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Texas Department of Transportation

DALLAS DISTRICT

Design Schematic

Jay R. Nelson, P.E.
District Engineer

U.S. 75
From Spur 399
To S.H. 121

McKinney, Texas
Collin County

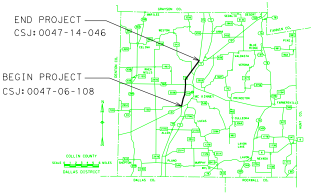
CSJ: 0047-06-108
0047-14-046

Functional Class.2: Urban Freeway

Project Length = 7.52 miles

Design Speed:

Mainlanes 70 mph
Ramps 50 mph
Frontage Rds 40 mph


END PROJECT
CSJ:0047-14-046
BEGIN PROJECT
CSJ:0047-06-108
GRAYSON CO.
FANNIN CO.
COLLIN COUNTY
DALLAS DISTRICT
DALLAS CO.
ROCKWALL CO.
DENTON CO.
HUNT CO.
MC KINNEY
PRINCETON
FARMERSVILLE
ALLEN
PLANO
LUCAS
WYLIE
CELINA
ANNA
WESTON
BLUE RIDGE
NEVADA
LAVON

Scale:
Horizontal 1:200
Vertical 1:20

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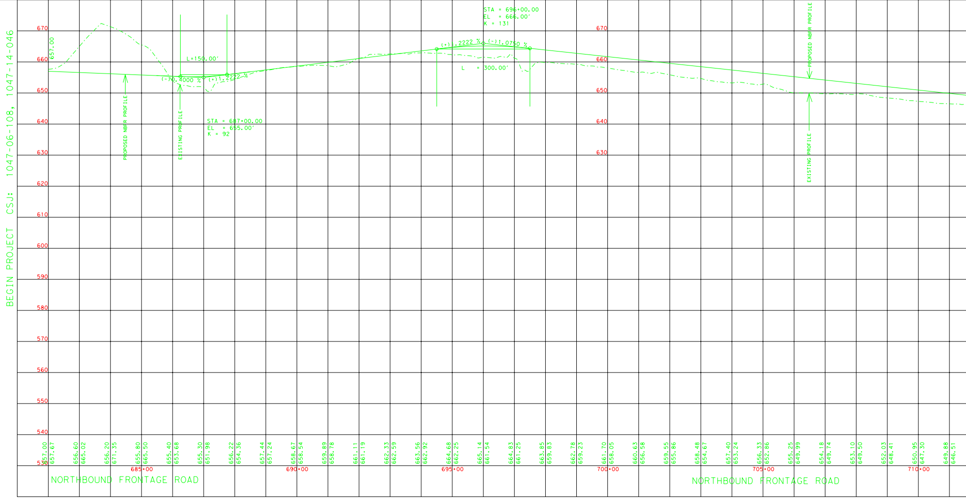
October 2003

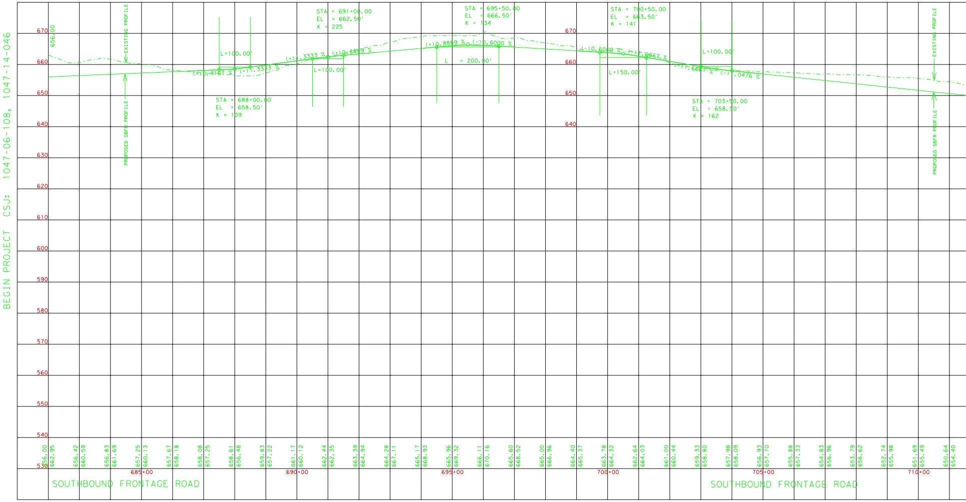
SCHEMATIC PREPARED BY:
TxDOT DALLAS DISTRICT

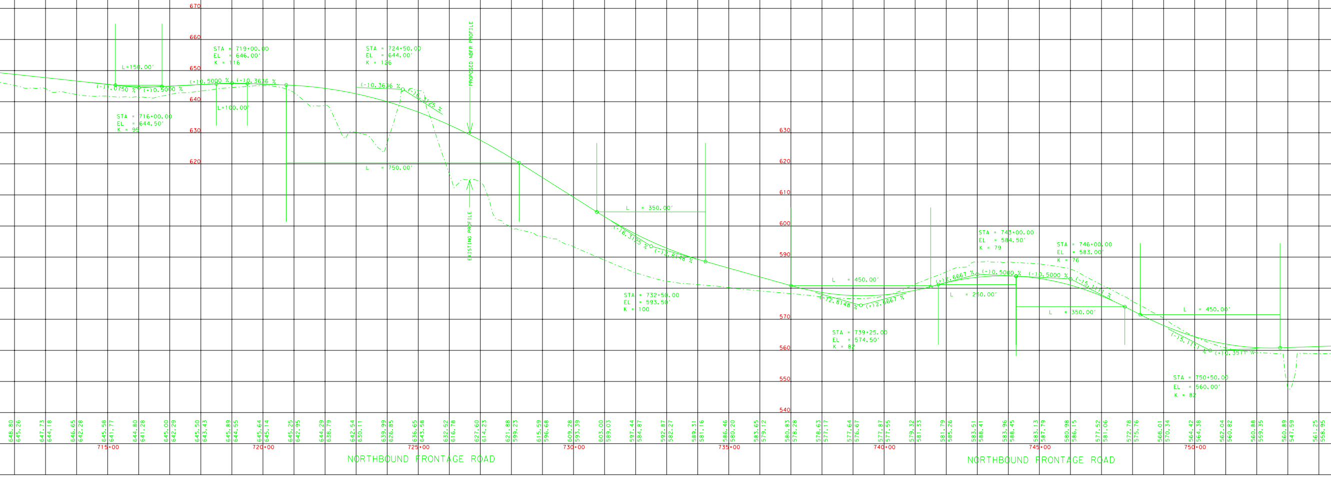
MICHAEL A. RENFROW, P.E.
PROJECT MANAGER

75050 — P.E. NUMBER
OCTOBER 2003 — DATE

Roll 5 of 6

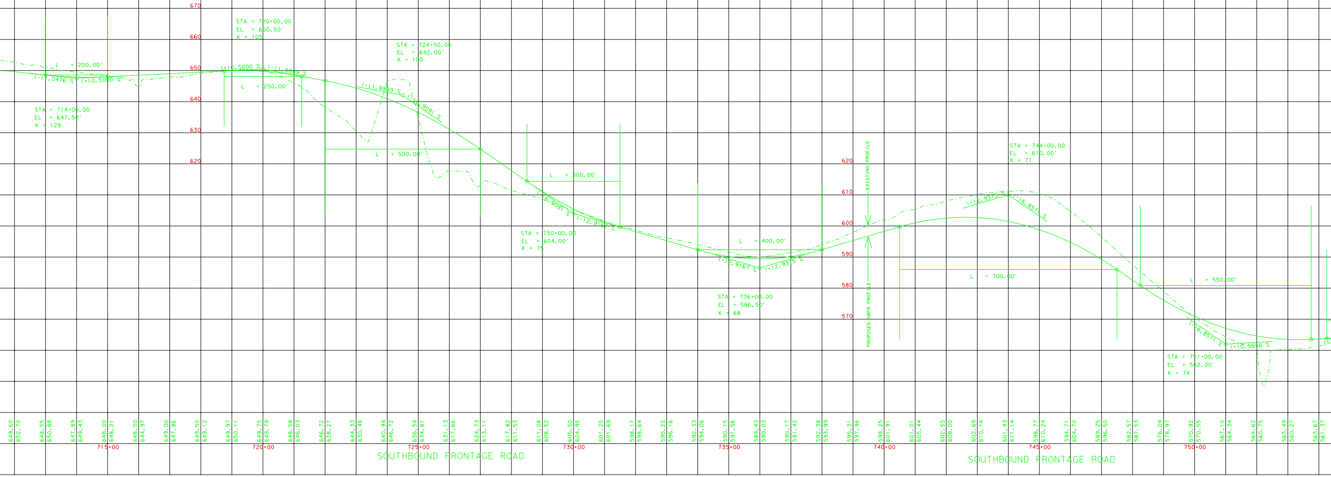

BEGIN PROJECT CSJ: 1047-06-108, 1047-14-046
NORTHBOUND FRONTAGE ROAD
PROPOSED NBFR PROFILE
EXISTING PROFILE
L=150.00'
(-)0.4000 %
(+)1.2222 %
STA = 687+00.00
EL = 655.00'
K = 92
STA = 696+00.00
EL = 666.00'
K = 131
(+)1.2222 %
(-)1.0750 %
L = 300.00'
670
660
650
640
630
620
610
600
590
580
570
560
550
540
530
685+00
690+00
695+00
700+00
705+00
710+00


BEGIN PROJECT CSJ: 1047-06-108, 1047-14-046
SOUTHBOUND FRONTAGE ROAD
PROPOSED SBFR PROFILE
EXISTING PROFILE
L=100.00'
(+)0.4167 %
(+)1.3333 %
STA = 688+00.00
EL = 658.50'
K = 109
STA = 691+00.00
EL = 662.50'
K = 225
(+)1.3333 %
(+)0.8889 %
L=100.00'
STA = 695+50.00
EL = 666.50'
K = 134
(+)0.8889 %
(-)0.6000 %
L = 200.00'
STA = 700+50.00
EL = 663.50'
K = 141
(-)0.6000 %
(-)1.6667 %
L=150.00'
L=100.00'
(-)1.6667 %
(-)1.0476 %
STA = 703+50.00
EL = 658.50'
K = 162
670
660
650
640
630
620
610
600
590
580
570
560
550
540
530
685+00
690+00
695+00
700+00
705+00
710+00


670
660
650
640
630
620
STA = 716+00.00
EL = 644.50'
K = 95
L=150.00'
(-)1.0750 %
(+)0.5000 %
STA = 719+00.00
EL = 646.00'
K = 116
(+)0.5000 %
(-)0.3636 %
L=100.00'
STA = 724+50.00
EL = 644.00'
K = 126
(-)0.3636 %
(-)6.3125 %
L = 750.00'
PROPOSED NBFR PROFILE
EXISTING PROFILE
L = 350.00'
(-)6.3125 %
(-)2.6148 %
STA = 732+50.00
EL = 593.50'
K = 100
630
620
610
600
590
580
570
560
550
540
L = 450.00'
(-)2.8148 %
(+)2.6667 %
STA = 739+25.00
EL = 574.50'
K = 82
STA = 743+00.00
EL = 584.50'
K = 79
(+)2.6667 %
(-)0.5000 %
L = 250.00'
STA = 746+00.00
EL = 583.00'
K = 76
(-)0.5000 %
(-)5.1111 %
L = 350.00'
L = 450.00'
(-)5.1111 %
(+)0.3571 %
STA = 750+50.00
EL = 560.00'
K = 82
648.80 645.26
647.73 644.18
646.65 642.28
645.58 641.77
644.80 641.28
645.00 642.29
645.50 643.43
645.89 644.55
645.64 645.14
645.25 642.95
644.29 638.79
642.54 630.11
639.99 626.85
636.65 643.56
632.52 616.78
627.60 614.23
621.88 599.23
615.59 596.68
609.28 593.39
603.00 589.03
597.44 584.87
592.87 582.27
589.31 581.16
586.46 580.20
583.65 579.12
580.83 578.28
578.63 577.17
577.64 576.67
577.87 577.55
579.32 581.33
581.79 585.26
583.51 588.41
583.96 588.45
583.13 587.79
580.98 586.15
577.52 581.06
572.78 575.76
568.01 570.34
564.42 564.36
562.04 560.82
560.88 559.35
560.89 547.59
561.25 558.95
715+00
720+00
725+00
730+00
735+00
740+00
745+00
750+00

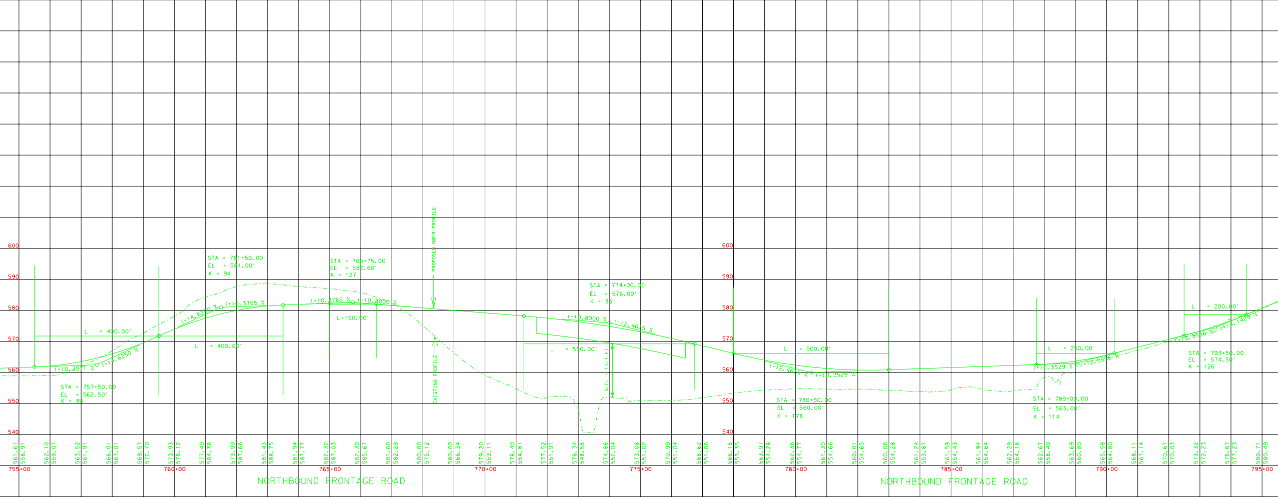
NORTHBOUND FRONTAGE ROAD

NORTHBOUND FRONTAGE ROAD


670
660
650
640
630
620
L = 200.00'
(-)1.0476 %
(+)0.5000 %
STA = 714+00.00
EL = 647.50'
K = 129
STA = 720+00.00
EL = 650.50'
K = 105
(+)0.5000 %
(-)1.8889 %
L = 250.00'
STA = 724+50.00
EL = 642.00'
K = 100
(-)1.8889 %
(-)6.9091 %
L = 500.00'
L = 300.00'
(-)6.9091 %
(-)2.9167 %
STA = 730+00.00
EL = 604.00'
K = 75
L = 400.00'
(-)2.9167 %
(+)2.9375 %
STA = 736+00.00
EL = 586.50'
K = 68
620
610
600
590
580
570
EXISTING PROFILE
PROPOSED SBFR PROFILE
STA = 744+00.00
EL = 610.00'
K = 71
(+)2.9375 %
(-)6.8571 %
L = 700.00'
L = 550.00'
(-)6.8571 %
(+)0.5556 %
STA = 751+00.00
EL = 562.00'
K = 74
649.60 652.70
648.55 650.88
647.89 649.43
648.00 648.21
648.50 644.97
649.00 647.86
649.50 649.12
649.97 650.11
649.75 649.79
648.58 646.03
646.72 638.27
644.33 630.48
640.94 646.72
636.54 654.81
631.13 617.66
624.73 613.11
617.82 611.53
611.08 608.52
605.50 604.95
601.25 601.69
598.17 598.64
595.25 596.16
592.33 594.06
590.15 591.56
589.43 590.03
590.17 591.42
592.38 593.99
595.31 597.96
598.25 601.91
601.01 605.44
602.55 608.00
602.69 610.14
601.43 611.14
598.77 610.24
594.71 604.70
589.25 596.50
582.57 587.53
576.09 578.97
570.92 570.55
567.10 564.34
564.62 560.75
563.49 560.27
563.67 561.37
715+00
720+00
725+00
730+00
735+00
740+00
745+00
750+00

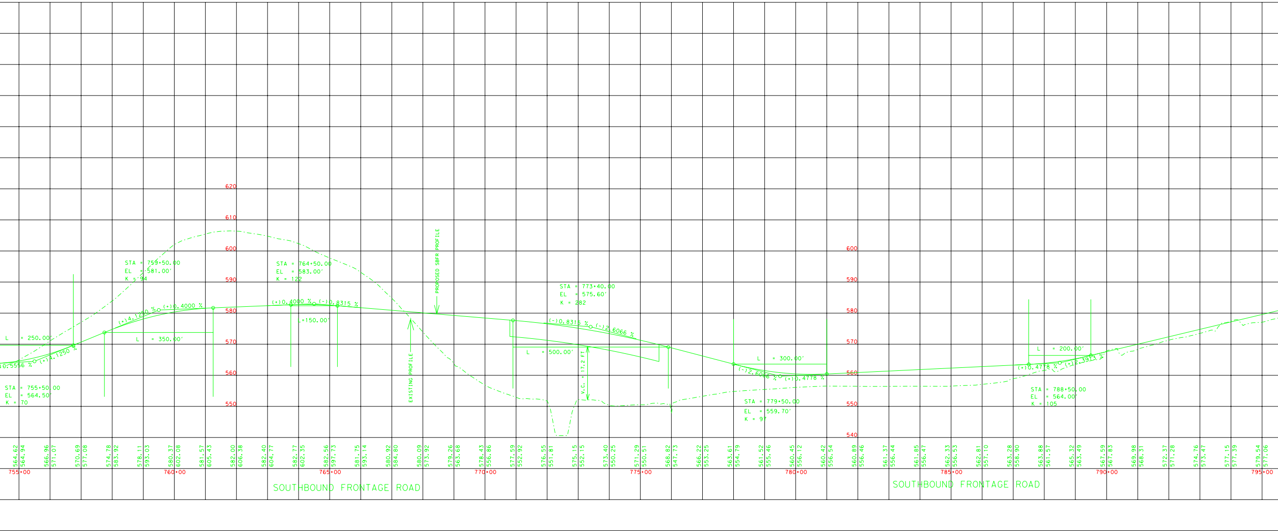
SOUTHBOUND FRONTAGE ROAD

SOUTHBOUND FRONTAGE ROAD


600
590
580
570
560
550
540
STA = 757+50.00
EL = 562.50'
K = 94
(+)0.3571 %
(+)4.6250 %
L = 400.00'
L = 400.00'
STA = 761+50.00
EL = 581.00'
K = 94
(+)4.6250 %
(+)0.3765 %
STA = 765+75.00
EL = 582.60'
K = 127
(+)0.3765 %
(-)0.8000 %
L=150.00'
PROPOSED NBFR PROFILE
EXISTING PROFILE
STA = 774+00.00
EL = 576.00'
K = 331
(-)0.8000 %
(-)2.4615 %
L = 550.00'
V.C. = 17.3 FT
L = 500.00'
(-)2.4615 %
(+)0.3529 %
STA = 780+50.00
EL = 560.00'
K = 178
L = 250.00'
(+)0.3529 %
(+)2.5556 %
STA = 789+00.00
EL = 563.00'
K = 114
L = 200.00'
(+)2.5556 %
(+)4.1429 %
STA = 793+50.00
EL = 574.50'
K = 126
561.61 558.91
562.10 559.07
563.52 561.91
566.01 567.01
569.57 572.70
573.93 578.12
577.49 584.38
579.99 587.66
581.43 588.75
581.94 587.77
582.32 587.03
582.30 585.67
581.60 582.29
580.80 575.12
580.00 566.34
579.20 559.11
578.40 554.87
577.52 551.91
576.34 548.55
574.86 552.04
573.08 551.02
570.99 551.04
568.62 551.88
566.15 553.35
563.97 554.28
562.36 554.77
561.30 554.66
560.81 554.65
560.88 554.28
561.24 553.87
561.59 554.43
561.94 554.64
562.29 554.18
562.67 558.40
563.69 560.80
565.58 564.80
568.11 567.14
570.67 570.03
573.32 572.23
576.67 577.23
580.71 580.49
755+00
760+00
765+00
770+00
775+00
780+00
785+00
790+00
795+00

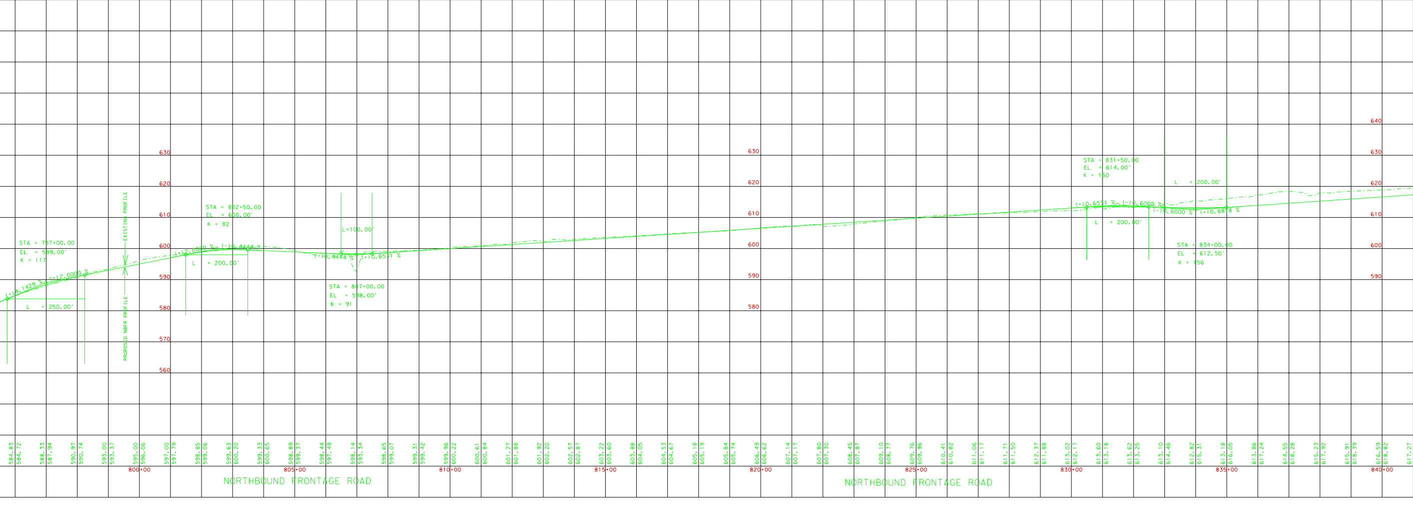
NORTHBOUND FRONTAGE ROAD

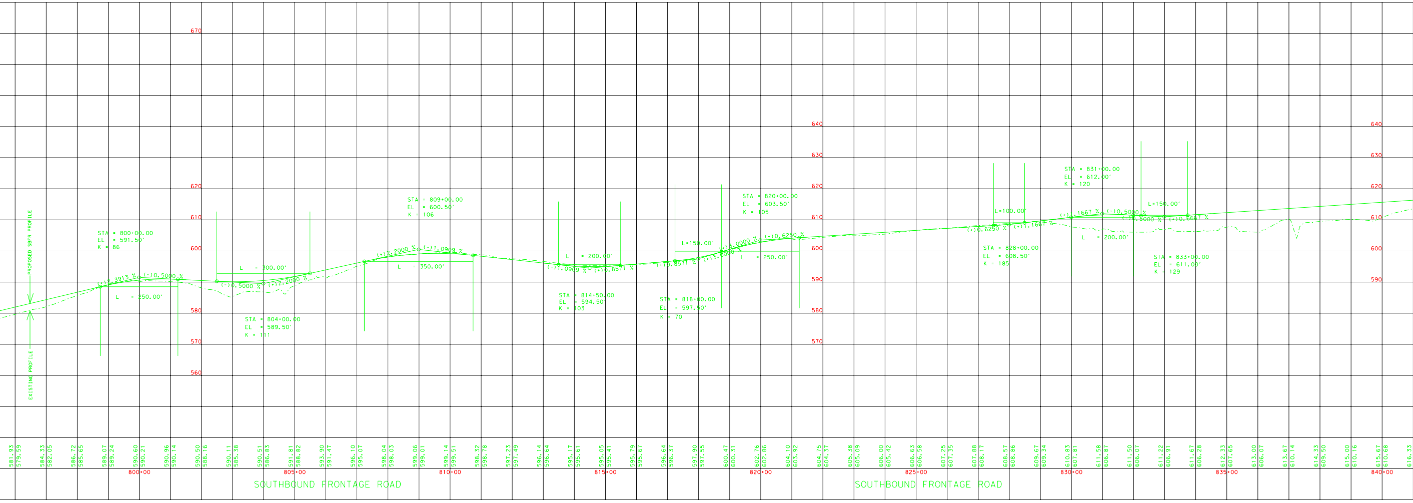
NORTHBOUND FRONTAGE ROAD

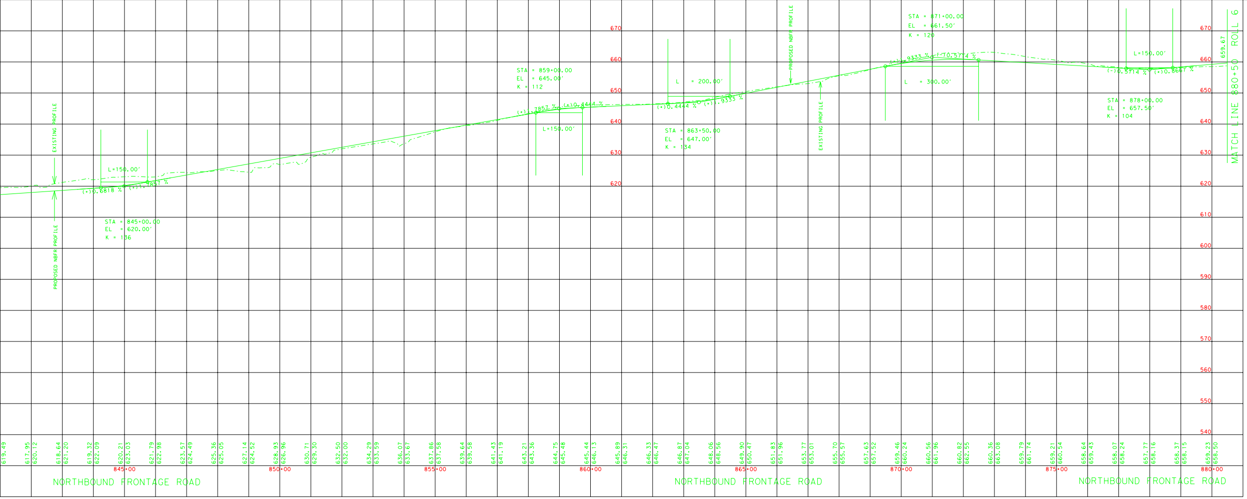

620
610
600
590
580
570
560
550
540
0.5556 %
(+)4.1250 %
L = 250.00'
STA = 755+50.00
EL = 564.50'
K = 70
STA = 759+50.00
EL = 581.00'
K = 94
(+)4.1250 %
(+)0.4000 %
L = 350.00'
STA = 764+50.00
EL = 583.00'
K = 122
(+)0.4000 %
(-)0.8315 %
L=150.00'
PROPOSED SBFR PROFILE
EXISTING PROFILE
STA = 773+40.00
EL = 575.60'
K = 282
(-)0.8315 %
(-)2.6066 %
L = 500.00'
V.C. = 17.2 FT
L = 300.00'
(-)2.6066 %
(+)0.4778 %
STA = 779+50.00
EL = 559.70'
K = 97
L = 200.00'
(+)0.4778 %
(+)2.3913 %
STA = 788+50.00
EL = 564.00'
K = 105
564.62 564.94
566.96 571.07
570.69 577.08
574.78 583.92
578.11 593.03
580.37 602.08
581.57 605.43
582.00 606.38
582.40 604.77
582.77 602.35
582.56 597.73
581.75 593.14
580.92 584.80
580.09 573.92
579.26 563.68
578.43 556.86
577.59 552.92
576.55 551.81
575.15 552.15
573.40 550.25
571.29 550.51
568.82 547.73
566.22 553.25
563.61 554.79
561.52 555.46
560.45 556.12
560.42 556.54
560.89 556.46
561.37 556.44
561.85 556.47
562.33 556.53
562.81 557.10
563.28 558.90
563.88 561.57
565.32 563.49
567.59 567.83
569.98 568.31
572.37 571.28
574.76 573.47
577.15 577.39
579.54 577.06
755+00
760+00
765+00
770+00
775+00
780+00
785+00
790+00
795+00

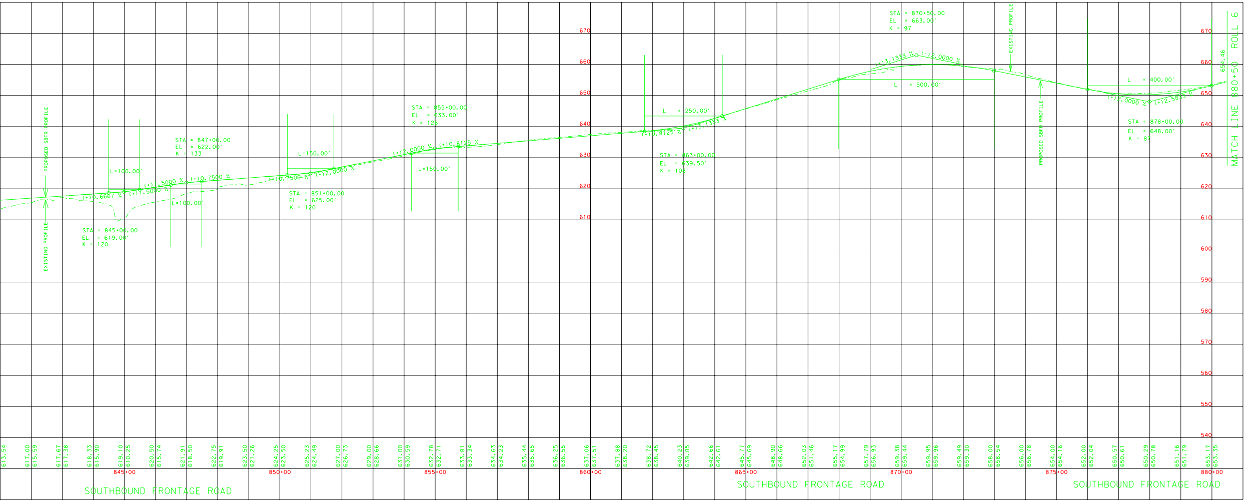
SOUTHBOUND FRONTAGE ROAD

SOUTHBOUND FRONTAGE ROAD


640
630
620
610
600
590
580
570
560
STA = 797+00.00
EL = 589.00'
K = 117
(+)4.1429 %
(+)2.0000 %
L = 250.00'
EXISTING PROFILE
PROPOSED NBFR PROFILE
STA = 802+50.00
EL = 600.00'
K = 82
(+)2.0000 %
(-)0.4444 %
L = 200.00'
L=100.00'
(-)0.4444 %
(+)0.6531 %
STA = 807+00.00
EL = 598.00'
K = 91
STA = 831+50.00
EL = 614.00'
K = 160
L = 200.00'
(+)0.6531 %
(-)0.6000 %
L = 200.00'
(-)0.6000 %
(+)0.6818 %
STA = 834+00.00
EL = 612.50'
K = 156
584.83 584.72
588.33 587.94
590.97 590.74
593.00 593.37
595.00 596.06
597.00 597.79
598.85 599.06
599.63 600.20
599.33 600.65
598.89 599.37
598.44 597.49
598.14 593.34
598.65 599.07
599.31 599.42
599.96 600.22
600.61 600.84
601.27 601.88
601.92 602.20
602.57 602.87
603.22 603.60
603.88 604.05
604.53 604.67
605.18 605.19
605.84 605.74
606.49 606.62
607.14 607.17
607.80 607.30
608.45 607.87
609.10 608.77
609.76 609.96
610.41 610.82
611.06 611.17
611.71 611.50
612.37 611.88
613.02 612.17
613.60 613.18
613.62 613.25
613.10 614.46
612.82 615.31
613.18 616.05
613.86 617.24
614.55 618.28
615.23 617.92
615.91 618.39
616.59 618.82
617.27
800+00
805+00
810+00
815+00
820+00
825+00
830+00
835+00
840+00
NORTHBOUND FRONTAGE ROAD
NORTHBOUND FRONTAGE ROAD


670
640
630
620
610
600
590
580
570
560
PROPOSED SBFR PROFILE
EXISTING PROFILE
STA = 800+00.00
EL = 591.50'
K = 86
(+)2.3913 %
(-)0.5000 %
L = 250.00'
L = 300.00'
(-)0.5000 %
(+)2.2000 %
STA = 804+00.00
EL = 589.50'
K = 111
STA = 809+00.00
EL = 600.50'
K = 106
(+)2.2000 %
(-)1.0909 %
L = 350.00'
L = 200.00'
(-)1.0909 %
(+)0.8571 %
STA = 814+50.00
EL = 594.50'
K = 103
L=150.00'
(+)0.8571 %
(+)3.0000 %
(+)3.0000 %
(+)0.6250 %
L = 250.00'
STA = 818+00.00
EL = 597.50'
K = 70
STA = 820+00.00
EL = 603.50'
K = 105
L=100.00'
(+)0.6250 %
(+)1.1667 %
STA = 828+00.00
EL = 608.50'
K = 185
STA = 831+00.00
EL = 612.00'
K = 120
(+)1.1667 %
(-)0.5000 %
L = 200.00'
L=150.00'
(-)0.5000 %
(+)0.6667 %
STA = 833+00.00
EL = 611.00'
K = 129
581.93 579.59
584.33 582.05
586.72 585.65
589.07 589.24
590.60 590.21
590.96 590.14
590.50 588.16
590.11 585.38
590.51 586.83
591.81 588.82
593.90 591.47
596.10 595.07
598.04 598.03
599.06 599.01
599.14 599.51
598.32 598.78
597.23 597.49
596.14 596.64
595.17 595.61
595.05 595.41
595.79 595.67
596.64 596.37
597.90 597.55
600.47 600.31
602.76 602.86
604.10 603.92
604.75 604.37
605.38 605.09
606.00 605.42
606.63 606.58
607.25 607.35
607.88 608.17
608.57 608.86
609.67 609.34
610.83 607.81
611.58 606.87
611.50 606.07
611.22 606.91
611.67 606.28
612.33 607.65
613.00 606.07
613.67 610.14
614.33 609.50
615.00 610.16
615.67 610.68
616.33
800+00
805+00
810+00
815+00
820+00
825+00
830+00
835+00
840+00
SOUTHBOUND FRONTAGE ROAD
SOUTHBOUND FRONTAGE ROAD


NORTHBOUND FRONTAGE ROAD
NORTHBOUND FRONTAGE ROAD
NORTHBOUND FRONTAGE ROAD
EXISTING PROFILE
PROPOSED NBFR PROFILE
STA = 845+00.00
EL = 620.00'
K = 136
L=150.00'
STA = 859+00.00
EL = 645.00'
K = 112
L=150.00'
STA = 863+50.00
EL = 647.00'
K = 134
L = 200.00'
STA = 871+00.00
EL = 661.50'
K = 120
L = 300.00'
STA = 878+00.00
EL = 657.50'
K = 104
L=150.00'
845+00
850+00
855+00
860+00
865+00
870+00
875+00
880+00
MATCH LINE 880+50 ROLL 6


SOUTHBOUND FRONTAGE ROAD
SOUTHBOUND FRONTAGE ROAD
SOUTHBOUND FRONTAGE ROAD
PROPOSED SBFR PROFILE
EXISTING PROFILE
STA = 845+00.00
EL = 619.00'
K = 120
L=100.00'
STA = 847+00.00
EL = 622.00'
K = 133
L=100.00'
STA = 851+00.00
EL = 625.00'
K = 120
L=150.00'
STA = 855+00.00
EL = 633.00'
K = 125
L=150.00'
STA = 863+00.00
EL = 639.50'
K = 108
L = 250.00'
STA = 870+50.00
EL = 663.00'
K = 97
L = 500.00'
STA = 878+00.00
EL = 648.00'
K = 81
L = 400.00'
845+00
850+00
855+00
860+00
865+00
870+00
875+00
880+00
MATCH LINE 880+50 ROLL 6

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DALLAS DISTRICT
Design Schematic
Jay R. Nelson, P.E.
District Engineer

U.S. 75
From Spur 399
To S.H. 121

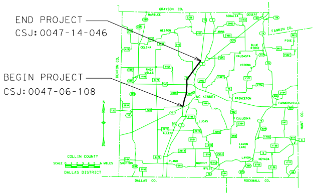
McKinney, Texas
Collin County

CSJ: 0047-06-108
0047-14-046

Functional Class.2: Urban Freeway

Project Length = 7.52 miles

Design Speed:
Mainlanes 70 mph
Ramps 50 mph
Frontage Rds 40 mph


END PROJECT
CSJ:0047-14-046
BEGIN PROJECT
CSJ:0047-06-108
COLLIN COUNTY
DALLAS DISTRICT

Scale:
Horizontal 1:200
Vertical 1:20

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October 2003

SCHEMATIC PREPARED BY:
TxDOT DALLAS DISTRICT
MICHAEL A. RENFROW, P.E.
PROJECT MANAGER
75050
P.E. NUMBER
OCTOBER 2003
DATE

Roll 5 of 6