Texas Department of Transportation
© 2018 by Texas Department of Transportation all rights reserved

AECOM
13355 NOEL ROAD
SUITE 400
DALLAS, TEXAS 75240
214-741-7777
TBPE NO. F-3580

TEXAS DEPARTMENT OF TRANSPORTATION
DALLAS DISTRICT
DESIGN SCHEMATIC
JAMES K. SELMAN, P.E., DISTRICT ENGINEER
COLLIN COUNTY

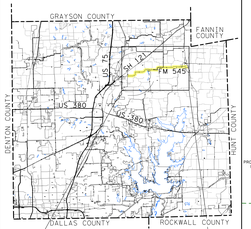
FM 545
PROJECT LIMIT: FM 2933 TO BS-78D
CONTROL: 1012-02-030
PROJECT LENGTH = 9.09 MI. (48,001.08 FT)
EXCEPTION = 1.69 MI. (8,939.97 FT)

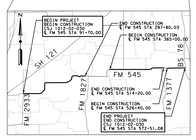
CROSS STREETS
ROLL 1 OF 8: FM 2933 & CR 415
ROLL 2 OF 8: CR 416
ROLL 3 OF 8: CR 472 & CR 1095
ROLL 4 OF 8: CR 475
ROLL 5 OF 8: FM 2862
ROLL 6 OF 8: CR 575 & FM 1377

FUNCTIONAL CLASS
FM 545:RURAL MAJOR COLLECTOR
FM CROSS STREETS:COLLECTOR MINOR
CR CROSS STREETS: LOCAL

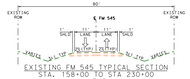
CONSTR LENGTH = 7.4 MI. (39,061.11 FT)

DESIGN SPEED
FM 545: 50 MPH
FM 545: 45 MPH (STA 136+58 TO STA 159+89)
FM CROSS STREETS: 40 MPH
CR CROSS STREETS: 30 MPH

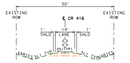




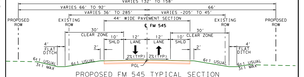
LOCATION MAP (NTS)



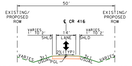
EXISTING FM 545 TYPICAL SECTION
STA. 158+00 TO STA 230+00
N.T.S.



EXISTING CR 416 TYPICAL SECTION
STA. 10+25 TO STA 16+00
N.T.S.



PROPOSED FM 545 TYPICAL SECTION
STA. 158+00 TO STA 230+00
N.T.S.



PROPOSED CR 416 TYPICAL SECTION
STA. 10+25 TO STA 16+00
N.T.S.

PREPARED BY AECOM TECHNICAL SERVICES INC. TBPE NUMBER 3580
FOR INTERIM REVIEW ONLY, NOT FOR PERMITTING, BIDDING OR CONSTRUCTION.
Prepared by or under the Direct Supervision of:

SRIKRISHNA PEARLALLY — 84772 — BRAD HERNANDEZ — 120078
NAME — P.E. NUMBER — NAME — P.E. NUMBER

SCALE IN FEET

APPROVED APRIL 30, 2018

ROLL 2 OF 8

© 2018 BY TEXAS DEPARTMENT OF TRANSPORTATION
ALL RIGHTS RESERVED

LEGEND:

- PROPOSED ROW
- EXISTING FM 545 ROW
- EXISTING CROSS STREETS ROW
- DRAINAGE EASEMENT
- NTMWD MITIGATION BOUNDARY
- PROPERTY LINE
- PARCEL IDENTIFICATION NUMBER
- DIRECTION OF TRAFFIC
- FLOW LINES FOR STREAM/CREEK
- FEMA FLOOD PLAIN
- PAVEMENT EDGE
- METAL BEAM GUARD FENCE
- EXISTING DRAINAGE STRUCTURES
- PROPOSED DRAINAGE STRUCTURES
- PROPOSED TRAVEL LANES
- PROPOSED SHOULDERS
- PROPOSED OVERLAY
- PROPOSED CROSS STREETS
- PROPOSED DRIVEWAYS
- BUILDING DISPLACEMENT
- ROADWAY PAVEMENT TO BE REMOVED

NOTES:

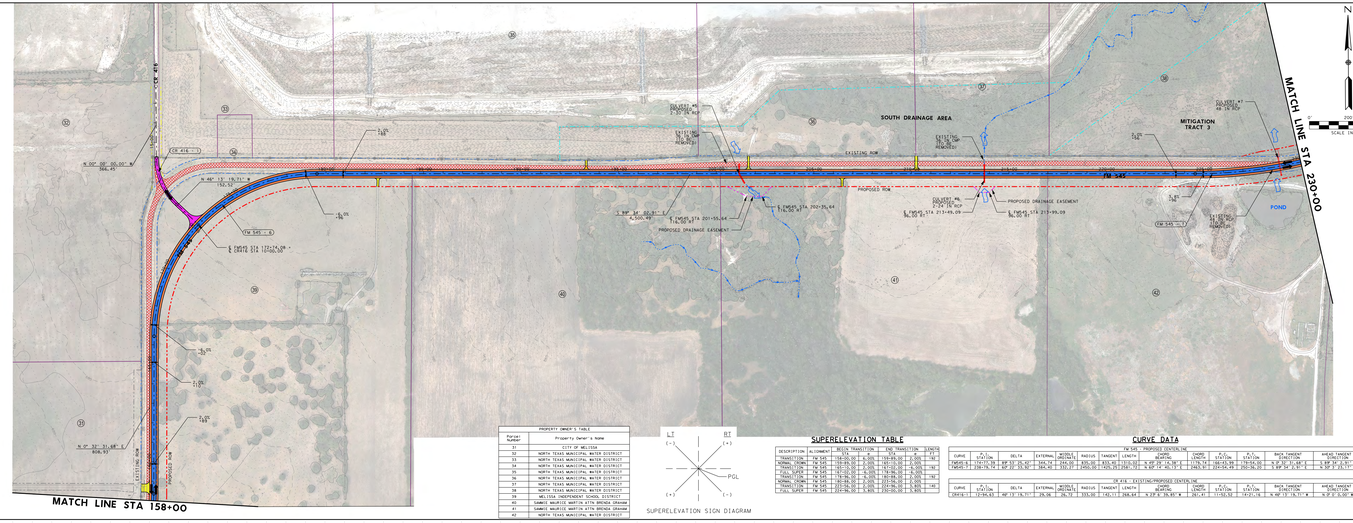
1. SCHEMATICS ARE BASED ON AERIAL AND DESIGN SURVEYS DATED DECEMBER 01, 2015 AND RECORD PLANS.
2. DIMENSIONS ARE TO THE EDGE OF PAVEMENT OR RAIL UNLESS OTHERWISE NOTED.
3. APPROXIMATE 100 YEAR FLOODPLAIN LIMITS ARE BASED UPON FEMA FLOOD INSURANCE RATE MAPS #48085C0705J, #48085C0845J, #48085C0845J.
4. OWNERSHIP AND PROPERTY LINE INFORMATION SHOWN ON SCHEMATIC OBTAINED FROM COLLIN COUNTY APPRAISAL DISTRICT (CCAD) ON APRIL 14, 2017. PROPERTY LINE ARE SHOWN FOR INFORMATIONAL USE ONLY.
5. EXISTING CSJ-VERT LOCATIONS, SIZE, AND ELEVATIONS OBTAINED FROM AS-BUILT AND RECORD DOCUMENTS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
6. EXISTING DRIVEWAYS WILL REMAIN UNLESS IT IS DETERMINED DURING DETAILED DESIGN THAT CONSTRUCTION WITH THE PROPOSED IMPROVEMENTS TO THE LOCAL GOVERNMENT OF THE DRIVEWAY IS A SAFETY ISSUE.
7. BUILDING DISPLACEMENTS ESTIMATED BASED ON ALIGNMENT IN THE PROPOSED ROW AND PROPOSED EASEMENTS SHOWN.
8. CONVENTIONAL ROADWAY SIGNAGE (SMALL SIGNS) ARE NOT SHOWN AND WILL BE DEVELOPED DURING THE PS&E PHASE OF THE PROJECT.
9. RESIDENTIAL DRIVEWAY RADII ARE 10 FT, CROSS STREET DRIVEWAY RADII ARE 30 FT AND COMMERCIAL DRIVEWAY RADII ARE 40 FT, UNLESS OTHERWISE NOTED.
10. PIPE CROSSING UNDERNEATH DRIVEWAYS IS NOT SHOWN FOR CLARITY.
11. THE NORTH TEXAS MUNICIPAL WATER DISTRICT MITIGATION AREAS WERE DELINEATED BY AECOM IN 2006 AND SURVEYED BY AECOM IN JANUARY 2006. THE MITIGATION AREAS SHOWN ARE APPROXIMATE AND FOR INFORMATIONAL USE ONLY.
12. THE FM 545 EXISTING RIGHT-OF-WAY SHOWN ON SCHEMATIC PROVIDED BY OTHERS. EXISTING CROSS STREETS' RIGHT-OF-WAY INFORMATION SHOWN TAKEN FROM COLLIN COUNTY APPRAISAL DISTRICT. ALL EXISTING RIGHT-OF-WAY TO BE FIELD VERIFIED DURING PS&E.

TRAFFIC DIAGRAM
N.T.S.

LEGEND:
XXXX - 2018 AVERAGE DAILY TRAFFIC VOLUME
XXXX - 2038 AVERAGE DAILY TRAFFIC VOLUME
XXXX - 2048 AVERAGE DAILY TRAFFIC VOLUME
ROAD

SOURCE:
TEXAS DEPARTMENT OF TRANSPORTATION,
TRANSPORTATION PLANNING AND PROGRAMMING DIVISION MEMORANDUM,
DATED FEBRUARY 5, 2018

K-FACTOR = 0.10
DIRECTIONAL DISTRIBUTION PERCENTAGE = 62/38
PERCENT TRUCKS: SU = 2.5
SM = 5.5



Parcel Number	Property Owner's Name
31	CITY OF MELISSA
32	NORTH TEXAS MUNICIPAL WATER DISTRICT
33	NORTH TEXAS MUNICIPAL WATER DISTRICT
34	NORTH TEXAS MUNICIPAL WATER DISTRICT
35	NORTH TEXAS MUNICIPAL WATER DISTRICT
36	NORTH TEXAS MUNICIPAL WATER DISTRICT
37	NORTH TEXAS MUNICIPAL WATER DISTRICT
38	NORTH TEXAS MUNICIPAL WATER DISTRICT
39	MELISSA INDEPENDENT SCHOOL DISTRICT
40	SAMUEL MAURICE MARTIN ATTN BRENDA GRAHAM
41	SAMUEL MAURICE MARTIN ATTN BRENDA GRAHAM
A2	NORTH TEXAS MUNICIPAL WATER DISTRICT

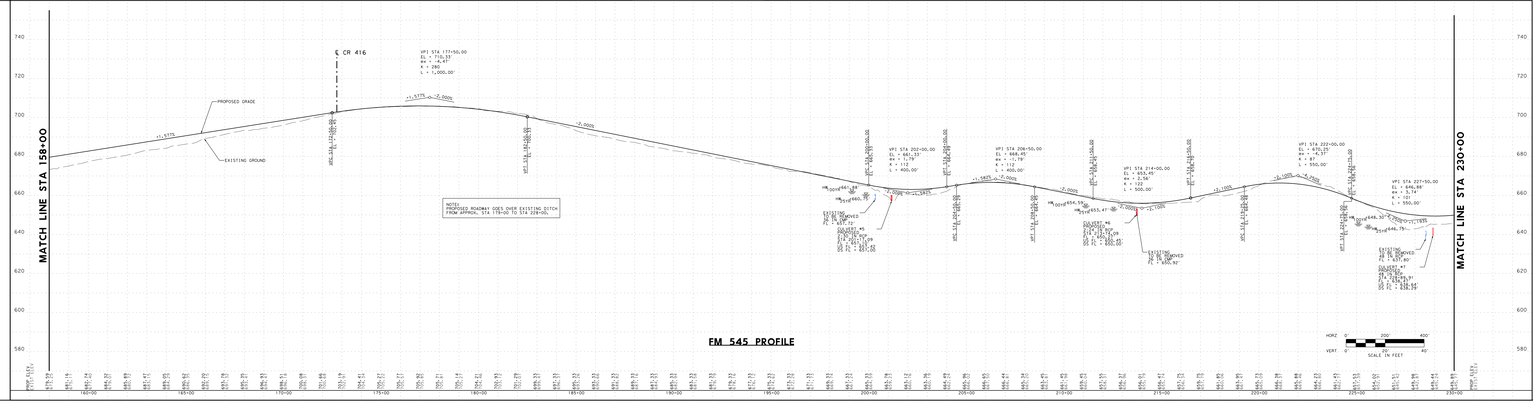
SUPERELEVATION TABLE

DESCRIPTION	ALIGNMENT	BEGIN TRANSITION STATION	BEGIN TRANSITION LENGTH	END TRANSITION STATION	END TRANSITION LENGTH	FM 545 - PROPOSED CENTER LINE CURVE DATA
TANGENT	FM 545	158+00.00	0.00%	170+84.00	0.00%	TAN
FULL SUPER	FM 545	170+84.00	0.00%	171+52.00	4.00%	TAN
REVERSE CURVE	FM 545	171+52.00	4.00%	176+36.00	4.00%	1432
FULL SUPER	FM 545	176+36.00	4.00%	177+04.00	0.00%	1432
TANGENT	FM 545	177+04.00	0.00%	207+56.00	0.00%	TAN
TANGENT	FM 545	207+56.00	0.00%	214+56.00	0.00%	TAN
FULL SUPER	FM 545	214+56.00	0.00%	215+24.00	4.00%	TAN

CURVE	P.I. STATION	DELTA	EXTERNAL	MIDDLE ORDINATE	RADIUS	TANGENT LENGTH	CURVE LENGTH	P.C. STATION	P.T. STATION	BACK TANGENT DIRECTION	AHEAD TANGENT DIRECTION
CURVE 1	176+70.00	49° 21' 36.00"	26.47	24.91	1432.39	668.00	1234.00	170+02.00	182+36.00	N 49° 21' 36.00" E	N 0° 00' 00.00" E

CURVE	P.I. STATION	DELTA	EXTERNAL	MIDDLE ORDINATE	RADIUS	TANGENT LENGTH	CURVE LENGTH	P.C. STATION	P.T. STATION	BACK TANGENT DIRECTION	AHEAD TANGENT DIRECTION
CURVE 1	176+36.92	90° 13' 16.11"	26.18	24.96	1145.92	1145.71	1806.64	164+51.20	182+57.84	N 0° 00' 00.00" E	N 90° 13' 16.11" E

SUPERELEVATION SIGN DIAGRAM



FM 545 PROFILE

Texas Department of Transportation
© 2018 by Texas Department of Transportation all rights reserved

AECOM
13355 NOEL ROAD
SUITE 400
DALLAS, TEXAS 75240
214-741-7777
TBPE NO. F-3580

TEXAS DEPARTMENT OF TRANSPORTATION
DALLAS DISTRICT
DESIGN SCHEMATIC
JAMES K. SELMAN, P.E., DISTRICT ENGINEER
COLLIN COUNTY

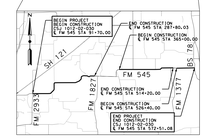
FM 545
PROJECT LIMIT: FM 2933 TO BS-78D
CONTROL: 1012-02-030
PROJECT LENGTH = 9.09 MI. (48,001.08 FT)
EXCEPTION = 1.69 MI. (8,939.97 FT)

CROSS STREETS
ROLL 1 OF 8: FM 2933 & CR 415
ROLL 2 OF 8: CR 416
ROLL 3 OF 8: CR 472 & CR 1095
ROLL 4 OF 8: CR 475
ROLL 5 OF 8: FM 2862
ROLL 6 OF 8: CR 575 & FM 1377

FUNCTIONAL CLASS
FM 545:RURAL MAJOR COLLECTOR
FM CROSS STREETS:COLLECTOR MINOR
CR CROSS STREETS: LOCAL

CONSTR LENGTH = 7.4 MI. (39,061.11 FT)

DESIGN SPEED
FM 545: 50 MPH
FM 545: 45 MPH (STA 136+58 TO STA 159+89)
FM CROSS STREETS: 40 MPH
CR CROSS STREETS: 30 MPH



LOCATION MAP (NTS)

PREPARED BY AECOM TECHNICAL SERVICES INC. TBPE NUMBER 3580
FOR INTERIM REVIEW ONLY, NOT FOR PERMITTING, BIDDING OR CONSTRUCTION.
Prepared by or under the Direct Supervision of:

SRIKRISHNA PEARLALLY — 84772 — BRAD HERNANDEZ — 120078
NAME — P.E. NUMBER — NAME — P.E. NUMBER

SCALE IN FEET

APPROVED APRIL 30, 2018

ROLL 2 OF 8

© 2018 BY TEXAS DEPARTMENT OF TRANSPORTATION
ALL RIGHTS RESERVED