© 2022

Texas Department of Transportation®

DALLAS DISTRICT DESIGN SCHEMATIC

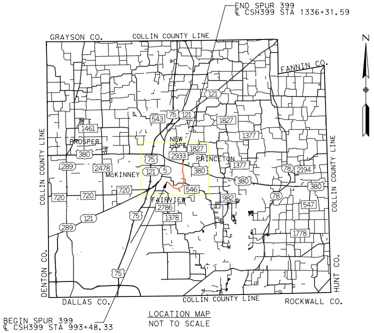
CEASON CLEMENS, P.E.
DALLAS DISTRICT ENGINEER

90% DESIGN SCHEMATIC SPUR 399 EXTENSION

CSJ: 0364-04-051, 0047-05-058 & 0047-10-002
FROM: US 75
TO: US 380
COLLIN COUNTY
FUNCTIONAL CLASS: URBAN FREEWAY
ORANGE ALTERNATIVE LENGTH: 7.0 MILES

DESIGN SPEEDS

MAINLANES (FREEWAY):	70 MPH
GENERAL RAMPS (PRINCIPAL ARTERIAL):	40-50 MPH
FRONTAGE ROADS (COLLECTOR):	35-45 MPH
CROSS STREETS (MAJOR COLLECTOR):	30 MPH


END SPUR 399
℄ CSH399 STA 1336+31.59
GRAYSON CO.
COLLIN COUNTY LINE
FANNIN CO.
COLLIN COUNTY LINE
COLLIN COUNTY LINE
PROSPER
NEW HOPE
PRINCETON
MCKINNEY
FAIRVIEW
DENTON CO.
DALLAS CO.
COLLIN COUNTY LINE
ROCKWALL CO.
HUNT CO.
N
75
121
380
1827
1377
2478
289
720
546
982
2786
1378
547
1778
2194
78
5
543
1461
2933
BEGIN SPUR 399
℄ CSH399 STA 993+48.33

LOCATION MAP
NOT TO SCALE

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

0 100 200 300 400
HORIZ. SCALE IN FEET

0 10 20 30 40
VERT. SCALE IN FEET

© 2022 by Texas Department of Transportation all rights reserved

NOVEMBER 2022

PRELIMINARY
SUBJECT TO REVISIONS

SCHEMATIC PREPARED BY:

NAME	P.E. NUMBER
DAVID SUTTON	120142

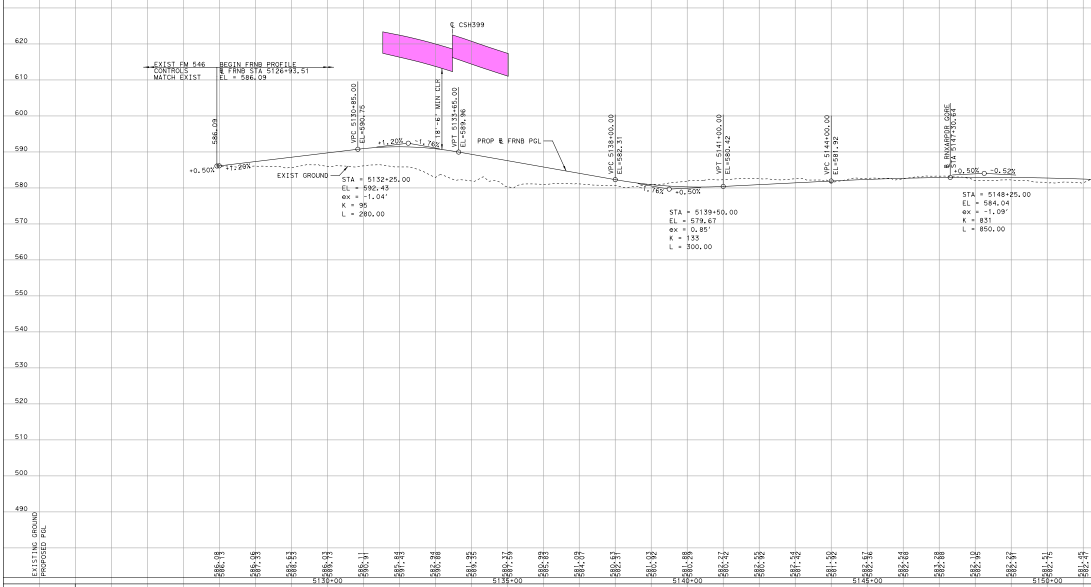
NOVEMBER 2022
DATE

NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES

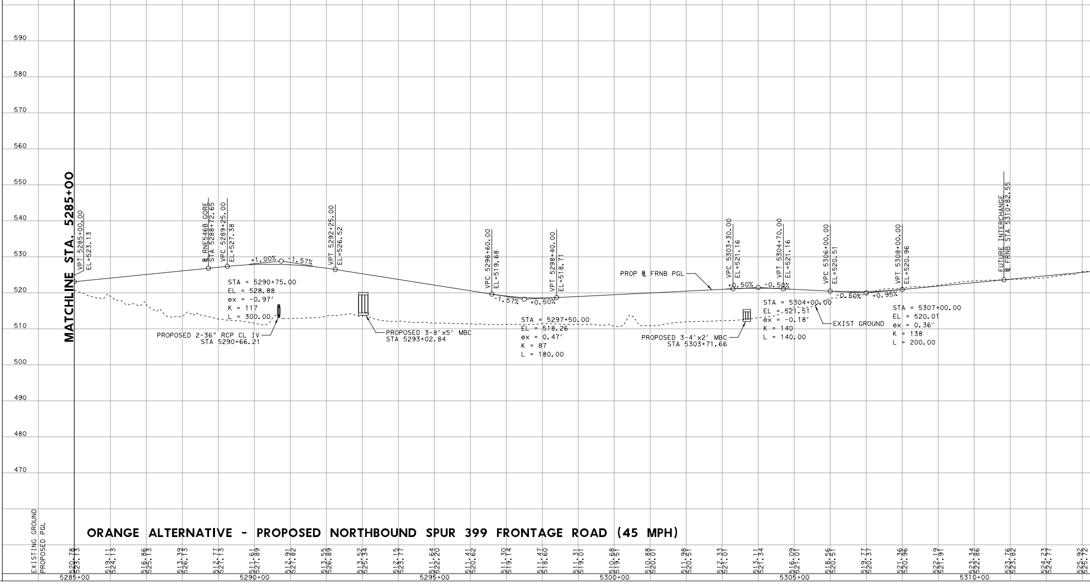
ROLL 5 OF 8

HDR
Firm Registration No. F-754
17111 Preston Road, Suite 300
Dallas, Texas 75248-1229
972.960.4400

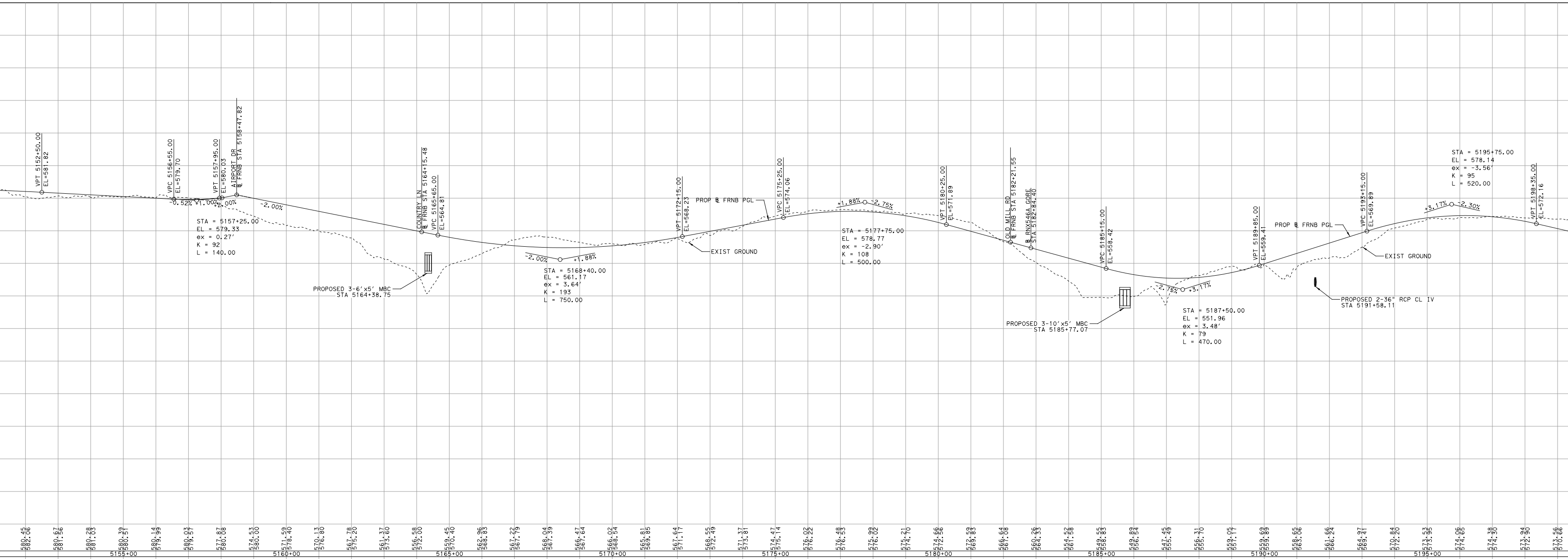
PROPOSED NORTHBOUND SPUR 399 FRONTAGE ROAD (45 MPH)

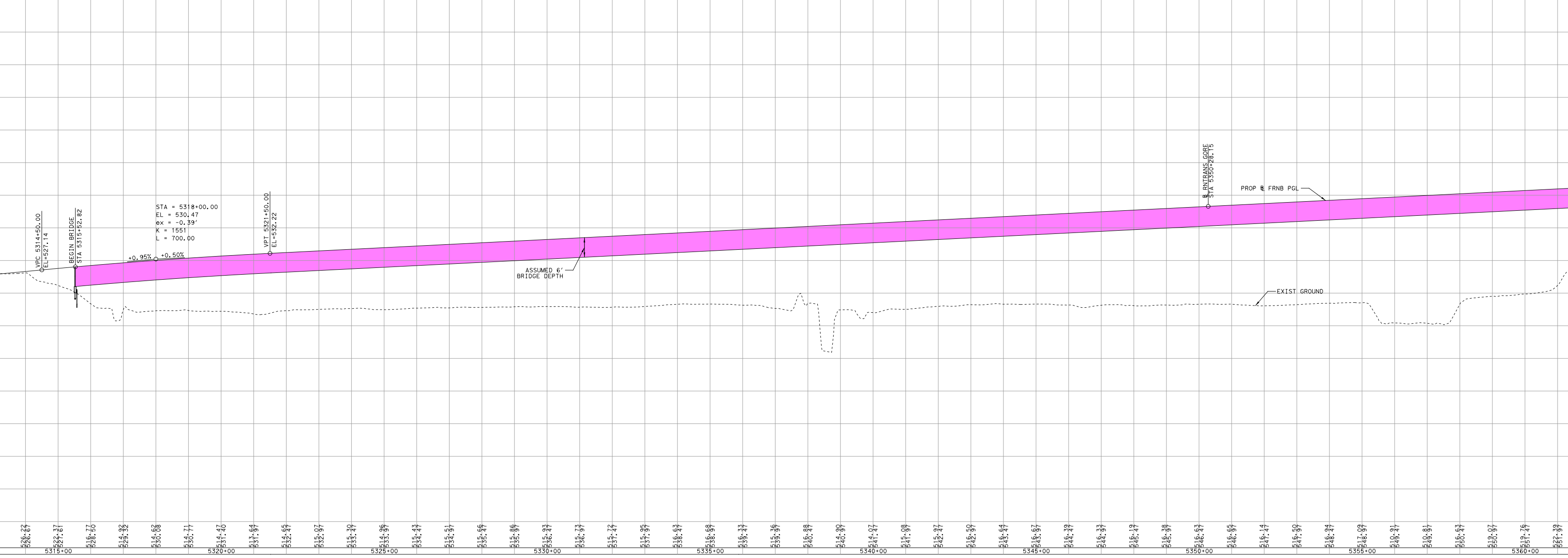

620
610
600
590
580
570
560
550
540
530
520
510
500
490
EXIST FM 546
CONTROLS
MATCH EXIST
BEGIN FRNB PROFILE
℄ FRNB STA 5126+93.51
EL = 586.09
586.09
+0.50%
+1.20%
EXIST GROUND
VPC 5130+85.00
EL=590.75
+1.20%
-1.76%
STA = 5132+25.00
EL = 592.43
ex = -1.04'
K = 95
L = 280.00
℄ CSH399
18'-6" MIN CLR
VPT 5133+65.00
EL=589.96
PROP ℄ FRNB PGL
VPC 5138+00.00
EL=582.31
-1.76%
+0.50%
STA = 5139+50.00
EL = 579.67
ex = 0.85'
K = 133
L = 300.00
VPT 5141+00.00
EL=580.42
VPC 5144+00.00
EL=581.92
℄ RNXARPDR GORE
STA 5147+30.64
+0.50%
-0.52%
STA = 5148+25.00
EL = 584.04
ex = -1.09'
K = 831
L = 850.00
EXISTING GROUND
PROPOSED PGL
5130+00
5135+00
5140+00
5145+00
5150+00

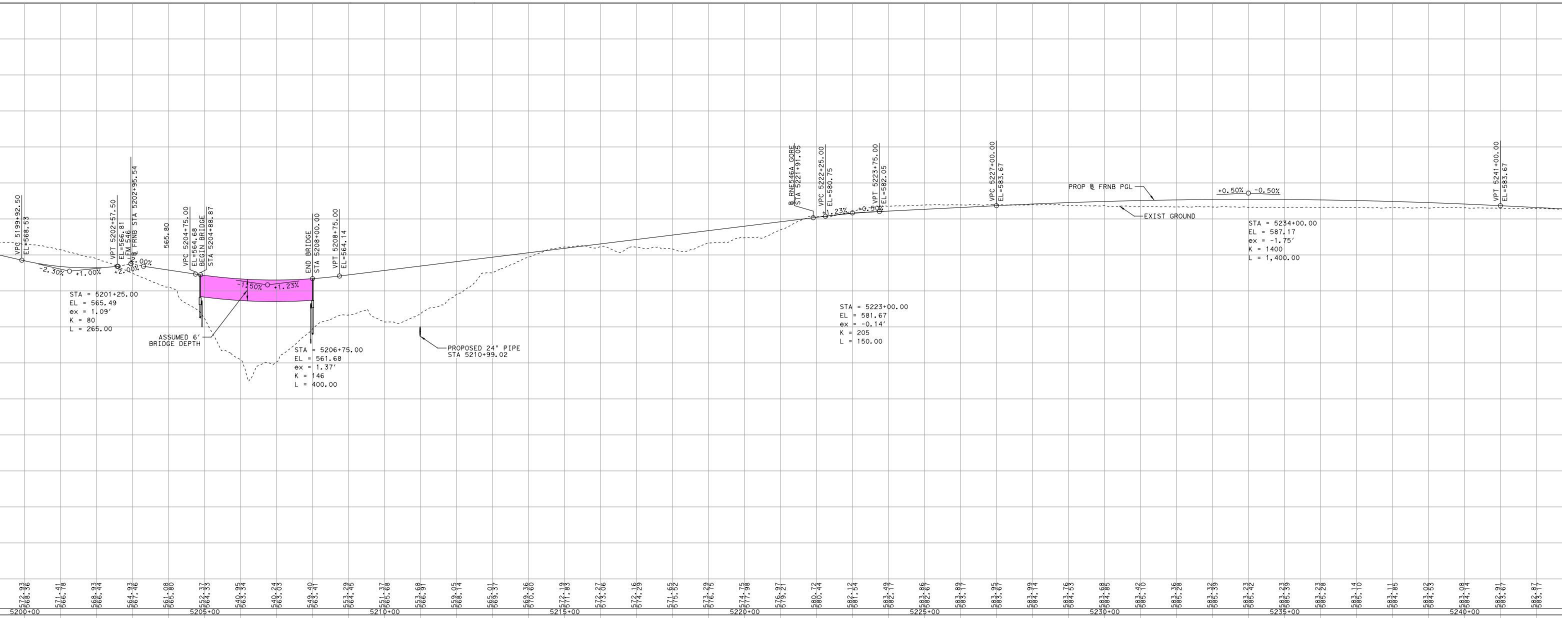
PROPOSED NORTHBOUND SPUR 399 FRONTAGE ROAD (45 MPH)

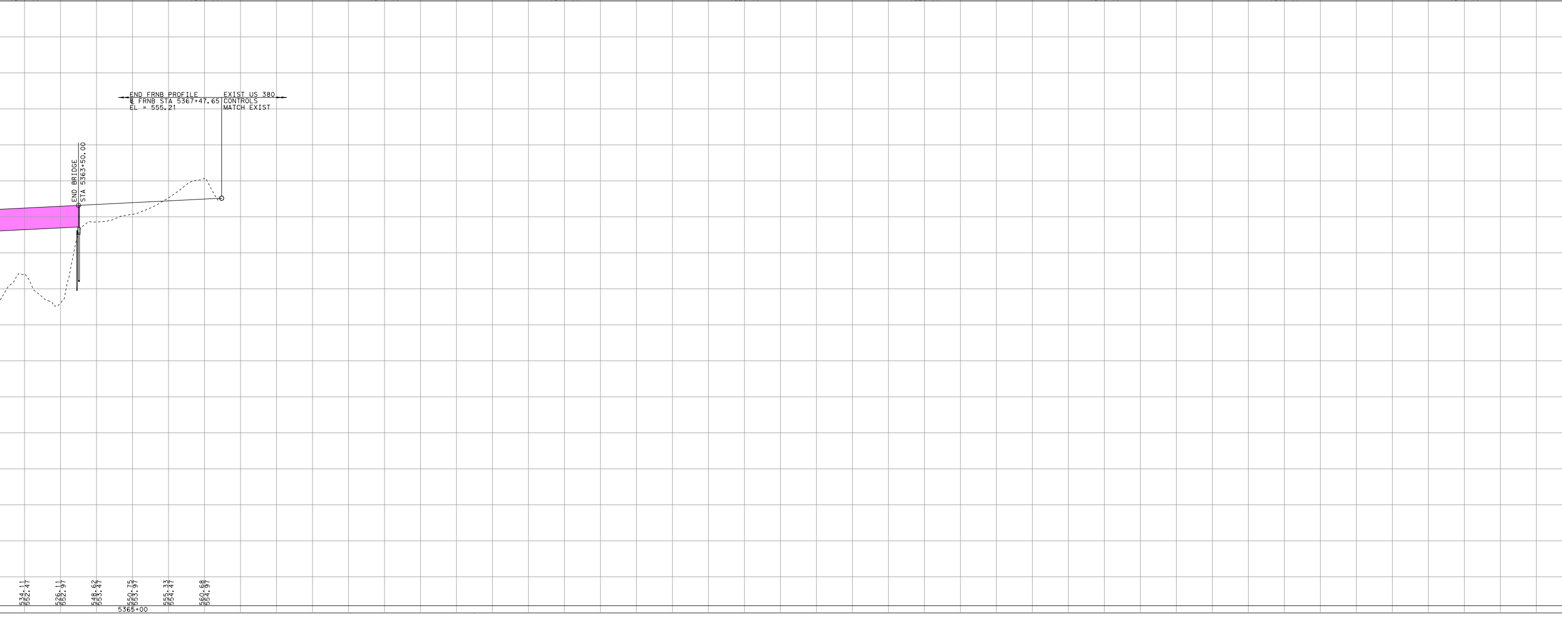

590
580
570
560
550
540
530
520
510
500
490
480
470
MATCHLINE STA. 5285+00
VPT 5285+00.00
EL=523.13
℄ RNE546B GORE
STA 5288+72.65
VPC 5289+25.00
EL=527.38
+1.00%
-1.57%
STA = 5290+75.00
EL = 528.88
ex = -0.97'
K = 117
L = 300.00
PROPOSED 2-36" RCP CL IV
STA 5290+66.21
VPT 5292+25.00
EL=526.52
PROPOSED 3-8'x5' MBC
STA 5293+02.84
VPC 5296+60.00
EL=519.68
-1.57%
+0.50%
STA = 5297+50.00
EL = 518.26
ex = 0.47'
K = 87
L = 180.00
VPT 5298+40.00
EL=518.71
PROP ℄ FRNB PGL
VPC 5303+30.00
EL=521.16
+0.50%
-0.50%
PROPOSED 3-4'x2' MBC
STA 5303+71.66
STA = 5304+00.00
EL = 521.51
ex = -0.18'
K = 140
L = 140.00
VPT 5304+70.00
EL=521.16
VPC 5306+00.00
EL=520.51
-0.50%
+0.95%
EXIST GROUND
STA = 5307+00.00
EL = 520.01
ex = 0.36'
K = 138
L = 200.00
VPT 5308+00.00
EL=520.96
FUTURE INTERCHANGE
℄ FRNB STA 5310+82.55
EXISTING GROUND
PROPOSED PGL
5285+00
5290+00
5295+00
5300+00
5305+00
5310+00

ORANGE ALTERNATIVE - PROPOSED NORTHBOUND SPUR 399 FRONTAGE ROAD (45 MPH)

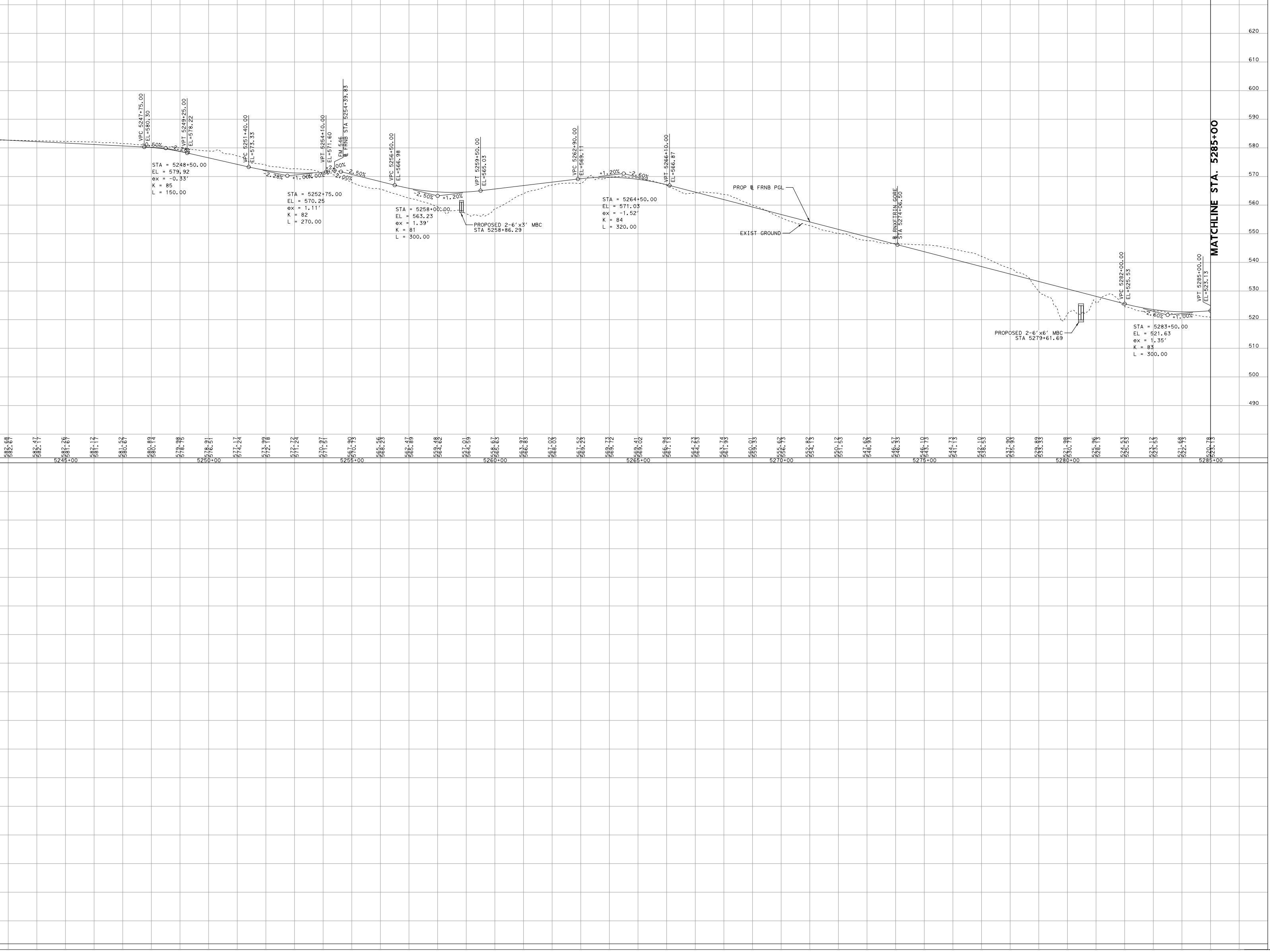

VPT 5152+50.00
EL=581.82
VPC 5156+55.00
EL=579.70
VPT 5157+95.00
EL=580.03
AIRPORT DR
℄ FRNB STA 5158+47.82
-0.52%
+1.00%
+2.00%
-2.00%
STA = 5157+25.00
EL = 579.33
ex = 0.27′
K = 92
L = 140.00
COUNTRY LN
℄ FRNB STA 5164+15.48
VPC 5165+65.00
EL=564.81
PROPOSED 3-6′x5′ MBC
STA 5164+38.75
-2.00%
+1.88%
STA = 5168+40.00
EL = 561.17
ex = 3.64′
K = 193
L = 750.00
VPT 5172+15.00
EL=568.23
EXIST GROUND
PROP ℄ FRNB PGL
VPC 5175+25.00
EL=574.06
+1.88%
-2.75%
STA = 5177+75.00
EL = 578.77
ex = -2.90′
K = 108
L = 500.00
VPT 5180+25.00
EL=571.89
OLD MILL RD
℄ FRNB STA 5182+21.55
℄ RNX546A GORE
STA 5182+84.40
VPC 5185+15.00
EL=558.42
PROPOSED 3-10′x5′ MBC
STA 5185+77.07
-2.75%
+3.17%
STA = 5187+50.00
EL = 551.96
ex = 3.48′
K = 79
L = 470.00
VPT 5189+85.00
EL=559.41
PROP ℄ FRNB PGL
PROPOSED 2-36" RCP CL IV
STA 5191+58.11
EXIST GROUND
VPC 5193+15.00
EL=569.89
+3.17%
-2.30%
STA = 5195+75.00
EL = 578.14
ex = -3.56′
K = 95
L = 520.00
VPT 5198+35.00
EL=572.16
580.45 582.06
580.67 581.56
580.28 581.03
580.39 580.51
580.14 579.99
580.03 579.57
577.87 580.08
574.53 580.00
571.59 578.40
570.13 576.80
567.78 575.20
561.37 573.60
556.58 572.00
559.45 570.40
562.96 568.83
567.22 567.79
568.04 567.39
566.47 567.64
566.02 568.54
565.81 569.85
567.64 571.17
568.55 572.49
571.37 573.81
574.47 575.14
576.02 576.22
576.48 576.53
575.99 576.02
575.21 574.70
574.66 572.56
572.59 569.83
566.64 567.08
560.26 564.33
554.52 561.58
549.55 558.83
549.89 556.54
547.45 555.49
556.31 555.70
559.05 557.17
559.69 559.89
558.65 563.06
561.66 566.24
564.97 569.41
570.84 572.20
573.53 573.95
574.06 574.65
574.38 574.30
573.94 572.90
573.56 570.66
5155+00
5160+00
5165+00
5170+00
5175+00
5180+00
5185+00
5190+00
5195+00


VPC 5314+50.00
EL=527.14
BEGIN BRIDGE
STA 5315+52.82
+0.95%
+0.50%
STA = 5318+00.00
EL = 530.47
ex = -0.39′
K = 1551
L = 700.00
VPT 5321+50.00
EL=532.22
ASSUMED 6′
BRIDGE DEPTH
℄ RNTRANS GORE
STA 5350+28.15
PROP ℄ FRNB PGL
EXIST GROUND
526.22 526.67
522.37 527.61
516.77 528.50
514.92 529.32
514.62 530.08
514.71 530.77
514.47 531.40
513.64 531.97
514.65 532.47
515.07 532.97
515.30 533.47
514.96 533.97
515.43 534.47
515.51 534.97
515.66 535.47
515.86 535.97
515.93 536.47
515.73 536.97
515.72 537.47
515.95 537.97
516.63 538.47
516.68 538.97
516.33 539.47
515.36 539.97
516.88 540.47
514.90 540.97
514.07 541.47
515.08 541.97
515.97 542.47
516.50 542.97
516.64 543.47
516.67 543.97
516.39 544.47
516.33 544.97
516.19 545.47
516.38 545.97
516.63 546.47
516.65 546.97
516.14 547.47
516.50 547.97
516.94 548.47
517.09 548.97
510.91 549.47
510.81 549.97
516.63 550.47
519.07 550.97
519.76 551.47
522.39 551.97
5315+00
5320+00
5325+00
5330+00
5335+00
5340+00
5345+00
5350+00
5355+00
5360+00


VPC 5199+92.50
EL=568.53
-2.30%
+1.00%
VPT 5202+57.50
EL=566.81
℄ FM 546
℄ FRNB STA 5202+95.54
+2.00%
-1.00%
565.80
STA = 5201+25.00
EL = 565.49
ex = 1.09′
K = 80
L = 265.00
VPC 5204+75.00
EL=564.68
BEGIN BRIDGE
STA 5204+88.87
-1.50%
+1.23%
ASSUMED 6′
BRIDGE DEPTH
END BRIDGE
STA 5208+00.00
VPT 5208+75.00
EL=564.14
STA = 5206+75.00
EL = 561.68
ex = 1.37′
K = 146
L = 400.00
PROPOSED 24" PIPE
STA 5210+99.02
℄ RNE546A GORE
STA 5221+91.05
VPC 5222+25.00
EL=580.75
+1.23%
+0.50%
VPT 5223+75.00
EL=582.05
STA = 5223+00.00
EL = 581.67
ex = -0.14′
K = 205
L = 150.00
VPC 5227+00.00
EL=583.67
PROP ℄ FRNB PGL
EXIST GROUND
+0.50%
-0.50%
STA = 5234+00.00
EL = 587.17
ex = -1.75′
K = 1400
L = 1,400.00
VPT 5241+00.00
EL=583.67
572.93 568.36
571.41 566.78
568.93 566.44
564.93 567.46
561.08 565.80
552.37 564.33
540.95 563.34
540.24 563.03
549.40 563.41
553.29 564.45
551.37 565.68
553.68 566.91
559.05 568.14
565.01 569.37
569.36 570.60
572.19 571.83
572.27 573.06
572.16 574.29
571.65 575.52
573.29 576.75
574.75 577.98
576.97 579.21
580.72 580.44
582.12 581.54
583.49 582.17
583.86 582.67
583.89 583.17
583.95 583.67
583.99 584.14
583.76 584.53
583.68 584.85
583.42 585.10
583.36 585.28
583.32 585.39
583.23 585.42
583.23 585.39
583.23 585.28
583.14 585.10
583.11 584.85
583.02 584.53
583.08 584.14
582.91 583.67
582.87 583.17
5200+00
5205+00
5210+00
5215+00
5220+00
5225+00
5230+00
5235+00
5240+00


END FRNB PROFILE
℄ FRNB STA 5367+47.65
EL = 555.21
EXIST US 380
CONTROLS
MATCH EXIST
END BRIDGE
STA 5363+50.00
534.11 552.47
526.11 552.97
548.62 553.47
550.75 553.97
555.33 554.47
560.68 554.97
5365+00

PROPOSED NORTHBOUND SPUR 399 FRONTAGE ROAD (45 MPH)


VPC 5247+75.00 EL=580.30
VPT 5249+25.00 EL=578.22
-0.50%
-2.28%
STA = 5248+50.00
EL = 579.92
ex = -0.33′
K = 85
L = 150.00
VPC 5251+40.00 EL=573.33
-2.28%
+1.00%
VPT 5254+10.00 EL=571.60
STA = 5252+75.00
EL = 570.25
ex = 1.11′
K = 82
L = 270.00
FM 546
℄ FRNB STA 5254+39.83
+2.00%
-2.00%
-2.50%
VPC 5256+50.00 EL=566.98
-2.50%
+1.20%
STA = 5258+00.00
EL = 563.23
ex = 1.39′
K = 81
L = 300.00
PROPOSED 2-6′x3′ MBC
STA 5258+86.29
VPT 5259+50.00 EL=565.03
VPC 5262+90.00 EL=569.11
+1.20%
-2.60%
STA = 5264+50.00
EL = 571.03
ex = -1.52′
K = 84
L = 320.00
VPT 5266+10.00 EL=566.87
PROP ℄ FRNB PGL
EXIST GROUND
℄ RNXFTRIN GORE
STA 5274+06.50
PROPOSED 2-6′x6′ MBC
STA 5279+61.69
VPC 5282+00.00 EL=525.53
-2.60%
+1.00%
STA = 5283+50.00
EL = 521.63
ex = 1.35′
K = 83
L = 300.00
VPT 5285+00.00 EL=523.13
MATCHLINE STA. 5285+00
620
610
600
590
580
570
560
550
540
530
520
510
500
490
582.68 582.67
582.47 582.17
582.26 581.67
582.12 581.17
581.52 580.67
580.89 580.14
579.98 578.75
578.91 576.51
577.17 574.24
573.99 572.18
572.72 571.24
570.97 571.51
567.90 570.73
565.56 568.23
562.47 565.89
559.48 564.62
557.01 564.59
558.67 565.63
563.97 566.83
567.02 568.03
567.52 569.23
569.73 569.72
569.41 569.02
566.94 567.13
564.23 564.53
563.74 561.93
560.01 559.33
555.62 556.73
552.82 554.13
550.12 551.53
547.62 548.93
546.57 546.33
546.10 543.73
544.73 541.13
542.10 538.53
537.90 535.93
529.89 533.33
521.98 530.73
525.96 528.13
524.53 525.53
523.12 523.53
521.68 522.73
520.78 523.13
5245+00
5250+00
5255+00
5260+00
5265+00
5270+00
5275+00
5280+00
5285+00

© 2022

Texas Department of Transportation

DALLAS DISTRICT
DESIGN SCHEMATIC

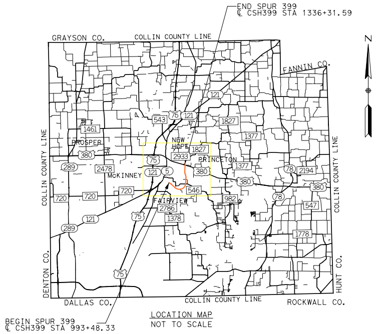
CEASON CLEMENS, P.E.
DALLAS DISTRICT ENGINEER

90% DESIGN SCHEMATIC
SPUR 399 EXTENSION

CSJ: 0364-04-051, 0047-05-058 & 0047-10-002
FROM: US 75
TO: US 380
COLLIN COUNTY
FUNCTIONAL CLASS: URBAN FREEWAY
ORANGE ALTERNATIVE LENGTH: 7.0 MILES

DESIGN SPEEDS

MAINLANES (FREEWAY):	70 MPH
GENERAL RAMPS (PRINCIPAL ARTERIAL):	40-50 MPH
FRONTAGE ROADS (COLLECTOR):	35-45 MPH
CROSS STREETS (MAJOR COLLECTOR):	30 MPH


END SPUR 399
℄ CSH399 STA 1336+31.59
GRAYSON CO.
COLLIN COUNTY LINE
FANNIN CO.
N
PROSPER
NEW HOPE
PRINCETON
MCKINNEY
FAIRVIEW
COLLIN COUNTY LINE
DENTON CO.
DALLAS CO.
COLLIN COUNTY LINE
ROCKWALL CO.
HUNT CO.
COLLIN COUNTY LINE
75
121
380
289
720
1461
543
1827
1377
2478
2933
546
982
78
2194
547
2786
1378
1778
BEGIN SPUR 399
℄ CSH399 STA 993+48.33

LOCATION MAP
NOT TO SCALE

SCALE: HORIZONTAL 1"=100′
SCALE: VERTICAL 1"=10′

0 100 200 300 400
HORIZ. SCALE IN FEET
0 10 20 30 40
VERT. SCALE IN FEET

© 2022 by Texas Department of Transportation all rights reserved

NOVEMBER 2022

PRELIMINARY
SUBJECT TO REVISIONS

SCHEMATIC PREPARED BY:

DAVID SUTTON	120142
NAME	P.E. NUMBER

NOVEMBER 2022
DATE

NOT INTENDED FOR CONSTRUCTION,
BIDDING, OR PERMIT PURPOSES

ROLL 5 OF 8

HDR
Firm Registration No. F-754

17111 Preston Road, Suite 300
Dallas, Texas 75248-1229
972.960.4400