



**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: 2017-14795

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
X
X

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

b. Vicinity map showing course of directions

c. Plans and specifications

(2) BOND:

☐

County Attorney, approval when applicable.

☒

Perpetual bond currently posted.

Bond No:



Amount: \$50,000.00

☐

Performance bond submitted.

Bond No:

Amount:

☐

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

Date

By: _____
Deputy

DON CARTER ELEMENTARY - LAMAR C.I.S.D.



<u>SHEET No.</u>	<u>DESCRIPTION</u>
<u>COVER</u>	<u>COVER SHEET</u>
C0.01	EXISTING CONDITIONS
C1.01	PAVING & GRADING PLAN
C2.01	DRAINAGE PLAN
C2.02	DRAINAGE CALCULATIONS
C3.01	WATER & SANITARY PLAN
C4.01	EROSION CONTROL PLAN
C4.02	EROSION CONTROL DETAILS
C5.01	CONSTRUCTION DETAILS
C5.02	CONSTRUCTION DETAILS
C5.03	CONSTRUCTION DETAILS

KELLY R. KALUZA & ASSOCIATES, INC.
CONSULTING ENGINEERS AND SURVEYORS
ENGINEERING FIRM No. F-1339
3014 AVENUE I
ROSENBERG, TEXAS 77471
(281) 341-0808

A circular professional engineer seal for the State of Texas. The outer ring contains the text "STATE OF TEXAS" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by two stars on each side. In the center, there is a five-pointed star above the name "DUANE H. WHITEHEAD" and the license number "105210". The word "LICENSED" is written in a smaller font below the license number. The seal is signed with a handwritten signature across the top and bottom right.

FORT BEND COUNTY ENGINEER

ENGINEER: *Rich D. Stuffle, P.E.*
For RICHARD W. STOLLES, P.E.

DATE: *6/7/17*

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

APPROVED: *Max D. D.*
DEVELOPMENT COORDINATOR

DATE: *6/7/17*



ARCHITECT
VLK Architects, Inc.
 20445, Suite 350
 Houston, Texas 77070
 Main Phone: 281.671.2300
 www.vlkarchitects.com

CIVIL ENGINEER
Kelly R. Kaluza & Associates, Inc.
 3014 Avenue I
 Rosenberg, Texas 77380
 Main Phone: 281.341.0808
 www.kellykaluza.com

MEP ENGINEER
Salas O'Brien
 10930 W. Sam Houston Pkwy N. Suite 900
 Houston, Texas 77064
 Main Phone: 281.664.1000
 www.salasobrien.com

STRUCTURAL ENGINEER
Matrix Structural Engineers
 5177 Richmond Ave, Suite 670
 Houston, Texas 77056
 Main Phone: 713.664.0130
 www.matrixstructural.com

FOOD SERVICE
FDP
 26215 Oak Ridge Drive
 The Woodlands, Texas 77380
 Main Phone: 281.350.2323
 www.foodservicesdesignprofessionals.com

LANDSCAPE
Pacheco Koch
 20445 State Highway 249, Suite 380
 Houston, Texas 77070-2623
 Main Phone: 281.683.0103
 www.pkco.com

March 27, 2017
REVISIONS
 Revision No.
 City & MUD Cmnts 05/05/2017

Director Drawn By
 Designer Quality Control
 DHW LLT
 Proj. Coord.

PROJECT NO.
1623.00
 SHEET TITLE

EXISTING CONDITIONS
 SHEET NO.

C0.01

COPYRIGHT © 2017 VLK ARCHITECTS

LAMAR CONSOLIDATED INDEPENDENT SCHOOL DISTRICT
 ROSENBERG, TX

DON CARTER ELEMENTARY
 CSP # 11-2017VRG

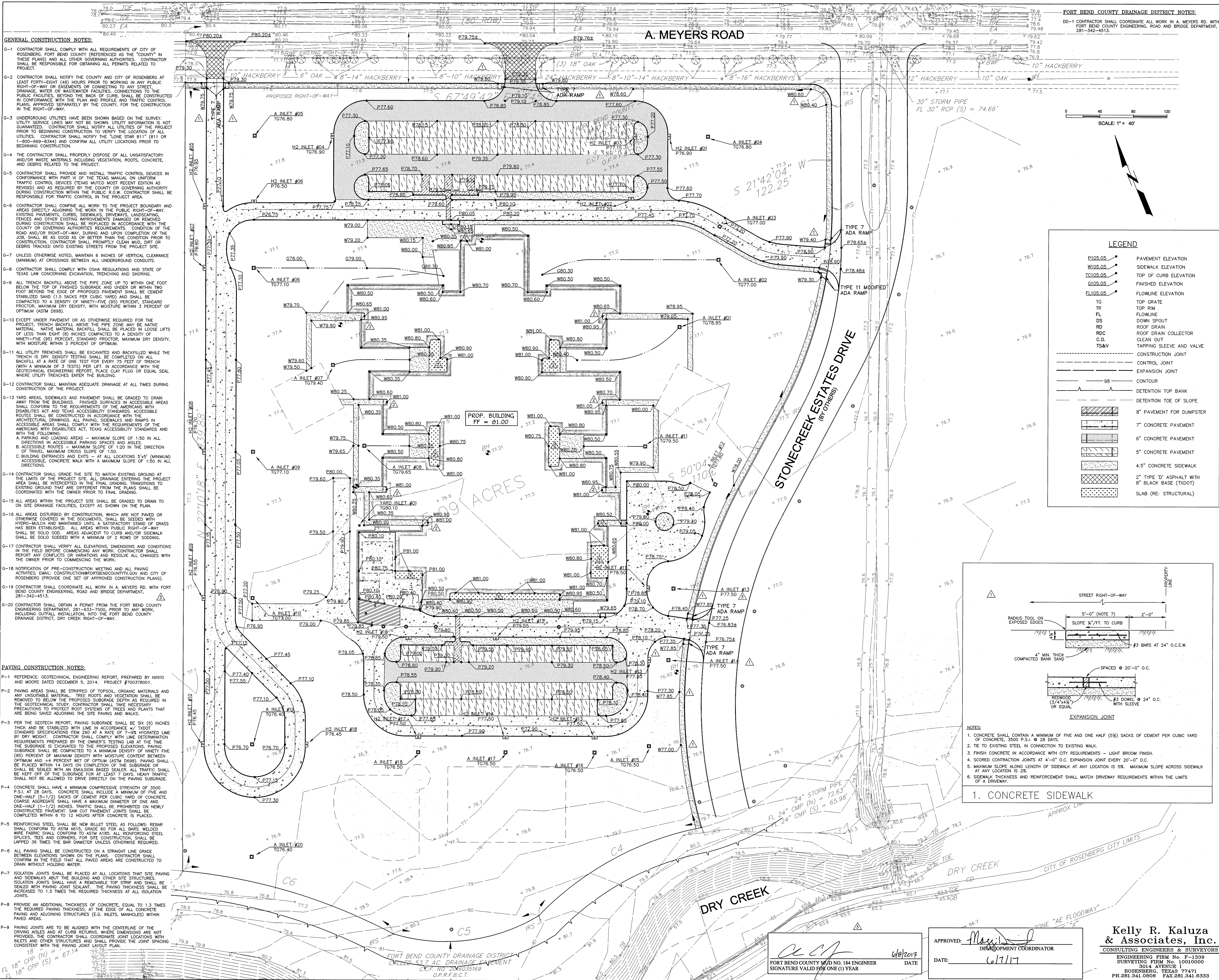
Kelly R. Kaluza & Associates, Inc.
 CONSULTING ENGINEERS & SURVEYORS
 ENGINEERING FIRM No. F-1339
 SURVEYING FIRM No. 10010000
 3014 AVENUE I
 ROSENBERG, TEXAS 77471
 PH.281.341.0808 FAX.281.341.6333

APPROVED: *[Signature]*
 DEVELOPMENT COORDINATOR
 DATE: 6/7/17

[Signature]
 FORT BEND COUNTY MUD NO. 184 ENGINEER
 SIGNATURE VALID FOR ONE (1) YEAR
 DATE: 6/8/2017

FORT BEND COUNTY DRAINAGE DISTRICT
 CALLED 53.7 AC. DRAINAGE EASEMENT
 C.C.F. NO. 2016035169
 O.P.R.F.B.C.T.

18" STORM PIPE
 FL 18" CPP (N) = 74.77
 FL 18" CPP (S) = 67.14



FORT BEND COUNTY DRAINAGE DISTRICT NOTES:

DO-1 CONTRACTOR SHALL COORDINATE ALL WORK IN A MEYERS RD. WITH FORT BEND COUNTY ENGINEERING, ROAD AND BRIDGE DEPARTMENT, 281-342-4513.



ARCHITECT

VLK Architects, Inc.
20445, Suite 350
Houston, Texas 77070
Main Phone: 281.671.1200
www.vlkarchitects.com

CIVIL ENGINEER

Kelly R. Kaluza & Associates, Inc.
3014 Avenue I
Rosenberg, Texas 77068
Main Phone: 281.341.0808
www.kellykaluza.com

MEP ENGINEER

Salas O'Brien
10930 W. Sam Houston Pkwy N. Suite 900
Houston, Texas 77064
Main Phone: 281.664.1900
www.salasoobrien.com

STRUCTURAL ENGINEER

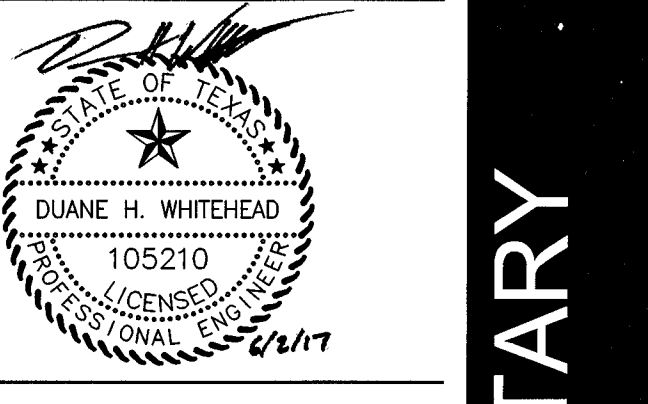
Matrix Structural Engineers
5177 Richmond Ave, Suite 670
Houston, Texas 77056
Main Phone: 713.684.0130
www.matrixstructural.com

FOOD SERVICE

FDP
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Main Phone: 281.350.2323
www.foodserviceengineering.com

LANDSCAPE

Pacheco Koch
25445 State Highway 249, Suite 380
Houston, Texas 77070-2623
Main Phone: 281.883.0103
www.pkco.com



March 27, 2017

REVISIONS

Revision No.	Added/Modified	Date
1	Addendum No. 3	04/17/2017
2	Addendum No. 5	04/25/2017
3	City & MUD Comments	05/06/2017

Director

Drawn By

Designer

Quality Control

DHW

LLT

Proj. Coord.

PROJECT NO.

1623.00

SHEET TITLE

PAVING & GRADING PLAN

SHEET NO.

C1.01

COPYRIGHT © 2017 VLK ARCHITECTS

Don Carter Elementary

CSP # 11-2017VRG

Don Carter Elementary

CSP # 11-2017VRG

Don Carter Elementary

CSP # 11-2017VRG

ARCHITECT

VLK Architects, Inc.
20445, Suite 380
Houston, Texas 77070
Main Phone: 281.671.2300
www.vlkarchitects.com

CIVIL ENGINEER

Kelly R. Kaluza &
Associates, Inc.
3014 Avenue I
Rosenberg, Texas 77380
Main Phone: 281.341.0808
www.kellykaluza.com

MEP ENGINEER

Salas O'Brien
10930 W. Sam Houston Pkwy N. Suite 900
Houston, Texas 77058
Main Phone: 281.664.1900
www.salasoobrien.com

STRUCTURAL ENGINEER

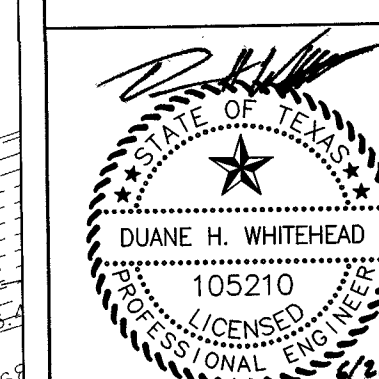
Matrix Structural Engineers
5177 Richmond Ave., Suite 670
Houston, Texas 77058
Main Phone: 713.664.0130
www.matrixstructural.com

FOOD SERVICE

FDP
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Main Phone: 281.330.2323
www.foodservicesdesignprofessionals.com

LANDSCAPE

Pacheco Koch
20445 State Highway 248, Suite 380
Houston, Texas 77070-2623
Main Phone: 281.883.0103
www.pkco.com



March 27, 2017

REVISIONS

Revision No.
Addendum No. 3 04/17/2017
City & MUD Cmts 05/05/2017
Revised Calculations 05/23/2017

Director Drawn By

Designer Quality Control
DHW LLT
Proj. Coord.

PROJECT NO.

1623.00

SHEET TITLE

DRAINAGE PLAN

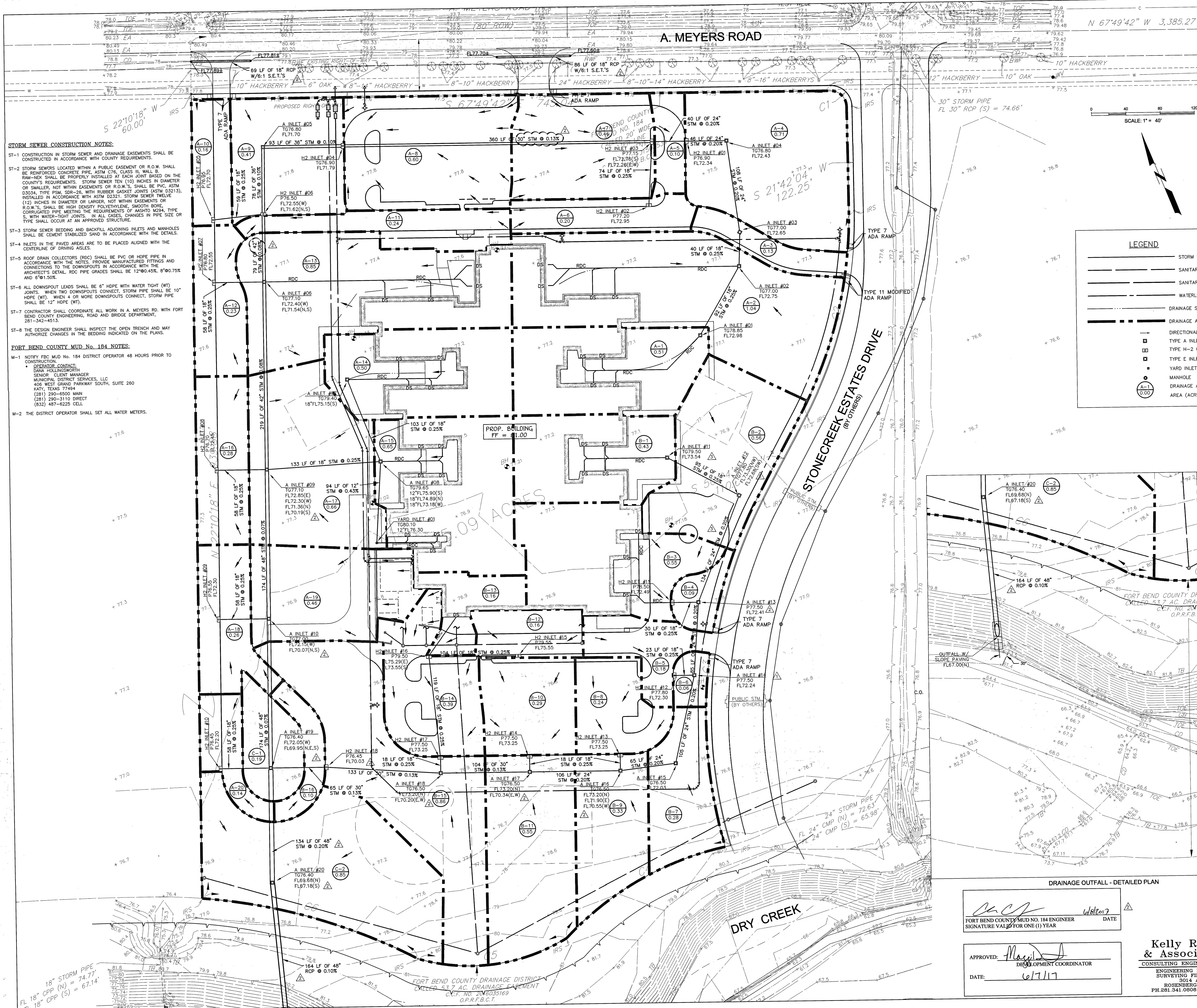
SHEET NO.

C2.01

COPYRIGHT © 2017 VLK ARCHITECTS

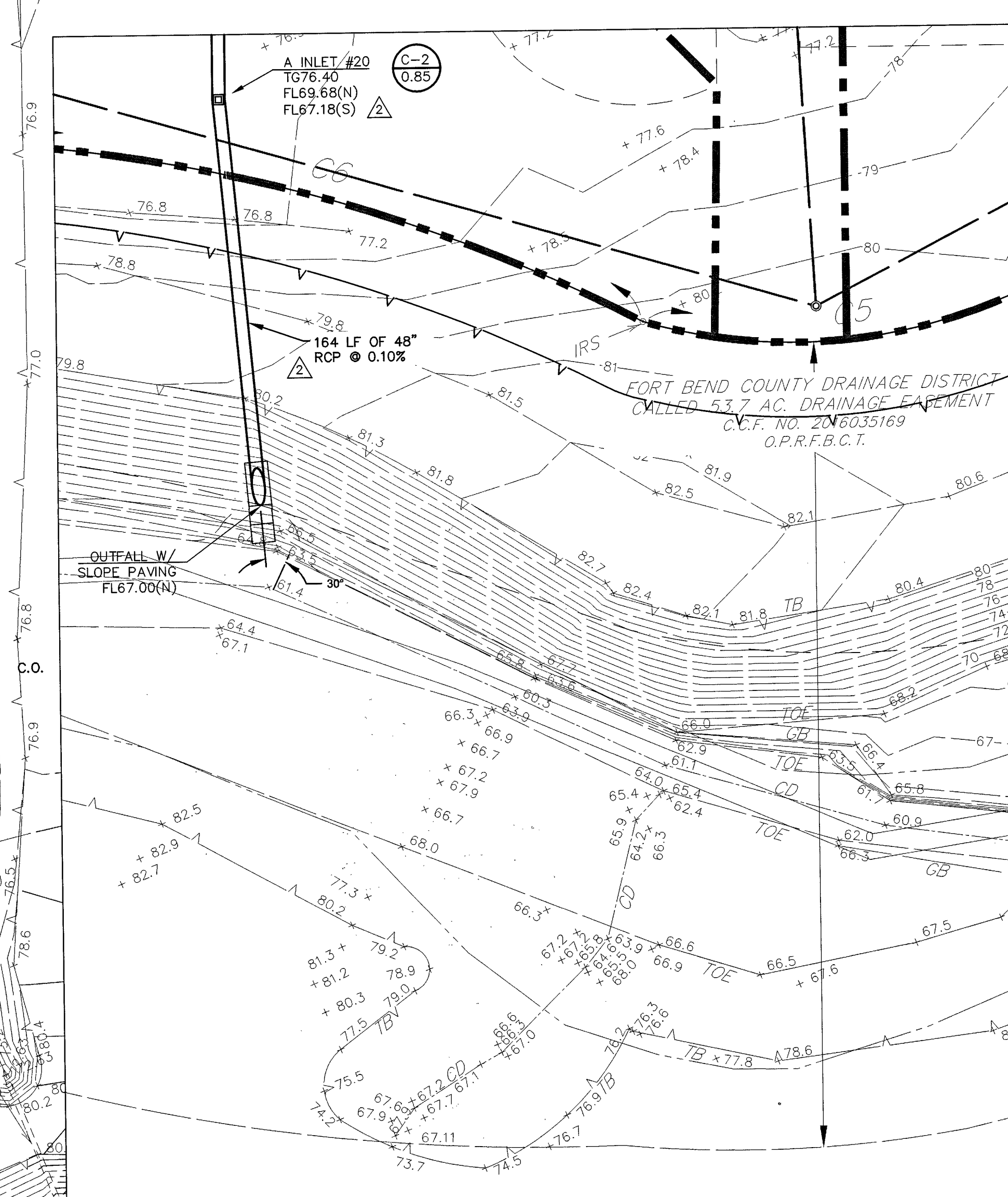
LAMAR CONSOLIDATED INDEPENDENT SCHOOL DISTRICT
ROSENBERG, TX

DON CARTER ELEMENTARY
CSP # 11-2017VRG



LEGEND

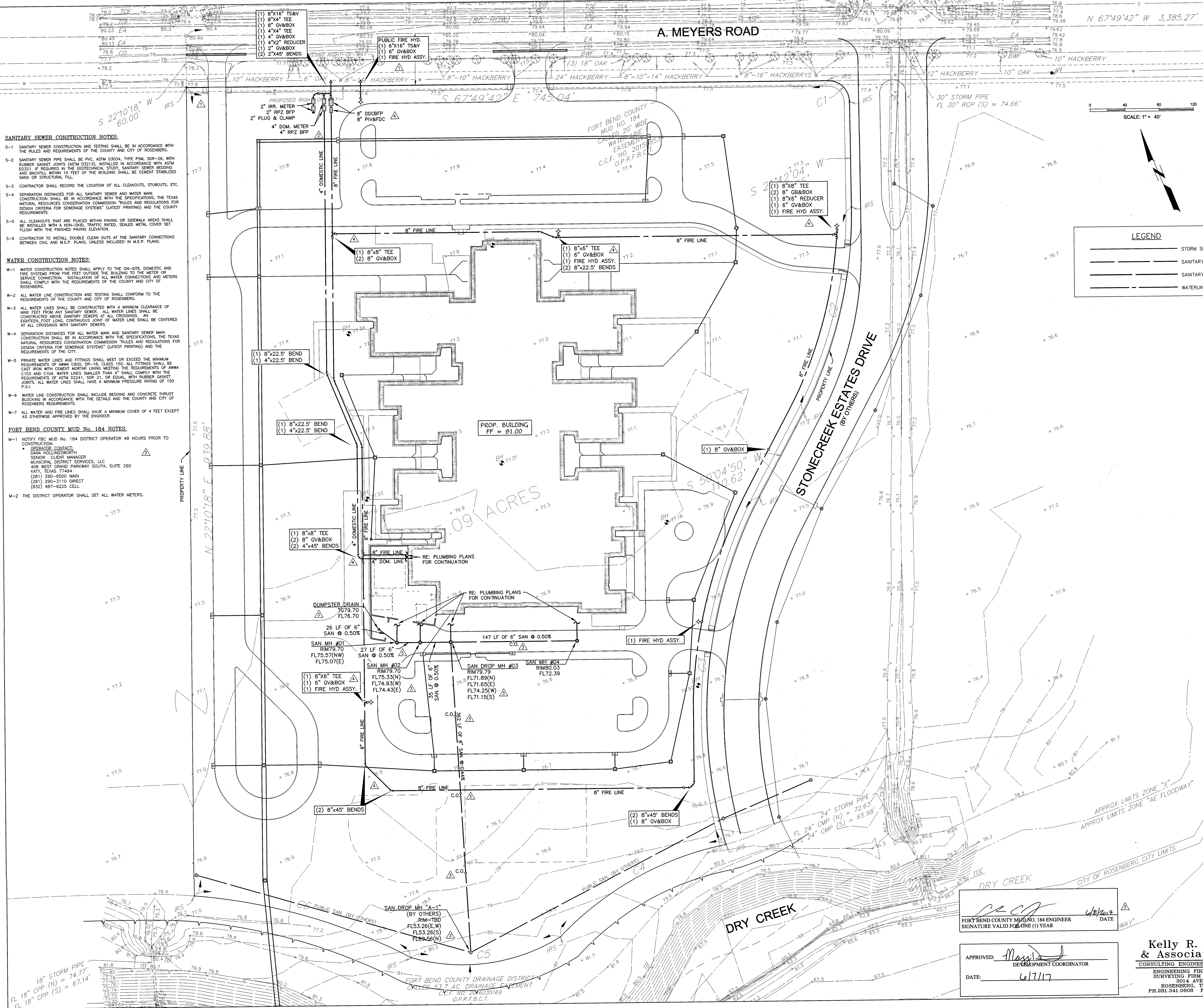
- STORM SEWER
- SANITARY SEWER
- SANITARY FORCE MAIN
- WATERLINE
- DRAINAGE SWALE
- DRAINAGE AREA BOUNDARY
- DIRECTIONAL FLOW OF RUNOFF
- TYPE A INLET
- TYPE H-2 CURB INLET
- TYPE E INLET
- YARD INLET
- MANHOLE
- DRAINAGE AREA DESIGNATION
- AREA (ACRES)



APPROVED: *[Signature]*
DATE: 6/7/17
FORT BEND COUNTY MUD NO. 184 ENGINEER
SIGNATURE VALID FOR ONE (1) YEAR

Kelly R. Kaluza &
Associates, Inc.
CONSULTING ENGINEERS & SURVEYORS
ENGINEERING FIRM NO. F-1339
SURVEYING FIRM NO. 10010000
3014 AVENUE I
ROSENBERG, TEXAS 77471
PH. 281.341.0808 FAX. 281.341.8333

Sub-Area no.	UPSTREAM STRUCTURE	DOWN STREAM STRUCTURE	LENGTH (ft)	SubArea ACREAGE	TOTAL ACREAGE	Tc UPPER (min)	C. RUNOFF COEFF	C. Rvq RUNOFF COEFF	STORM SEWER DATA										GRAVITY CAPACITY (cfs)	12. RAINFALL (in/hr)	Q2. RUNOFF (cfs)	13. RAINFALL (in/hr)	Q3. RUNOFF (cfs)	15. RAINFALL (in/hr)	Q5. RUNOFF (cfs)	110. RAINFALL (in/hr)	Q10. RUNOFF (cfs)	125. RAINFALL (in/hr)	Q25. RUNOFF (cfs)	1100. RAINFALL (in/hr)	Q100. RUNOFF (cfs)	HYDRAULIC GRADE DOWNSTREAM	HYDRAULIC GRADE UPSTREAM	UPSTREAM FLOW LINE	DOWN STREAM FLOW LINE	TOP OF UP STREAM INLET						
									SIZE (in.)	QTY	GRADE (%)	VELOCITY (ft/s)	12. RAINFALL (in/hr)	Q2. RUNOFF (cfs)	13. RAINFALL (in/hr)	Q3. RUNOFF (cfs)	15. RAINFALL (in/hr)	Q5. RUNOFF (cfs)																			110. RAINFALL (in/hr)	Q10. RUNOFF (cfs)	125. RAINFALL (in/hr)	Q25. RUNOFF (cfs)	1100. RAINFALL (in/hr)	Q100. RUNOFF (cfs)
A-1	A01	A02	92	0.51	0.51	23.88	0.63	0.63	18	1	0.013	0.25	3.03	5.36	3.54	1.14	3.97	1.27	4.58	1.47	5.39	1.90	6.30	2.43	8.24	3.31	78.23	78.32	72.58	72.75	78.85											
A-2	A02	A03	40	1.04	1.55	25.80	0.44	0.50	18	1	0.013	0.25	3.03	5.36	3.39	2.63	3.80	2.95	4.39	3.41	5.16	4.41	6.05	5.64	7.93	7.70	78.02	78.23	72.75	72.85	77.90											
A-3	A03	A04	108	0.13	1.68	25.96	0.85	0.53	24	1	0.013	0.20	3.22	10.12	3.37	2.99	3.78	3.36	4.37	3.88	5.15	5.02	6.03	6.42	7.91	6.77	77.85	78.02	72.85	72.43	77.90											
A-4	A04	H01	46	0.71	2.39	26.66	0.30	0.46	24	1	0.013	0.20	3.22	10.12	3.32	3.65	3.73	4.10	4.31	4.74	5.07	6.13	5.95	7.85	7.80	10.73	77.75	77.85	72.43	72.34	76.80											
A-5	H01	H03	40	0.10	2.49	26.74	0.80	0.47	24	1	0.013	0.20	3.22	10.12	3.32	3.65	3.73	4.10	4.30	5.07	5.06	6.57	5.94	8.40	7.79	11.48	77.85	77.75	72.34	72.25	76.90											
A-6	H02	H03	74	0.20	0.20	22.53	0.85	0.85	18	1	0.013	0.25	3.03	5.36	3.65	0.62	4.09	0.70	4.73	0.80	5.55	1.04	6.49	1.32	8.47	1.80	77.63	77.85	72.95	72.76	77.20											
A-7	H03	H04	380	0.46	3.15	27.24	0.82	0.55	30	1	0.013	0.13	3.01	14.79	3.28	5.87	3.68	6.36	4.26	7.35	5.01	9.52	5.88	12.18	7.72	16.67	77.04	77.83	72.28	71.79	77.15											
A-8	H04	A05	93	0.60	3.75	27.62	0.82	0.59	36	1	0.013	0.10	3.13	22.12	3.26	7.23	3.65	8.11	4.22	9.56	4.97	12.15	6.83	15.55	7.97	21.28	76.94	77.04	71.79	71.70	76.80											
A-9	A05	H06	78	0.41	4.16	27.85	0.30	0.56	36	1	0.013	0.10	3.13	22.12	3.26	7.23	3.65	8.11	4.22	9.56	4.97	12.15	6.83	15.55	7.97	21.28	76.94	77.04	71.79	71.70	76.80											
A-10	H05	H06	59	0.16	0.16	22.24	0.52	0.52	18	1	0.013	0.25	3.03	5.36	3.68	0.31	4.12	0.34	4.76	0.40	5.59	0.51	6.53	0.65	8.52	0.89	76.85	76.86	72.70	72.55	76.95											
A-11	H06	A06	79	0.24	4.56	28.05	0.85	0.58	42	1	0.013	0.08	3.14	30.18	3.22	8.49	3.82	9.52	4.18	11.01	4.93	14.26	5.78	18.26	7.90	25.01	76.81	76.82	72.55	72.40	76.80											
A-12	H07	A06	58	0.23	0.23	22.72	0.71	0.71	18	1	0.013	0.25	3.03	5.36	3.64	0.60	4.08	0.67	4.71	0.77	5.53	1.00	6.46	1.27	8.43	1.73	76.61	76.81	71.54	71.36	77.10											
A-13	A06	A09	219	0.85	5.64	28.58	0.52	0.57	42	1	0.013	0.08	3.14	30.18	3.19	10.33	3.58	11.60	4.14	13.41	4.88	17.37	5.73	22.25	7.54	30.49	77.46	77.57	75.15	74.89	79.40											
A-14	A07	A08	103	0.50	0.50	23.85	0.69	0.69	18	1	0.013	0.25	3.03	5.36	3.54	1.21	3.97	1.36	4.58	1.57	5.39	2.03	6.30	2.59	8.24	3.53	76.61	77.46	73.18	72.85	79.65											
A-15	A08	A09	133	0.55	1.15	25.25	0.77	0.73	18	1	0.013	0.25	3.03	5.36	3.43	2.88	3.84	3.23	4.44	3.74	5.23	4.84	6.12	6.18	8.02	8.43	76.61	76.81	72.45	72.30	76.70											
A-16	H08	A09	58	0.28	0.28	22.99	0.71	0.71	18	1	0.013	0.25	3.03	5.36	3.61	0.72	4.05	0.81	4.67	0.93	5.50	1.21	6.42	1.54	8.39	2.09	76.61	76.81	70.19	70.07	77.10											
A-17	A09	A10	174	0.66	7.73	29.34	0.41	0.59	48	1	0.013	0.07	3.02	38.00	3.14	14.29	3.53	16.04	4.06	18.55	4.80	24.04	6.94	30.80	7.43	42.28	76.46	76.48	72.30	72.15	76.55											
A-18	H09	A10	58	0.26	0.26	22.89	0.71	0.71	18	1	0.013	0.25	3.03	5.36	3.62	0.67	4.06	0.75	4.69	0.87	5.51	1.12	6.44	1.43	8.40	1.95	76.46	76.48	70.07	69.95	77.00											
A-19	A10	A19	174	0.46	8.45	29.55	0.58	0.59	48	1	0.013	0.07	3.02	38.00	3.13	15.63	3.51	17.55	4.06	20.29	4.78	26.30	6.62	33.71	7.40	46.25	76.28	76.46	70.07	69.95	77.00											
A-20	H10	A19	58	0.14	0.14	22.07	0.71	0.71	18	1	0.013	0.25	3.03	5.36	3.70	0.37	4.14	0.41	4.78	0.48	5.62	0.62	6.56	0.79	8.55	1.07	76.28	76.28	72.20	72.05	76.45											
B-1	A11	A12	95	0.43	0.43	23.62	0.69	0.69	18	1	0.013	0.25	3.03	5.36	3.55	1.05	3.99	1.18	4.61	1.36	5.42	1.76	6.34	2.24	8.28	3.05	78.60	78.68	73.54	73.30	79.50											
B-2	A12	A13	134	0.56	0.99	24.98	0.44	0.55	24	1	0.013	0.20	3.22	10.12	3.45	1.86	3.87	2.09	4.47	2.41	5.26	3.12	6.15	3.98	8.06	5.43	78.52	78.60	72.68	72.41	77.80											
B-3	H11	A13	30	0.55	0.55	24.00	0.80	0.80	18	1	0.013	0.25	3.03	5.36	3.53	1.54	3.95	1.73	4.57	2.00	5.37	2.58	6.28	3.30	8.22	4.49	78.52	78.57	72.49	72.41	77.80											
B-4	A13	A14	85	0.09	1.63	25.90	0.41	0.62	24	1	0.013	0.20	3.22	10.12	3.38	3.43	3.79	3.84	4.38	4.44	5.15	5.75	6.04	7.36	7.32	10.03	78.35	78.52	72.41	72.34	77.50											
B-5	H12	A14	23	0.18	0.18	22.39	0.85	0.85	18	1	0.013	0.25	3.03	5.36	3.67	0.56	4.11	0.63	4.74	0.73	5.57	0.94	6.51	1.20	8.49	1.62	78.35	78.35	72.30	72.24	77.80											
B-6	A14	A15	105	0.08	1.87	26.17	0.38	0.64	24	1	0.013	0.20	3.22	10.12	3.36	4.00	3.77	4.48	4.35	5.18	5.12	6.71	6.01	8.57	7.88	11.71	78.07	78.35	72.24	72.03	77.50											
B-7	A15	A16	65	0.28	2.15	26.44	0.36	0.50	24	1	0.013	0.20	3.22	10.12	3.34	4.30	3.75	4.83	4.33	5.58	5.09	7.22	5.97	9.24	7.84	12.62	77.87	78.07	72.03	71.90	76.50											
B-8	H13	A16	18	0.24	0.24	22.78	0.85	0.85	18	1	0.013	0.25	3.03	5.36	3.63	0.74	4.07	0.83	4.70	0.96	5.52	1.24	6.46	1.58	8.42	2.15	77.87	77.88	73.25	73.20	77.90											
B-9	A16	A17	106	0.33	2.72	26.93	0.30	0.59	24	1	0.013	0.20	3.22	10.12	3.30	5.26	3.71	5.90	4.28	6.82	5.04	8.83	5.91	11.38	7.76	15.46	77.38	77.67	70.55	70.34	76.50											
B-10	H14	A17	18	0.29	0.29	23.04	0.85	0.85	18	1	0.013	0.25	3.03	5.36	3.61	0.85	4.04	1.00	4.67	1.15	5.49	1.49	6.42	1.90	8.38	2.58	77.38	77.39	73.25	73.20	77.50											
B-11	A17	A18	104	0.55	3.56	27.51	0.30	0.56	30	1	0.013	0.13	3.01	14.79	3.28	5.54	3.68	7.34	4.23	8.48	4.98	10.98	5.85	14.06	7.68	19.24	77.15	77.38	70.34	70.20	76.50											
B-12	H15	H16	104	0.16	0.16	22.24	0.85	0.85	18	1	0.013	0.25	3.03	5.36	3.68	0.50	4.12	0.58	4.76	0.65	5.59	0.84	6.53	1.07	8.52	1.45	77.30	77.32	75.55	75.29	76.55											
B-13	H16	H17	119	0.16	0.32	23.18	0.85	0.85	18	1	0.013	0.25	3.03	5.36	3.60	0.98	4.03	1.10	4.65	1.27	5.47	1.64	6.40	2.09	8.35	2.84	77.21	77.30	73.55	73.25	79.50											
B-14	H17	A18	18	0.39	0.71	24.41	0.85	0.85	18	1	0.013	0.25	3.03	5.36	3.49	2.11	3.92	2.36	4.52	2.73	5.32	3.53	6.23	4.51	8.15	6.21	77.15	77.21	73.25	73.20	77.50											
B-15	A18	H18	133	0.86	5.13	28.34	0.30	0.56	30	1	0.013	0.13	3.01	14.79	3.21	5.19	3.60	10.31	4.16	11.92	4.90	15.44	5.75	19.78	7.57	27.10	76.58	77.15	70.20	70.03	76.50											
B-16	H18	A19	65	0.10	5.23	28.38	0.85	0.56	30	1	0.013	0.13	3.01	14.79	3.20	5.49	3.60	10.61	4.16	12.26	4.90	15.89	5.75	20.34	7.56	27.88	76.28	76.58	70.03	69.95	76.45											
C-1	A19	A20	134	0.19	14.01	30.92	0.30	0.58	48	1	0.013	0.20	5.11	64.24	3.04	24.67	3.42	27.71	3.95	32.20	4.66	41.10	5.48	53.31	7.23	73.75	75.93	76.28	69.95	69.68	76.40											
C-2	A20	OUTFALL	179	0.85	14.86	31.08	0.30	0.56	48	1	0.013	0.10	3.61	45.42	3.03	25.37	3.41	28.49	3.94	32.95	4.65	48.74	5.46	54.82	7.21	73.75	76.44	75.93	67.18	67.00	76.40											



SANITARY SEWER CONSTRUCTION NOTES:

- S-1 SANITARY SEWER CONSTRUCTION AND TESTING SHALL BE IN ACCORDANCE WITH THE RULES AND REQUIREMENTS OF THE COUNTY AND CITY OF ROSENBERG.
- S-2 SANITARY SEWER PIPE SHALL BE PVC, ASTM D3034, TYPE PSM, SDR-26, WITH RUBBER GASKET JOINTS (ASTM D3213), INSTALLED IN ACCORDANCE WITH ASTM D3213. F REQUIRED IN THE GEOTECHNICAL STUDY, SANITARY SEWER BEDDING AND BACKFILL WITHIN 10 FEET OF THE BUILDING SHALL BE CEMENT STABILIZED SAND OR STRUCTURAL FILL.
- S-3 CONTRACTOR SHALL RECORD THE LOCATION OF ALL CLEANOUTS, STUBOUTS, ETC.
- S-4 SEPARATION DISTANCES FOR ALL SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS, THE TEXAS NATURAL RESOURCES CONSERVATION COMMISSION "RULES AND REGULATIONS FOR DESIGN CRITERIA FOR SEWERAGE SYSTEMS" (LATEST PRINTING) AND THE COUNTY REQUIREMENTS.
- S-5 ALL CLEANOUTS THAT ARE PLACED WITHIN PAVING OR SIDEWALK AREAS SHALL BE INSTALLED WITH A NON-SKID, TRAFFIC RATED, SEALED METAL COVER SET FLUSH WITH THE FINISHED PAVING ELEVATION.
- S-6 CONTRACTOR TO INSTALL DOUBLE CLEAN OUTS AT THE SANITARY CONNECTIONS BETWEEN CIVIL AND M.E.P. PLANS, UNLESS INCLUDED IN M.E.P. PLANS.

WATER CONSTRUCTION NOTES:

- W-1 WATER CONSTRUCTION NOTES SHALL APPLY TO THE ON-SITE, DOMESTIC AND FIRE SYSTEMS FROM FIVE FEET OUTSIDE THE BUILDING TO THE METER OR SERVICE CONNECTION. INSTALLATION OF ALL WATER CONNECTIONS AND METERS SHALL COMPLY WITH THE REQUIREMENTS OF THE COUNTY AND CITY OF ROSENBERG.
- W-2 ALL WATER LINE CONSTRUCTION AND TESTING SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY AND CITY OF ROSENBERG.
- W-3 ALL WATER LINES SHALL BE CONSTRUCTED WITH A MINIMUM CLEARANCE OF NINE FEET FROM ANY SANITARY SEWER. ALL WATER LINES SHALL BE CONSTRUCTED ABOVE SANITARY SEWERS AT ALL CROSSINGS. AN EIGHTEEN FOOT LONG, CONTINUOUS JOINT OF WATER LINE SHALL BE CENTERED AT ALL CROSSINGS WITH SANITARY SEWERS.
- W-4 SEPARATION DISTANCES FOR ALL WATER MAIN AND SANITARY SEWER MAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS, THE TEXAS NATURAL RESOURCES CONSERVATION COMMISSION "RULES AND REGULATIONS FOR DESIGN CRITERIA FOR SEWERAGE SYSTEMS" (LATEST PRINTING) AND THE REQUIREMENTS OF THE CITY.
- W-5 PRIVATE WATER LINES AND FITTINGS SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF AWWA C900, DR-18, CLASS 150. ALL FITTINGS SHALL BE CAST IRON WITH CEMENT MORTAR LINING MEETING THE REQUIREMENTS OF AWWA C153 AND C104. WATER LINES SMALLER THAN 4" SHALL COMPLY WITH THE REQUIREMENTS OF ASTM D2241, SDR 21, OR EQUAL, WITH RUBBER GASKET JOINTS. ALL WATER LINES SHALL HAVE A MINIMUM PRESSURE RATING OF 150 P.S.I.
- W-6 WATER LINE CONSTRUCTION SHALL INCLUDE BEDDING AND CONCRETE THRUST BLOCKING IN ACCORDANCE WITH THE DETAILS AND THE COUNTY AND CITY OF ROSENBERG REQUIREMENTS.
- W-7 ALL WATER AND FIRE LINES SHALL HAVE A MINIMUM COVER OF 4 FEET EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER.

FORT BEND COUNTY MUD No. 184 NOTES:

- M-1 NOTIFY FBC MUD No. 184 DISTRICT OPERATOR 48 HOURS PRIOR TO CONSTRUCTION.
 - OPERATOR CONTACT:
DANA HOLLINGSWORTH
SENIOR CLIENT MANAGER
MUNICIPAL DISTRICT SERVICES, LLC
406 WEST GRAND PARKWAY SOUTH, SUITE 260
KATY, TEXAS 77494
(281) 290-6500 MAIN
(281) 290-3110 DIRECT
(832) 487-6225 CELL
- M-2 THE DISTRICT OPERATOR SHALL SET ALL WATER METERS.

ARCHITECT
VLK Architects, Inc.
20445, Suite 350
Houston, Texas 77070
Main Phone: 281.671.2300
www.vlkarchitects.com

CIVIL ENGINEER
Kelly R. Kaluza & Associates, Inc.
3014 Avenue I
Rosenberg, Texas 77380
Main Phone: 281.341.0808
www.kellykaluza.com

MEP ENGINEER
Salas O'Brien
10630 W. Sam Houston Pkwy N. Suite 900
Houston, Texas 77064
Main Phone: 281.664.1900
www.salasobrien.com

STRUCTURAL ENGINEER
Matrix Structural Engineers
5177 Richmond Ave., Suite 670
Houston, Texas 77056
Main Phone: 713.664.0130
www.matrixstructural.com

FOOD SERVICE
FDP
26216 Oak Ridge Drive
The Woodlands, Texas 77380
Main Phone: 281.350.2323
www.foodservicesdesignprofessionals.com

LANDSCAPE
Pacheco Koch
20445 State Highway 249, Suite 380
Houston, Texas 77070-2623
Main Phone: 281.883.0103
www.pkco.com

March 27, 2017

REVISIONS	
Revision No.	
△ Addendum No. 4	04/21/2017
△ Addendum No. 5	04/25/2017
△ City & MUD Cmts	05/05/2017
△ MUD Comments	05/16/2017

Director	Drawn By
Designer	Quality Control
DHW	LLT
Proj. Coord.	

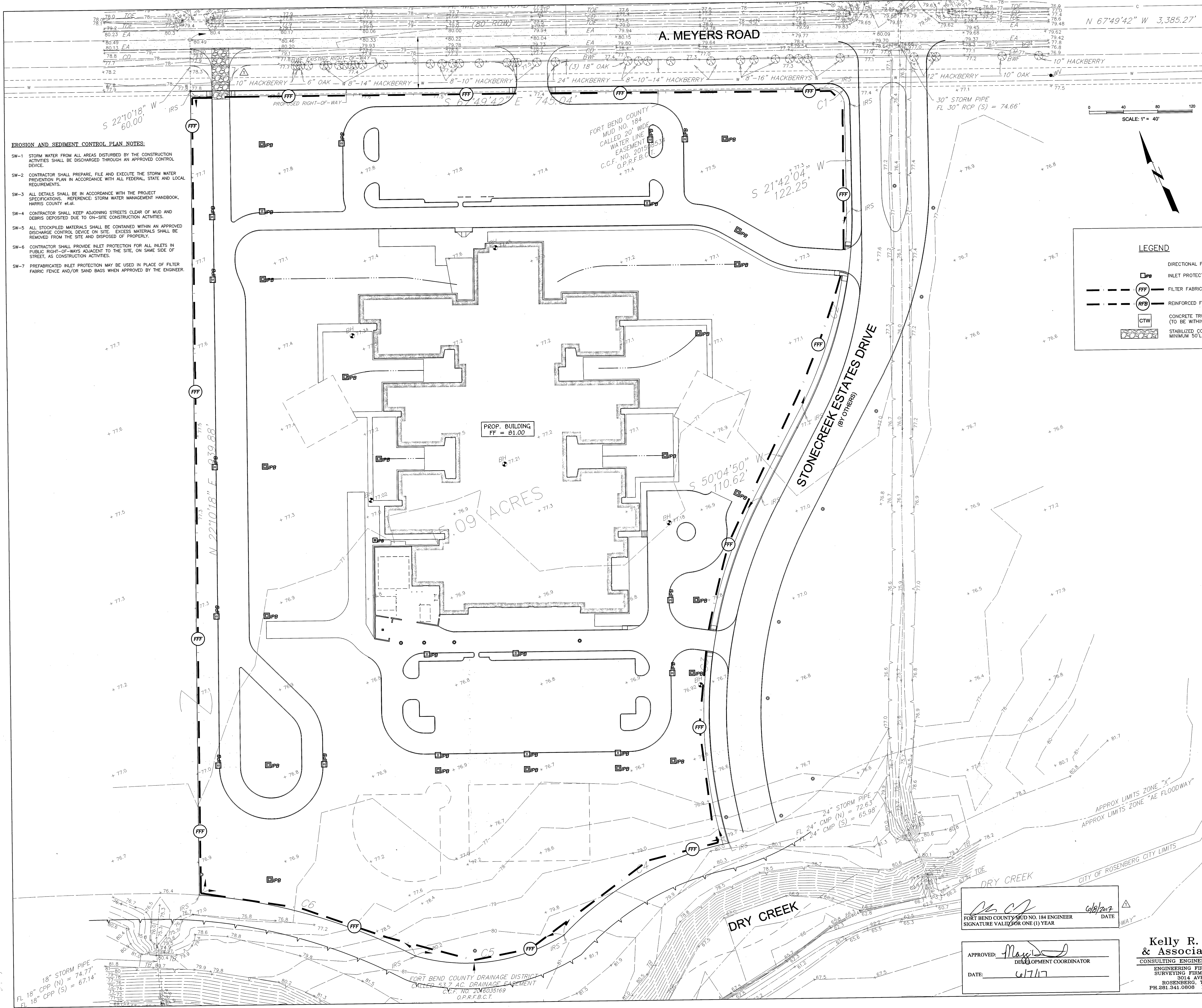
PROJECT NO.	
1623.00	
SHEET TITLE	
WATER & SANITARY PLAN	
SHEET NO.	
C3.01	

APPROVED:
DATE: 6/17/17

DEVELOPMENT COORDINATOR

Kelly R. Kaluza & Associates, Inc.
CONSULTING ENGINEERS & SURVEYORS
ENGINEERING FIRM No. F-1339
SURVEYING FIRM No. 10010000
3014 AVENUE I
ROSENBERG, TEXAS 77471
PH. 281.341.0808 FAX. 281.341.6333

DON CARTER ELEMENTARY
CSP # 11-2017VRG



ARCHITECT

VLK Architects, Inc.
20445, Suite 350
Houston, Texas 77070
Main Phone: 281.671.2300
www.vlkarchitects.com

CIVIL ENGINEER

Kelly R. Kaluza & Associates, Inc.
3014 Avenue I
Rosenberg, Texas 77380
Main Phone: 281.341.0808
www.kellykaluza.com

MEP ENGINEER

Salas O'Brien
10830 W. Sam Houston Pkwy N. Suite 900
Houston, Texas 77064
Main Phone: 281.664.1900
www.salasobrien.com

STRUCTURAL ENGINEER

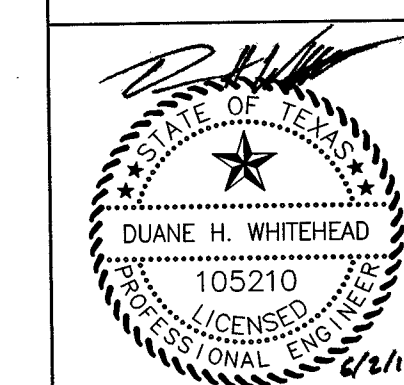
Matrix Structural Engineers
5177 Richmond Ave., Suite 670
Houston, Texas 77056
Main Phone: 713.664.0130
www.matrixstructural.com

FOOD SERVICE

FDP
26215 Oak Ridge Drive
The Woodlands, Texas 77380
Main Phone: 281.350.2323
www.foodserviceprofessionals.com

LANDSCAPE

Pacheco Koch
20445 State Highway 248, Suite 380
Houston, Texas 77070-2823
Main Phone: 281.883.0103
www.pkco.com



March 27, 2017

REVISIONS

Revision No. 1
City & MUD Cmnts 05/05/2017

Director Drawn By
Designer Quality Control
DHW LLT
Proj. Coord.

PROJECT NO.

1623.00

SHEET TITLE

EROSION CONTROL PLAN

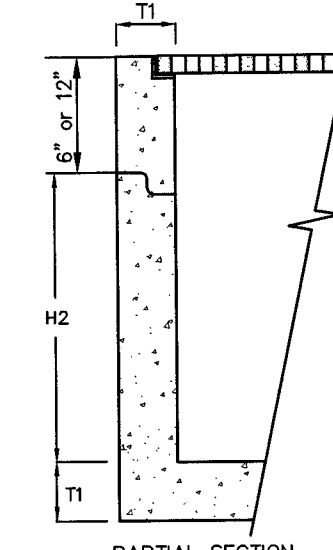
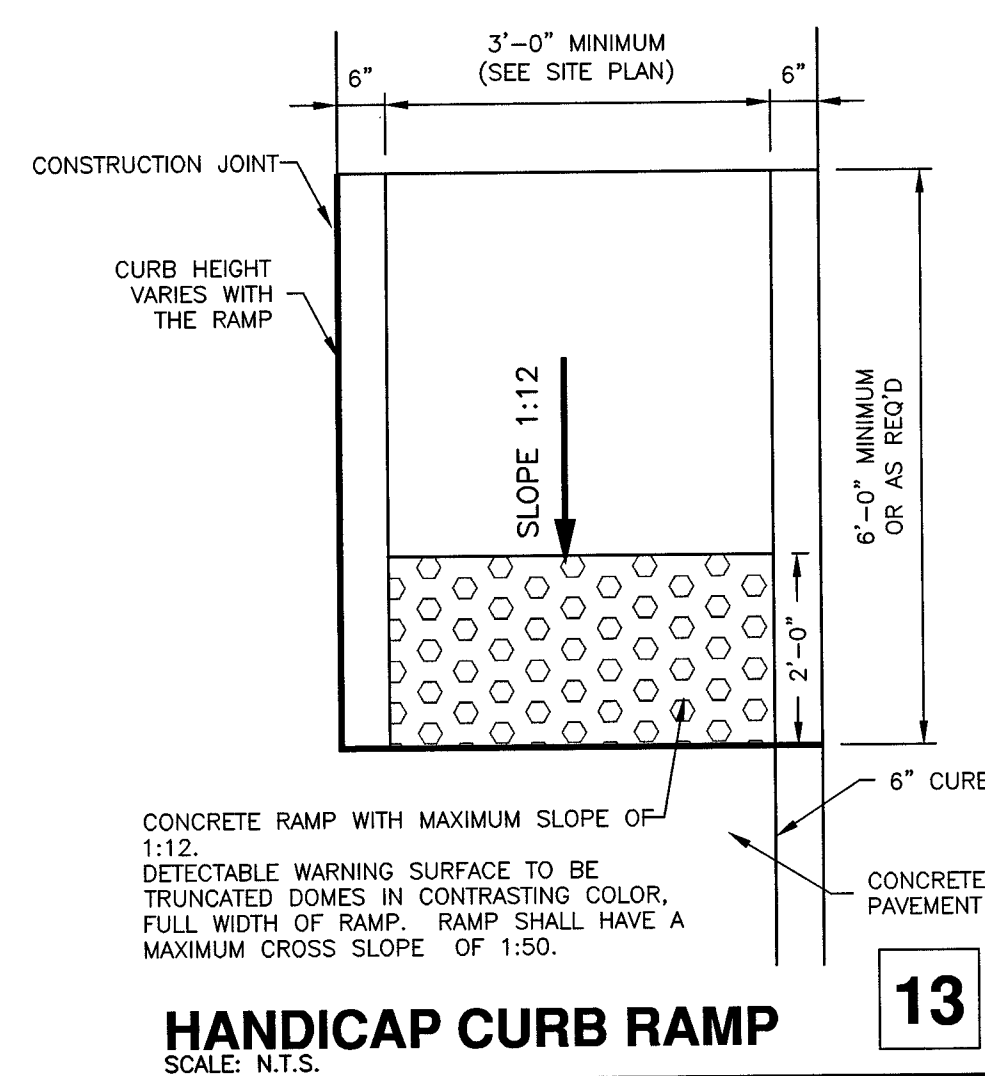
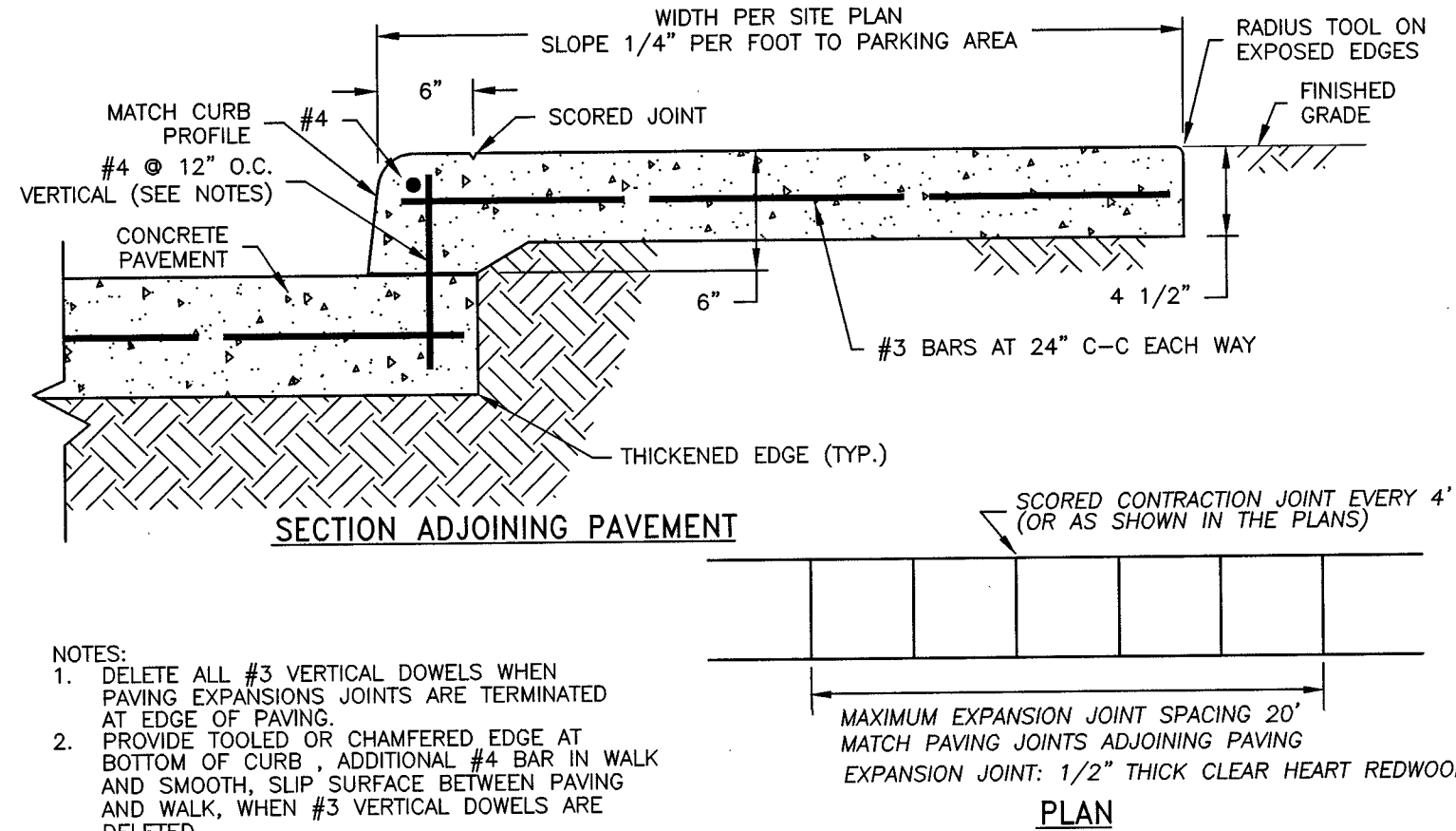
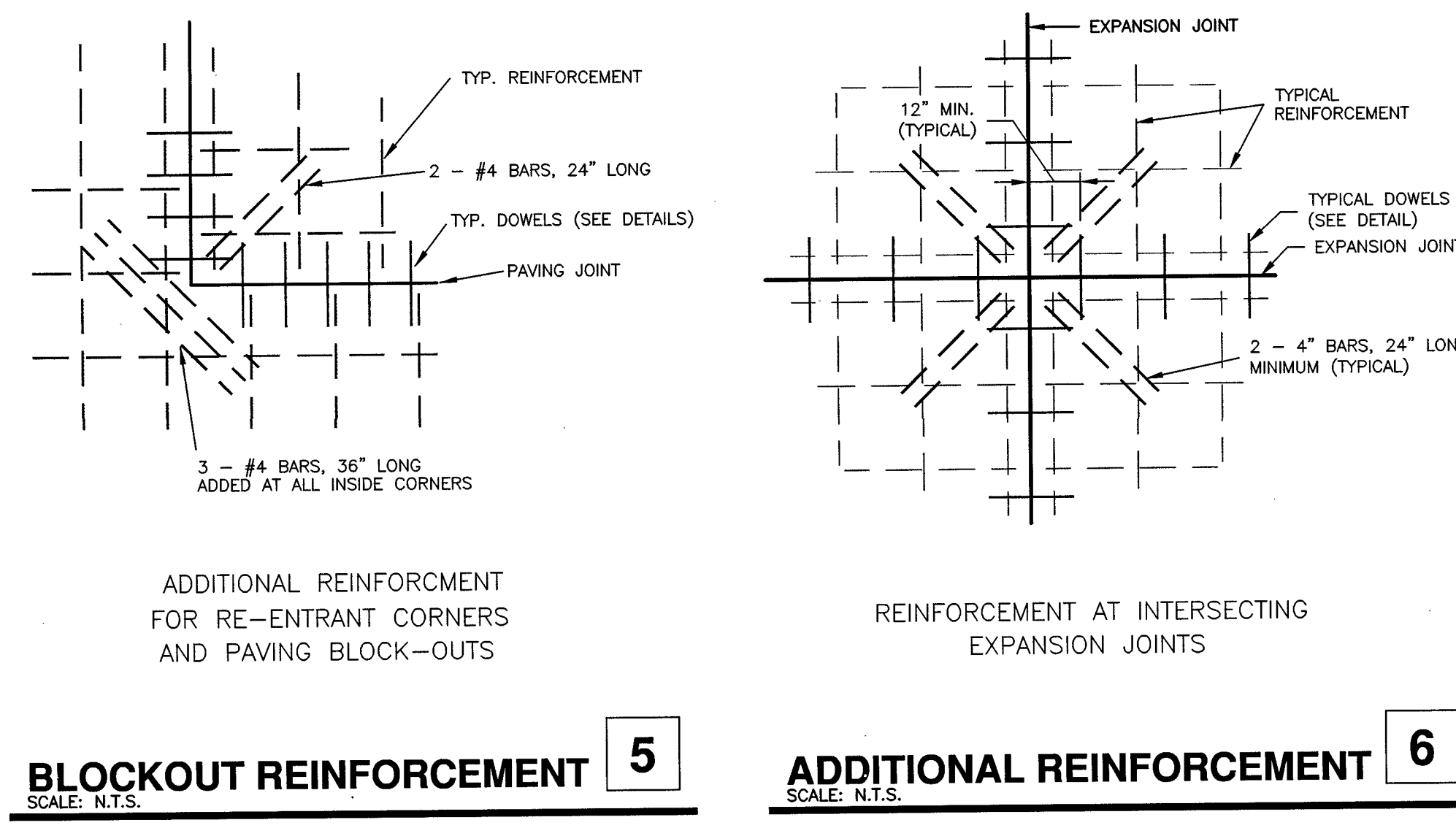
SHEET NO.

C4.01

COPYRIGHT © 2017 VLK ARCHITECTS

LAMAR CONSOLIDATED INDEPENDENT SCHOOL DISTRICT
ROSENBERG, TX

DON CARTER ELEMENTARY
CSP # 11-2017VRG

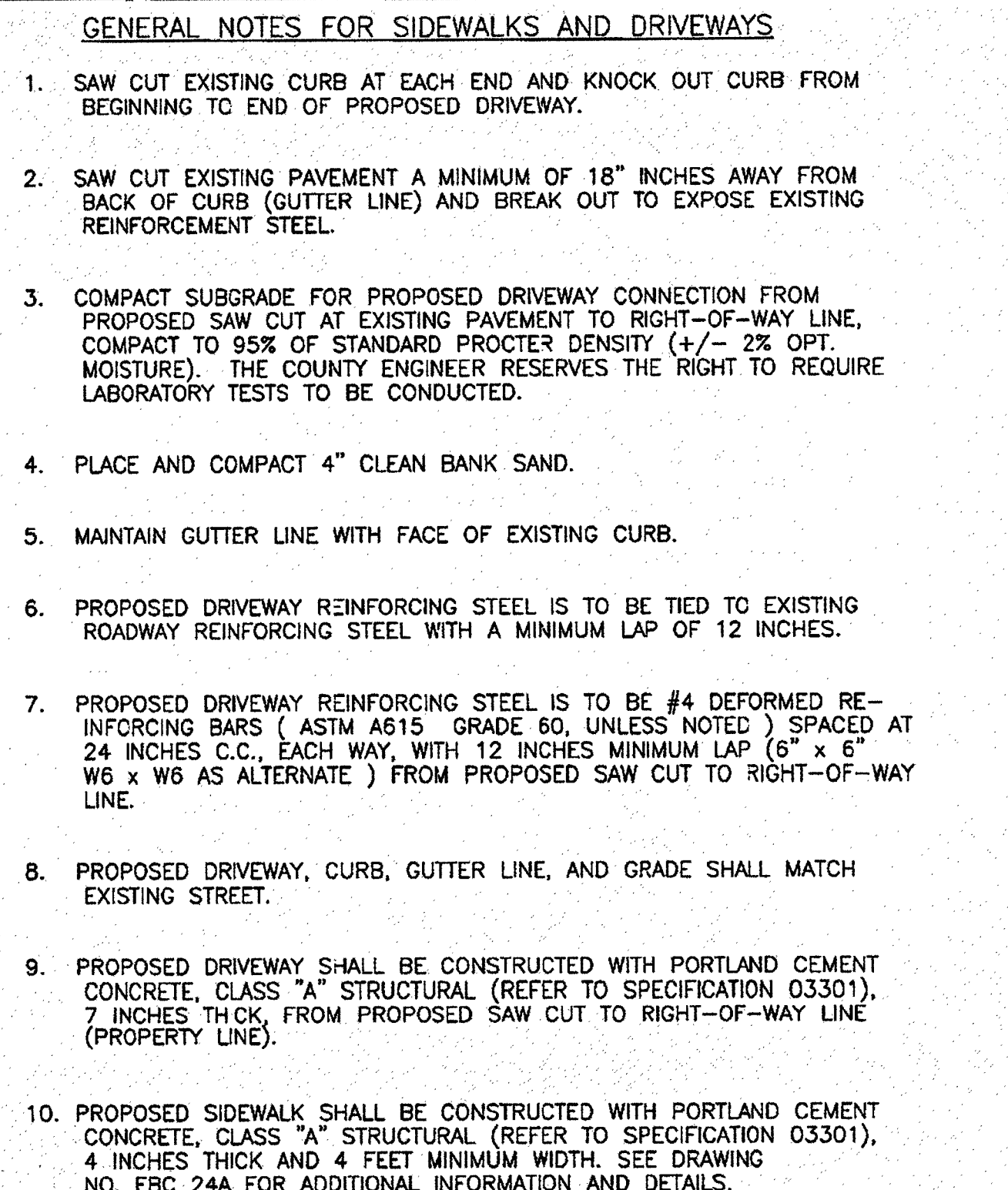
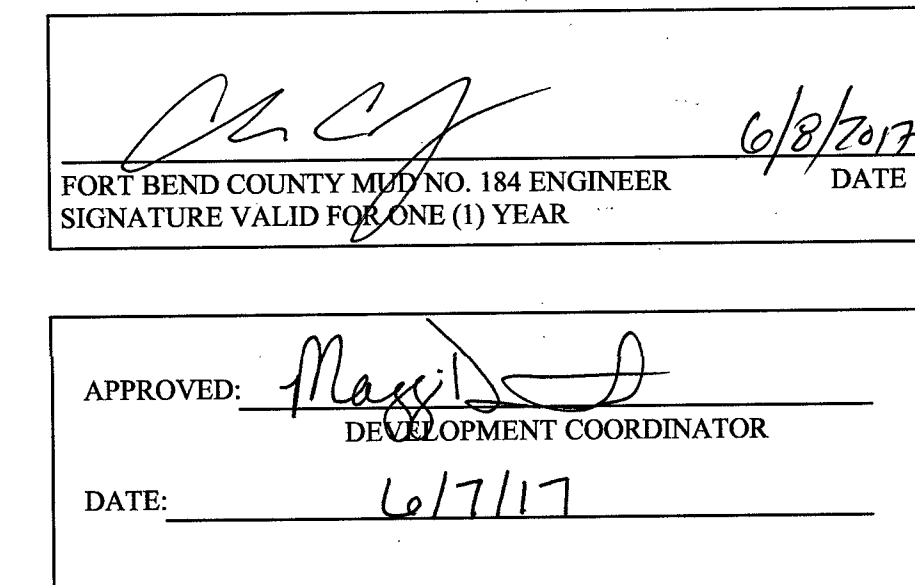
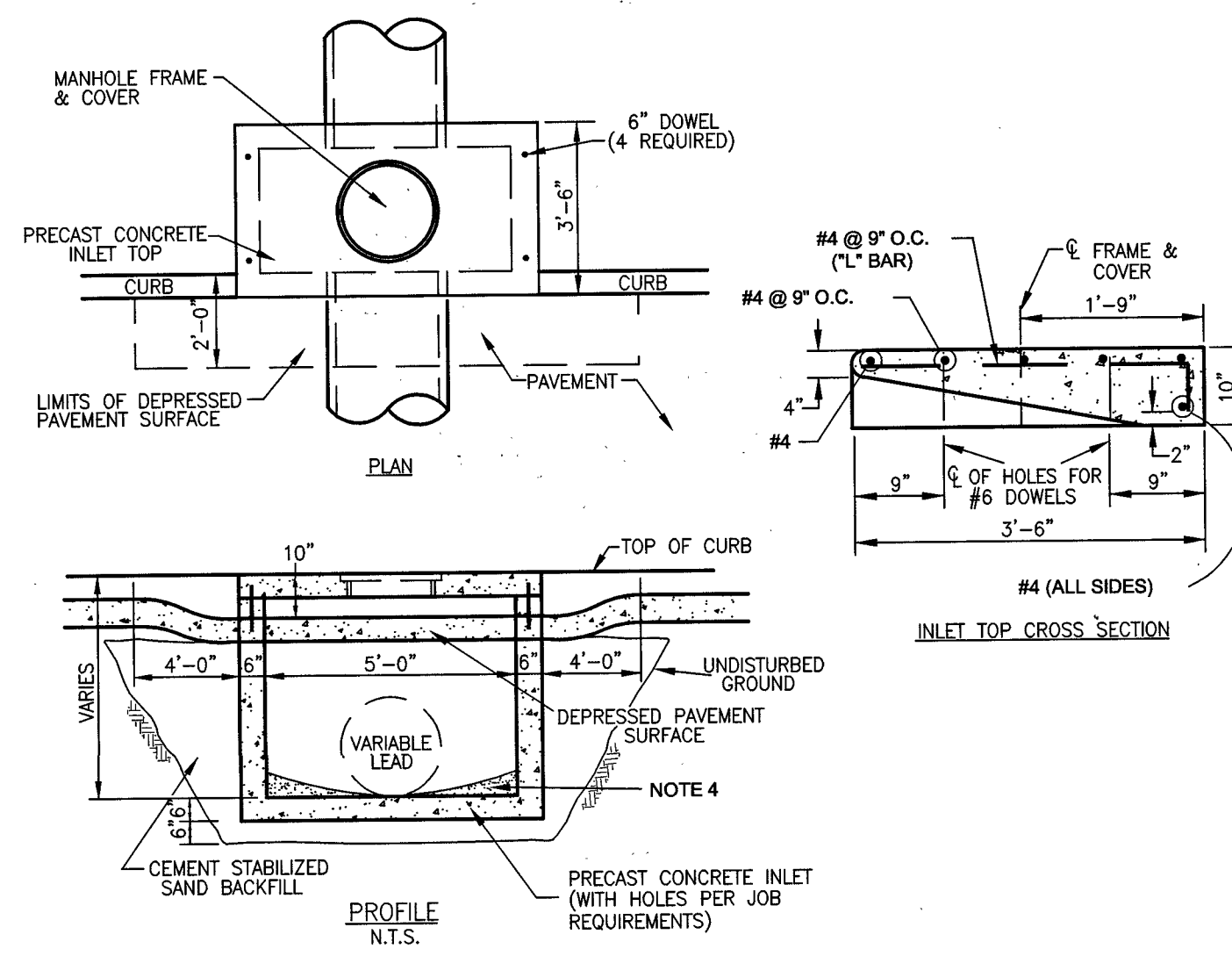


SPECIFICATIONS

CONCRETE : CLASS 1 CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH.

REINFORCEMENT: GRADE 60 REINFORCED. STEEL REBAR CONFORMING TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

C.I. CASTINGS: CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-- CLASS 30.



CONSTRUCTION NOTES FOR SIDEWALKS & DRIVEWAYS WITH CURB TYPE STREETS COMMERCIAL AREA	DRAWN BY: L. BRDECKA DATE DRAWN: 2-1-94	REVISED BY: L. BRDECKA DATE REVISED: 3-10-05
	APPROVED BY: L. HOOD DATE: 2-1-94	DRAWING NO. FBC-025B
FORT BEND COUNTY ENGINEERING DEPARTMENT		

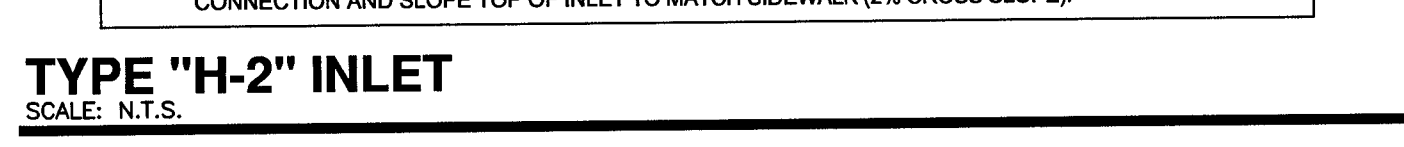
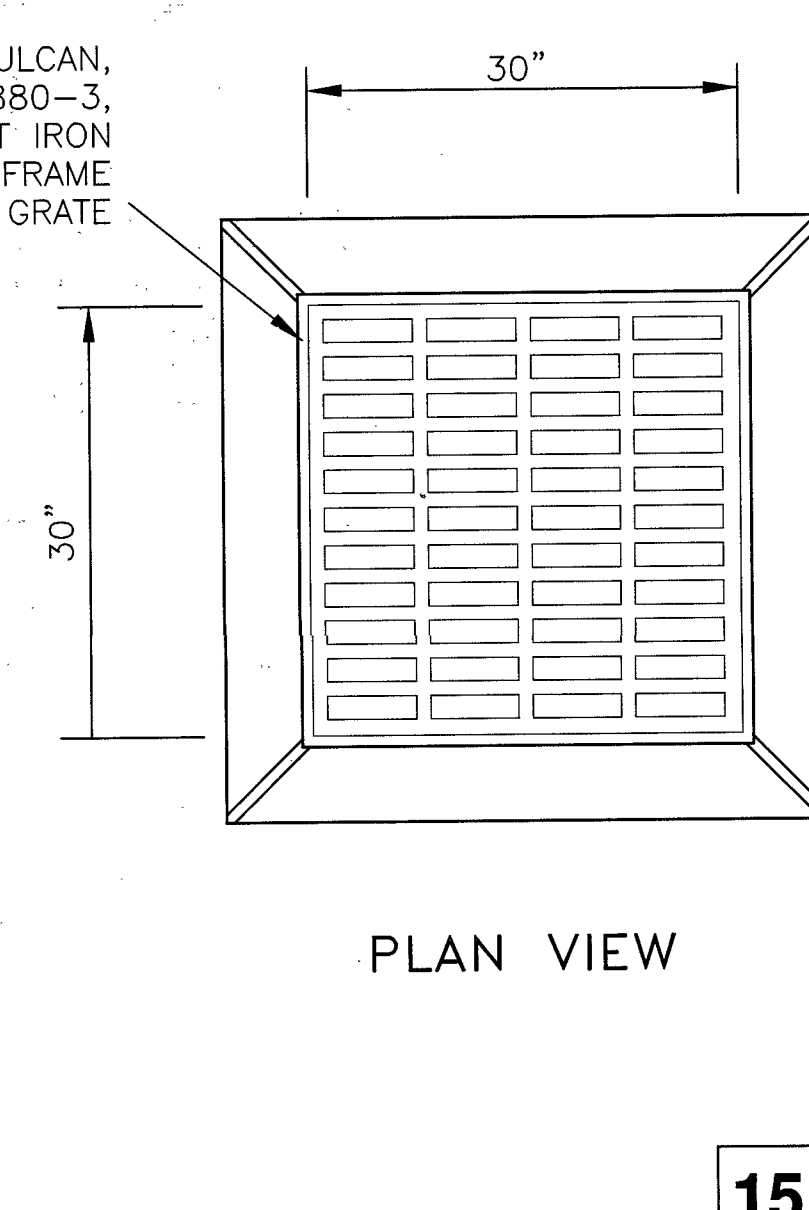
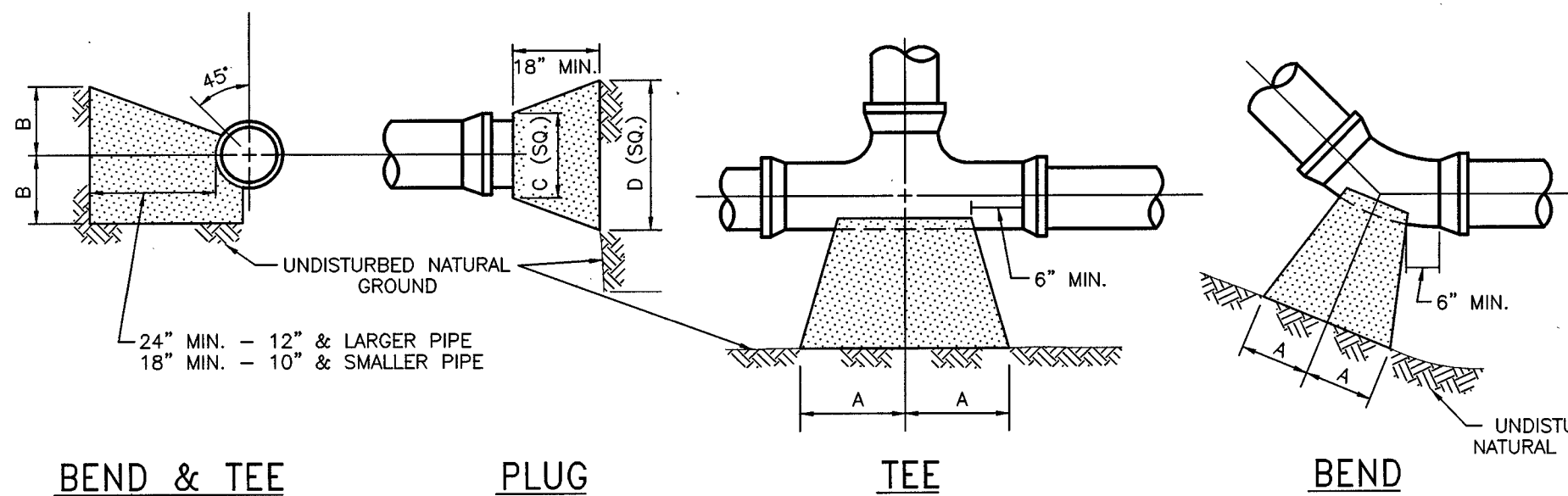


TABLE P-1 - TRENCH SHORING - MINIMUM REQUIREMENTS

DEPTH OF TRENCH FEET	KIND OR CONDITION OF EARTH	SIZE AND SPACING OF MEMBERS									
		UPRIGHTS					STRUTS				
		MINIMUM DIMENSIONS	MAXIMUM SPACING	MINIMUM DIMENSIONS	MAXIMUM SPACING	WIDTH OF TRENCH	MINIMUM DIMENSIONS	MAXIMUM SPACING	MINIMUM DIMENSIONS	MAXIMUM SPACING	MINIMUM DIMENSIONS
FEET	TYPE	INCHES	FEET	INCHES	FEET	UP TO 3	3 TO 5	5 TO 6	6 TO 8	8 TO 10	10 TO 15
5 TO 10	(A) HARD, COMPACT	3/4 OR 2x6	6	4	4	2x6	4x4	4x6	6x6	6x8	4
	(B) LIKELY TO CRACK	3/4 OR 2x6	3	4x6	4	2x6	4x4	4x6	6x6	6x8	4
	(C) SOFT, SANDY, OR FILLED	3/4 OR 2x6	CLOSE SHEETING	4x6	4	4x4	4x6	6x6	6x8	6x8	4
	(D) HYDROSTATIC PRESSURE	3/4 OR 2x6	CLOSE SHEETING	6x8	4	4x4	4x6	6x6	6x8	6x8	4
10 TO 15	(A) HARD, COMPACT	3/4 OR 2x6	4	4x6	4	4x4	4x6	6x6	6x8	6x8	4
	(B) LIKELY TO CRACK	3/4 OR 2x6	2	4x6	4	4x4	4x6	6x6	6x8	6x8	4
	(C) SOFT, SANDY, OR FILLED	3/4 OR 2x6	CLOSE SHEETING	4x6	4	4x4	4x6	6x6	6x8	6x8	4
	(D) HYDROSTATIC PRESSURE	3/4	CLOSE SHEETING	8x10	4	4x6	6x6	6x8	6x8	8x10	4
15 TO 20	(E) ALL KINDS OF CONDITIONS	3/4	CLOSE SHEETING	4x12	4	4x12	6x8	6x8	6x8	10x10	4
OVER 20	(F) ALL KINDS OF CONDITIONS	3/4	CLOSE SHEETING	6x8	4	4x12	6x8	6x8	6x8	10x12	4

1. TRENCH JACKS MAY BE USED IN LIEU OF, OR IN COMBINATION WITH, CROSS BRACES. SHORING IS NOT REQUIRED IN SOLID ROCK, HARD SHALE, OR HARD SLATE. WHERE EXISTING, STEEL, STEEL PILING AND BRACING OF EQUAL STRENGTH MAY BE SUBSTITUTED FOR WOOD.
- () DESIGNATION FOR PROPOSED (PRO) PURPOSES
- (*) FROM OSHA SAFETY AND HEALTH REGULATIONS PART 1926, SUBPART P.
2. SIZE OF THIMBER MEMBERS ARE ROUGH CUT DIMENSIONS (MIN. SIZE)

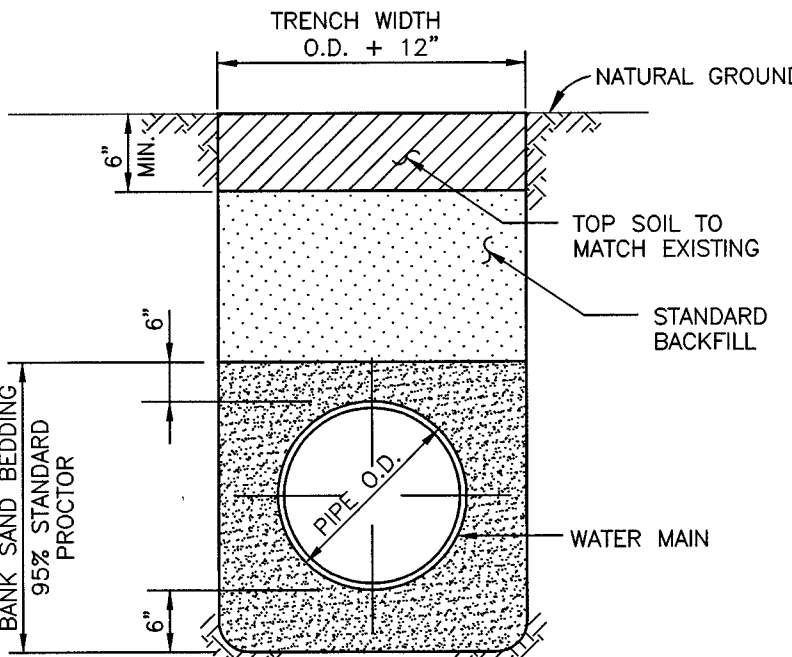


SIZE	90° BEND		45° BEND		22 1/2° BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B	A	B
2 1/2"	12"	7"	6"	7"	6"	6"	7"	8"	8"	14"
4"	14"	8"	7"	9"	6"	6"	8"	11"	8"	18"
6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"

NOTE: THRUST BLOCKS AT TRENCH FACE MUST HAVE A MINIMUM BEARING SURFACE OF 1.0 SQ. FOOT AND THE LEAST DIMENSION SHALL BE NO SMALLER THAN 1.5 TIMES PIPE DIAMETER, BUT NOT LESS THAN 1.0 FT.

THRUST BLOCK

SCALE: N.T.S.



1. BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, PLACED IN LIFTS, 8" THICK OR LESS, COMPACTED TO 85% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED BELOW.
2. BACKFILL UNDER DRIVEWAY AND PUBLIC STREETS SHALL BE CEMENT STABILIZED SAND (1.5 SACKS OF CEMENT PER CUBIC YARD OF SAND), COMPACTED TO 95% STANDARD PROCTOR DENSITY.
3. TRENCH SHORING, IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED AS REQUIRED.

WATER MAIN BEDDING AND BACKFILL

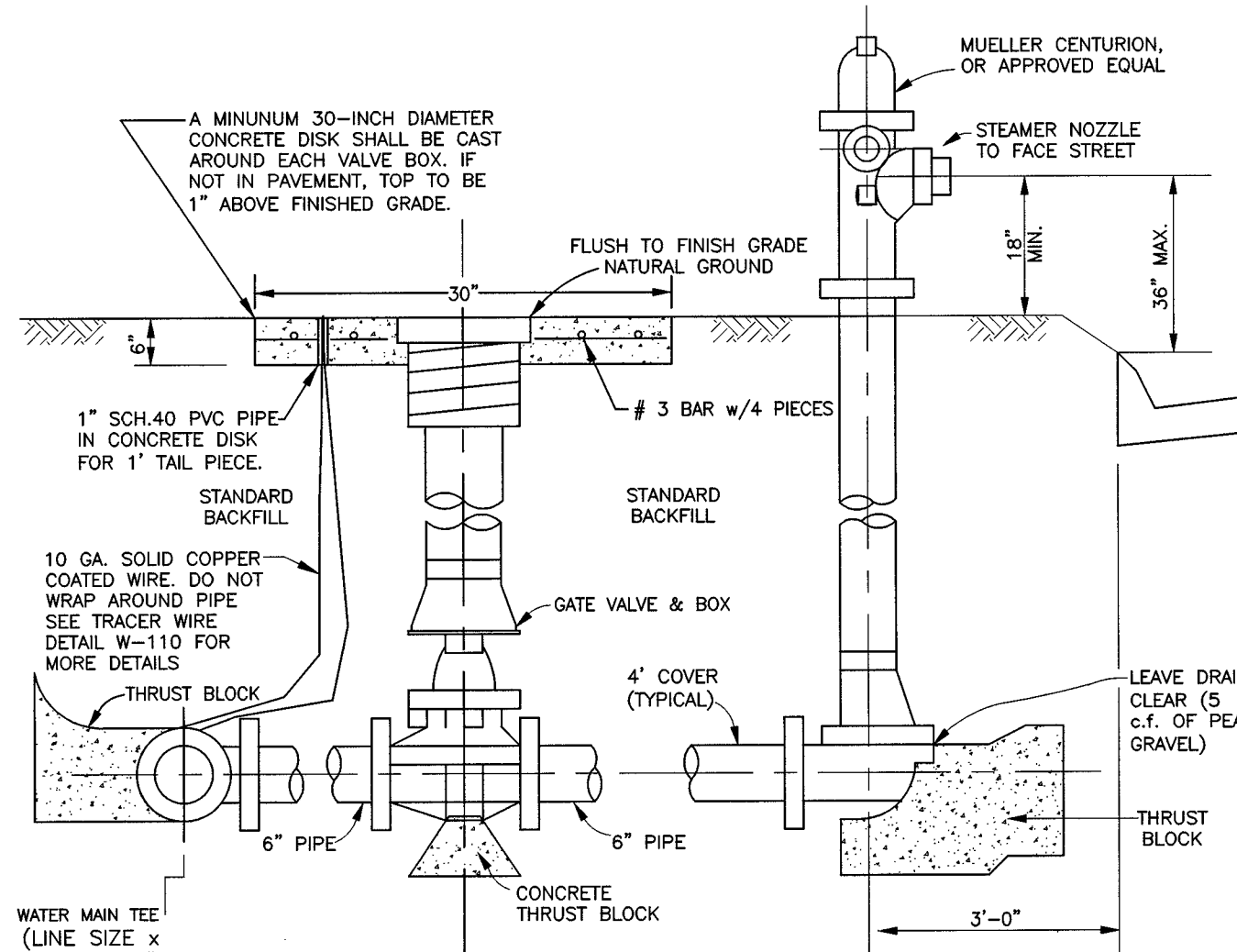
SCALE: N.T.S.

4

FIRE HYDRANT ASSEMBLY

SCALE: N.T.S.

5



BARREL	BONNET & CAPS	SILVER
4"	6"	RED
6"	8"	ORANGE
8"	10"	BLUE
10"	12"	GREEN
12"	14"	WHITE

COLOR CODE

3

1

2

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

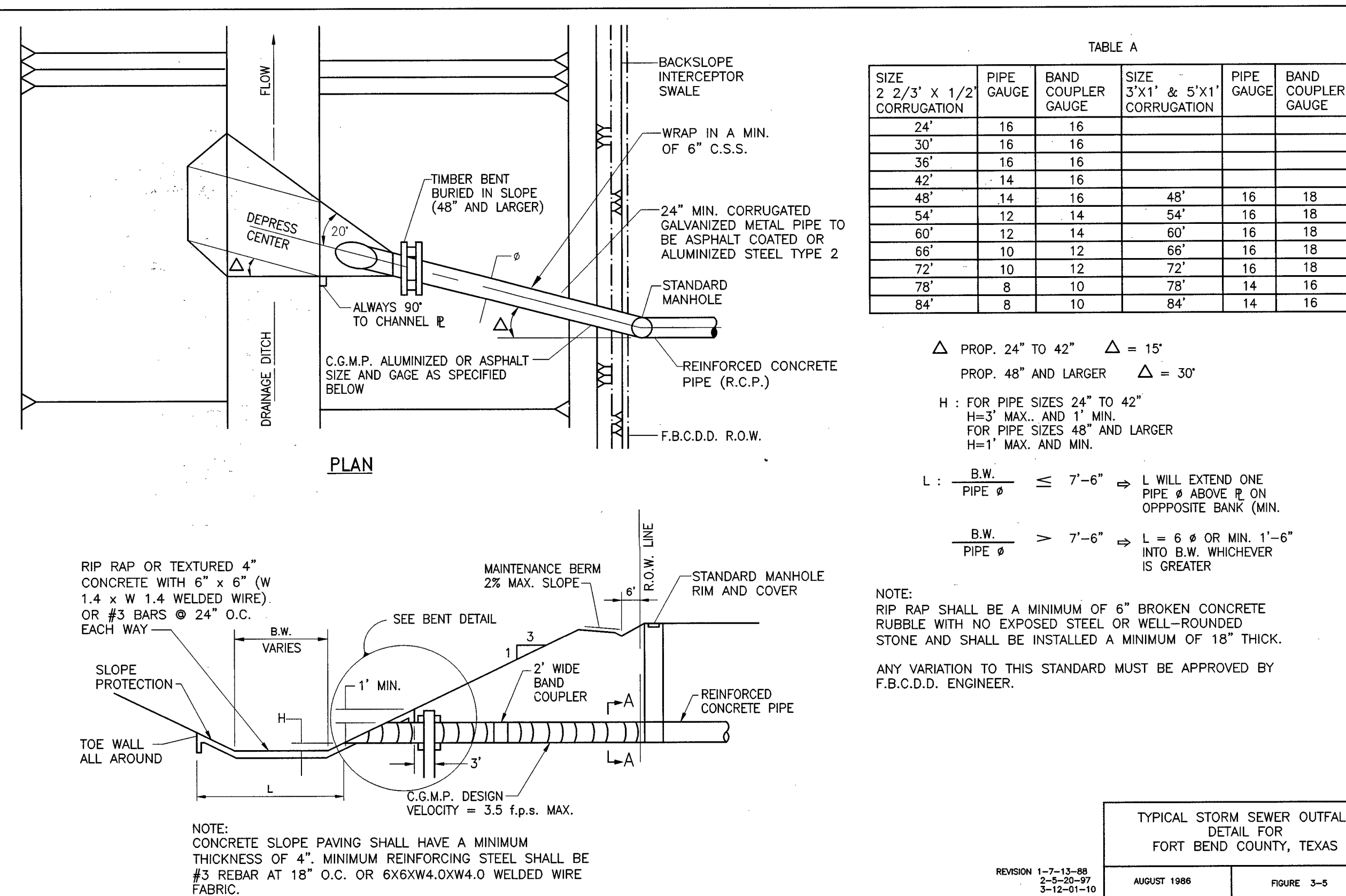
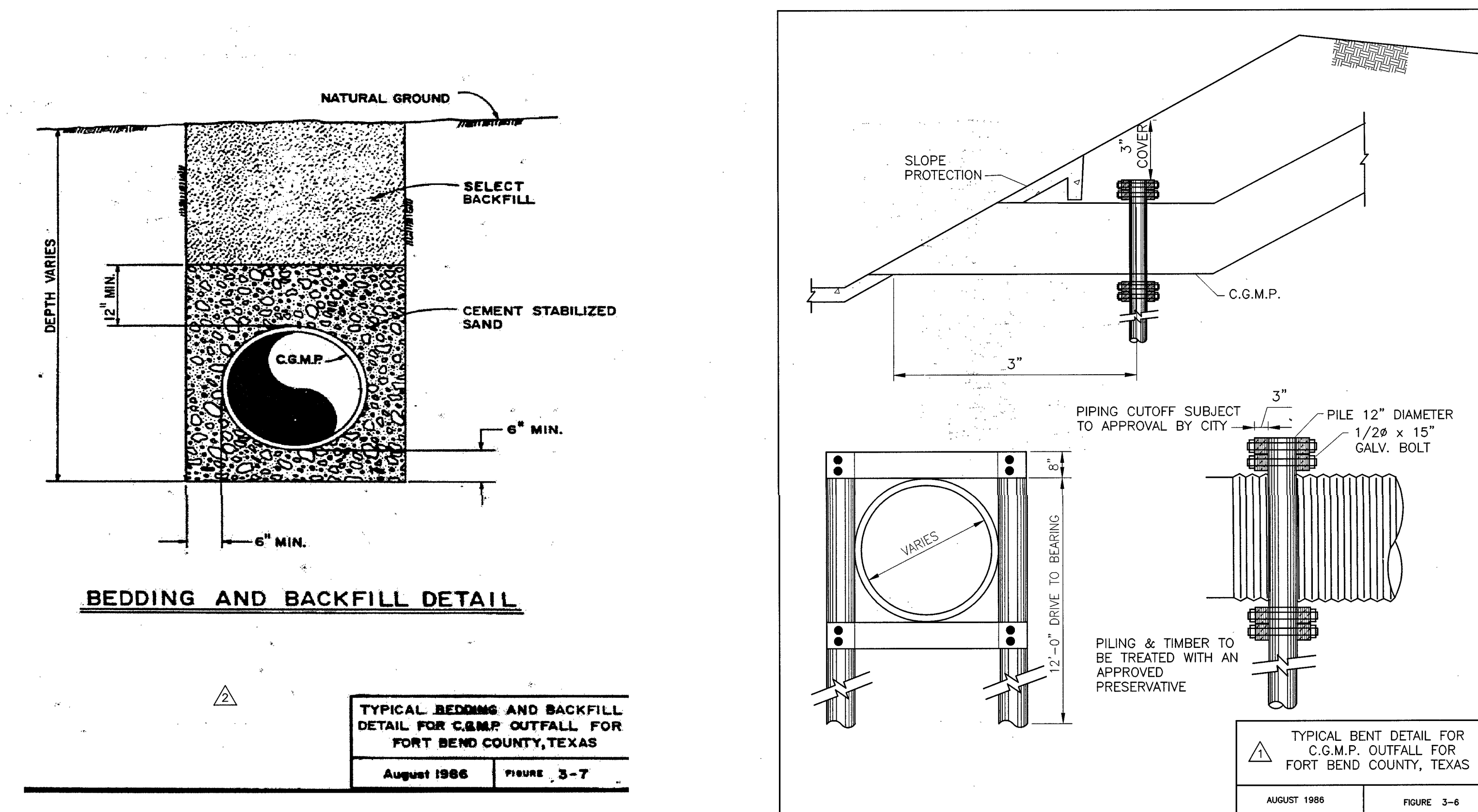
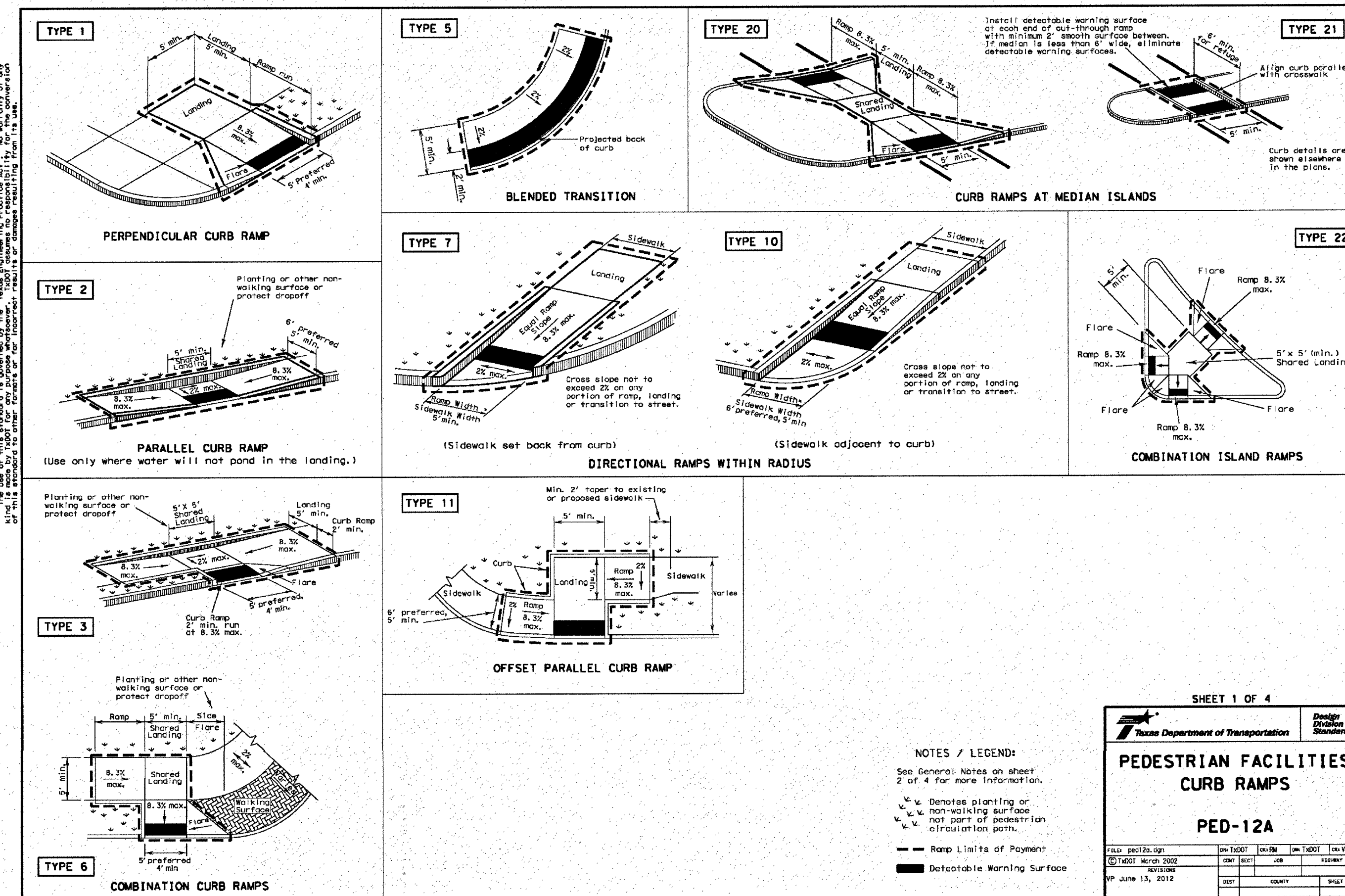
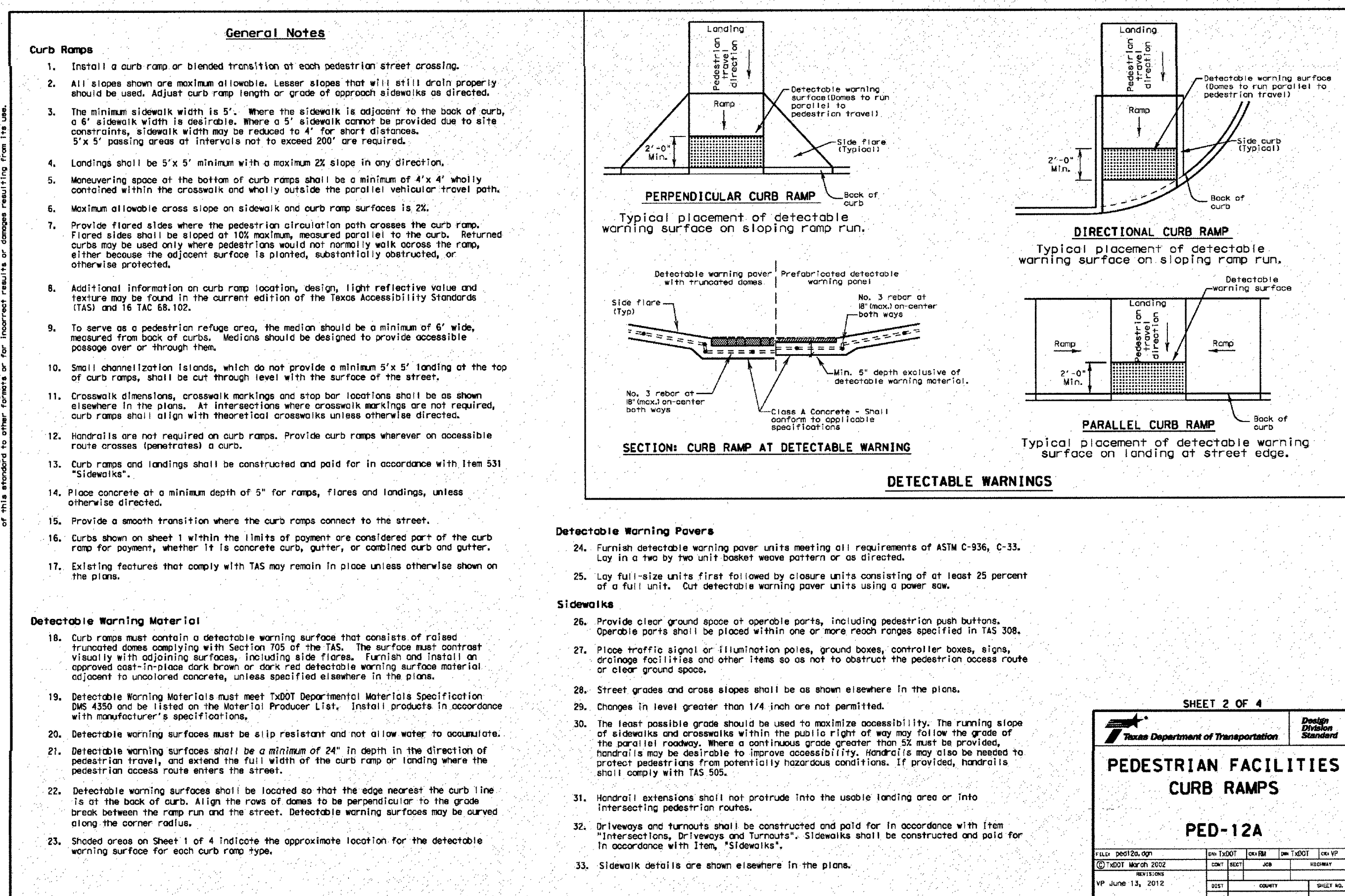
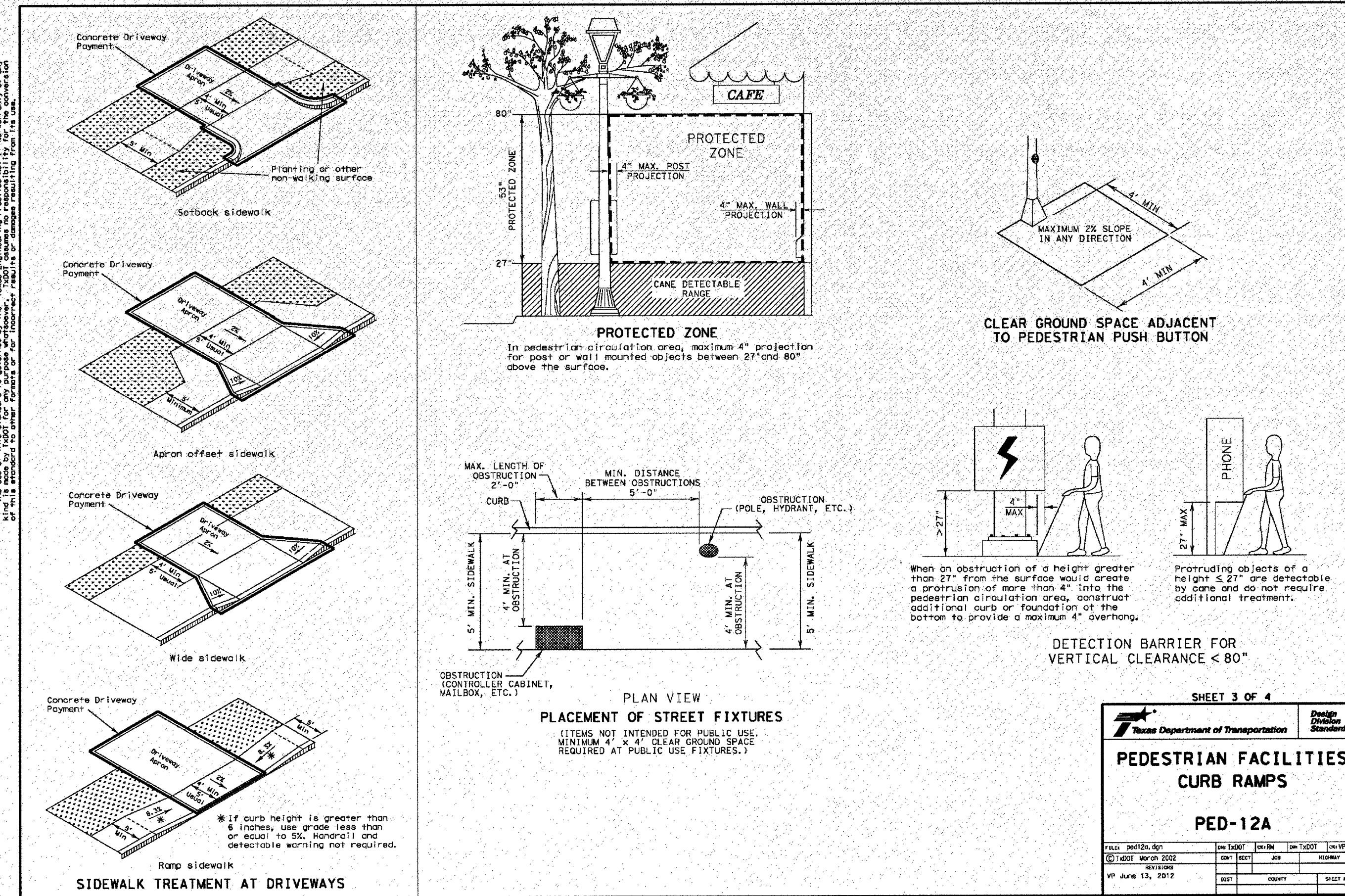
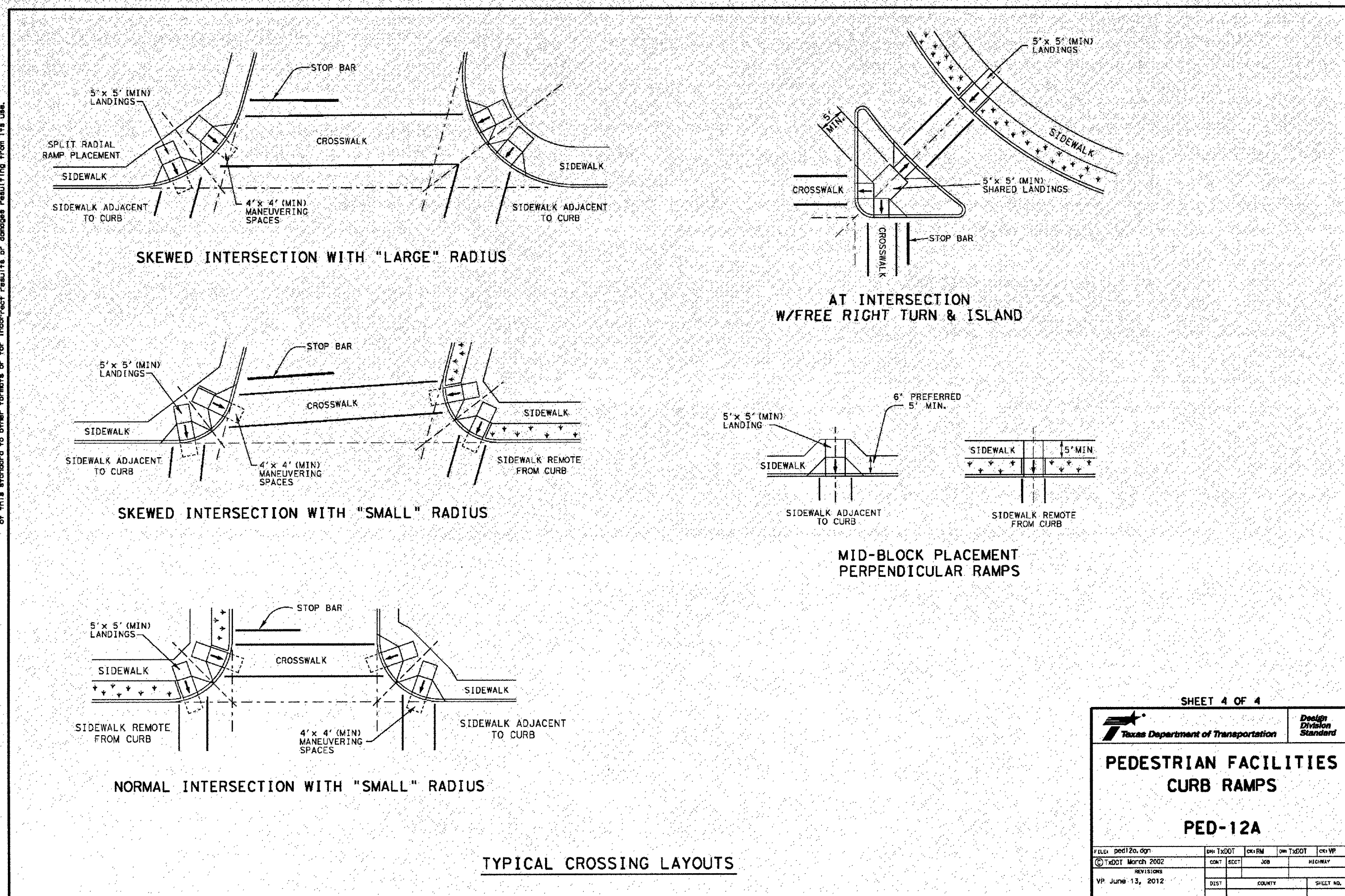
213

214

215

216

217



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 Fort Bend 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 Construction of Improvements in Subdivides as currently amended.
5. All road widths, curb radii and curb alignment shown indicates back of curb.
6. A continuous longitudinal reinforcing bar shall be used in the curbs.
7. All concrete pavement shall be 5 1/4" slab cement with a minimum compressive strength of 3500 psi at 28 days. Transverse expansion joints shall be installed at 40' maximum and at a maximum spacing of 50 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 curbs.
10. At all intersection locations, the curb shall be placed in accordance with **TXDOT Ped-12.2 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. At 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 R-1.1 stop signs shall be 30"x30" with diamond grade sheeting per Texas manual on uniform traffic control devices.
15. All stop signs shall be 30"x30" with diamond grade sheeting 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 names signs shall be mounted on stop sign post.
16. A diamond grade 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.

Pre Construction Meeting
Notification of pre-construction meeting and all paving activities. email:
construction@fortbendcountytx.gov
(provide one set of approved construction plans).

WIND DOUPLER GAUGE	
18	

18
18
18
16
16


6/8/20
 FORT BEND COUNTY MUD NO. 184 ENGINEER
 SIGNATURE VALID FOR ONE (1) YEAR
 DATE

APPROVED: [Signature]
DEVELOPMENT COORDINATOR

DATE: 6/7/17

	Kelly R. Kaluza & Associates, Inc CONSULTING ENGINEERS & SURVEYORS ENGINEERING FIRM No. F-1339 SURVEYING FIRM No. 10010000 3014 AVENUE I ROSENBERG, TEXAS 77471 PH.281.341.0808 FAX.281.341.6333
OUTFALL	
TEXAS	
3-5	

**W/LK Architects, Inc.**

CIVIL ENGINEER

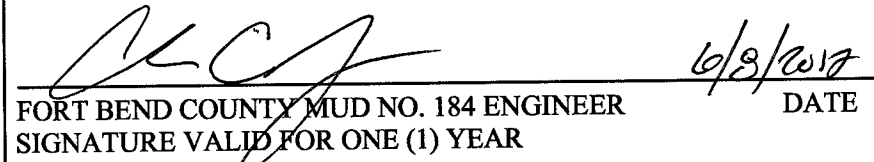
MEP ENGINEER

STRUCTURAL ENGINEER

FOOD SERVICE

LANDSCAPE

Pacheco Koch
20445 State Highway 249, Suite 380
Houston, Texas 77070-2623
Main Phone: 281.883.0103
www.pkce.com



APPROVED: [Signature]
DEVELOPMENT COORDINATOR

DATE: 6/7/17

**Kelly R. Kaluza
& Associates, Inc.**
CONSULTING ENGINEERS & SURVEYORS
ENGINEERING FIRM No. F-1339
SURVEYING FIRM No. 10010000
3014 AVENUE I
ROSENBERG, TEXAS 77471
PH.281.341.0808 FAX.281.341.6333

DON CARTER ELEMENTARY
CSP # 11-2017VRG

C5.04 

Copyright © 2017 VLK ARCHITECTS