.62	3.1	0.22	0	89.06	88.84	2.46	0.116	0.130	93.34	93.20	90.84	93.80	93.69	-0.46
																							93.2					
P	1	8	0.37	0.37	0.59	0.22	23.39	7.19	1.96	128	12	0.44	0.013	2.37	3.0	0.56	0	90.00	89.44	2.50	0.302	0.386	93.23	92.84	90.44	93.50	94.00	-0.27
P	3	10	0.22	0.22	0.59	0.13	22.66	7.28	1.18	128	12	0.44	0.013	2.37	3.0	0.56	0	90.00	89.44	1.50	0.109	0.140	92.90	92.76	90.44	93.50	93.69	-0.60
P	45	28	0.47	0.47	0.59	0.28	23.76	7.15	2.48	201.8	15	0.33	0.013	3.72	3.0	0.67	0	90.00	89.33	2.02	0.147	0.296	94.06	93.77	90.58	94.50	94.50	-0.44
P	28	29	0.47	0.94	0.59	0.55	24.80	7.02	4.87	66.7	15	0.33	0.013	3.72	3.0	0.22	0	89.33	89.11	3.97	0.565	0.377	93.77	93.39	90.36	94.50	95.00	-0.73
P	39	40	0.15	0.15	0.59	0.09	22.16	7.35	0.83	62.3	12	0.44	0.013	2.37	3.0	0.27	0	90.00	89.73	1.01	0.052	0.032	93.76	93.72	90.73	94.25	94.25	-0.49
P	33	32	0.30	0.30	0.59	0.18	23.09	7.24	1.60	64.8	12	0.44	0.013	2.37	3.0	0.29	0	90.00	89.71	2.04	0.201	0.130	93.96	93.83	90.71	95.65	94.00	-1.69
P	32	31	0.77	1.07	0.59	0.63	25.12	6.99	5.52	108.8	18	0.26	0.013	5.37	3.0	0.27	0	89.71	89.45	3.42	0.275	0.283	93.83	93.55	90.95	94.00	94.00	-0.17
P	31	MH4	0.06	1.13	0.59	0.67	25.22	6.98	5.82	74.5	18	0.25	0.013	5.37	3.0	0.19	0	89.45	89.25	3.29	0.305	0.227	93.55	93.32	90.75	94.00	94.00	-0.45
P	30	MH5	0.13	0.18	0.59	0.11	22.39	7.32	0.97	53.4	12	0.44	0.013	2.37	3.0	0.23	0	90.00	89.77	1.24	0.074	0.040	93.25	93.21	90.77	95.50	94.80	-2.25
P	24	23	0.57	0.57	0.59	0.34	24.06	7.12	2.99	174.8	12	0.44	0.013	2.37	3.0	0.77	0	90.00	89.23	3.81	0.703	1.228	94.27	93.05	90.23	95.15	93.95	-0.88
P	21	20	0.29	0.29	0.59	0.17	23.04	7.24	1.55	133.6	12	0.44	0.013	2.37	3.0	0.59	0	90.00	89.41	1.97	0.186	0.251	92.94	92.69	90.41	95.00	94.50	-2.06
P	25	26	0.65	0.65	0.59	0.38	24.27	7.09	3.40	77.2	15	0.33	0.013	3.72	3.0	0.25	0	90.00	89.75	2.77	0.276	0.213	93.78	93.57	91.00	94.50	93.80	-0.72
P	46	MH7	0.04	0.04	0.59	0.02	20.67	7.54	0.22	55.1	12	0.44	0.013	2.37	3.0	0.24	0	90.00	89.76	0.28	0.004	0.002	93.49	93.48	90.76	95.00	94.25	-1.51

STORM SEWER CALCULATION FORM - 25 YR

PROJECT: ILT-TX-022 - Beechnut
PROJ. NO.: HCB.002
PREPARED BY: MK DATE: 12/7/16
CHECKED BY: JSR DATE: 12/7/16

25 YR
"b" 115.50
"d" 21.20
"e" 0.7608

* Includes Frequency Factor (Cf) = 1.10

PRINTED: 12/7/2016 at 8:24 AM

LINE	MANHOLE FROM	MANHOLE TO	AREA INCR ac.	AREA TOTAL ac.	"C"	"CA"	"TC" min.	"I"	Q* cfs	L FT	LINE SIZE IN.	LINE SLOPE %	"N" VALUE	DESIGN Q cfs	DESIGN V fps	FALL FT	OTHER LOSS FT	FLOWLINE UPSTM	FLOWLINE DNSTM	ACT V fps	HYD GRAD %	H	ELEV HYD GRAD UPSTM	ELEV HYD GRAD DNSTM	TOP OF PIPE DNSTM	GRATE ELEV. UPSTM	GRATE ELEV. DNSTM	PONDING AT INLET (FT)
P	38	MH2	0.35	0.35	0.59	0.21	23.31	5.98	1.36	61.8	12	0.44	0.013	2.37	3.0	0.27	0	90.00	89.73	1.75	0.145	0.089	91.74	91.65	90.73	94.00	94.50	-2.26
P	MH2	37	0.00	0.35	0.59	0.21	23.31	5.98	1.36	128	15	0.33	0.013	3.72	3.0	0.42	0	89.73	89.31	1.11	0.044	0.056	91.65	91.59	90.56	94.50	94.25	-2.85
P	37	36	0.30	0.65	0.59	0.38	24.27	5.88	2.48	128	18	0.26	0.013	5.37	3.0	0.33	0	89.31	88.97	1.40	0.056	0.071	91.59	91.52	90.47	94.25	94.25	-2.66
P	36	27	0.38	1.03	0.59	0.61	25.06	5.81	3.88	128	24	0.15	0.013	9.62	3.1	0.23	0	88.97	88.74	1.24	0.029	0.038	91.52	91.48	90.74	94.25	94.25	-2.73
P	27	22	0.36	1.39	0.59	0.82	25.60	5.75	5.19	126	24	0.18	0.013	9.62	3.1	0.23	0	88.74	88.51	1.65	0.052	0.067	91.48	91.41	90.51	94.25	93.80	-2.77
P	22	19	0.32	1.71	0.59	1.01	25.99	5.72	6.35	128	24	0.18	0.013	9.62	3.1	0.23	0	88.51	88.28	2.02	0.078	0.100	91.41	91.31	90.28	93.80	93.80	-2.39
P	19	11	0.41	2.12	0.59	1.25	26.41	5.68	7.83	136	30	0.13	0.013	14.82	3.0	0.18	0	88.28	88.10	1.59	0.036	0.049	91.31	91.27	90.60	93.80	93.95	-2.49
P	11	8	0.27	2.39	0.59	1.41	26.65	5.65	8.76	131	30	0.13	0.013	14.82	3.0	0.17	0	88.10	87.93	1.79	0.045	0.060	91.27	91.21	90.43	93.95	94.00	-2.68
P	8	9	0.32	3.08	0.59	1.82	27.19	5.62	11.21	155	36	0.10	0.013	21.14	3.0	0.15	0	87.93	87.78	1.59	0.033	0.045	91.21	91.16	90.78	94.00	93.90	-2.79
P	9	2	0.47	19.63	0.59	11.58	31.83	5.21	66.37	126	48	0.10	0.013	45.52	3.6	0.13	1.80	85.98	85.85	5.28	0.213	0.272	91.16	90.89	89.65	93.90	93.89	-2.74
P	2	MH1	0.35	19.98	0.59	11.79	31.94	5.21	67.56	106	48	0.10	0.013	45.52	3.6	0.11	0	85.85	85.75	5.38	0.220	0.234	90.89	90.65	89.75	93.90	93.26	-3.00
P	MH1	GMMH0	0.00	19.98	0.59	11.79	31.94	5.21	67.56	141	54	0.10	0.013	62.32	3.9	0.14	4.50	81.25	81.10	4.25	0.118	0.160	90.65	90.49	85.60	93.86	95.00	-3.21
P	GMMH0	GMMH1	0.00	22.82	0.59	13.46	32.35	5.18	76.72	322	54	0.10	0.013	62.32	3.9	0.32	0	81.10	80.78	4.83	0.152	0.428	90.49	90.00	86.18	95.00	95.00	-4.51
P	GMMH1	GMMH2	2.22	25.04	0.59	14.77	32.63	5.16	83.85	61	54	0.10	0.013	62.32	3.9	0.06	2.05	78.72	78.66	5.28	0.181	0.110	90.00	89.89	83.16	95.00	95.00	-5.00
P	GMMH2	POND	9.69	34.73	0.59	20.49	33.68	5.05	114.50	259	60	0.10	0.013	82.54	4.2	0.26	0	78.66	78.40	5.83	0.192	0.495	89.89	89.39	83.40	95.00	93.20	-5.11
																					25YR WSE In POND =		89.39					
P	44	43	0.92	0.92	0.59	0.54	24.25	5.83	3.48	150	24	0.18	0.013	9.62	3.1	0.27	0	90.00	89.73	1.11	0.024	0.035	92.63	92.59	91.73	94.25	94.25	-1.62
P	43	42	0.69	1.61	0.59	0.95	25.87	5.73	5.95	130	24	0.18	0.013	9.62	3.1	0.27	0	89.73	89.46	1.90	0.070	0.105	92.59	92.49	91.46	94.25	94.25	-1.66
P	42	MH3	0.84	2.45	0.59	1.45	26.71	5.65	8.90	130.1	24	0.18	0.013	9.62	3.1	0.23	0	89.46	89.23	2.06	0.157	0.204	92.49	92.29	91.23	94.25	94.25	-1.76
P	MH3	40	0.00	2.45	0.59	1.45	26.71	5.65	8.90	64	24	0.18	0.013	9.62	3.1	0.12	0	89.23	89.11	2.86	0.157	0.100	92.29	92.19	91.11	94.50	94.25	-2.21
P	40	41	0.18	2.72	0.59	1.64	26.97	5.64	10.16	128	30	0.13	0.013	14.82	3.0	0.17	0	89.11	88.94	2.07	0.061	0.078	92.19	92.11	91.44	94.25	94.25	-2.06
P	41	29	0.36	3.14	0.59	1.85	27.23	5.6	11.40	128	30	0.13	0.013	14.82	3.0	0.17	0	88.94	88.78	2.33	0.077	0.099	92.11	92.01	91.28	94.25	94.25	-2.14
P	29	MH4	0.41	4.49	0.59	2.65	28.03	5.53	16.13	64	36	0.10	0.013	21.14	3.0	0.06	0	88.78	88.71	2.23	0.058	0.037	92.01	91.97	91.71	94.25	95.00	-2.24
P	MH4	MH5	0.00	5.02	0.59	3.37	28.55	5.49	20.02	63.6	36	0.10	0.013	21.14	3.0	0.06	0	88.71	88.65	2.88	0.090	0.057	91.97	91.92	91.65	95.00	94.80	-3.03
P	MH5	23	0.00	5.80	0.59	3.42	28.63	5.48	20.60	92.1	36	0.10	0.013	21.14	3.0	0.09	0	88.65	88.56	2.92	0.066	0.068	91.91	91.83	91.56	94.80	93.95	-2.89
P	23	20	0.66	7.03	0.59	4.15	29.10	5.44	24.82	136.5	36	0.10	0.013	21.14	3.0	0.14	0	88.56	88.42	3.51	0.138	0.188	91.83	91.64	91.42	93.95	93.90	-2.12
P	20	12	0.65	7.07	0.59	4.70	29.41	5.41	27.98	177.8	36	0.10	0.013	21.14	3.0	0.13	0	88.42	88.29	3.95	0.175	0.224	91.64	91.42	91.29	93.90	93.90	-2.26
P	12	9	0.39	8.36	0.59	4.93	29.53	5.40	29.39	131	36	0.10	0.013	21.14	3.0	0.13	0	88.29	88.16	4.15	0.192	0.252	91.41	91.16	91.16	93.90	93.69	-2.49
P	34	35	1.36	1.36	0.59	0.80	25.56	5.76	5.08	135.6	24	0.18	0.013	9.62	3.1	0.24	0	90.00	89.76	1.62	0.050	0.068	92.54	92.48	91.76	94.00	94.00	-1.46
P	35	MH6	0.82	2.18	0.59	1.29	26.47	5.67	8.02	35.8	24	0.18	0.013	9.62	3.1	0.06	0	89.76	89.69	2.55	0.125	0.045	92.48	92.43	91.69	94.00	94.50	-1.52
P	MH6	26	0.00	2.18	0.59	1.29	26.47	5.67	8.02	138	24	0.18	0.013	9.62	3.1	0.25	0	89.69	89.44	2.55	0.125	0.173	92.43	92.26	91.44	94.50	93.80	-2.07
P	26	18	0.28	3.11	0.59	1.83	27.21	5.6	11.30	150.8	30	0.13	0.013	14.82	3.0	0.17	0	89.44	89.27	2.30	0.076	0.088	92.26	92.16	91.77	94.00	94.25	-1.74
P	18	17	0.32	3.43	0.59	2.02	27.42	5.58	12.41	105.8	30	0.13	0.013	14.82	3.0	0.14	0	89.27	89.14	2.53	0.091	0.097	92.16	92.06	91.64	94.25	94.00	-2.09
P	17	16	0.16	3.59	0.59	2.12	27.52	5.58	13.09	82.7	30	0.13	0.013	14.82	3.0	0.11	0	89.14	89.03	2.65	0.100	0.083	92.06	91.98	91.53	94.30	94.00	-2.24
P	16	15	0.44	4.03	0.59	2.38	27.78	5.55	14.52	106	30	0.13	0.013	14.82	3.0	0.14	0	89.03	88.89	2.96	0.125	0.195	91.98	91.84	91.39	94.00	94.00	-2.02
P	15	14	0.67	4.70	0.59	2.77	28.23	5.52	16.84	116.9	36	0.10	0.013	21.14	3.0	0.12	0	88.89	88.77	2.38	0.063	0.074	91.84	91.77	91.77	94.00	94.50	-2.16
P	14	13	0.65	5.35	0.59	3.16	28.44	5.50	19.10	120	36	0.10	0.013	21.14	3.0	0.12	0	88.77	88.65	2.70	0.082	0.098	91.75	91.65	91.65	94.50	94.10	-2.75
P	13	10	0.29	5.64	0.59	3.33	28.56	5.48	20.06	131	36	0.10	0.013	21.14	3.0	0.13	0	88.65	88.52	2.84	0.090	0.118	91.64	91.52	91.52	94.10	94.10	-2.46
P	10	9	0.35	7.72	0.59	4.55	29.33	5.42	27.10	143	36	0.10	0.013	21.14	3.0	0.14	0	88.52	88.38	3.84	0.166	0.236	91.61	91.38	91.38	94.10	93.69	-2.49
P	7	6	0.22	0.22	0.59	0.13	22.66	6.05	0.86	82.7	12	0.44	0.013	2.37	3.0	0.36	0	90.00	89.64	1.10	0.039	0.040	93.55	93.50	90.64	94.00	93.80	-0.45
P	6	5	0.44	0.66	0.59	0.39	24.29	5.86	2.52	108	18	0.26	0.013	5.37	3.0	0.28	0	89.64	89.36	1.43	0.057	0.062	93.50	93.44	90.86	93.80	93.85	-0.30
P	5	4	0.40	1.06	0.59	0.63	25.10	5.8	3.99	116.9	18	0.26	0.013	5.37	3.0	0.30	0	89.36	89.06	2.26	0.144	0.168	93.44	93.27	90.56	93.85	93.80	-0.41
P	4	10	0.45	1.51	0.59	0.89	25.75	5.74	5.63	120	24	0.18	0.013	9.62	3.1	0.22	0	89.06	88.84	1.79	0.062	0.074	93.27	93.20	90.84	93.80	93.69	-0.53
																							93.2					
P	1	8	0.37	0.37	0.59	0.22	23.39	5.98	1.44	128	12	0.44	0.013	2.37	3.0	0.56	0	90.00	89.44	1.60	0.163	0.200	91.41	91.21	90.44	93.50	94.00	-2.09
P	3	10	0.22	0.22	0.59	0.13	22.66	6.05	0.85	128	12	0.44	0.013	2.37	3.0	0.56	0	90.00	89.44	1.10	0.099	0.075	91.24	91.16	90.44	93.50	93.69	-2.26
P	45	28	0.47	0.47	0.59	0.28	23.76	5.94	1.81	201.8	15	0.33	0.013	3.72	3.0	0.67	0	90.00	89.33	1.48	0.078	0.158	92.37	92.21	90.58	94.50	94.50	-2.13
P	28	29	0.47	0.94	0.59	0.55	24.80	5.82	3.55	66.7	15	0.33	0.013	3.72	3.0	0.22	0	89.33	89.11	2.89	0.301	0.201	92.21	92.01	90.36	94.50	95.00	-2.29
P	39	40	0.15	0.15	0.59	0.09	22.16	6.11	0.53	62.3	12	0.44	0.013	2.37	3.0	0.27	0	90.00	89.73	0.76	0.028	0.017	92.20	92.19	90.73	94.25	94.25	-2.05
P	33	32	0.30	0.30	0.59	0.18	23.09	6.01	1.17	64.8	12	0.44	0.013	2.37	3.0	0.29	0	90.00	89.71	1.49	0.107	0.070	92.31	92.24	90.71	95.65	94.00	-3.34
P	32	31	0.77	1.07	0.59	0.63	25.12	5.80	4.08	108.8	18	0.26	0.013	5.37	3.0	0.27	0	89.71	89.45	2.28	0.140	0.152	92.24	92.09	90.95	94.00	94.00	-1.76
P	31	MH4	0.06	1.13	0.59	0.67	25.22	5.79	4.25	74.5	18	0.26	0.013	5.37	3.0	0.19	0	89.45	89.25	2.41	0.163	0.121	92.09	91.97	90.75	94.00	95.00	-1.91
P	30	MH5	0.13	0.13	0.59	0.11	22.39	6.08	0.71	53.4	12	0.44	0.013	2.37	3.0	0.23	0	90.00	89.77	0.90	0.040	0.021	91.94	91.92	90.77	95.50	94.80	-3.56
P	24	23	0.57	0.57	0.59	0.34	24.06	5.91	2.19	174.8	12	0.44	0.013	2.37	3.0	0.77	0	90.00	89.23	2.79	0.375	0.656	92.48	91.83	90.23	95.15	93.95	-2.67
P	21	20	0.29	0.29	0.59	0.17	23.04	6.01	1.13	133.6	12	0.44	0.013	2.37	3.0	0.59	0	90.00	89.41	1.44	0.100	0.134	91.77	91.64	90.41	95.00	94.50	-3.23
P	25	26	0.65	0.65	0.59	0.38	24.27	5.88	2.48	77.2	15	0.33	0.013	3.72	3.0	0.25	0	90.00	89.75	2.02	0.147	0.113	92.37	92.26	91.00	94.50	93.80	-2.13
P	46	MH7	0.04	0.04	0.59	0.02	20.67	6.28	0.16	55.1	12	0.44	0.013	2.37	3.0	0.24	0	90.00	89.76	0.21	0.002	0.001	92.16	92.16	90.76	95.00	94.25	-2.84

1/5/17

NO.	DATE	REVISION
1	11/18/2016	RESUBMITTAL FOR AGENCY REVIEW
2	11/22/2016	ADDENDUM TWO
3	12/07/2016	AND COMMENTS
4	12/27/2016	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
5	01/03/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

BIG RED DOG
ENGINEERING | CONSULTING
2500 SUMMER STREET, SUITE 2100 HOUSTON, TEXAS 77007
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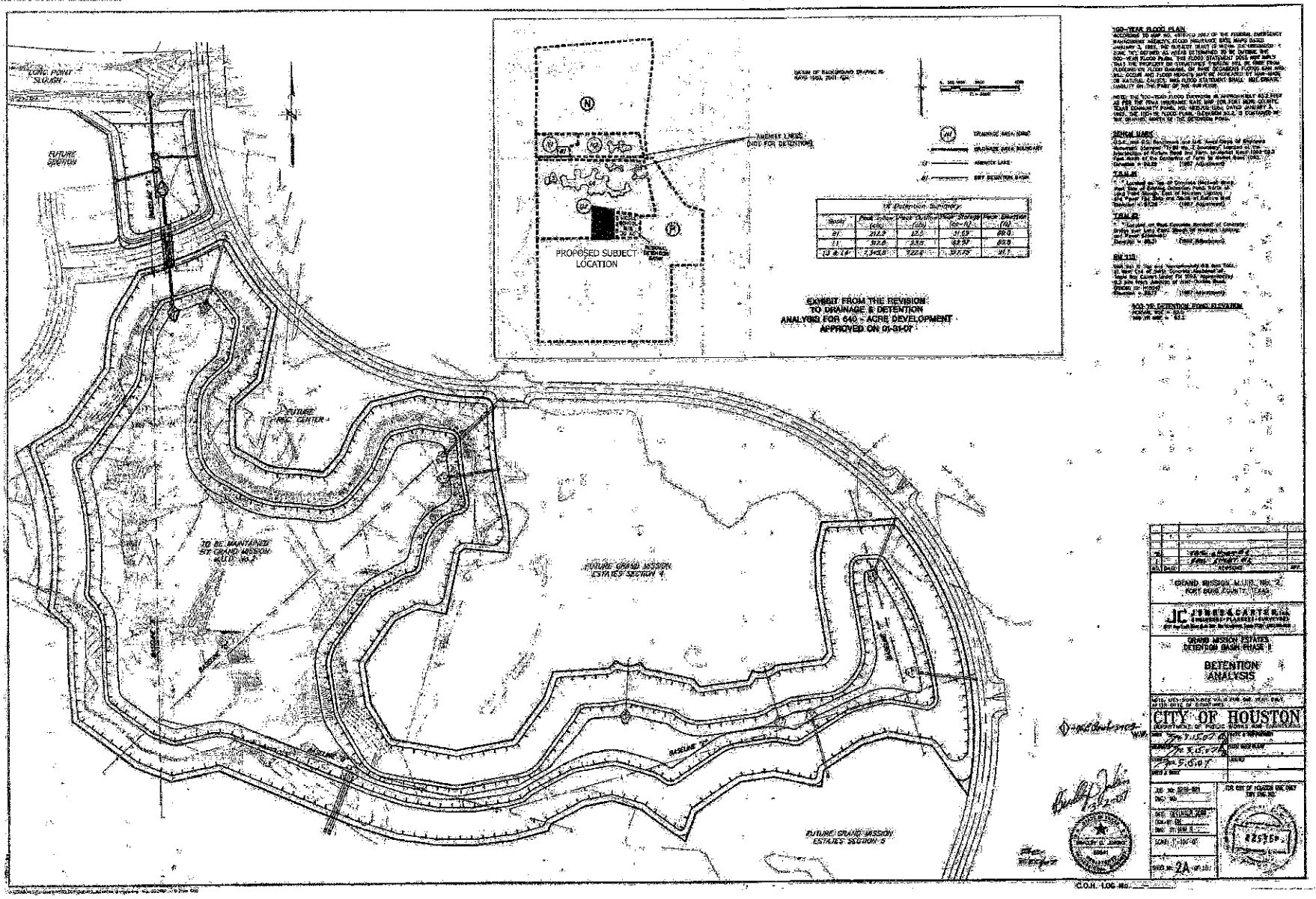
STATE OF TEXAS
JAMES S. ROWAN
117108
LICENSED PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

STORM DRAINAGE CALCS

SHEET
CG107
21 OF 33



APPROVED EXISTING DRAINAGE AREA MAP
PREPARED BY: JONES & CARTER, INC.
DATED: 03-02-07

APPROVED: _____ DEVELOPMENT COORDINATOR
DATE: 1/5/07

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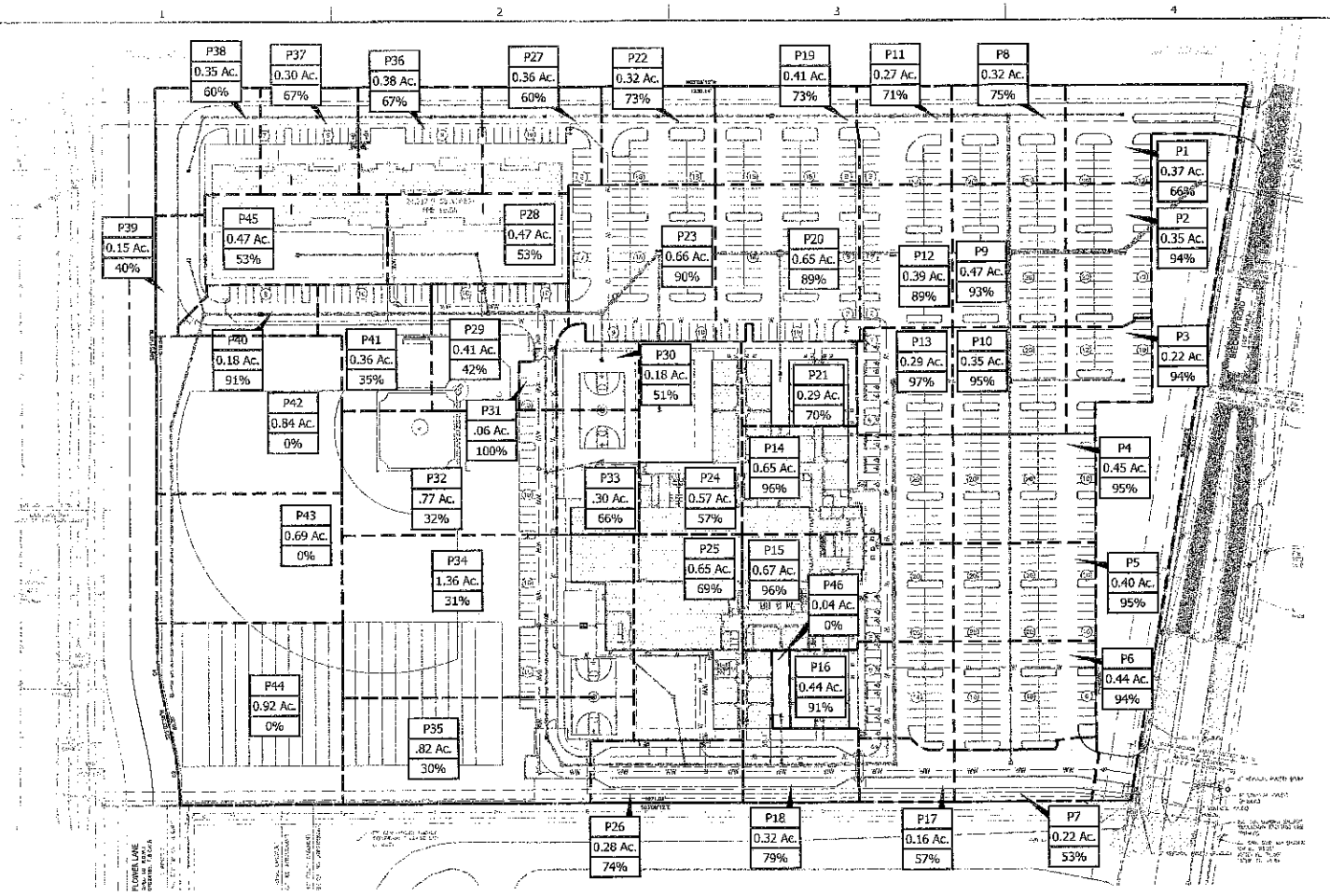
INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

EXISTING DRAINAGE AREA MAP

SHEET
CG200
22 OF 33



0 30' 60' 120'

LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- LIMITS OF CONSTRUCTION /DISTURBANCE
- CURB & GUTTER
- GRAVEL (GRADED) ELEV.
- STORM SEWER PIPE
- WATER LINE
- WASTE WATER LINE
- GUARD RAIL
- RETAINING WALL
- FIRE LANE
- UNDERGROUND GAS LINE
- OVERHEAD UTILITY
- UNDERGROUND ELECTRIC
- IRON FENCE
- WOOD FENCE
- TOP OF BANK
- BENCHMARK
- UTILITY POLE
- GUY ANCHOR
- TRANSFORMER
- LIGHT POLE
- SIGN
- WASTE WATER MANHOLE
- CLEAN-OUT
- WATER METER/VAULT
- FIRE HYDRANT
- WATER VALVE
- STORM DRAIN MANHOLE
- STORM DRAINAGE INLET
- BACKFLOW PREVENTER
- MAIL BOX

PROPOSED DRAINAGE AREA LEGEND

P-1	DRAINAGE AREA NAME
1.00 Ac.	DRAINAGE AREA SIZE
0%	DRAINAGE AREA IMPERVIOUS COVER
	DRAINAGE AREA BOUNDARY LINE
A	ANALYSIS POINT

APPROVED: DEVELOPMENT COORDINATOR
DATE: 1/5/17

NO.	DATE	REVISION
1	11/7/2016	RESIDENTIAL TCP AGENCY REVIEW
2	11/29/2016	AGENCY REVIEW
3	12/02/2016	ADD COMMENTS
4	12/19/2016	CSP BENCHMARK, CSP 3D EP
5	01/05/2017	RESIDENTIAL TC FOR BLDG COUNTY PER TWDB APPROVAL

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JAMES S. BOWER
117108
LICENSED
PROFESSIONAL ENGINEER
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

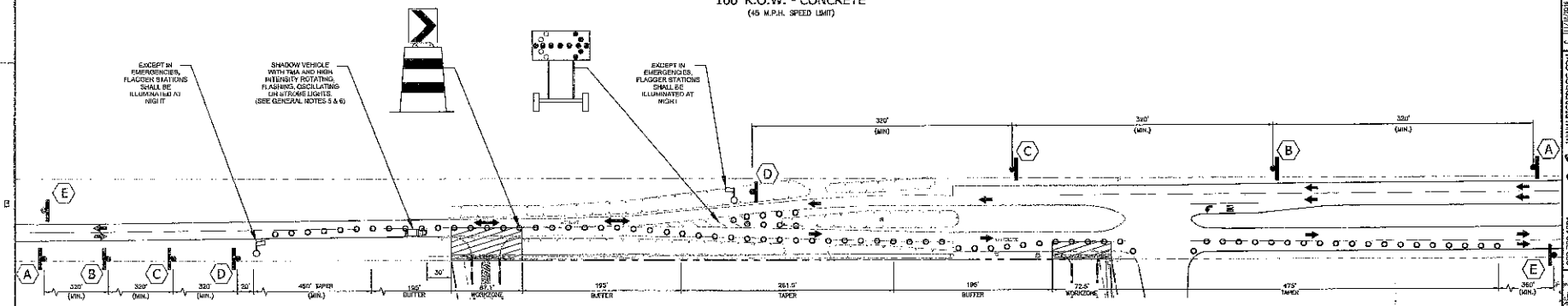
PROPOSED DRAINAGE AREA MAP

SHEET
CG201
23 OF 33

BEECHNUT ROAD - RIGHT LANE CLOSURE

100' R.O.W. - CONCRETE

(45 M.P.H. SPEED LIMIT)



SCALE NOTE:
TRAFFIC CONTROL PLAN IS TO SCALE; TRAFFIC CONTROL DEVICES ARE NOT SHOWN TO SCALE

Posted Speed	Formula	Minimum Taper Length			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing	Suggested Longitudinal Buffer Space	Minimum Flat Buffer
		L	1/2 L	2/3 L	On a Tangent	On a Tangent	X Distance		
20	L=WS	160'	80'	107'	30'	60'	120'	80'	160'
25		250'	125'	167'	35'	70'	150'	100'	200'
30		360'	180'	240'	40'	80'	240'	150'	300'
35		490'	245'	327'	45'	90'	320'	180'	360'
40		640'	320'	427'	50'	100'	400'	240'	420'
45		810'	405'	540'	55'	110'	500'	300'	540'
50		1000'	500'	667'	60'	120'	600'	360'	600'
55		1210'	605'	807'	65'	130'	700'	420'	660'
60		1440'	720'	960'	70'	140'	800'	480'	720'
65		1690'	845'	1127'	75'	150'	900'	540'	780'
70		1960'	980'	1307'	80'	160'	1000'	600'	840'

* Conventional Roads Only

** Posted Speed Prior to Implementation

TRAFFIC CONTROL LEGEND

- BOUNDARY / RIGHT OF WAY
- WORK ZONE IN ROW
- TRAFFIC FLOW
- CHANNELIZING DEVICE
- WARNING SIGNS
- TYPE 3 BARRICADE
- (A) ROAD WORK AHEAD CW20-1D 48 X 48
- (B) ONE LANE ROAD AHEAD CW20-4D 48 X 48
- (C) BE PREPARED TO STOP CW3-4 48 X 48
- (D) CW20-7 48 X 48; XXX FEET CW16-2P 24 X 18
- (E) END ROAD WORK G20-2 48 X 24
- HEAVY WORK VEHICLE FLAGGER
- TRUCK MOUNTED ATTENUATOR (TMA)
- FLAGGER

"TRAFFIC NOTES"

1. CONTRACTOR SHALL PROVIDE AND INSTALL TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH PART VI OF TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD - LATEST EDITION WITH REVISIONS) DURING CONSTRUCTION.

2. NO LANES SHALL BE BLOCKED FROM 7 A. M. TO 9 A. M. AND 4 P. M. TO 6:30 P. M. MONDAY THRU FRIDAY.

3. OFF DUTY POLICE OFFICERS/FLAGGERS ARE REQUIRED TO DIRECT TRAFFIC WHEN LANES ARE BLOCKED.

4. CONTRACTOR SHALL COVER THE EXCAVATION WITH STEEL PLATES ANCHORED PROPERLY DURING NON-WORKING HOURS AND ALLOW NORMAL TRAFFIC FLOW. IF COVERING IS NOT FEASIBLE, USE TRAFFIC FR 336 (-X JCI DELINEATOR OR APPROVED EQUAL WITH SHEETING AND BASE EPOXIED TO PAVEMENT NEXT TO EXCAVATION DURING NON-WORKING HOURS.

5. APPROVED COPIES OF TRAFFIC CONTROL PLANS* SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES.

6. IF THE CONTRACTOR CHOOSES TO USE A DIFFERENT METHOD OF TRAFFIC CONTROL PLAN DURING THE CONSTRUCTION THAN WHAT IS OUTLINED IN THE CONTRACT DRAWINGS, (S)HE SHALL BE RESPONSIBLE TO PREPARE AND SUBMIT ALTERNATE PLANS* TO TRAFFIC SECTION OF HCPID FOR APPROVAL TEN WORKING DAYS PRIOR TO IMPLEMENTATION.

*THESE PLANS SHALL BE DRAWN TO SCALE ON REPRODUCIBLE MYLARS AND SEALED BY A LICENSED ENGINEER IN THE STATE OF TEXAS. PLANS WILL BECOME A PART OF THE CONTRACT DRAWINGS.

10. APPROVED COPIES OF "TRAFFIC CONTROL PLANS" AND LANE/SIDEWALK CLOSURE PERMITS SHALL BE AVAILABLE FOR INSPECTION AT THE JOB SITE AT ALL TIMES. THE CONTRACTOR MUST SECURE "LANE/SIDEWALK CLOSURE PERMITS" FROM THE CITY'S TRAFFIC DIVISION BEFORE CLOSING A LANE/SIDEWALK. THE REQUEST MUST BE MADE AT LEAST TEN BUSINESS DAYS PRIOR TO THE DATE FOR WHICH THE CLOSURE IS SOUGHT. NOTE THAT WORKING HOURS MAY BE RESTRICTED OR THE REQUEST MAY BE DENIED. CALL 832-395-3020 FOR AN APPLICATION.

1. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.
2. THE MINIMUM LANE WIDTH ALLOWED IS 10 FEET. THE MINIMUM BUFFER ZONE BETWEEN THE WORK ZONE AND ADJACENT TRAFFIC IS 2 FEET.
3. FLORESCENT ORANGE SHALL BE THE BACKGROUND COLOR ON ALL WORK ZONE SIGNS.
4. THE CONTRACTOR SHALL REMOVE ADVANCE SIGNS WHEN NO CONSTRUCTION OPERATIONS ARE UNDERWAY.
5. OBSTRUCTIONS OR HAZARDS AT THE WORK AREA SHALL BE CLEARLY MARKED AND DELINEATED AT ALL TIMES.
6. ALL HOLES, TRENCHES OR OTHER HAZARDOUS AREAS SHALL BE ADEQUATELY PROTECTED BY LIGHTS OR OTHER PROTECTIVE DEVICES.
7. TRENCHES SHALL BE COVERED OR SURROUNDED WITH ORANGE PLASTIC CONSTRUCTION FENCE AS DIRECTED BY THE ENGINEER.
8. FLAGGER AND FCW20-7A SIGN MAY BE REQUIRED ACCORDING TO FIELD CONDITIONS.
9. VEHICLES PARKED IN ROADWAY SHALL BE EQUIPPED WITH TWO STROBES.
10. PHASES DO NOT HAVE TO BE COMPLETED IN ORDER.

GENERAL NOTES:

1. FLAGS ATTACHED TO SIGNS WHERE SHOWN ARE REQUIRED.
2. ALL TRAFFIC CONTROL DEVICES ILLUSTRATED ARE REQUIRED, EXCEPT THOSE DENOTED WITH THE TRIANGLE SYMBOL MAY BE OMITTED WHEN STATED ELSEWHERE IN THE PLANS, OR FOR ROUTINE MAINTENANCE WORK, WHEN APPROVED BY THE ENGINEER.
3. THE CW3-4 "BE PREPARED TO STOP" SIGN MAY BE INSTALLED AFTER THE CW20-1D "ONE LANE ROAD AHEAD" SIGN, BUT PROPER SIGN SPACING SHALL BE MAINTAINED.
4. SIGN SPACING MAY BE INCREASED OR AN ADDITIONAL CW20-1D "ROAD WORK AHEAD" SIGN MAY BE USED IF ADVANCE WARNING AHEAD OF THE FLAGGER OR R1-2 "YIELD" SIGN IS LESS THAN 1500 FEET.
5. A SHADOW VEHICLE WITH A TMA SHOULD BE USED ANYTIME IT CAN BE POSITIONED 30 TO 100 FEET IN ADVANCE OF THE AREA OF CREW EXPOSURE WITHOUT ADVERSELY AFFECTING THE PERFORMANCE OR QUALITY OF THE WORK. IF WORKERS ARE NO LONGER PRESENT BUT ROAD OR WORK CONDITIONS REQUIRE THE TRAFFIC CONTROL TO REMAIN IN PLACE, TYPE 3 BARRICADES OR OTHER CHANNELIZING DEVICES MAY BE SUBSTITUTED FOR THE SHADOW VEHICLE AND TMA. 6. ADDITIONAL SHADOW VEHICLES WITH TMAS MAY BE POSITIONED OFF THE PAVED SURFACE, NEXT TO THOSE SHOWN IN ORDER TO PROTECT WIDER WORK SPACES.

TCP (1-2a):

7. R1-2 "YIELD" SIGN TRAFFIC CONTROL MAY BE USED ON PROJECTS WITH APPROACHES THAT HAVE ADEQUATE SIGHT DISTANCE, FOR PROJECTS IN URBAN AREAS, WORK SPACES SHOULD BE NO LONGER THAN ONE HALF CITY BLOCK, IN RURAL AREAS ON ROADWAYS WITH LESS THAN 2000 ADT, WORK SPACES SHOULD BE NO LONGER THAN 400 FEET.
8. R1-2 "YIELD" SIGN WITH R1-2AP "TO ONCOMING TRAFFIC" PLAQUE SHALL BE PLACED ON A SUPPORT AT A 7 FOOT MINIMUM MOUNTING HEIGHT.

TCP (1-2b):

9. FLAGGERS SHOULD USE TWO-WAY RADIOS OR OTHER METHODS OF COMMUNICATION TO CONTROL TRAFFIC.
10. LENGTH OF WORK SPACE SHOULD BE BASED ON THE ABILITY OF FLAGGERS TO COMMUNICATE.
11. IF THE WORK SPACE IS LOCATED NEAR A HORIZONTAL OR VERTICAL CURVE THE BUFFER DISTANCES SHOULD BE INCREASED IN ORDER TO MAINTAIN ADEQUATE STOPPING SIGHT DISTANCE TO THE FLAGGER AND A QUEUE OF STOPPED VEHICLES (SEE TABLE ABOVE).
12. CHANNELIZING DEVICES ON THE CENTER LINE MAY BE OMITTED WHEN A PILOT CAR IS LEADING TRAFFIC AND APPROVED BY THE ENGINEER.
13. FLAGGERS SHOULD USE 24" STOP/SLOW PADDLES TO CONTROL TRAFFIC. FLAGS SHOULD BE LIMITED TO EMERGENCY SITUATIONS.

TRAFFIC CONTROL NOTES:

A. NO PARKING IS PERMITTED IN CITY'S R.O.W. FOR CONTRACTORS AND EMPLOYEES.

B. SIGNS ARE TO BE MOUNTED ON 7' FALL STANDS AND SHALL STAY UP FOR THE DURATION OF THE PROJECT.

C. "NO PARKING" SIGNS MUST BE IN PLACE 48 HOURS PRIOR TO COMMENCING WORK IN THE R.O.W.

D. GENERAL CONTRACTOR SHALL NOTIFY CAPITOL METRO PRIOR TO CLOSING ROADWAY.

SPACING FOR CHANNELIZING DEVICES

1. PLASTIC DRUMS ON MERGING TAPER @ 30' C-C WITH CHEVRON SIGN @ 60' C-C AND TYPE 'C' WARNING LIGHT (FOR OVERNIGHT CLOSURE)
2. PLASTIC DRUMS ON DOWNSTREAM TAPER @ 35' C-C
3. PLASTIC DRUMS ON RADII @ 5' C-C
4. PLASTIC DRUMS ON TANGENT @ 35' C- C WITH VERTICAL PANEL @ 70' C-C AND TYPE 'C' WARNING LIGHT @ 70' C-C (FOR OVERNIGHT CLOSURE)
5. PLASTIC DRUMS IN FRONT OF CONSTRUCTION ZONE @ 20' C-C WITH VERTICAL PANEL @ 40' C-C AND TYPE 'A' WARNING LIGHT @ 40' C-C (FOR OVERNIGHT CLOSURE)
6. CONCRETE TRAFFIC BARRIER (CTB) OR LOW PROFILE CONCRETE TRAFFIC BARRIER (LPCTB) WITH REFLECTORS @ 10' C-C IF PAVEMENT DROP IS MORE THAN TWELVE INCHES (12")
7. TUBULAR MARKER @ 20' C-C.

NOTE: SPACING SHOWN ON TRAFFIC CONTROL PLANS SHALL SUPERSEDE THE ABOVE SPACINGS.

1/10/17

NO.	DATE	REVISION
1	11/18/2016	RESUBMITTAL FOR AGENCY REVIEW
2	11/22/2016	ADDED WORK ZONE NOTES
3	12/20/2016	REDUCED WORK ZONE TO 1 LANE - TCP1 FORT BEND COUNTY FOR REVIEW
4	01/03/2017	REDUCED WORK ZONE TO 1 LANE - TCP1 FORT BEND COUNTY FOR FINAL APPROVAL

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CHAS. B. KRAH
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LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
January 3, 2017

INTERNATIONAL LEADERSHIP OF TEXAS
20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

TRAFFIC CONTROL PLAN

SHEET
CT100
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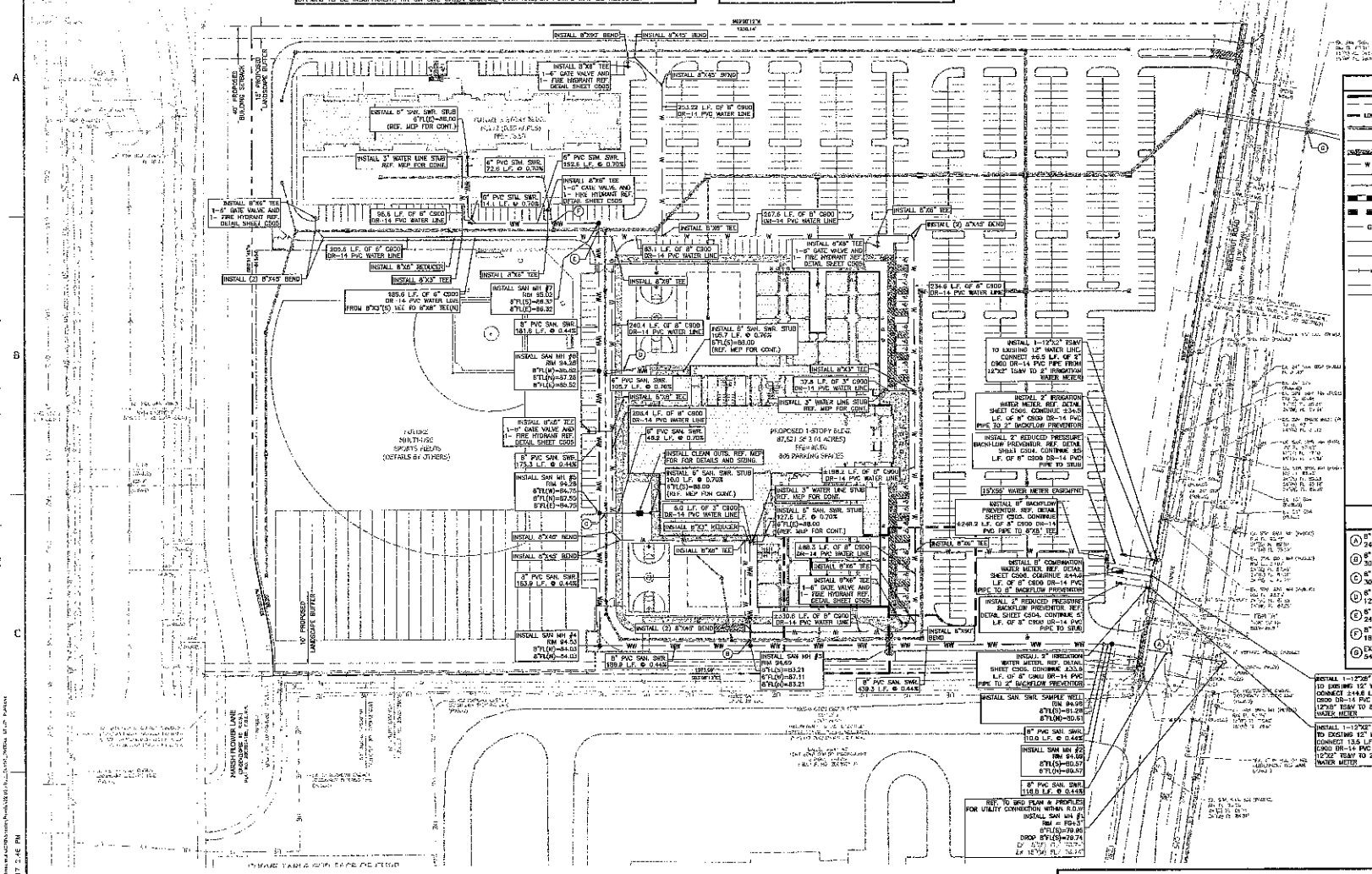
WATER LINE NOTES:
NO CONSTRUCTION ON WATER LINE TO COMMENCE PRIOR TO FIELD TEST BEING COMPLETED TO INSURE ADEQUATE FIRE PRESSURE AND FLOWS IS AVAILABLE TO THE SUBJECT SITE. IF EXISTING FIRE PRESSURES AND FLOWS ARE DEEMED TO BE INSUFFICIENT, AN ON SITE WATER STORAGE TANK AND/OR PUMPS MAY BE REQUIRED.

CAUTION:
CONTRACTOR TO VERIFY ALL EXISTING UTILITIES VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.



NOTE:
A. THE CONTRACTOR SHALL CONTACT MDS BUILDER SERVICES DEPARTMENT AT 281.290.8503 OR VIA EMAIL AT bldrservices@municipaldistricts.com 48 HOURS PRIOR TO CONSTRUCTION TO REQUEST REQUIRED INSPECTIONS. ALL SITE SANITARY SEWER AND GREASE TRAPS SHALL BE INSPECTED BY MDS PRIOR TO BACKFILL.

B. NO PIPES, VALVE FITTINGS, PLUMBING FITTINGS, AND FIXTURES WHICH CONTAIN MORE THAN A WEIGHTED AVERAGE OF 0.25% LEAD WHEN USED WITH RESPECT TO WETTED SURFACES EXIST IN PRIVATE WATER DISTRIBUTION FACILITIES INSTALLED ON OR AFTER JANUARY 4, 2014.

C. THE OWNER OR HIS CONTRACTOR SHALL INSTALL APPROPRIATE BACKFLOW PREVENTION DEVICES IN ACCORDANCE WITH STATE PLUMBING CODES OR AS REQUIRED BY THE DISTRICT'S OPERATOR. BACKFLOW TEST REPORTS MUST BE AVAILABLE AT THE TIME OF INSPECTION. COPIES OF ANNUAL TEST REPORTS MUST BE FORWARDED TO THE DISTRICT.

SITE UTILITY NOTES:
1. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND APPURTENANCES AS CALLED OUT ON PLANS.
2. ALL WATER PIPE TO BE PVC C900 DR-14 (BLUE).
3. ALL VERTICAL AND HORIZONTAL WATER LINE BENDS SHALL BE RESTRAINED TO THE MAIN USING MECHANICAL JOINT RESTRAINT DEVICES SUCH AS MEGA-LUG OR APPROVED EQUAL (SPL-WW-27A).
4. FOR ALL WATER/WASTEWATER CROSSINGS, WATERLINE MUST BE INSTALLED A MINIMUM OF 1' ABOVE TO TOP OF WASTEWATER LINE.
5. NO COMBUSTIBLE CONSTRUCTION WILL BEGIN ON THIS SITE PLAN UNTIL THE WATER LINE EXTENSION IS COMPLETED AND THE REQUIRED FIRE FLOW IS AVAILABLE.
6. ALL GRAVITY LINES ARE TO BE INSTALLED FROM DOWNSTREAM TO UPSTREAM.
7. ALL WASTEWATER PIPE TO BE PVC SDR 26 (GREEN).
8. REFERENCE GENERAL NOTES SHEET(S) FOR ADDITIONAL UTILITY NOTES.
9. WATER LINE IS DRAWN PER AS-BUILTS.CONTRACTOR TO VERIFY WATER LINE LOCATION AND SIZE PRIOR TO CONSTRUCTION

LEGEND

- BOUNDARY / RIGHT OF WAY
- EASEMENT / SETBACK
- LIMITS OF CONSTRUCTION /DISTURBANCE
- CURB & GUTTER
- CONTOUR (GRADE) ELEV.
- STORM SEWER PIPE
- WATER LINE
- WASTE WATER LINE
- GUARD RAIL
- RETAINING WALL
- FIRE LINE
- UNDERGROUND GAS LINE
- OVERHEAD UTILITY
- UNDERGROUND ELECTRIC
- IRON FENCE
- WOOD FENCE
- TOP OF BANK
- BENCHMARK
- UTILITY POLE
- GUY ANCHOR
- TRANSFORMER
- LIGHT POLE
- SIGN
- WASTE WATER MANHOLE
- CLEAN-OUT
- WATER METER/VAULT
- FIRE HYDRANT
- WATER VALVE
- STORM DRAIN MANHOLE
- STORM DRAINAGE INLET
- BACKFLOW PREVENTER
- MAIL BOX

GRAVITY CROSSINGS

A	8" WASTEWATER FL=90.28'	Δ=±6.06'
	24" (EX.) STORM WATER FL=87.27'	
B	8" WASTEWATER FL=87.16'	Δ=±1.28'
	30" STORM WATER FL=89.41'	
C	8" WASTEWATER FL=87.80'	Δ=±1.41'
	30" STORM WATER FL=89.99'	
D	8" WASTEWATER FL=87.47'	Δ=±1.58'
	12" STORM WATER FL=89.81'	
E	8" WASTEWATER FL=86.28'	Δ=±1.47'
	24" STORM WATER FL=85.77'	
F	8" WASTEWATER FL=85.72'	Δ=±1.49'
	18" STORM WATER FL=89.13'	
G	EX. 15" WASTEWATER FL=75.02'	Δ=±1.16'
	24" STORM WATER FL=81.08'	

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January 3, 2017

NO.	DATE	REVISION
1	11/16/2016	RESUBMITTAL FOR AGENCY REVIEW
2	11/28/2016	ADDENDUM NO. 1
3	12/07/2016	RESUBMITTAL TO FORT BEND COUNTY FOR REVIEW
4	12/20/2016	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL
5	01/03/2017	RESUBMITTAL TO FORT BEND COUNTY FOR FINAL APPROVAL

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20055 BEECHNUT ROAD
RICHMOND, TEXAS 77407

OVERALL UTILITY PLAN

SHEET
CU100
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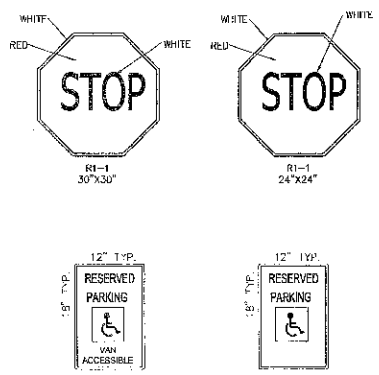
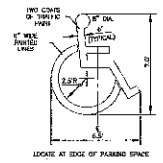


SIGN DETAILS

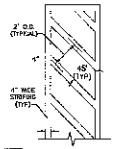
NOT TO SCALE



NOTES:
1. SEE SITE PLAN FOR TOTAL LAYOUT
2. THESE DETAILS ARE FOR REFERENCE AND DIMENSION CONTROL ONLY
3. ALL DIMENSIONS ARE TO THE OF STRIPE UNLESS OTHERWISE INDICATED

ACCESSIBLE PARKING SYMBOL

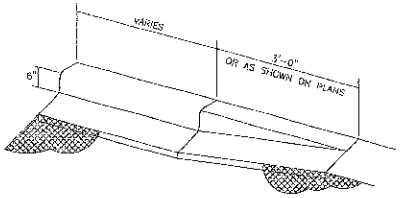
NOT TO SCALE



NOTES:
1. REFERENCE SITE PLAN FOR EXACT LIMITS OF STRIPING & DIMENSIONS.
2. ALL PAVEMENT STRIPING SHALL BE TWO COATS OF WHITE TRAFFIC PAINT.

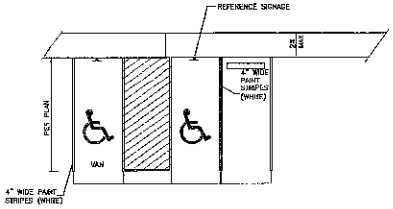
PAVEMENT STRIPING DETAIL

NOT TO SCALE



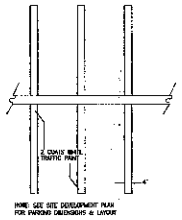
CURB TRANSITION

NOT TO SCALE



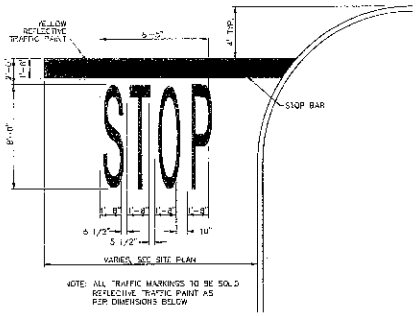
ACCESSIBLE STRIPING

NTS



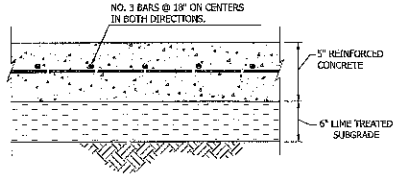
PAVEMENT STRIPING DETAIL

NTS



"STOP" PAVEMENT MARKING

NOT TO SCALE



NOTES:

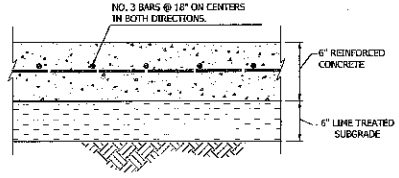
ASPHALTIC CONCRETE PAVEMENT SECTION BASED ON THE GEOTECHNICAL ENGINEERING STUDY PREPARED BY ALPHA TESTING, INC., PROJECT NO. H162297, DATED OCTOBER 18, 2016.

CONTRACTOR SHALL VERIFY PAVEMENT SECTIONS WITH ALPHA TESTING, INC. PRIOR TO CONSTRUCTION. BIG RED DOG ENGINEERING MAKES NO REPRESENTATION OR WARRANTIES IN REGARD TO THE GEOTECHNICAL INFORMATION CONTAINED HEREIN.

REFERENCE AFOREMENTIONED GEOTECH REPORT FOR DETAIL INFORMATION IN REGARDS TO PAVEMENT COMPACTION RATES AND MATERIAL PERCENTAGE

5" LIGHT ASPHALT PAVEMENT SECTION

NOT TO SCALE



NOTES:

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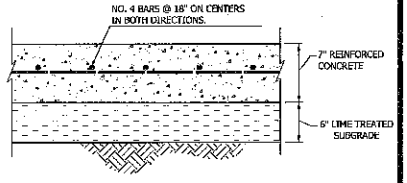
6" HEAVY ASPHALT PAVEMENT SECTION

NOT TO SCALE



NOTES:

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7" DUMPSTER AREAS AND TRUCK TRAFFIC AREAS

NOT TO SCALE

NO.	DATE	REASON
E	11/28/2016	RESUBMITTAL FOR AGENCY REVIEW
D	11/28/2016	ADDS CIRC. AD.
C	11/07/2016	REV. COMMENTS
B	10/20/2016	REV. COMMENTS, CITY, BRG, COUNTY FOR REVIEW
A	10/04/2016	REVISIONS TO CITY, BRG, COUNTY FOR FINAL APPROVAL

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January 3, 2017

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STANDARD DETAILS

SHEET
C500
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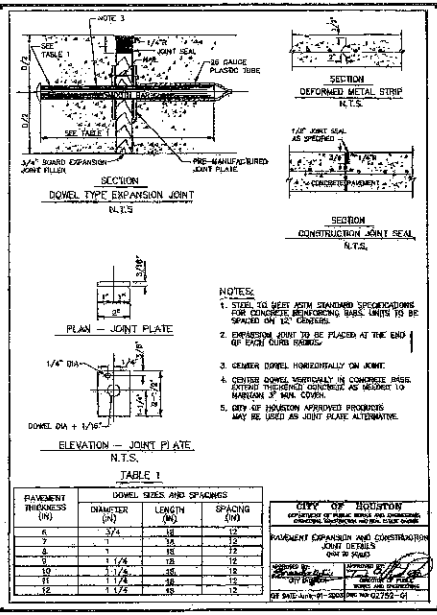
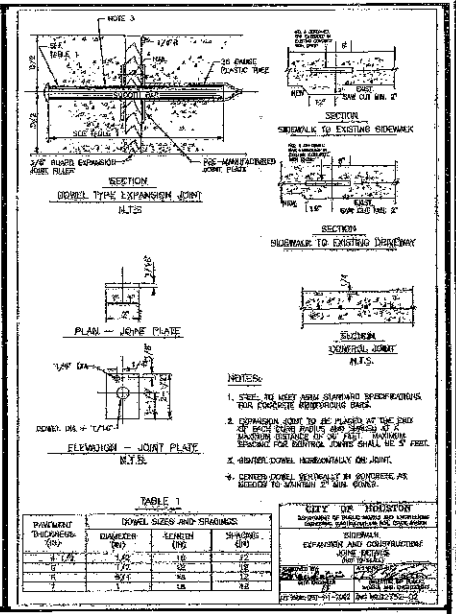
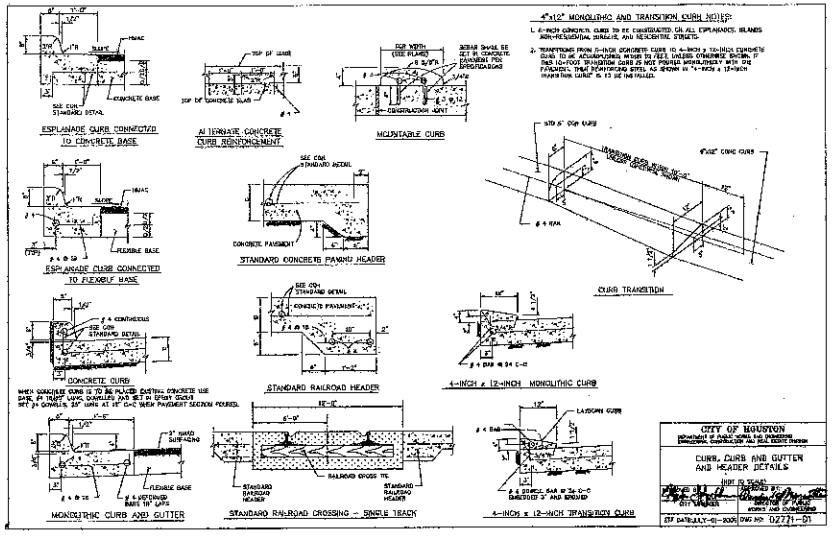
Mazz Dot 1/5/17







NO.	DATE	REVISION
0	11/12/2016	RESUBMITTAL TCP AGENCY REVIEW
1	11/22/2016	ADDED NOTE TWO
2	12/21/2016	RESUBMITTAL TO FORT BEND COUNTY TCP REVIEW
3	1/3/2017	RESUBMITTAL TO FORT BEND COUNTY TCP FINAL APPROVAL

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STANDARD DETAILS

SHEET
C501
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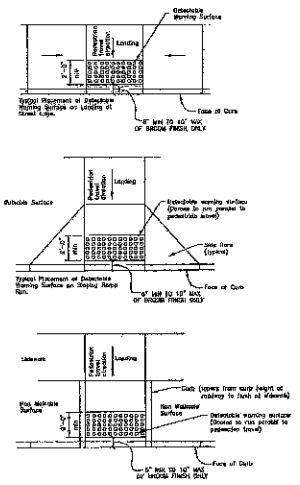
1/5/17



GENERAL NOTES FOR DETECTABLE WARNINGS

1. CURB RAMPS MUST CONTAIN A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH OF THE RAMP RUN OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.

2. DETECTABLE WARNING SURFACES MUST BE SLIP RESISTANT AND NOT ALLOW WATER TO ACCUMULATE.

3. ALIGN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.

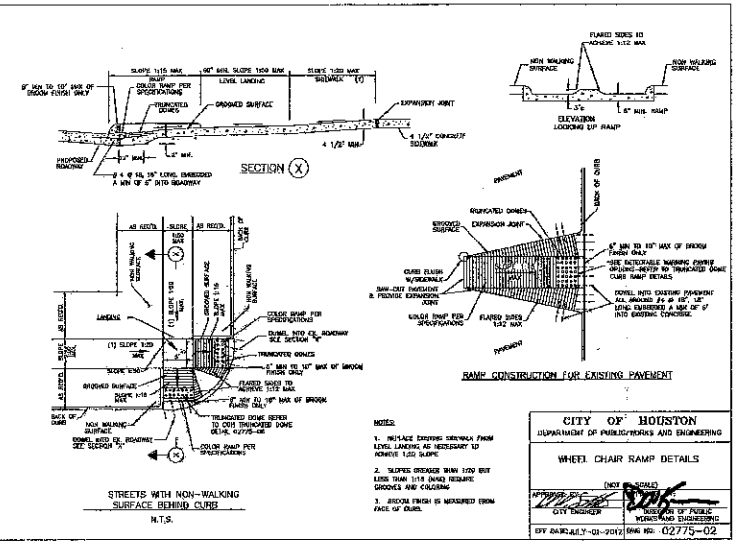
4. DMT

5. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL AND EXTEND THE FULL WIDTH OF THE RAMP RUN OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.

6. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CROSS LANE IS 6" MIN TO 10" MAX FROM THE EXTENSION OF THE FACE OF CURB. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.

7. RETROFIT CURB RAMP REPAIRS FOR NON GROOVED SURFACE.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
DETECTABLE WARNING CURB RAMP DETAILS (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2012	DWG NO: 02775-06



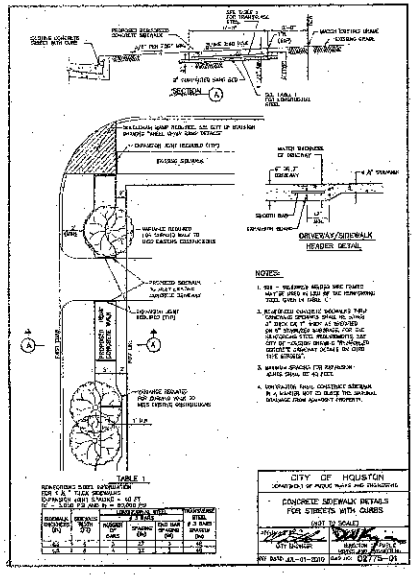
NOTES:

1. REPLACE EXISTING SIDEWALK FROM LEVEL LANDING AS NECESSARY TO ACHIEVE 1:20 SLOPE.

2. SLOPES DECREASE FROM 1:20 BUT LESS THAN 1:48 (MAX) REQUIRE GROOVES AND COLORING.

3. BROOM FINISH IS MEASURED FROM FACE OF CURB.

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
WHEEL CHAIR RAMP DETAILS (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2012	DWG NO: 02775-02



NOTES:

1. SEE - "SIDEWALK HELPER WIRE FRAMES" WHICH USED IN LIEU OF THE REINFORCING TOOL GIVEN IN TABLE 1.

2. REINFORCED CONCRETE SIDEWALKS THAT CONTAIN EXPANSION JOINTS SHALL BE ALIGNED "2" BACK OF 1" WIDE" AS SHOWN ON 6" STANDARD SIDEWALKS. FOR THE SIDEWALKS STEEL REQUIREMENTS SEE CITY OF HOUSTON DRAWING "REINFORCED CONCRETE SIDEWALK DETAILS ON CURB TYPE STREETS".

3. WHERE SPACES FOR EXPANSION JOINTS SHOW 5' OR LESS.

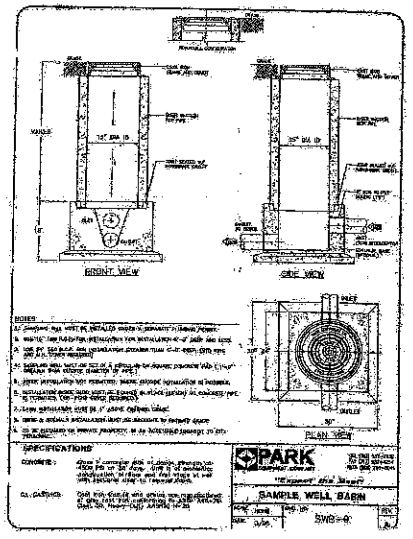
4. CONTRACTOR TO CONSTRUCT SIDEWALK IN A MANNER NOT TO ALTER THE NATURAL DRAINAGE FROM ADJACENT PROPERTY.

TABLE 1

REINFORCING STEEL REPRESENTATION FOR A 5' WIDE SIDEWALK
EXPANSION JOINTS 5 MAXIMUM = 10 FT
NOTE: USE FOR JOINT IN = SPACING FOR

SIDEWALK THICKNESS (IN)	MESH WIRE SIZE	CONCRETE STEEL 2 FT SPACING				PROPOSED STEEL 2.5 BAR SPACING (IN)	3.5 BAR SPACING (IN)
		NUMBER OF BARS	SPACING (IN)	BAR SIZE	SPACING (IN)		
4	4	4	24	3	8	16	24
4.5	4	4	24	3	8	16	24

CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
CONCRETE SIDEWALK DETAILS FOR STREETS WITH CURBS (NOT TO SCALE)	
APPROVED BY: CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010	DWG NO: 02775-01



NOTES:

1. DIMENSIONS MUST BE DETAILED ORDER TO DEMONSTRATE DESIGN INTENT.
2. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER MEASUREMENTS MADE FROM DRAWINGS.
3. USE BY SUBCONTRACTOR OR FABRICATOR OTHER THAN CITY OF HOUSTON PROHIBITED.
4. SUBMITTAL MUST INCLUDE SIZE & SPECIFICATION OF ANCHOR DIAGRAM AND LAYOUT DRAWING FROM MANUFACTURER OF PIPE.
5. ANCHOR INSTALLATION MUST PRECEDE WITH ANCHOR INSTALLATION BY MANUFACTURER.
6. INSTALLATION MUST NOT BE CONTINUED IN PLACE UNTIL ANCHOR HAS BEEN CONFIRMED TO BE FIRM AND SECURE.
7. SEAL REPRESENTS SIZE OF 1" ANCHOR BOLTS.
8. SEE DETAILS SPECIALIZED UNIT TO BE PROVIDED TO PROPERTY OWNER.
9. DO NOT DISTURB OR PRIVATE PROPERTY IN AN UNDERGROUND DRAINAGE TO PROPERTY.

SPECIFICATIONS

CONCRETE: Allow 7 calendar days for concrete strength to reach 75% of 28 days. Cure in accordance with specification section and that stated in mix with curing compound.

CLEANING: Clean with water and mild detergent or soap. Rinse thoroughly. Do not use harsh cleaners, abrasives, or solvents.

PARK
"Engineered Water Supply"

SAMPLE WELL BARN

DATE: 7-8-08	SCALE: 1/4" = 1'-0"
DRAWN BY:	SWB-Q

NO.	DATE	REVISION
1	11/18/16	RESIDENTIAL FOR AGENCY REVIEW
2	12/23/16	CITY COMMENTS
3	1/3/17	CITY COMMENTS
4	1/10/17	RESIDENTIAL TO TDLR FOR REVIEW
5	1/20/17	RESIDENTIAL TO TDLR FOR FINAL APPROVAL

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January 3, 2017

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RICHMOND, TEXAS 77407

STANDARD DETAILS

SHEET
C502
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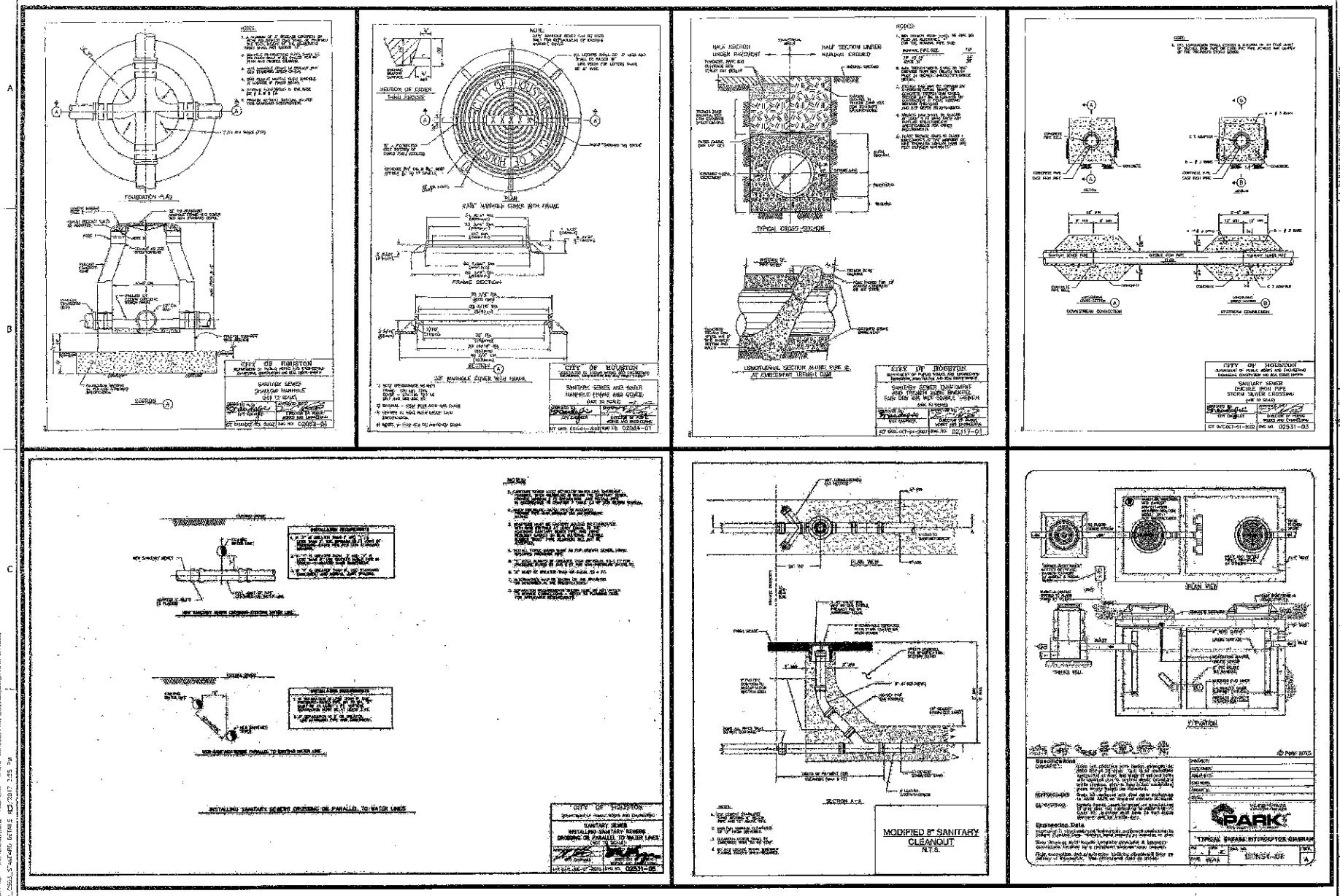
Maggie 1/5/17



REVISION	DATE
0	11/12/15 IN RESPONSE TO "FOR REVIEW" REVIEW
1	11/12/15 IN RESPONSE TO "FOR REVIEW" REVIEW
2	11/27/15 IN RESPONSE TO FORT BEND COUNTY FOR REVIEW
3	01/05/2016 IN RESPONSE TO FORT BEND COUNTY FOR "FINAL" APPROVAL
4	01/03/2017 RESUBMITTAL TO FORT BEND COUNTY FOR "FINAL" APPROVAL

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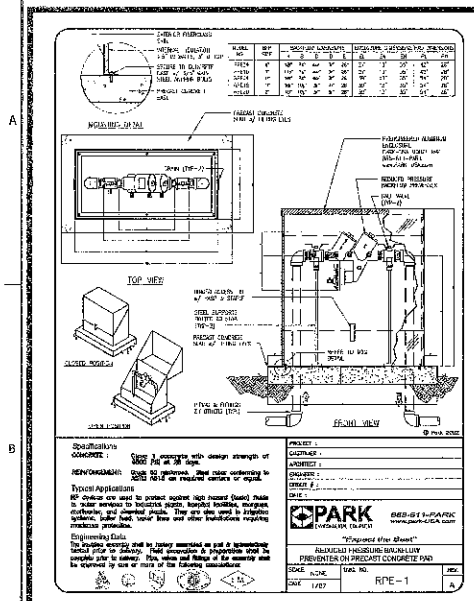

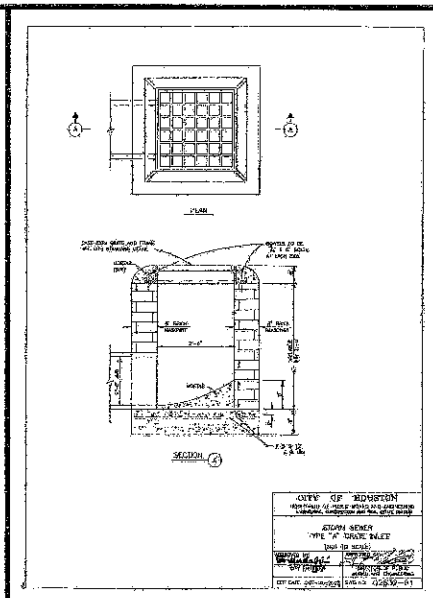

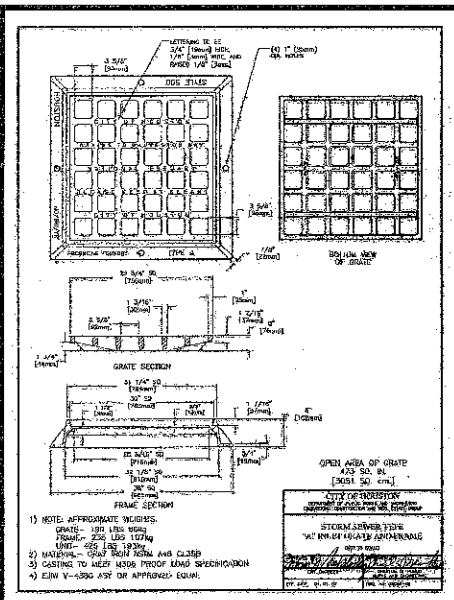

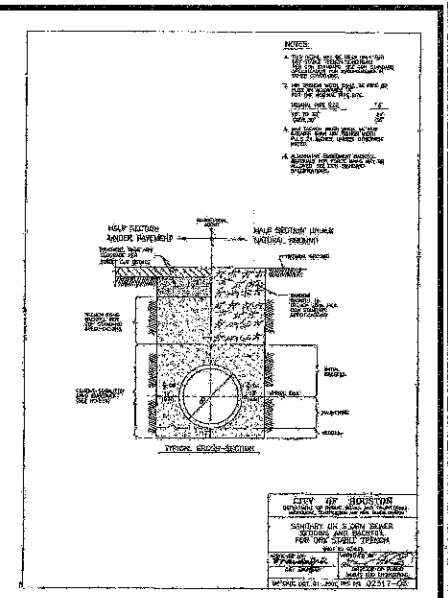

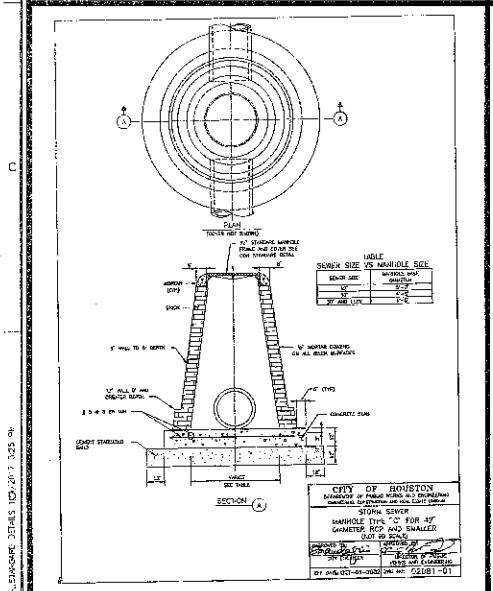

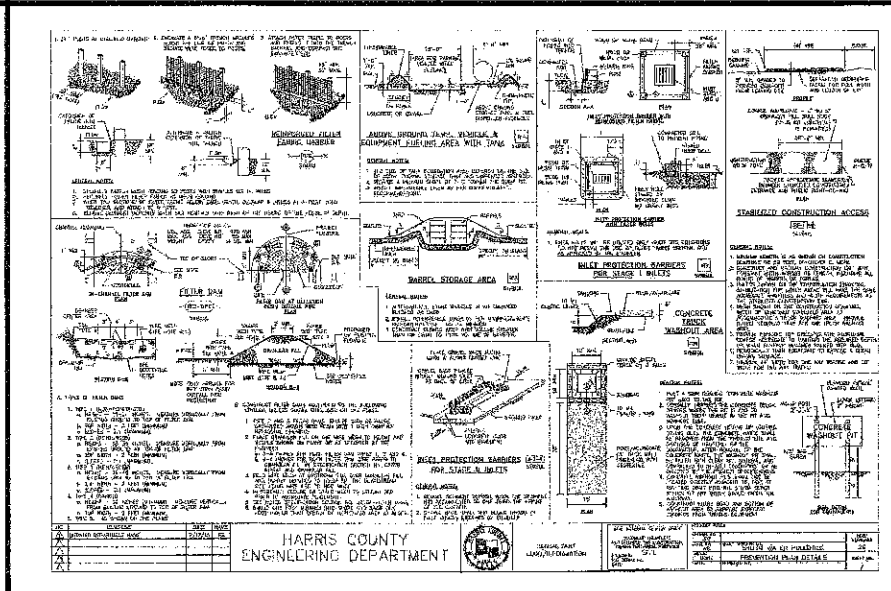

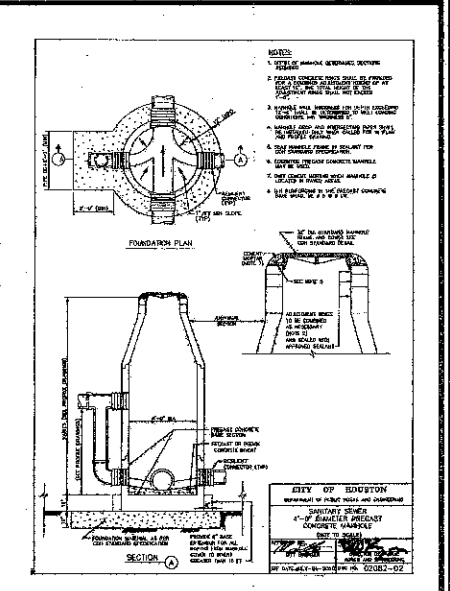

NO.	DATE	REVISIONS/REFERENCE
1	1/20/2016	REVISIONS PER HCFCD REVIEW
2	1/27/2016	ADDENDUM TWO
3	10/21/2016	ADD COMPOSITE
4	1/03/2017	REVISIONS PER TCEQ, TC, FORT BEND COUNTY FOR SSWL KYBOARD

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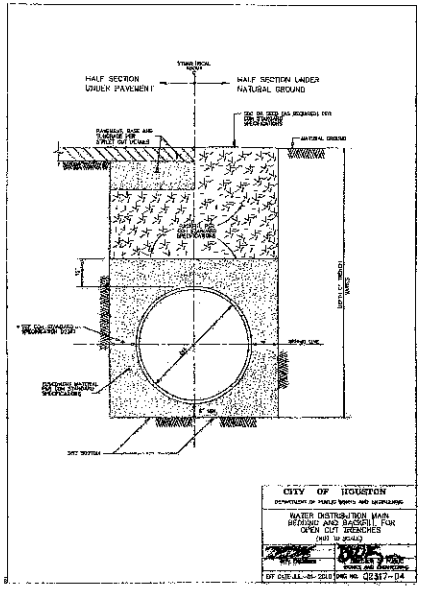
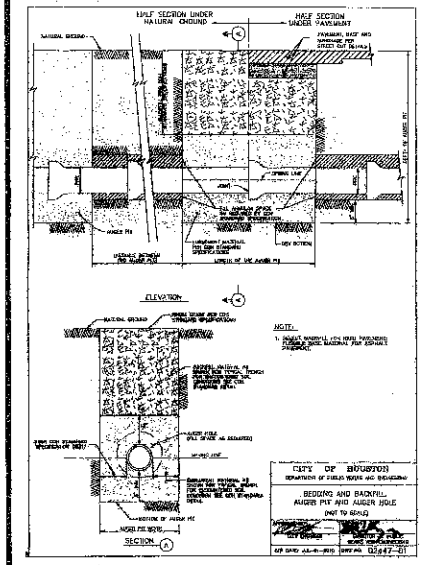
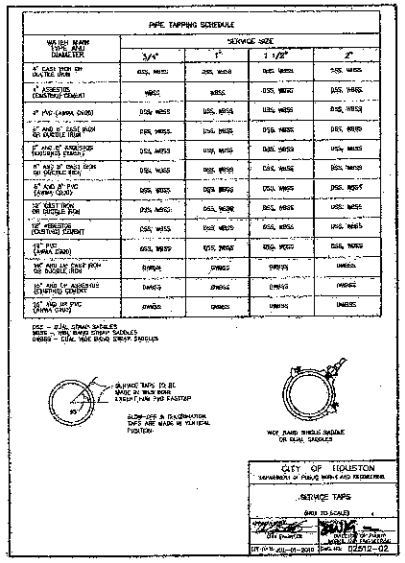




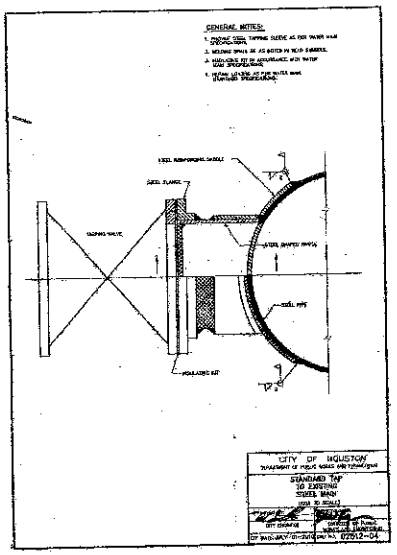


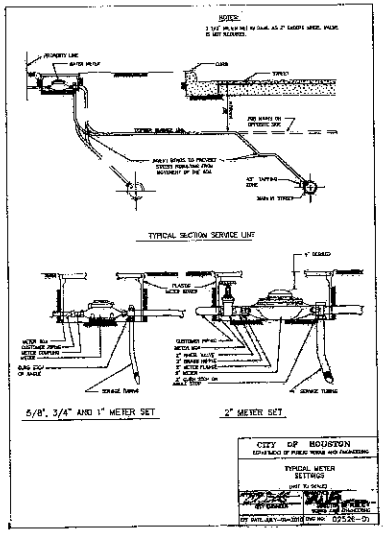
PIPE TAPPING SCHEDULE

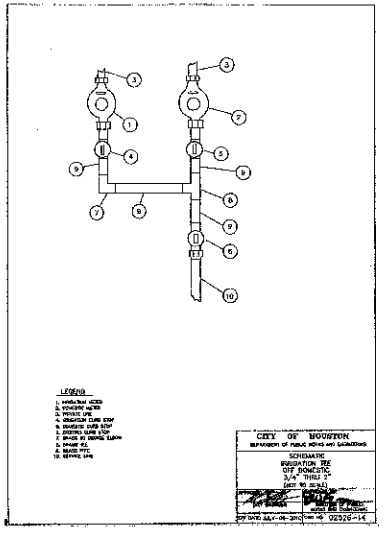
WATER MAIN TYPE AND DIAMETER	SERVICE SIZE			
	3/4"	1"	1 1/2"	2"
4" CAST IRON OR DUCTILE IRON	DSS, WSSS	DSS, WSSS	DSS, WSSS	DSS, WSSS
4" ASBESTOS (EXISTING CONDUIT)	WSSS	WSSS	DSS, WSSS	DSS, WSSS
4" PVC (AWWA C900)	DSS, WSSS	DSS, WSSS	DSS, WSSS	DSS, WSSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WSSS	DSS, WSSS	DSS, WSSS	DSS, WSSS
6" AND 8" ASBESTOS (EXISTING CONDUIT)	DSS, WSSS	DSS, WSSS	DSS, WSSS	DSS, WSSS
6" AND 8" PVC (AWWA C900)	DSS, WSSS	DSS, WSSS	DSS, WSSS	DSS, WSSS
12" CAST IRON OR DUCTILE IRON	DSS, WSSS	DSS, WSSS	DSS, WSSS	DSS, WSSS
12" ASBESTOS (EXISTING CONDUIT)	DSS, WSSS	DSS, WSSS	DSS, WSSS	DSS, WSSS
12" PVC (AWWA C900)	DSS, WSSS	DSS, WSSS	DSS, WSSS	DSS, WSSS
16" AND 18" CAST IRON OR DUCTILE IRON	SWWSS	SWWSS	SWWSS	SWWSS
16" AND 18" ASBESTOS (EXISTING CONDUIT)	SWWSS	SWWSS	SWWSS	SWWSS
16" AND 18" PVC (AWWA C900)	SWWSS	SWWSS	SWWSS	SWWSS

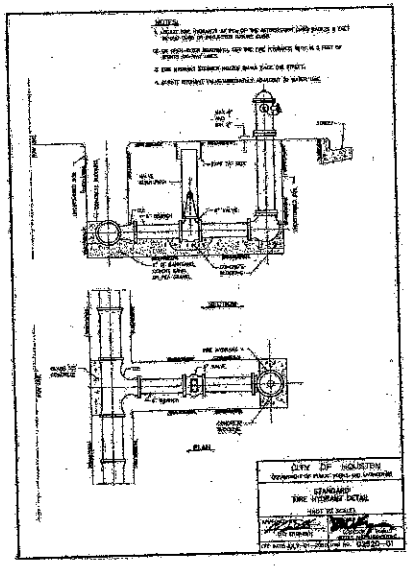
DSS - DUAL STRAP SADDLES
WSSS - WIDE BAND STRAP SADDLES
SWWSS - DUAL WIDE BAND STRAP SADDLES

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
SERVICE TAPS
(NOT TO SCALE)
DWG NO. 02612-02









NO	DATE	REVISION
0	11/13/2016	PRELIMINARY FOR AGENCY REVIEW
1	12/21/2016	ADDED COMMENTS
2	12/22/2016	ADDED COMMENTS - TCEQ
3	1/3/2017	PRELIMINARY - TO TCEQ FOR COUNTY FOR FINAL APPROVAL

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STANDARD DETAILS

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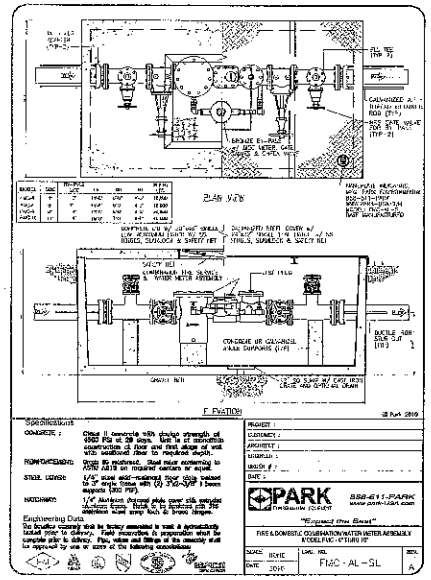
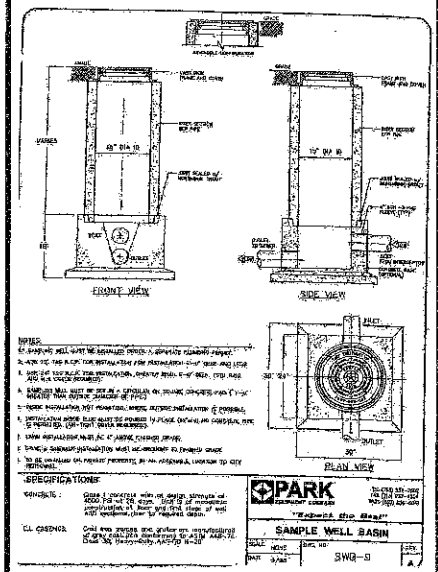
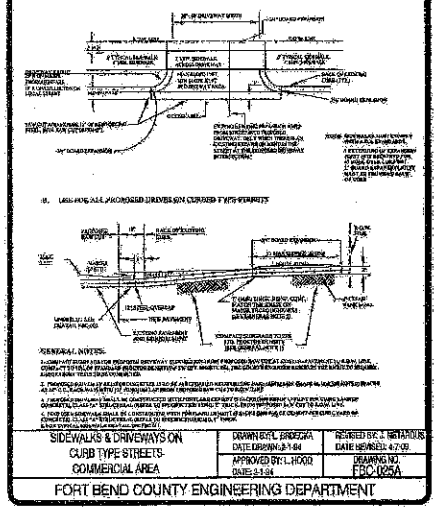




WHEN A COMMERCIAL SIDEWALK, DRIVEWAY, CURB OR GUTTER IS CONSTRUCTED, RECONSTRUCTED, REPAIRED OR REGRADED ON COUNTY RIGHT-OF-WAY, FOR UNDIVIDED CONCRETE OR ASPHALT CURB TYPE STREETS, USE SECTIONS APPLICABLE.

A. USE FOR ALL PROPOSED EXISTING CURB REMOVAL FOR DRIVEWAYS (PLAN VIEW NOT TO SCALE)



B. USE FOR ALL PROPOSED DRIVEWAYS CURVED TYPE STREETS

GENERAL NOTES:

SIDEWALKS & DRIVEWAYS ON CURB TYPE STREETS COMMERCIAL AREA	DRAWN BY: L. BRIDECKA DATE DRAWN: 3-1-94	REVISED BY: C. METAXOTOS DATE REVISED: 4-7-09
	APPROVED BY: L. HOOD DATE: 3-1-94	DRAWING NO. FBC-025A

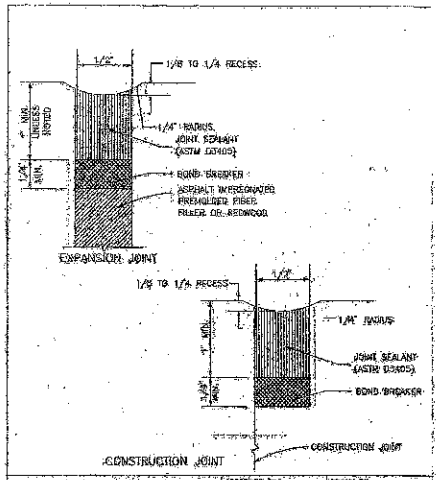
FORT BEND COUNTY ENGINEERING DEPARTMENT

GENERAL NOTES FOR SIDEWALKS AND DRIVEWAYS

1. SAW CUT EXISTING CURB AT EACH END AND KNOCK OUT CURB FROM BEGINNING TO END OF PROPOSED DRIVEWAY.
2. SAW CUT EXISTING PAVEMENT A MINIMUM OF 12" INCHES AWAY FROM BACK OF CURB (GUTTER LINE) AND REPAIR OUT TO EXPOSE EXISTING REINFORCEMENT STEEL.
3. COMPACT SUBGRADE FOR PROPOSED DRIVEWAY CONNECTION FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO RIGHT-OF-WAY LINE, COMPACT TO 95% OF STANDARD PROCTOR DENSITY (+/- 2% OPT. MOISTURE). THE COUNTY ENGINEER RESERVES THE RIGHT TO REQUIRE LABORATORY TESTS TO BE CONDUCTED.
4. PLACE AND COMPACT 4" CLEAN SAND BASE.
5. MAINTAIN EXISTING LINE WITH FACE OF EXISTING CURB.
6. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE TIED TO EXISTING ROADWAY REINFORCING STEEL WITH A MINIMUM LAP OF 12 INCHES.
7. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE #4 DEFORMED REBAR AS PER (ASTM A615) GRADE 60, UNLESS NOTED 3 SPACED AT 2'-0 INCHES O.C. EACH WAY, WITH 12 INCHES MINIMUM LAP OF 18" X 18" TIE # #3 AS ALTERNATE 2 FROM PROPOSED SAW CUT TO RIGHT-OF-WAY LINE.
8. PROPOSED DRIVEWAY CURB, CENTER LINE, AND GRADE SHALL MATCH EXISTING SURVEY.
9. PROPOSED DRIVEWAY SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 02301), 6 INCHES THICK AND 6 FEET MINIMUM WIDTH, SEE DRAWING NO. FBC 24A FOR ADDITIONAL INFORMATION AND DETAILS.
10. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 02301), 4 INCHES THICK AND 4 FEET MINIMUM WIDTH, SEE DRAWING NO. FBC 24A FOR ADDITIONAL INFORMATION AND DETAILS.

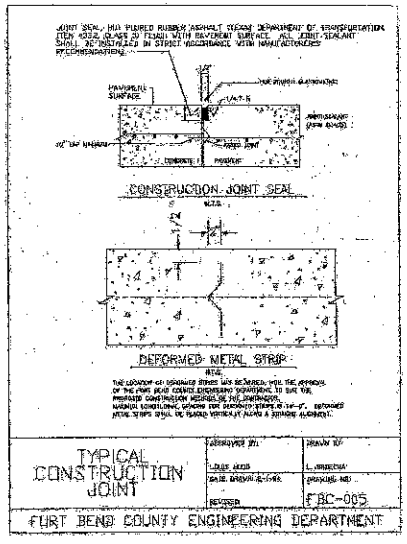
CONSTRUCTION NOTES FOR SIDEWALKS & DRIVEWAYS WITH CURB TYPE STREETS COMMERCIAL AREA	DRAWN BY: L. BRIDECKA DATE DRAWN: 2-1-96	REVISED BY: L. BRIDECKA DATE REVISED: 8-10-99
	APPROVED BY: L. HOOD DATE: 2-1-94	DRAWING NO. FBC-025B

FORT BEND COUNTY ENGINEERING DEPARTMENT



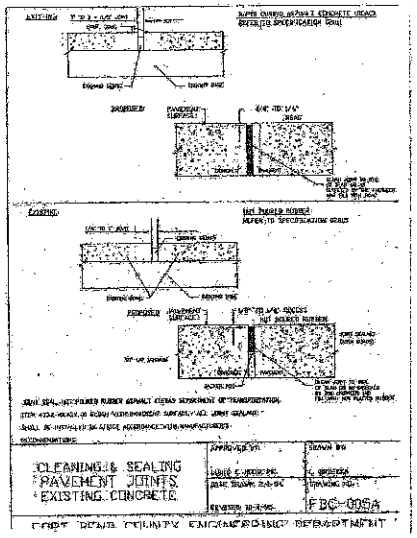
JOINT SEALANT FOR EXPANSION JOINT AND CONSTRUCTION JOINT	APPROVED BY: LUKE HOOD, P.E. DATE DRAWN: 3-1-94	DRAWN BY: L. BRIDECKA DRAWING NO.: FBC-006
	REVISED: 10-3-99	

FORT BEND COUNTY ENGINEERING DEPARTMENT



TYPICAL CONSTRUCTION JOINT	APPROVED BY: LUKE HOOD DATE DRAWN: 2-1-96	DRAWN BY: L. BRIDECKA DRAWING NO.: FBC-005
	REVISED:	

FORT BEND COUNTY ENGINEERING DEPARTMENT



CLEANING & SEALING PAVEMENT JOINTS, EXISTING CONCRETE	APPROVED BY: LUKE C. HOOD, P.E. DATE DRAWN: 2-1-94	DRAWN BY: L. BRIDECKA DRAWING NO.: FBC-005A
	REVISED: 10-3-99	

FORT BEND COUNTY ENGINEERING DEPARTMENT

NO.	DATE	
1	11/18/03	REVISIONS PER TCE AGENCY REVIEW
2	1/23/04	REVISE CURB DIMENSIONS
3	1/12/05	REVISE DETAIL TO 12" BEND COUNTY FOR FINAL APPROVAL
4	12/20/07	REVISE DETAIL TO 12" BEND COUNTY FOR FINAL APPROVAL

RE-05-07

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January 3, 2017

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STANDARD DETAILS

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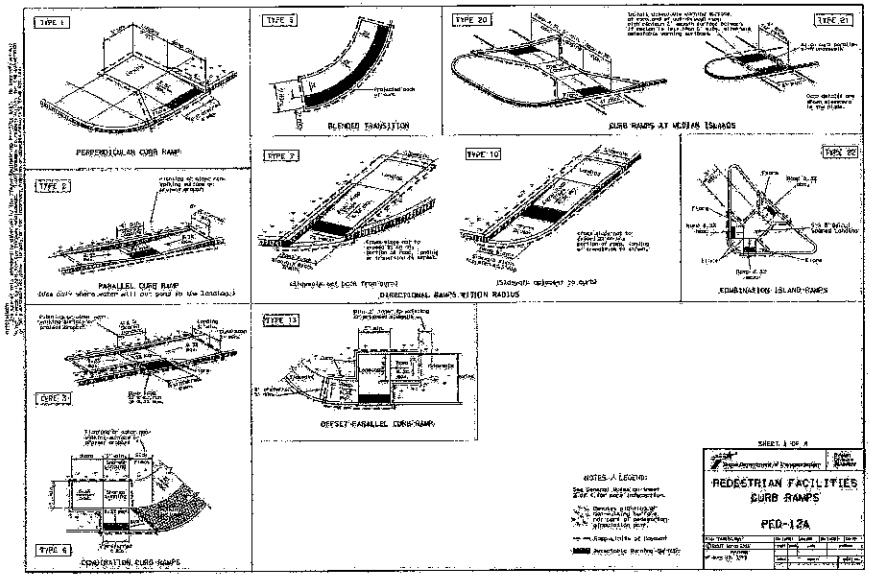

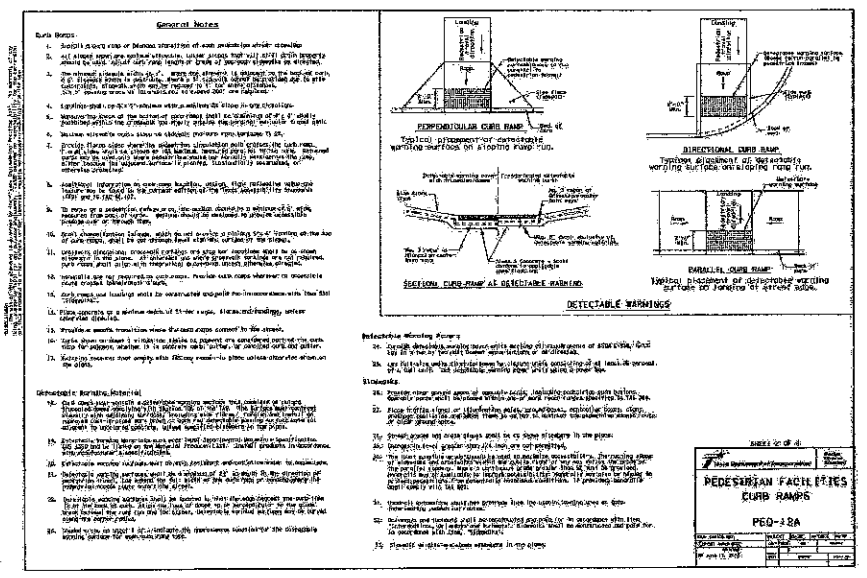

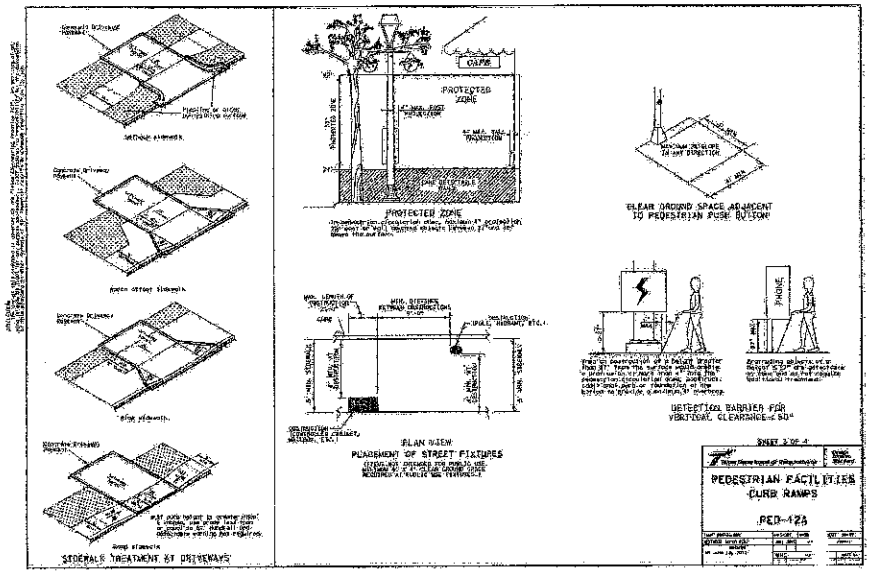

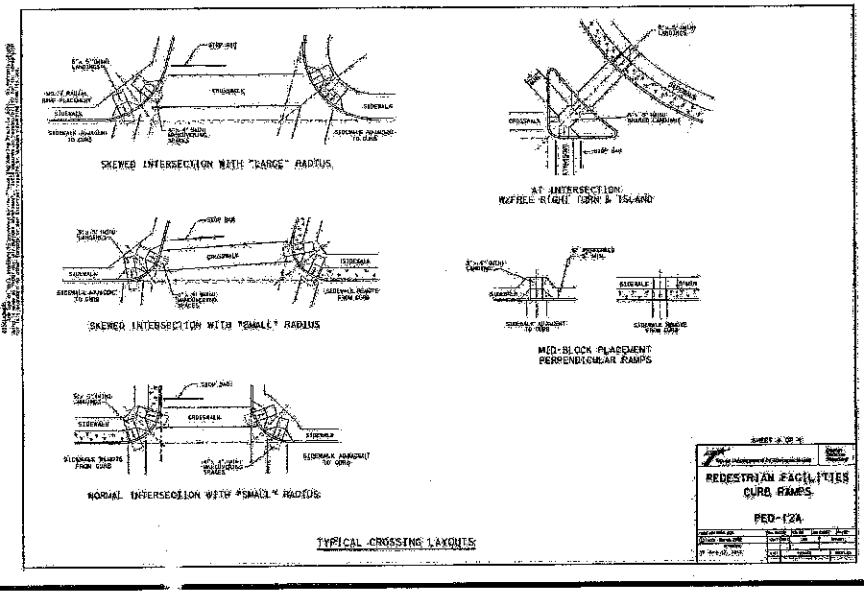

1	11/28/2016	REVISIONS PER AGENCY REVIEW
2	11/29/2016	REDUCTION TWC
3	12/07/2016	REDRAW PL, 10, CW, BMP, COA - PDF ISSUED
4	12/07/2016	REDRAW PL, 10, CW, BMP, COA - PDF ISSUED
5	12/07/2016	REDRAW PL, 10, CW, BMP, COA - PDF ISSUED

NO. DATE REVISION

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