

**RAMP E\_MANN\_G**

Curve Data

Curve E\_MANN\_G-5  
 P.I. Station = 14+70.18 N 1,895,756.1068 E 1,107,543.4173  
 Delta = 0° 20' 00.31" (RT)  
 Degree = 10° 04' 29.53"  
 Tangent = 1.6547  
 Length = 3.3094  
 Radius = 568.7000  
 External = 0.0024  
 Long Chord = 3.3094  
 Mid. Ord. = 0.0024  
 P.C. Station = 14+68.53 N 1,895,755.4348 E 1,107,544.9294  
 P.T. Station = 14+71.84 N 1,895,756.7875 E 1,107,541.9091  
 C.C. = N 1,896,275.1322 E 1,107,775.8717  
 Back = N 66° 02' 26.41" W  
 Ahead = N 65° 42' 26.10" W  
 Chord Bear = N 65° 52' 26.26" W

Course from PT E\_MANN\_G-5 to 941 N 65° 42' 26.10" W Dist 127.2191

Point 941 N 1,895,809.1253 E 1,107,425.9546 Sta 15+99.06

Course from 941 to PC E\_MANN\_G-6 N 64° 32' 45.93" W Dist 103.0040

Curve Data

Curve E\_MANN\_G-6  
 P.I. Station = 17+86.34 N 1,895,889.6168 E 1,107,256.8508  
 Delta = 27° 51' 08.52" (LT)  
 Degree = 16° 51' 25.75"  
 Tangent = 84.2791  
 Length = 165.2258  
 Radius = 339.8900  
 External = 10.2931  
 Long Chord = 163.6038  
 Mid. Ord. = 9.9905  
 P.C. Station = 17+02.06 N 1,895,853.3949 E 1,107,332.9490  
 P.T. Station = 18+67.28 N 1,895,886.0898 E 1,107,172.6455  
 C.C. = N 1,895,546.4976 E 1,107,186.8695  
 Back = N 64° 32' 45.93" W  
 Ahead = S 87° 36' 05.54" W  
 Chord Bear = N 78° 28' 20.20" W

Course from PT E\_MANN\_G-6 to 942 S 87° 36' 05.54" W Dist 127.6791

Point 942 N 1,895,880.7466 E 1,107,045.0783 Sta 19+94.96

Course from 942 to 943 N 85° 22' 05.22" E Dist 45.2593

Point 943 N 1,895,884.4014 E 1,107,090.1897 Sta 20+40.22

Course from 943 to 944 N 4° 35' 20.95" W Dist 1.9682

Point 944 N 1,895,886.3634 E 1,107,090.0323 Sta 20+42.19

**RAMP E\_MANN\_H**

Curve Data

Curve E\_MANN\_H-1  
 P.I. Station = 0+49.39 N 1,895,563.3230 E 1,107,176.5309  
 Delta = 11° 56' 11.83" (LT)  
 Degree = 12° 07' 39.48"  
 Tangent = 49.3913  
 Length = 98.4250  
 Radius = 472.4400  
 External = 2.5748  
 Long Chord = 98.2471  
 Mid. Ord. = 2.5608  
 P.C. Station = 0+00.00 N 1,895,559.7879 E 1,107,127.2663  
 P.T. Station = 0+98.42 N 1,895,576.9710 E 1,107,223.9991  
 C.C. = N 1,896,031.0162 E 1,107,093.4522  
 Back = N 85° 53' 44.31" E  
 Ahead = N 73° 57' 32.48" E  
 Chord Bear = N 79° 55' 38.39" E

Curve Data

Curve E\_MANN\_H-2  
 P.I. Station = 1+39.85 N 1,895,588.4184 E 1,107,263.8135  
 Delta = 19° 53' 39.73" (LT)  
 Degree = 24° 15' 18.95"  
 Tangent = 41.4275  
 Length = 82.0208  
 Radius = 236.2200  
 External = 3.6052  
 Long Chord = 81.6094  
 Mid. Ord. = 3.5510  
 P.C. Station = 0+98.42 N 1,895,576.9710 E 1,107,223.9991  
 P.T. Station = 1+80.45 N 1,895,612.7311 E 1,107,297.3565  
 C.C. = N 1,895,803.9936 E 1,107,158.7256  
 Back = N 73° 57' 32.48" E  
 Ahead = N 54° 03' 52.75" E  
 Chord Bear = N 64° 00' 42.62" E

Curve Data

Curve E\_MANN\_H-3  
 P.I. Station = 2+10.60 N 1,895,630.4302 E 1,107,321.7752  
 Delta = 28° 38' 52.40" (LT)  
 Degree = 48° 30' 37.97"  
 Tangent = 30.1584  
 Length = 59.0550  
 Radius = 118.1099  
 External = 3.7896  
 Long Chord = 58.4417  
 Mid. Ord. = 3.6718  
 P.C. Station = 1+80.45 N 1,895,612.7311 E 1,107,297.3565  
 P.T. Station = 2+39.50 N 1,895,657.6696 E 1,107,334.7191  
 C.C. = N 1,895,708.3623 E 1,107,228.0411  
 Back = N 54° 03' 52.75" E  
 Ahead = N 25° 25' 00.35" E  
 Chord Bear = N 39° 44' 26.55" E

Curve Data

Curve E\_MANN\_H-4  
 P.I. Station = 3+16.58 N 1,895,727.2911 E 1,107,367.8028  
 Delta = 76° 07' 59.09" (LT)  
 Degree = 58° 12' 45.45"  
 Tangent = 77.0823  
 Length = 130.7845  
 Radius = 98.4250  
 External = 26.5916  
 Long Chord = 121.3730  
 Mid. Ord. = 20.9355  
 P.C. Station = 2+39.50 N 1,895,657.6696 E 1,107,334.7191  
 P.T. Station = 3+70.29 N 1,895,776.0965 E 1,107,308.1395  
 C.C. = N 1,895,699.9135 E 1,107,245.8207  
 Back = N 25° 25' 00.35" E  
 Ahead = N 50° 42' 58.74" W  
 Chord Bear = N 12° 38' 59.19" W

**RAMP E\_MANN\_H**

Curve Data

Curve E\_MANN\_H-5  
 P.I. Station = 5+05.80 N 1,895,861.9010 E 1,107,203.2461  
 Delta = 69° 05' 22.18" (LT)  
 Degree = 29° 06' 22.75"  
 Tangent = 135.5177  
 Length = 237.3694  
 Radius = 196.8500  
 External = 42.1374  
 Long Chord = 223.2474  
 Mid. Ord. = 34.7079  
 P.C. Station = 3+70.29 N 1,895,776.0965 E 1,107,308.1395  
 P.T. Station = 6+07.65 N 1,895,794.5403 E 1,107,085.6553  
 C.C. = N 1,895,623.7306 E 1,107,183.5019  
 Back = N 50° 42' 58.74" W  
 Ahead = S 60° 11' 39.08" W  
 Chord Bear = N 85° 15' 39.83" W

Curve Data

Curve E\_MANN\_H-6  
 P.I. Station = 6+32.05 N 1,895,782.4118 E 1,107,064.4828  
 Delta = 21° 03' 56.01" (LT)  
 Degree = 43° 39' 34.04"  
 Tangent = 24.4003  
 Length = 48.2497  
 Radius = 131.2334  
 External = 2.2491  
 Long Chord = 47.9784  
 Mid. Ord. = 2.2112  
 P.C. Station = 6+07.65 N 1,895,794.5403 E 1,107,085.6553  
 P.T. Station = 6+55.90 N 1,895,763.4837 E 1,107,049.0846  
 C.C. = N 1,895,680.6671 E 1,107,150.8864  
 Back = S 60° 11' 39.08" W  
 Ahead = S 39° 07' 43.07" W  
 Chord Bear = S 49° 39' 41.07" W

Curve Data

Curve E\_MANN\_H-7  
 P.I. Station = 6+89.10 N 1,895,737.7327 E 1,107,028.1359  
 Delta = 21° 25' 08.34" (LT)  
 Degree = 32° 38' 33.37"  
 Tangent = 33.1958  
 Length = 65.6167  
 Radius = 175.5245  
 External = 3.1115  
 Long Chord = 65.2352  
 Mid. Ord. = 3.0573  
 P.C. Station = 6+55.90 N 1,895,763.4837 E 1,107,049.0846  
 P.T. Station = 7+21.52 N 1,895,706.1100 E 1,107,018.0380  
 C.C. = N 1,895,652.7166 E 1,107,185.2445  
 Back = S 39° 07' 43.07" W  
 Ahead = S 17° 42' 34.73" W  
 Chord Bear = S 28° 25' 08.90" W

Curve Data

Curve E\_MANN\_H-8  
 P.I. Station = 7+82.89 N 1,895,647.6458 E 1,106,999.3688  
 Delta = 19° 49' 59.36" (LT)  
 Degree = 16° 19' 16.67"  
 Tangent = 61.3726  
 Length = 121.5170  
 Radius = 351.0492  
 External = 5.3244  
 Long Chord = 120.9112  
 Mid. Ord. = 5.2448  
 P.C. Station = 7+21.52 N 1,895,706.1100 E 1,107,018.0380  
 P.T. Station = 8+43.04 N 1,895,586.3154 E 1,107,001.6429  
 C.C. = N 1,895,599.3231 E 1,107,352.4510  
 Back = S 17° 42' 34.73" W  
 Ahead = S 2° 07' 24.63" E  
 Chord Bear = S 7° 47' 35.05" W