TEXAS DEPARTMENT OF TRANSPORTATION
DALLAS DISTRICT

WILLIAM L. HALE, P.E., DISTRICT ENGINEER
US 380 DESIGN SCHEMATIC, COLLIN COUNTY

CSJ NO. 0135-11-018, 0135-02-049, 0135-02-044
AND 0135-02-050
WEST OF CR 26 (DENTON/COLLIN CL) TO FM 2478 (CUSTER ROAD)

DESIGN SPEED

US 380 MAINLANES COUNTY LINE TO CUSTER RD = 45 MPH
RAMPS = 40 MPH
FRONTAGE ROADS = 40 MPH
CROSS STREETS = 45 MPH

AVERAGE DAILY TRAFFIC

AVERAGE DAILY TRAFFIC =	2008	2030	2040
US 380 =	26,200	45,600	52,400

TEXAS DEPARTMENT OF TRANSPORTATION; TRANSPORTATION PROGRAMMING AND PLANNING DIVISION MEMORANDUM, JUNE 18, 2008

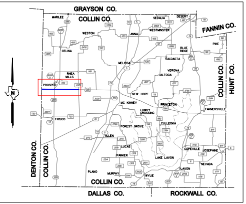
FUNCTIONAL CLASSIFICATION

US380 - URBAN PRINCIPAL ARTERIAL

SCALE

1"=100' HORIZONTAL
1"=10' VERTICAL

PROJECT LENGTH = 31,858.3 ft (6.034 miles)


GRAYSON CO.
COLLIN CO.
FANNIN CO.
COLLIN CO.
HUNT CO.
DENTON CO.
COLLIN CO.
COLLIN CO.
DALLAS CO.
ROCKWALL CO.
N
MARILEE
WESTON
SEDALIA
DESERT
WESTMINSTER
ANNA
CELINA
BLUE RIDGE
PIKE
MELISSA
VALDASTA
VERONA
ALTOGA
RHEA MILLS
PROSPER
NEW HOPE
MC KINNEY
PRINCETON
FARMERSVILLE
LOWRY CROSSING
FRISCO
FOREST GROVE
CULLEOKA
ALLEN
LUCAS
COPEVILLE
JOSEPHINE
PARKER
LAKE LAVON
NEVADA
LAVON
PLANO
MURPHY
WYLIE

LOCATION MAP

N.T.S.

INDEX OF SHEETS

SHEET 1 - MAIN LANES PLAN & PROFILE
SHEET 2 - MAIN LANES PLAN & PROFILE
SHEET 3 - MAIN LANES PLAN & CURVE DATA
SHEET 4 - PROFILES FRONTAGE ROADS, CROSS STREETS & RAMPS

LEGEND

🟥	PROPOSED MAINLANES
🟦	PROPOSED FRONTAGE ROAD
🟩	PROPOSED RAMPS
🟧	PROPOSED BRIDGES
🟨	PROPOSED SIDEWALK
▨	EXISTING ROAD TO BE REMOVED
⬜	FUTURE ROAD (BY OTHERS)
━ ━ ━	PROPOSED RETAINING WALL
── — ──	PROPOSED CENTERLINE
── — ──	EXISTING CENTERLINE
-·-·-·	PROPOSED RIGHT-OF-WAY
─┼┼┼─	CONTROL OF ACCESS
— — —	PERMANENT WATERLINE EASEMENT
- - - -	EXISTING 72" WATERLINE
-·-·-·	EXISTING RIGHT-OF-WAY
- - - -	EXISTING EASEMENT
─────	PROPOSED EASEMENT
┼┼┼┼┼	BNSF RAILROAD
── — ──	CITY/COUNTY LINE
— — —	PROPERTY LINE
←	LANE DIRECTIONAL INDICATOR

PREPARED BY AECOM
UNDER THE SUPERVISION OF:

RAJESH JANARTHANAN, P.E.

SERIAL NO. (TX PE NO. 99487)

DATE:_______________

DATE SUBMITTED
JUNE 25, 2012

DATE APPROVED

DATE REVISED

NOT INTENDED FOR
CONSTRUCTION,
BIDDING, OR
PERMIT PURPOSES

ROLL 3 OF 4

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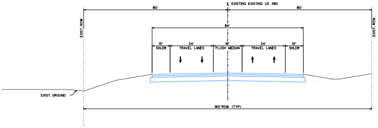
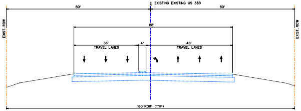
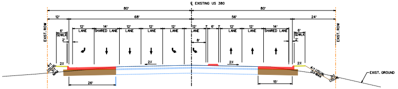
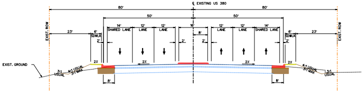
AECOM Technical Services Inc.- 3580


℄ EXISTING EXISTING US 380
80'
80'
EXIST. ROW
EXIST. ROW
84'
10' SHLDR
24' TRAVEL LANES
16' FLUSH MEDIAN
24' TRAVEL LANES
10' SHLDR
EXIST. GROUND
160' ROW (TYP)

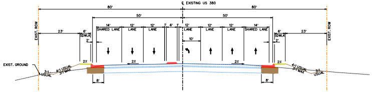

℄ EXISTING EXISTING US 380
80'
80'
EXIST. ROW
EXIST. ROW
88'
36' TRAVEL LANES
4'
48' TRAVEL LANES
160' ROW (TYP)


℄ EXISTING US 380
80'
80'
12'
68'
56'
24'
6' SDWLK
12' LANE
14' SHARED LANE
12' LANE
12' LANE
12' LANE
12' LANE
8'
12' LANE
12' LANE
14' SHARED LANE
6' SDWLK
EXIST. ROW
EXIST. ROW
EXIST. GROUND
26'
15'

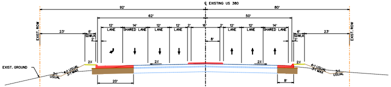
STA. 1376+50 TO STA. 1373+00
STA. 1297+00 TO STA. 1291+40


℄ EXISTING US 380
80'
80'
50'
50'
23'
23'
6' SDWLK
14' SHARED LANE
12' LANE
12' LANE
16'
8'
12' LANE
12' LANE
14' SHARED LANE
6' SDWLK
EXIST. ROW
EXIST. ROW
EXIST. GROUND
8'
8'

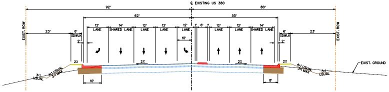
STA. 1373+00 TO STA. 1351+50
STA. 1343+00 TO STA. 1318+00
STA. 1310+00 TO STA. 1302+50
STA. 1291+40 TO STA. 1251+40
STA. 1247+40 TO STA. 1205+00


℄ EXISTING US 380
80'
80'
50'
50'
23'
23'
6' SDWLK
14' SHARED LANE
12' LANE
12' LANE
6'
12' LANE
12' LANE
12' LANE
14' SHARED LANE
6' SDWLK
10'
EXIST. ROW
EXIST. ROW
EXIST. GROUND
8'
8'

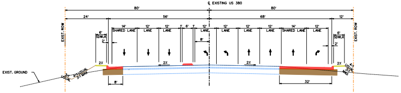
STA. 1351+50 TO STA. 1347+50
STA. 1318+00 TO STA. 1314+00


℄ EXISTING US 380
92'
80'
62'
50'
23'
23'
6' SDWLK
12' LANE
14' SHARED LANE
12' LANE
12' LANE
16'
12' LANE
12' LANE
14' SHARED LANE
6' SDWLK
8'
EXIST. ROW
EXIST. ROW
EXIST. GROUND
20'
8'

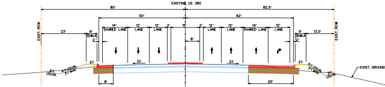
STA. 1347+50 TO STA. 1343+00
STA. 1205+00 TO STA. 1201+00


℄ EXISTING US 380
92'
80'
62'
50'
23'
23'
6' SDWLK
12' LANE
14' SHARED LANE
12' LANE
12' LANE
12' LANE
10'
12' LANE
12' LANE
14' SHARED LANE
6' SDWLK
EXIST. ROW
EXIST. ROW
EXIST. GROUND
10'
8'

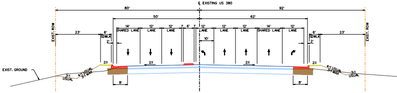
STA. 1314+00 TO STA. 1310+00


℄ EXISTING US 380
80'
80'
24'
56'
68'
12'
6' SDWLK
14' SHARED LANE
12' LANE
12' LANE
8'
12' LANE
12' LANE
12' LANE
12' LANE
14' SHARED LANE
12' LANE
6' SDWLK
EXIST. ROW
EXIST. ROW
EXIST. GROUND
8'
32'

STA. 1302+50 TO STA. 1297+00

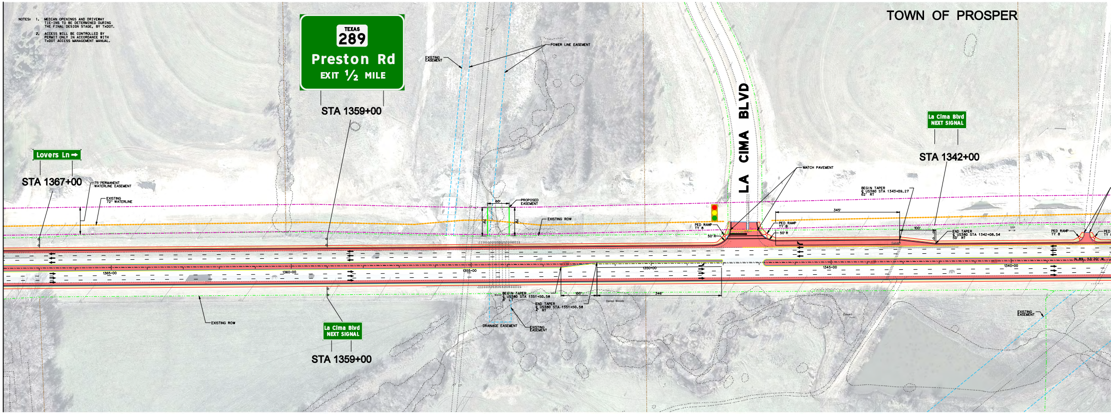

EXISTING US 380
80'
82.5'
50'
62'
23'
13.5'
6' SDWLK
14' SHARED LANE
12' LANE
12' LANE
16'
8'
12' LANE
12' LANE
14' SHARED LANE
12' LANE
6' SDWLK
EXIST. ROW
EXIST. ROW
EXIST. GROUND
8'
25'

STA. 1251+40 TO STA. 1247+40


℄ EXISTING US 380
80'
92'
50'
62'
23'
23'
6' SDWLK
14' SHARED LANE
12' LANE
12' LANE
12' LANE
10'
12' LANE
12' LANE
14' SHARED LANE
12' LANE
6' SDWLK
EXIST. ROW
EXIST. ROW
EXIST. GROUND
8'
8'

STA. 1201+00 TO STA. 1197+50

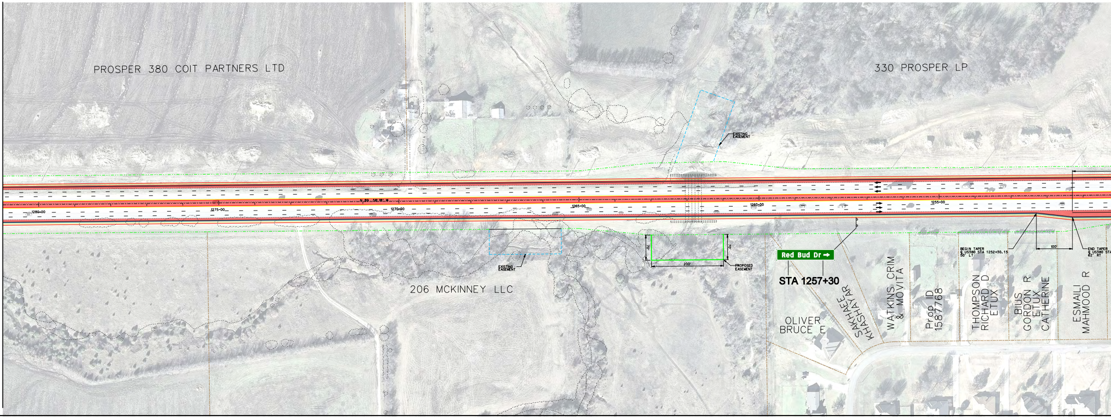
MATCHLINE US 380 STA. 1368+00
CSJ 0135-02-044
SEE ROLL 2 OF 4

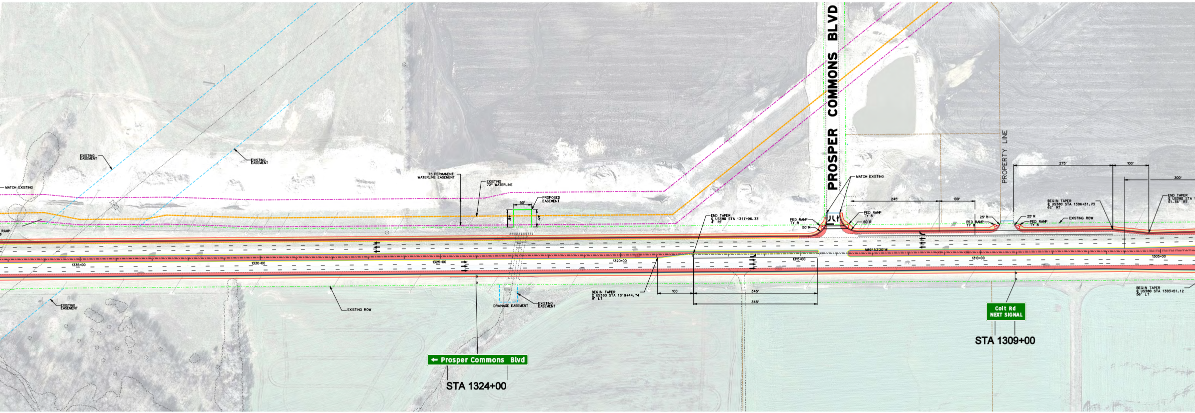

NOTES: 1. MEDIAN OPENINGS AND DRIVEWAY TIE-INS TO BE DETERMINED DURING THE FINAL DESIGN STAGE, BY TxDOT.

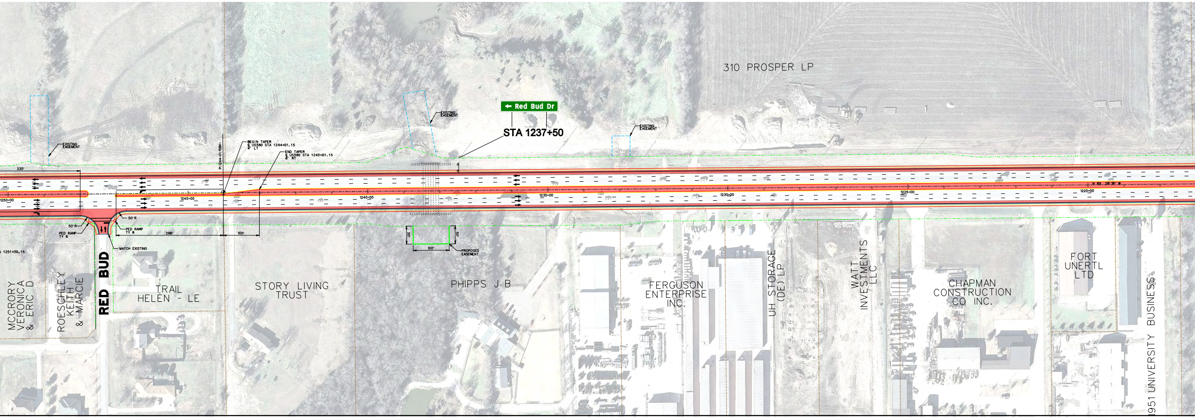
2. ACCESS WILL BE CONTROLLED BY PERMIT ONLY IN ACCORDANCE WITH TxDOT ACCESS MANAGEMENT MANUAL.

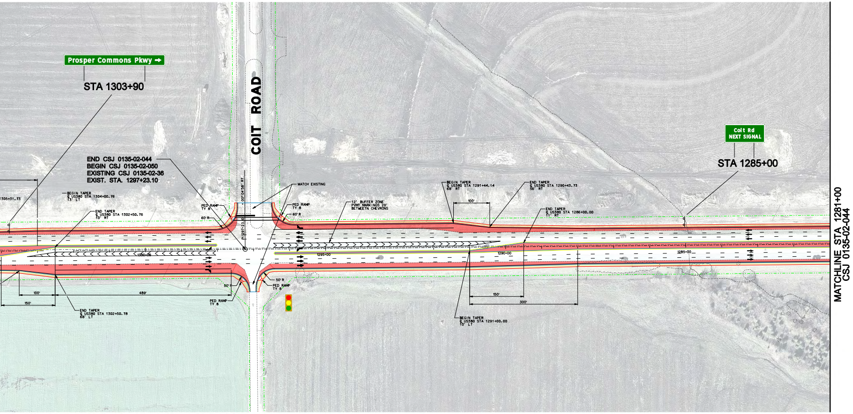
TOWN OF PROSPER
TEXAS 289
Preston Rd
EXIT 1/2 MILE
STA 1359+00
Lovers Ln ➡
STA 1367+00
75' PERMANENT WATERLINE EASEMENT
EXISTING 72" WATERLINE
EXISTING EASEMENT
POWER LINE EASEMENT
PROPOSED EASEMENT
EXISTING ROW
60'
LA CIMA BLVD
MATCH PAVEMENT
PED RAMP TY 8
50' R
345'
BEGIN TAPER
℄ US380 STA 1343+09.27
62' RT
100'
END TAPER
℄ US380 STA 1342+08.54
50' RT
La Cima Blvd NEXT SIGNAL
STA 1342+00
1365+00
1360+00
1355+00
1350+00
1345+00
1340+00
BEGIN TAPER
℄ US380 STA 1351+50.58
8' LT
END TAPER
℄ US380 STA 1351+50.58
4' RT
100'
346'
Dense Woods
DRAINAGE EASEMENT
EXISTING EASEMENT
EXISTING ROW
La Cima Blvd NEXT SIGNAL
STA 1359+00
Culvert

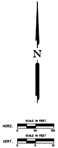
MATCHLINE STA 1281+00
CSJ 0135-02-044

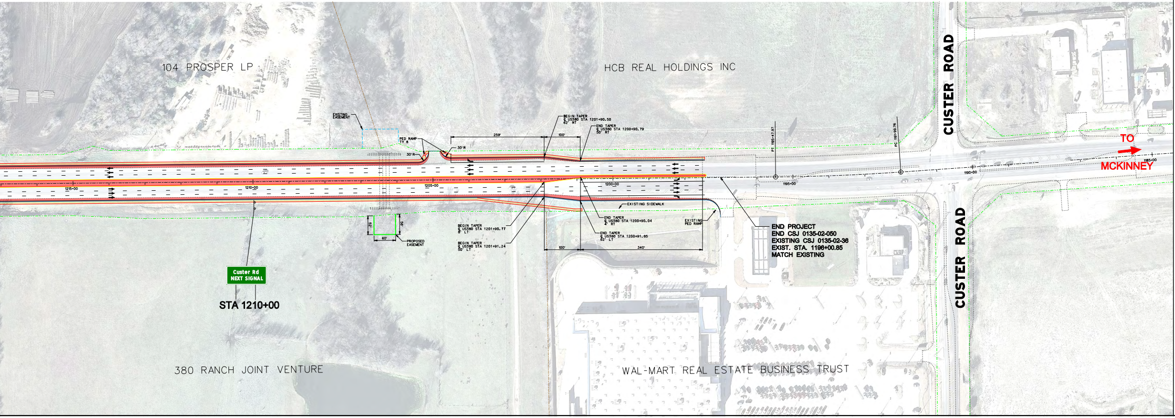

PROSPER 380 COIT PARTNERS LTD
330 PROSPER LP
EXISTING EASEMENT
1280+00
1275+00
1270+00
1265+00
1260+00
1255+00
EXISTING EASEMENT
200'
PROPOSED EASEMENT
206 MCKINNEY LLC
Red Bud Dr ➡
STA 1257+30
BEGIN TAPER
℄ US380 STA 1252+30.15
50' LT
100'
END TAPER
℄ US380 STA
62' RT
OLIVER BRUCE E
SAKHAEE KHASHAYAR
WATKINS CRIM & MOVITA
Prop ID 1587768
THOMPSON RICHARD D ETUX
BIUS GORDON R ETUX CATHERINE
ESMAILI MAHMOOD R


PROSPER COMMONS BLVD
PROPERTY LINE
EXISTING EASEMENT
EXISTING EASEMENT
MATCH EXISTING
RAMP
75' PERMANENT WATERLINE EASEMENT
EXISTING 72" WATERLINE
50'
48'
48'
PROPOSED EASEMENT
1335+00
1330+00
1325+00
1320+00
1315+00
1310+00
1305+00
N89°53'20"W
END TAPER ℄ US380 STA 1317+96.33 4' RT
BEGIN TAPER ℄ US380 STA 1319+44.74 8' LT
100'
345'
345'
PED RAMP TY 8
50' R
MATCH EXISTING
PED RAMP TY 8
50' R
245'
100'
25' R
PED RAMP TY 8
25' R
PED RAMP TY 8
EXISTING ROW
275'
100'
300'
BEGIN TAPER ℄ US380 STA 1306+31.73 62' RT
END TAPER ℄ US380 STA 51.36' RT
BEGIN TAPER ℄ US380 STA 1303+51.12 56' LT
EXISTING EASEMENT
EXISTING ROW
DRAINAGE EASEMENT
EXISTING EASEMENT
← Prosper Commons Blvd
STA 1324+00
Colt Rd NEXT SIGNAL
STA 1309+00


310 PROSPER LP
← Red Bud Dr
STA 1237+50
EXISTING EASEMENT
EXISTING EASEMENT
EXISTING EASEMENT
330'
PI 1244+01.15BK+
BEGIN TAPER ℄ US380 STA 1244+01.15 4' LT
END TAPER ℄ US380 STA 1243+01.15 8' RT
1250+00
1245+00
1240+00
1235+00
1230+00
1225+00
1220+00
N 89°56'18" W
50' R
50' R
PED RAMP TY 8
PED RAMP TY 8
298'
100'
MATCH EXISTING
1251+30.15
50'
50'
100'
PROPOSED EASEMENT
RED BUD
MCCRORY VERONICA & ERIC D
ROESCHLEY KEITH & MARCIE
TRAIL HELEN - LE
STORY LIVING TRUST
PHIPPS J B
FERGUSON ENTERPRISE INC.
UH STORAGE (DE) LP
WATT INVESTMENTS LLC
CHAPMAN CONSTRUCTION CO INC.
FORT UNERTL LTD
1951 UNIVERSITY BUSINESS


Prosper Commons Pkwy ➡
STA 1303+90
COIT ROAD
END CSJ 0135-02-044
BEGIN CSJ 0135-02-050
EXISTING CSJ 0135-02-36
EXIST. STA. 1297+23.10
1305+31.73
BEGIN TAPER
℄ US380 STA 1304+00.76
13' LT
END TAPER
℄ US380 STA 1302+50.76
10' RT
END TAPER
℄ US380 STA 1302+50.78
68' LT
100'
150'
489'
1300+00
PED RAMP
TY 8
60'R
50'R
00°04'58" RT.
PI 1297+23.10
MATCH EXISTING
12' BUFFER ZONE
PVMT MARKINGS 20'
BETWEETN CHEVRONS
1295+00
BEGIN TAPER
℄ US380 STA 1291+44.14
68' RT
END TAPER
℄ US380 STA 1290+43.73
56' RT
END TAPER
℄ US380 STA 1286+00.00
11' RT
BEGIN TAPER
℄ US380 STA 1291+00.00
10' LT
100'
150'
300'
1290+00
1285+00
Colt Rd
NEXT SIGNAL
STA 1285+00
MATCHLINE STA 1281+00
CSJ 0135-02-044


N
SCALE IN FEET
HORZ.
0
50
100
SCALE IN FEET
VERT.
0
5
10


104 PROSPER LP
HCB REAL HOLDINGS INC
EXISTING
EASEMENT
PED RAMP
TY 8
30'R
30'R
259'
100'
BEGIN TAPER
℄ US380 STA 1201+90.50
62' RT
END TAPER
℄ US380 STA 1200+90.79
50' RT
1215+00
1210+00
1205+00
1200+00
52'
56'
60'
PROPOSED
EASEMENT
BEGIN TAPER
℄ US380 STA 1201+90.77
8' LT
BEGIN TAPER
℄ US380 STA 1201+91.24
50' LT
EXISTING SIDEWALK
END TAPER
℄ US380 STA 1200+90.04
4' RT
END TAPER
℄ US380 STA 1200+91.85
62' LT
100'
340'
EXISTING
PED RAMP
Custer Rd
NEXT SIGNAL
STA 1210+00
PT 1195+47.97
PC 1191+99.76
1195+00
1190+00
1185+00
END PROJECT
END CSJ 0135-02-050
EXISTING CSJ 0135-02-36
EXIST. STA. 1196+00.85
MATCH EXISTING
CUSTER ROAD
CUSTER ROAD
TO
MCKINNEY
380 RANCH JOINT VENTURE
WAL-MART REAL ESTATE BUSINESS TRUST

US 380 MAINLANES

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Beginning chain US380INT description
----------------------------------------------------------------------------

Point USINT01       X   2,474,745.3043 Y    7,131,605.3396 Sta     1100+00.00

Course from  USINT01 to PC US380INT-1 N 88°  34' 02.31" E Dist 1,977.0348

                               Curve Data
                              *----------*
Curve US380INT-1
P.I. Station          1121+13.42  X       2,476,858.0615  Y        7,131,658.1807
Delta        -       1°  21' 49.56" (RT)
Degree       -       0°  30' 00.00"
Tangent      -            136.3831
Length       -            272.7534
Radius       -          11,459.1559
External  -               0.8116
Long Chord  -             272.7469
Mid. Ord.  -              0.8115
P.C. Station          1119+77.03  X       2,476,721.7210  Y        7,131,654.7708
P.T. Station          1122+49.79  X       2,476,994.4445  Y        7,131,658.3448
C.C.                        X       2,477,008.2297  Y        7,120,199.1972
Back         - N  88°  34' 02.31" E
Ahead        - N  89°  55' 51.87" E
Chord Bear   - N  89°  14' 57.09" E

Course from  PT US380INT-1 to PC US380INT-2 N 89°  55' 51.87" E Dist 3,158.0354

                               Curve Data
                              *----------*
Curve US380INT-2
P.I. Station          1156+30.94  X       2,480,375.5907  Y        7,131,662.4122
Delta        -       5°  00' 35.72" (RT)
Degree       -       1°  07' 24.41"
Tangent      -            223.1132
Length       -            445.9422
Radius       -           5,100.0000
External  -               4.8780
Long Chord  -             445.8001
Mid. Ord.  -              4.8734
P.C. Station          1154+07.82  X       2,480,152.4776  Y        7,131,662.1438
P.T. Station          1158+53.77  X       2,480,597.8749  Y        7,131,643.1955
C.C.                        X       2,480,158.6128  Y        7,126,562.1475
Back         - N  89°  55' 51.87" E
Ahead        - S  85°  03' 32.41" E
Chord Bear   - S  87°  33' 50.27" E

Course from  PT US380INT-2 to PC US380INT-3 S 85°  03' 32.41" E Dist 200.8756

                               Curve Data
                              *----------*
Curve US380INT-3
P.I. Station          1162+77.75  X       2,481,020.2877  Y        7,131,606.6775
Delta        -       5°  00' 35.69" (LT)
Degree       -       1°  07' 24.41"
Tangent      -            223.1128
Length       -            445.9413
Radius       -           5,100.0000
External  -               4.8780
Long Chord  -             445.7993
Mid. Ord.  -              4.8733
P.C. Station          1160+54.64  X       2,480,798.0040  Y        7,131,625.8941
P.T. Station          1165+00.58  X       2,481,243.4004  Y        7,131,606.9458
C.C.                        X       2,481,237.2660  Y        7,136,706.9422
Back         - S  85°  03' 32.41" E
Ahead        - N  89°  55' 51.90" E
Chord Bear   - S  87°  33' 50.26" E

Course from  PT US380INT-3 to USINT02 N 89°  55' 51.90" E Dist 2,745.6162

Point USINT02              X   2,483,989.0146 Y    7,131,610.2483 Sta     1192+46.20

Course from  USINT02 to PC US380INT-4 S 89°  53' 48.50" E Dist 2,517.5525

                               Curve Data
                              *----------*
Curve US380INT-4
P.I. Station          1219+46.83  X       2,486,689.6396  Y        7,131,605.3843
Delta        -       0°  54' 56.62" (LT)
Degree       -       0°  15' 00.36"
Tangent      -            183.0770
Length       -            366.1462
Radius       -          22,909.2706
External  -               0.7315
Long Chord  -             366.1423
Mid. Ord.  -              0.7315
P.C. Station          1217+63.75  X       2,486,506.5630  Y        7,131,605.7140
P.T. Station          1221+29.90  X       2,486,872.6982  Y        7,131,607.9805
C.C.                        X       2,486,547.8243  Y        7,154,514.9475
Back         - S  89°  53' 48.50" E
Ahead        - N  89°  11' 14.88" E
Chord Bear   - N  89°  38' 43.19" E

Course from  PT US380INT-4 to PC US380INT-5 N 89°  11' 14.88" E Dist 1,586.1057

                               Curve Data
                              *----------*
Curve US380INT-5
P.I. Station          1237+76.36  X       2,488,518.9932  Y        7,131,631.3288
Delta        -       0°  48' 45.70" (RT)
Degree       -       0°  40' 23.79"
Tangent      -             60.3548
Length       -            120.7075
Radius       -           8,510.0000
External  -               0.2140
Long Chord  -             120.7065
Mid. Ord.  -              0.2140
P.C. Station          1237+16.00  X       2,488,458.6445  Y        7,131,630.4729
P.T. Station          1238+36.71  X       2,488,579.3479  Y        7,131,631.3286
C.C.                        X       2,488,579.3239  Y        7,123,121.3286
Back         - N  89°  11' 14.88" E
Ahead        - S  89°  59' 59.42" E
Chord Bear   - N  89°  35' 37.73" E

Course from  PT US380INT-5 to PC US380INT-6 S 89°  59' 59.42" E Dist 316.4263

                               Curve Data
                              *----------*
Curve US380INT-6
P.I. Station          1244+23.01  X       2,489,165.6482  Y        7,131,631.3269
Delta        -       6°  03' 29.27" (LT)
Degree       -       1°  07' 24.41"
Tangent      -            269.8740
Length       -            539.2451
Radius       -           5,100.0000
External  -               7.1354
Long Chord  -             538.9939
Mid. Ord.  -              7.1254
P.C. Station          1241+53.14  X       2,488,895.7742  Y        7,131,631.3277
P.T. Station          1246+92.38  X       2,489,434.0151  Y        7,131,659.8080
C.C.                        X       2,488,895.7886  Y        7,136,731.3277
Back         - S  89°  59' 59.42" E
Ahead        - N  83°  56' 31.31" E
Chord Bear   - N  86°  58' 15.95" E

Course from  PT US380INT-6 to PC US380INT-7 N 83°  56' 31.31" E Dist 201.7152

                               Curve Data
                              *----------*
Curve US380INT-7
P.I. Station          1251+44.71  X       2,489,883.8177  Y        7,131,707.5443
Delta        -       5°  37' 35.36" (RT)
Degree       -       1°  07' 24.41"
Tangent      -            250.6133
Length       -            500.8238
Radius       -           5,100.0000
External  -               6.1538
Long Chord  -             500.6226
Mid. Ord.  -              6.1464
P.C. Station          1248+94.10  X       2,489,634.6039  Y        7,131,681.0959
P.T. Station          1253+94.92  X       2,490,134.4239  Y        7,131,709.4316
C.C.                        X       2,490,172.8304  Y        7,126,609.5762
Back         - N  83°  56' 31.31" E
Ahead        - N  89°  34' 06.67" E
Chord Bear   - N  86°  45' 18.99" E

Course from  PT US380INT-7 to USINT03 N 89°  34' 06.67" E Dist 445.5373

Point USINT03              X   2,490,579.9485 Y    7,131,712.7868 Sta     1258+40.46

Course from  USINT03 to USINT04 N 89°  34' 06.67" E Dist 1,761.6084

Point USINT04              X   2,492,341.5070 Y    7,131,726.0529 Sta     1276+02.07

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Ending chain US380INT description
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FRONTAGE ROADS

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Beginning chain FRWBLOVDNT description
----------------------------------------------------------------------------

                               Curve Data
                              *----------*
Curve FRWBLOVDNT-1
P.I. Station          12+30.75    N       7,131,659.69    E        2,481,220.67
Delta        -       8°  52' 02.75" (LT)
Degree       -       1°  55' 30.94"
Tangent      -             230.75
Length       -             460.58
Radius       -            2,976.00
External  -                 8.93
Long Chord  -              460.12
Mid. Ord.  -                8.91
P.C. Station          10+00.00    N       7,131,671.00    E        2,480,990.20
P.T. Station          14+60.58    N       7,131,684.05    E        2,481,450.14
C.C.                        N       7,134,643.42    E        2,481,136.03
Back         - S  87°  11' 28.56" E
Ahead        - N  83°  56' 28.69" E
Chord Bear   - N  88°  22' 30.07" E

                               Curve Data
                              *----------*
Curve FRWBLOVDNT-2
P.I. Station          14+77.66    N       7,131,685.85    E        2,481,467.12
Delta        -       0°  39' 26.80" (LT)
Degree       -       1°  55' 30.94"
Tangent      -              17.07
Length       -              34.15
Radius       -            2,976.00
External  -                 0.05
Long Chord  -               34.15
Mid. Ord.  -                0.05
P.C. Station          14+60.58    N       7,131,684.05    E        2,481,450.14
P.T. Station          14+94.73    N       7,131,687.85    E        2,481,484.07
C.C.                        N       7,134,643.42    E        2,481,136.03
Back         - N  83°  56' 28.69" E
Ahead        - N  83°  17' 01.89" E
Chord Bear   - N  83°  36' 45.29" E

                               Curve Data
                              *----------*
Curve FRWBLOVDNT-3
P.I. Station          17+27.02    N       7,131,715.01 E        2,481,714.77
Delta        -       6°  38' 50.01" (RT)
Degree       -       1°  25' 56.62"
Tangent      -             232.29
Length       -             464.06
Radius       -            4,000.00
External  -                 6.74
Long Chord  -              463.80
Mid. Ord.  -                6.73
P.C. Station          14+94.73    N       7,131,687.85    E        2,481,484.07
P.T. Station          19+58.80    N       7,131,715.29    E        2,481,947.06
C.C.                        N       7,127,715.30    E        2,481,951.87
Back         - N  83°  17' 01.89" E
Ahead        - N  89°  55' 51.90" E
Chord Bear   - N  86°  36' 26.90" E

Course from  PT FRWBLOVDNT-3 to FRWBLOVDNT2 N 89 33/64  55' 51.90" E Dist 456.29

Point FRWBLOVDNT2      N     7,131,715.84 E     2,482,403.35 Sta      24+15.09

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Ending chain FRWBLOVDNT description
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Beginning chain FREBDNTRR description
----------------------------------------------------------------------------

Point EDNTRR01      X   2,482,751.2491 Y    7,131,496.2594 Sta      10+00.00

Course from  EDNTRR01 to EDNTRR02 N 89°  55' 51.90" E Dist 1,237.7442

Point EDNTRR02             X   2,483,988.9924 Y    7,131,497.7482 Sta      22+37.74

Course from  EDNTRR02 to PC FREBDNTRR-1 S 89°  53' 48.50" E Dist 210.9875

                               Curve Data
                              *----------*
Curve FREBDNTRR-1
P.I. Station          25+01.10    X       2,484,252.3512  Y        7,131,497.2739
Delta        -       3°  00' 00.00" (LT)
Degree       -       2°  51' 53.24"
Tangent      -             52.3718
Length       -            104.7197
Radius       -           2,000.0000
External  -               0.6856
Long Chord  -             104.7078
Mid. Ord.  -              0.6853
P.C. Station          24+48.73    X       2,484,199.9795  Y        7,131,497.3682
P.T. Station          25+53.45    X       2,484,304.6562  Y        7,131,499.9206
C.C.                        X       2,484,203.5818  Y        7,133,497.3650
Back         - S  89°  53' 48.50" E
Ahead        - N  87°  06' 11.50" E
Chord Bear   - N  88°  36' 11.50" E

Course from  PT FREBDNTRR-1 to PC FREBDNTRR-2 N 87°  06' 11.50" E Dist 124.5442

                               Curve Data
                              *----------*
Curve FREBDNTRR-2
P.I. Station          27+30.37    X       2,484,481.3461 Y        7,131,508.8615
Delta        -       3°  00' 00.00" (RT)
Degree       -       2°  51' 53.24"
Tangent      -             52.3718
Length       -            104.7198
Radius       -           2,000.0000
External  -               0.6856
Long Chord  -             104.7078
Mid. Ord.  -              0.6854
P.C. Station          26+78.00    X       2,484,429.0412  Y        7,131,506.2147
P.T. Station          27+82.72    X       2,484,533.7179  Y        7,131,508.7672
C.C.                        X       2,484,530.1157  Y        7,129,508.7704
Back         - N  87°  06' 11.50" E
Ahead        - S  89°  53' 48.50" E
Chord Bear   - N  88°  36' 11.50" E

Course from  PT FREBDNTRR-2 to EDNTRR03 S 89°  53' 48.50" E Dist 429.8772

Point EDNTRR03             X   2,484,963.5944 Y    7,131,507.9929 Sta      32+12.59

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Ending chain FREBDNTRR description
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Beginning chain FRWBDNTRR description
----------------------------------------------------------------------------

Point WBDNTRR01     X   2,482,749.3616 Y    7,131,716.2573 Sta      10+00.00

Course from  WBDNTRR01 to PC FRWBDNTRR-1 N 89°  55' 51.90" E Dist 1,366.3749

                               Curve Data
                              *----------*
Curve FRWBDNTRR-1
P.I. Station          24+80.40    X       2,484,229.7609  Y        7,131,718.0380
Delta        -       4°  21' 12.09" (LT)
Degree       -       1°  54' 35.49"
Tangent      -            114.0255
Length       -            227.9413
Radius       -           3,000.0000
External  -               2.1662
Long Chord  -             227.8864
Mid. Ord.  -              2.1646
P.C. Station          23+66.37    X       2,484,115.7355  Y        7,131,717.9008
P.T. Station          25+94.32    X       2,484,343.4469  Y        7,131,726.8301
C.C.                        X       2,484,112.1270  Y        7,134,717.8987
Back         - N  89°  55' 51.90" E
Ahead        - N  85°  34' 39.81" E
Chord Bear   - N  87°  45' 15.86" E

Course from  PT FRWBDNTRR-1 to PC FRWBDNTRR-2 N 85°  34' 39.81" E Dist 406.8637

                               Curve Data
                              *----------*
Curve FRWBDNTRR-2
P.I. Station          31+19.72    X       2,484,867.2845  Y        7,131,767.3421
Delta        -       4°  31' 31.69" (RT)
Degree       -       1°  54' 35.49"
Tangent      -            118.5381
Length       -            236.9530
Radius       -           3,000.0000
External  -               2.3410
Long Chord  -             236.8914
Mid. Ord.  -              2.3391
P.C. Station          30+01.18    X       2,484,749.0993  Y        7,131,758.2020
P.T. Station          32+38.13    X       2,484,985.8224  Y        7,131,767.1286
C.C.                        X       2,484,980.4192  Y        7,128,767.1334
Back         - N  85°  34' 39.87" E
Ahead        - S  89°  53' 48.50" E
Chord Bear   - N  87°  50' 25.66" E

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Ending chain FRWBDNTRR description
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Beginning chain FREBRR289 description
----------------------------------------------------------------------------

Point EBRR01        X   2,485,258.2139 Y    7,131,504.4621 Sta      10+00.00

Course from  EBRR01 to PC FREBRR289-1 S 89°  53' 48.50" E Dist 571.9631

                               Curve Data
                              *----------*
Curve FREBRR289-1
P.I. Station          16+11.24    X       2,485,869.4549  Y        7,131,503.3612
Delta        -       3°  00' 00.00" (RT)
Degree       -       3°  49' 10.99"
Tangent      -             39.2789
Length       -             78.5398
Radius       -           1,500.0000
External  -               0.5142
Long Chord  -              78.5308
Mid. Ord.  -              0.5140
P.C. Station          15+71.96    X       2,485,830.1761 Y        7,131,503.4319
P.T. Station          16+50.50    X       2,485,908.6762  Y        7,131,501.2349
C.C.                        X       2,485,827.4745  Y        7,130,003.4344
Back         - S  89°  53' 48.50" E
Ahead        - S  86°  53' 48.50" E
Chord Bear   - S  88°  23' 48.50" E

Course from  PT FREBRR289-1 to PC FREBRR289-2 S 86°  53' 48.50" E Dist 233.3339

                               Curve Data
                              *----------*
Curve FREBRR289-2
P.I. Station          19+35.11    X       2,486,192.8694  Y        7,131,485.8276
Delta        -       3°  54' 56.62" (LT)
Degree       -       3°  49' 10.99"
Tangent      -             51.2767
Length       -            102.5135
Radius       -           1,500.0000
External  -               0.8762
Long Chord  -             102.4935
Mid. Ord.  -              0.8757
P.C. Station          18+83.84    X       2,486,141.6679  Y        7,131,488.6035
P.T. Station          19+86.35    X       2,486,244.1410  Y        7,131,486.5548
C.C.                        X       2,486,222.8696  Y        7,132,986.4039
Back         - S  86°  53' 48.50" E
Ahead        - N  89°  11' 14.88" E
Chord Bear   - S  88°  51' 16.81" E

Course from  PT FREBRR289-2 to EBRR02 N 89°  11' 14.88" E Dist 1,771.4637

Point EBRR02               X   2,488,015.4265 Y    7,131,511.6757 Sta      37+57.81

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Ending chain FREBRR289 description
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Beginning chain FRSBRRUTURN description
----------------------------------------------------------------------------

Point FRSBRR01      X   2,485,317.7848 Y    7,131,801.5625 Sta      10+00.00

Course from  FRSBRR01 to FRSBRR02 S 11°  20' 16.39" W Dist 336.5917

Point FRSBRR02             X   2,485,251.6127 Y    7,131,471.5395 Sta      13+36.59

----------------------------------------------------------------------------
Ending chain FRSBRRUTURN description
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Beginning chain FRNBRRUTURN description
----------------------------------------------------------------------------

                               Curve Data
                              *----------*
Curve FRNBRRUTURN-1
P.I. Station          10+91.36    X       2,485,077.1087  Y        7,131,766.9642
Delta        -     101°  14' 03.73" (RT)
Degree       -      76°  23' 39.74"
Tangent      -             91.3623
Length       -            132.5155
Radius       -             75.0000
External  -              43.2035
Long Chord  -             115.9386
Mid. Ord.  -             27.4126
P.C. Station          10+00.00    X       2,484,985.7465  Y        7,131,767.1287
P.T. Station          11+32.52    X       2,485,059.1478  Y        7,131,677.3847
C.C.                        X       2,484,985.6114  Y        7,131,692.1288
Back         - S  89°  53' 48.50" E
Ahead        - S  11°  20' 15.22" W
Chord Bear   - S  39°  16' 46.64" E

Course from  PT FRNBRRUTURN-1 to PC FRNBRRUTURN-2 S 11°  20' 15.22" W Dist 111.3061

                               Curve Data
                              *----------*
Curve FRNBRRUTURN-2
P.I. Station          13+05.39    X       2,485,025.1623  Y        7,131,507.8820
Delta        -      78°  45' 56.27" (RT)
Degree       -      76°  23' 39.74"
Tangent      -             61.5680
Length       -            103.1040
Radius       -             75.0000
External  -              22.0341
Long Chord  -              95.1748
Mid. Ord.  -             17.0307
P.C. Station          12+43.82    X       2,485,037.2659  Y        7,131,568.2486
P.T. Station          13+46.93    X       2,484,963.5944  Y        7,131,507.9929
C.C.                        X       2,484,963.7294  Y        7,131,582.9928
Back         - S  11°  20' 15.22" W
Ahead        - N  89°  53' 48.50" W
Chord Bear   - S  50°  43' 13.36" W

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Ending chain FRNBRRUTURN description
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Beginning chain FRWBRR289 description
----------------------------------------------------------------------------

Point WBRR01        X   2,485,310.7631 Y    7,131,766.5433 Sta      10+00.00

Course from  WBRR01 to PC FRWBRR289-1 S 89°  53' 48.50" E Dist 15.3030

                               Curve Data
                              *----------*
Curve FRWBRR289-1
P.I. Station          11+01.05    X       2,485,411.8096  Y        7,131,766.3613
Delta        -       3°  16' 27.38" (RT)
Degree       -       1°  54' 35.49"
Tangent      -             85.7436
Length       -            171.4404
Radius       -           3,000.0000
External  -               1.2251
Long Chord  -             171.4171
Mid. Ord.  -              1.2246
P.C. Station          10+15.30    X       2,485,326.0661 Y        7,131,766.5158
P.T. Station          11+86.74    X       2,485,497.4042  Y        7,131,761.3099
C.C.                        X       2,485,320.6629  Y        7,128,766.5206
Back         - S  89°  53' 48.50" E
Ahead        - S  86°  37' 21.12" E
Chord Bear   - S  88°  15' 34.81" E

Course from  PT FRWBRR289-1 to PC FRWBRR289-2 S 86°  37' 21.12" E Dist 753.0584

                               Curve Data
                              *----------*
Curve FRWBRR289-2
P.I. Station          19+96.99    X       2,486,306.2462  Y        7,131,713.5750
Delta        -       3°  16' 27.38" (LT)
Degree       -       2°  51' 48.09"
Tangent      -             57.1910
Length       -            114.3508
Radius       -           2,001.0000
External  -               0.8171
Long Chord  -             114.3352
Mid. Ord.  -              0.8168
P.C. Station          19+39.80    X       2,486,249.1546  Y        7,131,716.9444
P.T. Station          20+54.15    X       2,486,363.4370  Y        7,131,713.4720
C.C.                        X       2,486,367.0410  Y        7,133,714.4688
Back         - S  86°  37' 21.12" E
Ahead        - S  89°  53' 48.50" E
Chord Bear   - S  88°  15' 34.81" E

Course from  PT FRWBRR289-2 to PC FRWBRR289-3 S 89°  53' 48.50" E Dist 143.3226

                               Curve Data
                              *----------*
Curve FRWBRR289-3
P.I. Station          23+79.69    X       2,486,688.9770  Y        7,131,712.8857
Delta        -       0°  54' 56.62" (LT)
Degree       -       0°  15' 04.60"
Tangent      -            182.2179
Length       -            364.4280
Radius       -          22,801.7706
External  -               0.7281
Long Chord  -             364.4242
Mid. Ord.  -              0.7281
P.C. Station          21+97.48    X       2,486,506.7594  Y        7,131,713.2139
P.T. Station          25+61.90    X       2,486,871.1766  Y        7,131,715.4697
C.C.                        X       2,486,547.8272  Y        7,154,514.9475
Back         - S  89°  53' 48.50" E
Ahead        - N  89°  11' 14.88" E
Chord Bear   - N  89°  38' 43.19" E

Course from  PT FRWBRR289-3 to WBRR02 N 89°  11' 14.88" E Dist 1,203.5891

Point WBRR02               X   2,488,074.6446 Y    7,131,732.5377 Sta      37+65.49

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Ending chain FRWBRR289 description
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Beginning chain DNTEASTUTURN description
----------------------------------------------------------------------------

Point EUTURN01      X   2,482,900.8316 Y    7,131,668.4395 Sta      10+00.00

Course from  EUTURN01 to PC DNTEASTUTURN-1 S 89°  55' 51.90" W Dist 32.9582

                               Curve Data
                              *----------*
Curve DNTEASTUTURN-1
P.I. Station          10+84.16    X       2,482,816.6700  Y        7,131,668.3382
Delta        -      90°  13' 41.22" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             51.2035
Length       -             80.3137
Radius       -             51.0000
External  -              21.2689
Long Chord  -              72.2683
Mid. Ord.  -             15.0094
P.C. Station          10+32.96    X       2,482,867.8734  Y        7,131,668.3998
P.T. Station          11+13.27    X       2,482,816.9354  Y        7,131,617.1355
C.C.                        X       2,482,867.9347  Y        7,131,617.3999
Back         - S  89°  55' 51.90" W
Ahead        - S   0°  17' 49.32" E
Chord Bear   - S  44°  49' 01.29" W

Course from  PT DNTEASTUTURN-1 to PC DNTEASTUTURN-2 S 0°  17' 49.32" E Dist 46.0004

                               Curve Data
                              *----------*
Curve DNTEASTUTURN-2
P.I. Station          12+10.07    X       2,482,817.4372  Y        7,131,520.3391
Delta        -      89°  46' 18.78" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             50.7974
Length       -             79.9076
Radius       -             51.0000
External  -              20.9617
Long Chord  -              71.9812
Mid. Ord.  -             14.8658
P.C. Station          11+59.27    X       2,482,817.1739  Y        7,131,571.1357
P.T. Station          12+39.18    X       2,482,868.2346  Y        7,131,520.4002
C.C.                        X       2,482,868.1732  Y        7,131,571.4001
Back         - S   0°  17' 49.32" E
Ahead        - N  89°  55' 51.90" E
Chord Bear   - S  45°  10' 58.71" E

Course from  PT DNTEASTUTURN-2 to EUTURN02 N 89°  55' 51.90" E Dist 41.2889

Point EUTURN02             X   2,482,909.5234 Y    7,131,520.4498 Sta      12+80.47

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Ending chain DNTEASTUTURN description
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Beginning chain DNTWESTUTURN description
----------------------------------------------------------------------------

Point WUTURN01      X   2,482,246.8529 Y    7,131,543.6528 Sta      10+00.00

Course from  WUTURN01 to PC DNTWESTUTURN-1 N 89°  55' 51.90" E Dist 54.2338

                               Curve Data
                              *----------*
Curve DNTWESTUTURN-1
P.I. Station          11+07.07    X       2,482,353.9251 Y        7,131,543.7816
Delta        -      92°  01' 43.16" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             52.8385
Length       -             81.9164
Radius       -             51.0000
External  -              22.4364
Long Chord  -              73.3904
Mid. Ord.  -             15.5816
P.C. Station          10+54.23    X       2,482,301.0867  Y        7,131,543.7180
P.T. Station          11+36.15    X       2,482,351.9912  Y        7,131,596.5846
C.C.                        X       2,482,301.0253  Y        7,131,594.7180
Back         - N  89°  55' 51.90" E
Ahead        - N   2°  05' 51.26" W
Chord Bear   - N  43°  55' 00.32" E

Course from  PT DNTWESTUTURN-1 to PC DNTWESTUTURN-2 N 2°  05' 51.26" W Dist 46.0288

                               Curve Data
                              *----------*
Curve DNTWESTUTURN-2
P.I. Station          12+31.40    X       2,482,348.5047  Y        7,131,691.7751
Delta        -      87°  58' 16.84" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             49.2255
Length       -             78.3049
Radius       -             51.0000
External  -              19.8812
Long Chord  -              70.8368
Mid. Ord.  -             14.3048
P.C. Station          11+82.18    X       2,482,350.3064  Y        7,131,642.5826
P.T. Station          12+60.48    X       2,482,299.2793  Y        7,131,691.7159
C.C.                        X       2,482,299.3406  Y        7,131,640.7160
Back         - N   2°  05' 51.26" W
Ahead        - S  89°  55' 51.90" W
Chord Bear   - N  46°  04' 59.68" W

Course from  PT DNTWESTUTURN-2 to WUTURN02 S 89°  55' 51.90" W Dist 28.1085

Point WUTURN02             X   2,482,271.1708 Y    7,131,691.6821 Sta      12+88.59

----------------------------------------------------------------------------
Ending chain DNTWESTUTURN description
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```
Beginning chain FREBDNT description
----------------------------------------------------------------------------

Point FREBDNT01     X   2,482,404.9977 Y    7,131,495.8430 Sta      10+00.00

Course from  FREBDNT01 to FREBDNT02 N 89°  55' 51.90" E Dist 346.2516

Point FREBDNT02            X   2,482,751.2491 Y    7,131,496.2594 Sta      13+46.25

----------------------------------------------------------------------------
Ending chain FREBDNT description
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```
Beginning chain FRWBDNT description
----------------------------------------------------------------------------

Point FRWBDNT01     X   2,482,403.3540 Y    7,131,715.8411 Sta      10+00.00

Course from  FRWBDNT01 to FRWBDNT02 N 89°  55' 51.90" E Dist 346.0078

Point FRWBDNT02            X   2,482,749.3616 Y    7,131,716.2573 Sta      13+46.01

----------------------------------------------------------------------------
Ending chain FRWBDNT description
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```
Beginning chain FREB289 description
----------------------------------------------------------------------------

Point FREBSH01      X   2,488,001.7107 Y    7,131,511.4812 Sta      10+00.00

Course from  FREBSH01 to FREBSH02 N 89°  11' 14.88" E Dist 237.9843

Point FREBSH02             X   2,488,239.6710 Y    7,131,514.8560 Sta      12+37.98

----------------------------------------------------------------------------
Ending chain FREB289 description
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```
Beginning chain FRWB289 description
----------------------------------------------------------------------------

Point FRWBSH01      X   2,488,074.6446 Y    7,131,732.5377 Sta      10+00.00

Course from  FRWBSH01 to FRWBSH02 N 89°  11' 14.88" E Dist 242.2952

Point FRWBSH02             X   2,488,316.9155 Y    7,131,735.9736 Sta      12+42.30

----------------------------------------------------------------------------
Ending chain FRWB289 description
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```
Beginning chain SH289EASTUTUR description
----------------------------------------------------------------------------

Point SHEUTURN01    X   2,488,420.3768 Y    7,131,689.4370 Sta      10+00.00

Course from  SHEUTURN01 to PC SH289EASTUTUR-1 S 89°  11' 14.89" W Dist 34.4396

                               Curve Data
                              *----------*
Curve SH289EASTUTUR-1
P.I. Station          10+69.64    X       2,488,350.7470  Y        7,131,688.4495
Delta        -      69°  13' 20.55" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             35.1972
Length       -             61.6161
Radius       -             51.0000
External  -              10.9665
Long Chord  -              57.9365
Mid. Ord.  -              9.0257
P.C. Station          10+34.44    X       2,488,385.9407  Y        7,131,688.9487
P.T. Station          10+96.06    X       2,488,338.7290  Y        7,131,655.3676
C.C.                        X       2,488,386.6639  Y        7,131,637.9538
Back         - S  89°  11' 14.89" W
Ahead        - S  19°  57' 54.33" W
Chord Bear   - S  54°  34' 34.61" W

                               Curve Data
                              *----------*
Curve SH289EASTUTUR-2
P.I. Station          11+27.39    X       2,488,328.0307  Y        7,131,625.9184
Delta        -       0°  54' 48.39" (LT)
Degree       -       1°  27' 27.73"
Tangent      -             31.3322
Length       -             62.6631
Radius       -           3,930.5557
External  -               0.1249
Long Chord  -              62.6624
Mid. Ord.  -              0.1249
P.C. Station          10+96.06    X       2,488,338.7290  Y        7,131,655.3676
P.T. Station          11+58.72    X       2,488,317.8032  Y        7,131,596.3025
C.C.                        X       2,492,033.0615  Y        7,130,313.2889
Back         - S  19°  57' 54.33" W
Ahead        - S  19°  03' 05.95" W
Chord Bear   - S  19°  30' 30.14" W

                               Curve Data
                              *----------*
Curve SH289EASTUTUR-3
P.I. Station          12+31.37    X       2,488,294.0881 Y        7,131,527.6299
Delta        -     109°  51' 51.06" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             72.6521
Length       -             97.7921
Radius       -             51.0000
External  -              37.7656
Long Chord  -              83.4841
Mid. Ord.  -             21.6961
P.C. Station          11+58.72    X       2,488,317.8032  Y        7,131,596.3025
P.T. Station          12+56.51    X       2,488,366.7329  Y        7,131,528.6601
C.C.                        X       2,488,366.0097  Y        7,131,579.6550
Back         - S  19°  03' 05.95" W
Ahead        - N  89°  11' 14.89" E
Chord Bear   - S  35°  52' 49.58" E

Course from  PT SH289EASTUTUR-3 to SHEUTURN02 N 89°  11' 14.89" E Dist 72.7551

Point SHEUTURN02           X   2,488,439.4807 Y    7,131,529.6919 Sta      13+29.27

----------------------------------------------------------------------------
Ending chain SH289EASTUTUR description
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Beginning chain SH289NUTURN description
----------------------------------------------------------------------------

                               Curve Data
                              *----------*
Curve SH289NUTURN-1
P.I. Station          10+12.90    X       2,488,175.4808  Y        7,131,862.9260
Delta        -       0°  21' 17.91" (LT)
Degree       -       1°  22' 32.34"
Tangent      -             12.9021
Length       -             25.8041
Radius       -           4,165.0000
External  -               0.0200
Long Chord  -              25.8041
Mid. Ord.  -              0.0200
P.C. Station          10+00.00    X       2,488,180.3250  Y        7,131,874.8842
P.T. Station          10+25.80    X       2,488,170.7108  Y        7,131,850.9381
C.C.                        X       2,492,040.6088  Y        7,130,311.0957
Back         - S  22°  03' 09.76" W
Ahead        - S  21°  41' 51.85" W
Chord Bear   - S  21°  52' 30.81" W

                               Curve Data
                              *----------*
Curve SH289NUTURN-2
P.I. Station          11+02.15    X       2,488,142.4865  Y        7,131,780.0054
Delta        -     112°  30' 36.97" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             76.3417
Length       -            100.1474
Radius       -             51.0000
External  -              40.8099
Long Chord  -              84.8150
Mid. Ord.  -             22.6697
P.C. Station          10+25.80    X       2,488,170.7108  Y        7,131,850.9381
P.T. Station          11+25.95    X       2,488,218.8205  Y        7,131,781.0880
C.C.                        X       2,488,218.0973  Y        7,131,832.0829
Back         - S  21°  41' 51.85" W
Ahead        - N  89°  11' 14.89" E
Chord Bear   - S  34°  33' 26.63" E

Course from  PT SH289NUTURN-2 to PC SH289NUTURN-3 N 89°  11' 14.89" E Dist 56.3506

                               Curve Data
                              *----------*
Curve SH289NUTURN-3
P.I. Station          12+16.18    X       2,488,309.0370  Y        7,131,782.3675
Delta        -      67°  11' 07.53" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             33.8750
Length       -             59.8030
Radius       -             51.0000
External  -              10.2251
Long Chord  -              56.4351
Mid. Ord.  -              8.5174
P.C. Station          11+82.30    X       2,488,275.1654  Y        7,131,781.8871
P.T. Station          12+42.11    X       2,488,321.7279  Y        7,131,813.7754
C.C.                        X       2,488,274.4422  Y        7,131,832.8820
Back         - N  89°  11' 14.89" E
Ahead        - N  22°  00' 07.36" E
Chord Bear   - N  55°  35' 41.12" E

                               Curve Data
                              *----------*
Curve SH289NUTURN-4
P.I. Station          12+55.21    X       2,488,326.6386  Y        7,131,825.9284
Delta        -       0°  22' 28.11" (RT)
Degree       -       1°  25' 42.48"
Tangent      -             13.1076
Length       -             26.2152
Radius       -           4,011.0000
External  -               0.0214
Long Chord  -              26.2152
Mid. Ord.  -              0.0214
P.C. Station          12+42.11    X       2,488,321.7279  Y        7,131,813.7754
P.T. Station          12+68.32    X       2,488,331.6285  Y        7,131,838.0490
C.C.                        X       2,492,040.6087  Y        7,130,311.0957
Back         - N  22°  00' 07.36" E
Ahead        - N  22°  22' 35.47" E
Chord Bear   - N  22°  11' 21.41" E

----------------------------------------------------------------------------
Ending chain SH289NUTURN description
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```
Beginning chain SH289SUTURN description
----------------------------------------------------------------------------

                               Curve Data
                              *----------*
Curve SH289SUTURN-1
P.I. Station          10+12.00    X       2,488,148.1685  Y        7,131,374.2410
Delta        -       0°  20' 27.33" (RT)
Degree       -       1°  25' 11.69"
Tangent      -             12.0047
Length       -             24.0094
Radius       -           4,035.0000
External  -               0.0179
Long Chord  -              24.0094
Mid. Ord.  -              0.0179
P.C. Station          10+00.00    X       2,488,145.0400  Y        7,131,362.6511
P.T. Station          10+24.01    X       2,488,151.3660  Y        7,131,385.8121
C.C.                        X       2,492,040.6088  Y        7,130,311.0957
Back         - N  15°  06' 22.23" E
Ahead        - N  15°  26' 49.56" E
Chord Bear   - N  15°  16' 35.89" E

                               Curve Data
                              *----------*
Curve SH289SUTURN-2
P.I. Station          10+92.01    X       2,488,169.4775  Y        7,131,451.3551
Delta        -     106°  15' 34.67" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             67.9993
Length       -             94.5836
Radius       -             51.0000
External  -              33.9994
Long Chord  -              81.5997
Mid. Ord.  -             20.3998
P.C. Station          10+24.01    X       2,488,151.3660  Y        7,131,385.8121
P.T. Station          11+18.59    X       2,488,101.4850  Y        7,131,450.3908
C.C.                        X       2,488,102.2083  Y        7,131,399.3959
Back         - N  15°  26' 49.56" E
Ahead        - S  89°  11' 14.89" W
Chord Bear   - N  37°  40' 57.78" W

Course from  PT SH289SUTURN-2 to PC SH289SUTURN-3 S 89°  11' 14.89" W Dist 54.2580

                               Curve Data
                              *----------*
Curve SH289SUTURN-3
P.I. Station          12+10.95    X       2,488,009.1374  Y        7,131,449.0811
Delta        -      73°  31' 19.71" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             38.0989
Length       -             65.4434
Radius       -             51.0000
External  -              12.6594
Long Chord  -              61.0449
Mid. Ord.  -             10.1420
P.C. Station          11+72.85    X       2,488,047.2324  Y        7,131,449.6214
P.T. Station          12+38.29    X       2,487,998.8500  Y        7,131,412.3974
C.C.                        X       2,488,047.9557  Y        7,131,398.6265
Back         - S  89°  11' 14.89" W
Ahead        - S  15°  39' 55.18" W
Chord Bear   - S  52°  25' 35.03" W

Course from  PT SH289SUTURN-3 to SHSUTURN02 S 15°  39' 55.18" W Dist 18.2522

Point SHSUTURN02           X   2,487,993.9216 Y    7,131,394.8232 Sta      12+56.55

----------------------------------------------------------------------------
Ending chain SH289SUTURN description
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```
Beginning chain FRNBDNT description
----------------------------------------------------------------------------

Point FRNBDNT01     X   2,482,769.4208 Y    7,131,716.2814 Sta      10+00.00

Course from  FRNBDNT01 to FRNBDNT02 S 033*64 17' 49.32" E Dist 220.0017

Point FRNBDNT02            X   2,482,770.5613 Y    7,131,496.2827 Sta      12+20.00

----------------------------------------------------------------------------
Ending chain FRNBDNT description
```

```
Beginning chain FRSBDNT description
----------------------------------------------------------------------------

Point FRSBDNT01     X   2,482,392.6539 Y    7,131,715.8283 Sta      10+00.00

Course from  FRSBDNT01 to FRSBDNT02 S 233*64 05' 51.26" E Dist 208.1304

Point FRSBDNT02            X   2,482,400.2718 Y    7,131,507.8373 Sta      12+08.13

----------------------------------------------------------------------------
Ending chain FRSBDNT description
```

```
Beginning chain SH289WESTUTUR description
----------------------------------------------------------------------------

Point SHWUTURN01    X   2,487,856.9477 Y    7,131,557.4338 Sta      10+00.00

Course from  SHWUTURN01 to PC SH289WESTUTUR-1 N 89°  11' 14.89" E Dist 71.0174

                               Curve Data
                              *----------*
Curve SH289WESTUTUR-1
P.I. Station          11+07.85    X       2,487,964.7823  Y        7,131,558.9632
Delta        -      71°  40' 02.48" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             36.8279
Length       -             63.7924
Radius       -             51.0000
External  -              11.9071
Long Chord  -              59.7143
Mid. Ord.  -              9.6533
P.C. Station          10+71.02    X       2,487,927.9580  Y        7,131,558.4409
P.T. Station          11+34.81    X       2,487,975.8690  Y        7,131,594.0827
C.C.                        X       2,487,927.2348  Y        7,131,609.4358
Back         - N  89°  11' 14.89" E
Ahead        - N  17°  31' 12.41" E
Chord Bear   - N  53°  21' 13.65" E

                               Curve Data
                              *----------*
Curve SH289WESTUTUR-2
P.I. Station          11+58.80    X       2,487,983.0903  Y        7,131,616.9578
Delta        -       0°  38' 45.88" (RT)
Degree       -       1°  20' 48.09"
Tangent      -             23.9878
Length       -             47.9752
Radius       -           4,254.5557
External  -               0.0676
Long Chord  -              47.9749
Mid. Ord.  -              0.0676
P.C. Station          11+34.81    X       2,487,975.8690  Y        7,131,594.0827
P.T. Station          11+82.78    X       2,487,990.5691 Y        7,131,639.7500
C.C.                        X       2,492,033.0615  Y        7,130,313.2889
Back         - N  17°  31' 12.41" E
Ahead        - N  18°  09' 58.29" E
Chord Bear   - N  17°  50' 35.35" E

                               Curve Data
                              *----------*
Curve SH289WESTUTUR-3
P.I. Station          12+54.26    X       2,488,012.8520  Y        7,131,707.6589
Delta        -     108°  58' 43.40" (LT)
Degree       -     112°  20' 40.80"
Tangent      -             71.4713
Length       -             97.0039
Radius       -             51.0000
External  -              36.8017
Long Chord  -              83.0288
Mid. Ord.  -             21.3764
P.C. Station          11+82.78    X       2,487,990.5691 Y        7,131,639.7500
P.T. Station          12+79.79    X       2,487,941.3879  Y        7,131,706.6454
C.C.                        X       2,487,942.1111 Y        7,131,655.6505
Back         - N  18°  09' 58.29" E
Ahead        - S  89°  11' 14.88" W
Chord Bear   - N  36°  19' 23.42" W

Course from  PT SH289WESTUTUR-3 to SHWUTURN02 S 89°  11' 14.88" W Dist 31.8818

Point SHWUTURN02           X   2,487,909.5093 Y    7,131,706.1933 Sta      13+11.67

----------------------------------------------------------------------------
Ending chain SH289WESTUTUR description
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Beginning chain FRNB289 description
----------------------------------------------------------------------------

                               Curve Data
                              *----------*
Curve FRNB289-1
P.I. Station          11+17.16    X       2,488,275.0444  Y        7,131,626.5502
Delta        -       3°  21' 59.09" (LT)
Degree       -       1°  26' 13.43"
Tangent      -            117.1618
Length       -            234.2563
Radius       -           3,987.0000
External  -               1.7211
Long Chord  -             234.2226
Mid. Ord.  -              1.7203
P.C. Station          10+00.00    X       2,488,316.9158  Y        7,131,735.9745
P.T. Station          12+34.26    X       2,488,239.6707  Y        7,131,514.8560
C.C.                        X       2,492,040.6088  Y        7,130,311.0957
Back         - S  20°  56' 22.03" W
Ahead        - S  17°  34' 22.94" W
Chord Bear   - S  19°  15' 22.49" W

----------------------------------------------------------------------------
Ending chain FRNB289 description
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```
Beginning chain FRSB289 description
----------------------------------------------------------------------------

Point FRSBSH01      X   2,488,074.6446 Y    7,131,732.5377 Sta      10+00.00

Course from  FRSBSH01 to FRSBSH02 S 18°  15' 34.02" W Dist 232.7774

Point FRSBSH02             X   2,488,001.7107 Y    7,131,511.4812 Sta      12+32.78

----------------------------------------------------------------------------
Ending chain FRSB289 description
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RAMPS

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Beginning chain REBDNTENTI description
----------------------------------------------------------------------------

                               Curve Data
                              *----------*
Curve REBDNTENTI-1
P.I. Station          11+04.53    X       2,483,530.9979  Y        7,131,509.1973
Delta        -       5°  59' 02.22" (LT)
Degree       -       2°  51' 53.24"
Tangent      -            104.5347
Length       -            208.8793
Radius       -           2,000.0000
External  -               2.7300
Long Chord  -             208.7844
Mid. Ord.  -              2.7263
P.C. Station          10+00.00    X       2,483,426.4633  Y        7,131,509.0716
P.T. Station          12+08.88    X       2,483,634.9498  Y        7,131,520.2201
C.C.                        X       2,483,424.0576  Y        7,133,509.0702
Back         - N  89°  55' 51.90" E
Ahead        - N  83°  56' 49.68" E
Chord Bear   - N  86°  56' 20.79" E

Course from  PT REBDNTENTI-1 to PC REBDNTENTI-2 N 83°  56' 49.68" E Dist 48.9753

                               Curve Data
                              *----------*
Curve REBDNTENTI-2
P.I. Station          13+65.01    X       2,483,790.2062  Y        7,131,536.6831
Delta        -       6°  08' 00.48" (RT)
Degree       -       2°  51' 53.24"
Tangent      -            107.1515
Length       -            214.0984
Radius       -           2,000.0000
External  -               2.8683
Long Chord  -             213.9962
Mid. Ord.  -              2.8642
P.C. Station          12+57.85    X       2,483,683.6521 Y        7,131,525.3844
P.T. Station          14+71.95    X       2,483,897.3577  Y        7,131,536.5324
C.C.                        X       2,483,894.5442  Y        7,129,536.5343
Back         - N  83°  56' 49.68" E
Ahead        - S  89°  55' 09.84" E
Chord Bear   - N  87°  00' 49.92" E

Course from  PT REBDNTENTI-2 to PC REBDNTENTI-3 S 89°  55' 09.84" E Dist 135.2354

                               Curve Data
                              *----------*
Curve REBDNTENTI-3
P.I. Station          16+85.15    X       2,484,110.5587  Y        7,131,536.2324
Delta        -       2°  58' 38.66" (LT)
Degree       -       1°  54' 35.49"
Tangent      -             77.9658
Length       -            155.8966
Radius       -           3,000.0000
External  -               1.0129
Long Chord  -             155.8790
Mid. Ord.  -              1.0126
P.C. Station          16+07.19    X       2,484,032.5929  Y        7,131,536.3421
P.T. Station          17+63.08    X       2,484,188.4249  Y        7,131,540.1726
C.C.                        X       2,484,036.8131 Y        7,134,536.3391
Back         - S  89°  55' 09.84" E
Ahead        - N  87°  06' 11.50" E
Chord Bear   - N  88°  35' 30.83" E

Course from  PT REBDNTENTI-3 to PC REBDNTENTI-4 N 87°  06' 11.50" E Dist 145.3121

                               Curve Data
                              *----------*
Curve REBDNTENTI-4
P.I. Station          19+86.95    X       2,484,412.0086  Y        7,131,551.4864
Delta        -       3°  00' 00.00" (RT)
Degree       -       1°  54' 35.49"
Tangent      -             78.5578
Length       -            157.0796
Radius       -           3,000.0000
External  -               1.0284
Long Chord  -             157.0617
Mid. Ord.  -              1.0280
P.C. Station          19+08.40    X       2,484,333.5512  Y        7,131,547.5163
P.T. Station          20+65.48    X       2,484,490.5662  Y        7,131,551.3449
C.C.                        X       2,484,485.1630  Y        7,128,551.3498
Back         - N  87°  06' 11.50" E
Ahead        - S  89°  53' 48.50" E
Chord Bear   - N  88°  36' 11.50" E

----------------------------------------------------------------------------
Ending chain REBDNTENTI description
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Beginning chain FREBDNTEX description
----------------------------------------------------------------------------

                               Curve Data
                              *----------*
Curve FREBDNTEX-1
P.I. Station          12+27.39    X       2,480,379.9364  Y        7,131,604.4174
Delta        -       8°  40' 08.58" (RT)
Degree       -       1°  54' 35.49"
Tangent      -            227.3892
Length       -            453.9104
Radius       -           3,000.0000
External  -               8.6053
Long Chord  -             453.4776
Mid. Ord.  -              8.5807
P.C. Station          10+00.00    X       2,480,152.5474  Y        7,131,604.1439
P.T. Station          14+53.91    X       2,480,604.7689  Y        7,131,570.4142
C.C.                        X       2,480,156.1564  Y        7,128,604.1460
Back         - N  89°  55' 51.87" E
Ahead        - S  81°  23' 59.55" E
Chord Bear   - S  85°  44' 03.84" E

Course from  PT FREBDNTEX-1 to PC FREBDNTEX-2 S 81°  23' 59.55" E Dist 202.1072

                               Curve Data
                              *----------*
Curve FREBDNTEX-2
P.I. Station          18+83.41    X       2,481,029.4358  Y        7,131,506.1884
Delta        -       8°  40' 08.55" (LT)
Degree       -       1°  54' 35.49"
Tangent      -            227.3889
Length       -            453.9100
Radius       -           3,000.0000
External  -               8.6053
Long Chord  -             453.4771
Mid. Ord.  -              8.5807
P.C. Station          16+56.02    X       2,480,804.6036  Y        7,131,540.1916
P.T. Station          21+09.93    X       2,481,256.8245  Y        7,131,506.4619
C.C.                        X       2,481,253.2161 Y        7,134,506.4598
Back         - S  81°  23' 59.55" E
Ahead        - N  89°  55' 51.90" E
Chord Bear   - S  85°  44' 03.82" E

Course from  PT FREBDNTEX-2 to FREBDNTEX02 N 89°  55' 51.90" E Dist 1,148.1607

Point FREBDNTEX02          X   2,482,404.9845 Y    7,131,507.8430 Sta      32+58.09

----------------------------------------------------------------------------
Ending chain FREBDNTEX description
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Beginning chain RWBDNTEX description
----------------------------------------------------------------------------

                               Curve Data
                              *----------*
Curve RWBDNTEX-1
P.I. Station          11+19.65    X       2,484,183.8011 Y        7,131,693.9827
Delta        -       4°  34' 04.52" (RT)
Degree       -       1°  54' 35.49"
Tangent      -            119.6513
Length       -            239.1758
Radius       -           3,000.0000
External  -               2.3851
Long Chord  -             239.1125
Mid. Ord.  -              2.3832
P.C. Station          10+00.00    X       2,484,064.1498  Y        7,131,693.8388
P.T. Station          12+39.18    X       2,484,303.0837  Y        7,131,684.5970
C.C.                        X       2,484,067.7583  Y        7,128,693.8409
Back         - N  89°  55' 51.90" E
Ahead        - S  85°  30' 03.58" E
Chord Bear   - S  87°  47' 05.84" E

                               Curve Data
                              *----------*
Curve RWBDNTEX-2
P.I. Station          12+96.75    X       2,484,360.4756  Y        7,131,680.0812
Delta        -       4°  23' 44.92" (LT)
Degree       -       3°  49' 10.99"
Tangent      -             57.5693
Length       -            115.0821
Radius       -           1,500.0000
External  -               1.1043
Long Chord  -             115.0538
Mid. Ord.  -              1.1035
P.C. Station          12+39.18    X       2,484,303.0837  Y        7,131,684.5970
P.T. Station          13+54.26    X       2,484,418.0447  Y        7,131,679.9775
C.C.                        X       2,484,420.7464  Y        7,133,179.9751
Back         - S  85°  30' 03.58" E
Ahead        - S  89°  53' 48.50" E
Chord Bear   - S  87°  41' 56.04" E

Course from  PT RWBDNTEX-2 to PC RWBDNTEX-3 S 89°  53' 48.50" E Dist 133.8494

                               Curve Data
                              *----------*
Curve RWBDNTEX-3
P.I. Station          15+69.52    X       2,484,633.3028  Y        7,131,679.5898
Delta        -       3°  06' 31.79" (RT)
Degree       -       1°  54' 35.49"
Tangent      -             81.4090
Length       -            162.7780
Radius       -           3,000.0000
External  -               1.1044
Long Chord  -             162.7580
Mid. Ord.  -              1.1040
P.C. Station          14+88.11    X       2,484,551.8939  Y        7,131,679.7364
P.T. Station          16+50.89    X       2,484,714.5839  Y        7,131,675.0284
C.C.                        X       2,484,546.4907  Y        7,128,679.7413
Back         - S  89°  53' 48.50" E
Ahead        - S  86°  47' 16.71" E
Chord Bear   - S  88°  20' 32.60" E

Course from  PT RWBDNTEX-3 to PC RWBDNTEX-4 S 86°  47' 16.71" E Dist 70.1695

                               Curve Data
                              *----------*
Curve RWBDNTEX-4
P.I. Station          18+02.46    X       2,484,865.9242  Y        7,131,666.5353
Delta        -       3°  06' 31.78" (LT)
Degree       -       1°  54' 35.49"
Tangent      -             81.4089
Length       -            162.7779
Radius       -           3,000.0000
External  -               1.1044
Long Chord  -             162.7579
Mid. Ord.  -              1.1040
P.C. Station          17+21.05    X       2,484,784.6432  Y        7,131,671.0967
P.T. Station          18+83.83    X       2,484,947.3330  Y        7,131,666.3886
C.C.                        X       2,484,952.7364  Y        7,134,666.3838
Back         - S  86°  47' 16.71" E
Ahead        - S  89°  53' 48.49" E
Chord Bear   - S  88°  20' 32.60" E

----------------------------------------------------------------------------
Ending chain RWBDNTEX description
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Beginning chain REB289EX description
----------------------------------------------------------------------------

                               Curve Data
                              *----------*
Curve REB289EX-1
P.I. Station          10+72.87    X       2,485,831.3202  Y        7,131,548.9301
Delta        -       2°  46' 58.43" (RT)
Degree       -       1°  54' 35.49"
Tangent      -             72.8704
Length       -            145.7122
Radius       -           3,000.0000
External  -               0.8849
Long Chord  -             145.6979
Mid. Ord.  -              0.8846
P.C. Station          10+00.00    X       2,485,758.4499  Y        7,131,549.0613
P.T. Station          11+45.71    X       2,485,904.0982  Y        7,131,545.2610
C.C.                        X       2,485,753.0466  Y        7,128,549.0662
Back         - S  89°  53' 48.50" E
Ahead        - S  87°  06' 50.07" E
Chord Bear   - S  88°  30' 19.28" E

Course from  PT REB289EX-1 to PC REB289EX-2 S 87°  06' 50.07" E Dist 238.0001

                               Curve Data
                              *----------*
Curve REB289EX-2
P.I. Station          14+80.58    X       2,486,238.5370  Y        7,131,528.4005
Delta        -       3°  41' 55.05" (LT)
Degree       -       1°  54' 35.49"
Tangent      -             96.8634
Length       -            193.6595
Radius       -           3,000.0000
External  -               1.5633
Long Chord  -             193.6259
Mid. Ord.  -              1.5625
P.C. Station          13+83.71    X       2,486,141.7965  Y        7,131,533.2776
P.T. Station          15+77.37    X       2,486,335.3907  Y        7,131,529.7741
C.C.                        X       2,486,292.8480  Y        7,134,529.4724
Back         - S  87°  06' 50.07" E
Ahead        - N  89°  11' 14.88" E
Chord Bear   - S  88°  57' 47.59" E

Course from  PT REB289EX-2 to PC REB289EX-3 N 89°  11' 14.88" E Dist 57.0890

                               Curve Data
                              *----------*
Curve REB289EX-3
P.I. Station          17+56.79    X       2,486,514.7955  Y        7,131,532.3185
Delta        -       4°  40' 12.80" (RT)
Degree       -       1°  54' 35.49"
Tangent      -            122.3339
Length       -            244.5322
Radius       -           3,000.0000
External  -               2.4932
Long Chord  -             244.4645
Mid. Ord.  -              2.4912
P.C. Station          16+34.46    X       2,486,392.4740  Y        7,131,530.5837
P.T. Station          18+78.99    X       2,486,636.8522  Y        7,131,524.0880
C.C.                        X       2,486,435.0166  Y        7,128,530.8853
Back         - N  89°  11' 14.88" E
Ahead        - S  86°  08' 32.32" E
Chord Bear   - S  88°  28' 38.72" E

                               Curve Data
                              *----------*
Curve REB289EX-4
P.I. Station          20+01.33    X       2,486,758.9089  Y        7,131,515.8576
Delta        -       4°  40' 12.80" (LT)
Degree       -       1°  54' 35.49"
Tangent      -            122.3339
Length       -            244.5322
Radius       -           3,000.0000
External  -               2.4932
Long Chord  -             244.4645
Mid. Ord.  -              2.4912
P.C. Station          18+78.99    X       2,486,636.8522  Y        7,131,524.0880
P.T. Station          21+23.53    X       2,486,881.2304  Y        7,131,517.5924
C.C.                        X       2,486,838.6878  Y        7,134,517.2907
Back         - S  86°  08' 32.32" E
Ahead        - N  89°  11' 14.88" E
Chord Bear   - S  88°  28' 38.72" E

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Ending chain REB289EX description
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Beginning chain RWB289ENT description
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                              Curve Data
                              *---------*
Curve RWB289ENT-1
P.I. Station          10+70.48  X     2,485,983.0022  Y     7,131,664.6571
Delta        -      2° 41' 30.60" (LT)
Degree        -     1° 54' 35.49"
Tangent     -          70.4850
Length        -        140.9440
Radius        -      3,000.0000
External  -             0.8279
Long Chord  -          140.9310
Mid. Ord.  -            0.8277
P.C. Station           10+00.00  X     2,485,912.5173  Y     7,131,664.7841
P.T. Station           11+40.94  X     2,486,053.4152  Y     7,131,667.8406
C.C.                X      2,485,917.9206  Y     7,134,664.7792
Back          - S  89°  53' 48.50" E
Ahead         - N  87°  24' 40.90" E
Chord Bear  - N  88°  45' 26.20" E

Course from  PT RWB289ENT-1 to PC RWB289ENT-2 N 87°  24' 40.90" E Dist 82.6053

                              Curve Data
                              *---------*
Curve RWB289ENT-2
P.I. Station          12+94.03  X     2,486,206.3493  Y     7,131,674.7549
Delta        -      2° 41' 30.60" (RT)
Degree        -     1° 54' 35.49"
Tangent     -          70.4850
Length        -        140.9440
Radius        -      3,000.0000
External  -             0.8279
Long Chord  -          140.9310
Mid. Ord.  -            0.8277
P.C. Station           12+23.55  X     2,486,135.9363  Y     7,131,671.5714
P.T. Station           13+64.49  X     2,486,276.8341  Y     7,131,674.6279
C.C.                X      2,486,271.4309  Y     7,128,674.6328
Back          - N  87°  24' 40.90" E
Ahead         - S  89°  53' 48.50" E
Chord Bear  - N  88°  45' 26.20" E

Course from  PT RWB289ENT-2 to PC RWB289ENT-3 S 89°  53' 48.50" E Dist 255.5833

                              Curve Data
                              *---------*
Curve RWB289ENT-3
P.I. Station          17+45.17  X     2,486,657.5148  Y     7,131,673.9423
Delta        -      4° 46' 32.24" (LT)
Degree        -     1° 54' 35.49"
Tangent     -         125.0979
Length        -        250.0510
Radius        -      3,000.0000
External  -             2.6071
Long Chord  -          249.9786
Mid. Ord.  -            2.6049
P.C. Station           16+20.08  X     2,486,532.4170  Y     7,131,674.1676
P.T. Station           18+70.13  X     2,486,782.1970  Y     7,131,684.1326
C.C.                X      2,486,537.8203  Y     7,134,674.1627
Back          - S  89°  53' 48.50" E
Ahead         - N  85°  19' 39.26" E
Chord Bear  - N  87°  42' 55.38" E

Course from  PT RWB289ENT-3 to PC RWB289ENT-4 N 85°  19' 39.26" E Dist 167.3729

                              Curve Data
                              *---------*
Curve RWB289ENT-4
P.I. Station          21+38.59  X     2,487,049.7677  Y     7,131,706.0013
Delta        -      3° 51' 35.63" (RT)
Degree        -     1° 54' 35.49"
Tangent     -         101.0901
Length        -        202.1037
Radius        -      3,000.0000
External  -             1.7027
Long Chord  -          202.0655
Mid. Ord.  -            1.7018
P.C. Station           20+37.50  X     2,486,949.0136  Y     7,131,697.7667
P.T. Station           22+39.60  X     2,487,150.8477  Y     7,131,707.4349
C.C.                X      2,487,193.3903  Y     7,128,707.7365
Back          - N  85°  19' 39.26" E
Ahead         - N  89°  11' 14.88" E
Chord Bear  - N  87°  15' 27.07" E

==========================================================================
Ending chain RWB289ENT description

Beginning chain REB289ENT description
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Point RMPEBENT01     X    2,488,239.6710 Y    7,131,514.8569 Sta      10+00.00

Course from  RMPEBENT01 to PC REB289ENT-1 N 89°  11' 14.89" E Dist 441.7189

                              Curve Data
                              *---------*
Curve REB289ENT-1
P.I. Station          16+54.50  X     2,488,894.1074  Y     7,131,524.1383
Delta        -      8° 02' 50.27" (LT)
Degree        -     1° 53' 38.67"
Tangent     -         212.7833
Length        -        424.8668
Radius        -      3,025.0000
External  -             7.4745
Long Chord  -          424.5177
Mid. Ord.  -            7.4561
P.C. Station           14+41.72  X     2,488,681.3455  Y     7,131,521.1209
P.T. Station           18+66.59  X     2,489,104.3518  Y     7,131,556.9107
C.C.                X      2,488,638.4483  Y     7,134,545.8167
Back          - N  89°  11' 14.89" E
Ahead         - N  81°  08' 24.61" E
Chord Bear  - N  85°  09' 49.75" E

Course from  PT REB289ENT-1 to PC REB289ENT-2 N 81°  08' 24.61" E Dist 121.5781

                              Curve Data
                              *---------*
Curve REB289ENT-2
P.I. Station          20+61.58  X     2,489,297.0193  Y     7,131,586.9433
Delta        -      2° 48' 06.70" (RT)
Degree        -     1° 54' 30.91"
Tangent     -          73.4161
Length        -        146.8029
Radius        -      3,002.0000
External  -             0.8976
Long Chord  -          146.7883
Mid. Ord.  -            0.8973
P.C. Station           19+88.16  X     2,489,224.4792  Y     7,131,575.6359
P.T. Station           21+34.97  X     2,489,370.0254  Y     7,131,594.6912
C.C.                X      2,489,686.8403  Y     7,128,609.4555
Back          - N  81°  08' 24.61" E
Ahead         - N  83°  56' 31.31" E
Chord Bear  - N  82°  32' 27.96" E

Course from  PT REB289ENT-2 to PC REB289ENT-3 N 83°  56' 31.31" E Dist 272.2196

                              Curve Data
                              *---------*
Curve REB289ENT-3
P.I. Station          26+27.75  X     2,489,860.0530  Y     7,131,646.6965
Delta        -      5° 00' 34.41" (RT)
Degree        -     1° 08' 10.93"
Tangent     -         220.5598
Length        -        440.8385
Radius        -      5,042.0000
External  -             4.8218
Long Chord  -          440.6981
Mid. Ord.  -            4.8172
P.C. Station           24+07.19  X     2,489,640.7249  Y     7,131,623.4198
P.T. Station           28+48.02  X     2,490,080.5758  Y     7,131,650.7321
C.C.                X      2,490,172.8304  Y     7,126,609.5762
Back          - N  83°  56' 31.31" E
Ahead         - N  88°  57' 05.72" E
Chord Bear  - N  86°  26' 48.52" E

==========================================================================
Ending chain REB289ENT description


Beginning chain RWB289EX description
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Point WBEXT01       X    2,488,319.7062 Y    7,131,736.0141 Sta      10+00.00

Course from  WBEXT01 to PC RWB289EX-1 N 89°  11' 14.89" E Dist 137.3573

                              Curve Data
                              *---------*
Curve RWB289EX-1
P.I. Station          11+98.47  X     2,488,518.1606  Y     7,131,738.8287
Delta        -      0° 48' 45.70" (RT)
Degree        -     0° 39' 53.56"
Tangent     -          61.1171
Length        -        122.2322
Radius        -      8,617.5000
External  -             0.2167
Long Chord  -          122.2312
Mid. Ord.  -            0.2167
P.C. Station           11+37.36  X     2,488,457.0497  Y     7,131,737.9620
P.T. Station           12+59.59  X     2,488,579.2778  Y     7,131,738.8285
C.C.                X      2,488,579.2534  Y     7,123,121.3285
Back          - N  89°  11' 14.89" E
Ahead         - S  89°  59' 59.42" E
Chord Bear  - N  89°  35' 37.73" E

Course from  PT RWB289EX-1 to PC RWB289EX-2 S 89°  59' 59.42" E Dist 316.4264

                              Curve Data
                              *---------*
Curve RWB289EX-2
P.I. Station          16+54.39  X     2,488,974.0733  Y     7,131,738.8274
Delta        -      1° 04' 16.69" (LT)
Degree        -     0° 41' 00.66"
Tangent     -          78.3692
Length        -        156.7339
Radius        -      8,382.5000
External  -             0.3663
Long Chord  -          156.7316
Mid. Ord.  -            0.3663
P.C. Station           15+76.02  X     2,488,895.7041 Y     7,131,738.8276
P.T. Station           17+32.75  X     2,489,052.4288  Y     7,131,740.2924
C.C.                X      2,488,895.7278  Y     7,140,121.3276
Back          - S  89°  59' 59.42" E
Ahead         - N  88°  55' 43.90" E
Chord Bear  - N  89°  27' 52.24" E

Course from  PT RWB289EX-2 to PC RWB289EX-3 N 88°  55' 43.90" E Dist 652.7029

                              Curve Data
                              *---------*
Curve RWB289EX-3
P.I. Station          24+80.74  X     2,489,800.2922  Y     7,131,754.2753
Delta        -      2° 10' 58.00" (LT)
Degree        -     1° 08' 43.65"
Tangent     -          95.2912
Length        -        190.5594
Radius        -      5,002.0000
External  -             0.9076
Long Chord  -          190.5479
Mid. Ord.  -            0.9074
P.C. Station           23+85.45  X     2,489,705.0176  Y     7,131,752.4939
P.T. Station           25+76.01 X     2,489,895.4299  Y     7,131,759.6841
C.C.                X      2,489,611.5111 Y     7,136,753.6198
Back          - N  88°  55' 43.90" E
Ahead         - N  86°  44' 45.90" E
Chord Bear  - N  87°  50' 14.90" E

                              Curve Data
                              *---------*
Curve RWB289EX-4
P.I. Station          26+94.73  X     2,490,013.9535  Y     7,131,766.4225
Delta        -      0° 54' 13.02" (RT)
Degree        -     0° 22' 50.12"
Tangent     -         118.7150
Length        -        237.4251
Radius        -     15,054.4758
External  -             0.4681
Long Chord  -          237.4226
Mid. Ord.  -            0.4681
P.C. Station           25+76.01 X     2,489,895.4299  Y     7,131,759.6841
P.T. Station           28+13.44  X     2,490,132.5686  Y     7,131,771.2909
C.C.                X      2,490,749.9376  Y     7,116,729.4792
Back          - N  86°  44' 45.90" E
Ahead         - N  87°  38' 58.91" E
Chord Bear  - N  87°  11' 52.41" E

Course from  PT RWB289EX-4 to WBEXT02 N 88°  18' 11.92" E Dist 96.4202

Point WBEXT02          X    2,490,228.9465 Y    7,131,774.1457 Sta      29+09.86

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Ending chain RWB289EX description
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Beginning chain RNB289ENT description
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                              Curve Data
                              *---------*
Curve RNB289ENT-1
P.I. Station          11+04.20  X     2,488,354.1535  Y     7,131,833.2894
Delta        -      2° 59' 38.58" (RT)
Degree        -     1° 26' 13.43"
Tangent     -         104.1961
Length        -        208.3447
Radius        -      3,987.0000
External  -             1.3613
Long Chord  -          208.3210
Mid. Ord.  -            1.3608
P.C. Station           10+00.00  X     2,488,316.9158  Y     7,131,735.9745
P.T. Station           12+08.34  X     2,488,396.4234  Y     7,131,928.5263
C.C.                X      2,492,040.6088  Y     7,130,311.0957
Back          - N  20°  56' 22.03" E
Ahead         - N  23°  56' 00.61" E
Chord Bear  - N  22°  26' 11.32" E

Course from  PT RNB289ENT-1 to PC RNB289ENT-2 N 23°  56' 00.61" E Dist 247.8788

                              Curve Data
                              *---------*
Curve RNB289ENT-2
P.I. Station          14+83.63  X     2,488,508.0997  Y     7,132,180.1406
Delta        -      1° 02' 48.43" (LT)
Degree        -     1° 54' 35.49"
Tangent     -          27.4055
Length        -         54.8096
Radius        -      3,000.0000
External  -             0.1252
Long Chord  -           54.8088
Mid. Ord.  -            0.1252
P.C. Station           14+56.22  X     2,488,496.9819  Y     7,132,155.0917
P.T. Station           15+11.03  X     2,488,518.7580  Y     7,132,205.3889
C.C.                X      2,485,754.9312  Y     7,133,372.1200
Back          - N  23°  56' 00.61" E
Ahead         - N  22°  53' 12.18" E
Chord Bear  - N  23°  24' 36.39" E

                              Curve Data
                              *---------*
Curve RNB289ENT-3
P.I. Station          16+66.76  X     2,488,579.3204  Y     7,132,348.8530
Delta        -      5° 57' 31.40" (RT)
Degree        -     1° 54' 53.88"
Tangent     -         155.7233
Length        -        311.1659
Radius        -      2,992.0000
External  -             4.0497
Long Chord  -          311.0257
Mid. Ord.  -            4.0442
P.C. Station           15+11.03  X     2,488,518.7580  Y     7,132,205.3889
P.T. Station           18+22.20  X     2,488,654.4489  Y     7,132,485.2549
C.C.                X      2,491,275.2145  Y     7,131,041.7691
Back          - N  22°  53' 12.18" E
Ahead         - N  28°  50' 43.58" E
Chord Bear  - N  25°  51' 57.88" E

==========================================================================
Ending chain RNB289ENT description

Beginning chain RSB289ENT description
==========================================================================

Point SBENT01       X    2,488,001.7107 Y    7,131,511.4812 Sta      10+00.00

Course from  SBENT01 to PC RSB289ENT-1 S 15°  39' 55.18" W  Dist 298.7692

                              Curve Data
                              *---------*
Curve RSB289ENT-1
P.I. Station          14+59.32  X     2,487,877.6860  Y     7,131,069.2223
Delta        -     17° 48' 15.82" (LT)
Degree        -     5° 35' 23.40"
Tangent     -         160.5510
Length        -        318.5140
Radius        -      1,025.0000
External  -            12.4978
Long Chord  -          317.2340
Mid. Ord.  -           12.3472
P.C. Station           12+98.77  X     2,487,921.0377  Y     7,131,223.8097
P.T. Station           16+17.28  X     2,487,883.6786  Y     7,130,908.7831
C.C.                X      2,488,907.9644  Y     7,130,947.0414
Back          - S  15°  39' 55.18" W
Ahead         - S   2°  08' 20.65" E
Chord Bear  - S   6°  45' 47.27" W

                              Curve Data
                              *---------*
Curve RSB289ENT-2
P.I. Station          16+98.77  X     2,487,886.7203  Y     7,130,827.3494
Delta        -      2° 20' 22.10" (RT)
Degree        -     1° 26' 08.25"
Tangent     -          81.4905
Length        -        162.9584
Radius        -      3,991.0000
External  -             0.8319
Long Chord  -          162.9471
Mid. Ord.  -            0.8317
P.C. Station           16+17.28  X     2,487,883.6786  Y     7,130,908.7831
P.T. Station           17+80.24  X     2,487,886.4352  Y     7,130,745.8594
C.C.                X      2,483,895.4597  Y     7,130,759.8186
Back          - S   2°  08' 20.65" E
Ahead         - S   0°  12' 01.45" W
Chord Bear  - S   0°  58' 09.60" E

==========================================================================
Ending chain RSB289ENT description


Beginning chain RSB289EX description
==========================================================================

Point SBEX01        X    2,488,911.7775 Y    7,133,112.6555 Sta      10+00.00

Course from  SBEX01 to SBEX02 S 37°  27' 56.50" W  Dist 391.7271

Point SBEX02              X    2,488,673.4953 Y    7,132,801.7348 Sta      13+91.73

Course from  SBEX02 to PC RSB289EX-1 S 37°  27' 56.50" W  Dist 132.5431

                              Curve Data
                              *---------*
Curve RSB289EX-1
P.I. Station          18+06.65  X     2,488,421.1041 Y     7,132,472.4042
Delta        -      9° 09' 36.25" (LT)
Degree        -     1° 37' 31.48"
Tangent     -         282.3785
Length        -        563.5536
Radius        -      3,525.0000
External  -            11.2922
Long Chord  -          562.9536
Mid. Ord.  -           11.2562
P.C. Station           15+24.27  X     2,488,592.8711 Y     7,132,696.5330
P.T. Station           20+87.82  X     2,488,287.2074  Y     7,132,223.7894
C.C.                X      2,491,390.7260  Y     7,130,552.3237
Back          - S  37°  27' 56.50" W
Ahead         - S  28°  18' 20.25" W
Chord Bear  - S  32°  53' 08.38" W

                              Curve Data
                              *---------*
Curve RSB289EX-2
P.I. Station          21+03.22  X     2,488,279.9051 Y     7,132,210.2309
Delta        -      1° 43' 17.51" (LT)
Degree        -     5° 35' 23.40"
Tangent     -          15.3999
Length        -         30.7975
Radius        -      1,025.0000
External  -             0.1157
Long Chord  -           30.7964
Mid. Ord.  -            0.1157
P.C. Station           20+87.82  X     2,488,287.2074  Y     7,132,223.7894
P.T. Station           21+18.62  X     2,488,273.0135  Y     7,132,196.4591
C.C.                X      2,489,189.6490  Y     7,131,737.7604
Back          - S  28°  18' 20.25" W
Ahead         - S  26°  35' 02.75" W
Chord Bear  - S  27°  26' 41.50" W

                              Curve Data
                              *---------*
Curve RSB289EX-3
P.I. Station          23+71.35  X     2,488,159.9142  Y     7,131,970.4482
Delta        -      6° 51' 57.24" (LT)
Degree        -     1° 21' 35.91"
Tangent     -         252.7298
Length        -        504.8546
Radius        -      4,213.0000
External  -             7.5736
Long Chord  -          504.5525
Mid. Ord.  -            7.5600
P.C. Station           21+18.62  X     2,488,273.0135  Y     7,132,196.4591
P.T. Station           26+23.48  X     2,488,074.6446  Y     7,131,732.5377
C.C.                X      2,492,040.6088  Y     7,130,311.0957
Back          - S  26°  35' 02.75" W
Ahead         - S  19°  43' 05.51" W
Chord Bear  - S  23°  09' 04.13" W

==========================================================================
Ending chain RSB289EX description


Beginning chain RNB289EX description
==========================================================================

                              Curve Data
                              *---------*
Curve RNB289EX-1
P.I. Station          11+68.10  X     2,488,188.9167  Y     7,131,354.5978
Delta        -      4° 49' 43.21" (LT)
Degree        -     1° 26' 13.43"
Tangent     -         168.1041
Length        -        336.0092
Radius        -      3,987.0000
External  -             3.5423
Long Chord  -          335.9098
Mid. Ord.  -            3.5392
P.C. Station           10+00.00  X     2,488,239.6710  Y     7,131,514.8569
P.T. Station           13+36.01 X     2,488,151.8327  Y     7,131,190.6351
C.C.                X      2,492,040.6088  Y     7,130,311.0957
Back          - S  17°  34' 22.99" W
Ahead         - S  12°  44' 39.78" W
Chord Bear  - S  15°  09' 31.38" W

Course from  PT RNB289EX-1 to PC RNB289EX-2 S 12°  44' 39.78" W  Dist 385.8056

                              Curve Data
                              *---------*
Curve RNB289EX-2
P.I. Station          17+67.34  X     2,488,056.6811 Y     7,130,769.9338
Delta        -      1° 44' 19.22" (RT)
Degree        -     1° 54' 35.49"
Tangent     -          45.5219
Length        -         91.0367
Radius        -      3,000.0000
External  -             0.3454
Long Chord  -           91.0332
Mid. Ord.  -            0.3453
P.C. Station           17+21.81 X     2,488,066.7233  Y     7,130,814.3342
P.T. Station           18+12.85  X     2,488,045.2963  Y     7,130,725.8586
C.C.                X      2,485,140.6314  Y     7,131,476.1396
Back          - S  12°  44' 39.78" W
Ahead         - S  14°  28' 59.00" W
Chord Bear  - S  13°  36' 49.39" W

                              Curve Data
                              *---------*
Curve RNB289EX-3
P.I. Station          20+51.91 X     2,487,985.5103  Y     7,130,494.4008
Delta        -     15° 11' 48.86" (LT)
Degree        -     3° 11' 50.31"
Tangent     -         239.0546
Length        -        475.3030
Radius        -      1,792.0000
External  -            15.8747
Long Chord  -          473.9110
Mid. Ord.  -           15.7354
P.C. Station           18+12.85  X     2,488,045.2963  Y     7,130,725.8586
P.T. Station           22+88.15  X     2,487,988.4886  Y     7,130,255.3647
C.C.                X      2,489,780.3495  Y     7,130,277.6907
Back          - S  14°  28' 59.00" W
Ahead         - S   0°  42' 49.86" E
Chord Bear  - S   6°  53' 04.57" W

==========================================================================
Ending chain RNB289EX description
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TEXAS DEPARTMENT OF TRANSPORTATION
DALLAS DISTRICT

WILLIAM L. HALE, P.E., DISTRICT ENGINEER
US 380 DESIGN SCHEMATIC, COLLIN COUNTY

CSJ NO. 0135-11-018, 0135-02-049, 0135-02-044 AND 0135-02-050

EAST OF CR 26 (DENTON/COLLIN CL) TO FM 2478 (CUSTER ROAD)

DESIGN SPEED

US 380 MAINLANES COUNTY LINE TO CUSTER RD = 45 MPH
RAMPS = 40 MPH
FRONTAGE ROADS = 40 MPH
CROSS STREETS = 45 MPH

AVERAGE DAILY TRAFFIC =	2008	2030	2040
US 380 =	26,200	45,600	52,400

TEXAS DEPARTMENT OF TRANSPORTATION; TRANSPORTATION PROGRAMMING AND PLANNING DIVISION MEMORANDUM, JUNE 18, 2008

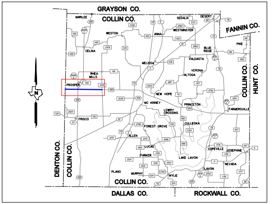
FUNCTIONAL CLASSIFICATION

US380 - URBAN PRINCIPAL ARTERIAL

SCALE

1"=100' HORIZONTAL
1"=10' VERTICAL

PROJECT LENGTH = 31,858.3 ft (6.034 miles)


GRAYSON CO.
COLLIN CO.
FANNIN CO.
COLLIN CO.
HUNT CO.
DENTON CO.
COLLIN CO.
COLLIN CO.
DALLAS CO.
ROCKWALL CO.
N
MARILEE
WESTON
ANNA
SEDALIA
DESERT
WESTMINSTER
CELINA
BLUE RIDGE
PIKE
MELISSA
VALDASTA
VERONA
ALTOGA
RHEA MILLS
PROSPER
NEW HOPE
MC KINNEY
PRINCETON
FARMERSVILLE
LOWRY CROSSING
FRISCO
CULLEOKA
FOREST GROVE
ALLEN
LUCAS
COPEVILLE
JOSEPHINE
PARKER
LAKE LAVON
NEVADA
PLANO
MURPHY
WYLIE
LAVON
380
75
121
289
5
78

LOCATION MAP

N.T.S.

INDEX OF SHEETS

SHEET 1 - MAIN LANES PLAN & PROFILE
SHEET 2 - MAIN LANES PLAN & PROFILE
SHEET 3 - MAIN LANES PLAN & CURVE DATA
SHEET 4 - PROFILES FRONTAGE ROADS, CROSS STREETS & RAMPS

LEGEND

🟥	PROPOSED MAINLANES
🟦	PROPOSED FRONTAGE ROAD
🟩	PROPOSED RAMPS
🟧	PROPOSED BRIDGES
🟨	PROPOSED SIDEWALK
▨	EXISTING ROAD TO BE REMOVED
⬜	FUTURE ROAD (BY OTHERS)
━ ━ ━	PROPOSED RETAINING WALL
—— – ——	PROPOSED CENTERLINE
—— – ——	EXISTING CENTERLINE
– · – · –	PROPOSED RIGHT-OF-WAY
—╫╫╫—	CONTROL OF ACCESS
—— – – ——	PERMANENT WATERLINE EASEMENT
– – – –	EXISTING 72" WATERLINE
– · – · –	EXISTING RIGHT-OF-WAY
– – – –	EXISTING EASEMENT
———	PROPOSED EASEMENT
┼┼┼┼┼	BNSF RAILROAD
—— – – ——	CITY/COUNTY LINE
—— – – ——	PROPERTY LINE
←	LANE DIRECTIONAL INDICATOR

PREPARED BY AECOM
UNDER THE SUPERVISION OF:

RAJESH JANARTHANAN, P.E.

SERIAL NO. (TX PE NO. 99487)

DATE:____________

DATE SUBMITTED
JUNE 25, 2012

DATE APPROVED

DATE REVISED

NOT INTENDED FOR
CONSTRUCTION,
BIDDING, OR
PERMIT PURPOSES

ROLL 3 OF 4

Texas Department of Transportation

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AECOM Technical Services Inc.- 3580

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