ROLL 3A OF 5 FRONTAGE ROAD AND RAMP PROFILES

TEXAS DEPARTMENT OF TRANSPORTATION

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

SH 183 REEVALUATION DESIGN SCHEMATIC

SH 183 FROM WEST OF SH 161 TO IH 35E DALLAS COUNTY

CSJ: 0094–03–065 FROM 1.2 MILES EAST OF SH 360 TO 0.66 MILE WEST OF LOOP 12, PROJECT LENGTH 6.69 MILES

CSJ: 0094–07–015 FROM 1.0 MILES EAST OF LOOP 12 TO WEST END OF ELM FORK TRINITY BRIDGE, PROJECT LENGTH 0.3 MILE

CSJ: 0094–07–020 FROM WEST END OF ELM FORK TRINITY BRIDGE TO IH 35E, PROJECT LENGTH 1.1 MILES

DESIGN SPEED

FREEWAY = 70 mph
RAMPS = 50 mph
RAMP ERW168 = 40 MPH
DIRECT CONNECTORS = 50 mph
SH 161 DIRECT CONNECTORS (DCW139, DCW146, DCE149, DCE177, DCN733) = 35 MPH
FRONTAGE ROADS = 40 mph
CROSS STREETS = 40 mph
MANAGED LANES - HOV = 70 mph

AVERAGE DAILY TRAFFIC 2000 (2029)

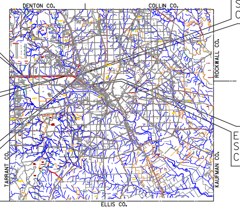
IH 35E TO LOOP 12	174,100 (278,600)
LOOP 12 TO SH 360	216,900 (347,300)

ROADWAY: URBAN FREEWAY

BEGIN PROJECT
SH 183 ℄ STA. 91+00
CSJ NO. 0094-03-065

END PROJECT
SH 183 ℄ STA. 443+33
CSJ NO. 0094-03-065

END PROJECT
CSJ NO. 0094-07-015
AND BEGIN PROJECT
CSJ NO. 0094-07-020
SH183 ℄ STA. 549+50


DENTON CO.
COLLIN CO.
ROCKWALL CO.
TARRANT CO.
KAUFMAN CO.
ELLIS CO.

BEGIN PROJECT
SH 183 ℄ STA. 531+25
CSJ NO. 0094-07-015

END PROJECT
SH 183 ℄ STA. 607+03
CSJ NO. 0094-07-020

DRAFT SUBMITTAL

NOT INTENDED FOR
CONSTRUCTION, BIDDING,
OR PERMIT PURPOSES.

DATE APPROVED

HALFF ASSOCIATES, INC.
TBPE FIRM #F-312
These documents are not intended for Construction, Bidding, or Permit Purposes. They were prepared by, or under the supervision of:

Type or Print Name	PE#	Date
Matthew G. Craig	69910	03-13-12

DATE SUBMITTED

MAY 31, 2006

DATE REVISED

MARCH 13, 2012

50 0 100 200 300
HORIZONTAL
5 0 10 20 30
VERTICAL
SCALE IN FEET

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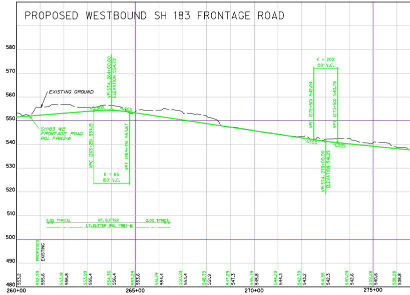
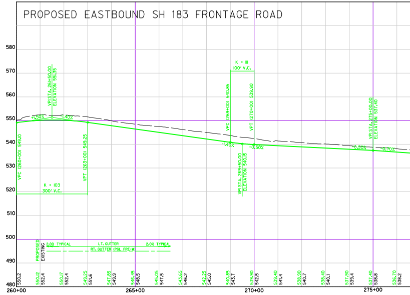
**ROLL 3A OF 5
FRONTAGE ROAD
AND RAMP PROFILES**

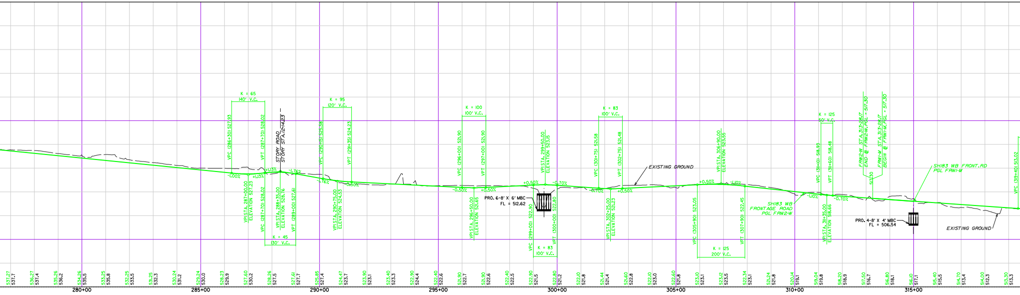
PROPOSED WESTBOUND SH 183 FRONTAGE ROAD

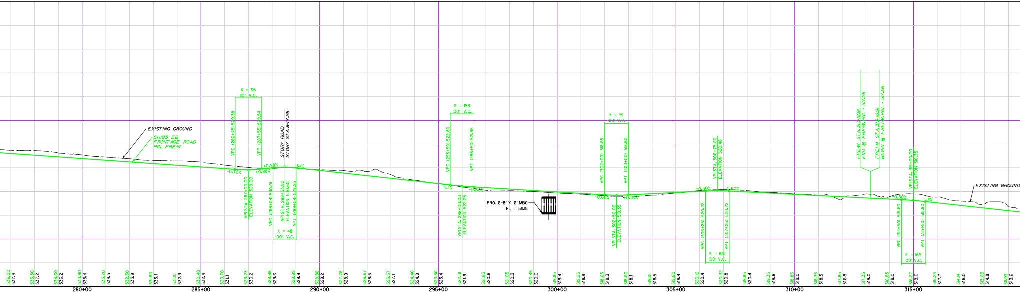


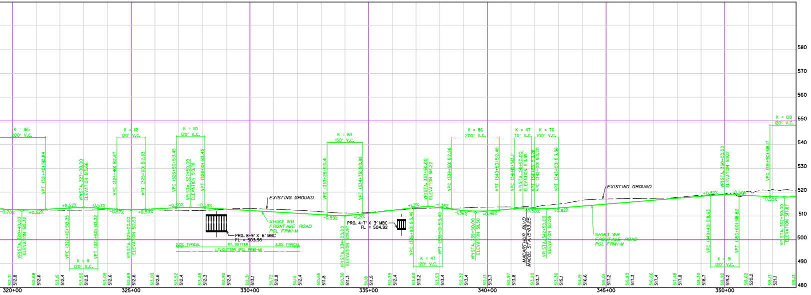
PRELIMINARY SCHEMATIC

PROPOSED EASTBOUND SH 183 FRONTAGE ROAD

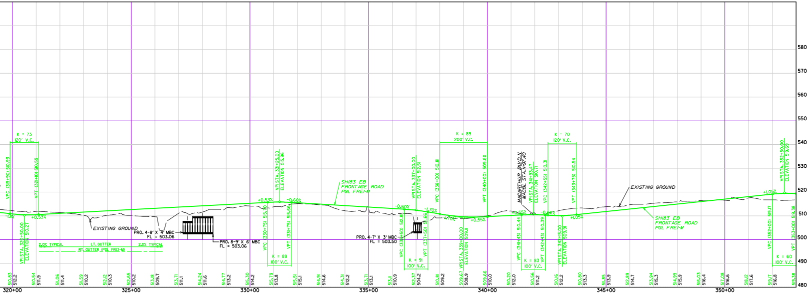



K = 65
140' V.C.
VPC (286+30) 527.93
VPT (287+70) 528.02
-1.00%
+1.13%
VPI STA. 287+00.00
ELEVATION 527.23
STORY ROAD
STORY STA.12+14.23
+1.13%
-1.76%
VPC (287+70) 528.02
VPI STA. 288+35.00
ELEVATION 528.76
VPT (289+00) 527.61
K = 45
130' V.C.
K = 95
120' V.C.
VPC (290+15) 525.58
VPT (291+35) 524.23
-1.76%
-0.50%
VPI STA. 290+75.00
ELEVATION 524.53
K = 100
100' V.C.
VPC (296+00) 521.90
VPT (297+00) 521.90
-0.50%
+0.50%
VPI STA. 296+50.00
ELEVATION 521.65
PRO. 6-8' X 6' MBC
FL = 512.62
+0.50%
VPI STA. 299+50.00
ELEVATION 523.15
-0.70%
VPC (299+00) 522.90
VPT (300+00) 522.80
K = 83
100' V.C.
K = 83
100' V.C.
VPC (301+75) 521.58
VPT (302+75) 521.48
-0.70%
+0.50%
VPI STA. 302+25.00
ELEVATION 521.23
EXISTING GROUND
+0.50%
VPI STA. 306+90.00
ELEVATION 523.55
-1.10%
VPC (305+90) 523.05
VPT (307+90) 522.45
K = 125
200' V.C.
SH183 WB
FRONTAGE ROAD
PGL FRW2-W
K = 125
50' V.C.
VPC (311+10) 518.93
VPT (311+60) 518.48
-1.10%
-0.70%
VPI STA. 311+35.00
ELEVATION 518.66
FRW2-W STA.313+28.17
END @ FRW2-W,PGL - 517.30
FRW1-M STA.313+28.17
BEGIN @ FRW1-M,PGL - 517.30
517.30
SH183 WB FRONT.RD
PGL FRW1-M
PRO. 4-8' X 4' MBC
FL = 506.54
EXISTING GROUND
VPC (319+40) 513.02
537.27 537.7
536.27 537.4
535.26 536.2
534.26 535.5
533.25 535.8
532.25 533.5
531.25 532.3
530.24 531.2
529.24 530.0
528.23 529.9
527.60 530.2
528.26 527.5
527.61 527.7
525.85 527.4
524.47 523.7
523.90 523.1
523.40 523.3
522.90 524.4
522.40 522.6
521.90 522.7
521.90 522.6
522.40 522.5
522.90 521.5
522.80 521.2
522.10 521.8
521.44 521.4
521.60 522.8
522.10 523.0
522.60 521.8
523.10 523.1
523.12 523.5
522.34 523.1
521.24 521.8
520.14 519.1
519.04 519.8
518.20 518.9
517.50 516.7
516.80 518.1
516.10 517.1
515.40 515.5
514.70 513.4
514.00 512.3
513.30 513.3
280+00
285+00
290+00
295+00
300+00
305+00
310+00
315+00

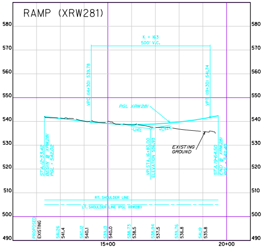

EXISTING GROUND
SH183 EB
FRONTAGE ROAD
PGL FRE-W
K = 66
110' V.C.
VPC (286+45) 529.38
VPT (287+55) 529.54
-0.70%
+0.98%
VPI STA. 287+00.00
ELEVATION 529.00
STORY ROAD
STORY STA.8+77.26
+0.98%
-1.11%
VPC (288+04) 530.01
VPI STA. 288+53.82
ELEVATION 530.50
VPT (289+04) 529.95
K = 48
100' V.C.
K = 198
100' V.C.
VPC (295+50) 522.80
VPT (296+50) 521.95
-1.11%
-0.60%
VPI STA. 296+00.00
ELEVATION 522.25
PRO. 6-8' X 6' MBC
FL = 511.15
K = 91
100' V.C.
VPC (302+00) 518.65
VPT (303+00) 518.60
-0.60%
+0.50%
VPI STA. 302+50.00
ELEVATION 518.35
+0.50%
VPI STA. 306+75.00
ELEVATION 520.48
-0.50%
VPC (306+25) 520.22
VPT (307+25) 520.22
K = 100
100' V.C.
FRE-W STA.313+18.91
END @ FRE-W,PGL - 517.26
FRE1-M STA.313+18.91
BEGIN @ FRE1-M,PGL - 517.26
-0.50%
VPI STA. 315+00.00
ELEVATION 516.35
-1.11%
VPC (314+50) 516.60
VPT (315+50) 515.80
K = 165
100' V.C.
EXISTING GROUND
536.00 537.4
535.30 537.2
534.60 536.2
533.90 535.4
533.20 534.5
532.50 533.8
531.80 533.1
531.10 532.9
530.40 532.4
529.70 531.1
529.23 530.2
529.98 529.6
529.99 529.9
528.88 529.2
527.78 528.9
526.67 528.5
525.57 527.1
524.46 524.8
523.36 523.4
522.31 521.9
521.65 520.6
521.05 520.3
520.45 520.0
519.85 519.4
519.25 518.9
518.65 518.3
518.60 518.1
519.10 518.5
519.60 519.4
520.10 520.4
520.32 520.8
519.85 520.4
519.35 519.6
518.85 519.0
518.35 518.5
517.85 516.9
517.35 519.0
516.85 518.0
516.27 519.0
515.24 517.7
514.14 516.0
513.03 514.8
511.93 513.6
280+00
285+00
290+00
295+00
300+00
305+00
310+00
315+00



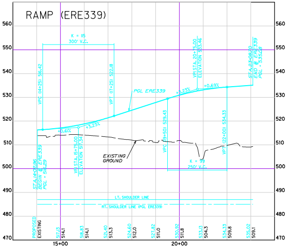
EXISTING GROUND
SH183 WB FRONTAGE ROAD PGL FRWI-M
PRO. 8-9' X 6' MBC FL = 503.98
PRO. 4-7' X 3' MBC FL = 504.92
MACARTHUR BLVD MACBL STA.15+83.25
2.0% TYPICAL
RT. GUTTER
LT. GUTTER (PGL FRWI-M)
K = 165 200' V.C.
K = 112 120' V.C.
K = 110 120' V.C.
K = 83 150' V.C.
K = 86 200' V.C.
K = 47 70' V.C.
K = 76 100' V.C.
K = 120 120' V.C.
K = 111 120' V.C.
K = 47 120' V.C.
K = 91 120' V.C.
580
570
560
550
540
530
520
510
500
490
480
320+00
325+00
330+00
335+00
340+00
345+00
350+00



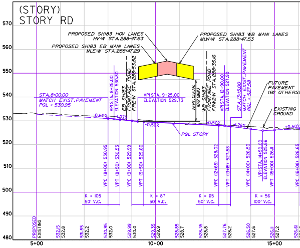
EXISTING GROUND
SH183 EB FRONTAGE ROAD PGL FREI-M
PRO. 4-8' X 4' MBC FL = 503.06
PRO. 8-9' X 6' MBC FL = 503.06
PRO. 4-7' X 3' MBC FL = 503.50
MACARTHUR BLVD N MACBL STA.11+97.40
2.0% TYPICAL
LT. GUTTER
RT. GUTTER (PGL FREI-M)
K = 73 120' V.C.
K = 89 200' V.C.
K = 70 120' V.C.
K = 89 100' V.C.
K = 91 100' V.C.
K = 83 100' V.C.
K = 60 100' V.C.
580
570
560
550
540
530
520
510
500
490
480
320+00
325+00
330+00
335+00
340+00
345+00
350+00



RAMP (XRW281)
K = 163 500' V.C.
PGL XRW281
EXISTING GROUND
RT. SHOULDER LINE
LT. SHOULDER LINE (PGL XRW281)
PROPOSED
EXISTING
580
570
560
550
540
530
520
510
500
490
15+00
20+00

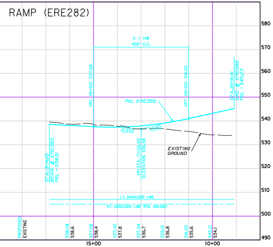


RAMP (ERE339)
K = 115 300' V.C.
PGL ERE339
EXISTING GROUND
K = 90 250' V.C.
LT. SHOULDER LINE
RT. SHOULDER LINE (PGL ERE339)
PROPOSED
EXISTING
560
550
540
530
520
510
500
490
480
470
15+00
20+00

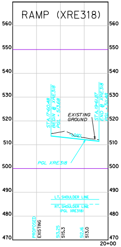


(STORY)
STORY RD
PROPOSED SH183 HOV LANES HV-W STA.288+47.63
PROPOSED SH183 EB MAIN LANES MLE-W STA.288+47.29
PROPOSED SH183 WB MAIN LANES MLW-W STA.288+47.53
STA.8+00.00 MATCH EXIST. PAVEMENT PGL = 530.95
VPI STA. 9+25.00 ELEVATION 529.73
VERT. CLEAR. 16'6" (MIN)
MATCH EXIST. PAVEMENT
FUTURE PAVEMENT (BY OTHERS)
EXISTING GROUND
PGL STORY
K = 105 50' V.C.
K = 87 50' V.C.
K = 65 50' V.C.
K = 56 100' V.C.
PROPOSED
EXISTING
570
560
550
540
530
520
510
500
490
480
5+00
10+00
15+00

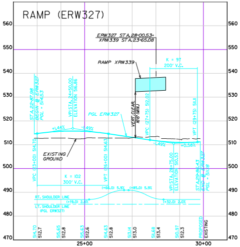
RAMP (ERE282)


K = 148
400' V.C.
VPC (15+00) 537.58
VPT (19+00) 541.00
STA.20+91.41
END @ ERE282
PGL - 545.23
PGL ERE282
-0.50%
+2.21%
STA.13+14.05
BEGIN @ ERE282
PGL - 538.51
VPI STA. 17+00.00
ELEVATION 536.58
EXISTING GROUND
LT. SHOULDER LINE
RT. SHOULDER LINE (PGL ERE282)
PROPOSED
EXISTING
538.08 538.6
537.58 538.4
537.42 537.8
537.94 536.7
539.13 536.8
541.00 535.6
543.21 534.1
15+00
10+00
580
570
560
550
540
530
520
510
500
490

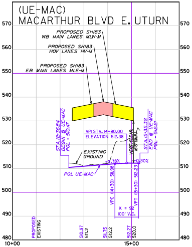
RAMP (XRE318)


STA.17+60.48
BEGIN @ XRE318
PGL - 513.68
STA.19+61.87
END @ XRE318
PGL - 511.48
EXISTING GROUND
-1.09%
PGL XRE318
LT. SHOULDER LINE
RT. SHOULDER LINE (PGL XRE318)
PROPOSED
EXISTING
513.25 515.3
512.16 513.0
20+00
560
550
540
530
520
510
500
490
480
470

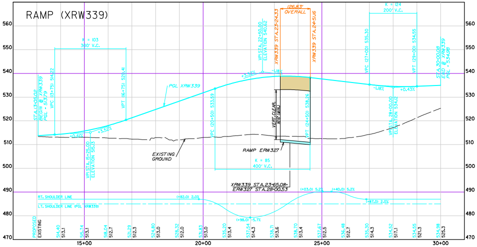
RAMP (ERW327)


ERW327 STA.28+00.53=
XRW339 STA.23+65.08
RAMP XRW339
K = 97
200' V.C.
STA.22+87.98
BEGIN @ ERW327
PGL - 514.53
VPI STA. 24+50.00
ELEVATION 516.86
PGL ERW327
VERT. CLEAR.
16'6" (MIN.)
VPC (27+75) 512.02
VPT (29+75) 511.11
+1.44%
-1.49%
-1.49%
+0.58%
EXISTING GROUND
VPC (23+00) 514.70
VPT (26+00) 514.63
K = 102
300' V.C.
VPI STA. 28+75.00
ELEVATION 510.53
STA.29+86.43
END @ ERW327
PGL - 511.18
(+66.0) 5.9%
(+85.0) 5.9%
RT. SHOULDER LINE
(+19.0) 2.0%
(+32.0) 2.0%
LT. SHOULDER LINE (PGL ERW327)
514.70 512.7
515.65 512.8
515.63 512.6
514.63 512.8
513.14 513.0
511.68 513.4
510.97 512.3
PROPOSED
EXISTING
25+00
30+00
560
550
540
530
520
510
500
490
480
470

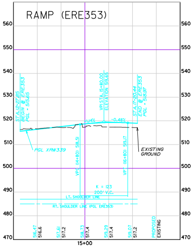
(UE-MAC)
MACARTHUR BLVD E. UTURN


PROPOSED SH183
WB MAIN LANES MLW-M
PROPOSED SH183
HOV LANES HV-M
PROPOSED SH183
EB MAIN LANES MLE-M
STA.12+36.84
BEGIN @ UE-MAC
PGL - 510.47
VPI STA. 14+80.00
ELEVATION 512.38
VERT. CLEAR.
16'6" (MIN.)
STA.15+35.32
END @ UE-MAC
PGL - 512.21
EXISTING GROUND
+0.78%
-0.30%
PGL UE-MAC
VPC (14+30) 511.98
VPT (15+30) 512.23
K = 92
100' V.C.
PROPOSED
EXISTING
510.97 511.2
511.75 512.2
512.27 520.0
10+00
15+00
570
560
550
540
530
520
510
500
490
480

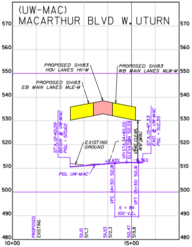
RAMP (XRW339)

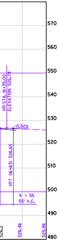

126.83'
OVERALL
K = 124
200' V.C.
K = 103
300' V.C.
VPI STA. 22+50.00
ELEVATION 540.62
XRW339 STA.23+24.33
XRW339 STA.24+51.16
VPC (27+00) 535.30
VPT (29+00) 534.55
STA.30+00.08
END @ XRW339
PGL - 534.98
STA.13+05.02
BEGIN @ XRW339
PGL - 513.79
VPC (13+75) 514.22
VPT (16+75) 520.41
PGL XRW339
+3.52%
-1.18%
-1.18%
+0.43%
VPC (20+50) 533.59
VERT. CLEAR.
16'6" (MIN.)
VPT (24+50) 538.26
VPI STA. 28+00.00
ELEVATION 534.12
+0.61%
+3.52%
VPI STA. 15+25.00
ELEVATION 515.13
EXISTING GROUND
RAMP ERW327
K = 85
400' V.C.
XRW339 STA.23+65.08=
ERW327 STA.28+00.53
RT. SHOULDER LINE
(+82.0) 2.0%
(+03.0) 5.2%
(+40.0) 5.2%
(+87.0) 2.0%
LT. SHOULDER LINE (PGL XRW339)
(+98.0) -5.7%
PROPOSED
EXISTING
514.40 513.1
515.74 513.1
518.04 512.7
521.29 512.3
524.80 513.0
528.32 512.0
531.83 513.0
535.20 513.4
537.54 514.3
538.71 513.6
538.70 513.4
537.67 512.5
536.48 512.7
535.30 514.3
534.52 517.1
534.55 521.3
534.98 525.3
15+00
20+00
25+00
30+00
560
550
540
530
520
510
500
490
480
470

RAMP (ERE353)

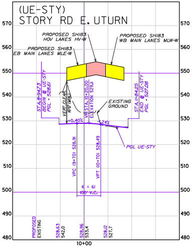

STA.12+27.85
BEGIN @ ERE353
PGL - 515.65
VPI STA. 15+80.00
ELEVATION 519.65
STA.17+20.44
END @ ERE353
PGL - 518.97
+1.14%
-0.48%
PGL XRW339
VPC (14+80) 518.51
VPT (16+80) 519.17
EXISTING GROUND
K = 123
200' V.C.
LT. SHOULDER LINE
RT. SHOULDER LINE (PGL ERE353)
516.47 516.6
517.61 517.2
518.73 517.4
519.29 517.4
519.07 517.2
PROPOSED
EXISTING
15+00
560
550
540
530
520
510
500
490
480
470

(UW-MAC)
MACARTHUR BLVD W. UTURN

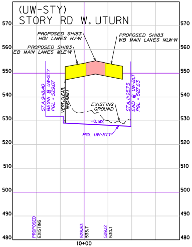

PROPOSED SH183
HOV LANES HV-M
PROPOSED SH183
WB MAIN LANES MLW-M
PROPOSED SH183
EB MAIN LANES MLE-M
STA.12+42.09
BEGIN @ UW-MAC
PGL - 510.62
EXISTING GROUND
VPI STA. 14+80.00
ELEVATION 512.59
VERT. CLEAR.
16'6" (MIN.)
STA.15+47.33
END @ UW-MAC
PGL - 512.35
+0.83%
-0.36%
PGL UW-MAC
VPC (14+30) 512.18
VPT (15+30) 512.41
K = 84
100' V.C.
PROPOSED
EXISTING
511.10 511.7
511.93 512.3
512.47 519.8
10+00
15+00
570
560
550
540
530
520
510
500
490
480


VPI STA. 16+35.00
ELEVATION 526.79
-0.50%
VPT (16+63) 526.65
K = 55
55' V.C.
526.2
526.46
525.96
570
560
550
540
530
520
510
500
490
480

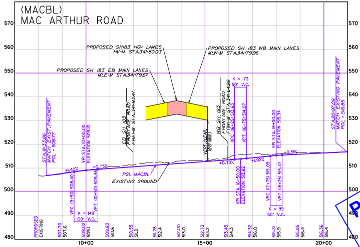
(UE-STY)
STORY RD E. UTURN


PROPOSED SH183
HOV LANES HV-W
PROPOSED SH183
WB MAIN LANES MLW-W
PROPOSED SH183
EB MAIN LANES MLE-W
STA.8+94.73
BEGIN @ UE-STY
PGL - 528.61
VERT. CLEAR.
16'6" (MIN.)
VPI STA. 10+20.00
ELEVATION 529.11
EXISTING GROUND
STA.11+84.25
END @ UE-STY
PGL - 527.08
+0.40%
-1.24%
PGL UE-STY
VPC (9+70) 528.91
VPT (10+70) 528.49
K = 61
100' V.C.
PROPOSED
EXISTING
528.63 542.0
528.96 533.4
528.12 527.7
10+00
570
560
550
540
530
520
510
500
490
480

(UW-STY)
STORY RD W. UTURN


PROPOSED SH183
HOV LANES HV-W
PROPOSED SH183
WB MAIN LANES MLW-W
PROPOSED SH183
EB MAIN LANES MLE-W
STA.9+18.40
BEGIN @ UW-STY
PGL - 529.07
VERT. CLEAR.
16'6" (MIN.)
EXISTING GROUND
STA.11+95.75
END @ UW-BLT
PGL - 527.63
+0.51%
PGL UW-STY
PROPOSED
EXISTING
528.63 533.7
528.12 530.1
10+00
570
560
550
540
530
520
510
500
490
480

(MACBL)
MAC ARTHUR ROAD


PROPOSED SH183 HOV LANES
HV-M STA.341+80.03
PROPOSED SH 183 WB MAIN LANES
MLW-M STA.341+79.96
PROPOSED SH 183 EB MAIN LANES
MLE-M STA.341+79.67
EB SH 183
FRONTAGE ROAD
FREI-M STA.341+93.47
WB SH 183
FRONTAGE ROAD
FRWI-M STA.341+64.99
K = 173
50' V.C.
VPC (16+25) 513.63
VPT (16+75) 514.07
VPI STA. 18+00.00
ELEVATION 515.34
STA.20+97.09
MATCH EXISTING PAVEMENT
PGL - 516.85
STA.8+33.86
MATCH EXIST. PAVEMENT
PGL - 506.77
VPI STA. 10+00.00
ELEVATION 509.10
VERT. CLEAR.
16'6" (MIN.)
+1.40%
+0.73%
+0.73%
+1.02%
+0.51%
PGL MACBL
EXISTING GROUND
VPC (9+50) 508.40
VPT (10+50) 509.46
K = 148
100' V.C.
VPI STA. 16+50.00
ELEVATION 513.82
VPC (17+75) 515.09
VPT (18+25) 515.47
K = 99
50' V.C.
PROPOSED
EXISTING
507.70 507.6
509.02 509.1
509.83 510.6
510.55 511.3
511.28 512.4
512.00 513.0
512.73 513.2
513.45 514.3
514.32 516.0
515.31 515.9
515.85 516.4
516.36 516.4
10+00
15+00
20+00
570
560
550
540
530
520
510
500
490
480

PRELIMINARY
SCHEMATIC

TEXAS DEPARTMENT OF TRANSPORTATION

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

SH 183 REEVALUATION DESIGN SCHEMATIC

SH 183 FROM WEST OF SH 161 TO IH 35E DALLAS COUNTY

CSJ: 0094-03-065 FROM 1.2 MILES EAST OF SH 360 TO 0.66 MILE WEST OF LOOP 12, PROJECT LENGTH 6.69 MILES

CSJ: 0094-07-015 FROM 1.0 MILES EAST OF LOOP 12 TO WEST END OF ELM FORK TRINITY BRIDGE, PROJECT LENGTH 0.3 MILE

CSJ: 0094-07-020 FROM WEST END OF ELM FORK TRINITY BRIDGE TO IH 35E, PROJECT LENGTH 1.1 MILES

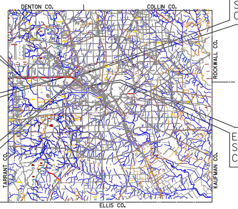
DESIGN SPEED

FREEWAY = 70 mph
RAMPS = 50 mph
RAMP ERW168 = 40 MPH
DIRECT CONNECTORS = 50 mph
SH 161 DIRECT CONNECTORS (DCW139, DCW146, DCE149, DCE177, DCN733) = 35 MPH
FRONTAGE ROADS = 40 mph
CROSS STREETS = 40 mph
MANAGED LANES - HOV = 70 mph

AVERAGE DAILY TRAFFIC 2000 (2029)

IH 35E TO LOOP 12	174,100 (278,600)
LOOP 12 TO SH 360	216,900 (347,300)

ROADWAY: URBAN FREEWAY


DENTON CO.
COLLIN CO.
ROCKWALL CO.
KAUFMAN CO.
TARRANT CO.
ELLIS CO.

BEGIN PROJECT
SH 183 ℄ STA. 91+00
CSJ NO. 0094-03-065

BEGIN PROJECT
SH 183 ℄ STA. 531+25
CSJ NO. 0094-07-015

END PROJECT
SH 183 ℄ STA. 443+33
CSJ NO. 0094-03-065

END PROJECT
SH 183 ℄ STA. 607+03
CSJ NO. 0094-07-020

END PROJECT
CSJ NO. 0094-07-015
AND BEGIN PROJECT
CSJ NO. 0094-07-020
SH183 ℄ STA. 549+50

DRAFT SUBMITTAL

NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

DATE APPROVED

DATE SUBMITTED

MAY 31, 2006

DATE REVISED

MARCH 13, 2012

HALFF ASSOCIATES, INC.
TBPE FIRM #F-312

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

Type or Print Name	PE#	Date
Matthew G. Craig	69910	03-13-12

50 0 100 200 300
HORIZONTAL
5 0 10 20 30
VERTICAL
SCALE IN FEET

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ROLL 3A OF 5
FRONTAGE ROAD AND RAMP PROFILES

ROLL 3A OF 5 FRONTAGE ROAD AND RAMP PROFILES