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Texas Department of Transportation

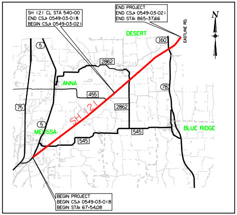
DALLAS DISTRICT
WILLIAM HALE, P.E. DISTRICT ENGINEER
SH 121
COLLIN COUNTY
DESIGN SCHEMATIC
SEPTEMBER 2011

ROLL 11 of 11

FROM: SH 5 IN MELISSA TO: CR 635 (EAST LINE ROAD)
BRIDGE REPLACEMENT AND HIGHWAY RECONSTRUCTION
PROJECT LENGTH: 15.11 MILES (79784')
BRIDGE: 0.30 MILES (1560')
ROADWAY: 14.81 MILES (78224')

CSJ: 0549-03-018 (SH 5 to FM 455)
CSJ: 0549-03-021 (FM 455 to CR 635/FANNIN COUNTY LINE)

HORZ 0 100 200 300
VERT 0 10 20 30
GRAPHIC SCALE
(IN FEET)


SH 121 CL STA 540+00
END CSJ: 0549-03-018
BEGIN CSJ: 0549-03-021
END PROJECT
END CSJ: 0549-03-021
END STA: 865+37.66
N
EASTLINE RD.
DESERT
160
5
2862
ANNA
455
78
75
2862
SH 121
5
MELISSA
545
545
BLUE RIDGE
BEGIN PROJECT
BEGIN CSJ: 0549-03-018
BEGIN STA: 67+54.08

LOCATION MAP

INDEX OF ROLLS

ROLL	DESCRIPTION
1	SH 121 STA 67+54.08 TO STA 187+00
2	SH 121 STA 187+00 TO STA 327+00
3	SH 121 STA 327+00 TO STA 467+00
4	SH 121 STA 467+00 TO STA 607+00
5	SH 121 STA 607+00 TO STA 747+00
6	SH 121 STA 747+00 TO CR 635 (FANNIN COUNTY LINE)
7	SH 121 STA 747+00 TO FANNIN COUNTY LINE (TRANSITION)
8	SH 5 AND FANNIN ROAD
9	FM 455 AND CONNECTING RAMPS
10	FM 2862 AND CONNECTING RAMPS
11	SH 160 AND CONNECTING RAMPS

DESIGN ROADWAY	LIMITS		FUNCTIONAL CLASSIFICATION	ADT		DESIGN SPEED
	FROM	TO		2012	2032	
SH 121 (SUBURBAN)	SH 5 STA 67+54.08	Outer Loop + STA 368+10.00	ARTERIAL	18800	29400	45
SH 121 (RURAL)	Outer Loop + STA 368+10.00	CR 635 STA 865+37.66	ARTERIAL	13500	21000	70
SH 121 RAMPS	Outer Loop + STA 368+10.00	CR 635 STA 865+37.66	RAMP	NA	NA	35
FM 2933	AT SH 121		COLLECTOR	1000	1600	40
455 N	AT SH 121		ARTERIAL	1550	2250	40
455 S	AT SH 121		COLLECTOR	500	700	40
E. HOUSTON ST (FM 2862)	AT SH 121		COLLECTOR	1700	2700	50
SH 160	AT SH 121		ARTERIAL	4100	6600	50
N. McDonald Street (SH 5 SOUTH)	AT SH 121		ARTERIAL	7300	11,300	40
MC KINNEY ST (SH 5 NORTH)	AT SH 121		ARTERIAL	6400	9900	40
DENTON ST (FM 545)	AT SH 121		COLLECTOR	4200	6500	30
COUNTY ROADS						
CR 418	AT SH 121		LOCAL	600	900	30
LANDFILL ENTRANCE	AT SH 121		LOCAL	NA	NA	30
416	AT SH 121		LOCAL	NA	NA	30
419	AT SH 121		LOCAL	300	600	20 •
420	AT SH 121		LOCAL	NA	NA	20 •
475	AT SH 121		LOCAL	250	450	30
507(509)	AT SH 121		LOCAL	NA	NA	20 •
424 / 513	AT SH 121		LOCAL	NA	NA	30
526 / 527	AT SH 121		LOCAL	NA	NA	20 •
528 / 581	AT SH 121		LOCAL	NA	NA	20 •
582	AT SH 121		LOCAL	NA	NA	20 •
936	AT SH 121		LOCAL	NA	NA	20 •
1002	AT SH 121		LOCAL	NA	NA	20 •
COUNTY LINE RD	AT SH 121		LOCAL	250	250	20 •
EASTLINE RD	AT SH 121		LOCAL	200	350	30
CITY STREETS						
FANNIN RD	AT SH 121		COLLECTOR	NA	NA	30
BARTLETT RD	AT SH 121		LOCAL	NA	NA	30
CREEKSIDE RD	AT SH 121		LOCAL	NA	NA	30
BERRY RD	AT SH 121		LOCAL	2600	4000	30
EASTWOOD RD	AT SH 121		LOCAL	NA	NA	30
LILLIAN DR	AT SH 121		LOCAL	NA	NA	30
NUGENT ST	AT SH 121		LOCAL	NA	NA	30
LIBERTY WAY	AT SH 121		LOCAL	900	1400	30
REDWOOD BLVD	AT SH 121		LOCAL	NA	NA	30

• = UNPAVED COUNTY ROAD
+ = FUTURE OUTER LOOP, BY OTHERS

NOTES:

1. MEDIAN OPENINGS ARE PRELIMINARY AND SUBJECT TO CHANGE. FINAL MEDIAN OPENING LOCATIONS TO BE DETERMINED DURING PS&E AND IN COORDINATION WITH THE CITIES OF MELISSA AND ANNA.
2. SOURCE OF TRAFFIC DATA:
   TEXAS DEPARTMENT OF TRANSPORTATION
   TRANSPORTATION, PROGRAMING AND PLANNING DIVISION
   MARCH 27, 2007
3. ALL URBAN SECTIONS WILL HAVE CONCRETE CURB AND GUTTER WITH BARRIER CURBS.

osowe1s
9/30/2011 8:31:34 AM
L:\110871\148-18336-000\prod\Exhibits\121 CROSS STREETS SH160-200.dgn

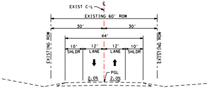
LEGEND

— - —	EXISTING R.O.W. (ACCESS BY PERMIT ONLY)
——	PROPERTY LINES
▬ ▪ ▬	PROPOSED R.O.W. (ACCESS BY PERMIT ONLY IN ACCORDANCE WITH TXDOT ACCESS CONTROL MANUAL)
- — - —	SH 121 CL
X X X X	OBLITERATE EXISTING ROADWAY
— —3"w— —	WATER UTILITY
- - - -	CITY LIMIT
🟩	SH 121 PAVEMENT
🟦	CROSS STREETS
☐	BRIDGE
🟪	DRIVEWAYS
——	RETAINING WALL
▨	DISPLACED STRUCTURE

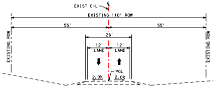
These documents are not intended for Construction, Bidding or Permit Purposes. They were prepared by, or under the supervision of:

NANCY D. MITCHELL, P.E. 79762 09/22/11
PROJECT MANAGER PE# DATE

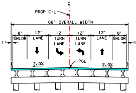
Lockwood, Andrews & Newnam, Inc.
T.B.P.E. Firm # 2614


EXIST C-L
℄
EXISTING 60' ROW
30'
30'
44'
10' SHLDR
12' LANE
12' LANE
10' SHLDR
EXISTING ROW
EXISTING ROW
PGL
2.0%
2.0%

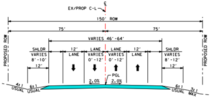
EXISTING SH 160 TYPICAL SECTION
NTS CSJ 0549-03-021
STA. 5+00 TO STA. 13+48.38


EXIST C-L
℄
EXISTING 110' ROW
55'
55'
26'
12' LANE
12' LANE
EXISTING ROW
EXISTING ROW
PGL
2.0%
2.0%

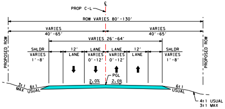
EXISTING SH 160 TYPICAL SECTION
NTS CSJ 0549-03-021
STA. 13+48.38 TO STA. 22+83.71


PROP C-L
℄
66' OVERALL WIDTH
8' SHLDR
12' LANE
12' TURN LANE
12' TURN LANE
12' LANE
8' SHLDR
1'
1'
PGL
2.0%
2.0%

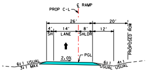
PROPOSED SH 160 BRIDGE TYPICAL SECTION
NTS CSJ 0549-03-021
STA. 12+76.52 TO STA. 14+18.52


EX/PROP C-L
℄
150' ROW
75'
75'
VARIES 46'-64'
SHLDR VARIES 8'-10'
12'
12' LANE
LANE VARIES 0'-12'
LANE VARIES 0'-12'
12' LANE
SHLDR VARIES 8'-12'
12'
PROPOSED ROW
PROPOSED ROW
PGL
2.0%
2.0%
4:1 USUAL
6:1 USUAL
6:1 USUAL
3:1 MAX

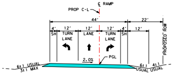
PROPOSED SH 160 TYPICAL SECTION
NTS CSJ 0549-03-021
STA. 5+00 TO STA. 12+76.52


PROP C-L
℄
ROW VARIES 80'-130'
VARIES 40'-65'
VARIES 40'-65'
VARIES 26'-64'
SHLDR VARIES 1'-8'
12' LANE
LANE VARIES 0'-12'
LANE VARIES 0'-12'
12' LANE
SHLDR VARIES 1'-8'
PROPOSED ROW
PROPOSED ROW
PGL
2.0%
2.0%
3:1 MAX
6:1 USUAL
6:1 USUAL
4:1 USUAL
3:1 MAX

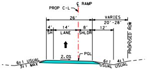
PROPOSED SH 160 TYPICAL SECTION
NTS CSJ 0549-03-021
STA. 14+18.52 TO STA. 22+83.71


℄ RAMP
PROP C-L
26'
20'
4'
14'
8'
12'
SH
LANE
SHLDR
PROPOSED ROW
2.0%
PGL
6:1 USUAL
3:1 MAX
6:1
USUAL
4:1
USUAL

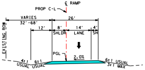
PROPOSED RAMP TYPICAL SECTION
AT SH 160 NB EXIT
CSJ 0549-03-021 NTS
STA. 78+61.19 TO STA. 85+35.37


℄ RAMP
PROP C-L
44'
22'
4'
12'
12'
12'
4'
12'
SH
TURN LANE
LANE
TURN LANE
SH
PROPOSED ROW
2.0%
PGL
6:1 USUAL
3:1 MAX
6:1
USUAL
4:1
USUAL

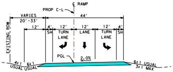
PROPOSED RAMP TYPICAL SECTION
AT SH 160 NB EXIT
NTS CSJ 0549-03-021
STA. 85+35.37 TO STA. 90+62.72


℄ RAMP
PROP C-L
26'
VARIES
20'-28'
4'
14'
8'
12'
SH
LANE
SHLDR
PROPOSED ROW
2.0%
PGL
6:1 USUAL
3:1 MAX
6:1
USUAL
4:1
USUAL

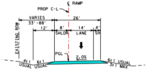
PROPOSED RAMP TYPICAL SECTION
AT SH 160 NB ENTRANCE
CSJ 0549-03-021 NTS
STA. 91+27.97 TO STA. 100+48.35


℄ RAMP
PROP C-L
VARIES
32'-68'
26'
12'
8'
14'
4'
SHLDR
LANE
SH
EXISTING ROW
PGL
2.0%
4:1
USUAL
6:1
USUAL
6:1 USUAL
3:1 MAX

PROPOSED RAMP TYPICAL SECTION
AT SH 160 SB ENTRANCE
NTS CSJ 0549-03-021
STA. 82+43.30 TO STA. 90+71.54

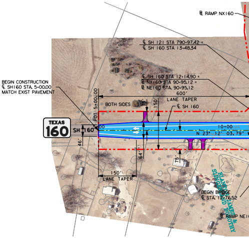

℄ RAMP
PROP C-L
VARIES
20'-33'
44'
12'
4'
12'
12'
12'
4'
SH
TURN LANE
LANE
TURN LANE
SH
EXISTING ROW
PGL
2.0%
4:1
USUAL
6:1
USUAL
6:1 USUAL
3:1 MAX

PROPOSED RAMP TYPICAL SECTION
AT SH 160 SB EXIT
NTS CSJ 0549-03-021
STA. 91+39.07 TO STA. 95+64.83

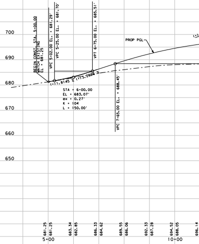

℄ RAMP
PROP C-L
VARIES
33'-88'
26'
12'
8'
14'
4'
SHLDR
LANE
SH
EXISTING ROW
PGL
2.0%
4:1
USUAL
6:1
USUAL
6:1 USUAL
3:1 MAX

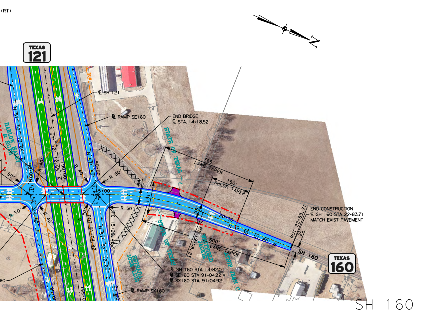
PROPOSED RAMP TYPICAL SECTION
AT SH 160 SB EXIT
NTS CSJ 0549-03-021
STA. 95+64.83 TO STA. 103+27.16

CL160-1
PI STATION = 17+21.15
DELTA = 21° 42' 01.99"
DEGREE OF CURVE = 5° 43' 46.48"
TANGENT = 191.67
LENGTH = 378.75
RADIUS = 1,000.00
PC STATION = 15+29.48
PT STATION = 19+08.23


℄ RAMP NX160
℄ SH 121 STA 790+97.42 =
℄ SH 160 STA 13+48.34
℄ SH 160 STA 12+14.90 =
℄ NX160 STA 90+95.12 =
℄ NE160 STA 90+95.12
BEGIN CONSTRUCTION
℄ SH160 STA 5+00.00
MATCH EXIST PAVEMENT
POT 5+00.00
600'
LANE TAPER
BOTH SIDES
75'
150'
℄ SH 160
TEXAS
160
SH 160
46'
10+00
N 23° 12' 03.79"
64'
75'
150'
LANE TAPER
BEGIN BRIDGE
℄ STA 12+76.52
BLANTON JAMES & SLINGERLAND DOROTHY
℄ RAMP NE16

SUPERELEVATION TABLE					
ROADWAY	EVENT	LEFT		RIGHT	
		STA.	X- SLOPE	STA.	X- SLOPE
SH 78 SH 160	BEGIN SE TRANSITION	15+29	-2.00%	15+29	-2.00%
	END SE TRANSITION	18+42	5.90%	17+01	-5.90%
SH 160	BEGIN SE TRANSITION	18+73	5.90%	18+57	-5.90%
	END SE TRANSITION	22+21	-2.00%	20+28	-2.00%

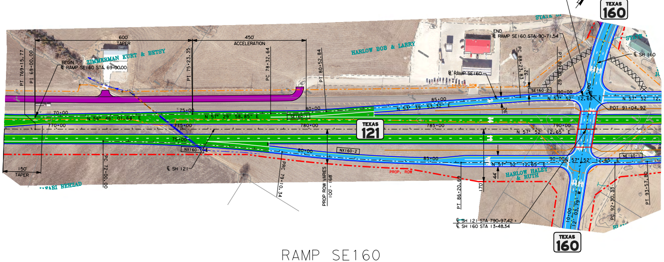



(RT)
TEXAS 121
℄ SH 121
℞ RAMP SE160
END BRIDGE
℄ STA. 14+18.52
365' LANE TAPER
150' SHLDR TAPER
600' LANE TAPER
END CONSTRUCTION
℄ SH 160 STA 22+83.71
MATCH EXIST PAVEMENT
POT 22+83.71
SH 160
TEXAS 160
℄ SH 160 STA 14+82.01 =
℞ SE160 STA 91+04.92 =
℞ SX160 STA 91+04.92
℞ RAMP SX160
POT 91+04.92
R 50'
R 40'
STATE OF TEXAS

SH 160

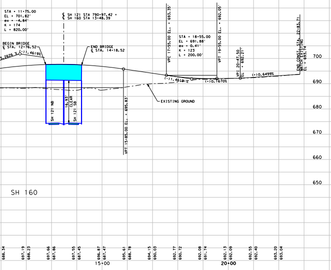
SE160-1
PI STATION = 79+42.79
DELTA = 4° 12' 19.33" (LT)
DEGREE OF CURVE = 1° 54' 35.49"
TANGENT = 110.15
LENGTH = 220.19
RADIUS = 3,000.00
PC STATION = 78+32.64
PT STATION = 80+52.84

SE160-2
PI STATION = 88+97.26
DELTA = 4° 12' 19.33" (RT)
DEGREE OF CURVE = 2° 51' 53.24"
TANGENT = 73.43
LENGTH = 146.80
RADIUS = 2,000.00
PC STATION = 88+23.83
PT STATION = 89+70.62

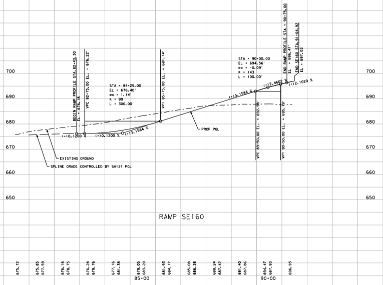

N
℄ SH 160 STA 14+82.01 =
℞ SE160 STA 91+04.92
TEXAS 160
600' TAPER
450' ACCELERATION
BEGIN
℞ RAMP SE160 STA. 69+00.00
ZIMMERMAN KURT & BETSY
HARLOW BOB & LARRY
END
℞ RAMP SE160 STA. 90+71.54
℞ RAMP SE160
PT 769+15.77
PI 69+00.00
PT 75+23.35
PC 78+32.64
PT 80+52.84
PC 88+23.83
PT 89+70.62
70+00
75+00
80+00
85+00
90+00
770+00
775+00
780+00
785+00
790+00
N 56° 46' 01.84" E
N 57° 29' 58.85" E
N 53° 39' 53.32" E
N 57° 52' 12.65" E
POT 91+04.92
SE160-1
SE160-2
NX160-1
NX160-2
NE160-1
TEXAS 121
150' TAPER
PC 72+00.00
PRC 79+10.34
PROP ROW VARIES 100' - 168'
PROP. ROW
℄ SH 121
PT 86+20.69
170
44
℄ SH 121 STA 790+97.42 =
℄ SH 160 STA 13+48.34
HARLOW HALEY & RUTH
PC 92+30.33
PT 93+57.80
TEXAS 160

RAMP SE160

SUPERELEVATION TABLE					
ROADWAY	EVENT	LEFT		RIGHT	
		STA.	X- SLOPE	STA.	X- SLOPE
RAMP SE 160	BEGIN SE TRANSITION			87+37	2.00%
	END SE TRANSITION			88+46	-2.80%
	BEGIN SE TRANSITION			89+49	-2.80%
	END SE TRANSITION			90+57	2.00%


STA = 11+75.00
EL = 701.82'
ex = -4.84'
K = 174
L = 820.00'
℄ SH 121 STA 790+97.42 =
℄ SH 160 STA 13+48.39
BEGIN BRIDGE
℄ STA. 12+76.52
END BRIDGE
℄ STA. 14+18.52
3.2626 %
(-)1.4619%
SH 121 NB
16.93' CLEAR
SH 121 SB
VPT 15+85.00 EL. = 695.83'
EXISTING GROUND
VPC 17+55.00 EL. = 693.35'
STA = 18+55.00
EL = 691.88'
ex = 0.41'
K = 123
L = 200.00'
VPT 19+55.00 EL. = 692.05'
(-)1.4619 %
(+)0.1670%
VPI 20+47.50
EL = 692.21'
(+)0.6499%
END CONST. STA. 22+83.71
MATCH EXISTING
EL = 693.74
700
690
680
670
660
650
15+00
20+00

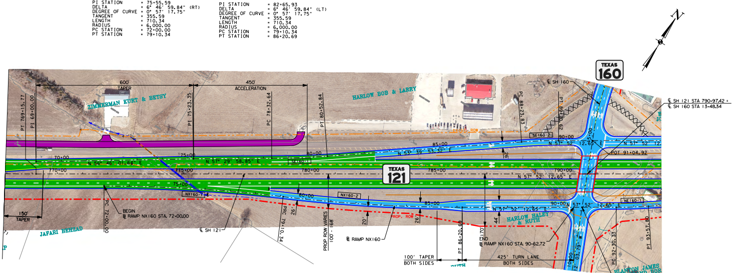
SH 160


700
690
680
670
660
650
BEGIN RAMP PROFILE STA. 82+43.30
EL = 676.18
VPC 82+75.00 EL. = 676.22'
STA = 84+25.00
EL = 676.40'
ex = 1.14'
K = 99
L = 300.00'
VPT 85+75.00 EL. = 681.14'
(+)0.1200 %
(+)0.1200 %
(+)3.1584 %
PROP PGL
EXISTING GROUND
SPLINE GRADE CONTROLLED BY SH121 PGL
STA = 90+00.00
EL = 694.56'
ex = -0.09'
K = 143
L = 100.00'
(+)3.1584 %
(+)2.4602 %
(+)2.1020 %
VPC 89+50.00 EL. = 692.98'
VPT 90+50.00 EL. = 695.79'
END RAMP PROFILE STA = 90+75.00
EL = 696.41'
END SE160 STA. 91+04.92
EL = 697.03
85+00
90+00

RAMP SE160

NX160-1
PI STATION = 75+55.59
DELTA = 6° 46′ 59.84″ (RT)
DEGREE OF CURVE = 0° 57′ 17.75″
TANGENT = 355.59
LENGTH = 710.34
RADIUS = 6,000.00
PC STATION = 72+00.00
PT STATION = 79+10.34

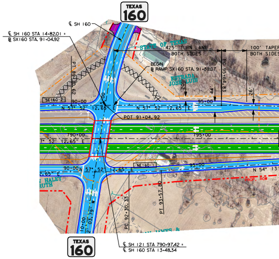
NX160-2
PI STATION = 82+65.93
DELTA = 6° 46′ 59.84″ (LT)
DEGREE OF CURVE = 0° 57′ 17.75″
TANGENT = 355.59
LENGTH = 710.34
RADIUS = 6,000.00
PC STATION = 79+10.34
PT STATION = 86+20.69

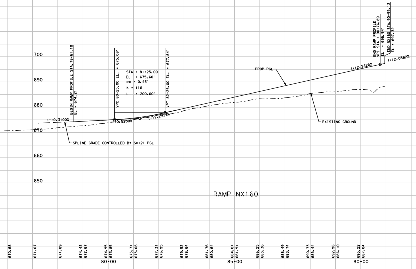

N
TEXAS 160
TEXAS 121
600′ TAPER
450′ ACCELERATION
ZIMMERMAN KURT & BETSY
HARLOW BOB & LARRY
JAFARI BEHZAD
HARLOW HALEY & RUTH
PT 769+15.77
PI 69+00.00
PI 75+23.35
PC 78+32.64
PT 80+52.84
PC 88+23.83
PC 72+00.00
PRC 79+10.34
PT 86+20.69
N 56° 46′ 01.64″ E
N 57° 29′ 58.85″ E
N 53° 39′ 51.32″ E
N 57° 52′ 12.65″ E
POT 91+04.92
℄ SH 160
℄ SH 121
℄ SH 121 STA 790+97.42 =
℄ SH 160 STA 13+48.34
℄ SH 160 STA 12+14.90 =
℞ NX160 STA 90+95.12
150′ TAPER
BEGIN ℞ RAMP NX160 STA. 72+00.00
PROP ROW VARIES 100′ - 168′
℞ RAMP NX160
END ℞ RAMP NX160 STA. 90+62.72
100′ TAPER BOTH SIDES
425′ TURN LANE BOTH SIDES
PROP. ROW
SE160-2
NE160-1
SE160-1
NX160-1
NX160-2
70+00
75+00
80+00
85+00
90+00
770+00
775+00
780+00
785+00
790+00
20′
26′
44′
170′

RAMP NX160

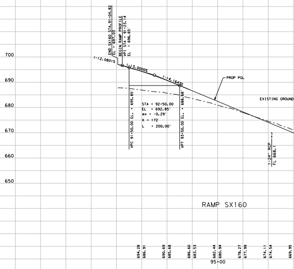
SX160-1
PI STATION = 99+22.66
DELTA = 6° 49′ 33.77″ (RT)
DEGREE OF CURVE = 0° 57′ 17.75″
TANGENT = 357.83
LENGTH = 714.82
RADIUS = 6,000.00
PC STATION = 95+64.83
PT STATION = 102+79.65

SX160-2
PI STATION = 105+35.55
DELTA = 4° 53′ 03.70″ (LT)
DEGREE OF CURVE = 0° 57′ 17.75″
TANGENT = 255.90
LENGTH = 511.49
RADIUS = 6,000.00
PC STATION = 102+79.65
PT STATION = 107+91.14


TEXAS 160
℄ SH 160
℄ SH 160 STA 14+82.01 =
℞ SX160 STA 91+04.92
STATE OF TEXAS
425′ TURN LANE BOTH SIDES
100′ TAPER BOTH SIDES
BEGIN ℞ RAMP SX160 STA. 91+39.07
PC 95+64.83
PT 93+57.80
PC 92+30.33
POT 91+04.92
N 57° 52′ 12.65″ E
SE160-2
NE160-1
90+00
95+00
790+00
795+00
44′
26′
PROP. ROW
℄ SH 121 STA 790+97.42 =
℄ SH 160 STA 13+48.34

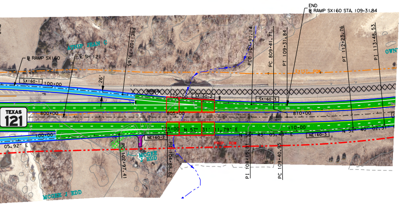

700
690
680
670
660
650
BEGIN RAMP PROFILE STA. 78+61.19
EL = 674.21
(+)0.3100%
SPLINE GRADE CONTROLLED BY SH121 PGL
VPC 80+25.00 EL. = 675.08′
STA = 81+25.00
EL = 675.60′
ex = 0.43′
K = 116
L = 200.00′
VPT 82+25.00 EL. = 677.84′
(+)0.5200%
(+)2.2426%
PROP PGL
EXISTING GROUND
END RAMP PROFILE
VPI STA = 90+76.89
EL = 696.94′
END NX160 STA. 90+95.12
EL = 697.32
(+)2.0582%
670.68
671.07
671.89
672.43 672.67
674.95 673.85
675.71 675.08
677.31 676.95
679.52 678.64
681.76 680.64
684.01 681.91
686.25 683.36
688.49 683.74
690.73 685.44
692.98 686.10
695.22 687.04
80+00
85+00
90+00

RAMP NX160

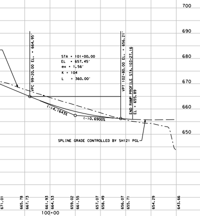

700
690
680
670
660
650
END SX160 STA. 91+04.82
EL = 697.03
BEGIN RAMP PROFILE
VPI STA = 91+23.14
EL = 696.65′
(-)2.0801%
(-)3.0000%
(-)4.1643%
VPC 91+50.00 EL. = 695.85′
STA = 92+50.00
EL = 692.85′
ex = -0.29′
K = 172
L = 200.00′
VPT 93+50.00 EL. = 688.68′
PROP PGL
EXISTING GROUND
1-24″ RCP
FL 668.1
694.28 686.91
690.69 685.68
686.60 683.53
682.44 680.94
678.27 677.99
674.11 674.54
669.95
95+00

RAMP SX160

SX160-3
PI STATION = 108+61.50
DELTA = 1° 56' 30.07" (LT)
DEGREE OF CURVE = 1° 22' 47.84"
TANGENT = 70.36
LENGTH = 140.71
RADIUS = 4,152.00
PC STATION = 107+91.14
PT STATION = 109+31.84


END
℞ RAMP SX160 STA. 109+31.84
℞ RAMP SX160
℄ SH 121
ATNIP JEAN C
PRC 102+79.65
PCC 107+91.14
PC 809+41.71
PT 109+31.84
PT 112+23.76
PI 113+48.53
EXIST. ROW
SX160-1
100+00
26'
SX160-2
105+00
SX160-3
TEXAS 121
800+00
805+00
810+00
105+00
N 57° 31' 11.79" E
110+00
N 56° 43' 05.48" E
N 52° 40' 02.31" E
100+00
05.92" E
NE160-2
NE160-3
PROP. ROW
PC 102+97.41
PT 104+88.62
PI 108+15.81
PC 109+40.95
MCGEE J EDD

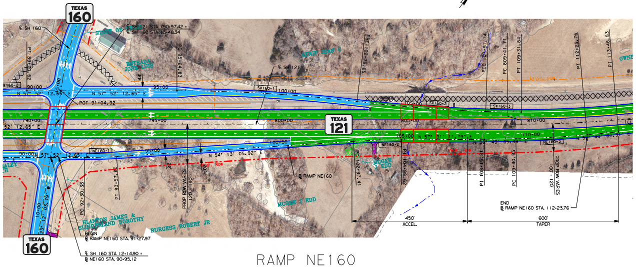
RAMP SX160


700
690
680
670
660
650
VPC 99+20.00 EL. = 664.95'
STA = 101+00.00
EL = 657.45'
ex = 1.56'
K = 104
L = 360.00'
VPT 102+80.00 EL. = 656.21'
END RAMP PROFILE STA. 103+27.16
EL = 655.89
(-)14.1643%
(-)10.6900%
SPLINE GRADE CONTROLLED BY SH121 PGL
671.01
665.78
667.73
661.93
664.53
659.02
661.55
657.07
658.49
656.07
655.71
654.29
643.66
100+00

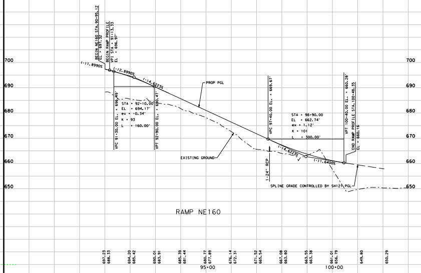
NE160-1
PI STATION = 92+94.09
DELTA = 3° 39' 06.73" (LT)
DEGREE OF CURVE = 2° 51' 53.24"
TANGENT = 63.76
LENGTH = 127.47
RADIUS = 2,000.00
PC STATION = 92+30.33
PT STATION = 93+57.80

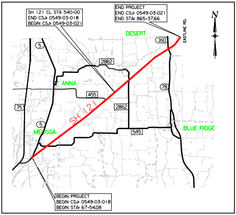
NE160-2
PI STATION = 103+93.05
DELTA = 3° 39' 06.73" (RT)
DEGREE OF CURVE = 1° 54' 35.49"
TANGENT = 95.64
LENGTH = 191.21
RADIUS = 3,000.00
PC STATION = 102+97.41
PT STATION = 104+88.62

NE160-3
PI STATION = 110+82.41
DELTA = 4° 03' 03.17" (LT)
DEGREE OF CURVE = 1° 25' 56.62"
TANGENT = 141.46
LENGTH = 282.80
RADIUS = 4,000.00
PC STATION = 109+40.95
PT STATION = 112+23.76


TEXAS 160
℄ SH 160
℄ SH121 STA 790+97.42 =
℄ SH 160 STA 13+48.34
STATE OF TEXAS
ESTRADA JOSE LUIS
PT 89+10.62
PC 95+64.83
44'
NE160-2
90+00
N 57° 52' 12.65" E
95+00
POT 91+04.92
℄ SH 121
SX160-1
100+00
ATNIP JEAN C
PRC 102+79.65
790+00
795+00
800+00
TEXAS 121
NE160-1
90+00
95+00
100+00
N 54° 13' 05.92" E
PROP. ROW
PROP ROW VARIES
120'-190'
℞ RAMP NE160
PC 92+30.33
PT 93+57.80
10+00
23° 12' 03.79" W
BLANTON JAMES & SLINGERLAND DOROTHY
BURGESS ROBERT JR
MCGEE J EDD
BEGIN
℞ RAMP NE160 STA. 91+27.97
℄ SH 160 STA 12+14.90 =
℞ NE160 STA. 90+95.12
TEXAS 160
SX160-2
105+00
SX160-3
PCC 107+91.14
PC 809+41.71
PT 109+31.84
PT 112+23.76
PI 113+48.53
EXIST. ROW
805+00
810+00
N 57° 31' 11.79" E
110+00
N 56° 43' 05.48" E
N 52° 40' 02.31" E
NE160-3
PC 102+97.41
PT 104+88.62
PI 108+15.81
PC 109+40.95
PROP ROW VARIES
100'-120'
END
℞ RAMP NE160 STA. 112+23.76
450'
ACCEL.
600'
TAPER
OWNE

RAMP NE160


700
690
680
670
660
650
BEGIN NE160 STA. 90+95.12
EL = 697.32
BEGIN RAMP PROFILE
VPI STA = 91+13.33
EL = 696.97'
(-)11.8990%
(-)12.8990%
(-)14.6223%
PROP PGL
VPC 91+30.00 EL. = 696.49'
STA = 92+10.00
EL = 694.17'
ex = -0.34'
K = 93
L = 160.00'
VPT 92+90.00 EL. = 690.47'
EXISTING GROUND
VPC 97+40.00 EL. = 669.67'
1-24" RCP
STA = 98+90.00
EL = 662.74'
ex = 1.12'
K = 101
L = 300.00'
(-)14.6223%
(-)11.6400%
VPT 100+40.00 EL. = 660.28'
END RAMP PROFILE STA. 100+48.35
EL = 660.16
SPLINE GRADE CONTROLLED BY SH121 PGL
RAMP NE160
697.23
688.33
694.20
685.42
690.01
683.91
685.39
681.44
680.77
677.89
676.14
672.31
671.52
665.54
667.08
663.80
663.55
663.38
661.01
656.79
649.80
650.29
95+00
100+00


SH 121 CL STA 540+00
END CSJ: 0549-03-018
BEGIN CSJ: 0549-03-021
END PROJECT
END CSJ: 0549-03-021
END STA: 865+37.66
EASTLINE RD.
N
DESERT
160
5
2862
ANNA
455
78
75
2862
SH 121
5
MELISSA
545
BLUE RIDGE
BEGIN PROJECT
BEGIN CSJ: 0549-03-018
BEGIN STA: 67+54.08

LOCATION MAP

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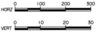
Texas Department of Transportation

DALLAS DISTRICT
WILLIAM HALE, P.E. DISTRICT ENGINEER
SH 121
COLLIN COUNTY
DESIGN SCHEMATIC
SEPTEMBER 2011

ROLL 11 of 11

FROM: SH 5 IN MELISSA TO: CR 635 (EAST LINE ROAD)
BRIDGE REPLACEMENT AND HIGHWAY RECONSTRUCTION
PROJECT LENGTH: 15.11 MILES (79784')
BRIDGE: 0.30 MILES (1560')
ROADWAY: 14.81 MILES (78224')

CSJ: 0549-03-018 (SH 5 to FM 455)
CSJ: 0549-03-021 (FM 455 to CR 635/FANNIN COUNTY LINE)


0
100
200
300
HORZ
0
10
20
30
VERT

GRAPHIC SCALE
(IN FEET)

LEGEND

- — - —	EXISTING R.O.W. (ACCESS BY PERMIT ONLY)
——	PROPERTY LINES
▬ ▪ ▬ ▪ ▬	PROPOSED R.O.W. (ACCESS BY PERMIT ONLY IN ACCORDANCE WITH TXDOT ACCESS CONTROL MANUAL)
- — - —	SH 121 CL
X X X X	OBLITERATE EXISTING ROADWAY
— —3"w— —	WATER UTILITY
- - - - - -	CITY LIMIT
🟩	SH 121 PAVEMENT
▭	CROSS STREETS
🟥	BRIDGE
🟪	DRIVEWAYS
——	RETAINING WALL
▨	DISPLACED STRUCTURE

INDEX OF ROLLS

ROLL	DESCRIPTION
1	SH 121 STA 67+54.08 TO STA. 187+00
2	SH 121 STA 187+00 TO STA. 327+00
3	SH 121 STA 327+00 TO STA. 467+00
4	SH 121 STA 467+00 TO STA. 607+00
5	SH 121 STA 607+00 TO STA. 747+00
6	SH 121 STA 747+00 TO CR 635 (FANNIN COUNTY LINE)
7	SH 121 STA 747+00 TO FANNIN COUNTY LINE (TRANSITION)
8	SH 5 AND FANNIN ROAD
9	FM 455 AND CONNECTING RAMPS
10	FM 2862 AND CONNECTING RAMPS
11	SH 160 AND CONNECTING RAMPS

DESIGN ROADWAY	LIMITS		FUNCTIONAL CLASSIFICATION	ADT		DESIGN SPEED
	FROM	TO		2012	2032	
SH 121 (SUBURBAN)	SH 5 STA 67+54.08	Outer Loop + STA 368+10.00	ARTERIAL	18800	29400	45
SH 121 (RURAL)	Outer Loop + STA 368+10.00	CR 635 STA 865+37.66	ARTERIAL	13500	21000	70
SH 121 RAMPS	Outer Loop + STA 368+10.00	CR 635 STA 865+37.66	RAMP	NA	NA	35
FM 2933	AT SH 121		COLLECTOR	1000	1600	40
455 N	AT SH 121		ARTERIAL	1550	2250	40
455 S	AT SH 121		COLLECTOR	500	700	40
E. HOUSTON ST (FM 2862)	AT SH 121		COLLECTOR	1700	2700	50
SH 160	AT SH 121		ARTERIAL	4100	6600	50
N. McDonald Street (SH 5 SOUTH)	AT SH 121		ARTERIAL	7300	11,300	40
MC KINNEY ST (SH 5 NORTH)	AT SH 121		ARTERIAL	6400	9900	40
DENTON ST (FM 545)	AT SH 121		COLLECTOR	4200	6500	30
COUNTY ROADS						
CR 418	AT SH 121		LOCAL	600	900	30
LANDFILL ENTRANCE	AT SH 121		LOCAL	NA	NA	30
416	AT SH 121		LOCAL	NA	NA	30
419	AT SH 121		LOCAL	300	600	20 •
420	AT SH 121		LOCAL	NA	NA	20 •
475	AT SH 121		LOCAL	250	450	30
507(509)	AT SH 121		LOCAL	NA	NA	20 •
424 / 513	AT SH 121		LOCAL	NA	NA	30
526 / 527	AT SH 121		LOCAL	NA	NA	20 •
528 / 581	AT SH 121		LOCAL	NA	NA	20 •
582	AT SH 121		LOCAL	NA	NA	20 •
936	AT SH 121		LOCAL	NA	NA	20 •
1002	AT SH 121		LOCAL	NA	NA	20 •
COUNTY LINE RD	AT SH 121		LOCAL	250	250	20 •
EASTLINE RD	AT SH 121		LOCAL	200	350	30
CITY STREETS						
FANNIN RD	AT SH 121		COLLECTOR	NA	NA	30
BARTLETT RD	AT SH 121		LOCAL	NA	NA	30
CREEKSIDE RD	AT SH 121		LOCAL	NA	NA	30
BERRY RD	AT SH 121		LOCAL	2600	4000	30
EASTWOOD RD	AT SH 121		LOCAL	NA	NA	30
LILLIAN DR	AT SH 121		LOCAL	NA	NA	30
NUGENT ST	AT SH 121		LOCAL	NA	NA	30
LIBERTY WAY	AT SH 121		LOCAL	900	1400	30
REDWOOD BLVD	AT SH 121		LOCAL	NA	NA	30

• = UNPAVED COUNTY ROAD
+ = FUTURE OUTER LOOP, BY OTHERS

NOTES:

1. MEDIAN OPENINGS ARE PRELIMINARY AND SUBJECT TO CHANGE. FINAL MEDIAN OPENING LOCATIONS TO BE DETERMINED DURING PS&E AND IN COORDINATION WITH THE CITIES OF MELISSA AND ANNA.
2. SOURCE OF TRAFFIC DATA:
   TEXAS DEPARTMENT OF TRANSPORTATION
   TRANSPORTATION, PROGRAMING AND PLANNING DIVISION
   MARCH 27, 2007
3. ALL URBAN SECTIONS WILL HAVE CONCRETE CURB AND GUTTER WITH BARRIER CURBS.