HOUSTON DISTRICT
PROJECT DEVELOPMENT

I-10 KATY FREEWAY

PRELIMINARY
SUBJECT TO CHANGE

SCHEMATIC LAYOUT

I-10

COUNTY: WALLER
FORT BEND
HARRIS
LIMITS FROM: FM 359
LIMITS TO: SH 6

CSJ: 0271-04-070
0271-05-025
0271-06-117
DATE: 03/31/2017
APPROVED: __/__/____

NOT A BIDDING DOCUMENT
____________________ P.E.
TBPE NO. __________
____

LEGEND

DESCRIPTION	SYMBOLOGY	WEIGHT	COLOR CODE
PROPOSED MAIN LANES	—	2	BLACK -0
PROPOSED MANAGED LANES	—	2	PURPLE -13
PROPOSED FRONTAGE ROADS	━	5	BLUE -1
PROPOSED RAMPS	—	2	BLUE -1
PROPOSED DIRECT CONNECTOR	—	2	ORANGE -6
PROPOSED EMBANKMENT	—	2	RED -3
PROPOSED RETAINING WALL	━	6	RED -3
PROPOSED BRIDGE BENTS	▭	2	RED -3
PROPOSED NOISE WALL	━	5	MAGENTA -37
PROPOSED SIDEWALKS	—	2	MAGENTA -200
PROPOSED STRIPING	▰▰▰	1	ORANGE -6
PROPOSED LANE INDICATOR	➡	1	BLACK -0
PROPOSED RIGHT-OF-WAY	━ ╷	5	BLACK -0
CONTROL OF ACCESS	—	2	RED -3
PLANIMETRIC	⌂	1	GREEN -2
EXISTING RIGHT-OF-WAY	— —	1	BLACK -0
EXISTING ROADWAY	—	2	GREEN -2
EXISTING ROADWAY TO BE REMOVED	▰▰▰	1	BLACK -0
EXISTING LANE INDICATOR	⇨	1	BLACK -0
TRAFFIC COUNT YEAR 2040 DHV	⬬	1	BLACK -0

COLORFILL LEGEND

MAIN LANES	🟨
MANAGED LANES	🟪
FRONTAGE ROADS	⬜
RAMPS	🟦
BRIDGES	🟧

SCALE

0 100 200 300 400

DESIGN CRITERIA

FUNCTIONAL CLASSIFICATION: PRINCIPAL ARTERIAL INTERSTATE
MAIN LANE DESIGN CRITERIA: FREEWAY
MAIN LANE DESIGN SPEED: 70 MPH
FRONTAGE ROAD DESIGN CRITERIA: LOW SPEED URBAN STREETS
FRONTAGE ROAD DESIGN SPEED: 45 MPH
RAMP DESIGN SPEED: 45 MPH

I-10 MAIN LANE CURVE DATA

PI STATION = 883+70.08
DELTA = 0° 51' 45.25" (LT)
DEGREE OF CURVE = 0° 15' 00.00"
TANGENT = 172.52
LENGTH = 345.03
RADIUS = 22,918.31
PC STATION = 881+97.56
PT STATION = 885+42.59
NO SUPERELEVATION REQUIRED

PI STATION = 919+22.85
DELTA = 2° 01' 53.44" (RT)
DEGREE OF CURVE = 0° 15' 00.00"
TANGENT = 406.35
LENGTH = 812.60
RADIUS = 22,918.31
PC STATION = 915+16.50
PT STATION = 923+29.11
NO SUPERELEVATION REQUIRED

PI STATION = 941+64.48
DELTA = 0° 56' 49.82" (LT)
DEGREE OF CURVE = 0° 15' 00.00"
TANGENT = 189.44
LENGTH = 378.87
RADIUS = 22,918.31
PC STATION = 939+75.04
PT STATION = 943+53.91
NO SUPERELEVATION REQUIRED

PI STATION = 961+91.39
DELTA = 1° 25' 51.72" (LT)
DEGREE OF CURVE = 0° 15' 00.00"
TANGENT = 286.22
LENGTH = 572.41
RADIUS = 22,918.31
PC STATION = 959+05.17
PT STATION = 964+77.58
NO SUPERELEVATION REQUIRED

PI STATION = 988+11.58
DELTA = 1° 09' 43.50" (RT)
DEGREE OF CURVE = 0° 15' 00.00"
TANGENT = 232.42
LENGTH = 464.83
RADIUS = 22,918.31
PC STATION = 985+79.15
PT STATION = 990+43.98
NO SUPERELEVATION REQUIRED

PI STATION = 1023+84.53
DELTA = 1° 04' 42.21" (RT)
DEGREE OF CURVE = 0° 15' 00.00"
TANGENT = 215.68
LENGTH = 431.36
RADIUS = 22,918.31
PC STATION = 1021+68.84
PT STATION = 1026+00.20
NO SUPERELEVATION REQUIRED

I-10 WB RAMP 35 CURVE DATA

PI STATION = 3883+53.62
DELTA = 9° 52' 57.58" (LT)
DEGREE OF CURVE = 1° 13' 27.37"
TANGENT = 404.62
LENGTH = 807.23
RADIUS = 4,680.00
PC STATION = 3879+49.00
PT STATION = 3887+56.23
WIDENING OF MAINLANES
3% CROSS-SLOPE PROVIDED
FOR RAMP AREA
2% CROSS-SLOPE PROVIDED

I-10 EB RAMP 36 CURVE DATA

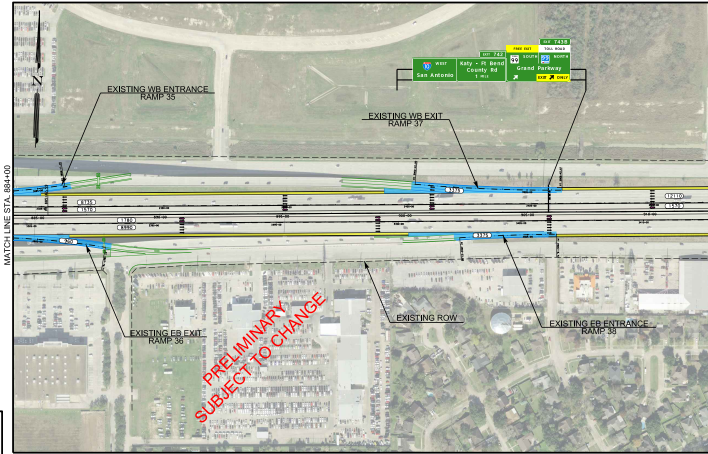
PI STATION = 4885+06.43
DELTA = 7° 36' 51.16" (RT)
DEGREE OF CURVE = 1° 13' 27.37"
TANGENT = 311.43
LENGTH = 621.94
RADIUS = 4,680.00
PC STATION = 4881+95.00
PT STATION = 4888+16.94
WIDENING OF MAINLANES
3% CROSS-SLOPE PROVIDED
FOR RAMP AREA
2% CROSS-SLOPE PROVIDED

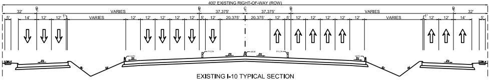
I-10 WB RAMP 37 CURVE DATA

PI STATION = 3903+42.52
DELTA = 5° 18' 38.08" (LT)
DEGREE OF CURVE = 0° 53' 03.10"
TANGENT = 300.52
LENGTH = 600.61
RADIUS = 6,480.00
PC STATION = 3900+42.00
PT STATION = 3906+42.61
MATCH EXISTING CROSS SLOPE

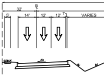
I-10 EB RAMP 38 CURVE DATA

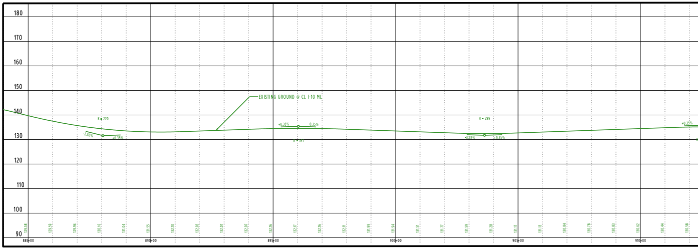
PI STATION = 4904+20.77
DELTA = 3° 29' 46.60" (RT)
DEGREE OF CURVE = 0° 53' 03.10"
TANGENT = 197.77
LENGTH = 395.42
RADIUS = 6,480.00
PC STATION = 4902+23.00
PT STATION = 4906+18.42
MATCH EXISTING CROSS SLOPE


N
MATCH LINE STA. 884+00
EXISTING WB ENTRANCE
RAMP 35
EXISTING WB EXIT
RAMP 37
EXISTING EB EXIT
RAMP 36
EXISTING ROW
EXISTING EB ENTRANCE
RAMP 38
PRELIMINARY
SUBJECT TO CHANGE
EXIT 742
EXIT 743B
FREE EXIT
TOLL ROAD
10 WEST
San Antonio
Katy - Ft Bend
County Rd
1 MILE
99 SOUTH
99 NORTH
Grand Parkway
EXIT ONLY
8735
1570
1780
8990
960
3375
3375
12110
1570
885+00
890+00
895+00
900+00
905+00
910+00


400' EXISTING RIGHT-OF-WAY (ROW)
32'
VARIES
37.375'
37.375'
VARIES
32'
5'
14'
12'
12'
1'
VARIES
12'
12'
12'
12'
12'
5'
12'
20.375'
20.375'
12'
5'
12'
12'
12'
12'
12'
VARIES
1'
12'
12'
14'
5'
2%
2%
2%
2%
PYLON
PYLON
SSCB

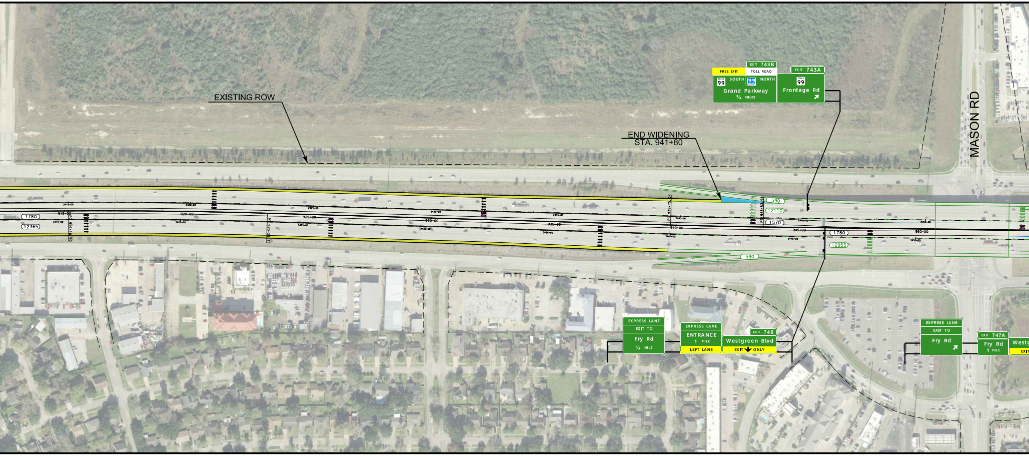
EXISTING I-10 TYPICAL SECTION

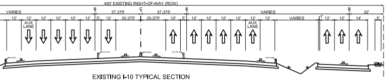

32'
VARIES
5'
14'
12'
12'
1'
VARIES
2%



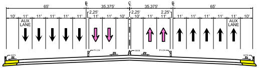
ROADWAY: I-10
COUNTY: WALLER, ETC.
LIMITS FROM: FM 359
LIMITS TO: SH 6

5
7

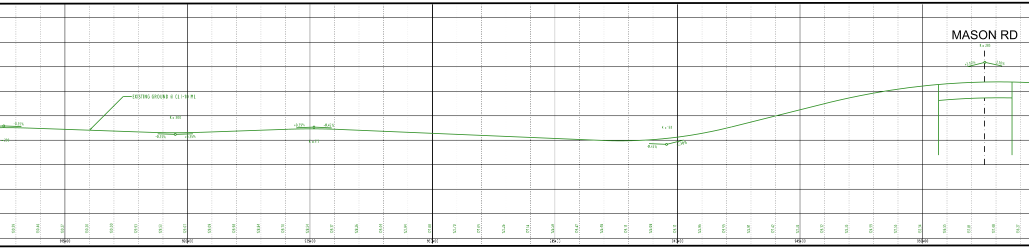

EXISTING ROW
END WIDENING
STA. 941+80
MASON RD
FREE EXIT
EXIT 743B
TOLL ROAD
SOUTH 99 NORTH
Grand Parkway
¾ MILES
EXIT 743A
99
Frontage Rd
EXPRESS LANE
EXIT TO
Fry Rd
¼ MILE
EXPRESS LANE
ENTRANCE
1 MILE
LEFT LANE
EXIT 746
Westgreen Blvd
EXIT ONLY
EXPRESS LANE
EXIT TO
Fry Rd
EXIT 747A
Fry Rd
1 MILE
1780
12365
590
12110
1570
1780
12955
590
915+00
920+00
925+00
930+00
935+00
940+00
945+00
950+00

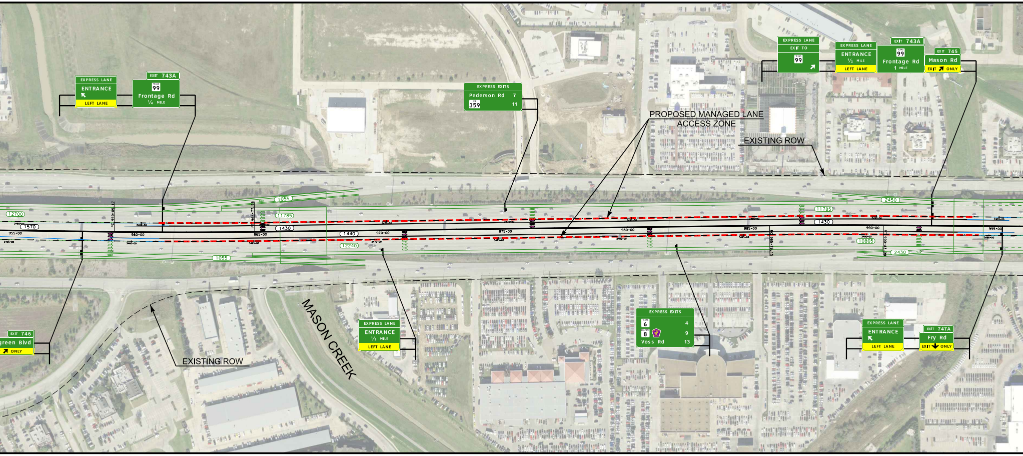

400' EXISTING RIGHT-OF-WAY (ROW)
VARIES
37.375'
37.375'
VARIES
32'
12'
12'
12'
12'
12'
12'
5'
12'
20.375'
20.375'
12'
5'
12'
12'
12'
12'
12'
12'
VARIES
1'
12'
12'
14'
5'
AUX LANE
AUX LANE
2%
2%
2%
5%
5%
2%

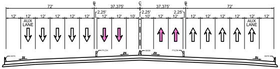
EXISTING I-10 TYPICAL SECTION
WITH AUXILIARY LANE


65'
35.375'
35.375'
65'
2.25'
2.25'
2.25'
10'
11'
11'
11'
11'
11'
11'
11'
10'
10'
11'
11'
11'
11'
11'
11'
11'
10'
AUX LANE
AUX LANE
PYLON
PYLON
2%
2%
5%
5%

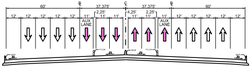
PROPOSED I-10 WIDENING TYPICAL SECTION
WITH AUXILIARY LANE
STA. 903+00 - 942+00



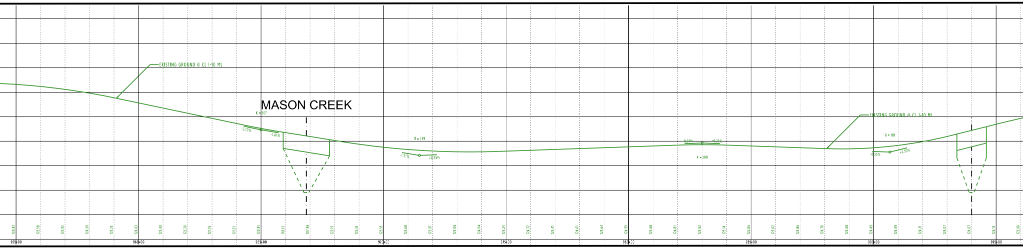

EXPRESS LANE
ENTRANCE
LEFT LANE
EXIT 743A
99
Frontage Rd
¼ MILE
EXPRESS EXITS
Pederson Rd 7
359 11
EXPRESS LANE
EXIT TO
99
EXPRESS LANE
ENTRANCE
½ MILE
LEFT LANE
EXIT 743A
99
Frontage Rd
1 MILE
EXIT 745
Mason Rd
EXIT ONLY
PROPOSED MANAGED LANE
ACCESS ZONE
EXISTING ROW
1055
12700
11785
1570
1430
1440
12240
1055
2450
11785
1430
10865
2430
955+00
960+00
965+00
970+00
975+00
980+00
985+00
990+00
995+00
EXIT 746
green Blvd
ONLY
EXISTING ROW
MASON CREEK
EXPRESS LANE
ENTRANCE
½ MILE
LEFT LANE
EXPRESS EXITS
6 4
8 9
Voss Rd 13
EXPRESS LANE
ENTRANCE
LEFT LANE
EXIT 747A
Fry Rd
EXIT ONLY

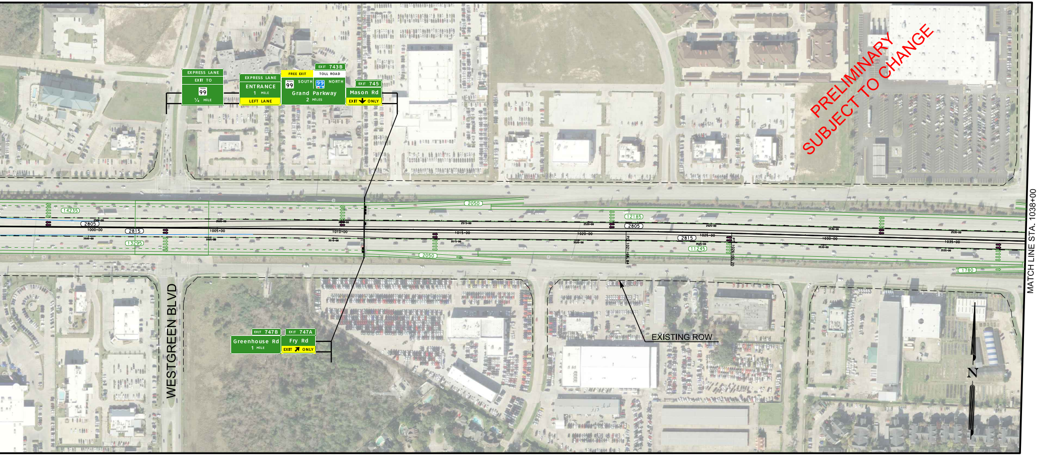

72'
37.375'
37.375'
72'
2.25'
2.25'
2.25'
12'
12'
12'
12'
12'
12'
12'
12'
10'
10'
12'
12'
12'
12'
12'
12'
12'
12'
AUX LANE
AUX LANE
PYLON
PYLON
2%
2%
3%
3%

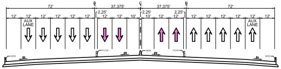
PROPOSED I-10 RESTRIPE TYPICAL SECTION
WITH AUXILIARY LANE
STA. 942+00 - 959+00


60'
37.375'
37.375'
60'
2.25'
4.25'
2.25'
12'
12'
12'
12'
12'
11'
11'
11'
11'
11'
11'
12'
12'
12'
12'
12'
AUX LANE
AUX LANE
PYLON
PYLON
2%
2%
3%
3%

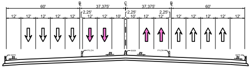
PROPOSED I-10 RESTRIPE TYPICAL SECTION
"ACCESS ZONE"
STA. 959+00 - 994+00


EXISTING GROUND @ CL I-10 ML
MASON CREEK
K = 307
-2.10%
-1.61%
K = 329
-1.61%
+0.35%
-0.35%
+0.35%
K = 300
EXISTING GROUND @ CL I-10 ML
K = 181
-0.35%
+2.50%
130.81
123.58
123.93
124.50
125.25
124.63
123.40
122.30
121.76
121.31
120.91
118.13
107.96
123.15
123.33
123.55
123.68
123.97
124.06
124.04
124.24
124.32
124.41
124.61
124.64
124.59
124.68
124.81
124.92
125.14
125.06
125.02
124.86
124.76
124.68
124.49
124.49
124.21
124.07
124.07
124.13
123.96
955+00
960+00
965+00
970+00
975+00
980+00
985+00
990+00
995+00

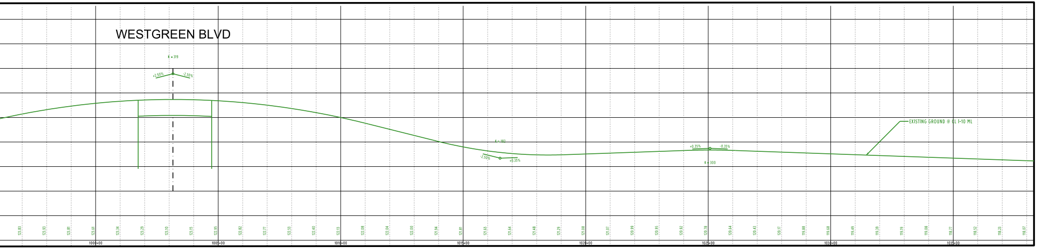

EXPRESS LANE
EXIT TO
99
¼ MILE
EXPRESS LANE
ENTRANCE
1 MILE
LEFT LANE
FREE EXIT
EXIT 743B
TOLL ROAD
99 SOUTH
99 NORTH
Grand Parkway
2 MILES
EXIT 745
Mason Rd
EXIT ONLY
PRELIMINARY
SUBJECT TO CHANGE
14235
2805
2815
13295
2050
12185
2815
11245
1780
EXISTING ROW
WESTGREEN BLVD
EXIT 747B
Greenhouse Rd
1 MILE
EXIT 747A
Fry Rd
EXIT ONLY
N
MATCH LINE STA. 1038+00


72'
37.375'
37.375'
72'
2.25'
2.25'
2.25'
12'
12'
12'
12'
12'
12'
12'
12'
10'
10'
12'
12'
12'
12'
12'
12'
12'
12'
AUX LANE
AUX LANE
PYLON
SSCB
PYLON
2%
2%

PROPOSED I-10 RESTRIPE TYPICAL SECTION
WITH AUXILIARY LANE
STA. 994+00 - 1010+00


60'
37.375'
37.375'
60'
2.25'
2.25'
2.25'
12'
12'
12'
12'
12'
12'
10'
10'
12'
12'
12'
12'
12'
12'

PROPOSED I-10 RESTRIPE TYPICAL SECTION
STA. 1010+00 - 1038+00



HOUSTON DISTRICT
PROJECT DEVELOPMENT

I-10 KATY FREEWAY

PRELIMINARY
SUBJECT TO CHANGE

ROADWAY: I-10
COUNTY: WALLER, ETC.
LIMITS FROM: FM 359
LIMITS TO: SH 6