



**REVIEW BY FORT BEND COUNTY
COMMISSIONERS COURT**

**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: 2018-20482

Applicant: Sundance Construction

Job Location Site: 4818 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 _____, seconded by Commissioner _____, 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

Presented to Commissioners Court and approved.

By: 
County Engineer

Date Recorded _____ Comm. Court No. _____

Clerk of Commissioners Court

By: N/A
Drainage District Engineer/Manager

By: _____
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: 2018-20482

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:

- 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: XXXXXXXXXX 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

10/29/2018

Date

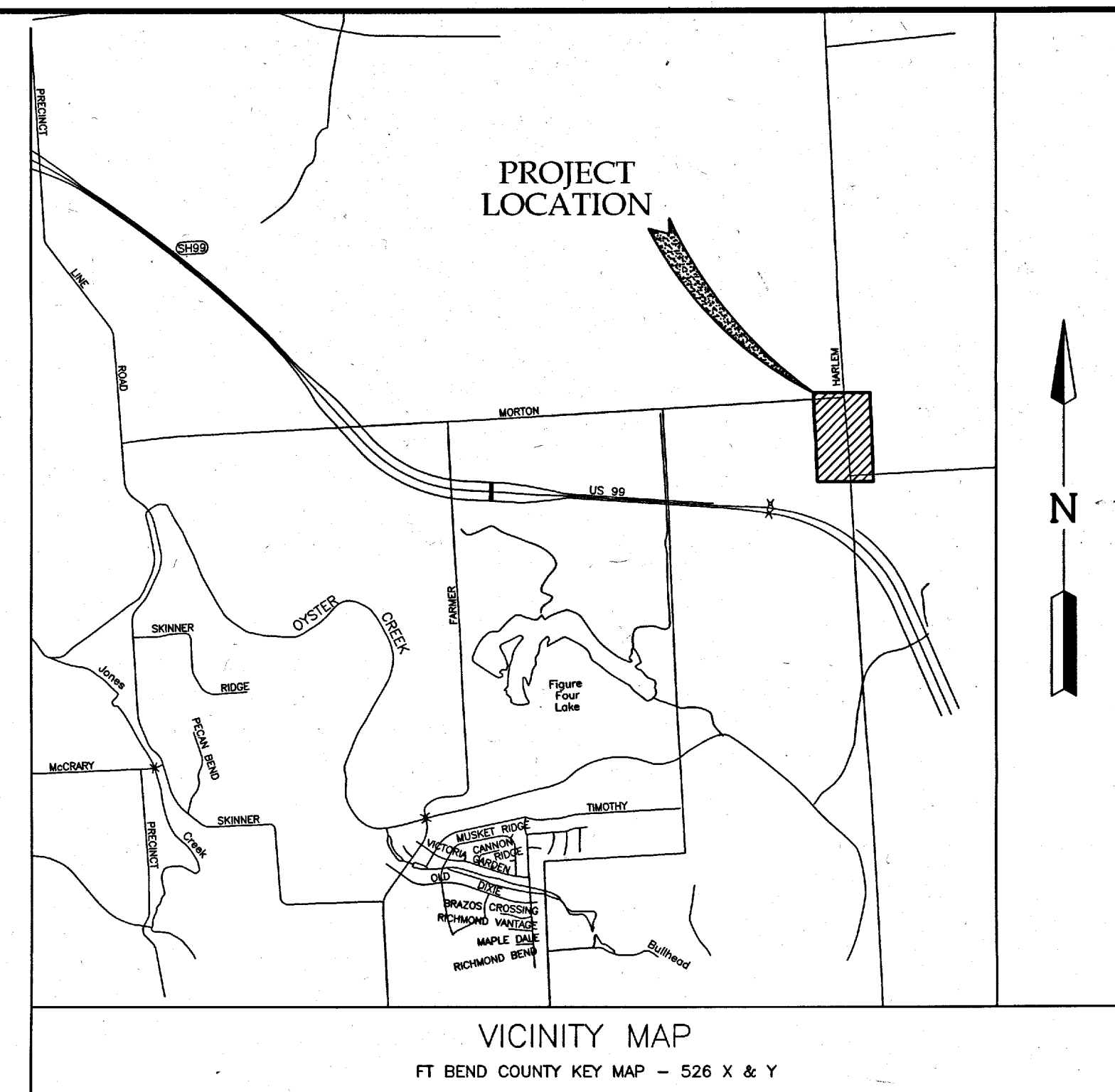
FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT NO. 143

FORT BEND COUNTY, TEXAS

CONSTRUCTION PLANS FOR HARLEM ROAD TURN LANES

TO SERVE

WATERVIEW ESTATES SECTION 2 & 3 CITY OF HOUSTON E.T.J.



SHEET INDEX

- COVER SHEET
- GENERAL CONSTRUCTION NOTES
- OVERALL LAYOUT
- STORM WATER POLLUTION PREVENTION PLAN

PLAN & PROFILE

- HARLEM ROAD TURN LANES 1 STA. 0+00 TO 7+00
- HARLEM ROAD TURN LANES 2 STA. 6+00 TO 12+50
- HARLEM ROAD TURN LANE 3 STA. 14+00 TO END
- HARLEM ROAD LEFT TURN LANE 1 TRAFFIC CONTROL PLAN
- HARLEM ROAD RIGHT TURN LANE 1 TRAFFIC CONTROL PLAN
- HARLEM ROAD LEFT TURN LANE 2 TRAFFIC CONTROL PLAN
- HARLEM ROAD RIGHT TURN LANE 2 TRAFFIC CONTROL PLAN
- HARLEM ROAD RIGHT TURN LANE 3 TRAFFIC CONTROL PLAN

DETAILS

- STORM SEWER & PAVING CONSTRUCTION DETAILS
- BARRICADE, PERMANENT SIGNAGE AND STRIPING DETAILS
- SWPPP DETAILS
- TXDOT PEDESTRIAN FACILITIES PED-12A

JOB NO. 2145-2119

DATE : APRIL 2017

NOTES

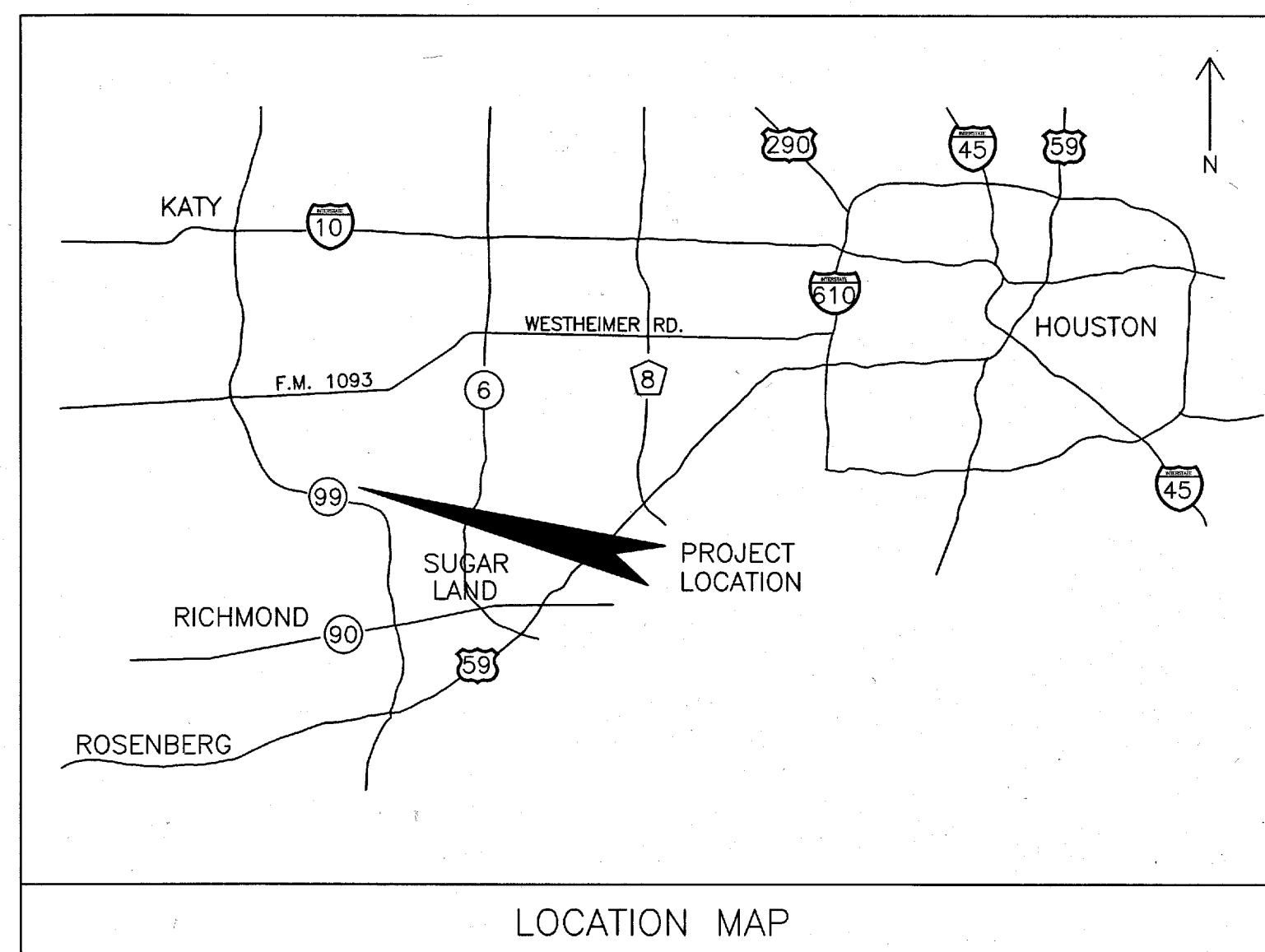
- SUBJECT TRACT IS LOCATED IN ZONE "X" UNSHADED, AREA DETERMINED TO BE OUTSIDE THE 500 YEAR FLOODPLAIN, PER FEMA MAP 48157C0140L DATED APRIL 2, 2014.

RECORD DRAWING

I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS

BY _____ DATE _____

TITLE _____



APPROVED FOR CONSTRUCTION

BY _____ DATE _____

ONE-CALL NOTIFICATION SYSTEM
CALL BEFORE YOU DIG!!!
(713)223-4567 (IN HOUSTON)
(NEW STATEWIDE NUMBER OUTSIDE HOUSTON)
1-800-344-8377

FIRM
FLOOD INSURANCE MAP
PANEL 140 OF 575
MAP# 48157C0140L

FORT BEND COUNTY ENGINEER

ENGINEER: Richard W. Stolleis, P.E.
FOR RICHARD W. STOLLEIS, P.E.

DATE: 5/23/17

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

APPROVED: Max Wang
DEVELOPMENT COORDINATOR

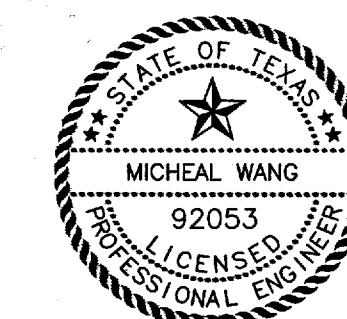
DATE: 5/12/17

DEVELOPER:
99 GRAND MISSION, LLC.
5850 SAN FELIPE, SUITE 490
HOUSTON, TX 77057
(713) 782-9000

DEDEN SERVICES, LLC

CIVIL ENGINEERING
Texas Registered Engineering Firm F-10971

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



ENGINEER:

LJA Engineering, Inc.

2929 Briarpark Drive
Suite 600
Houston, Texas 77042

Phone 713.953.5200
Fax 713.953.5026
FRN-F-1386



LEGEND

XX——XX = REINFORCED FABRIC FENCE

INSTALL AND MAINTAIN REINFORCED
FILTER FABRIC FENCE AND STABILIZED
CONSTRUCTION EXITS.
(SEE DETAIL SHEET NO. 15)

BENCHMARK:
FOUND TXDOT 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 ADJUST.)

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

NOTES:

1. ALL CURB TO BE 6-INCH UNLESS OTHERWISE SPECIFIED.

RECORD DRAWING

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IMPROVEMENTS CONSTRUCTED AS TO SIZE,
LOCATION AND GRADE AND THAT THE
CONSTRUCTION WAS IN FULL COMPLIANCE WITH
THE CONTRACT DOCUMENTS

BY _____ DATE _____
TITLE _____

PRIVATE UTILITY LINES SHOWN

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED,
CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:
For your safety, you are required by Texas law to call 811 at least 48 hours
before you dig so that underground line can be marked. This Verification does
not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES
Date _____
CenterPoint Energy/Natural Gas Facilities Verification ONLY.
(This Signature verifies that you have shown CNP Natural Gas lines correctly -
not to be used for conflict verification.) (Gas service lines are not shown.)
Signature Valid for six months.

Date _____
CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities - not to be used for
conflict verification.) Signature Valid for six months.

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED:
DEVELOPMENT COORDINATOR

DATE: 5/23/17

DATE	REVISION	BY

PLAT NAME: WATERVIEW TOWN CENTER SEC 2

CPC 101 FILE NO. 2015-2065

F.B.C.M.U.D. NO. 143

HARLEM ROAD
TURN LANES

STORM WATER POLLUTION
PREVENTION PLAN

DEDEN SERVICES, LLC
CIVIL ENGINEERING
Texas Registered Engineering Firm F-10071

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

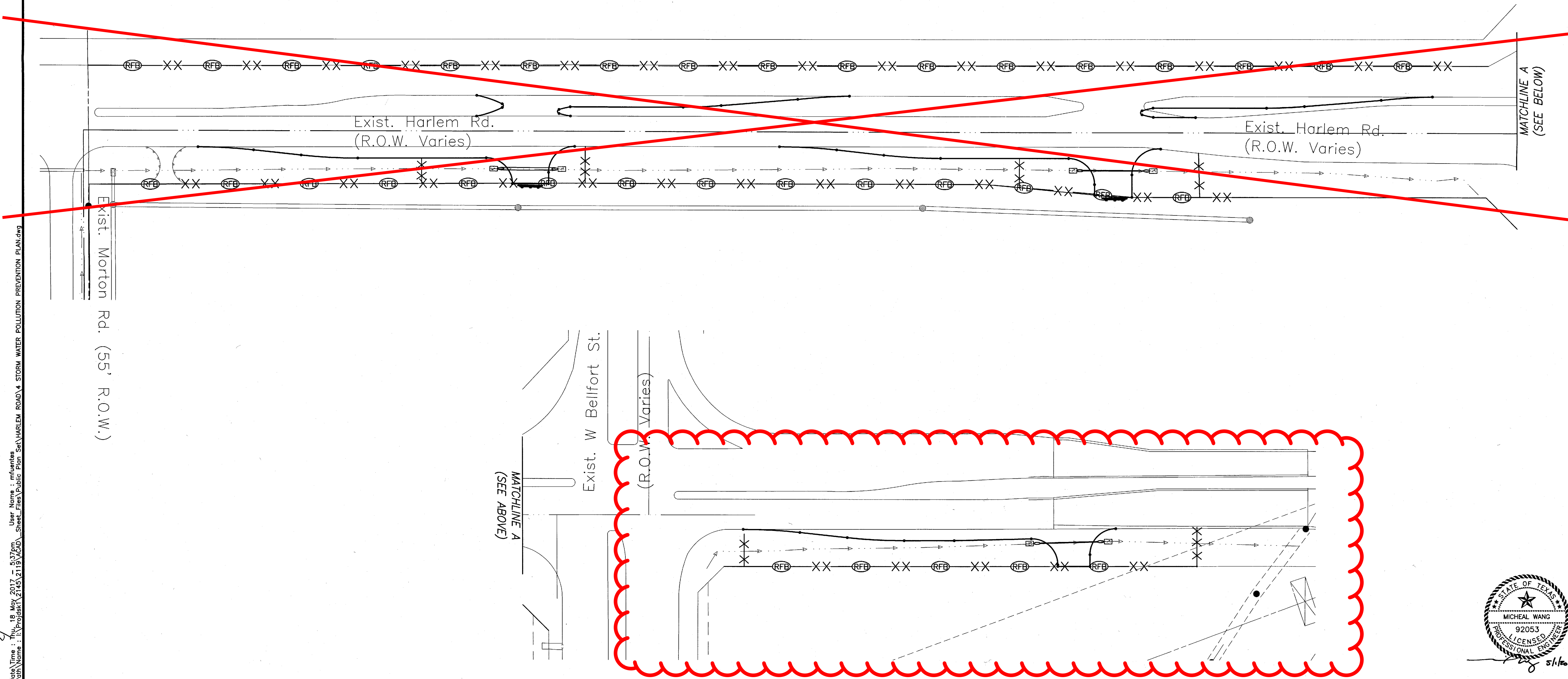
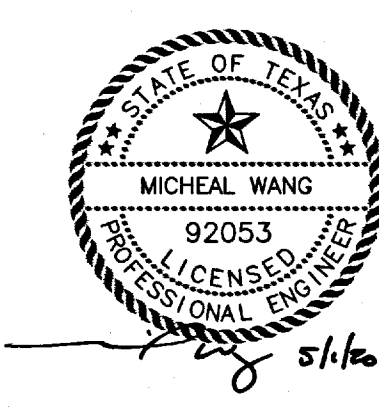
LJA Engineering, Inc.
2029 Briarpark Drive
Suite 600
Houston, Texas 77042

Phone 713.953.5200
Fax 713.953.5026
FRN - F-1386

LJA PROJECT NO.: 2145-2119

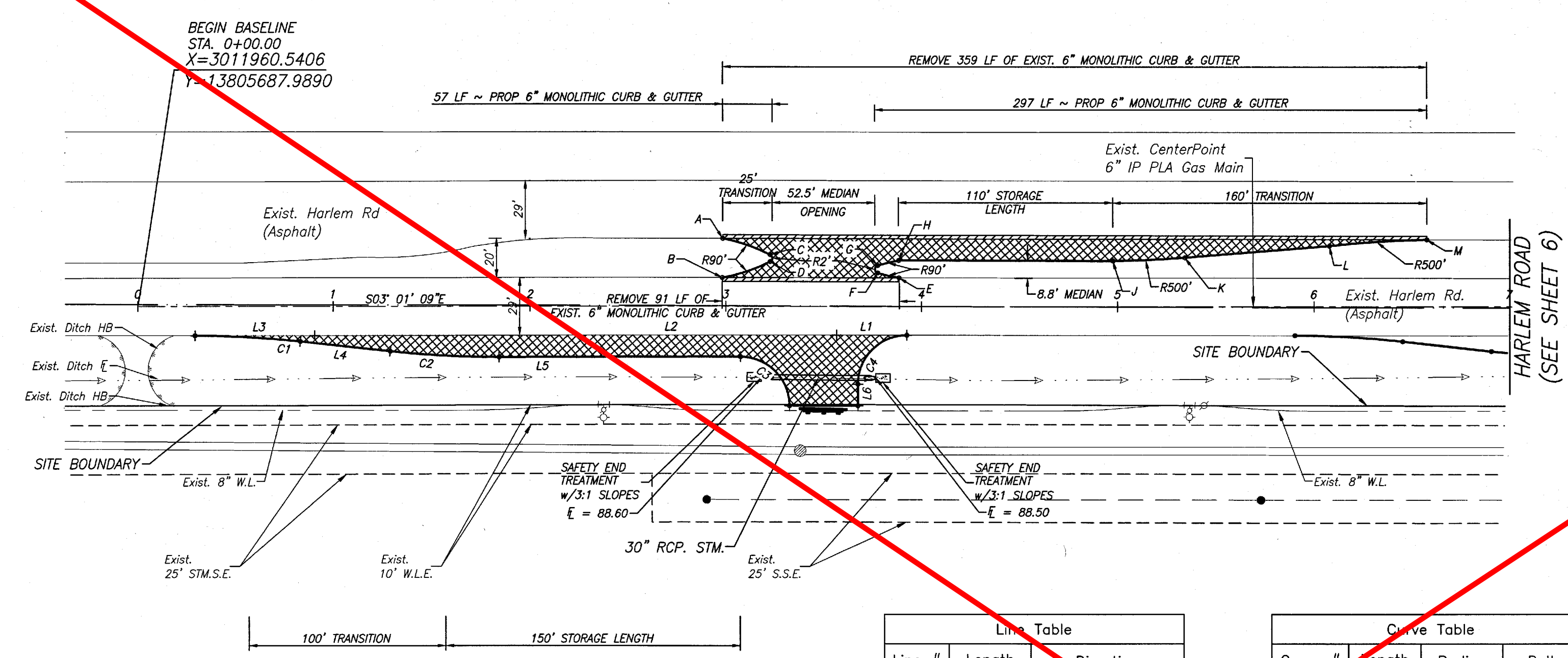
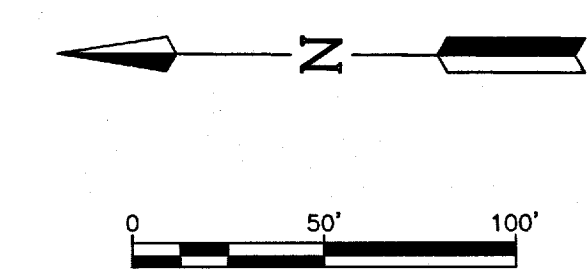
DRAWN: A.B./M.F. DESIGN: A.B./M.F. DATE: APRIL 2017

SCALE: 1" = 50' SHEET NO. 4 OF 16



User Name: rluentes
 Path Name: I:\Projects\2145\2119\PCDD_Sheet_Files\Public Plan Set\HARLEM ROAD\4 STORM WATER POLLUTION PREVENTION PLAN.dwg
 Plot Time: 4:18:19 PM 5/17/2017
 Plot Name: I:\Projects\2145\2119\PCDD_Sheet_Files\Public Plan Set\HARLEM ROAD\4 STORM WATER POLLUTION PREVENTION PLAN.dwg

HARLEM ROAD TURN LANES - JOB NO. 2145-2119



Line #	Length	Direction
L1	35.774'	S02° 59' 43.41"E
L2	266.168'	S03° 06' 33.86"E
L3	61.048'	S02° 57' 26.29"E
L4	45.980'	N03° 13' 11.01"W
L5	123.317'	N03° 06' 33.86"W
L6	11.012'	S86° 56' 47.47"W

Curve #	Length	Radius	Delta
C1	53.905'	500.000'	006.1770
C2	55.232'	500.000'	006.3291
C3	39.294'	25.000'	090.0559
C4	39.295'	25.000'	090.0581

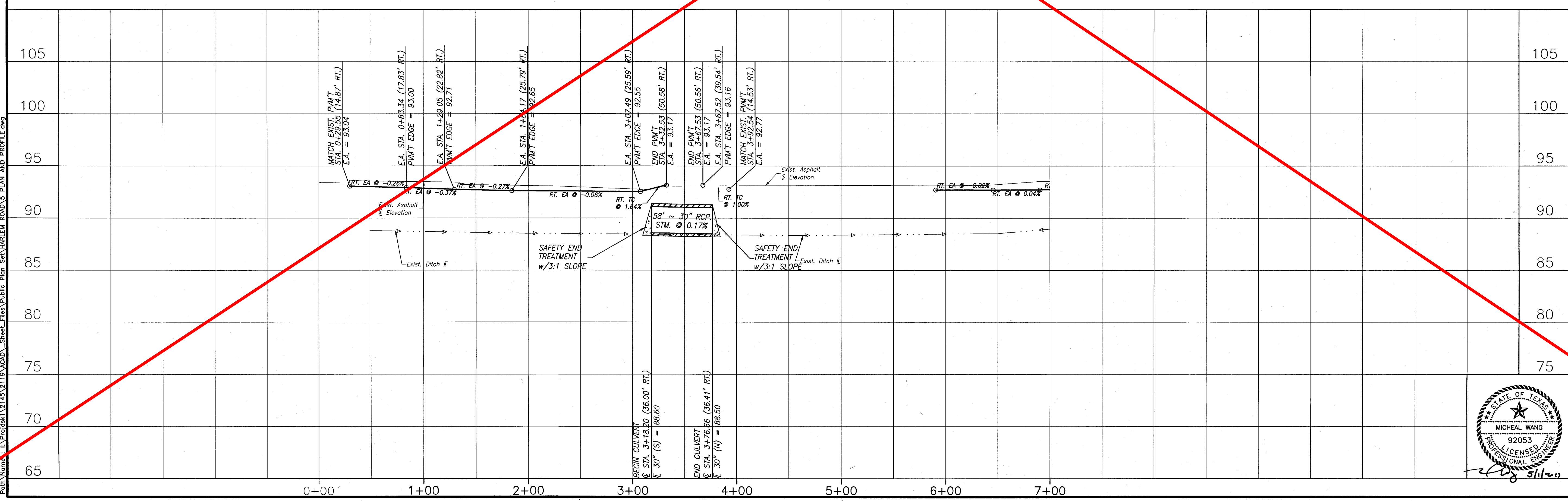
PT #	STA.	OFFSET	ELEV.
A	2+98.43	34.64' LT.	93.76
B	2+98.21	14.63' LT.	93.78
C	3+22.65	28.36' LT.	93.85
D	3+22.68	22.87' LT.	93.95
E	3+88.54	14.62' LT.	93.74
F	3+77.67	17.12' LT.	93.85
G	3+77.66	20.95' LT.	93.85
H	3+88.34	23.47' LT.	93.74
I	4+97.59	23.27' LT.	93.88
K	5+34.11	24.91' LT.	93.92
L	6+07.81	30.92' LT.	93.99
M	6+57.68	34.20' LT.	94.04

= INDICATES CURB REMOVAL
 = INDICATES 2 INCH ASPHALT WITH 10" BLACK BASE

NOTE: ALL PROPOSED PAVEMENT TO HAVE 2% CROSS-SLOPE TOWARDS EXISTING PAVEMENT OR DITCH AS APPROPRIATE

NOTE
CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE HARLEM ROAD R.O.W. WITH THE FORT BEND COUNTY ROAD & BRIDGE DEPT. (281)341-4513.

Date: 29 Apr 2017 8:07 AM User: Nemo - Michael
 Plot Name: \\p01-2017-0000\Projects\2145\2145-2065\Drawings\Public\Plan_SNA\HARLEM ROAD\PLAN AND PROFILE.dwg



BENCHMARK:
FOUND TXDOT 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 = 92.22 (NAVD 88, 2001 ADJUST.)

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

NOTES:
1. ALL CURB TO BE 6-INCH UNLESS OTHERWISE SPECIFIED.

RECORD DRAWING
I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS

BY: _____ DATE: _____
TITLE: _____

PRIVATE UTILITY LINES SHOWN
TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:
For your safety, you are required by TEXAS LAW to call 811 at least 48 hours before you dig so that underground lines can be marked. This verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES
Date: _____
CenterPoint Energy/Natural Gas Facilities Verification ONLY. (This signature verifies existing underground facilities - not to be used for conflict verification.) (Gas service lines are not shown.) Signature Valid for six months.

Date: _____
CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY. (This signature verifies existing underground facilities - not to be used for conflict verification.) Signature Valid for six months.

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: DEVELOPMENT COORDINATOR

DATE: 5/12/17

DATE	REVISION	BY

PLAT NAME: WATERVIEW TOWN CENTER SEC 2
CPC 101 FILE NO. 2015-2065

105
100
95
90
85
80
75
70
65

F.B.C.M.U.D. NO. 143

HARLEM ROAD
TURN LANES

HARLEM ROAD
STA. 0+00 TO 7+00

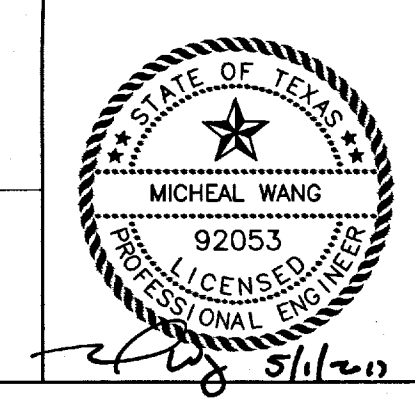
DEDEN SERVICES, LLC
9328 WESTVIEW HOUSTON, TX 77055
CIVIL ENGINEERING (713) 461-8822
Professional Engineering Firm F-10971 FAX (713) 461-2671

LJA Engineering, Inc.
2929 Briarpark Drive Phone 713.953.5200
Suite 600 Houston, Texas 77042 Fax 713.953.5029
92053 FRN - F-1398

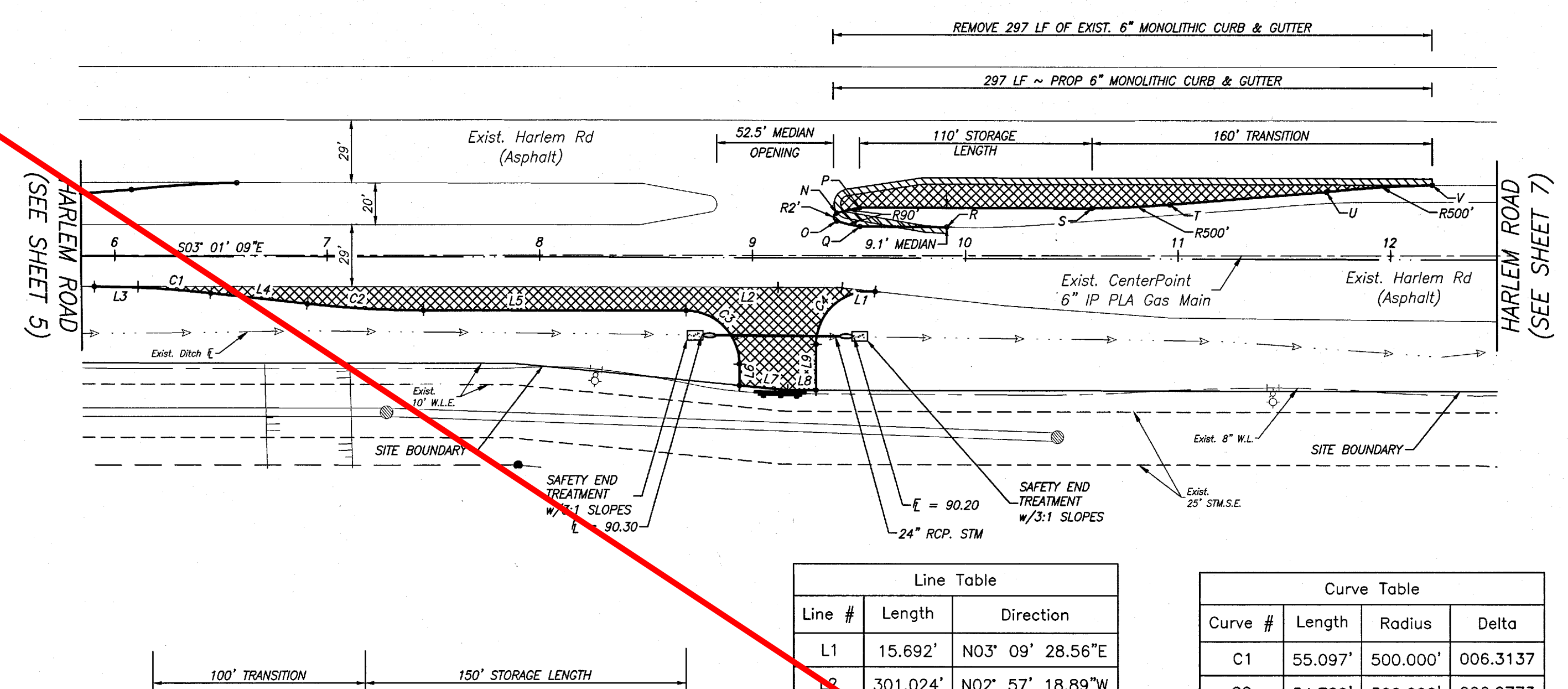
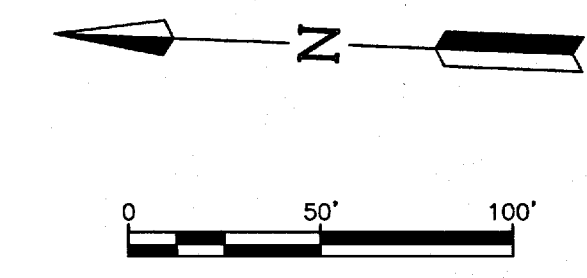
LJA PROJECT NO.: 2145-2119

DRAWN: A.B./M.F. DESIGN: A.B./M.F. DATE: APRIL 2017

SCALE: 1" = 50'
SHEET NO. 5 OF 16



HARLEM ROAD TURN LANES - JOB NO. 2145-2119



Line #	Length	Direction
L1	15.692'	N03° 09' 28.56"E
L2	301.024'	N02° 57' 18.89"W
L3	30.646'	N03° 00' 13.95"W
L4	45.603'	S03° 19' 19.38"W
L5	123.543'	S00° 57' 18.89"E
L6	10.077'	S87° 03' 23.68"W
L7	22.661'	S02° 30' 48.96"W
L8	13.451'	S02° 56' 01.00"E
L9	21.560'	N87° 01' 43.15"E

Curve #	Length	Radius	Delta
C1	55.097'	500.000'	006.3137
C2	54.780'	500.000'	006.2773
C3	39.275'	25.000'	090.0118
C4	41.944'	25.000'	096.1298

PT #	STA.	OFFSET	ELEV.
N	9+39.57	20.02' LT.	93.76
O	9+39.58	16.20' LT.	93.78
P	9+50.25	22.55' LT.	93.95
Q	9+50.45	13.69' LT.	93.95
R	9+91.23	13.43' LT.	93.74
S	10+59.57	22.42' LT.	93.85
T	10+96.09	24.06' LT.	93.85
U	11+69.79	30.07' LT.	93.74
V	12+19.58	33.28' LT.	93.88

NOTE
CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE HARLEM ROAD R.O.W. WITH THE FORT BEND COUNTY ROAD & BRIDGE DEPT. (281)341-4513.

- = INDICATES CURB REMOVAL
- = INDICATES 2 INCH ASPHALT WITH 10" BLACK BASE

NOTE: ALL PROPOSED PAVEMENT TO HAVE 2% CROSS-SLOPE TOWARDS EXISTING PAVEMENT OR DITCH AS APPROPRIATE

BENCHMARK:
FOUND TXDOT 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 (NAD 88, 2001 ADJUST.)

FLOODPLAIN INFORMATION:
SUBJECT TRACT IS LOCATED IN ZONE "X" UNSHADOWED, AREA DETERMINED TO BE OUTSIDE THE 100 YEAR FLOODPLAIN, PER FEMA MAP 15457C0140L, DATED APRIL 2, 2014

NOTES:
1. ALL CURB TO BE 6-INCH UNLESS OTHERWISE SPECIFIED.

RECORD DRAWING
I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS
BY _____ DATE _____
TITLE _____

PRIVATE UTILITY LINES SHOWN
TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222
NOTICE:
For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground lines can be marked. This verification does not fulfill your obligation to call 811.
VERIFICATION OF PRIVATE UTILITY LINES
Date _____
(This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (Gas service lines are not shown.) Signature valid for six months.
Date _____
(This signature verifies existing underground facilities - not to be used for conflict verification.) Signature valid for six months.

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: DEVELOPMENT COORDINATOR
DATE: 5/12/17

DATE	REVISION	BY

PLAT NAME: WATERVIEW TOWN CENTER SEC 2
CPC 101 FILE NO. 2015-2065

F.B.C.M.U.D. NO. 143

HARLEM ROAD TURN LANES

HARLEM ROAD STA. 6+00 TO 12+50

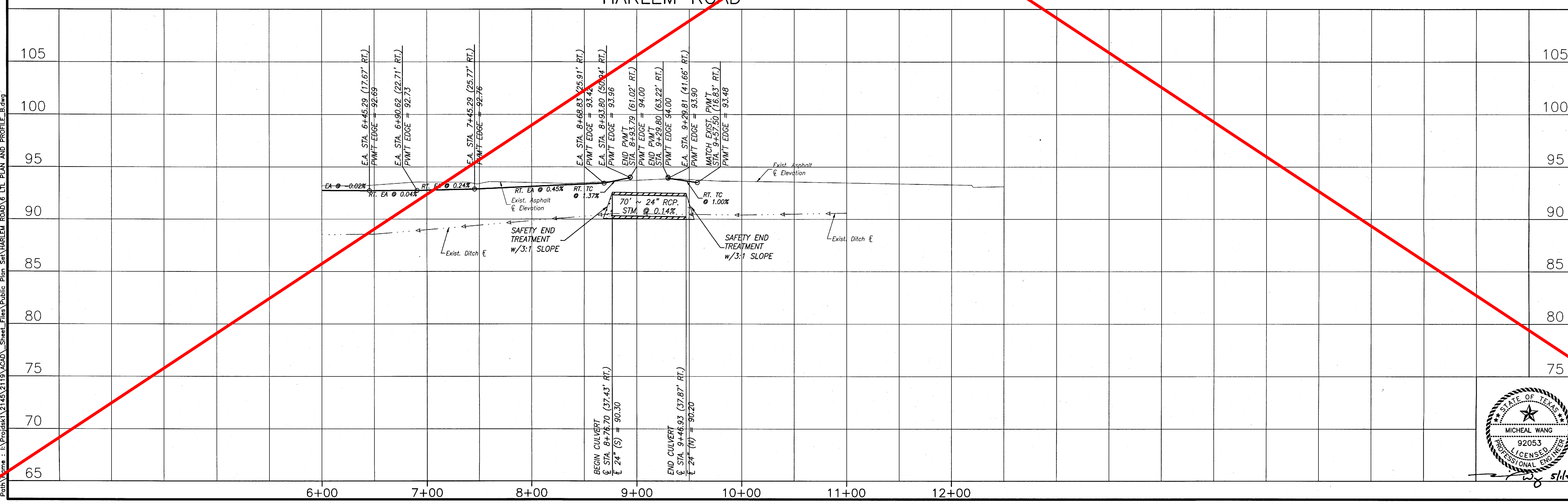
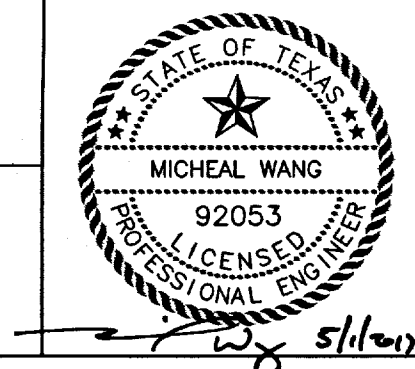
DEDEN SERVICES, LLC
CIVIL ENGINEERING
Texas Registered Engineering Firm F-10971
9328 WESTVIEW HOUSTON, TX 77055
(713) 461-8822
FAX (713) 461-2671

LJA Engineering, Inc.
2929 Briarpark Drive Suite 600 Houston, Texas 77042
Phone 713.953.5200 Fax 713.953.5028 FRN - F-1386

LJA PROJECT NO.: 2145-2119

DRAWN: A.B./M.F. DESIGN: A.B./M.F. DATE: APRIL 2017

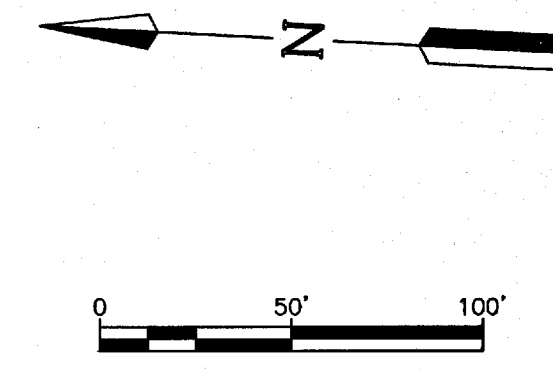
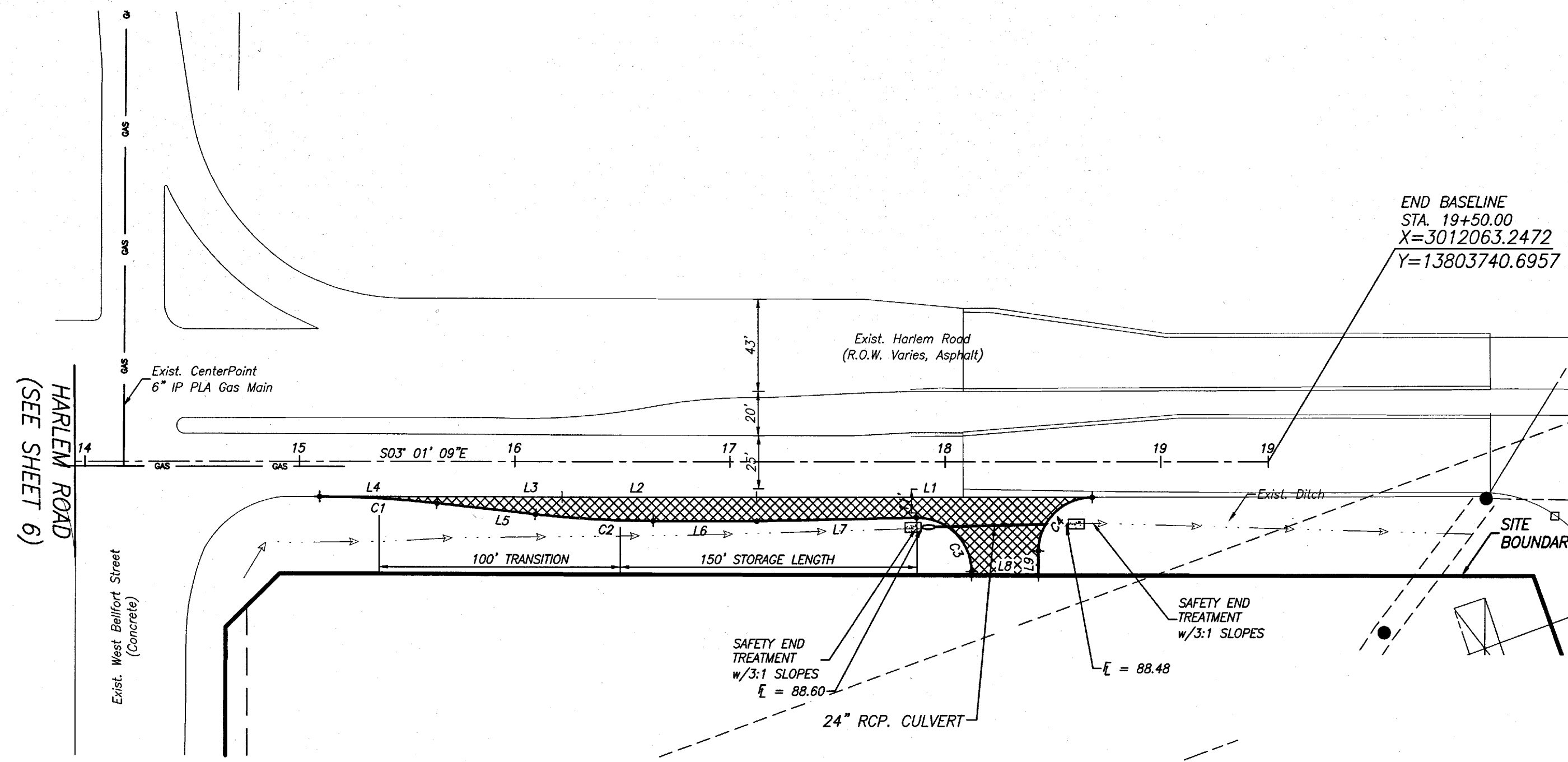
HORIZ: 1" = 50'
VERT: 1" = 5' SHEET NO. 6 OF 16



Date: 26 Apr 2017 6:56am User: Norm - Michalek
 Plot File: \\LJA-SPRINT\2015\2145\2119\Sheet_FIGS\Public\Plan_Profile_B.dwg

HARLEM ROAD TURN LANES - JOB NO. 2145-2119

Date: 18 May 2017 5:43:00 AM User: Mwangi - 1/1/2017
 Plot Number: 2145-2117 (2145-2117) SHEET: 7 of 16 HARLEM ROAD TURN LANES



Line #	Length	Direction
L1	155.995'	N03° 03' 25.48"W
L2	90.453'	N02° 57' 22.45"W
L3	62.797'	N02° 57' 22.45"W
L4	49.772'	N02° 57' 22.45"W
L5	45.989'	S03° 18' 43.83"W
L6	48.245'	S02° 57' 22.45"E
L7	74.384'	S04° 14' 04.75"E
L8	30.998'	S02° 54' 13.00"E
L9	11.449'	N87° 06' 09.87"E

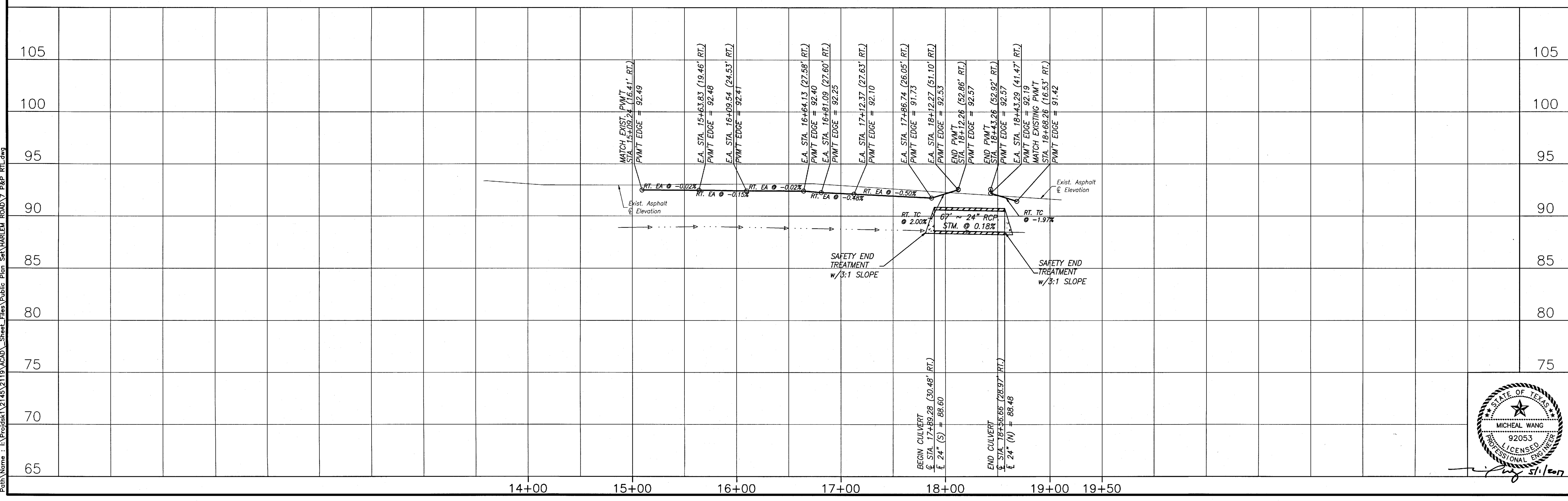
Curve #	Length	Radius	Delta
C1	54.700'	500.000'	006.2682
C2	54.702'	500.000'	006.2684
C3	39.856'	25.000'	091.3439
C4	39.185'	25.000'	089.8058

= INDICATES 2 INCH ASPHALT WITH 10" BLACK BASE

NOTE: ALL PROPOSED PAVEMENT TO HAVE 2% CROSS-SLOPE TOWARDS EXISTING DITCH AS

NOTE
 CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE HARLEM ROAD R.O.W. WITH THE FORT BEND COUNTY ROAD & BRIDGE DEPT, (281)341-4513.

HARLEM ROAD



BENCHMARK:
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FORT BEND COUNTY ENGINEERING DEPARTMENT
 APPROVED:
 DEVELOPMENT COORDINATOR
 DATE: 5/23/17

DATE	REVISION	BY

PLAT NAME: WATERVIEW TOWN CENTER SEC 2

CPC 101 FILE NO. 2015-2065

105
 100
 95
 90
 85
 80
 75
 70
 65

F.B.C.M.U.D. NO. 143

HARLEM ROAD TURN LANES

HARLEM ROAD STA. 14+00 TO END

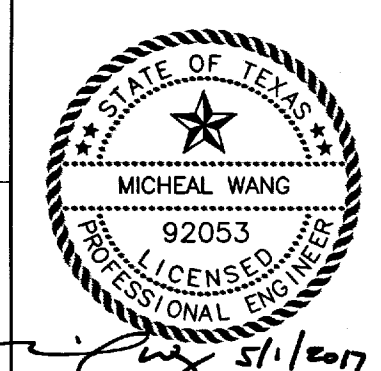
DEDEN SERVICES, LLC
 CIVIL ENGINEERING
 Texas Registered Engineering Firm F-10971
 9328 WESTVIEW HOUSTON, TX 77055
 (713) 461-8822
 FAX (713) 461-0721

LJA Engineering, Inc.
 2929 Briarpark Drive Suite 600 Houston, Texas 77042
 Phone 713.953.5200 Fax 713.953.5028 FRN - F-1388

LJA PROJECT NO.: 2145-2119

DRAWN: AB/M.F. DESIGN: AB/M.F. DATE: APRIL 2017

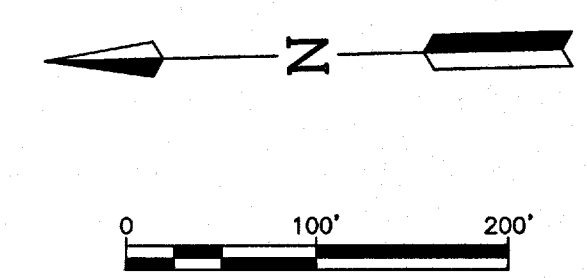
HORIZ: 1" = 50'
 VERT: 1" = 5'
 SHEET NO. 7 OF 16

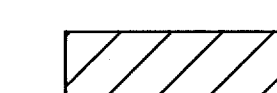


HARLEM ROAD TURN LANES - JOB NO. 2145-2119

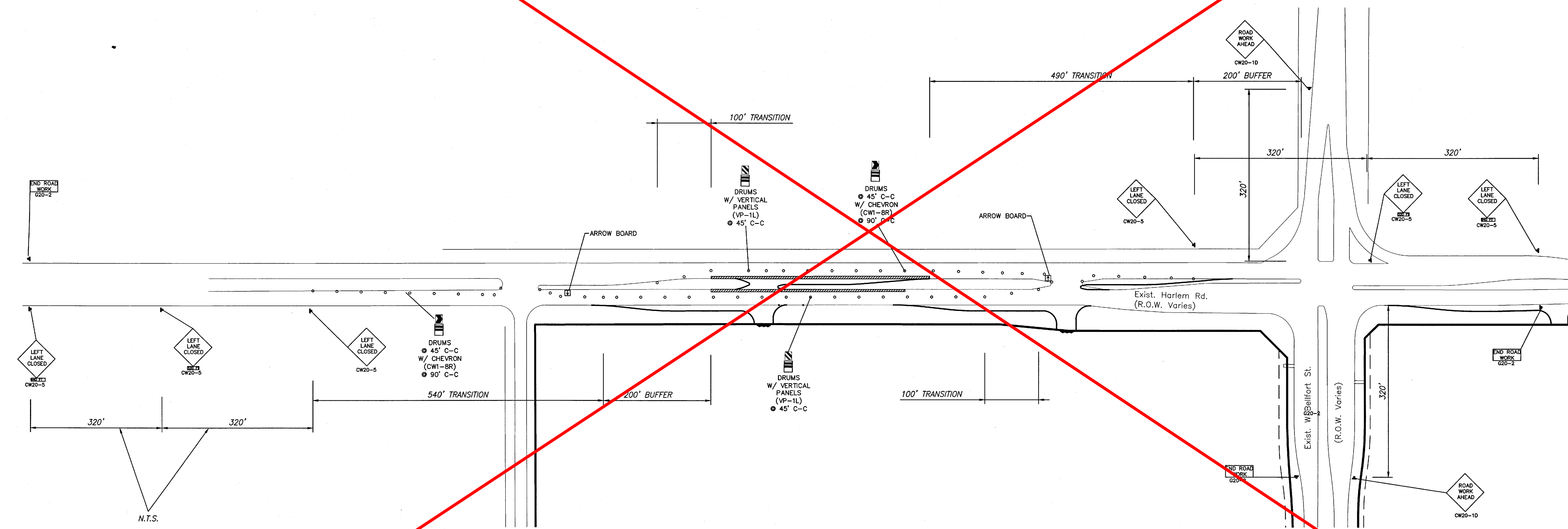
BENCHMARK:
 FOUND TXDOT BRASS CAP SET IN EAST END OF SOUTH HEADWALL OF CONCRETE BOX CULVERTS (SET OF 5) @ HWY. 99 GRAND PARKWAY & OUTFALL DITCH-SOUTH, 1,800(+/-) WEST OF HARLEM ROAD. ELEVATION = 92.24 (NVD 88, 2001 ADJUST.)

FLOODPLAIN INFORMATION:
 SUBJECT TRACT IS LOCATED IN ZONE "X" UNSHADED AREA DETERMINED TO BE OUTSIDE THE 100 YEAR FLOODPLAIN, PER FEMA MAP 48157C0140L, DATED APRIL 2, 2014



 = INDICATES WORK ZONE

HOURS OF CLOSURE
 9 AM - 2:30 PM



NOTES:

1. ALL CURB TO BE 6-INCH UNLESS OTHERWISE SPECIFIED.

RECORD DRAWING

I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS

BY _____ DATE _____

TITLE _____

PRIVATE UTILITY LINES SHOWN

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:

For your safety, you are required by Texas Law to call 811 at least 48 hours before you dig so that underground line can be marked. This Verification does not fulfill your obligation to call 811.

VERIFICATION OF PRIVATE UTILITY LINES

Date _____

CenterPoint Energy/Natural Gas Facilities Verification ONLY:
 (This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (Gas service lines are not shown.) Signature Valid for six months.

Date _____

CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY:
 (This signature verifies existing underground facilities - not to be used for conflict verification.) Signature Valid for six months.

Date _____

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: 
 DEVELOPMENT COORDINATOR

DATE: 5/23/17

DATE	REVISION	BY

PLAT NAME: WATERVIEW TOWN CENTER SEC 2

CPC 101 FILE NO. 2015-2065

F.B.C.M.U.D. NO. 143

HARLEM ROAD
 TURN LANES

HARLEM ROAD
 LEFT TURN LANE 1
 TRAFFIC CONTROL PLAN

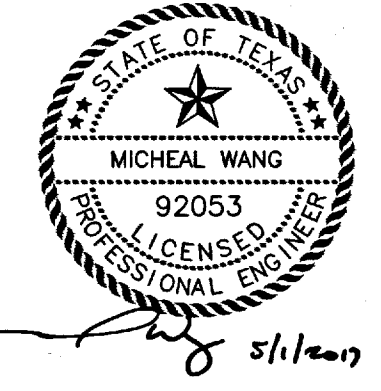
DEDEN SERVICES, LLC
 CIVIL ENGINEERING
 9328 WESTVIEW HOUSTON, TX 77055
 (713) 461-8822
 FAX (713) 461-2671

LJA Engineering, Inc.
 2829 Briarpath Drive Phone 713.953.5200
 Suite 600 Fax 713.953.5026
 Houston, Texas 77042 FRN - F-1386

LJA PROJECT NO.: 2145-2119

DRAWN: A.B./M.F. DESIGN: A.B./M.F. DATE: APRIL 2017

SCALE: 1" = 100' SHEET NO. 8 OF 16



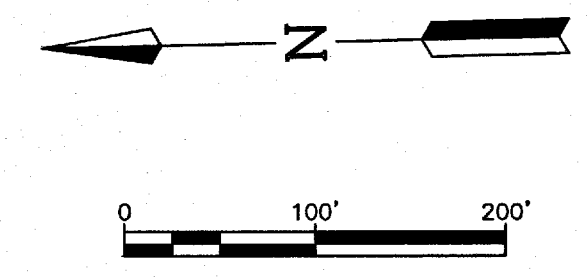
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HARLEM ROAD_TURN LANES - JOB NO. 2145-2119

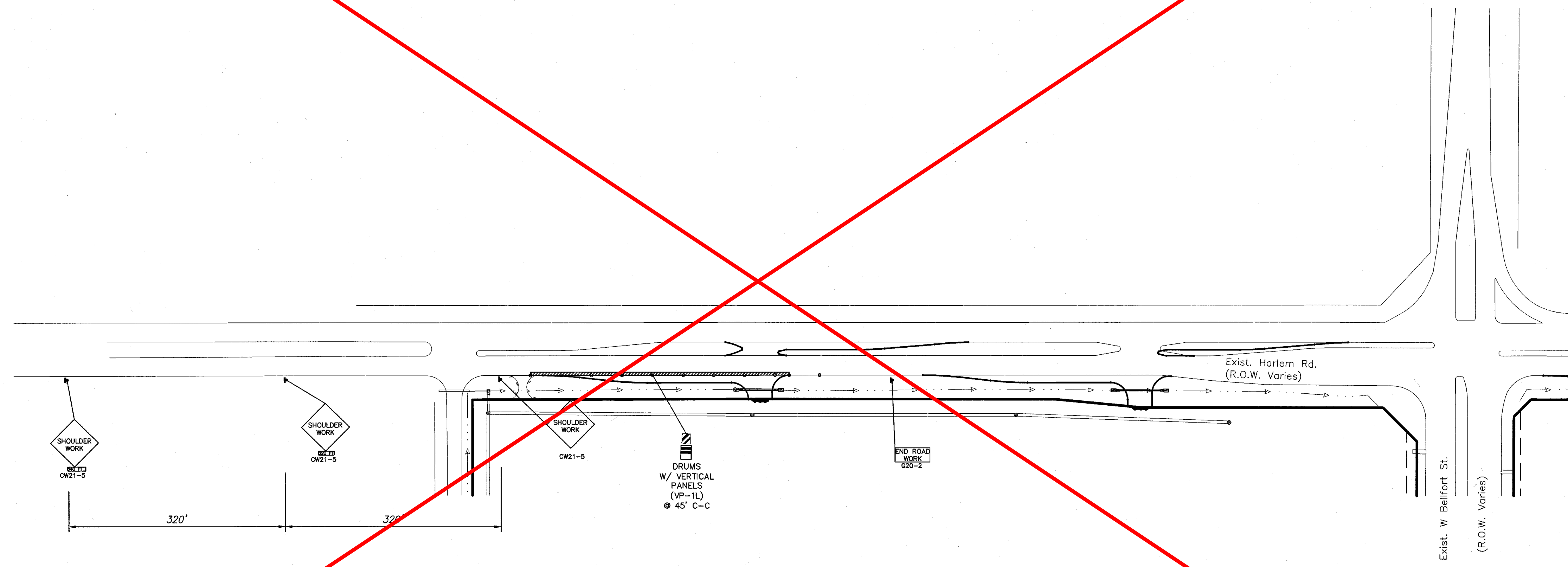
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BENCHMARK:
 FOUND TXDOT BRASS CAP SET IN EAST END OF SOUTH HEADWALL OF CONCRETE BOX CULVERTS (SET OF 5) @ HWY. 69/GRAND PARKWAY & OUTFALL DITCH SOUTH, 1,800(+/-) WEST OF HARLEM ROAD. ELEVATION = 92.24 (NAVD 88, 2001 ADJUST.)

FLOODPLAIN INFORMATION:
 SUBJECT TRACT IS LOCATED IN ZONE "X" UNSHADED, AREA DETERMINED TO BE OUTSIDE THE 500 YEAR FLOODPLAIN, PER FEMA MAP 15157C0140L, DATED APRIL 2, 2014



= INDICATES WORK ZONE



NOTES:

- ALL CURB TO BE 6-INCH UNLESS OTHERWISE SPECIFIED.

RECORD DRAWING

I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS

BY _____ DATE _____
 TITLE _____

PRIVATE UTILITY LINES SHOWN

TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:
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VERIFICATION OF PRIVATE UTILITY LINES

Date _____
 CenterPoint Energy/Natural Gas Facilities Verification ONLY.
 (This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (Gas service lines are not shown.)
 Signature Valid for six months.

Date _____
 CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
 (This signature verifies existing underground facilities - not to be used for conflict verification.) Signature Valid for six months.

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED:
 DEVELOPMENT COORDINATOR

DATE: 5/12/17

DATE	REVISION	BY

PLAT NAME: WATERVIEW TOWN CENTER SEC 2

CPC 101 FILE NO. 2015-2065

F.B.C.M.U.D. NO. 143

HARLEM ROAD
 TURN LANES

HARLEM ROAD
 RIGHT TURN LANE 1
 TRAFFIC CONTROL PLAN

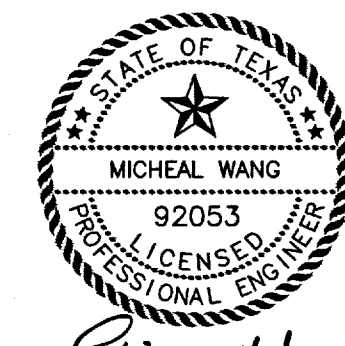
DEDEN SERVICES, LLC
 ENGINEERING
 Texas Registered Engineering Firm F-10971
 9328 WESTVIEW HOUSTON, TX 77055
 (713) 461-8822
 FAX (713) 461-2571

LJA Engineering, Inc.
 2529 Briarpark Drive Phone 713.953.5200
 Suite 600 Fax 713.953.5026
 Houston, Texas 77042 FRN - F-1386

LJA PROJECT NO.: 2145-2119

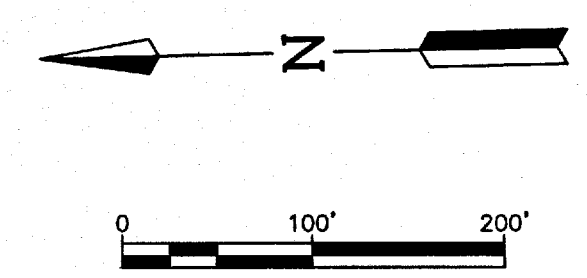
DRAWN: A.B./M.F. DESIGN: A.B./M.F. DATE: APRIL 2017

SCALE: 1" = 100'
 SHEET NO. 9 OF 16

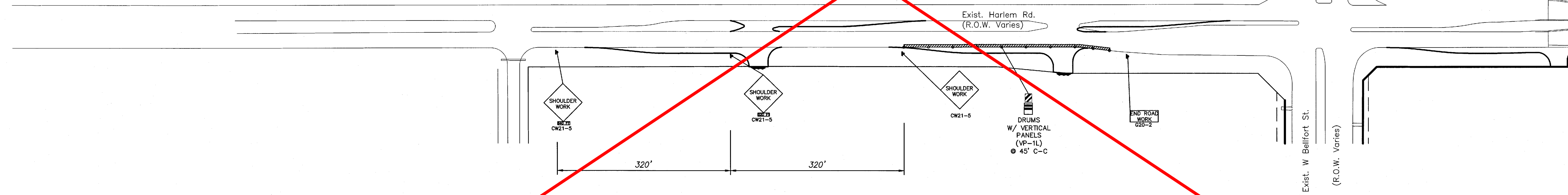


HARLEM ROAD TURN LANES - JOB NO. 2145-2119

11
User Name: rluentes
Plot Name: I:\Projects\2145\2119\ACD_Sheet_Files\Public\Plan Set\HARLEM ROAD\11_RTL TCP 2.dwg
Plot Time: Thu, 19 May 2017 8:11 AM



 = INDICATES WORK ZONE




BENCHMARK:
FOUND TXDOT BRASS CAP SET IN EAST END OF SOUTH HEADWALL OF CONCRETE BOX CULVERTS (SET OF 5) @ HWY. 89 GRAND PARKWAY & OUTFALL DITCH-SOUTH, 1,800(+/-) WEST OF HARLEM ROAD, ELEVATION = 92.24 (NAD 88, 2001 ADJUST.)

FLOODPLAIN INFORMATION:
SUBJECT TRACT IS LOCATED IN ZONE "X" UNSHADED AREA DETERMINED TO BE OUTSIDE THE 100 YEAR FLOODPLAIN, PER FEMA MAP 48457C0140L, DATED APRIL 2, 2014

NOTES:
1. ALL CURB TO BE 6-INCH UNLESS OTHERWISE SPECIFIED.

RECORD DRAWING
I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS
BY _____ DATE _____

PRIVATE UTILITY LINES SHOWN
TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222
NOTICE:
For your safety, you are required by TEXAS LAW to call 811 at least 48 hours before you dig so that underground line can be marked. This Verification does not fulfill your obligation to call 811.
VERIFICATION OF PRIVATE UTILITY LINES
Date _____
CenterPoint Energy/Natural Gas Facilities Verification ONLY.
(This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (Gas service lines are not shown.)
Signature Valid for six months.
Date _____
CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
(This signature verifies existing underground facilities - not to be used for conflict verification.) Signature Valid for six months.

FORT BEND COUNTY ENGINEERING DEPARTMENT
APPROVED: 
DEVELOPMENT COORDINATOR
DATE: 5/23/17

DATE	REVISION	BY

PLAT NAME: WATERVIEW TOWN CENTER SEC 2
CPC 101 FILE NO. 2015-2065

F.B.C.M.U.D. NO. 143

HARLEM ROAD
TURN LANES

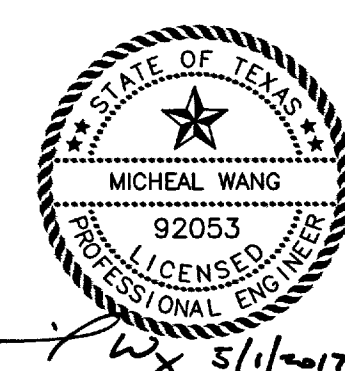
HARLEM ROAD
RIGHT TURN LANE 2
TRAFFIC CONTROL PLAN

DEDEN SERVICES, LLC
CIVIL ENGINEERING
Registered Engineering Firm F-10971
9328 WESTVIEW HOUSTON, TX 77055
(713) 461-8822
FAX (713) 461-2671

LJA Engineering, Inc.
2929 Briarpath Drive Phone 713.953.5200
Suite 600 Fax 713.953.5026
Houston, Texas 77042 FRN - F-1386

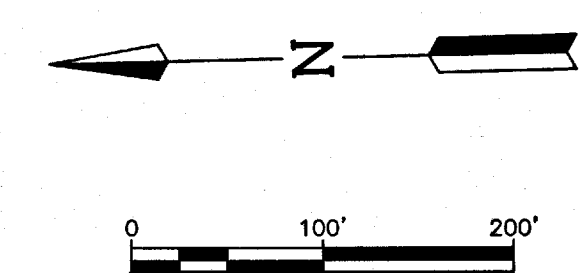
LJA PROJECT NO.: 2117-2119
DRAWN: A.B./M.F. DESIGN: A.B./M.F. DATE: APRIL 2017

SCALE: 1" = 100'
SHEET NO. 11 OF 16

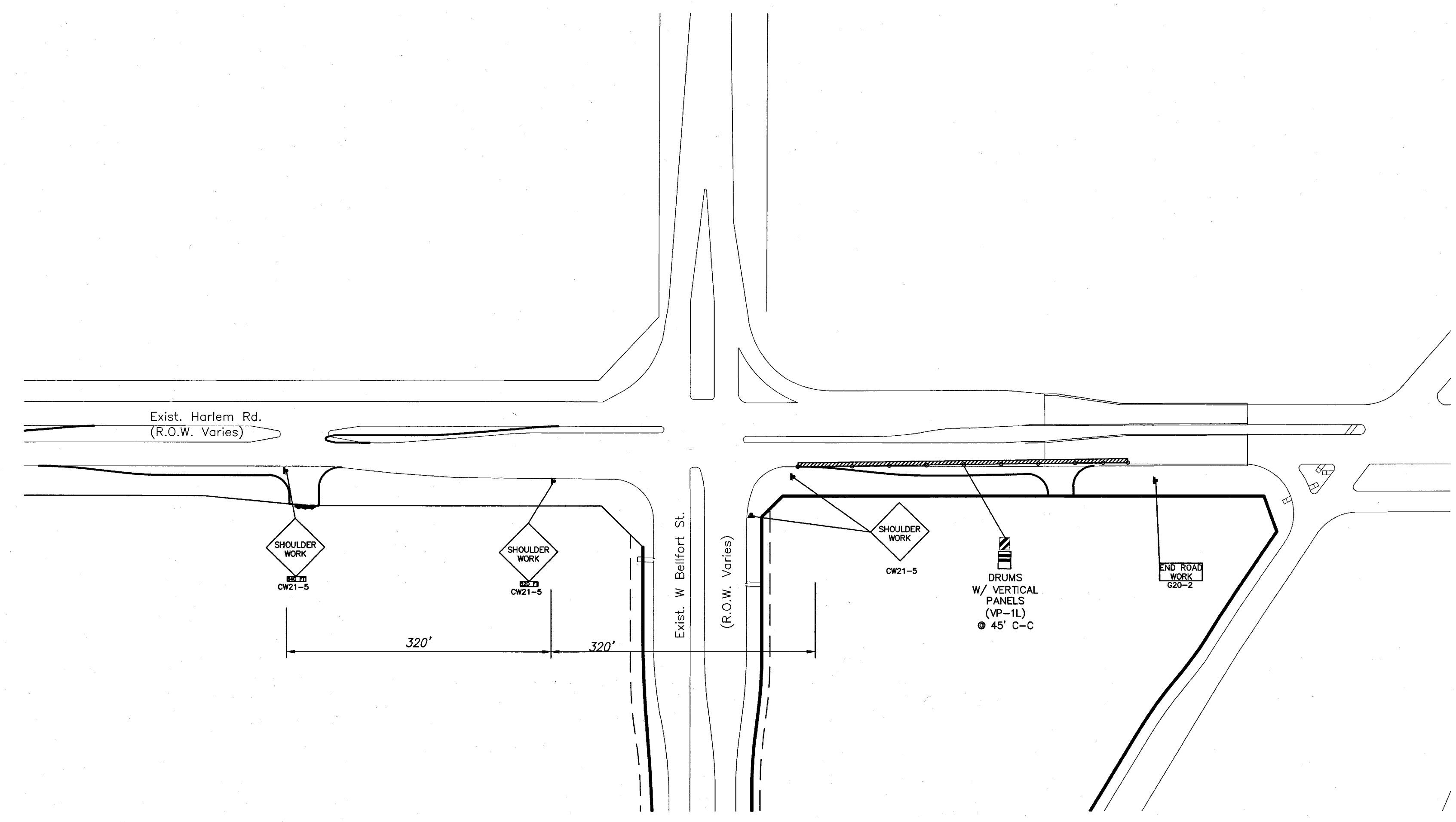


HARLEM ROAD TURN LANES - JOB NO. 2145-2119

12
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= INDICATES WORK ZONE



BENCHMARK:
 FOUND TXDOT 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 ADJUST.)

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

NOTES:
 1. ALL CURB TO BE 6-INCH UNLESS OTHERWISE SPECIFIED.

RECORD DRAWING
 I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS
 BY _____ DATE _____
 TITLE _____

PRIVATE UTILITY LINES SHOWN
 TO ARRANGE FOR LINES TO BE TURNED OFF OR MOVED, CALL CENTERPOINT ENERGY AT 713-207-2222

NOTICE:
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VERIFICATION OF PRIVATE UTILITY LINES
 Date _____
 CenterPoint Energy/Natural Gas Facilities Verification ONLY.
 (This Signature verifies that you have shown CNP Natural Gas lines correctly - not to be used for conflict verification.) (Gas service lines are not shown.)
 Signature Valid for six months.

VERIFICATION OF UNDERGROUND ELECTRICAL FACILITIES
 Date _____
 CenterPoint Energy/UNDERGROUND Electrical Facilities Verification ONLY.
 (This signature verifies existing underground facilities - not to be used for conflict verification.) Signature Valid for six months.

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED:
 DEVELOPMENT COORDINATOR
 DATE: 5/23/17

DATE	REVISION	BY

PLAT NAME: WATERVIEW TOWN CENTER SEC 2
 CPC 101 FILE NO. 2015-2065

F.B.C.M.U.D. NO. 143

HARLEM ROAD
 TURN LANES

HARLEM ROAD
 RIGHT TURN LANE 3
 TRAFFIC CONTROL PLAN

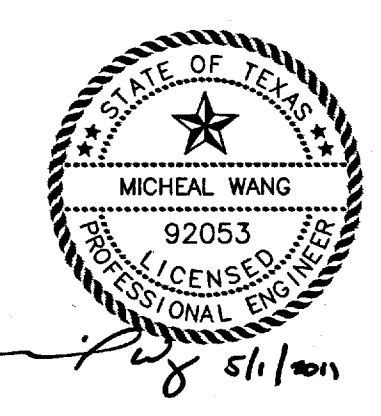
DEDEN SERVICES, LLC 9328 WESTVIEW HOUSTON, TX 77055
 CIVIL ENGINEERING (713) 461-8822
 Texas Registered Engineering Firm F-10971 FAX (713) 461-2671

LJA Engineering, Inc.
 2929 Briarpark Drive Phone 713.953.5200
 Suite 600 Fax 713.953.5028
 Houston, Texas 77042 FRN - F-1388

LJA PROJECT NO.: 2145-2119

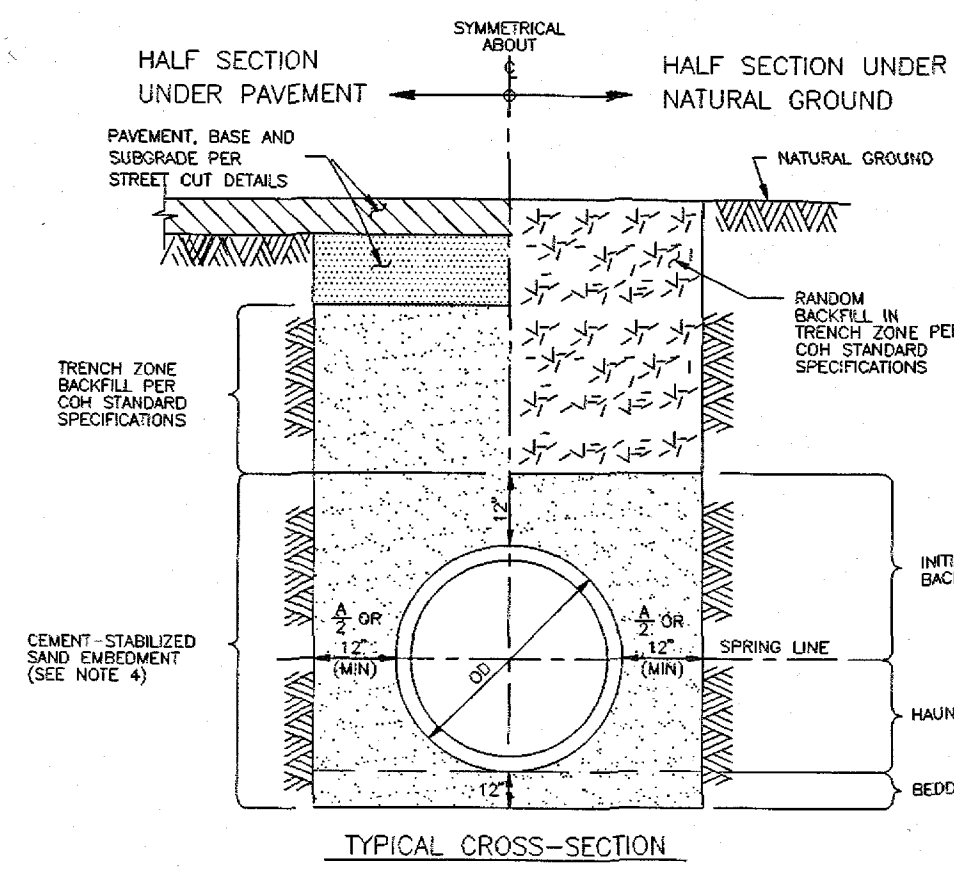
DRAWN: AB/M.F. DESIGN: AB/M.F. DATE: APRIL 2017

SCALE: 1" = 100' SHEET NO. 12 OF 16



HARLEM ROAD TURN LANES - JOB NO. 2145-2119

- NOTES:**
1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS PER COH STANDARD. SEE COH STANDARD SPECIFICATION FOR REQUIREMENTS IN OTHER CONDITIONS.
 2. MIN TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE.
- | NOMINAL PIPE SIZE | "A" |
|-------------------|-----|
| 16" TO 20" | 2" |
| OVER 20" | 3" |
3. MAX TRENCH WIDTH SHALL BE NOT GREATER THAN MIN TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
 4. ALTERNATIVE EMBODIMENT BACKFILL MATERIALS FOR FORCE MAINS MAY BE ALLOWED. SEE COH STANDARD SPECIFICATIONS.



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

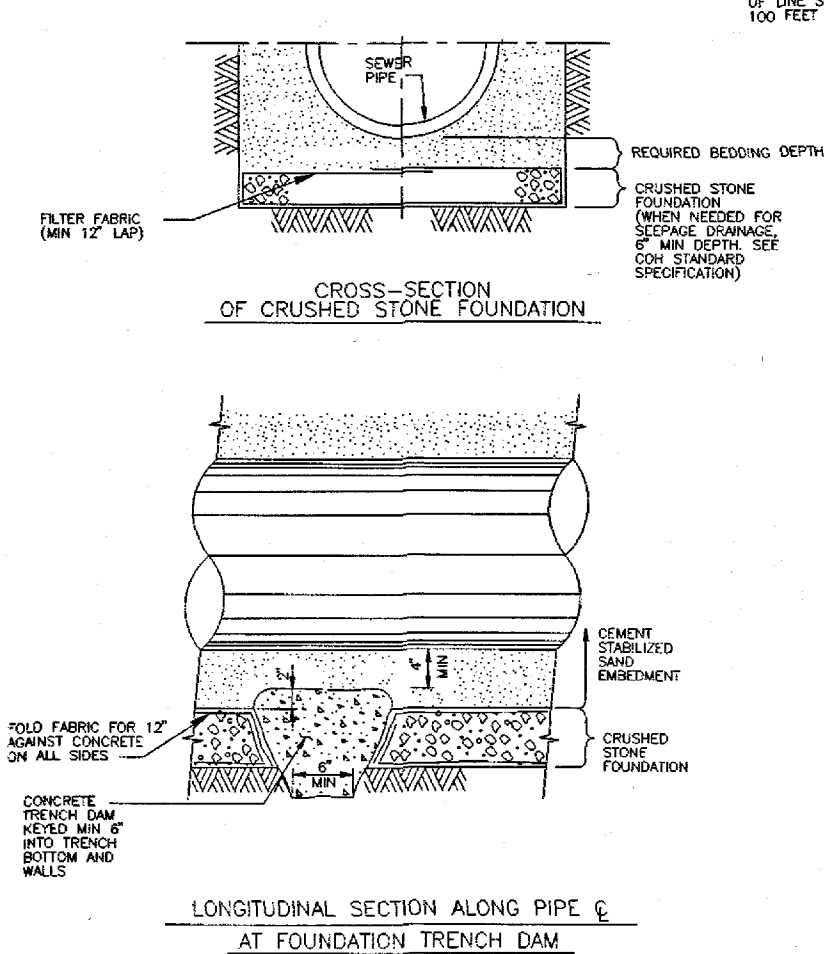
SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH (NOT TO SCALE)

APPROVED BY: *[Signature]*
CITY ENGINEER

APPROVED BY: *[Signature]*
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 02317-03

- NOTES:**
1. ACTUAL SHARP OF CONCRETE TRENCH DAM CROSS SECTION MAY BE DETERMINED BY CONTACTING THE MANUFACTURER.
 2. THIS DETAIL SHALL BE USED WITH CENTER-TRENCH DAM EMBODIMENT OR OTHER CLASS II EMBODIMENT IN WET STABLE TRENCH CONDITIONS.
 3. PLACE TRENCH DAM IN PLACE 1 SPACING FROM THE TRENCH WALLS 100 FEET BETWEEN MANHOLES.



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY OR STORM SEWER CRUSHED STONE FOUNDATION FOR WET STABLE TRENCH (NOT TO SCALE)

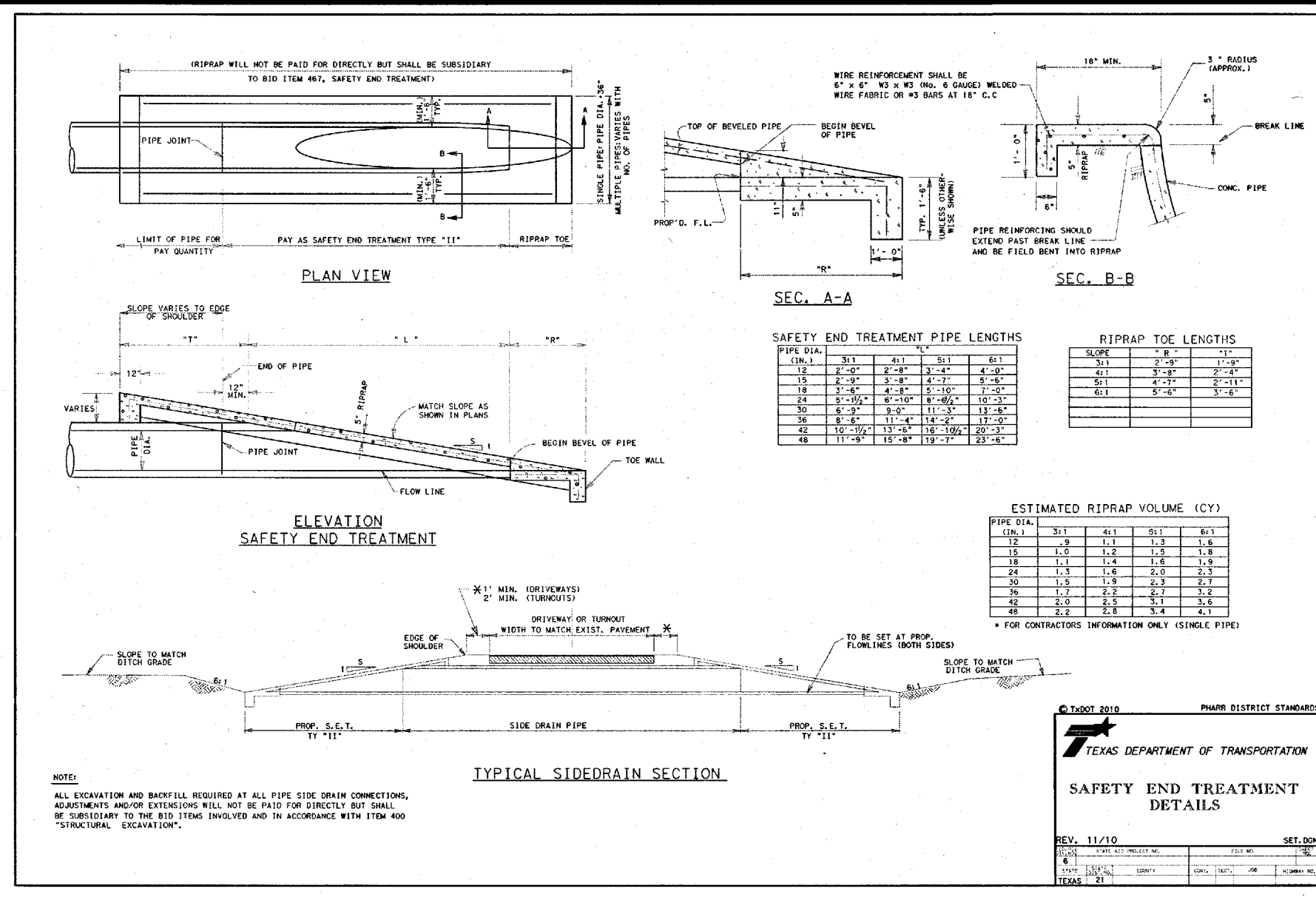
APPROVED BY: *[Signature]*
CITY ENGINEER

APPROVED BY: *[Signature]*
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

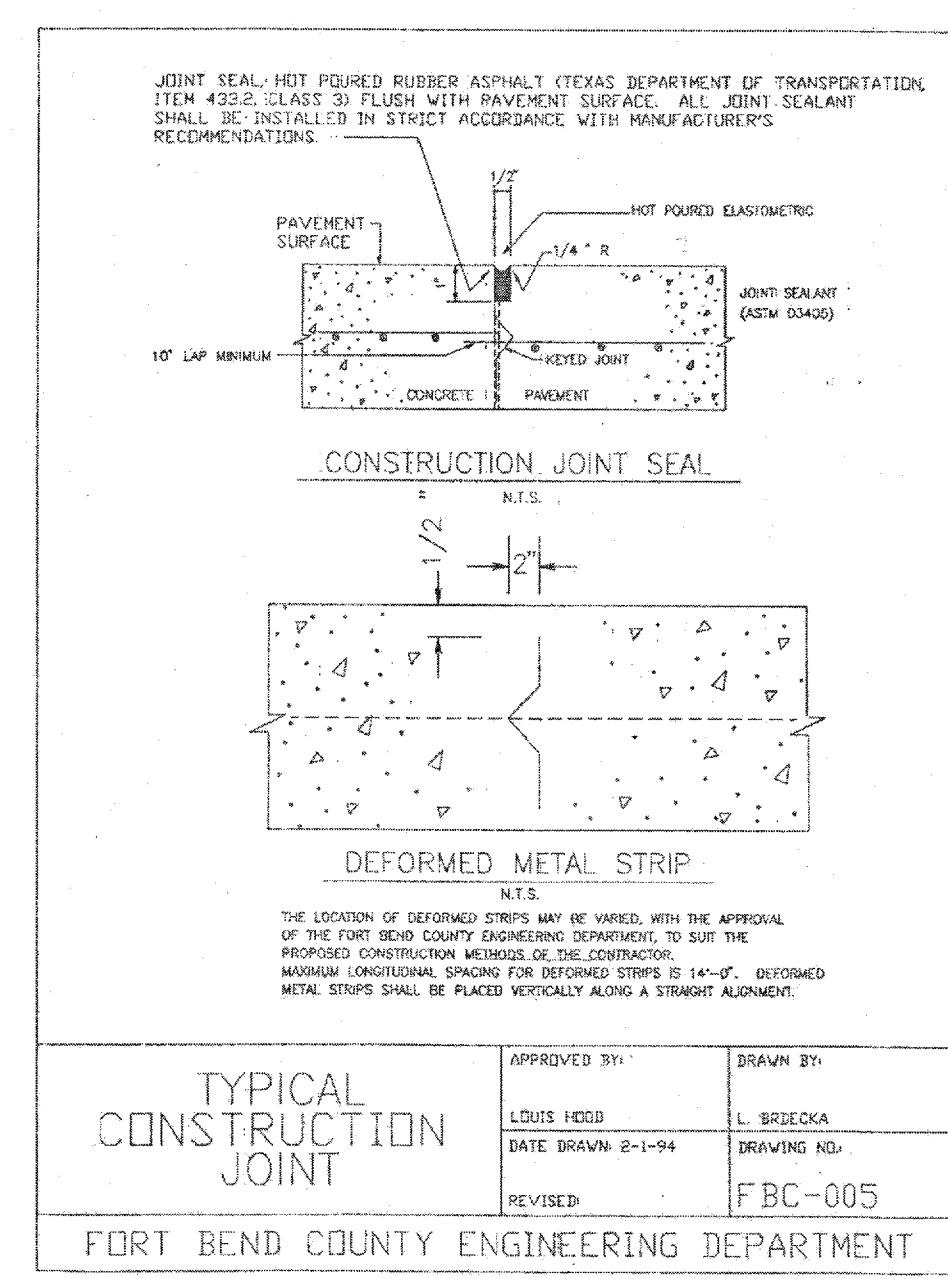
EFF DATE: OCT-01-2002 DWG NO: 02317-02

SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH

SANITARY OR STORM SEWER CRUSHED STONE FOUNDATION FOR WET STABLE TRENCH



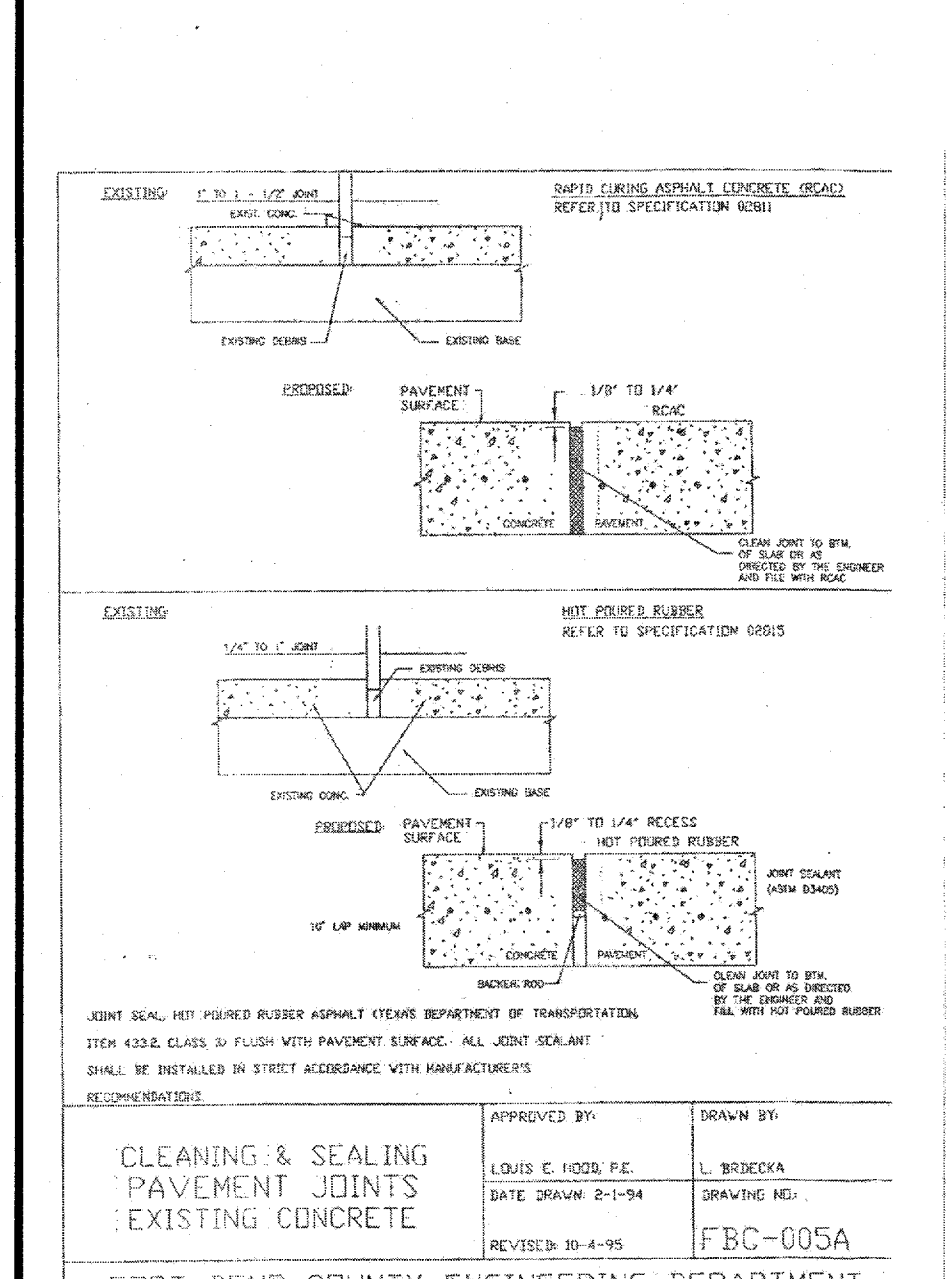
SAFETY END TREATMENT DETAIL



TYPICAL CONSTRUCTION JOINT

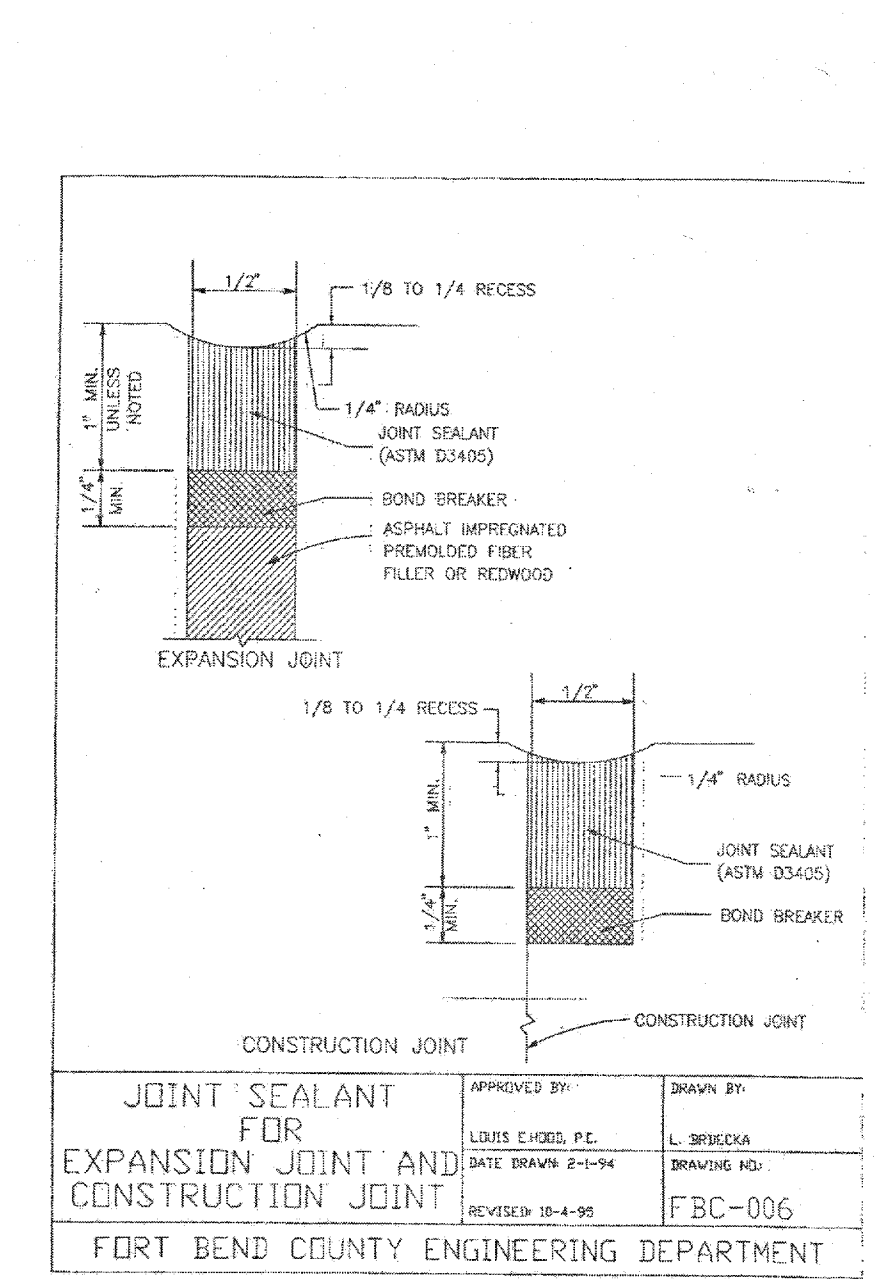
APPROVED BY: *[Signature]*
DATE DRAWN: 2-1-94
DRAWING NO: FBC-005

FORT BEND COUNTY ENGINEERING DEPARTMENT



APPROVED BY: *[Signature]*
DATE DRAWN: 2-1-94
DRAWING NO: FBC-005A

FORT BEND COUNTY ENGINEERING DEPARTMENT



APPROVED BY: *[Signature]*
DATE DRAWN: 2-1-94
DRAWING NO: FBC-006

FORT BEND COUNTY ENGINEERING DEPARTMENT

BENCHMARK:
FOUND TXDOT 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 ADJUST.)

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

- NOTES:**
1. ALL CURB TO BE 6-INCH UNLESS OTHERWISE SPECIFIED.

RECORD DRAWING

I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS

BY: _____ DATE: _____
TITLE: _____

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: *[Signature]*
DEVELOPMENT COORDINATOR

DATE	REVISION	BY
5/12/17		

PLAT NAME: WATERVIEW TOWN CENTER SEC 2

CPC 101 FILE NO. 2015-2065

F.B.C.M.U.D. NO. 143

HARLEM ROAD TURN LANES

STORM SEWER & PAVING CONSTRUCTION DETAILS

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

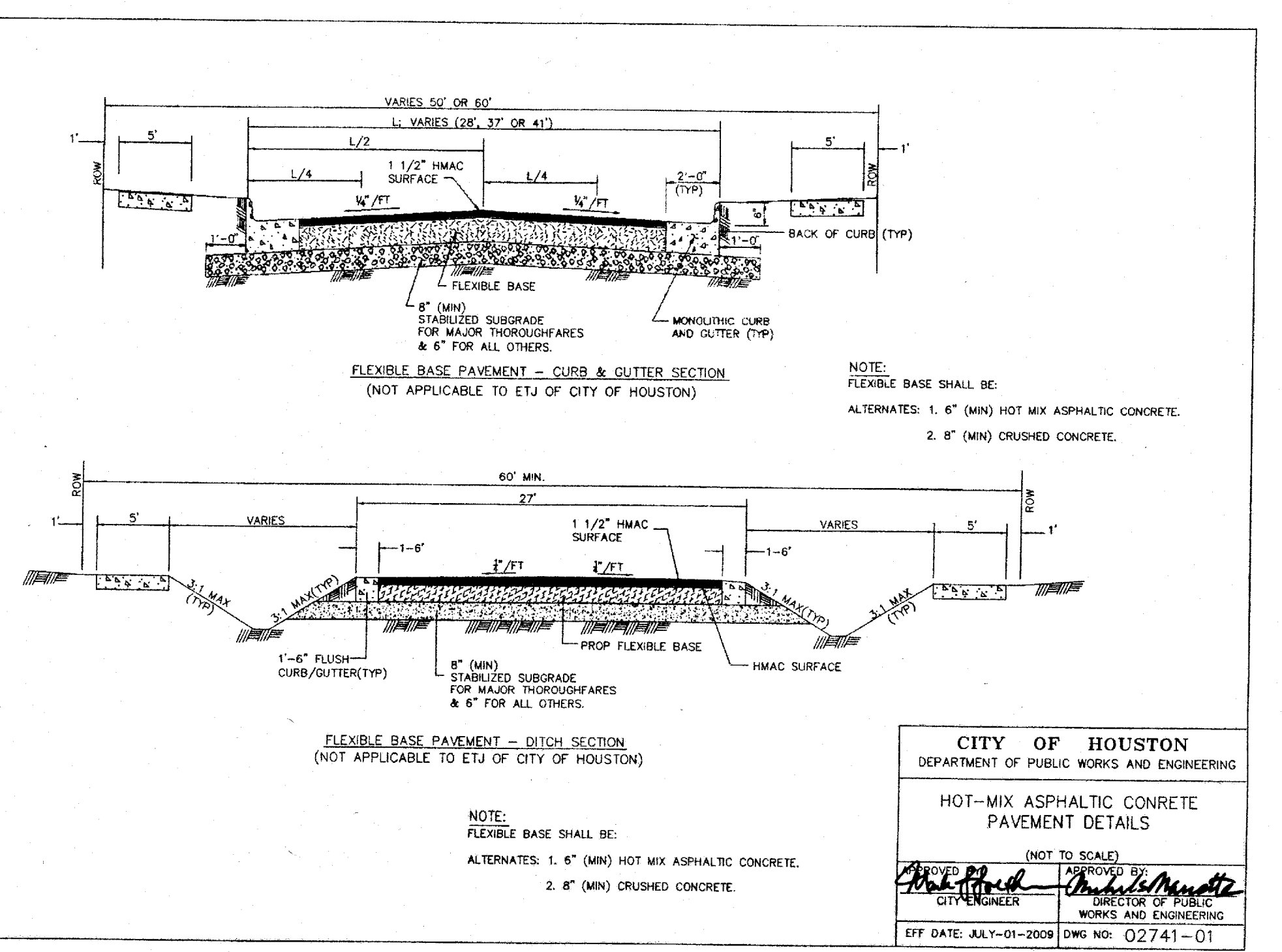
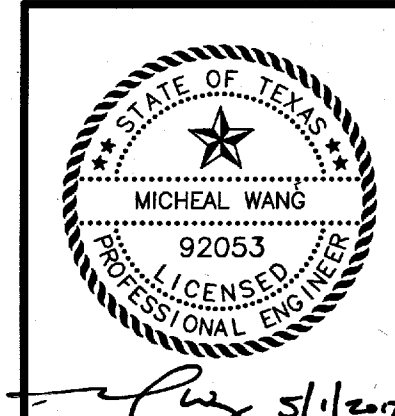
9328 WESTVIEW HOUSTON, TX 77036
(713) 461-8822
FAX (713) 461-2671

LJA Engineering, Inc.
2929 Briarpark Drive Suite 600 Houston, Texas 77042
Phone 713.953.5200 Fax 713.953.5026 FRN - F-1386

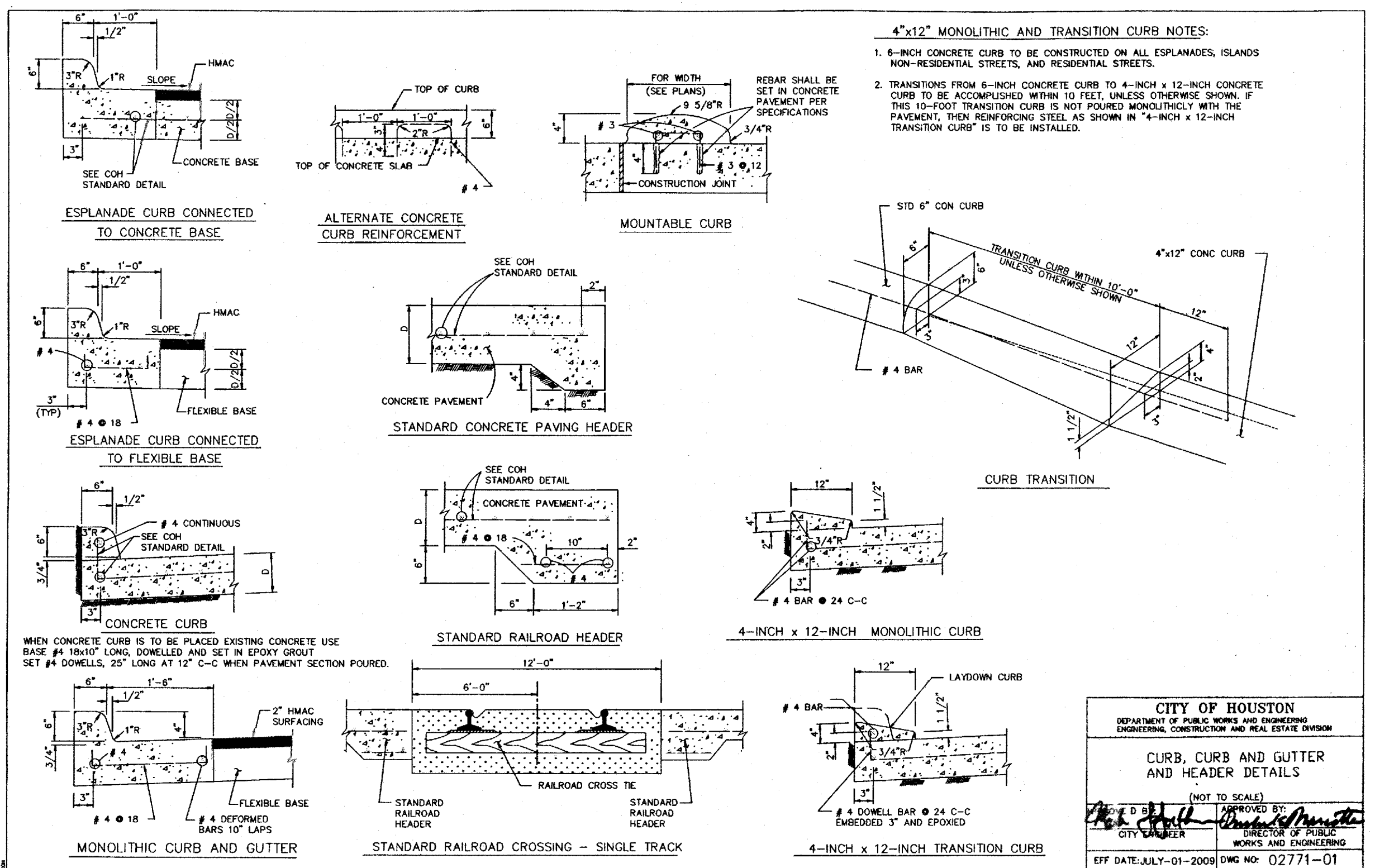
LJA PROJECT NO.: 2145-2119

DRAWN: A.B./M.F. DESIGN: A.B./M.F. DATE: APRIL 2017

SCALE: AS SHOWN SHEET NO. 13 OF 16



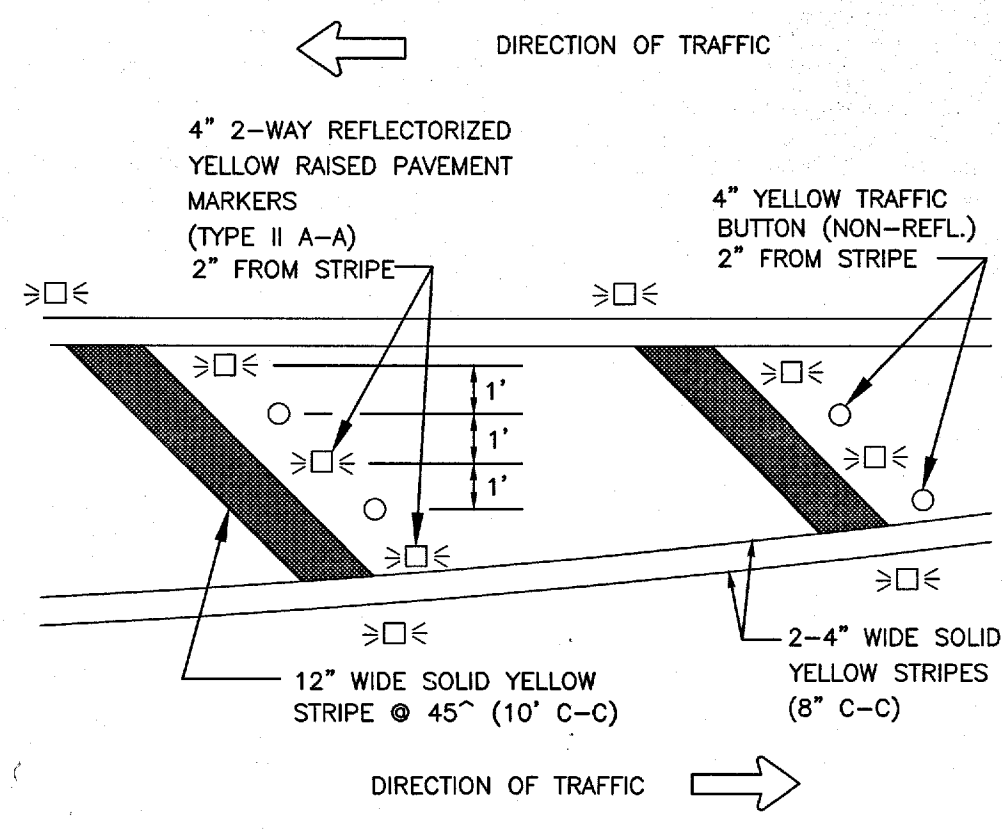
ASPHALT PAVEMENT DETAILS



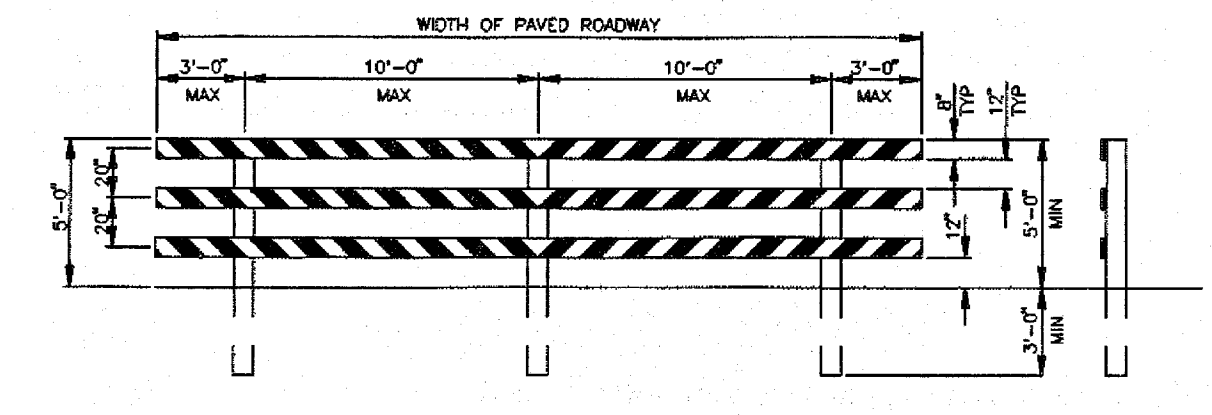
CURB, CURB AND GUTTER AND HEADER DETAILS

User: Norm; mlucente; Path: Norm; 1 May 2017 6:51:04 PM; Sheet: Files\Public\Plan Set\HARLEM ROAD\13 STM & PAVING DETAILS 1.dwg

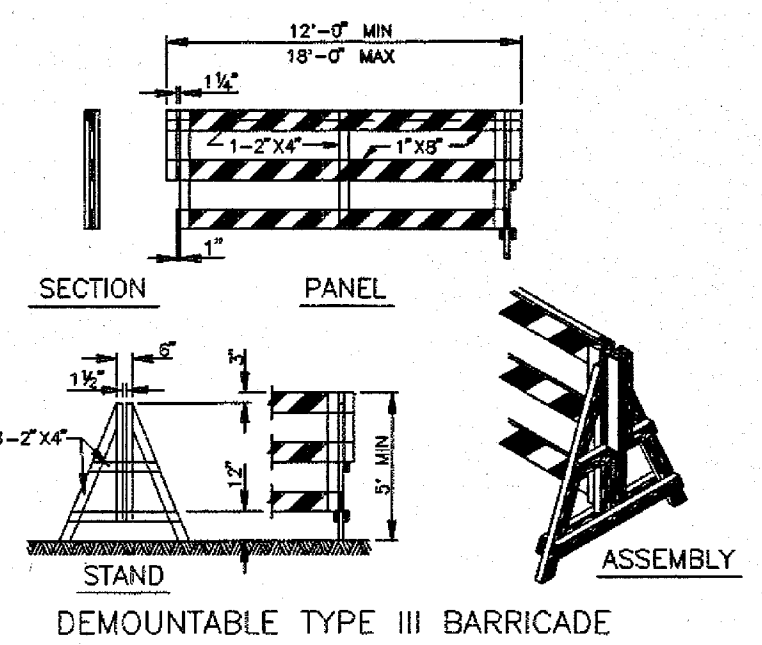
HARLEM ROAD TURN LANES - JOB NO. 2145-2119



CROSSHATCHING DETAIL
N.T.S.



FOR TYPE III BARRICADE FOR END OF ROAD, THE THREE (3) RAILS SHALL BE REFLECTIVE RED AND REFLECTIVE WHITE STRIPES ON SIDE FACING TRAFFIC



BARRICADE NOTES

THE MOST RECENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND ITS REVISIONS, SHALL GOVERN THE CONSTRUCTION AND USE OF ALL ITEMS HEREIN DESCRIBED.

CHANNELIZATION DEVICES OTHER THAN BARRICADES SHOULD NORMALLY BE USED FOR CHANNELIZATION PURPOSES.

BARRICADES SHOULD NORMALLY BE PLACED PERPENDICULAR TO THE TRAFFIC FLOW. OTHER CHANNELIZING DEVICES, SUCH AS DRUMS, VERTICAL PANELS OR PORTABLE BARRIERS, SHOULD BE USED WHERE NEEDED TO SEPARATE TRAFFIC FROM THE WORK AREA. IN ALL CASES, THE BARRICADES SHOULD BE SO LOCATED AS TO MOST ADVANTAGEOUSLY WARN AND DIRECT TRAFFIC.

BARRICADES MAY BE DESIGNED AND CONSTRUCTED FROM WOOD OR ANY OTHER SUITABLE MATERIAL IN A MANNER APPROVED BY THE DEPARTMENT OF TRAFFIC AND TRANSPORTATION. THE CONSTRUCTION DETAILS SHOWN HEREON ARE TYPICAL AND ARE SUGGESTED DETAILS FOR WOOD SUPPORT SYSTEMS FOR BARRICADES. THE DETAILS OF RAIL WIDTH AND STRIPING, NUMBER AND SPACING OF RAILS, MINIMUM LENGTH AND HEIGHT (ABOVE PAVEMENT) OF RAILS MUST BE ADHERED TO WHEN ALTERNATE DESIGNS ARE USED.

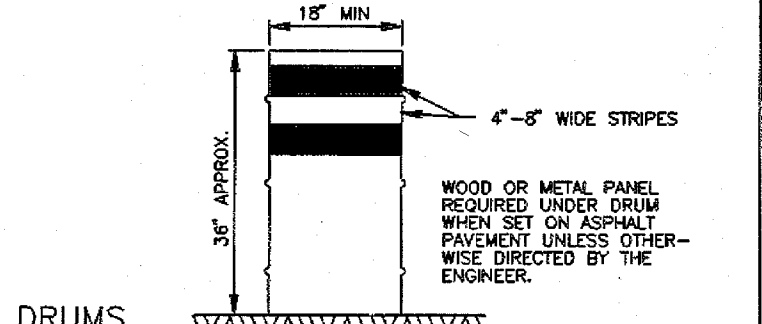
BARRICADES ARE TO BE CONSTRUCTED OF CLEAN SOUND MATERIAL ALL SURFACES ABOVE GROUND WHICH ARE NOT STRIPED, SHALL BE WHITE EXCEPT THE UNPAINTED GALVANIZED METAL OR ALUMINUM COMPONENTS MAY BE USED.

COMPONENTS MADE OF LUMBER SHALL BE PAINTED WITH A MINIMUM OF TWO COATS OF AN APPROVED BRAND OF WHITE PAINT TO SECURE THOROUGH COVERAGE AND A UNIFORM WHITE COLOR.

THE REFLECTORIZED WHITE AND REFLECTORIZED ORANGE (REFLECTORIZED RED) STRIPES FOR BARRICADES, DRUMS AND VERTICAL PANELS SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING AND SHALL BE MAINTAINED TO MEET THE APPEARANCE, COLOR AND REFLECTIVITY REQUIREMENTS SET BY DOT.

THE CONTRACTOR SHALL MAINTAIN EACH BARRICADE IN A CLEAN AND GOOD CONDITION.

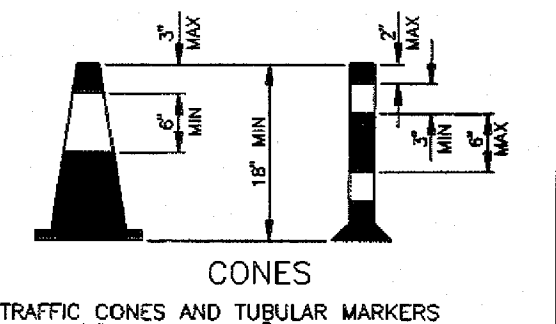
BARRICADES SHALL BE REMOVED UPON COMPLETION OF THE WORK AND/OR THE ELIMINATION OF THE HAZARD ON ANY SECTION.



TRAFFIC CONES AND TUBULAR MARKERS SHALL BE A MIN OF 18" INCHES IN HEIGHT WITH A BROADENED BASE AND MAY BE MADE OF VARIOUS MATERIALS TO WITHSTAND IMPACT WITHOUT DAMAGE TO THEMSELVES OR TO VEHICLES. LARGER SIZES SHOULD BE USED ON FREEWAYS AND OTHER ROADWAYS WHERE SPEEDS ARE RELATIVELY HIGH OR WHERE EVER MORE CONSPICUOUS GUIDANCE IS NEEDED. ORANGE SHALL BE THE PREDOMINANT COLOR ON CONES AND TUBULAR MARKERS. THEY SHOULD BE KEPT CLEAN AND BRIGHT FOR MAX TARGET VALUE. FOR NIGHTTIME USE THEY SHALL BE REFLECTORIZED OR EQUIPPED WITH LIGHTING DEVICES FOR MAX VISIBILITY. REFLECTORIZED MATERIAL SHALL HAVE A SMOOTH, SEALED OUTER SURFACE WHICH WILL DISPLAY THE SAME APPROX COLOR DAY AND NIGHT.

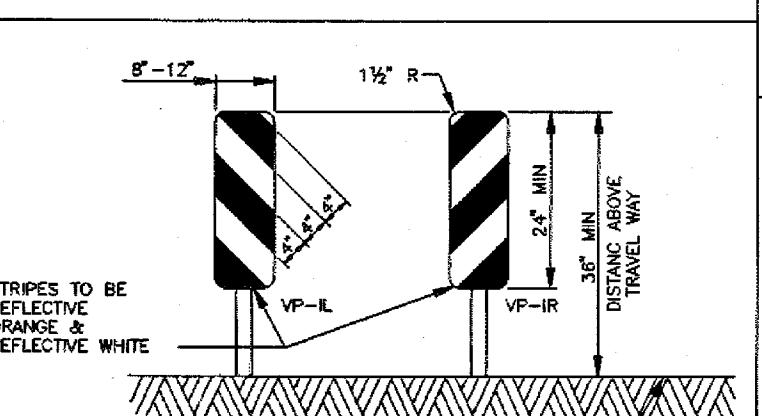
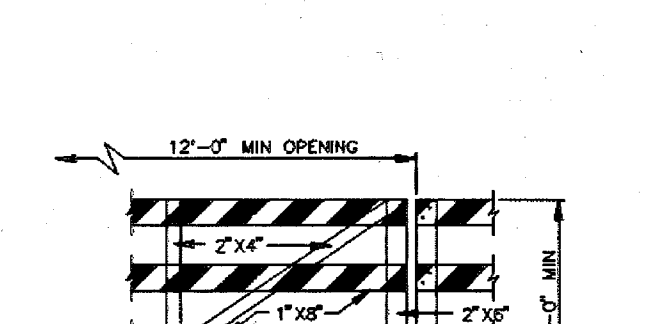
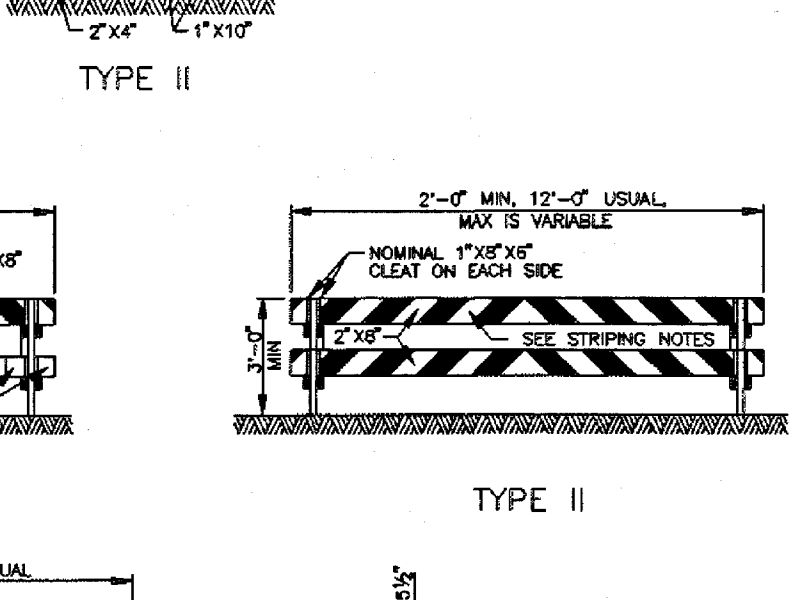
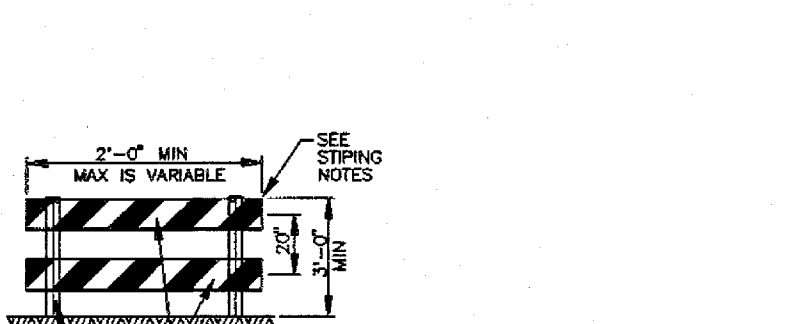
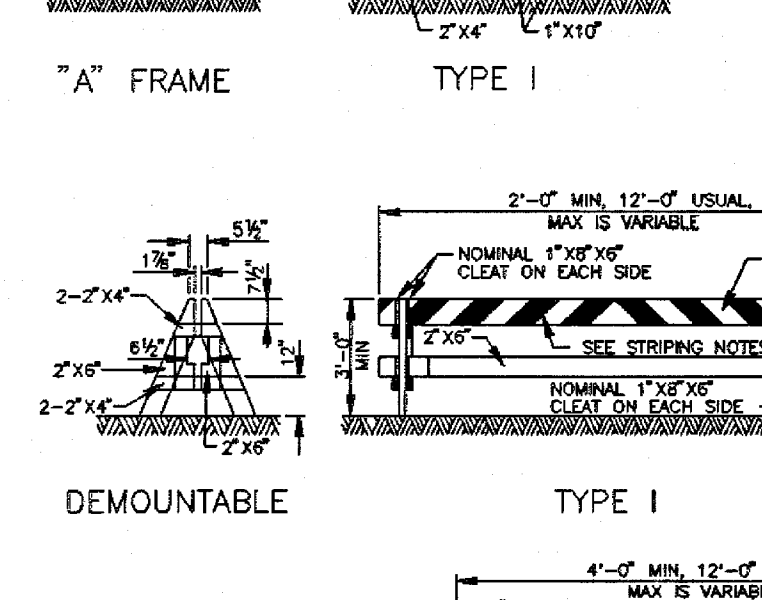
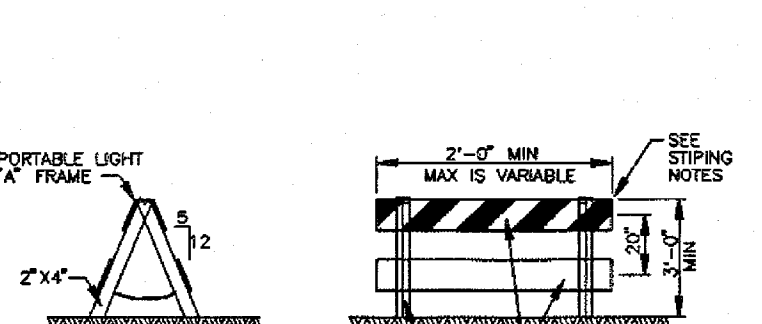
REFLECTORIZATION OF TUBULAR MARKERS SHALL BE A MIN OF TWO THREE-INCH BANDS PLACED A MAX OF 2" FROM THE TOP WITH A MAX OF 6" BETWEEN THE BANDS. REFLECTORIZATION OF CONES SHALL BE PROVIDED BY A MIN OF BAND PLACED A MAX OF 3" FROM THE TOP.

CONES OR TUBULAR MARKERS ARE GENERALLY ONLY SUITABLE FOR TEMPORARY USAGE (UP TO 8 HOURS) WITH OTHER CHANNELIZATION DEVICES SUCH AS VERTICAL PANELS OR BARRICADES PREFERRED FOR LONGER TERM USAGE. CARE SHOULD BE TAKEN TO INSURE THAT THEY REMAIN IN THEIR PROPER LOCATION AND IN AN UPRIGHT POSITION.

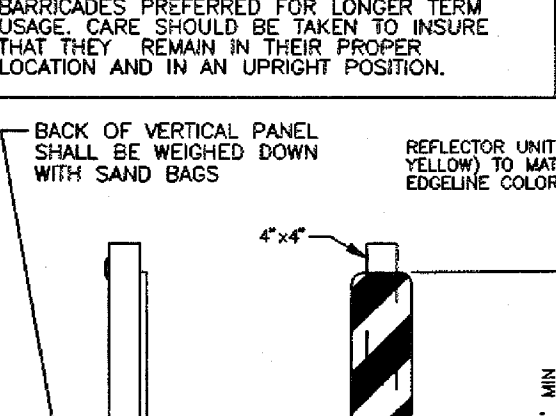


DRUMS SET ON END AND USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE APPROX 36" IN HEIGHT AND A MIN OF 18" IN DIAMETER. THE CONTRACTOR, AT HIS OPTION, MAY USE DRUMS MADE FROM STEEL BARRELS OR BLACK POLYETHYLENE PLASTIC DRUM LINERS WEIGHING APPROX EIGHT POUNDS EACH. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, CIRCUMFERENTIAL, REFLECTORIZED ORANGE AND REFLECTORIZED WHITE STRIPES. 4 TO 8 INCHES WIDE. THE FIRST REFLECTORIZED STRIPE SHOULD START WITHIN TWO (2) INCHES OF THE TOP OF THE DRUM. THERE SHALL BE AT LEAST TWO ORANGE AND TWO WHITE STRIPES ON EACH DRUM. IF THERE ARE NON-REFLECTORIZED SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, THEY SHALL BE NO MORE THAN 2 INCHES WIDE. METAL DRUMS SHALL BE PAINTED BLACK OR ORANGE BEFORE REFLECTORIZED STRIPES ARE ADDED. ALL DRUMS ON PROJECT WILL BE THE SAME COLOR. WHEN DRUMS ARE PLACED IN THE ROADWAY, APPROPRIATE WARNING SIGNS SHOULD BE USED. DURING HOURS OF DARKNESS, A FLASHING WARNING LIGHT SHOULD BE PLACED ON DRUMS USED SIMPLY AS A WARNING DEVICE. STEADY BURN ELECTRIC LIGHTS OR DELINEATORS SHOULD BE PLACED ON DRUMS USED IN SERIES FOR TRAFFIC CHANNELIZATION. DRUMS SHALL BE WEIGHTED WITH SAND TO THE EXTENT INDICATED IN THE PLANS.

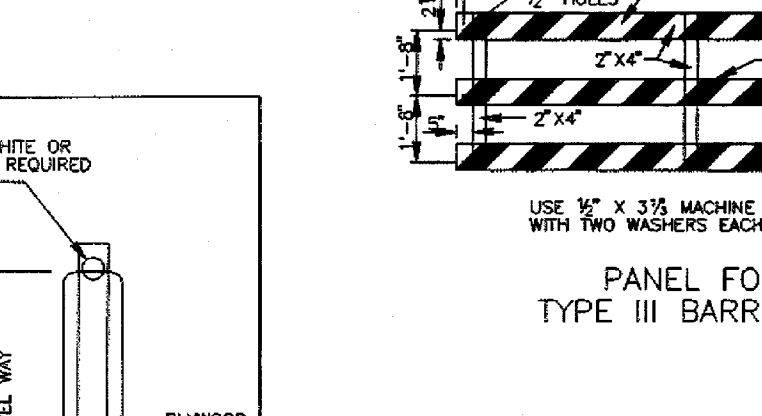
CW-8 CHEVRON SIGNS, CW-6A ARROW SIGNS OR VP-1 VERTICAL PANELS MOUNTED ABOVE DRUMS MAY BE USED AS SUPPLEMENTS TO DRUM DELINEATION.



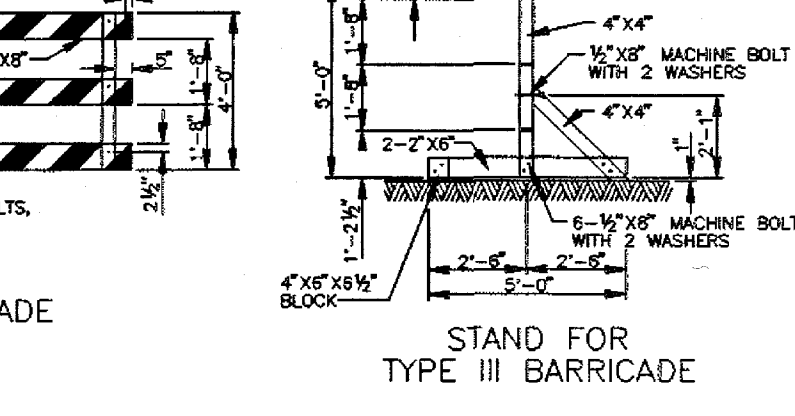
VERTICAL PANELS ARE NORMALLY USED AS CHANNELIZING DEVICES TO INDICATE TANGENT OR NEARLY TANGENT ROADWAY ALIGNMENT WHERE GOOD TARGET VALUE OF A DEVICE IS NEEDED IN DAYTIME AS WELL AS THE NIGHTTIME. IN ADDITION VERTICAL PANELS SHOULD BE USED AT THE EDGE OF SHOULDER DROP-OFFS AND OTHER SUCH AREAS AS LANE TRANSITIONS WHERE POSITIVE DAY AND NIGHT DELINEATION MAY BE REQUIRED. VERTICAL PANELS SHOULD BE MOUNTED BACK TO BACK IF USED AT THE EDGE OF CUTS ADJACENT TO TWO-WAY TWO LANE ROADWAYS. STRIPES SHOULD ALWAYS SLOPE DOWNWARD TOWARD THE TRAVELED WAY.



OTHER SIMILAR SUPPORTS MAY BE USED WHEN APPROVED OR DIRECTED BY THE COH DEPT OF TRAFFIC AND TRANSPORTATION



FOR ALL TYPES OF BARRICADES WITH RAILS LESS THAN 3'-0" LONG, STRIPES 4" WIDE SHALL BE SHOWN ONLY ON BACK SIDE OF BARRICADE RAILS.



STRIPING SHOULD COVER THE FULL WIDTH OF THE RAIL. STRIPING OF RAILS, PANELS, ETC. SHOULD SLOPE DOWNWARD AT AN ANGLE OF 45° DEGREES IN DIRECTIONS TRAFFIC IS TO PASS.

WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, IT IS DESIRABLE THAT THE STRIPES SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN IN DETOURING. WHEN BOTH RIGHT AND LEFT TURNS ARE PROVIDED FOR, THE CHEVRON STRIPING MAY SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

BARRICADE STANDARD
(NOT TO SCALE)

APPROVED BY: *[Signature]*
CITY ENGINEER

APPROVED BY: *[Signature]*
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 01580-01

BENCHMARK:

FOUND TXDOT 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 ADJUST.)

FLOODPLAIN INFORMATION:

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

NOTES:

1. ALL CURB TO BE 6-INCH UNLESS OTHERWISE SPECIFIED.

RECORD DRAWING

I CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION AND GRADE AND THAT THE CONSTRUCTION WAS IN FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS

BY _____ DATE _____

TITLE _____

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: *[Signature]*
DEVELOPMENT COORDINATOR

DATE: 5/12/17

DATE	REVISION	BY

PLAT NAME: WATERVIEW TOWN CENTER SEC 2

CPC 101 FILE NO. 2015-2065

F.B.C.M.U.D. NO. 143

HARLEM ROAD TURN LANES

BARRICADE, PERMANENT SIGNAGE AND STRIPING DETAILS

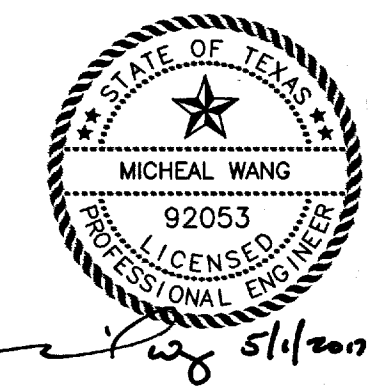
DEDEN SERVICES, LLC
9228 WESTVIEW HOUSTON, TX 77095
CIVIL ENGINEERING (713) 461-8822
Texas Registered Engineering Firm F-10973 FAX (713) 461-2671

LJA Engineering, Inc.
2929 Briarpark Drive Suite 600 Houston, Texas 77042
Phone 713.953.5200 Fax 713.953.5028 FRN - F-1386

LJA PROJECT NO.: 2145-2119

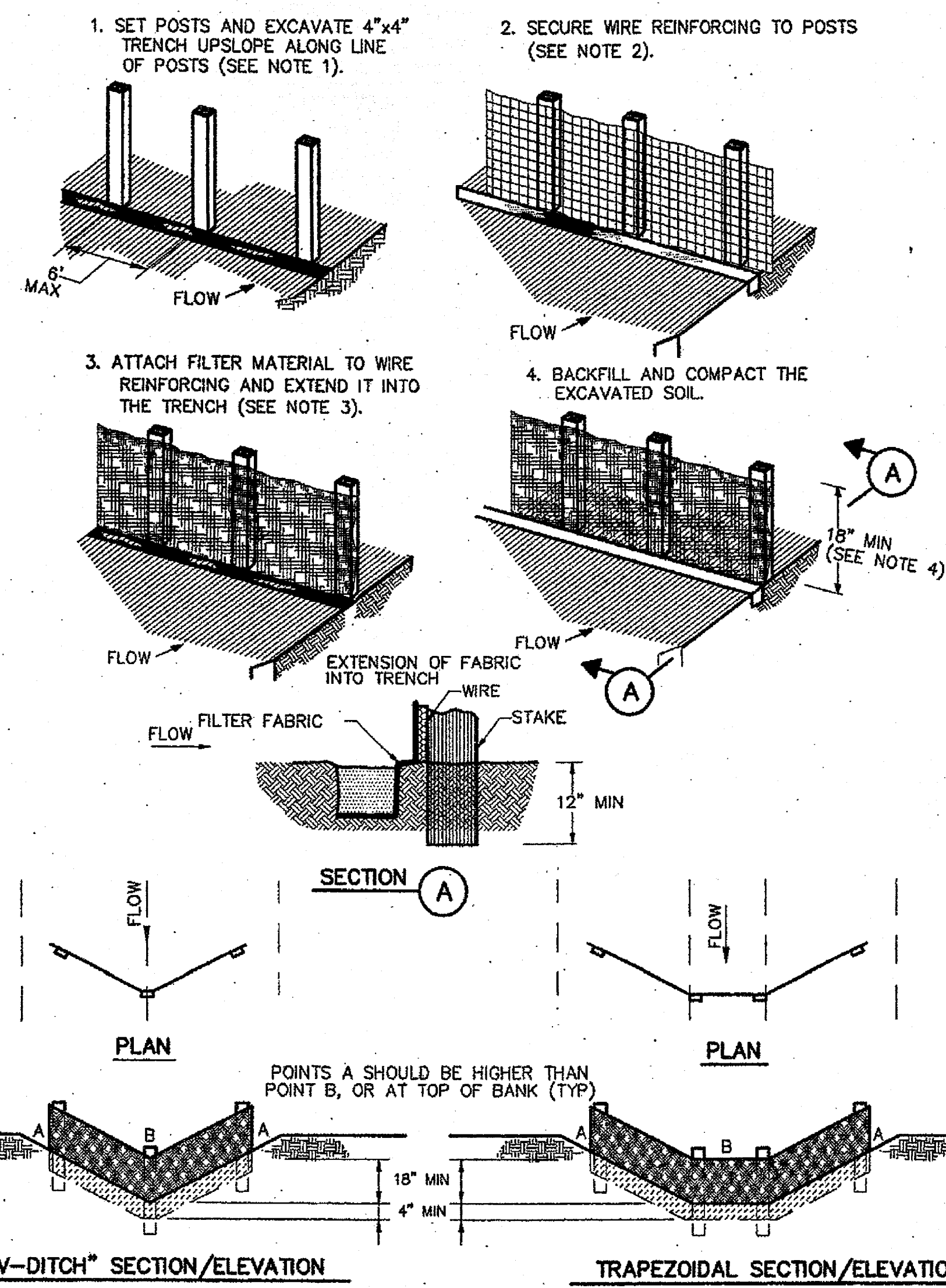
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SCALE: AS SHOWN SHEET NO. 14 OF 16



Date: 25 Apr 2017 8:43am User: Mwang - kchouh
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HARLEM ROAD TURN LANES - JOB NO. 2145-2119

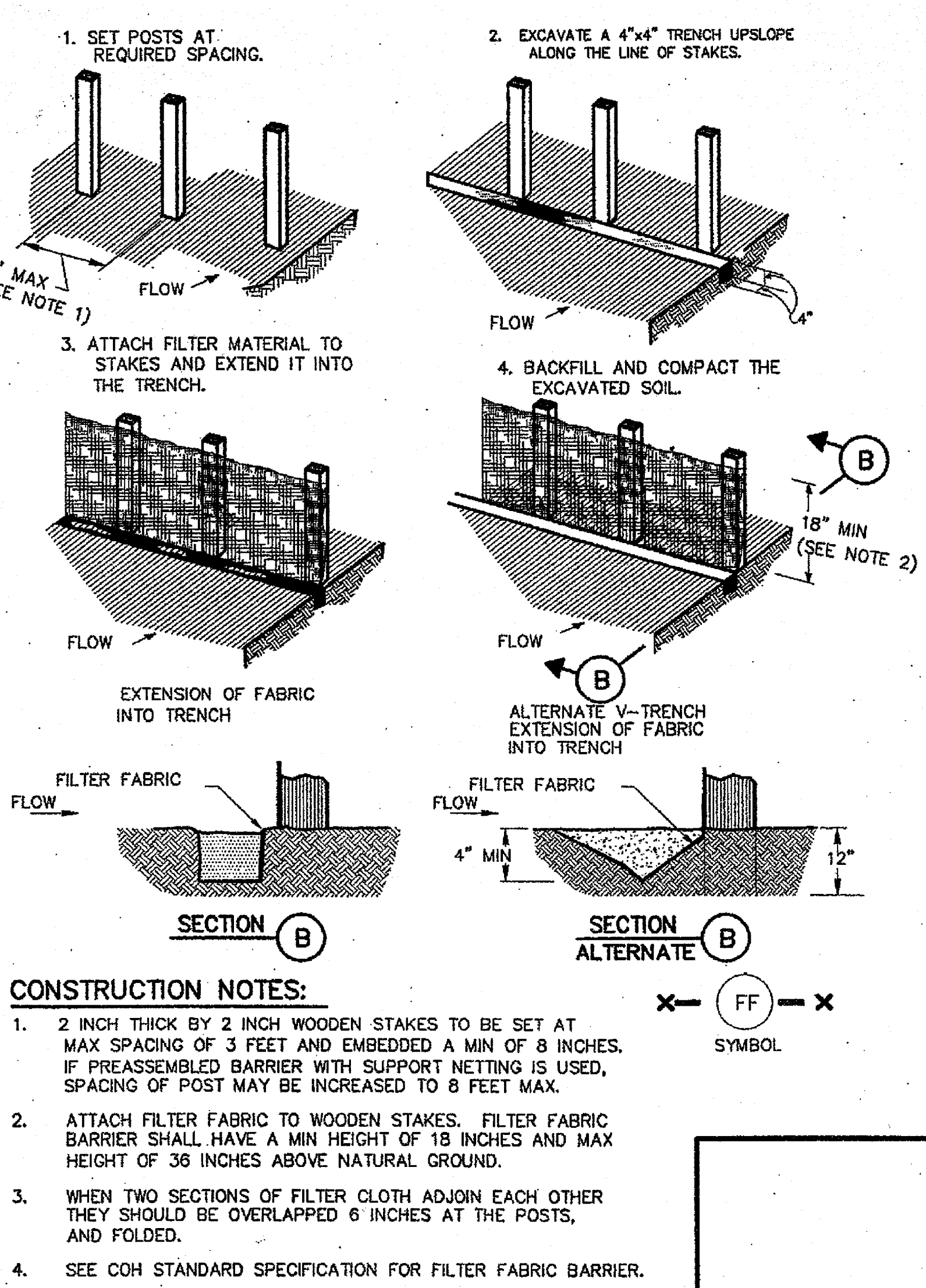
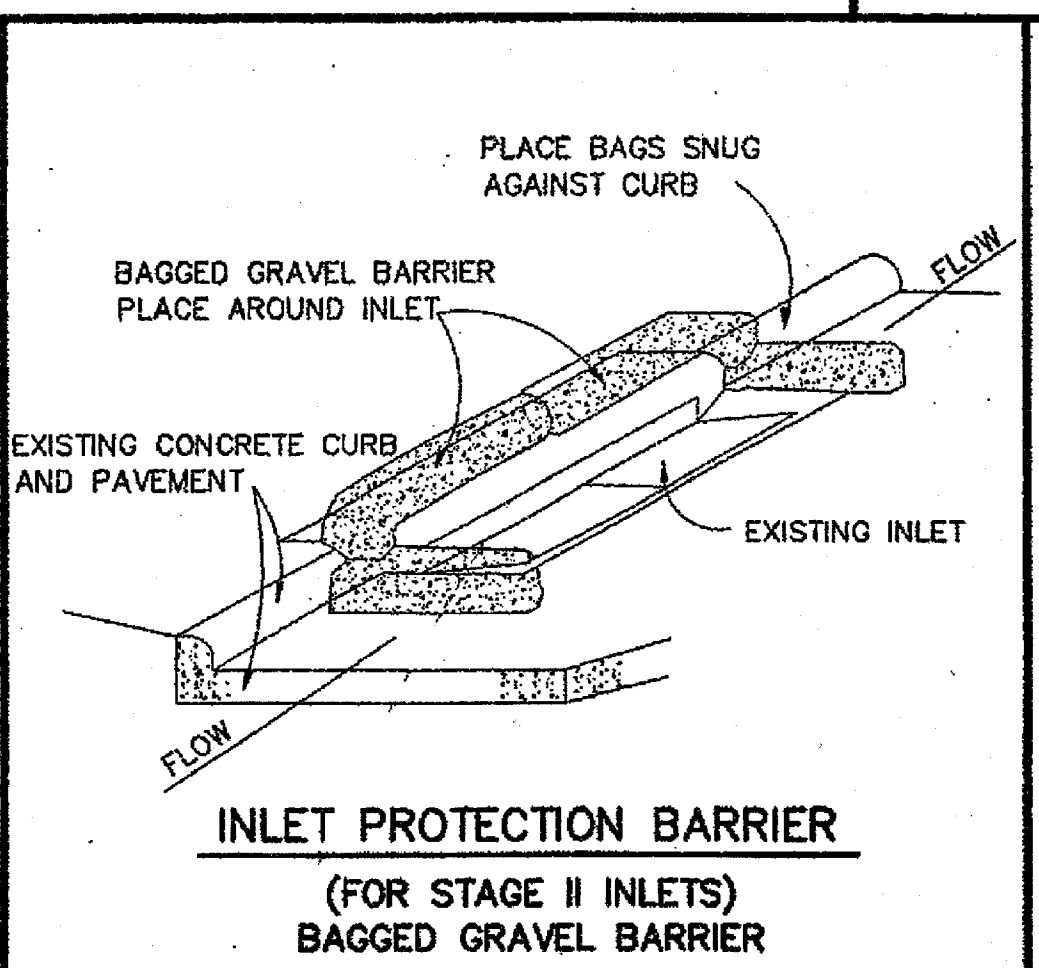


CONSTRUCTION NOTES:

1. SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
2. WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
4. MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
6. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

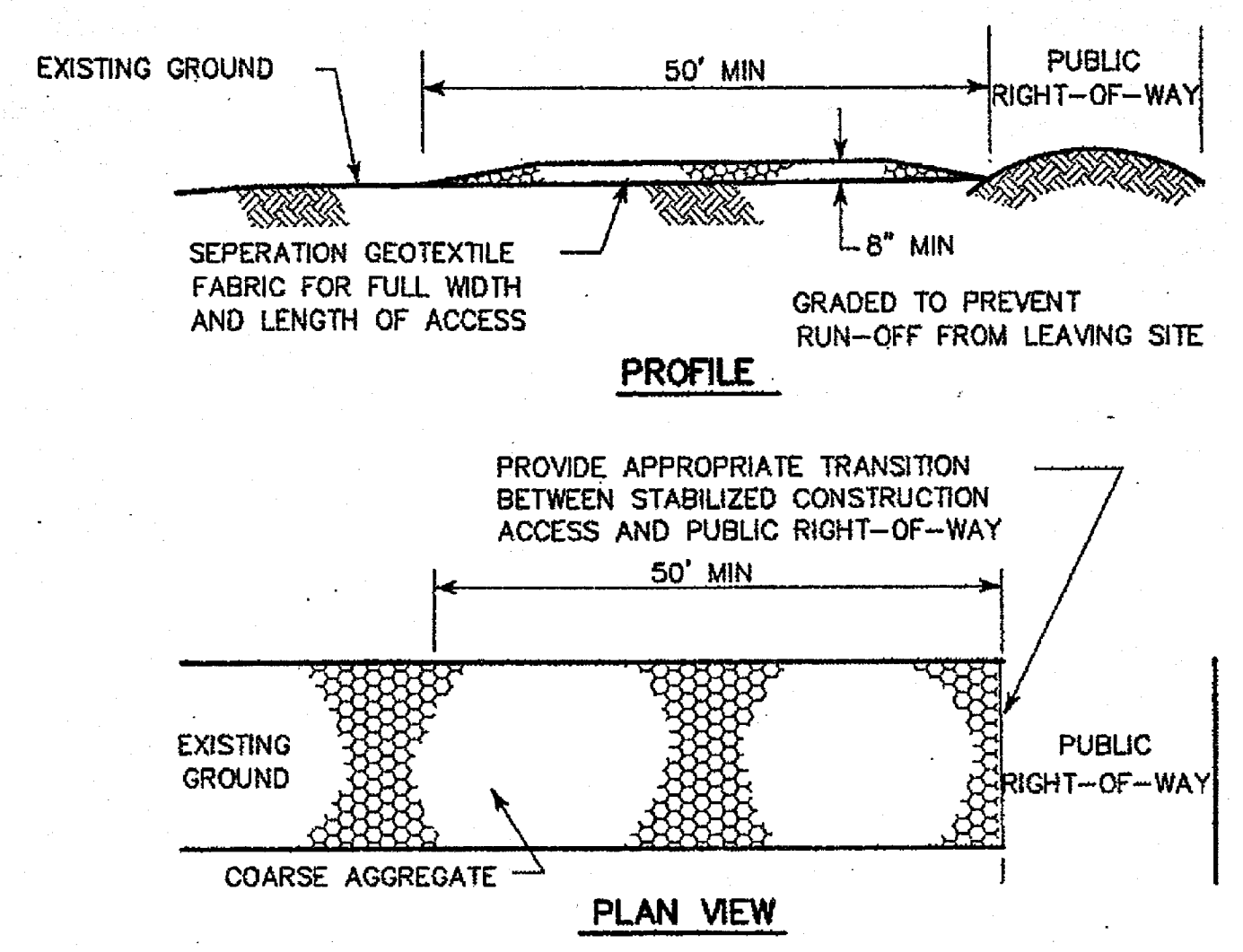
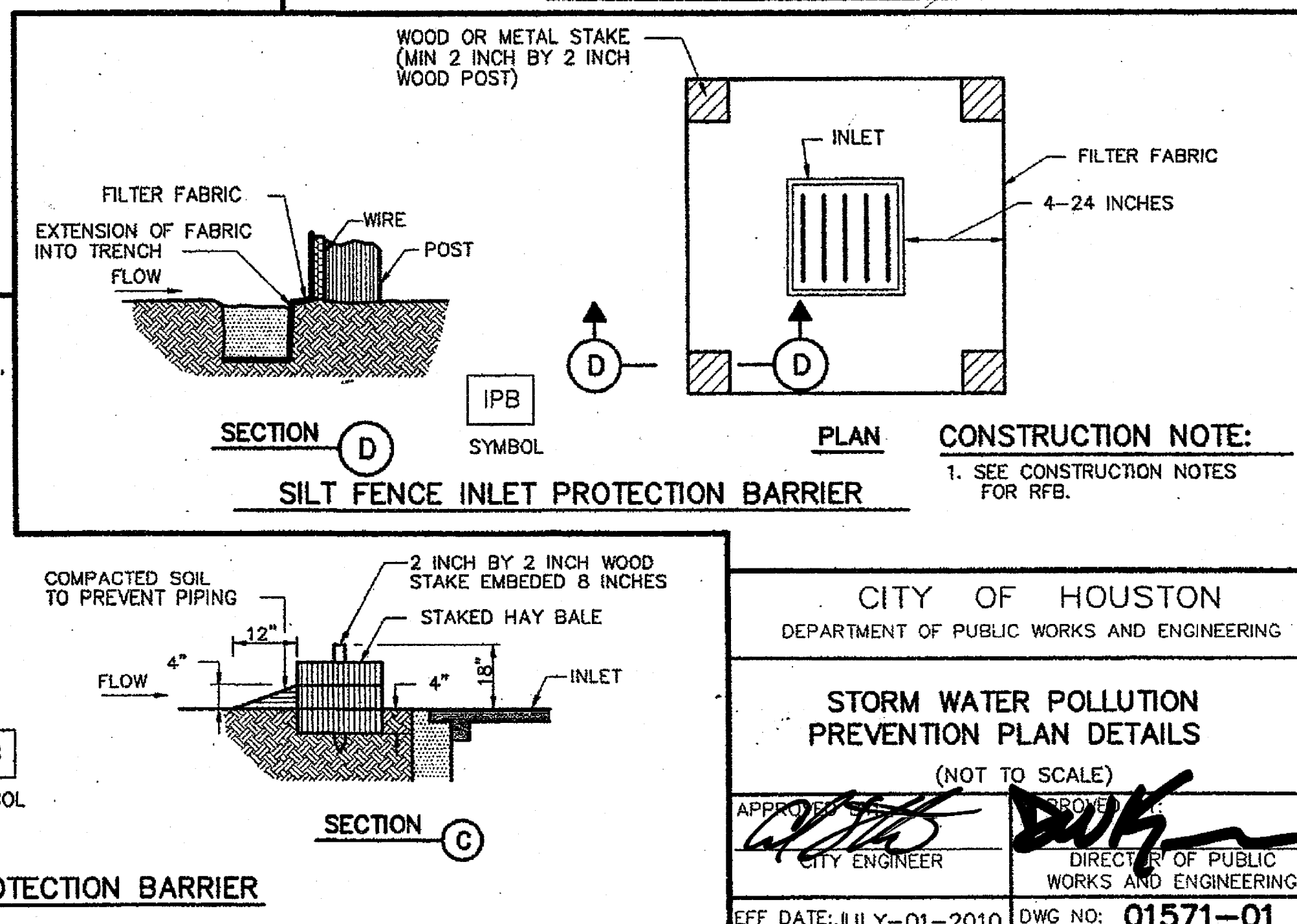
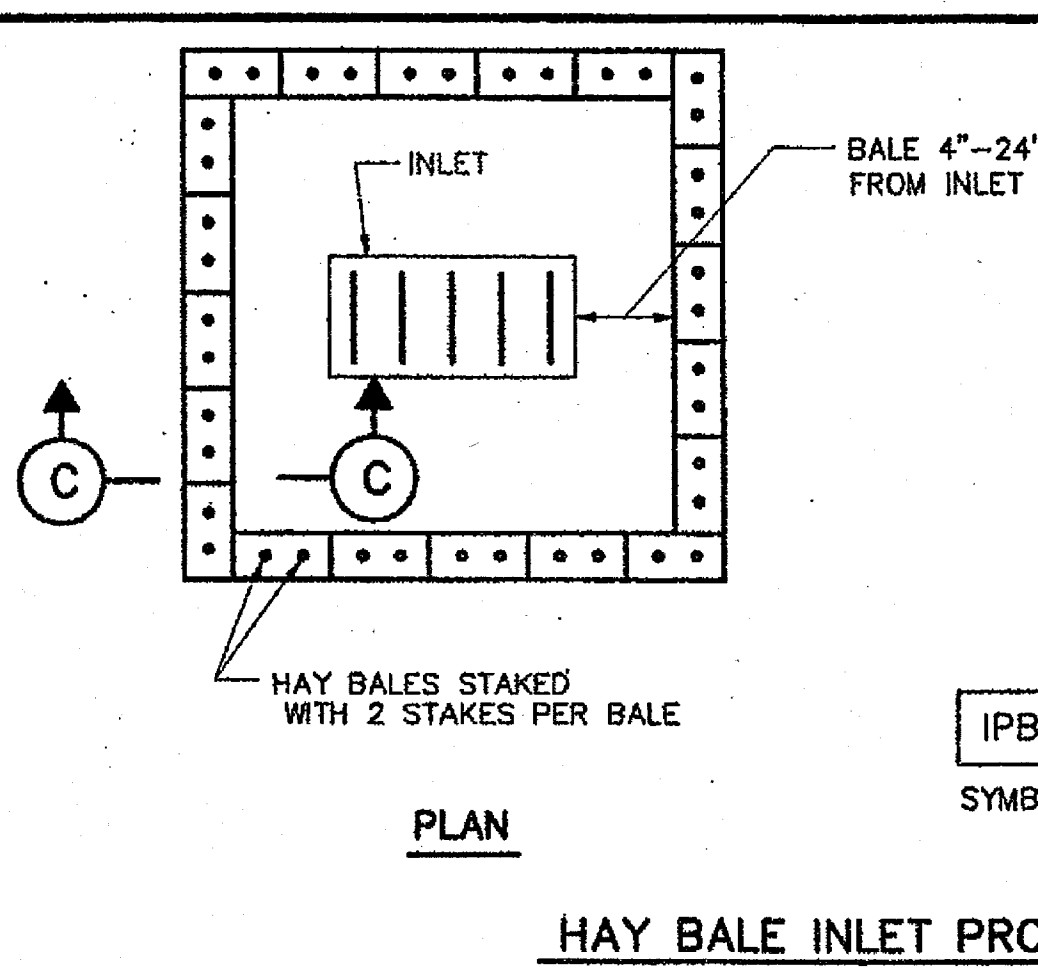
REINFORCED FILTER FABRIC BARRIER

SYMBOL: X (RFB) X



CONSTRUCTION NOTES:

1. 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
4. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.



CONSTRUCTION NOTES:

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
6. COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
7. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

STABILIZED CONSTRUCTION ACCESS

SYMBOL: X (SC) X

BENCHMARK:

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BY: _____ DATE: _____

TITLE: _____

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: [Signature] DEVELOPMENT COORDINATOR

DATE: 5/12/17

DATE	REVISION	BY

PLAT NAME: WATERVIEW TOWN CENTER SEC 2

CPC 101 FILE NO. 2015-2065

F.B.C.M.U.D. NO. 143

HARLEM ROAD TURN LANES

SWPPP DETAILS

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

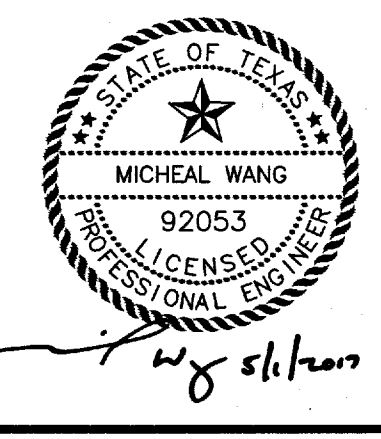
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LJA PROJECT NO.: 2145-2119

DRAWN: A.B./M.F. DESIGN: A.B./M.F. DATE: APRIL 2017

SCALE: AS SHOWN SHEET NO. 15 OF 16



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HARLEM ROAD TURN LANES - JOB NO. 2145-2119

