



**REVIEW BY FORT BEND COUNTY
COMMISSIONERS COURT**

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

☐ Right of Way Permit
☒ Commercial Driveway Permit

Permit No: 2018-20660

Applicant: Sundance Construction

Job Location Site: 4828 Waterview Town Center Drive, Richmond, TX 77406

Bond No. **Date of Bond:** 8/2/2018 **Amount:** \$50,000.00

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

Notes:

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
 - a. 48 hours in advance of construction start up, and
 - b. When construction is completed and ready for final inspection, submit notification to Permit Administrator thru MyGovernmentOnline.org portal.
3. This permit expires one (1) year from date of permit if construction has not commenced.
4. This permit applies to work performed within right-of-ways owned and maintained by Fort Bend County only, and it is the responsibility of the applicant to acquire all other necessary permits.

On this 6th day of November, 2018, Upon Motion of Commissioner Meyers, seconded by Commissioner Patterson, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Signature

By:

Sean Eglinton
County Engineer

Presented to Commissioners Court and approved.

Date Recorded 11/13-2018

Comm. Court No. 12 M

N/A

By:

Drainage District Engineer/Manager

Clerk of Commissioners Court

By:

Andrea Wilkins
Deputy



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

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

- ☐ Right of Way Permit
☒ Commercial Driveway Permit

Permit No: 2018-20660

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:

- | | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | a. Name of road, street, and/or drainage ditch affected. |
| <input checked="" type="checkbox"/> | b. Vicinity map showing course of directions |
| <input checked="" type="checkbox"/> | c. Plans and specifications |

(2) BOND:

- | | | | |
|-------------------------------------|--|---------------------|---------------------|
| <input type="checkbox"/> | County Attorney, approval when applicable. | | |
| <input checked="" type="checkbox"/> | Perpetual bond currently posted. | Bond No: [REDACTED] | Amount: \$50,000.00 |
| <input type="checkbox"/> | Performance bond submitted. | Bond No: _____ | Amount: _____ |
| <input type="checkbox"/> | Cashier's Check | Check No: _____ | Amount: _____ |

(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):

Drainage District Approval

Date

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

Permit Administrator

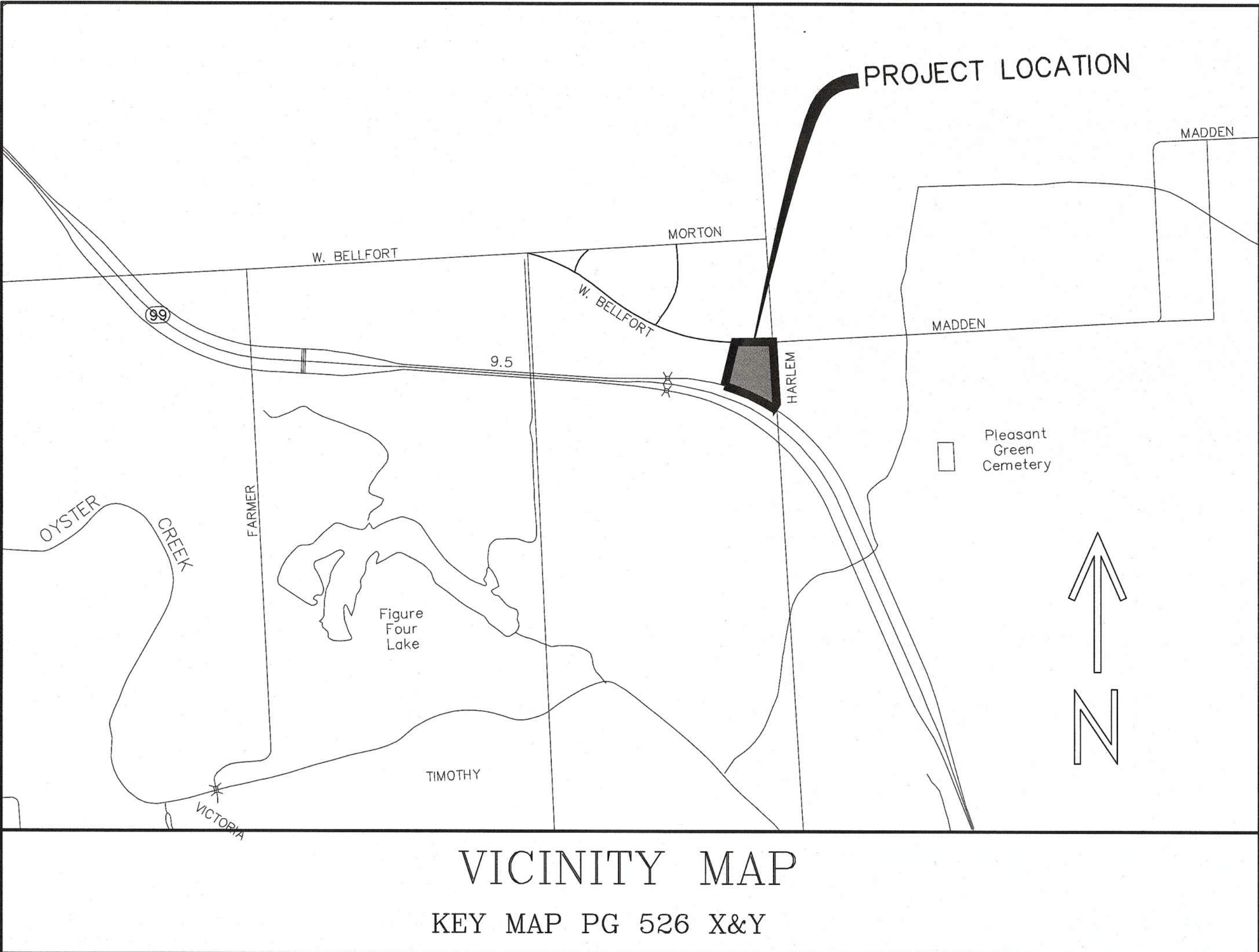
10/29/2018

Date

READ KING
PLANS FOR CONSTRUCTION OF WATER, SANITARY
SEWER, PAVING AND DRAINAGE FACILITIES
TO SERVE
WATerview TOWN CENTER VILLAGE EAST
HIGHWAY 99 AND HARLEM ROAD
RICHMOND, TEXAS 77046

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Sheet 12	Traffic Control Plan



VICINITY MAP
KEY MAP PG 526 X&Y

- Fort Bend County Municipal Utility District No. 143 General Construction Notes**
- The City of Houston and TCO rules for waterline crossings must be followed. The City of Houston requires a minimum of 24 inches (24") between water and sanitary sewer crossings and a minimum of 18 inches (18") between water and storm sewer crossings.
 - Polyvinyl-chloride (PVC) pipe shall conform to ASTM Specification D3034 and be installed according to ASTM D2321.
 - All sanitary sewer service lines shall be constructed to true alignment and grade. Warped and sagging lines will not be permitted.
 - Building tie-on connection will be made directly to the stub-out from the building plumbing at the foundation on all waste outlets.
 - All non-single family service lines will be encased in a layer of 3.5 sack per cubic yard cement stabilized sand, six-inches (6") thick, completely around the line.
 - All service lines under or within one-foot (1') of proposed or future driveways or parking lots shall be backfilled with 3.5 sack per cubic yard, cement stabilized sand, to within one-foot (1') of subgrade.
 - Water-tight adapters of a type compatible with the materials being joined will be used at the point of connection of the service line to the building plumbing. No cement grout materials are permitted.
 - No bends or turns at any point will be greater than 45 degrees.
 - Each cleanout will be installed so that it opens in a direction opposite to the flow of the waste and, except in the case of "open" branch and end-of-line cleanouts, cleanouts will be installed vertically above the flow line of the pipe.
 - Cleanout will be made with airtight mechanical plug.
 - Application for Sanitary Sewer Service must be filed prior to construction of the service line and the connection fee should accompany this application. Application forms are available from the District's Operator, Environmental Development Partners, 713-395-3100. Construction must not begin until authorized by the District.
 - When the service line is complete, and prior to backfilling the pipe trench, the applicant for sewer service shall request an inspection of the installation. Requests for inspections shall be made to the District's Operator, Environmental Development Partners, 713-395-3100 twenty-four (24) hours in advance of the inspection.
 - The physical connection to the District's sewer main will be made by use of an adapter of a type compatible with materials being joined. The connection shall be watertight. No cement grout materials are permitted.
 - Any damage to the District's facility shall be repaired promptly by the applicant under the direction of the District's Engineer. Major damage will be repaired by the District at the applicant's expense.
 - All bathroom fixtures including toilets, urinals, etc., will have separate plumbing and will connect to the service line downstream of the grease trap.
 - Backfilling of service lines trench must be accomplished within twenty-four (24) hours of inspection and approval. No debris will be permitted in the trench.
 - During inspection of the service connection, the Inspector will examine all District facilities such as manholes, valves, flush valves, and risers on and adjacent to the lot. The connection permit will not be granted until any damage to these facilities has been repaired.
 - No waste material which is not biologically degradable will be permitted to discharge into the District's sewage facilities. Including mud and debris accumulated during service line installation. The applicant is to be fully responsible for cleaning and jetting the lines of any dirt or debris.
 - No downspouts, yard and street drains, or gutters will be permitted to be connected into the District's sanitary sewer facilities.
 - A connection permit will be granted after inspection confirms that all requirements of the District's Rules and Regulations have been met.
 - The use of pipe or pipe fittings that contain more than 0.25 percent (0.25%) lead, or solders and flux that contain more than 0.2 percent (0.2%) lead, are prohibited for installation or repair of any plumbing in any Residential or Commercial facility providing water for human consumption and connection to the District's water supply system.

Fort Bend County
Construction - General Notes

- Fort Bend County must be invited to the Pre-Construction Meeting.
- 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.
- 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.
- 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.
- All road widths, curb radii and curb alignment shown indicates back of curb.
- A continuous longitudinal reinforcing bar shall be used in the curbs.
- All concrete pavement shall be 5 1/2 sack cement with a minimum compressive strength of 3500 psi at 28 days. Transverse expansion joints shall be installed at each curb return and at a maximum spacing of 60 feet.
- All weather access to all existing streets and driveways shall be maintained at all times.
- 4"x12" reinforced concrete curb shall be placed in front of single family lots only. All other areas shall be 6" reinforced concrete curb.
- At all intersection locations, Type 7 ramps shall be placed in accordance with TxDOT Ped-12a standard detail sheet. A.D.A. - Handicap Ramps shall be installed with street paving at all intersections and comply with current A.D.A. regulations.
- Curb headers are required at curb connections to Handicap Ramps, with no construction joint within 5' of ramps.
- All intersections utilizing Traffic Control measures shall have A.D.A. wheel chair ramps installed.
- 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.
- All R1-1 stop signs shall be 30"x30" with diamond grade sheeting per Texas manual on uniform traffic control devices.
- 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.
- A Blue Double Reflectorized button shall be placed at all Fire Hydrant locations. The button shall be placed 12 inches off of the centerline of the street on the same side as the hydrant.

NOTE: Fort Bend County notes supersede any conflicting notes.

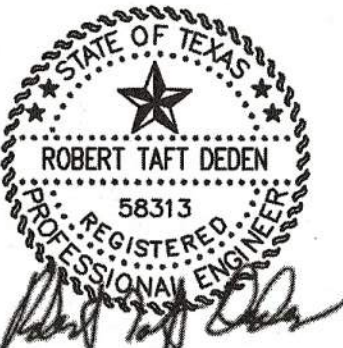
Inspection. The Project and all parts thereof shall be subject to inspection from time to time by inspectors designated by Fort Bend County. No such inspections shall relieve the Contractor of any of its obligations hereunder. Neither failure to inspect nor failure to discover or reject any of the work 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.

FORT BEND COUNTY ENGINEER	
ENGINEER: <i>Paul J. Stanley, P.E.</i>	
DATE: 4/6/18	
THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN (1) YEAR FROM DATE OF APPROVAL.	
APPROVED: <i>Carando A. S.</i>	
DATE: 4/5/18	

NO.	DATE	REVISIONS	BY	CK	APP
1	4/10/18	REVISED PER FORT BEND COUNTY M.U.D. No. 143			
2	4/10/18	REVISED PER FORT BEND COUNTY ENGINEERING			

Paul J. Stanley
FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT NUMBER 143 ENGINEER,
SIGNATURE VALID FOR ONE (1) YEAR

4-11-2018
DATE



DEDEN SERVICES, LLC
CIVIL ENGINEERING
Texas Registered Engineering Firm F-10971

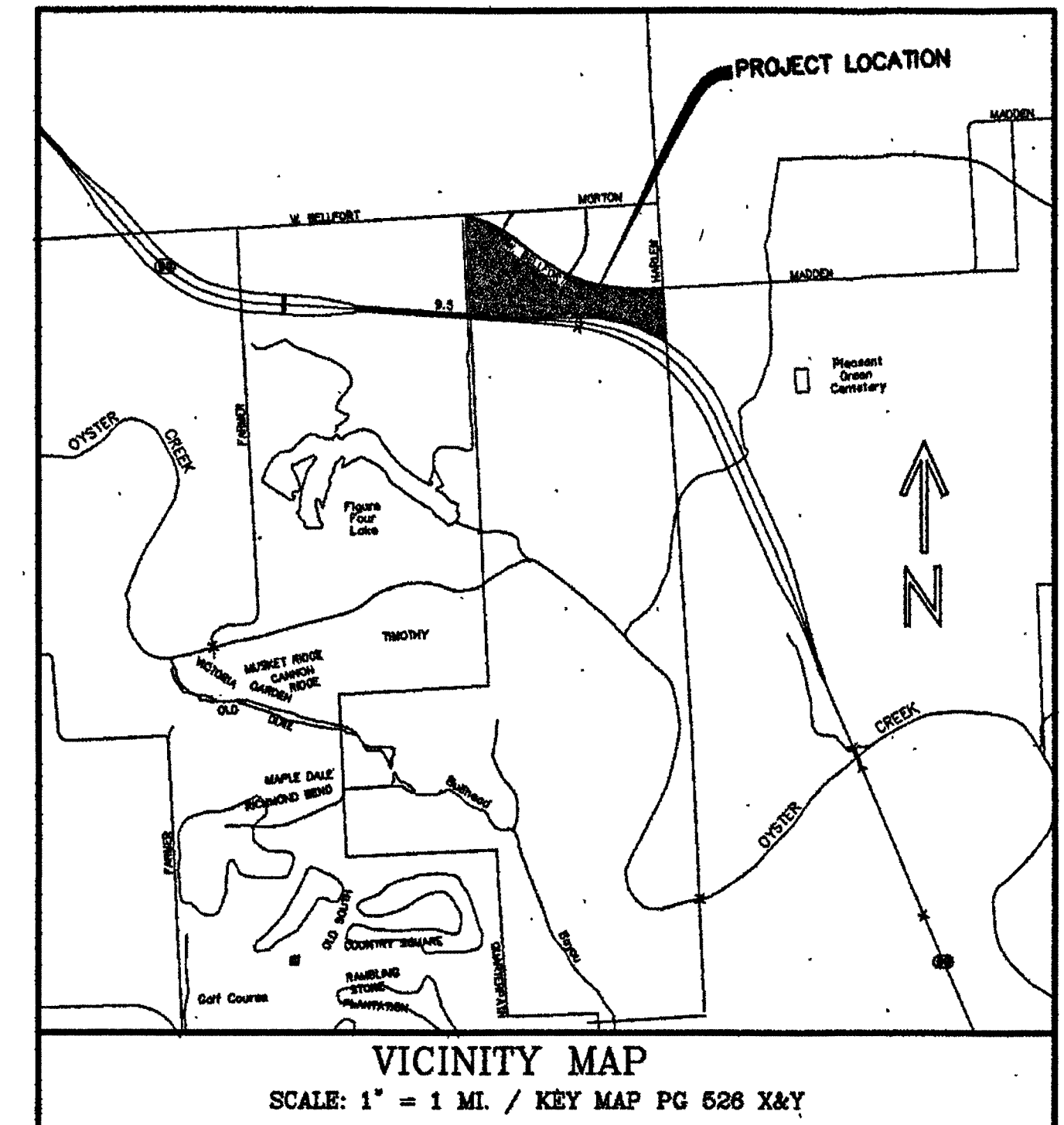
9328 WESTVIEW
HOUSTON, TX 77055
(713) 461-8822
FAX (713) 461-2671

03-20-2018

Job No.:
Drawn:
Checked:
Approved:
Scale: HORIZ. : 1" = 20'

**READ KING
WATerview TOWN CENTER
VILLAGE EAST
Highway 99 and Harlem Road
Richmond, Texas 77046
COVER SHEET**

DATE: JANUARY 2018 SHEET 1 OF 12



ABBREVIATIONS:

BL.....Building Line

CF.....Clerks File

ESMT.....Easement

FBCDR.....Fort Bend County Deed Records

FBCPR.....Fort Bend County Plat Records

FBCOPRP.....Fort Bend County Official Public Records of Real Property

Line Table		
Line #	Bearing	Distance
L1	N87°04' 00"E	97.56'
L2	S89°42' 24"E	32.20'
L3	N87°04' 00"E	133.15'
L4	N87°15' 17"E	36.92'
L5	S47°38' 02"E	35.54'
L6	S87°16' 41"W	45.58'
L7	N81°52' 35"W	140.90'
L8	S19°30' 33"W	186.10'
L9	S19°31° 10"	206.84'
L10	S19°31° 10"	240.80'
L11	S20°35' 15"	7.77'
L12	S1°52' 44"E	35.80'
L13	S42°22' 36"W	80.18'
L14	N88°43' 37"E	35.31'
L15	S46°41' 42"W	55.50'
L17	S32°65' 30"W	377.35'
L18	S3°30' 06"W	21.82'
L19	N86°22' 54"W	436.09'
L20	N86°22' 54"W	427.07'
L21	S86°22' 54"E	362.95'
L22	N21°03' 36"W	29.68'

2817703948

25 PGS
PLAT ATTACH

FILED AND RECORDED
OFFICIAL PUBLIC RECORDS

Laura Richard

Laura Richard, County Clerk
Fort Bend County, Texas

February 07, 2017 03:14:03 PM

PER: 3558.00 RPT

2817702020

A SUBDIVISION OF 60.4787 ACRES OF LAND SITUATED IN THE
THE WILLIAM MORTON LEAGUE SURVEY, A-62
FORT BEND COUNTY, TEXAS

APPROVED: CHS
for DEVELOPMENT COORDINATOR

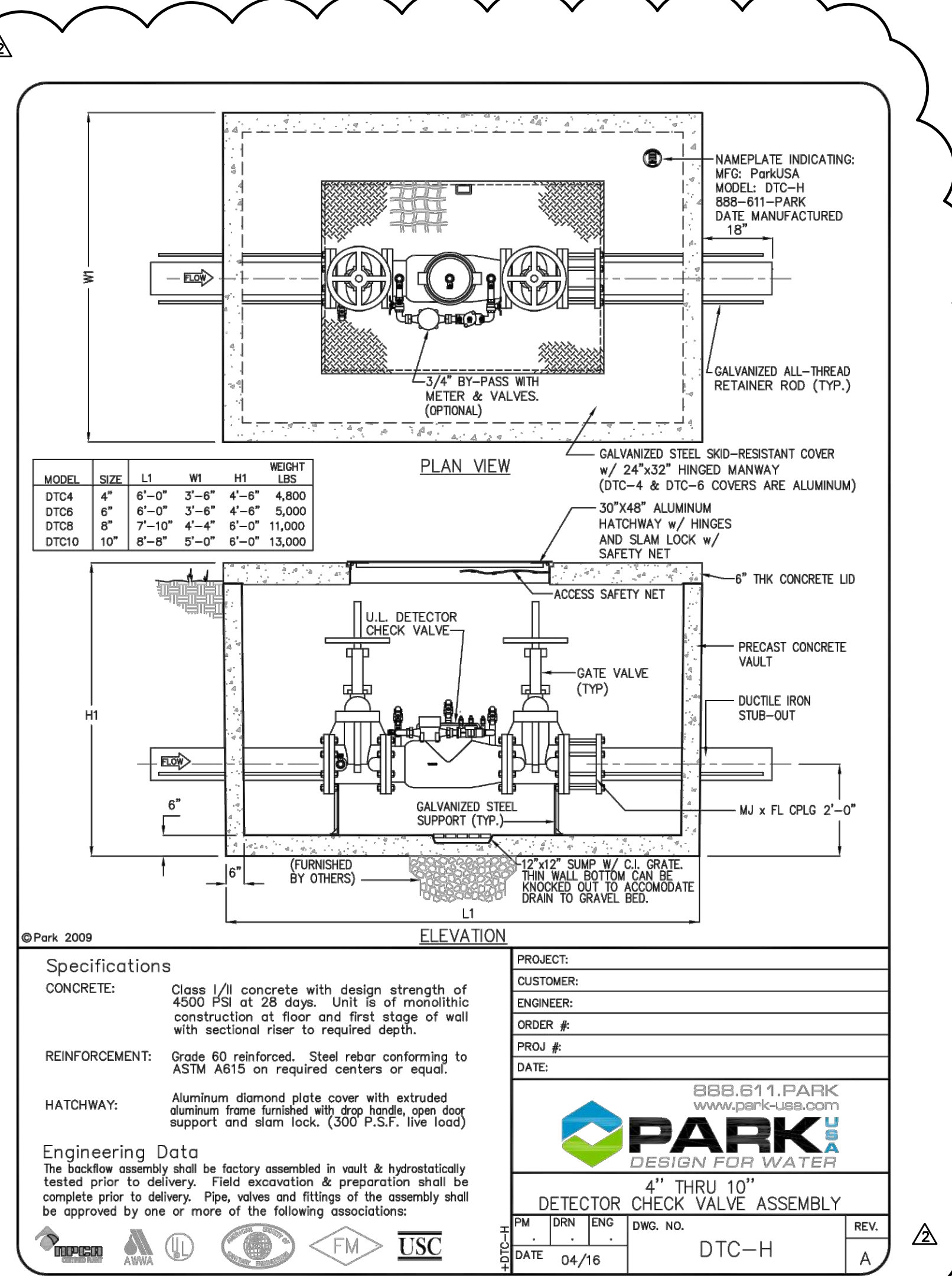
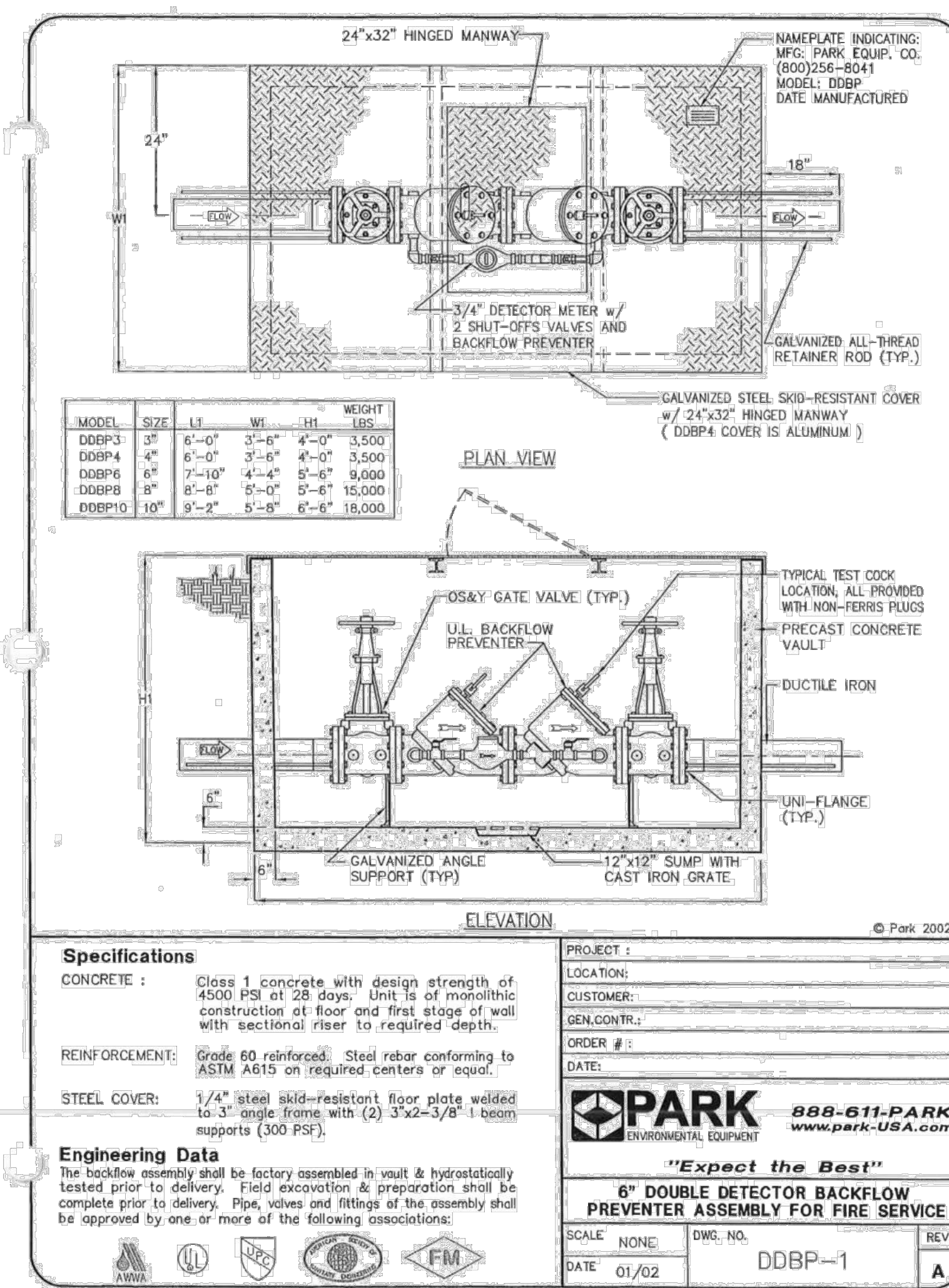
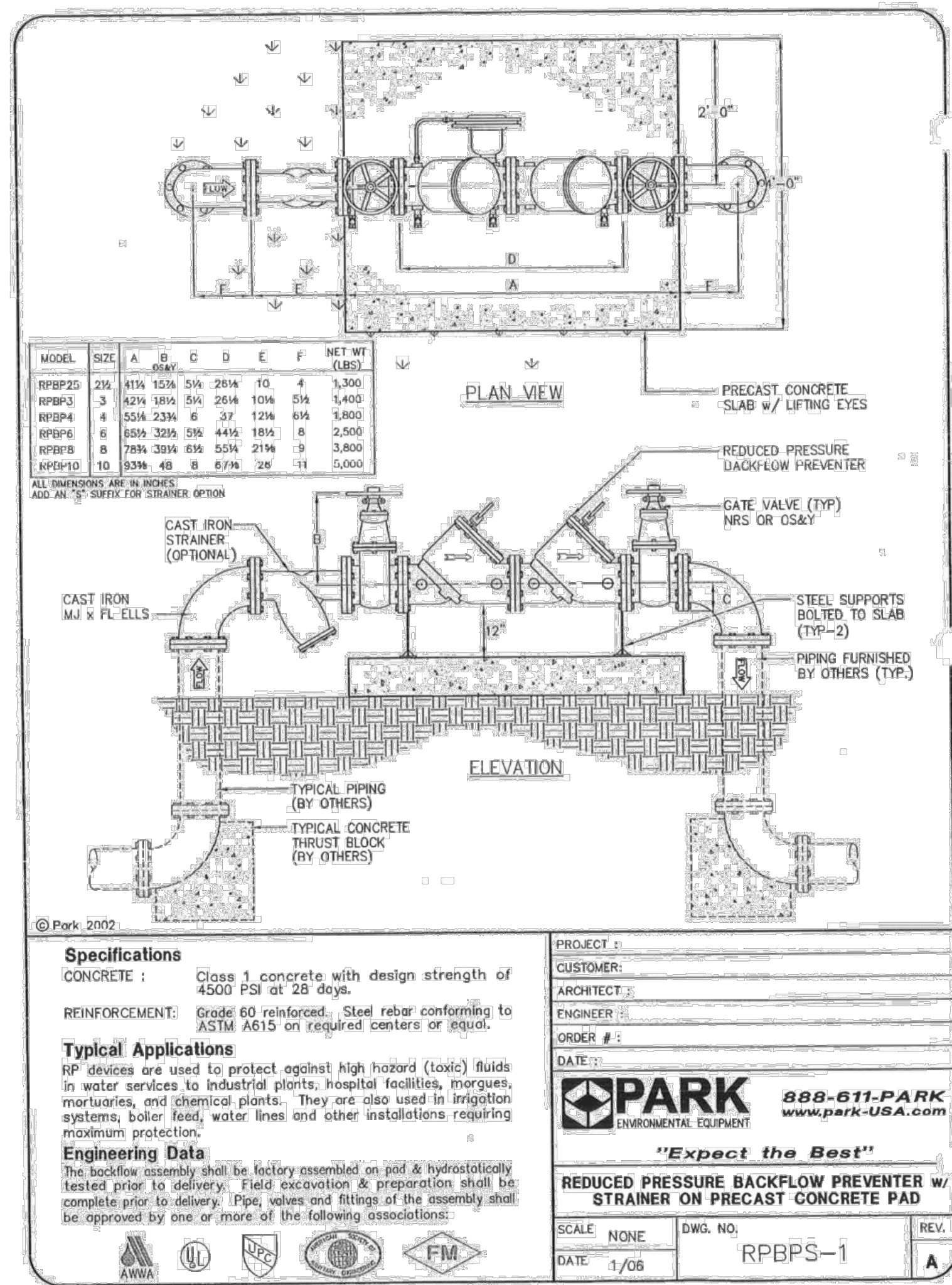
DATE: 4/5/18

DEDEN SERVICES, LLC
 CIVIL ENGINEERING
 Texas Registered Engineering Firm F-10971

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 HOUSTON, TX. 77055
 (713) 461-8822
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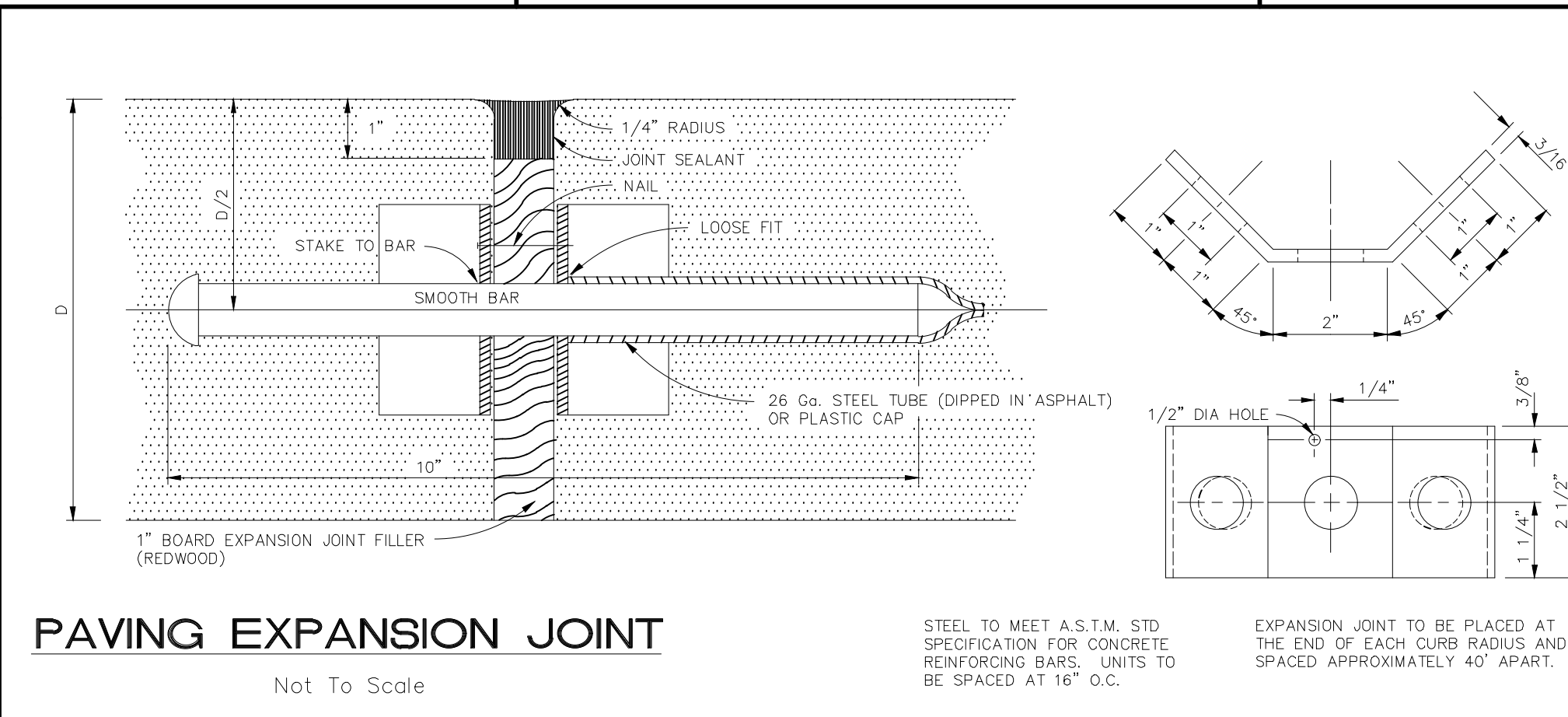
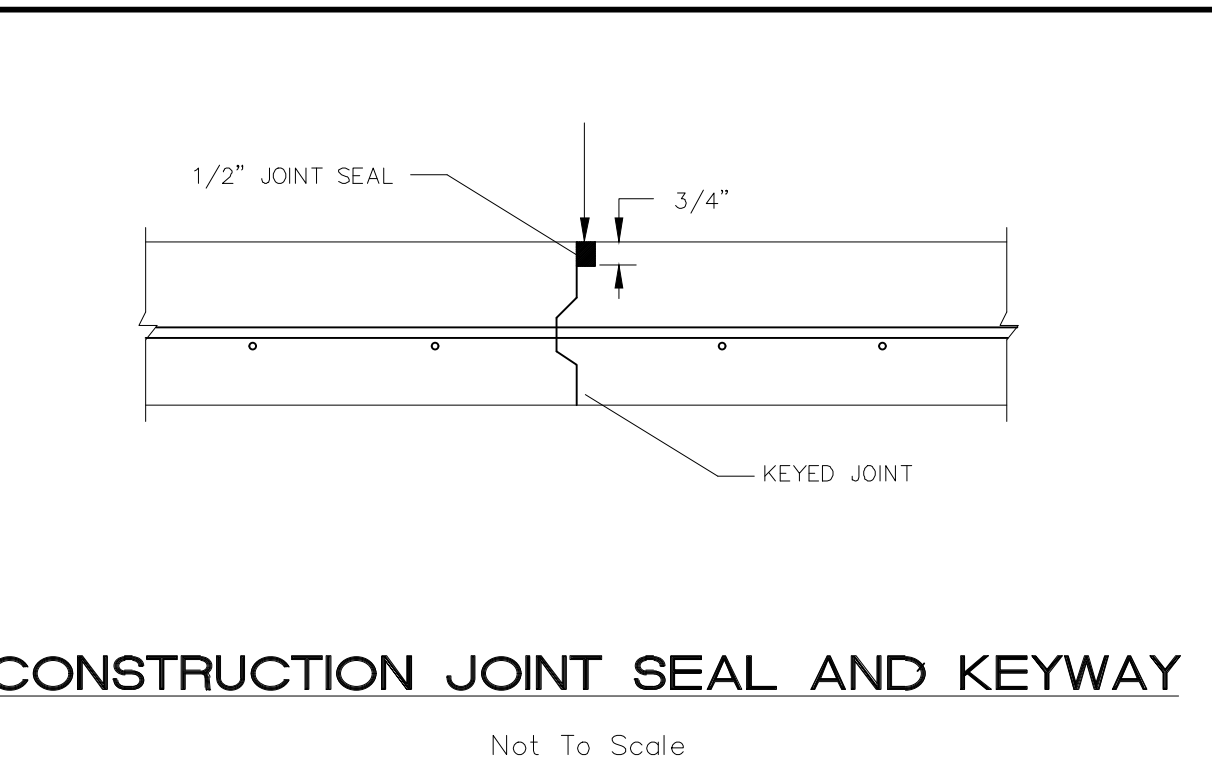
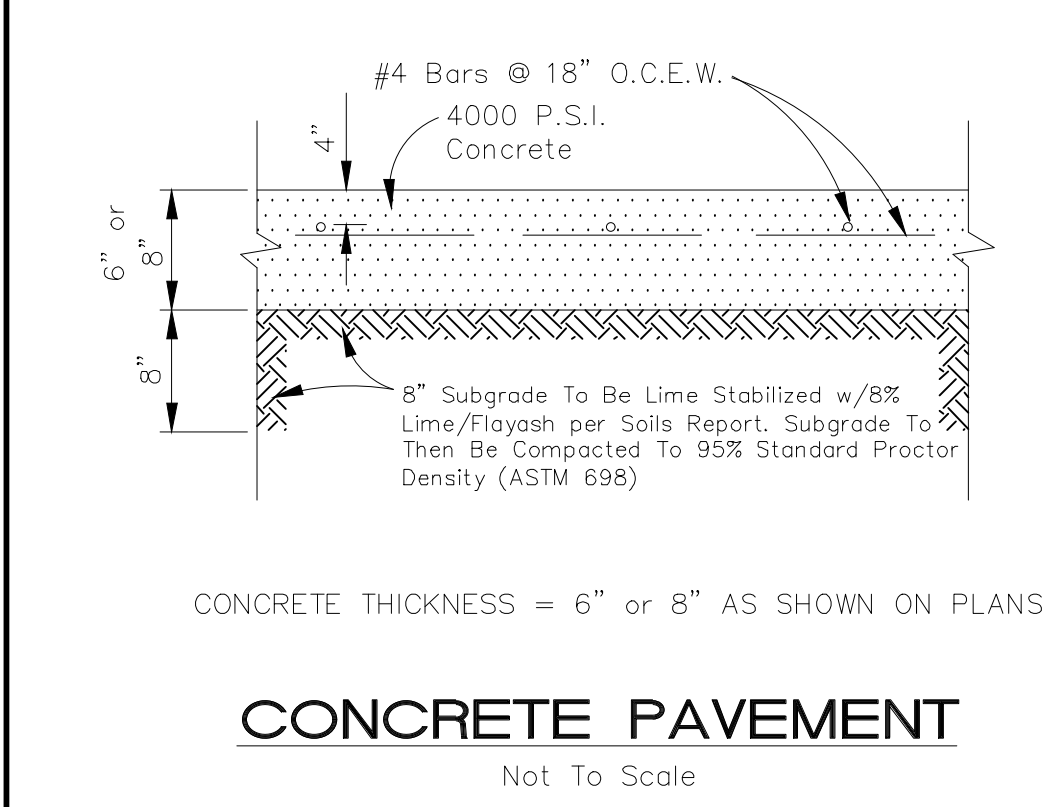
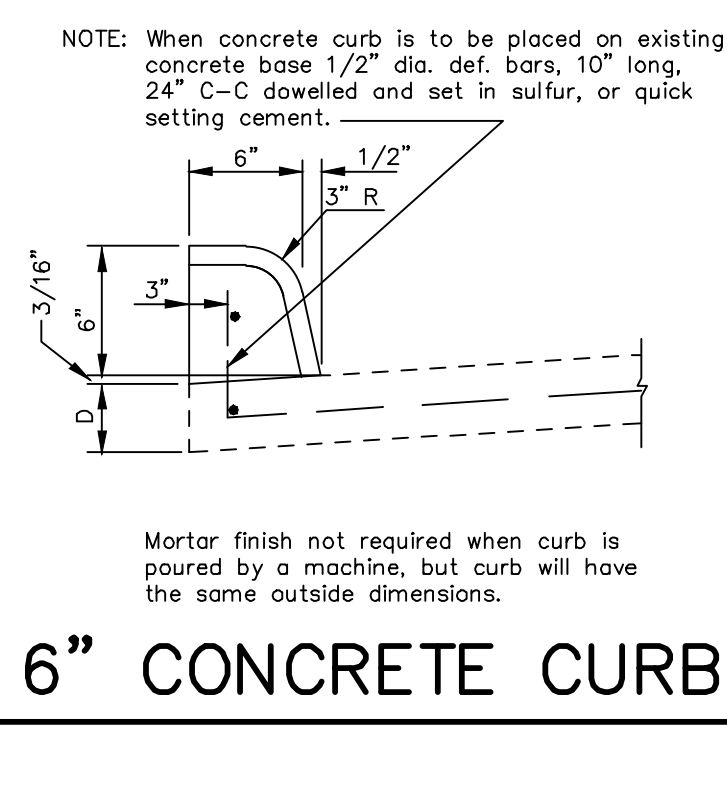
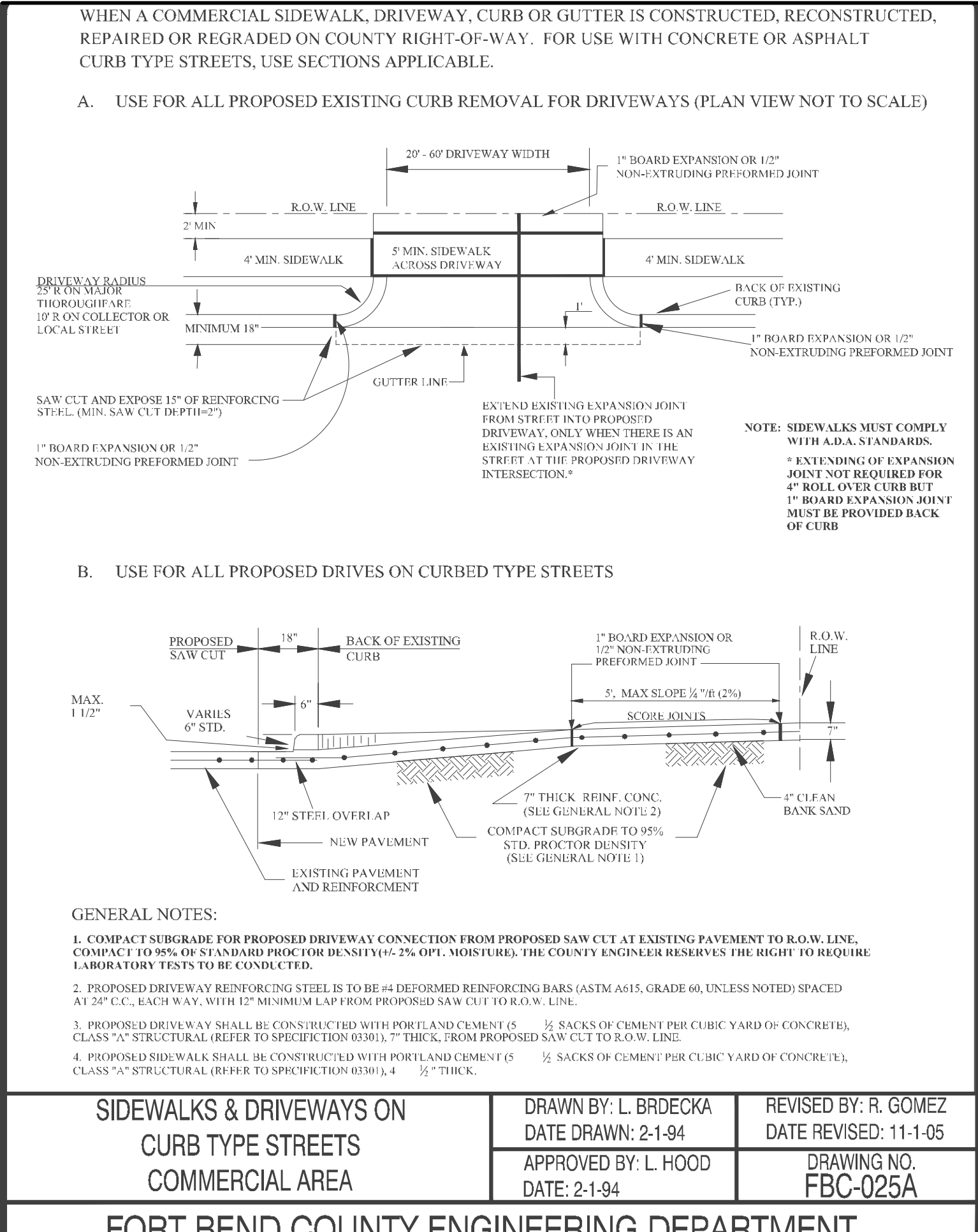
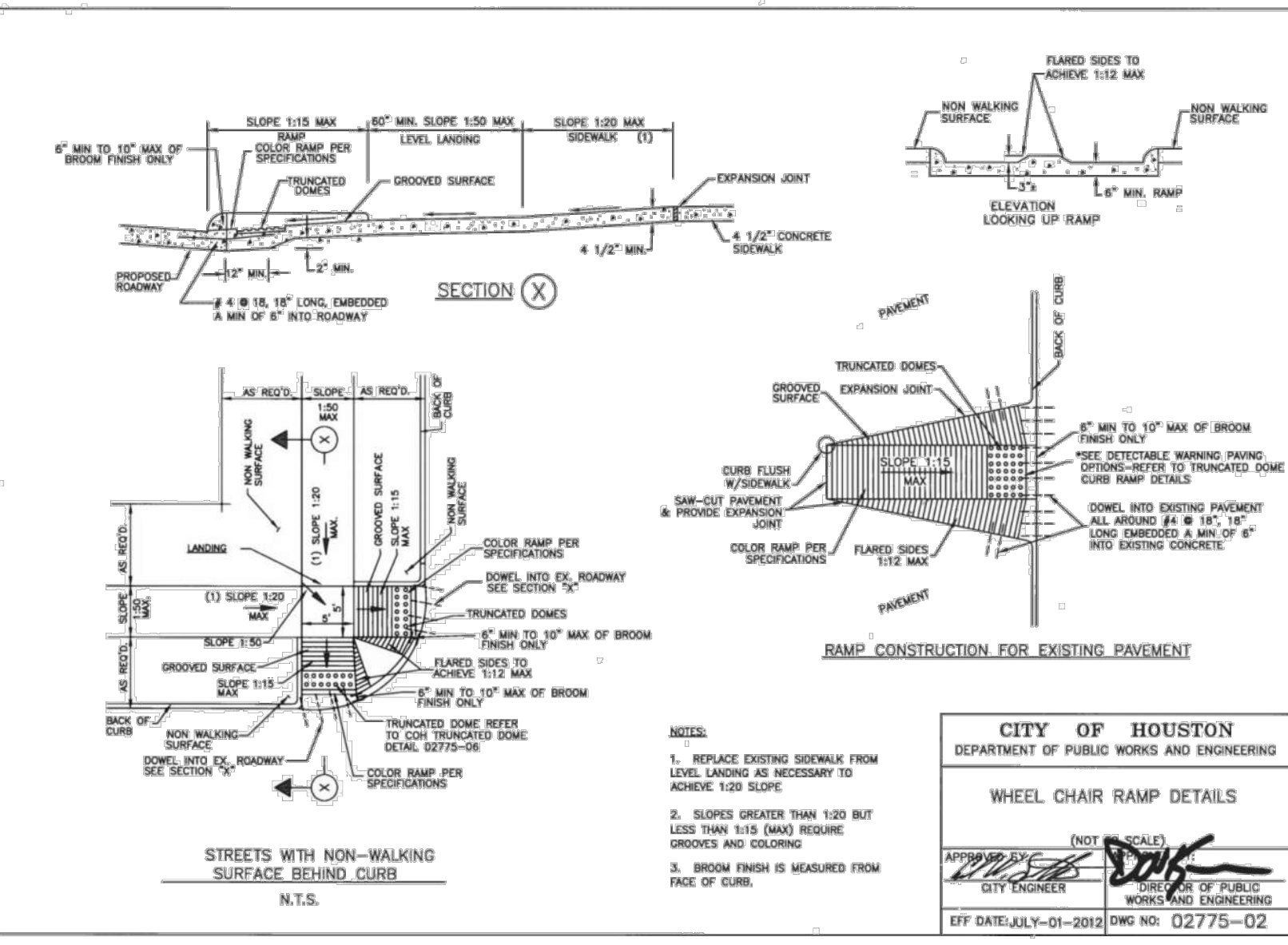
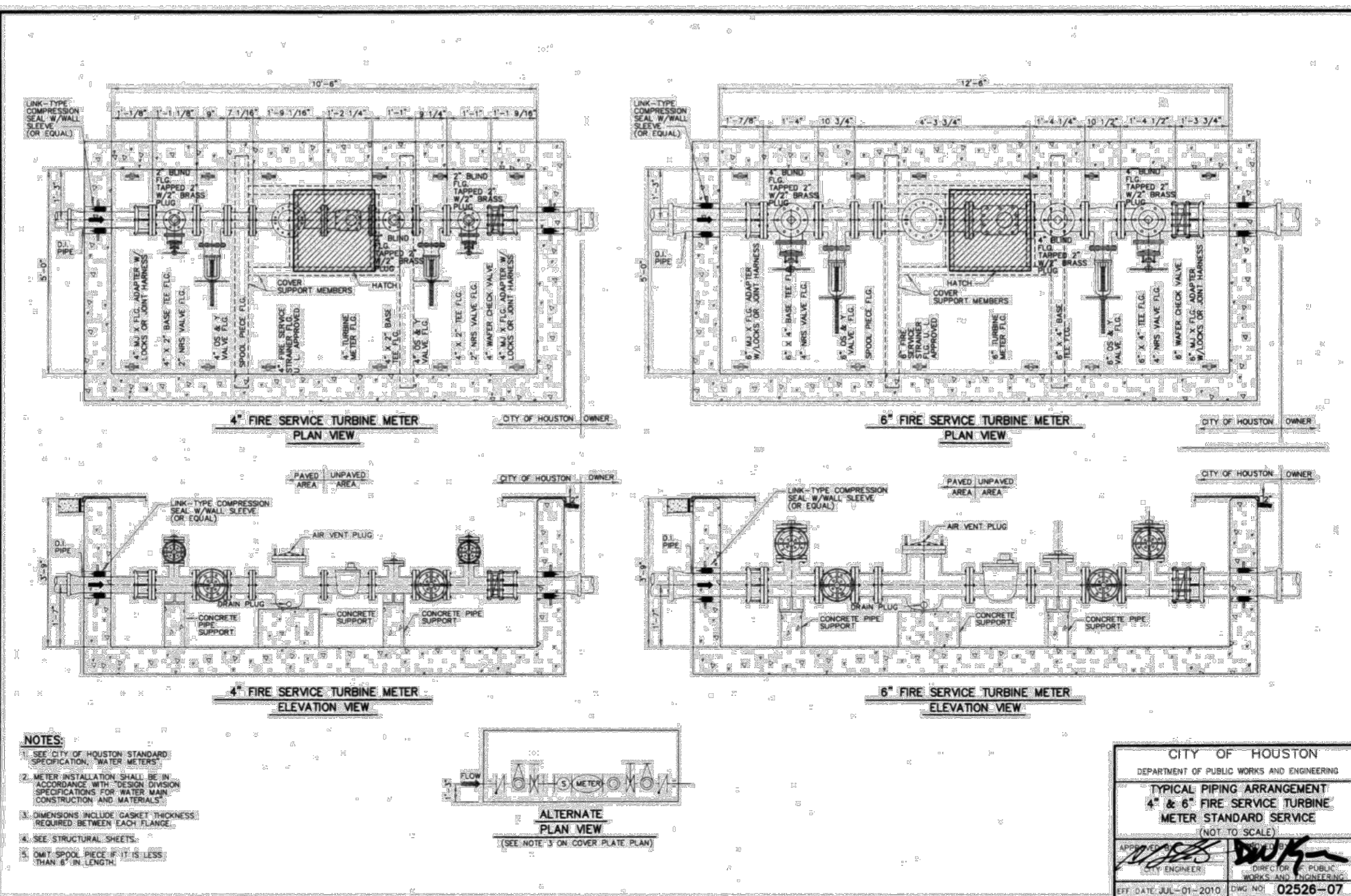
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Scale: N.T.S.

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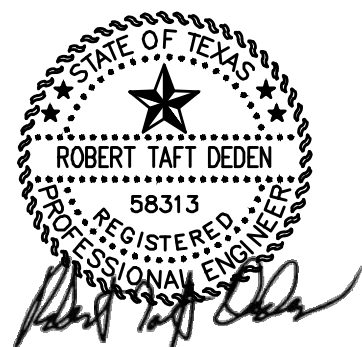
PAVING NOTES

- FAILURE TO MEET THE REQUIREMENTS THROUGH THE TESTING PROCEDURE WILL RESULT IN THE REJECTION OF THAT PORTION DEEMED TO BE DEFICIENT. THE PROPOSED PAVEMENT DEPTHS SHOWN ON THE PLAN DETAIL SHEETS IS CONSISTENT WITH THESE NOTES AND SHALL BE USED TO DETERMINE THE REQUIREMENT IN EACH CASE.
- FAILURE OF A PAVEMENT TO MEET THESE MINIMUM REQUIREMENTS WILL RESULT IN THE REJECTION OF PAVEMENT. IMMEDIATE REMOVAL AND REPLACEMENT OF SUBSTANDARD PAVEMENT SECTIONS WILL BE NECESSARY TO SATISFY THESE REQUIREMENTS.
- PAVEMENTS EXCEEDING DEPTH OR STRENGTH REQUIREMENTS WILL BE ACCEPTED IF BOTH CRITERIA MEET THE MINIMUM ESTABLISHED REQUIREMENTS.
- TRANSVERSE EXPANSION JOINTS ARE REQUIRED AT MAXIMUM SPACING OF 40'-0\" C-C, WITH JOINTS AND VERTICAL CURB JOINTS TO BE SEALED WITH LIQUID RUBBER CONFORMING TO TADOT ITEM 360.2 (8% CLASS 2 (NOT POURED RUBBER)).
- DENSITY TESTING SHALL BE DONE IMMEDIATELY PRIOR TO PLACEMENT OF REINFORCING STEEL FOR CONCRETE PAVING.
- CONCRETE CYLINDERS @ 4 EACH, SLUMP, AND AIR ENTRAINMENT TESTS ARE REQUIRED FOR EACH 150 CY. OF CONCRETE PAVING.
- CONTRACTOR TO SUBMIT CONSTRUCTION JOINT AND EXPANSION JOINT PLAN TO OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
- ALL CONCRETE SHALL BE 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. STEEL SHALL BE #4 REBAR ON 18-INCHES C-C, E.W. ALL CAR AREAS SHALL BE 8-INCH REINFORCED CONCRETE AND TRUCK AREAS SHALL BE 8-INCH REINFORCED CONCRETE.
- ALL SUBGRADE SHALL BE PREPARED ACCORDING TO SOILS REPORT AND COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY UNDER CONCRETE AREAS AND 90% STANDARD PROCTOR DENSITY IN LANDSCAPE OR DETENTION AREAS.



NO.	DATE	REVISIONS	BY	CK	APP
4/10/18	REVISED PER FORT BEND COUNTY M.U.D. No. 143				
4/10/18	REVISED PER FORT BEND COUNTY ENGINEERING				

FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT NUMBER 143 ENGINEER, DATE



DEDEN SERVICES, LLC
CIVIL ENGINEERING
Texas Registered Engineering Firm F-10971

Job No.:
9328 WESTVIEW
HOUSTON, TX 77055
(713) 461-8822
FAX (713) 461-2671

Drawn:
Checked:
Approved:
Scale: AS SHOWN

READ KING
WATERTOWN TOWN CENTER
VILLAGE EAST
Highway 99 and Harlem Road
Richmond, Texas 77406
NOTES AND DETAILS

DATE: JANUARY 2018 SHEET 3 OF 12

LJA Engineering, Inc.

Project: 99 Grand Mission Collector Roads - Waterview Town Center Village East
LJA Job No. 2145-2119D - 2145-2128System: Storm
By: AB & MEF Date: 10/13/2015 & 02/22/2017 LINE A,B,C,D,F,G,J,K,L
Checked by: Date: LINE E

Design Frequency: 2 years

COH 2 YR

b= 75.01
d= 16.2
e= 0.8315

2 YR

FROM JUNCTION	TO JUNCTION	ADDED AREA	TOTAL AREA	TC min	Intensity	C	CI	Additional Q	CUM Q (2 YR)	REACH ft	LINE/BOX SIZE	WIDTH	HEIGHT	SLOPE %	DESIGN Q	V	D.S. FALL	FLOWLINE UP	DOWN	ACT.V	SLOPE	delta H	ELEV. HYD. GRAD.	TG	HG DIST
		ac	ac	min				cfs	cfs	ft	in	FT	FT		cfs	ips	(ft)	STREAM	STREAM	ips	GRAD. (%)		STREAM	STREAM	ft
SYSTEM 2																									
LINE B																									
1	2	0.00	3.43	27.42	3.25	0.80	2.60	9.04	9.04	303	6	4	0.10	87.97	4.1	0.00	86.20	85.90	0.38	0.001	0.003	91.38	91.38	92.50	1.12
2	3	0.00	8.51	28.58	3.12	0.80	2.50	13.15	22.19	135	6	4	0.10	87.97	4.1	0.00	85.90	85.77	0.12	0.005	0.007	91.38	91.37	93.15	1.77
3	4	5.55	14.06	30.93	3.05	0.80	2.44	0.00	35.72	185	6	4	0.10	87.97	4.1	0.00	85.77	85.58	0.19	0.013	0.024	91.37	91.35	93.80	2.43
4	5	0.00	14.06	30.93	3.05	0.80	2.44	0.00	35.72	181	6	6	0.10	170.52	4.7	0.00	85.27	85.09	0.18	0.004	0.005	91.35	91.34	93.80	2.45
5	6	0.00	18.61	31.77	3.00	0.80	2.40	12.36	48.08	191	6	6	0.10	170.52	4.7	0.00	85.09	84.90	0.19	0.008	0.015	91.34	91.32	92.50	1.18
6	7	0.00	18.61	31.77	3.00	0.80	2.40	0.00	48.08	214	7	6	0.10	209.01	5.0	0.00	84.90	84.18	0.72	0.005	0.011	91.32	91.31	93.35	1.04
7	8	0.00	25.23	32.66	2.95	0.80	2.37	16.49	64.57	227	7	6	0.10	209.01	5.0	0.00	84.18	83.96	0.22	0.009	0.022	91.31	91.29	92.50	1.19
8	9	5.16	30.39	33.24	2.93	0.80	2.34	0.00	76.65	305	7	6	0.10	209.01	5.0	0.00	83.96	83.65	0.31	0.013	0.041	91.29	91.26	92.50	1.21
9	10	0.00	30.39	33.24	2.93	0.80	2.34	0.00	76.65	82	8	6	0.10	248.53	5.2	0.00	75.30	75.22	0.08	0.009	0.008	91.25	91.24	93.40	2.15
10	JUNCTION BOX	0.00	30.39	33.24	2.93	0.80	2.34	0.00	76.65	21	8	6	0.10	248.53	5.2	0.00	83.64	83.62	0.02	0.009	0.002	91.24	91.24	93.20	1.04

SYSTEM 2																											
LINE BA																											
A1	A2	0.07	0.07	21.26	3.69	0.80	2.95	0.00	0.21	63	18			0.3000	5.77	3.3	0.00	88.40	88.21	0.12	0.000	0.000	91.50	91.50	92.50	1.00	
A2	A3	0.17	0.24	22.78	3.57	0.80	2.85	0.00	0.69	99	18			0.3000	5.77	3.3	0.00	88.21	87.91	0.30	0.004	0.004	91.50	91.50	92.50	1.00	
A3	A4	0.14	0.38	23.43	3.52	0.80	2.81	0.00	1.00	107	18			0.3001	5.77	3.3	0.00	87.91	87.59	0.31	0.011	0.011	91.49	91.48	92.50	1.00	
A4	A5	0.16	1.84	25.13	3.33	0.80	2.66	0.00	1.51	102	24			0.2000	10.14	3.2	0.00	87.59	87.39	0.20	0.004	0.005	91.49	91.48	92.50	1.01	
A5	A6	0.17	2.01	26.31	3.32	0.80	2.66	0.00	1.96	85	24			0.2000	10.14	3.2	0.00	87.39	87.22	0.17	0.007	0.006	91.48	91.48	92.50	1.02	
A6	A7	0.22	2.23	26.52	3.31	0.80	2.64	0.00	2.35	113	24			0.2000	10.14	3.2	0.00	87.22	86.99	0.23	0.013	0.014	91.48	91.46	92.50	1.32	
A7	A8	0.11	2.34	26.61	3.30	0.80	2.64	0.00	2.64	99	24			0.2000	10.14	3.2	0.00	86.99	86.79	0.20	0.016	0.015	91.48	91.45	93.00	1.54	
A8	A9	0.18	2.52	26.77	3.29	0.80	2.63	0.00	3.31	135	24			0.2000	10.14	3.2	0.00	86.79	86.52	0.27	0.021	0.029	91.45	91.42	93.00	1.55	
A9	A10	0.02	3.59	27.52	3.24	0.80	2.59	0.00	3.36	95	24			0.2000	10.14	3.2	0.00	86.52	86.09	0.43	0.022	0.021	91.42	91.40	93.00	1.58	
A10	A11	0.09	3.68	27.58	3.24	0.80	2.59	0.00	3.59	75	24			0.2000	10.14	3.2	0.00	86.09	85.94	0.14	0.025	0.019	91.40	91.38	93.00	2.10	
Ex B2	A11	0.09	4.92	28.24	3.20	0.80	2.56	0.00	3.92	26	36			0.1000	21.15	3.0	0.00	85.93	85.90	0.04	0.003	0.001	91.38	91.38	93.00	1.62	

LINE BB																										
B1	B2	0.15	0.15	22.16	3.62	0.80	2.89	0.00	0.43	45	18			0.3000	5.77	3.3	0.00	88.50	88.37	0.25	0.002	0.001	91.58	91.58	92.60	1.02
B2	B3	0.75	0.90	24.62	3.42	0.80	2.74	0.00	2.49	96	18			0.3000	5.77	3.3	0.00	88.37	88.08	0.14	0.006	0.003	91.58	91.52	92.60	1.02
B3	A4	0.40	1.30	25.47	3.37	0.80	2.70	0.00	3.57	144	24			0.3000	12.42	4.0	0.00	88.08	87.65	1.13	0.025	0.005	91.52	91.49	92.90	1.28

LINE BC																										
C1	C2	0.02	0.02	20.02	3.79	0.80	3.03	0.00	0.06	24	18			1.0000	10.53	6.0	0.00	89.52	89.28	0.03	0.000	0.000	91.58	91.58	93.80	2.22
C2	C3	0.35	0.37	23.39	3.52	0.80	2.82	0.00	1.05	74	18			1.0000	10.53	6.0	0.00	89.28	88.54	0.59	0.010	0.007	91.58	91.58	93.80	2.22
C3	C4	0.56	0.96	24.93	3.41	0.80	2.73	0.00	2.66	70	18			1.0000	10.53	6.0	0.00	88.54	87.84	1.50	0.063	0.041	91.58	91.53	93.80	2.22
C4	C5	0.04	1.00	25.00	3.41	0.80	2.73	0.00	2.77	34	18			0.3000	5.77	3.3	0.00	87.84	87.74	1.56	0.069	0.023	91.53	91.51	93.80	2.27
C5	A9	0.05	1.05	25.09	3.40	0.80	2.72	0.00	2.90	122	18			0.3000	5.77	3.3	0.00	87.74	87.37	1.64	0.076	0.082	91.51	91.42	93.90	2.39

LINE BD																										
D1	D2	0.84	0.84	24.70	3.43	0.80	2.74	0.00	2.30	83	18			0.3000	5.77	3.3	0.00	87.20	86.95	1.30	0.048	0.039	91.44	91.40	92.80	1.36
D2	A11	0.31	1.15	25.25	3.39	0.80	2.71	0.00	3.14	131	24			0.2000	10.14	3.2	0.00	86.95	86.69	1.00	0.019	0.025	91.40	91.38	92.80	1.40

LJA Engineering, Inc.

Project: 99 Grand Mission Collector Roads - Waterview Town Center Village East
LJA Job No. 2145-2119D - 2145-2128System: Storm
By: AB & MEF Date: 10/13/2015 & 02/22/2017 LINE A,B,C,D,F,G,J,K,L 5-YR W.S.E. 91.24
Checked by: Date: LINE E 5-YR W.S.E. 81.09

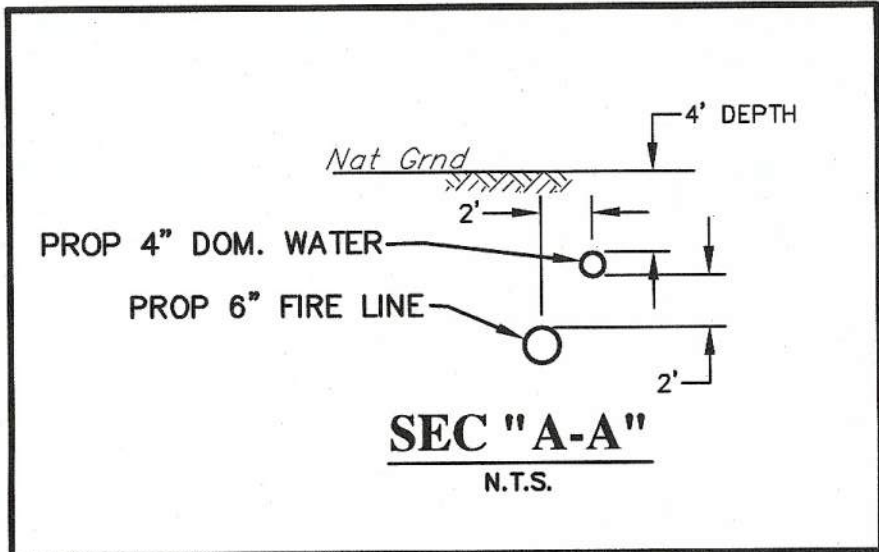
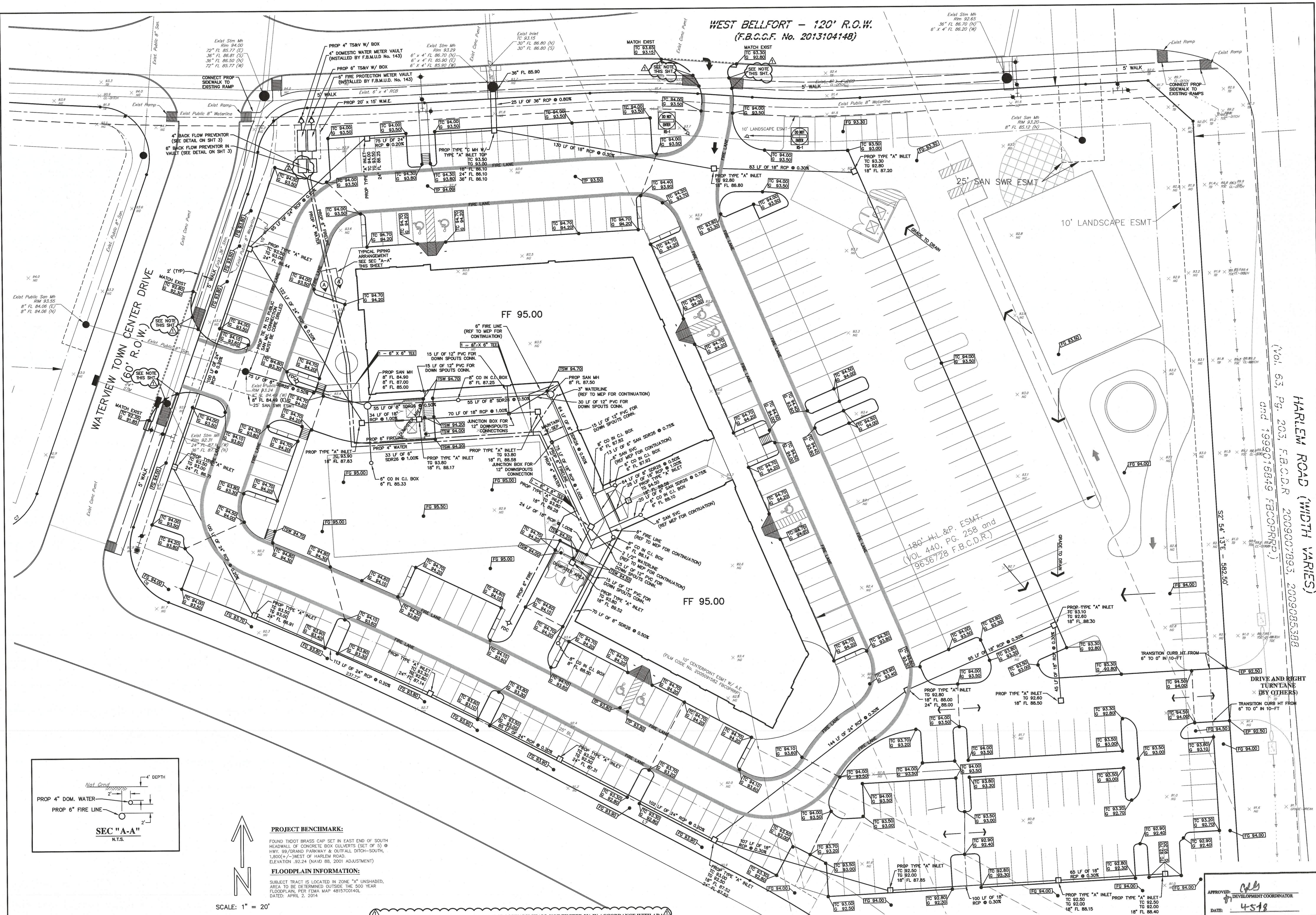
COH 100 YR

b= 125.4
d= 21.8
e= 0.75

Design Frequency: 100 (1.25) yr. years

100 YR FBC

FROM JUNCTION	TO JUNCTION	ADDED AREA ac	TOTAL AREA ac	TC min	Intensity	C	CI	Additional cfs	CUM X100 Y1.25 cfs	REACH ft	SIZE in	LINE/BOX WIDTH FT	HEIGHT FT	SLOPE %	DESIGN cfs	V lps	D.S. FALL (ft)	OTHER LOSSES t	FLOWLINE UP STREAM	DOWN STREAM	ACT.V lps	SLOPE GRAD. (%)	delta H ft	ELEV. HYD. STREAM	HYD. GRAD. STREAM	TG FT	HQ DIST BELOW FT
SYSTEM 2																											
LINE B																											
1	2	0.00	3.43	27.42	3.25	0.80	2.60	0.00	50.04	203	6	4	0.10	97.97	4.08	0	0	86.20	85.90	2.09	0.026	0.079	93.28	93.20	92.50	-0.78	
2	3	0.00	8.51	28.58	3.12	0.80	2.50	0.00	104.20	135	6	4	0.10	97.97	4.08	0	0	85.90	85.77	4.34	0.113	0.151	93.20	93.05	93.15	-0.05	
3	4	5.55	14.06	30.93	3.05	0.80	2.44	0.00	127.72	185	6	4	0.10	97.97	4.08	0	0	85.77	85.58	5.32	0.089	0.312	93.05	92.74	93.80	0.75	
4	5	0.00	14.06	30.93	3.05	0.80	2.44	0.00	127.72	181	6	6	0.10	170.52	4.74	0	0	85.27	85.09	3.35	0.068	0.101	92.74	92.64	93.80	1.06	
5	6	0.00	18.61	31.77	3.00	0.80	2.40	0.00	181.08	191	6	6	0.10	170.52	4.74	0	0	85.09	84.90	3.25	0.112	0.215	92.64	92.43	92.50	-0.21	
6	7	0.00	18.61	31.77	3.00	0.80	2.40	0.00	181.08	214	7	6	0.10	209.01	4.98	0	0	84.90	84.18	4.31	0.075	0.160	92.43	92.27	93.30	0.87	
7	8	0.00	25.23	32.86	2.96	0.80	2.37	0.00	238.57	227	7	6	0.10	202.01	4.98	0	0	84.18	83.96	5.68	0.130	0.294	92.27	91.97	92.50	0.23	
8	9	5.16	30.39	33.24	2.93	0.80	2.34	0.00	291.86	305	7	6	0.10	209.01	4.98	0	0	83.96	83.65	6.94	0.194	0.591	91.97	91.38	92.50	0.53	
9	10	0.00	30.39	33.24	2.93	0.80	2.34	0.00	291.86	328	8	6	0.10	248.53	5.18	0	0	83.65	83.28	6.94	0.202	0.112	91.38	90.92	92.50	0.58	
10	10	0.00	30.39	33.24	2.93	0.80	2.34	0.00	291.86	21	8	6	0.10	248.53	5.18	0	0	83.64	83.62	6.08	0.137	0.029	91.27	91.24	92.50	1.93	



PROJECT BENCHMARK:
FOUND TYPICAL BRASS CAP SET IN EAST END OF SOUTH
HEADWALL OF CONCRETE BOX CULVERTS (SET OF 5)
HWY. 99/GRAND PARKWAY & OUTFALL DITCH-SOUTH,
1,800(+/-) FEET WEST OF HARLEM ROAD,
ELEVATION: 92.24 (NAVD 88, 2001 ADJUSTMENT)

FLOODPLAIN INFORMATION:
SUBJECT TRACT IS LOCATED IN ZONE "X" UNSHADED,
AREA TO BE DETERMINED OUTSIDE THE 500 YEAR
FLOODPLAIN, PER FEMA MAP 4815700140L,
DATED: APRIL 2, 2014

SCALE: 1" = 20'

NOTE REGARDING RAMPS: CROSS SLOPE THRU CROSSWALK SHALL NOT EXCEED 2% IN ACCORDANCE WITH ADA

NO.	DATE	REVISIONS	BY	CK	APP
1	4/10/18	REVISED PER FORT BEND COUNTY M.U.D. No. 143			
2	4/10/18	REVISED PER FORT BEND COUNTY ENGINEERING			

Robert Taft Deden
4-11-2018
FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT NUMBER 143 ENGINEER,
SIGNATURE VALID FOR ONE (1) YEAR



DEDEN SERVICES, LLC
CIVIL ENGINEERING
Texas Registered Engineering Firm F-10971

9328 WESTVIEW
HOUSTON, TX 77055
(713) 461-8822
FAX (713) 461-2671

Job No.:
Drawn:
Checked:
Approved:
Scale: HORIZ. : 1" = 20'

READ KING
DEVELOPMENT COORDINATOR
DATE: 4-5-18

WATERVIEW TOWN CENTER VILLAGE EAST
Highway 99 and Harlem Road
Richmond, Texas 77406
CIVIL SITE PLAN

DATE: JANUARY 2018 SHEET 7 OF 12

WEST BELLFORT - 120' R.O.W.
(F.B.C.C.F. No. 2013104148)

HARLEM ROAD (WIDTH VARIES)
(Vol. 63, Pg. 203, F.B.C.D.R. 200907893, 200908538
and 1999016849 FBCDPRP)

DRIVE AND RIGHT
TURN LANE
(BY OTHERS)

WATERVIEW TOWN CENTER DRIVE
(60' R.O.W.)

180' H.L. & P. ESMT.
(VOL. 440, PG. 258 and
9636728 F.B.C.D.R.)

LEGEND

- REINFORCED FILTER FABRIC BARRIER
- INLET PROTECTION BARRIER
- STABILIZED CONSTRUCTION ACCESS
- CONCRETE TRUCK WASH AREA

PROJECT BENCHMARK:
FOUND TYPICAL BRASS CAP SET IN EAST END OF SOUTH
HEADWALL OF CONCRETE BOX CULVERTS (SET OF 5) @
HWY. 99/GRAND PARKWAY & OUTFALL DITCH-SOUTH,
1,800' +/- WEST OF HARLEM ROAD
ELEVATION: 92.24 (NAVD 88, 2001 ADJUSTMENT)

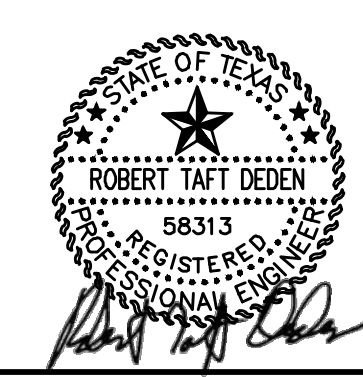
FLOODPLAIN INFORMATION:
SUBJECT TRACT IS LOCATED IN ZONE "X" UNSHADED,
AREA TO BE DETERMINED OUTSIDE THE 500 YEAR
FLOODPLAIN, PER FEMA MAP 48157C0140L
DATED: APRIL 2, 2014

SCALE: 1" = 20'

*REINFORCED FILTER FABRIC FENCE TO BE LOCATED AT LEAST 2' BACK OF CURB

NO.	DATE	REVISIONS	BY	CK	APP
4/10/18	REVISED PER FORT BEND COUNTY M.U.D. No. 143				
4/10/18	REVISED PER FORT BEND COUNTY ENGINEERING				

FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT NUMBER 143 ENGINEER, DATE
SIGNATURE VALID FOR ONE (1) YEAR



DEDEN SERVICES, LLC
CIVIL ENGINEERING
Texas Registered Engineering Firm F-10571

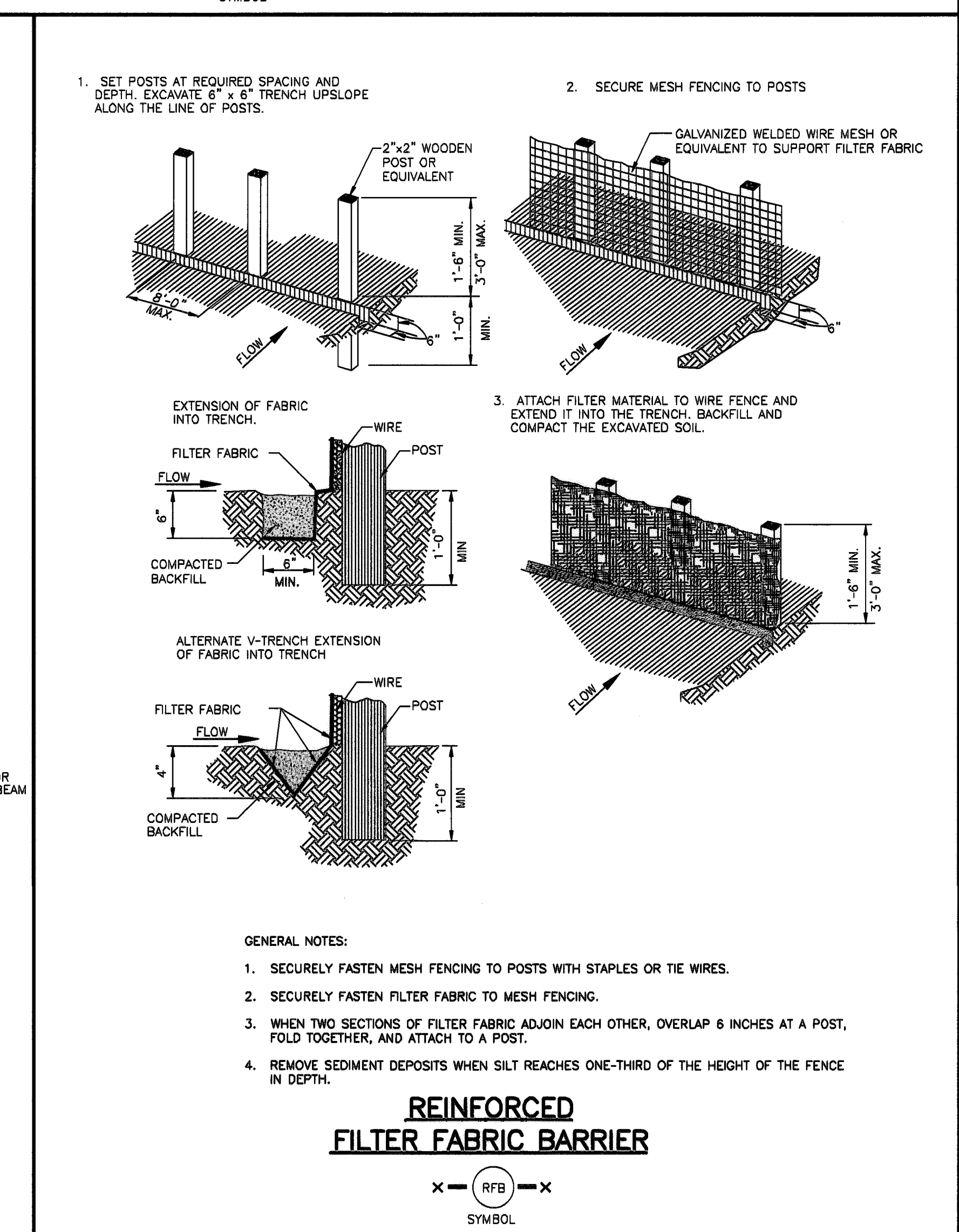
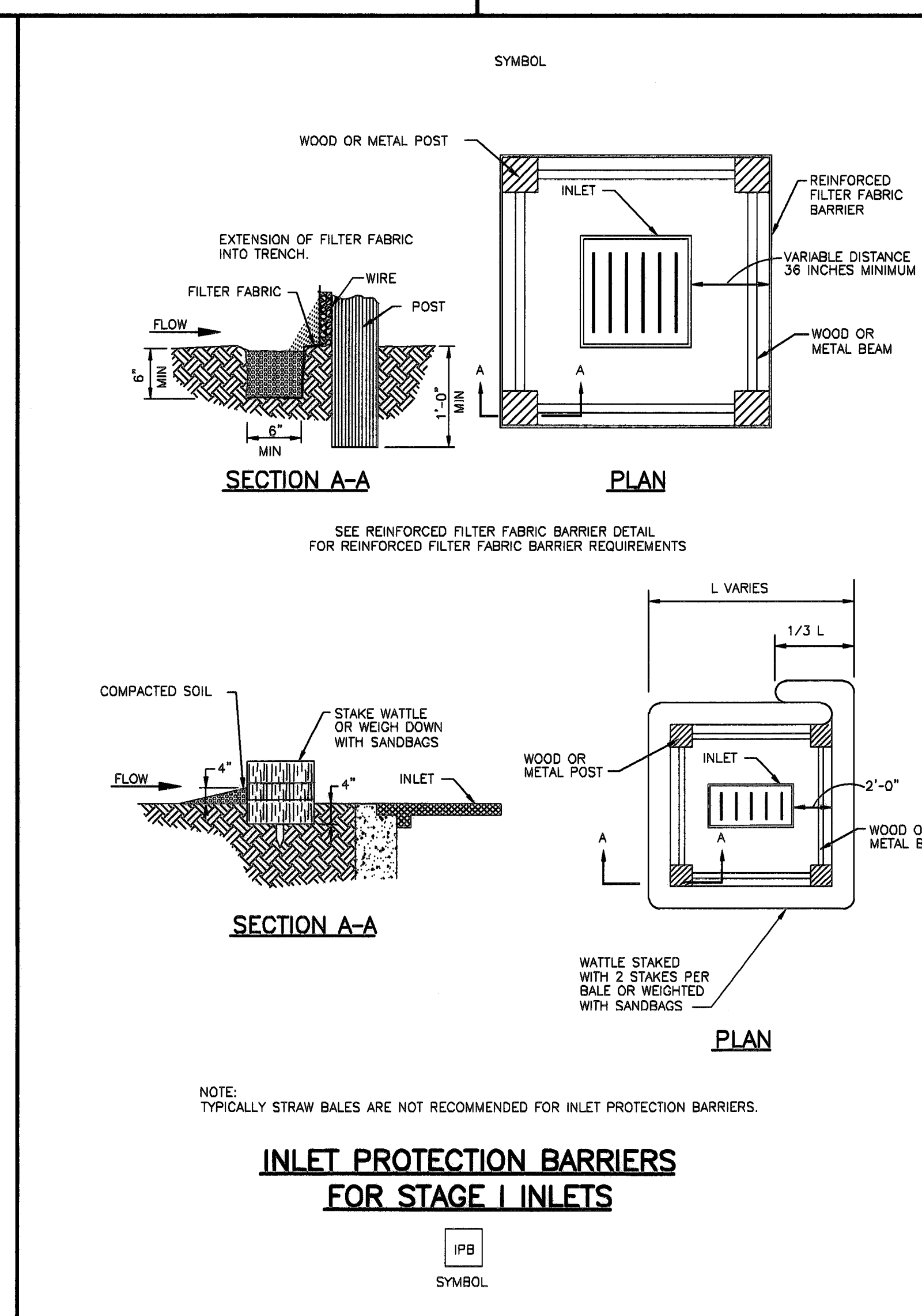
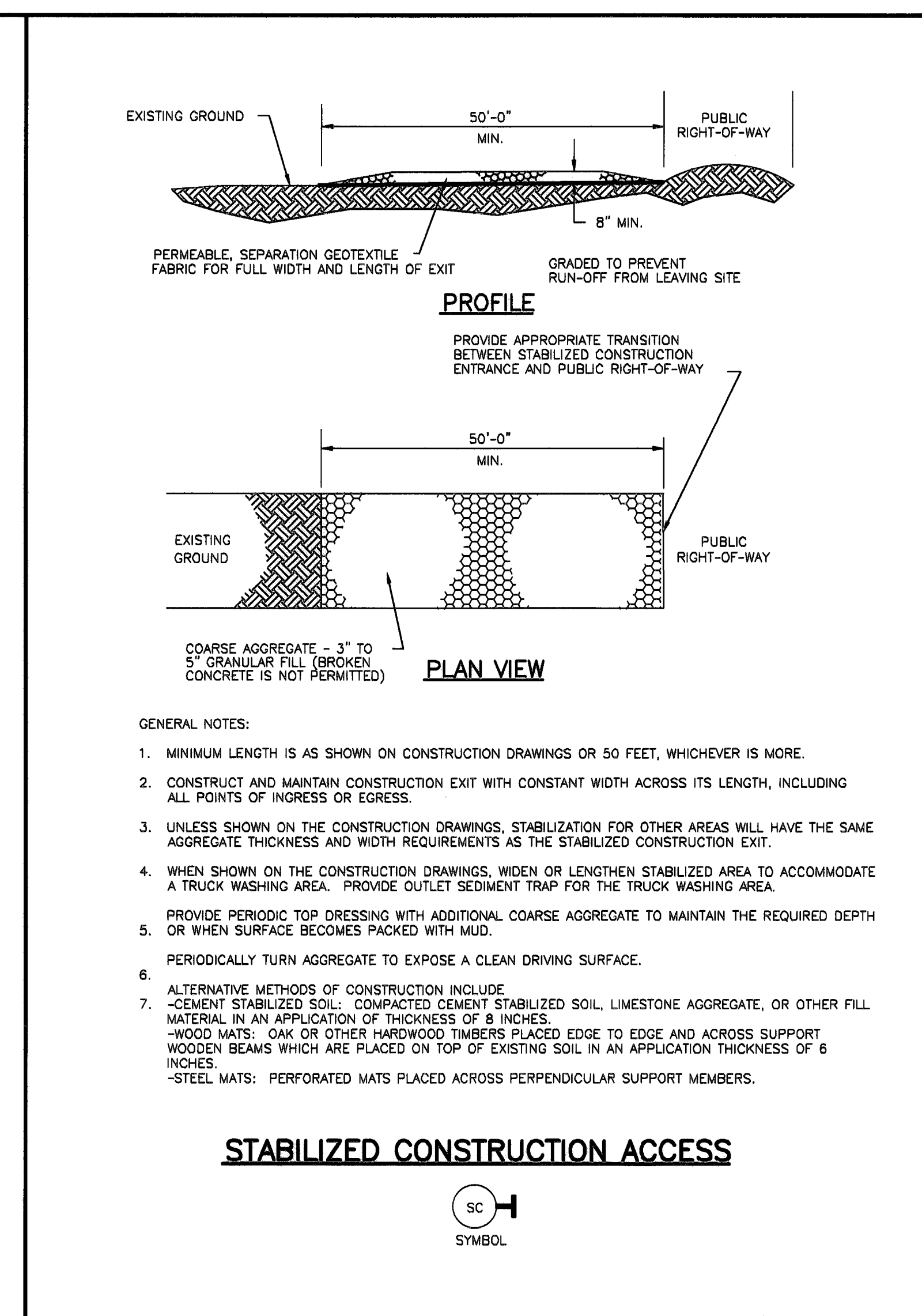
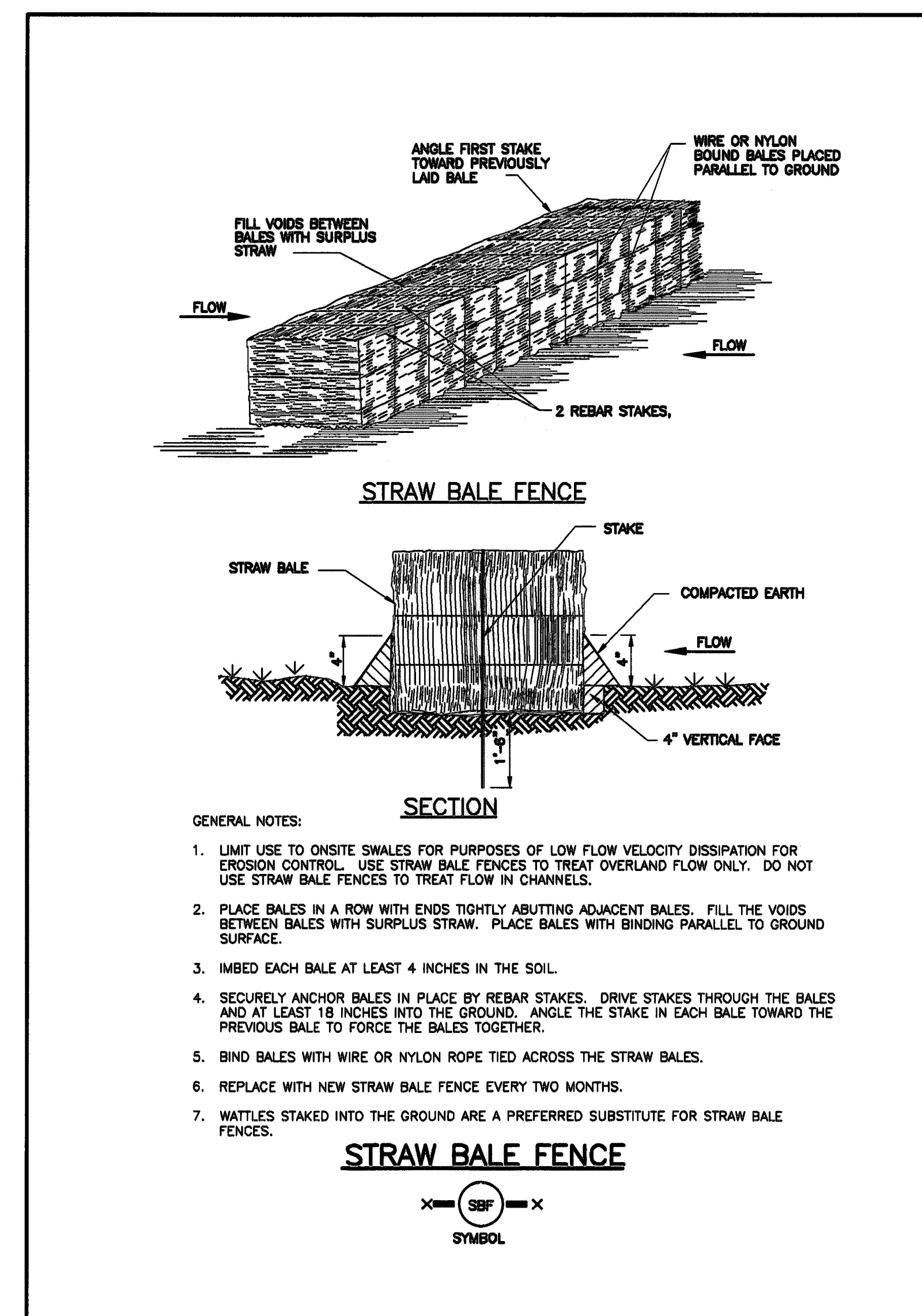
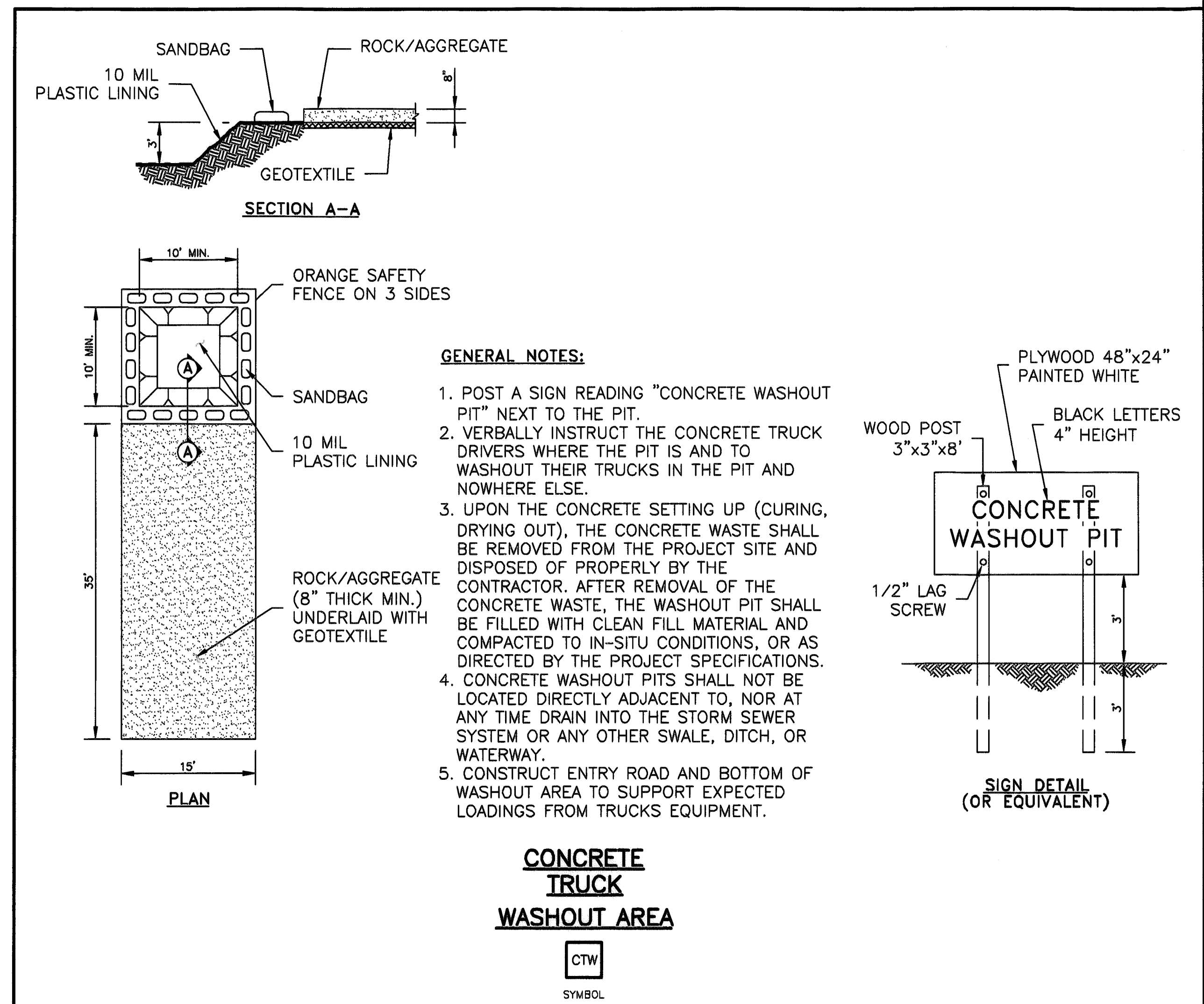
9328 WESTVIEW
HOUSTON, TX 77055
(713) 461-8822
FAX (713) 461-2671

Job No.:
Drawn:
Checked:
Approved:
Scale: HORIZ. : 1" = 20'

READ KING
WATERVIEW TOWN CENTER
VILLAGE EAST
Highway 99 and Harlem Road
Richmond, Texas 77406
SWPPP PLAN

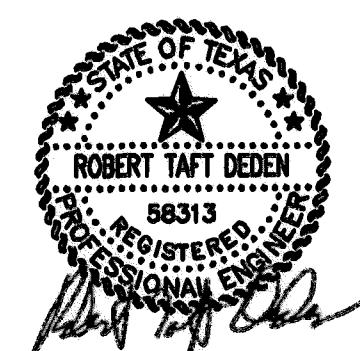
APPROVED: [Signature]
DEVELOPMENT COORDINATOR
DATE: 4-5-18

DATE: JANUARY 2018 SHEET 9 OF 12



NO.	DATE	REVISIONS	BY	OK	APP

FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT NUMBER 143 ENGINEER, DATE
SIGNATURE VALID FOR ONE (1) YEAR

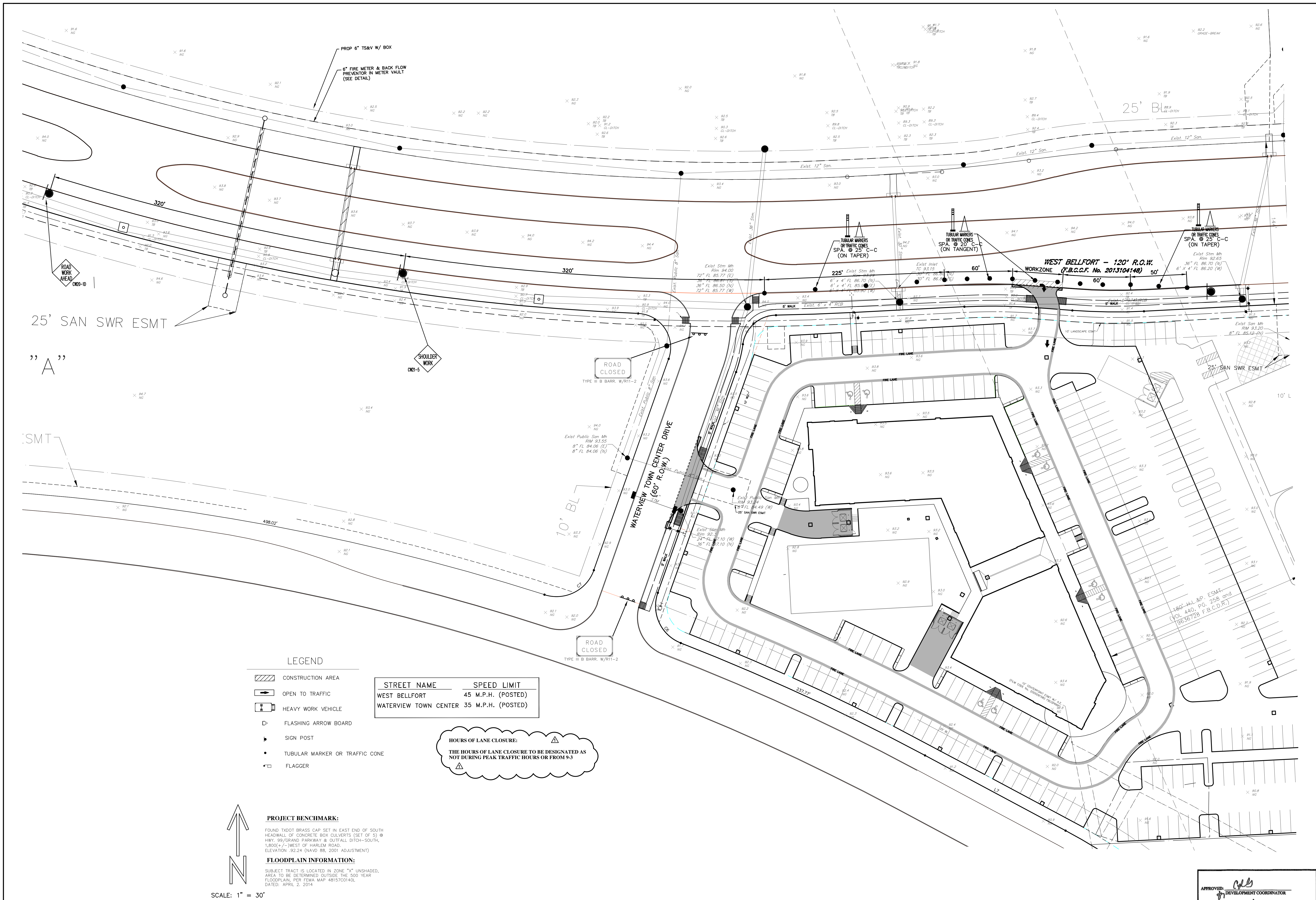


DEDEN SERVICES, LLC
CIVIL ENGINEERING
Texas Registered Engineering Firm F-10871

9328 WESTVIEW
HOUSTON, TX. 77055
(713) 461-8822
FAX (713) 461-2671

Job No.:
Drawn:
Checked:
Approved:
Scale: HORIZ. : 1" = 20'

APPROVED: *RLB*
DEVELOPMENT COORDINATOR
DATE: 4-5-18
READ KING
WATERVILLE TOWN CENTER
VILLAGE EAST
Highway 99 and Harlem Road
Richmond, Texas 77406
SWPPP DETAILS
DATE: JANUARY 2018 SHEET 10 OF 12



LEGEND

- CONSTRUCTION AREA
- OPEN TO TRAFFIC
- HEAVY WORK VEHICLE
- FLASHING ARROW BOARD
- SIGN POST
- TUBULAR MARKER OR TRAFFIC CONE
- FLAGGER

STREET NAME	SPEED LIMIT
WEST BELLFORT	45 M.P.H. (POSTED)
WATERVIEW TOWN CENTER	35 M.P.H. (POSTED)

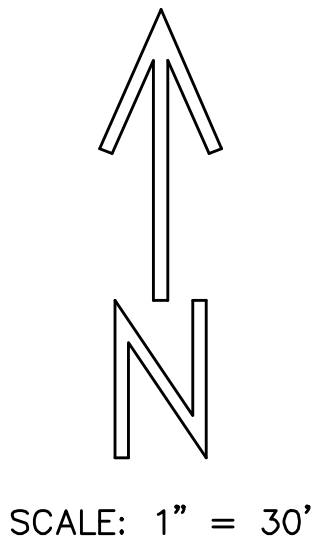
HOURS OF LANE CLOSURE:
THE HOURS OF LANE CLOSURE TO BE DESIGNATED AS NOT DURING PEAK TRAFFIC HOURS OR FROM 9-3

PROJECT BENCHMARK:

FOUND TYPOT BRASS CAP SET IN EAST END OF SOUTH HEADWALL OF CONCRETE BOX CULVERTS (SET OF 5) @ HWY. 99/GRAND PARKWAY & OUTFALL DITCH-SOUTH, 1,800' +/- WEST OF HARLEM ROAD. ELEVATION: 92.24 (NAVD 88, 2001 ADJUSTMENT)

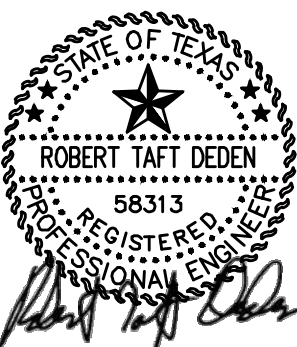
FLOODPLAIN INFORMATION:

SUBJECT TRACT IS LOCATED IN ZONE "X" UNSHADED. AREA TO BE DETERMINED OUTSIDE THE 500 YEAR FLOODPLAIN, PER FEMA MAP 48157C0140L DATED: APRIL 2, 2014



NO.	DATE	REVISIONS	BY	CK	APP
1	4/10/18	REVISED PER FORT BEND COUNTY M.U.D. No. 143			
2	4/10/18	REVISED PER FORT BEND COUNTY ENGINEERING			

FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT NUMBER 143 ENGINEER. DATE



DEDEN SERVICES, LLC
CIVIL ENGINEERING
Texas Registered Engineering Firm F-10971

9328 WESTVIEW
HOUSTON, TX 77055
(713) 461-8822
FAX (713) 461-2671

Job No.:
Drawn:
Checked:
Approved:
Scale: HORIZ. : 1" = 30'

READ KING
WATERVIEW TOWN CENTER
VILLAGE EAST
Highway 99 and Harlem Road
Richmond, Texas 77406
TRAFFIC CONTROL PLAN

DATE: JANUARY 2018 SHEET 12 OF 12

