SXTOPO, 078901JATRI.DGN, 2-4,10,11,17-19,25,33
ROW, 078901TRWRI.DGN, 1,6,10,34,35,40-42,47,60
PROF, 078901PROF.DGN, 1-43,45-63
ALIGN, 078901THARI.DGN, 1,2,4,21-23,29-31,37,38,40-43
PVRI, 078901TPVRI.DGN, 1-61,63

BORDER, 078901BDR2.DGN, 1-5,12,13,21,23,63
MANTU-S, 078901PROF.DGN, 1-43,45-62
N-MANTU, 078901PROF.DGN, 1-43,45-62
S-CR370, 078901PROF.DGN, 1-43,45-63
CR370-N, 078901PROF.DGN, 1-43,45-63

PRF ROTATION=0.000000
F:\TBL\HWY5000.TBL

I:\proj\03078901\dgn\078901TDT04.DGN
Tue Aug 19 13:05:44 2008
\\HZDALLAS2\DISK0\PLOTTING\400B-18\078901tdt04.prf
ugarte

Texas Department of Transportation

DALLAS DISTRICT
WILLIAM L. HALE, P.E., DISTRICT ENGINEER

COLLIN COUNTY

DESIGN SCHEMATIC

US 75
FROM TELEPHONE ROAD (CR 275) TO COUNTY LINE ROAD (CR 375) GRAYSON COUNTY LINE
PROJECT LENGTH = 10.29 MILES

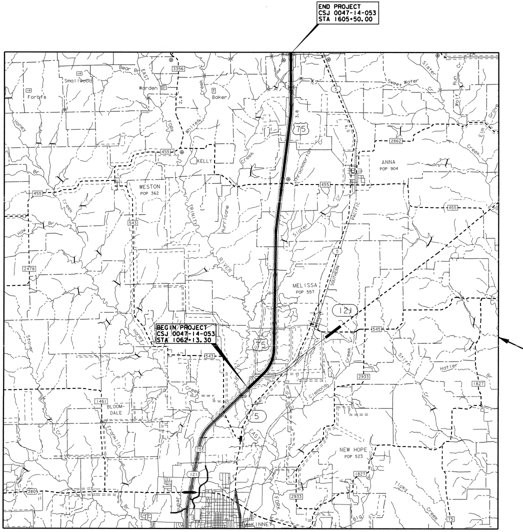
CSJ # 0047-14-053
STA 1062+13.30 TO STA 1605+50.00

DESIGN SPEED: 70 MPH MAIN LANES
50 MPH RAMPS
50 MPH FRONTAGE ROADS
45 MPH SH 121
30 MPH COLLECTOR ROADS

FUNCTIONAL CLASS: RURAL FREEWAY
ROLL 4 OF 9

SCALE 1"=200'H, 1"=20'V

JUNE 2008


Bear Br
3356
Smallwood
EAST
FORK
Warden
Whites
Creek
Baker
2.8
3.8
Fortis
Honey
Br
455
KELLY
Creek
75
Throckmorton
Cr
Sweet Water
Sister
Cr
Run
Wolf
Elm Grove
Creek
2862
ANNA
POP 904
WESTON
POP 362
455
Creek
Haw
Br
543
TRINITY
Hurricane
RIVER
Slater
5
PACIFIC
SOUTHERN
2478
MELISSA
POP 557
121
545
Stover
Honey
543
Creek
Stiff
Cr
Hatler
Br
1827
2933
Clemons
1461
BLOOM-
DALE
Franklin
Cr
5
EAST
FORK
NEW HOPE
POP 523
1827
Br
Ticky
Creek
75
121
380
Br
Wyser
2933
Big
McKINNEY
75

END PROJECT
CSJ 0047-14-053
STA 1605+50.00

BEGIN PROJECT
CSJ 0047-14-053
STA 1062+13.30

VICINITY MAP
NTS

HUITT-ZOLLARS
Huitt-Zollars, Inc. Dallas
3131McKinney Avenue, Suite 600
Dallas, Texas 75204-2489

THE SEAL APPEARING ON THIS
DOCUMENT WAS AUTHORIZED BY
DAVID ALAN NUFER, P.E. 68818

DAVID ALAN NUFER
68818
6-18-08

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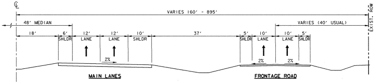
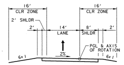
	MAIN ROAD
DESIGN SPEED FUNCTIONAL CLASS	70 MPH PRINCIPAL ARTERIAL
DESIGN SPEED FUNCTIONAL CLASS	50 MPH FRONTAGE ROAD
DESIGN SPEED FUNCTIONAL CLASS	30 MPH COLLECTOR ROAD
AVERAGE DAILY TRAFFIC PRESENT (2008) DESIGN (2030)	 51,100 78,300

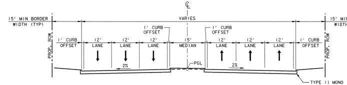
TRAFFIC DATA SOURCE:
TEXAS DEPARTMENT OF TRANSPORTATION,
TRANSPORTATION, PLANNING AND
PROGRAMMING DIVISION.


℄
VARIES 160' - 895'
EXIST. ROW
48' MEDIAN
VARIES (40' USUAL)
18'
6' SHLDR
12' LANE
12' LANE
10' SHLDR
37'
5' SHLDR
10' LANE
10' LANE
5' SHLDR
2%
2%
2%
MAIN LANES
FRONTAGE ROAD

EXISTING US 75 TYPICAL HALF SECTION

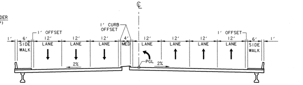

16' CLR ZONE
16' CLR ZONE
2' SHLDR
2'
14' LANE
8' SHLDR
2'
2%
PGL & AXIS OF ROTATION
6:1
6:1

PROP RAMP TYPICAL SECTION


℄
VARIES
15' MIN BORDER WIDTH (TYP)
15' MIN BORDER WIDTH (TYP)
PROP. ROW
PROP. ROW
1' CURB OFFSET
12' LANE
12' LANE
12' LANE
1' CURB OFFSET
15' MEDIAN
1' CURB OFFSET
12' LANE
12' LANE
12' LANE
1' CURB OFFSET
2%
PGL
2%
TYPE II MONO CURB (TYP)

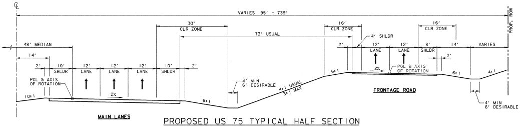
PROPOSED CROSS STREET TYPICAL SECTION

CR 370 STA 93+74 - 97+46.94 & STA 102+53.42 - 106+00
MANTUA RD STA 96+40 - 97+48.93 & STA 102+48.93 - 104.76


℄
1' OFFSET
1' CURB OFFSET
1' OFFSET
1'
6' SIDE WALK
12' LANE
12' LANE
12' LANE
4' MED
12' LANE
12' LANE
12' LANE
12' LANE
6' SIDE WALK
1'
PGL
2%
2%

PROPOSED CROSS STREET BRIDGE TURN LANE TYPICAL SECTION

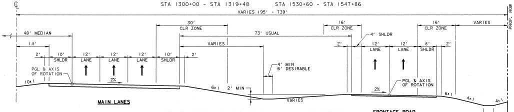
CR 370 STA 97+46.74 - 102+53.42
MANTUA RD STA 97+48.93 - 102+48.93


℄
VARIES 195' - 739'
PROP. ROW
30' CLR ZONE
73' USUAL
16' CLR ZONE
16' CLR ZONE
48' MEDIAN
4' SHLDR
14'
VARIES
2'
12' LANE
12' LANE
8' SHLDR
14'
2'
10' SHLDR
12' LANE
12' LANE
12' LANE
10' SHLDR
2'
2'
PGL & AXIS OF ROTATION
PGL & AXIS OF ROTATION
2%
2%
4' MIN 6' DESIRABLE
4:1 USUAL 3:1 MAX
6:1
6:1
6:1
4:1
10:1
FRONTAGE ROAD
4' MIN 6' DESIRABLE
MAIN LANES

PROPOSED US 75 TYPICAL HALF SECTION

FRONTAGE ROAD HIGHER THAN MAINLANES

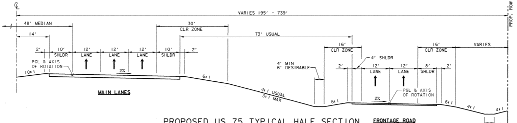
STA 1080+00 - STA 1155+52	STA 1397+53 - STA 1415+58
STA 1169+31 - STA 1229+65	STA 1465+55 - STA 1487+25
STA 1267+78 - STA 1285+55	STA 1510+44 - STA 1522+23
STA 1300+00 - STA 1319+48	STA 1530+60 - STA 1547+86


℄
VARIES 195' - 739'
PROP. ROW
30' CLR ZONE
73' USUAL
16' CLR ZONE
16' CLR ZONE
VARIES
48' MEDIAN
4' SHLDR
14'
VARIES
2'
12' LANE
12' LANE
8' SHLDR
2'
2'
10' SHLDR
12' LANE
12' LANE
12' LANE
10' SHLDR
2'
PGL & AXIS OF ROTATION
PGL & AXIS OF ROTATION
2%
2%
4' MIN 6' DESIRABLE
6:1
2' MIN
VARIES
6:1
4:1
4:1
10:1
MAIN LANES
FRONTAGE ROAD
4' MIN 6' DESIRABLE

PROPOSED US 75 TYPICAL HALF SECTION

AT GRADE

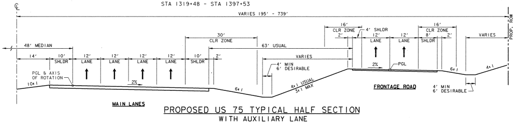
STA 1547+86 - END


℄
VARIES 195' - 739'
PROP. ROW
48' MEDIAN
30' CLR ZONE
73' USUAL
16' CLR ZONE
16' CLR ZONE
VARIES
14'
2'
10' SHLDR
12' LANE
12' LANE
12' LANE
10' SHLDR
2'
4' SHLDR
2'
12' LANE
12' LANE
8' SHLDR
2'
PGL & AXIS OF ROTATION
PGL & AXIS OF ROTATION
2%
2%
4' MIN 6' DESIRABLE
6:1
4:1 USUAL 3:1 MAX
6:1
6:1
4:1
4:1
10:1
MAIN LANES
FRONTAGE ROAD
4' MIN 6' DESIRABLE

PROPOSED US 75 TYPICAL HALF SECTION

MAINLANES HIGHER THAN FRONTAGE ROAD

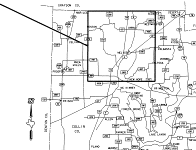
STA 1155+52 - STA 1169+31	STA 1415+58 - STA 1465+55
STA 1229+65 - STA 1267+78	STA 1487+25 - STA 1510+44
STA 1285+55 - STA 1300+00	STA 1522+23 - STA 1530+60
STA 1319+48 - STA 1397+53	


℄
VARIES 195' - 739'
PROP. ROW
16' CLR ZONE
2'
4' SHLDR
12' LANE
12' LANE
16' CLR ZONE
8' SHLDR
2'
VARIES
30' CLR ZONE
63' USUAL
48' MEDIAN
VARIES
14'
10' SHLDR
12' LANE
12' LANE
12' LANE
12' LANE
10' SHLDR
2'
2%
PGL
PGL & AXIS OF ROTATION
2%
4' MIN 6' DESIRABLE
4:1 USUAL 3:1 MAX
6:1
6:1
4:1
10:1
FRONTAGE ROAD
4' MIN 6' DESIRABLE
MAIN LANES

PROPOSED US 75 TYPICAL HALF SECTION

WITH AUXILIARY LANE

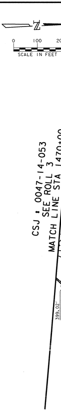
BEGIN STA 1080+00


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

LEGEND	
PLAN	
— - —	CENTERLINE - ℄
—— - - ——	EXIST. ROW
━━ ━ ━ ━━	PROPOSED ROW
—ııı——ııı—	CONTROL OF ACCESS
▨	IMPACTED BUILDING
- - - - - - - -	PROPOSED EASEMENT
━━ ━━ ━━	PROPOSED RETAINING WALL

NOTE

EXISTING DRIVEWAYS WILL REMAIN UNLESS IT IS DETERMINED DURING DETAILED DESIGN AND COORDINATION WITH THE CITIES THE DRIVEWAY WILL BE A SAFETY ISSUE AND/ OR VIOLATES THE CURRENT CONTROLLED ACCESS REQUIREMENTS.


N
0
100
20
SCALE IN FEET
CSJ : 0047-14-053
SEE ROLL 3
MATCH LINE STA 1470+00
399.02'

NOTE:

ALL ROW STATIO
BASED ON THE U

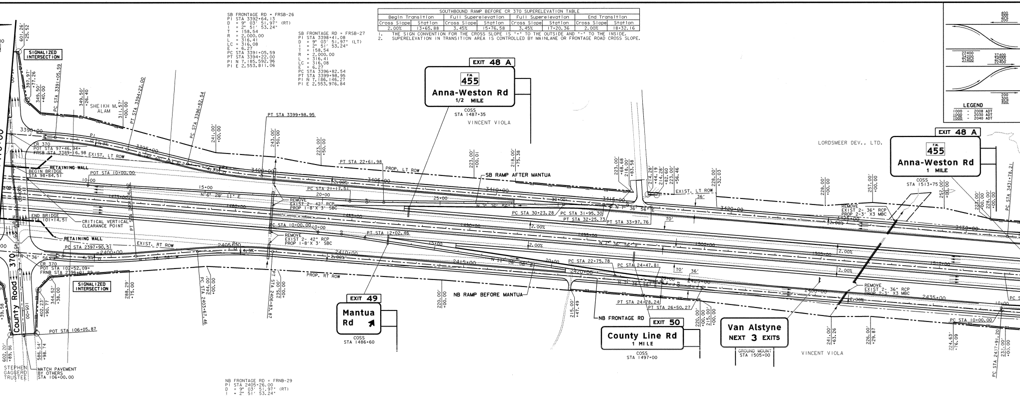
SB FRONTAGE RD = FRSB-26
PI STA 3392+64.13
D = 9° 03′ 51.97" (RT)
I = 2° 51′ 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 3391+05.59
PT STA 3394+22.00
PI N 7,185,592.96
PI E 2,553,811.06

SB FRONTAGE RD = FRSB-27
PI STA 3398+41.08
D = 9° 03′ 51.97" (LT)
I = 2° 51′ 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 3396+82.54
PT STA 3399+98.95
PI N 7,186,146.27
PI E 2,553,976.84

SOUTHBOUND RAMP BEFORE CR 370 SUPERELEVATION TABLE

Begin Transition		Full Superelevation		Full Superelevation		End Transition	
Cross Slope	Station	Cross Slope	Station	Cross Slope	Station	Cross Slope	Station
2.00%	13+65.88	3.45%	15+76.58	3.45%	17+20.36	2.00%	18+32.16

1. THE SIGN CONVENTION FOR THE CROSS SLOPE IS "+" TO THE OUTSIDE AND "-" TO THE INSIDE.
2. SUPERELEVATION IN TRANSITION AREA IS CONTROLLED BY MAINLANE OR FRONTAGE ROAD CROSS SLOPE.


EXIT 48 A
F.M. 455
Anna-Weston Rd
1/2 MILE
COSS STA 1487+35
VINCENT VIOLA
EXIT 48 A
F.M. 455
Anna-Weston Rd
1 MILE
COSS STA 1513+75
LORDSMEER DEV., LTD.
EXIT 49
Mantua Rd
COSS STA 1486+60
EXIT 50
County Line Rd
1 MILE
COSS STA 1497+00
Van Alstyne
NEXT 3 EXITS
GROUND MOUNT STA 1505+00
VINCENT VIOLA
SIGNALIZED INTERSECTION
SIGNALIZED INTERSECTION
SHEIKH M. ALAM
STEPHEN GAGGERO TRUSTEE
MATCH PAVEMENT BY OTHERS STA 106+00.00
CR 370
POT STA 97+46.94= FRSB STA 3389+16.98
EXIST. LT ROW
RETAINING WALL
BEGIN BRIDGE STA 98+84.51
POT STA 10+00.00
END BRIDGE STA 101+14.51
CRITICAL VERTICAL CLEARANCE POINT
RETAINING WALL
PC STA 2397+90.51
EXIST. RT ROW
CR 370
POT STA 102+52.09= FRNB STA 2396+01.89
County Road 370
POT STA 106+05.87
PC STA 3391+05.59
PT STA 3394+22.00
PC STA 3396+82.54
PT STA 3399+98.95
PT STA 22+61.98
PROP. LT ROW
PC STA 21+17.51
SB RAMP AFTER MANTUA
REMOVE EXIST 2- 42" RCP PROP 1-8'X 3' SBC
PC STA 10+00.00
REMOVE EXIST 2- 42" RCP PROP 1-8'X 3' SBC
PT STA 12+02.46
PC STA 2403+67.46
PT STA 2406+83.87
PROP. RT ROW
NB RAMP BEFORE MANTUA
PC STA 30+23.28
PC STA 31+95.30
PT STA 32+25.73
PT STA 33+97.76
EXIST. LT ROW
PC STA 22+75.78
PC STA 24+47.81
PT STA 24+78.24
PT STA 26+50.27
NB FRONTAGE RD
REMOVE EXIST 2- 36" RCP PROP 2-3' X3 MBC
REMOVE EXIST 2- 36" RCP PROP 2-3' X3 MBC
PC STA 10+00.00
PC STA 3431+78.21
PC STA 2437+91.20
N 6° 28′ 11" E
N 3° 36′ 56" E
N 7° 36′ 56" E
N 11° 38′ 58" E
LEGEND
1000 - 2008 ADT
1000 - 2030 ADT
1000 - 2040 ADT

NB FRONTAGE RD = FRNB-28
PI STA 2399+49.05
D = 9° 03′ 51.97" (LT)
I = 2° 51′ 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 2397+90.51
PT STA 2401+06.92
PI N 7,185,598.00
PI E 2,554,316.18

NB FRONTAGE RD = FRNB-29
PI STA 2405+26.00
D = 9° 03′ 51.97" (RT)
I = 2° 51′ 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 2403+67.46
PT STA 2406+83.87
PI N 7,186,175.43
PI E 2,554,301.57

NORTHBOUND RAMP AFTER CR 370 SUPERELEVATION TABLE

Begin Transition		Full Superelevation		Full Superelevation		End Transition	
Cross Slope	Station	Cross Slope	Station	Cross Slope	Station	Cross Slope	Station
2.00%	15+51.24					2.00%	21+15.67

1. THE SIGN CONVENTION FOR THE CROSS SLOPE IS "+" TO THE OUTSIDE AND "-" TO THE INSIDE.
2. SUPERELEVATION IN TRANSITION AREA IS CONTROLLED BY MAINLANE OR FRONTAGE ROAD CROSS SLOPE.

NORTHBOUND FRONTAGE ROAD US 75 SUPERELEVATION TABLE

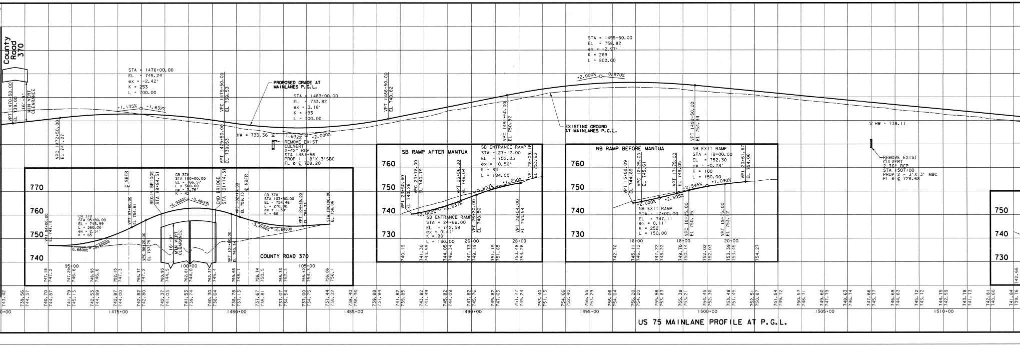
Begin Transition		Full Superelevation		Full Superelevation		End Transition	
Cross Slope	Station	Cross Slope	Station	Cross Slope	Station	Cross Slope	Station
2.00%	2396+90.00	-4.30%	2398+45.00	-4.30%	2400+55.00	2.00%	2402+10.00
2.00%	2403+30.00	4.30%	2403+90.00	4.30%	2406+65.00	2.00%	2407+25.00
2.00%	2454+05.00	4.30%	2454+65.00	4.30%	2457+40.00	2.00%	2458+00.00
2.00%	2459+20.00	-4.30%	2460+75.00	-4.30%	2462+85.00	2.00%	2464+40.00
2.00%	2466+15.00	-4.30%	2467+75.00	-4.30%	2469+80.00	2.00%	2471+35.00
2.00%	2472+55.00	4.30%	2473+15.00	4.30%	2475+90.00	2.00%	2476+50.00
2.00%	2515+00.00	5.80%	2516+25.00	5.80%	2521+75.00	2.00%	
2.00%		-5.80%	2524+55.00	-5.80%	2529+75.00	2.00%	2531+65.00

1. THE SIGN CONVENTION FOR THE CROSS SLOPE IS "+" TO THE OUTSIDE AND "-" TO THE INSIDE.

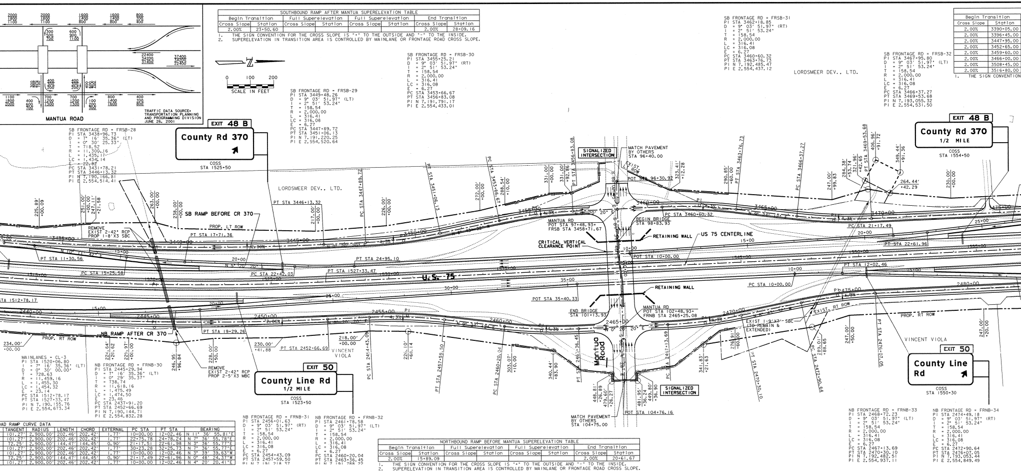
MANTUA R

RAMP/CURVE NAME	PI STA	DELTA	DEGREE
MANTUA RD OFF-RAMP-N CURVE-1	11+01.27	4° 00′ 00.03" RT	1° 58′ 32.58"
MANTUA RD OFF-RAMP-N CURVE-2	23+77.05	4° 00′ 00.00" LT	1° 58′ 32.58"
MANTUA RD ON-RAMP-S CURVE-1	21+89.76	2° 51′ 15.25" LT	1° 58′ 32.58"
MANTUA RD ON-RAMP-S CURVE-2	31+24.55	4° 00′ 00.00" RT	1° 58′ 32.58"
MANTUA RD ON-RAMP-N CURVE-1	11+01.27	4° 00′ 00.03" LT	1° 58′ 32.58"
MANTUA RD ON-RAMP-N CURVE-2	20+36.00	2° 51′ 15.25" RT	1° 58′ 32.58"
MANTUA RD OFF-RAMP-S CURVE-1	11+01.27	4° 00′ 00.00" RT	1° 58′ 32.58"

NS AND OFFSETS ARE
S 75 CENTERLINE.



US 75 MAINLANE PROFILE AT P.G.L.


MANTUA ROAD
TRAFFIC DATA SOURCE: TRANSPORTATION PLANNING AND PROGRAMMING DIVISION JUNE 26, 2001
SCALE IN FEET
0
100
200
EXIT 48 B
County Rd 370
COSS STA 1525+50
County Rd 370 1/2 MILE
COSS STA 1554+50
EXIT 50
County Line Rd 1/2 MILE
COSS STA 1523+50
County Line Rd
COSS STA 1550+30
LORDSMEER DEV., LTD.
VINCENT VIOLA
SB RAMP BEFORE CR 370
NB RAMP AFTER CR 370
PROP. LT ROW
PROP. RT ROW
REMOVE EXIST 2-42" RCP PROP 1-8'X3 SBC
REMOVE EXIST 2-42" RCP PROP 2-5'X3 MBC
SIGNALIZED INTERSECTION
MATCH PAVEMENT BY OTHERS STA 96+40.00
MATCH PAVEMENT BY OTHERS STA 104+75.00
MANTUA RD POT STA 97+48.93= FRSB STA 3458+71.67
MANTUA RD POT STA 102+48.93= FRNB STA 2465+25.08
BEGIN BRIDGE STA 98+83.93
END BRIDGE STA 101+13.93
RETAINING WALL
US 75 CENTERLINE
CRITICAL VERTICAL CLEARANCE POINT
U.S. 75
Mantua Road
EXIST 1-9'X7' SBC (TO REMAIN & EXTENDED)

SOUTHBOUND RAMP AFTER MANTUA SUPERELEVATION TABLE							
Begin Transition		Full Superelevation		Full Superelevation		End Transition	
Cross Slope	Station	Cross Slope	Station	Cross Slope	Station	Cross Slope	Station
2.00%	23+50.60					2.00%	28+09.16

1. THE SIGN CONVENTION FOR THE CROSS SLOPE IS "+" TO THE OUTSIDE AND "-" TO THE INSIDE.
2. SUPERELEVATION IN TRANSITION AREA IS CONTROLLED BY MAINLANE OR FRONTAGE ROAD CROSS SLOPE.

SB FRONTAGE RD = FRSB-28
PI STA 3438+96.73
D = 7° 16' 35.36" (LT)
I = 0° 30' 25.33"
T = 718.52
R = 11,300.16
L = 1,435.11
LC = 1,434.14
E = 22.82
PC STA 3431+78.21
PT STA 3446+13.32
PI N 7,190,166.81
PI E 2,554,514.41

SB FRONTAGE RD = FRSB-29
PI STA 3449+48.26
D = 9° 03' 51.97" (LT)
I = 2° 51' 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 3447+89.72
PT STA 3451+06.13
PI N 7,191,220.25
PI E 2,554,520.64

SB FRONTAGE RD = FRSB-30
PI STA 3455+25.21
D = 9° 03' 51.97" (RT)
I = 2° 51' 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 3453+66.67
PT STA 3456+83.08
PI N 7,191,791.17
PI E 2,554,433.01

SB FRONTAGE RD = FRSB-31
PI STA 3462+18.85
D = 9° 03' 51.97" (RT)
I = 2° 51' 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 3460+60.32
PT STA 3463+76.73
PI N 7,192,485.47
PI E 2,554,437.12

SB FRONTAGE RD = FRSB-32
PI STA 3467+95.80
D = 9° 03' 51.97" (LT)
I = 2° 51' 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 3466+37.27
PT STA 3469+53.68
PI N 7,193,055.32
PI E 2,554,531.50

Begin Transition	
Cross Slope	Station
2.00%	3390+05.00
2.00%	3396+45.00
2.00%	3447+95.00
2.00%	3452+65.00
2.00%	3459+60.00
2.00%	3466+00.00
2.00%	3508+45.00
2.00%	3516+80.00

1. THE SIGN CONVENTION

MAINLANES = CL-3
PI STA 1520+06.80
I = 7° 16' 35.36" (LT)
D = 0° 30' 00.00"
T = 728.63
R = 11,459.16
L = 1,455.30
LC = 1,454.32
E = 23.14
PC STA 1512+78.17
PT STA 1527+33.47
PI N 7,190,155.76
PI E 2,554,673.34

NB FRONTAGE RD = FRNB-30
PI STA 2445+29.94
D = 7° 16' 35.36" (LT)
I = 0° 29' 35.37"
T = 738.74
R = 11,618.16
L = 1,475.49
LC = 1,474.50
E = 23.46
PC STA 2437+91.20
PT STA 2452+66.69
PI N 7,190,144.71
PI E 2,554,832.28

NB FRONTAGE RD = FRNB-31
PI STA 2456+01.63
D = 9° 03' 51.97" (RT)
I = 2° 51' 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 2454+43.09
PT STA 2457+59.50
PI N 7,191,218.37

NB FRONTAGE RD = FRNB-32
PI STA 2461+78.58
D = 9° 03' 51.97" (LT)
I = 2° 51' 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 2460+20.04
PT STA 2463+36.45
PI N 7,191,788.22

NB FRONTAGE RD = FRNB-33
PI STA 2468+72.23
D = 9° 03' 51.97" (LT)
I = 2° 51' 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 2467+13.69
PT STA 2470+30.10
PI N 7,192,482.51
PI E 2,554,937.11

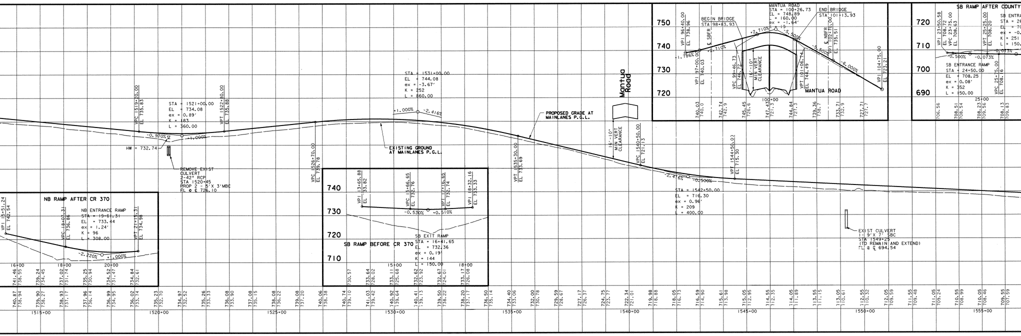
NB FRONTAGE RD = FRNB-34
PI STA 2474+49.18
D = 9° 03' 51.97" (RT)
I = 2° 51' 53.24"
T = 158.54
R = 2,000.00
L = 316.41
LC = 316.08
E = 6.27
PC STA 2472+90.64
PT STA 2476+07.05
PI N 7,193,053.44
PI E 2,554,849.49

AD RAMP CURVE DATA

TANGENT	RADIUS	LENGTH	CHORD	EXTERNAL	PC STA	PT STA	BEARING
101.27'	2,900.00'	202.46'	202.42'	1.77'	10+00.00	12+02.46	N 11° 36' 55.81"E
101.27'	2,900.00'	202.46'	202.42'	1.77'	22+75.78	24+78.24	N 7° 36' 55.78"E
72.25'	2,900.00'	144.47'	144.45'	0.90'	21+17.51	22+61.98	N 3° 36' 55.77"E
101.27'	2,900.00'	202.46'	202.42'	1.77'	30+23.28	32+25.73	N 7° 36' 55.77"E
101.27'	2,900.00'	202.46'	202.42'	1.77'	10+00.00	12+02.46	N 3° 39' 39.63"W
72.25'	2,900.00'	144.47'	144.45'	0.90'	21+17.49	22+61.96	N 0° 48' 24.37"W
101.27'	2,900.00'	202.46'	202.42'	1.77'	10+00.00	12+02.46	N 4° 20' 20.41"E

NORTHBOUND RAMP BEFORE MANTUA SUPERELEVATION TABLE							
Begin Transition		Full Superelevation		Full Superelevation		End Transition	
Cross Slope	Station	Cross Slope	Station	Cross Slope	Station	Cross Slope	Station
2.00%	15+89.09					2.00%	20+61.67

1. THE SIGN CONVENTION FOR THE CROSS SLOPE IS "+" TO THE OUTSIDE AND "-" TO THE INSIDE.
2. SUPERELEVATION IN TRANSITION AREA IS CONTROLLED BY MAINLANE OR FRONTAGE ROAD CROSS SLOPE.



SOUTHBOUND FRONTAGE ROAD US 75 SUPERELEVATION					
Full Superelevation		Full Superelevation		End Transition	
Cross Slope	Station	Cross Slope	Station	Cross Slope	Station
-4.30%	3391+60.00	-4.30%	3393+70.00	2.00%	3395+25.00
4.30%	3397+05.00	4.30%	3399+80.00	2.00%	3400+40.00
4.30%	3448+15.00	4.30%	3450+90.00	2.00%	3451+50.00
-4.30%	3454+20.00	-4.30%	3456+35.00	2.00%	3457+90.00
-4.30%	3461+15.00	-4.30%	3463+25.00	2.00%	3464+80.00
4.30%	3466+80.00	4.30%	3469+35.00	2.00%	3469+95.00
5.80%	3510+00.00	5.80%	3515+20.00	2.00%	3516+70.00
-5.80%	3518+70.00	-5.80%	3523+70.00	2.00%	3525+65.00

FOR THE CROSS SLOPE IS "+" TO THE OUTSIDE AND "-" TO THE INSIDE.

SOUTHBOUND RAMP BEFORE MANTUA SUPERELEVATION TABLE							
Begin Transition		Full Superelevation		Full Superelevation		End Transition	
Cross Slope	Station	Cross Slope	Station	Cross Slope	Station	Cross Slope	Station
2.00%	14+16.57					2.00%	18+89.16

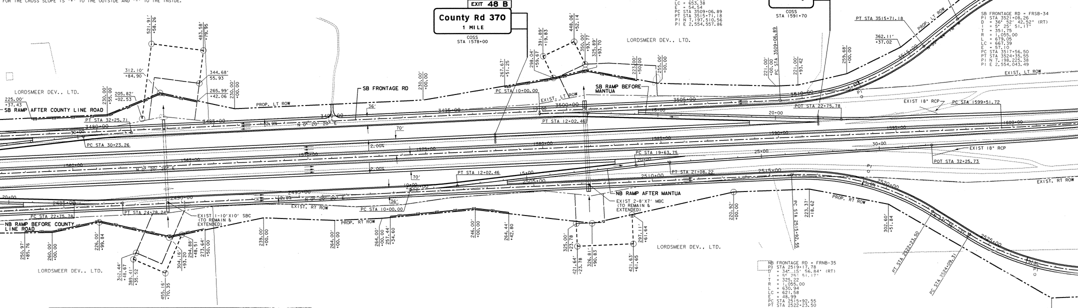
1. THE SIGN CONVENTION FOR THE CROSS SLOPE IS "+" TO THE OUTSIDE AND "-" TO THE INSIDE.
2. SUPERELEVATION IN TRANSITION AREA IS CONTROLLED BY MAINLANE OR FRONTAGE ROAD CROSS SLOPE.

SOUTHBOUND RAMP AFTER COUNTY LINE ROAD SUPERELEVATION TABLE							
Begin Transition		Full Superelevation		Full Superelevation		End Transition	
Cross Slope	Station	Cross Slope	Station	Cross Slope	Station	Cross Slope	Station
2.00%	23+50.89					2.00%	28+09.16

1. THE SIGN CONVENTION FOR THE CROSS SLOPE IS "+" TO THE OUTSIDE AND "-" TO THE INSIDE.
2. SUPERELEVATION IN TRANSITION AREA IS CONTROLLED BY MAINLANE OR FRONTAGE ROAD CROSS SLOPE.

SB FRONTAGE RD = FRSB-33
PI STA 3512+50.46
D = 36° 04′ 37.91" (LT)
I = 5° 25′ 51.17"
T = 343.58
R = 1,055.00
L = 664.30
LC = 653.38
E = 54.54
PC STA 3509+06.89
PT STA 3515+71.18
PI N 7,197,510.56
PI E 2,554,557.86

SB FRONTAGE RD = FRSB-34
PI STA 3521+08.26
D = 36° 52′ 42.52" (RT)
I = 5° 25′ 51.17"
T = 351.75
R = 1,055.00
L = 679.05
LC = 667.39
E = 57.10
PC STA 3517+56.50
PT STA 3524+35.55
PI N 7,198,225.38
PI E 2,554,043.49


EXIT 48 B
County Rd 370
1 MILE
COSS
STA 1578+00
EXIT 49
Mantua
Rd
COSS
STA 1591+70
LORDSMEER DEV., LTD.
LORDSMEER DEV., LTD.
LORDSMEER DEV., LTD.
LORDSMEER DEV., LTD.
SB RAMP AFTER COUNTY LINE ROAD
SB FRONTAGE RD
SB RAMP BEFORE MANTUA
NB RAMP BEFORE COUNTY LINE ROAD
NB RAMP AFTER MANTUA
PROP. LT ROW
EXIST. LT ROW
PROP. RT ROW
EXIST. RT ROW
N 0° 20′ 20" E
PT STA 32+25.71
PC STA 30+23.26
PC STA 10+00.00
PT STA 12+02.46
PC STA 19+63.75
PT STA 21+08.22
PC STA 22+75.78
PT STA 24+78.24
POT STA 22+75.78
PC STA 3517+56.50
PT STA 3515+71.18
PC STA 3509+06.89
PC STA 2515+92.55
PT STA 2522+23.50
PC STA 2524+09.31
PC STA 1599+51.72
POT STA 32+25.73
EXIST 18" RCP
EXIST 1-10′X10′ SBC (TO REMAIN & EXTENDED)
EXIST 2-8′X7′ MBC (TO REMAIN & EXTENDED)
743.05′ +28.93
618.79′ +89.31
362.11′ +37.02
225.00′ +37.43
205.82′ +02.53
312.10′ +84.90
344.68′ 55.93
265.99′ +42.06
733.86′ +17.84

NORTHBOUND RAMP AFTER MANTUA SUPERELEVATION TABLE							
Begin Transition		Full Superelevation		Full Superelevation		End Transition	
Cross Slope	Station	Cross Slope	Station	Cross Slope	Station	Cross Slope	Station
2.00%	14+16.57					2.00%	18+75.13

1. THE SIGN CONVENTION FOR THE CROSS SLOPE IS "+" TO THE OUTSIDE AND "-" TO THE INSIDE.
2. SUPERELEVATION IN TRANSITION AREA IS CONTROLLED BY MAINLANE OR FRONTAGE ROAD CROSS SLOPE.

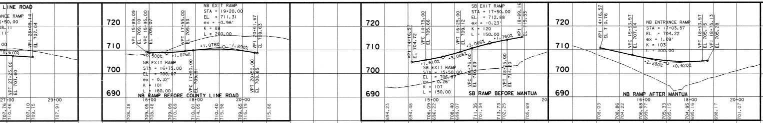
NB FRONTAGE RD = FRNB-35
PI STA 2519+17.78
D = 34° 15′ 56.84" (RT)
I = 5° 25′ 51.17"
T = 325.22
R = 1,055.00
L = 630.94
LC = 621.58
E = 48.99
PC STA 2515+92.55
PT STA 2522+23.50
PI N 7,197,522.62
PI E 2,554,875.93

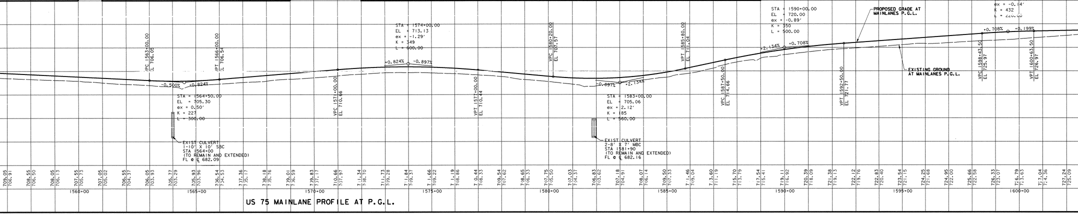
NB FRONTAGE RD = FRNB-36
PI STA 2527+33.59
D = 34° 10′ 21.71" (LT)
I = 5° 25′ 51.17"
T = 324.29
R = 1,055.00
L = 629.23
LC = 619.94
E = 48.71
PC STA 2524+09.31
PT STA 2530+38.53
PI N 7,198,210.16
PI E 2,555,350.32

COUNTY LINE ROAD RAMP CURVE DATA										
RAMP/CURVE NAME	PI STA	DELTA	DEGREE	TANGENT	RADIUS	LENGTH	CHORD	EXTERNAL	PC STA	PT STA
COUNTY LINE RD OFF-RAMP-N CURVE-1	11+01.27	4° 00′ 00.00" RT	1° 58′ 32.58"	101.27′	2,900.00′	202.46′	202.42′	1.77′	10+00.00	12+02.46
COUNTY LINE RD OFF-RAMP-N CURVE-2	23+77.06	4° 00′ 00.00" LT	1° 58′ 32.58"	101.27′	2,900.00′	202.46′	202.42′	1.77′	22+75.78	24+78.24
COUNTY LINE RD ON-RAMP-S CURVE-1	21+89.74	2° 51′ 15.25" LT	1° 58′ 32.58"	72.25′	2,900.00′	144.47′	144.45′	0.90′	21+17.49	22+61.96
COUNTY LINE RD ON-RAMP-S CURVE-2	31+24.53	4° 00′ 00.00" RT	1° 58′ 32.58"	101.27′	2,900.00′	202.46′	202.42′	1.77′	30+23.26	32+25.71

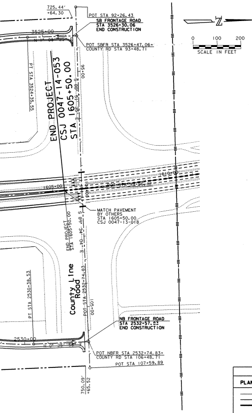
NORTHBOUND RAMP BEFORE COUNTY LINE ROAD SUPERELEVATION TABLE							
Begin Transition		Full Superelevation		Full Superelevation		End Transition	
Cross Slope	Station	Cross Slope	Station	Cross Slope	Station	Cross Slope	Station
2.00%	15+89.09					2.00%	20+61.67

1. THE SIGN CONVENTION FOR THE CROSS SLOPE IS "+" TO THE OUTSIDE AND "-" TO THE INSIDE.
2. SUPERELEVATION IN TRANSITION AREA IS CONTROLLED BY MAINLANE OR FRONTAGE ROAD CROSS SLOPE.

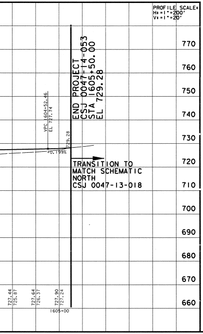

LINE ROAD
NB RAMP BEFORE COUNTY LINE ROAD
NB EXIT RAMP
STA = 19+20.00
EL = 711.31
ex = -0.96′
K = 88
L = 260.00
NB EXIT RAMP
STA = 16+75.00
EL = 708.67
ex = 0.32′
K = 101
L = 160.00
SB RAMP BEFORE MANTUA
SB EXIT RAMP
STA = 17+50.00
EL = 712.88
ex = -0.23′
K = 120
L = 150.00
SB EXIT RAMP
STA = 15+50.00
EL = 706.87
ex = 0.26′
K = 107
L = 150.00
NB RAMP AFTER MANTUA
NB ENTRANCE RAMP
STA = 17+03.57
EL = 704.22
ex = 1.09′
K = 103
L = 300.00
720
710
700
690


STA = 1564+50.00
EL = 705.30
ex = 0.50′
K = 227
L = 300.00
STA = 1574+00.00
EL = 713.13
ex = -1.29′
K = 349
L = 600.00
STA = 1583+00.00
EL = 705.06
ex = 2.12′
K = 185
L = 560.00
STA = 1590+00.00
EL = 720.00
ex = -0.89′
K = 350
L = 500.00
STA = 1599+53.50
EL = 726.75
ex = -0.14′
K = 432
-0.500%
+0.824%
-0.897%
+2.134%
+0.708%
+0.199%
PROPOSED GRADE AT MAINLANES P.G.L.
EXISTING GROUND AT MAINLANES P.G.L.
EXIST. CULVERT 1-10′ X 10′ SBC STA 1564+00 (TO REMAIN AND EXTENDED) FL @ ℄ 682.09
EXIST. CULVERT 2-8′ X 7′ MBC STA 1581+90 (TO REMAIN AND EXTENDED) FL @ ℄ 682.16
1560+00
1565+00
1570+00
1575+00
1580+00
1585+00
1590+00
1595+00
1600+00

US 75 MAINLANE PROFILE AT P.G.L.

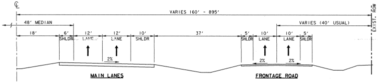

725.44'
+64.30
POT STA 92+26.43
SB FRONTAGE ROAD
STA 3526+30.06
END CONSTRUCTION
3525+00
POT SBFR STA 3526+47.06=
COUNTY RD STA 93+48.71
PT STA 3524+35.55
END PROJECT
CSJ 0047-14-053
STA 1605+50.00
95+00
1605+00
1610+00
POT STA 99+36.42
100+00
MATCH PAVEMENT
BY OTHERS
STA 1605+50.00
CSJ 0047-13-018
END PROJECT
STA 1605+50.00
PT STA 2530+38.53
County Line
Road
POT STA 2532+74.83
105+00
NB FRONTAGE ROAD
STA 2532+57.83
END CONSTRUCTION
2530+00
POT NBFR STA 2532+74.83=
COUNTY RD STA 106+48.71
POT STA 107+59.89
750.09'
+65.52
0
100
200
SCALE IN FEET
N

NOTE:
ALL ROW STATIONS AND OFFSETS ARE BASED ON THE US 75 CENTERLINE.

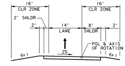


LEGEND	
PLAN	
——— - ———	CENTERLINE - ℄
————————	EXIST. ROW
——— - - ———	PROPOSED ROW
—II——II—	CONTROL OF ACCESS
▨	IMPACTED BUILDING
- - - - - -	PROPOSED EASEMENT
━━ ━━	PROPOSED RETAINING WALL

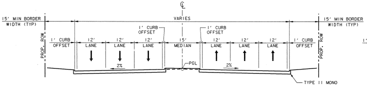
NOTE
EXISTING DRIVEWAYS WILL REMAIN UNLESS IT IS DETERMINED DURING DETAILED DESIGN AND COORDINATION WITH THE CITIES THE DRIVEWAY WILL BE A SAFETY ISSUE AND/ OR VIOLATES THE CURRENT CONTROLLED ACCESS REQUIREMENTS.


℄
VARIES 160' - 895'
EXIST. ROW
48' MEDIAN
VARIES (40' USUAL)
18'
6' SHLDR
12' LANE
12' LANE
10' SHLDR
37'
5' SHLDR
10' LANE
10' LANE
5' SHLDR
2%
2%
2%
MAIN LANES
FRONTAGE ROAD

EXISTING US 75 TYPICAL HALF SECTION

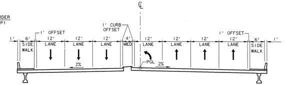

16' CLR ZONE
16' CLR ZONE
2' SHLDR
2'
14' LANE
8' SHLDR
2'
PGL & AXIS OF ROTATION
2%
6:1
6:1

PROP RAMP TYPICAL SECTION


℄
15' MIN BORDER WIDTH (TYP)
VARIES
15' MIN BORDER WIDTH (TYP)
PROP. ROW
1' CURB OFFSET
12' LANE
12' LANE
1' CURB OFFSET
12' LANE
15' MEDIAN
1' CURB OFFSET
12' LANE
12' LANE
12' LANE
1' CURB OFFSET
PROP. ROW
2%
PGL
2%
TYPE II MONO CURB (TYP)

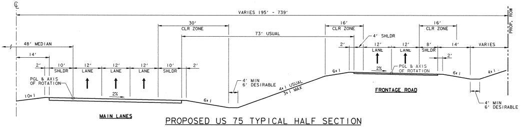
PROPOSED CROSS STREET TYPICAL SECTION

CR 370 STA 93+74 - 97+46.94 & STA 102+53.42 - 106+00
MANTUA RD STA 96+40 - 97+48.93 & STA 102+48.93 - 104.76


℄
1' OFFSET
1' CURB OFFSET
1' OFFSET
1'
6' SIDE WALK
12' LANE
12' LANE
12' LANE
4' MED
12' LANE
12' LANE
12' LANE
12' LANE
6' SIDE WALK
1'
2%
PGL
2%

PROPOSED CROSS STREET BRIDGE TURN LANE TYPICAL SECTION

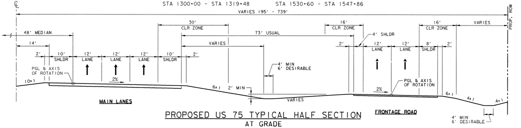
CR 370 STA 97+46.74 - 102+53.42
MANTUA RD STA 97+48.93 - 102+48.93


℄
VARIES 195' - 739'
PROP. ROW
30' CLR ZONE
73' USUAL
16' CLR ZONE
16' CLR ZONE
48' MEDIAN
14'
2'
10' SHLDR
12' LANE
12' LANE
12' LANE
10' SHLDR
2'
4' SHLDR
2'
12' LANE
12' LANE
8' SHLDR
14'
VARIES
2'
PGL & AXIS OF ROTATION
2%
PGL & AXIS OF ROTATION
2%
10:1
6:1
4' MIN 6' DESIRABLE
4:1 USUAL 3:1 MAX
6:1
6:1
4:1
4' MIN 6' DESIRABLE
MAIN LANES
FRONTAGE ROAD

PROPOSED US 75 TYPICAL HALF SECTION

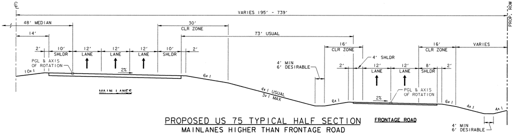
FRONTAGE ROAD HIGHER THAN MAINLANES

STA 1080+00 - STA 1155+52	STA 1397+53 - STA 1415+58
STA 1169+31 - STA 1229+65	STA 1465+55 - STA 1487+25
STA 1267+78 - STA 1285+55	STA 1510+44 - STA 1522+23
STA 1300+00 - STA 1319+48	STA 1530+60 - STA 1547+86


℄
VARIES 195' - 739'
PROP. ROW
30' CLR ZONE
73' USUAL
16' CLR ZONE
16' CLR ZONE
VARIES
48' MEDIAN
14'
VARIES
2'
10' SHLDR
12' LANE
12' LANE
12' LANE
10' SHLDR
2'
4' SHLDR
2'
12' LANE
12' LANE
8' SHLDR
2'
4' MIN 6' DESIRABLE
PGL & AXIS OF ROTATION
2%
PGL & AXIS OF ROTATION
2%
10:1
6:1
2' MIN
VARIES
6:1
4:1
4:1
MAIN LANES
FRONTAGE ROAD
4' MIN 6' DESIRABLE

PROPOSED US 75 TYPICAL HALF SECTION

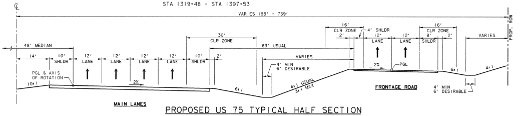
AT GRADE
STA 1547+86 - END


℄
VARIES 195' - 739'
PROP. ROW
30' CLR ZONE
73' USUAL
16' CLR ZONE
16' CLR ZONE
VARIES
48' MEDIAN
14'
2'
10' SHLDR
12' LANE
12' LANE
12' LANE
10' SHLDR
2'
4' MIN 6' DESIRABLE
4' SHLDR
2'
12' LANE
12' LANE
8' SHLDR
2'
PGL & AXIS OF ROTATION
2%
PGL & AXIS OF ROTATION
2%
10:1
6:1
4:1 USUAL 3:1 MAX
6:1
6:1
4:1
4:1
MAIN LANES
FRONTAGE ROAD
4' MIN 6' DESIRABLE

PROPOSED US 75 TYPICAL HALF SECTION

MAINLANES HIGHER THAN FRONTAGE ROAD

STA 1155+52 - STA 1169+31	STA 1415+58 - STA 1465+55
STA 1229+65 - STA 1267+78	STA 1487+25 - STA 1510+44
STA 1285+55 - STA 1300+00	STA 1522+23 - STA 1530+60
STA 1319+48 - STA 1397+53	


℄
VARIES 195' - 739'
PROP. ROW
16' CLR ZONE
4' SHLDR
16' CLR ZONE
30' CLR ZONE
63' USUAL
2'
12' LANE
12' LANE
8' SHLDR
2'
VARIES
48' MEDIAN
14'
10' SHLDR
12' LANE
12' LANE
12' LANE
12' LANE
10' SHLDR
2'
VARIES
4' MIN 6' DESIRABLE
PGL & AXIS OF ROTATION
2%
PGL
2%
10:1
6:1
4:1 USUAL 3:1 MAX
6:1
4:1
MAIN LANES
FRONTAGE ROAD
4' MIN 6' DESIRABLE

PROPOSED US 75 TYPICAL HALF SECTION

WITH AUXILIARY LANE
BEGIN STA 1080+00

COUNTY

Texas Department of Transportation

DALLAS DISTRICT
WILLIAM L. HALE, P.E., DISTRICT ENGINEER

COLLIN COUNTY

DESIGN SCHEMATIC

US 75
FROM TELEPHONE ROAD (CR 275) TO LINE ROAD (CR 375) GRAYSON COUNTY LINE
PROJECT LENGTH = 10.29 MILES

CSJ # 0047-14-053
STA 1062+13.30 TO STA 1605+50.00

DESIGN SPEED: 70 MPH MAIN LANES
50 MPH RAMPS
50 MPH FRONTAGE ROADS
45 MPH SH 121
30 MPH COLLECTOR ROADS

FUNCTIONAL CLASS: RURAL FREEWAY
ROLL 4 OF 9

SCALE 1"=200'H, 1"=20'V

JUNE 2008

HUITT-ZOLLARS
Huitt-Zollars, Inc. Dallas
3131 McKinney Avenue, Suite 600
Dallas, Texas 75204-2489

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DAVID ALAN NUFER, P.E. 68818

DAVID ALAN NUFER
68818
6-18-08

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