NTTA®
NORTH TEXAS TOLLWAY AUTHORITY
5900W. Plano Pkwy, Plano, Texas 75093
Jorge Figueredo, Executive Director

DALLAS NORTH TOLLWAY EXTENSION

SECTION 4A
FROM US380 TO FM428
DESIGN SCHEMATIC

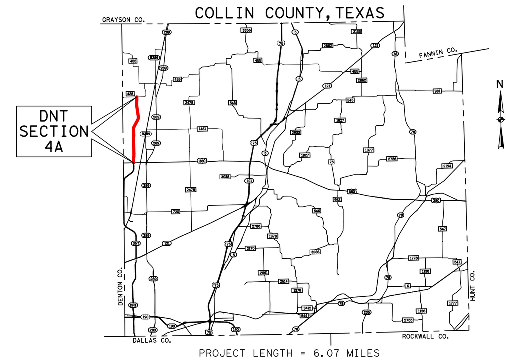
DESIGN SPEED

FUNCTIONAL CLASS: URBAN TOLLWAY (FREEWAY)
DESIGN SPEED: 70 mph (TOLLWAY MAINLANES)
50 mph (RAMPS)
45 mph (SERVICE ROADS)
45 mph (CROSS STREETS)
* UNLESS OTHERWISE NOTED ON PLANS

AVERAGE DAILY TRAFFIC

31,200 (2012)
80,800 (2030)

COLLIN COUNTY, TEXAS



PROJECT LENGTH = 6.07 MILES

JUNE 23, 2008

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

Matthew G. Craig 69910 06-23-2008
Type or Print Name PE# Date

HALFF
1201 NORTH BOWSER ROAD
RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200
FAX (214) 739-0095

DATE APPROVED | DESIGN SCHEMATIC NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES | DATE SUBMITTED

PRELIMINARY
DRAFT SUBJECT TO CHANGE

ROLL 1 OF 6
SCALE: 1"=200'
0 100 200 300 400 600

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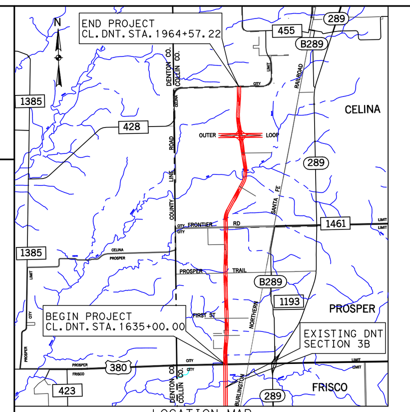
ROLL 1 OF 6 STA. 1635+00 TO STA. 1740+00



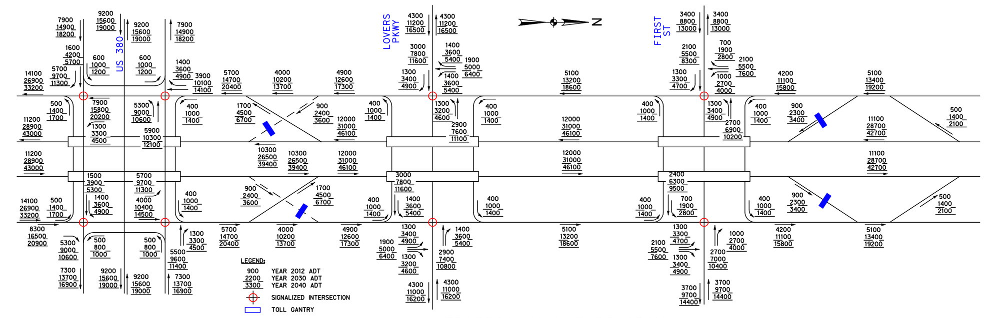
LOCATION MAP
N.T.S.

LEGEND:

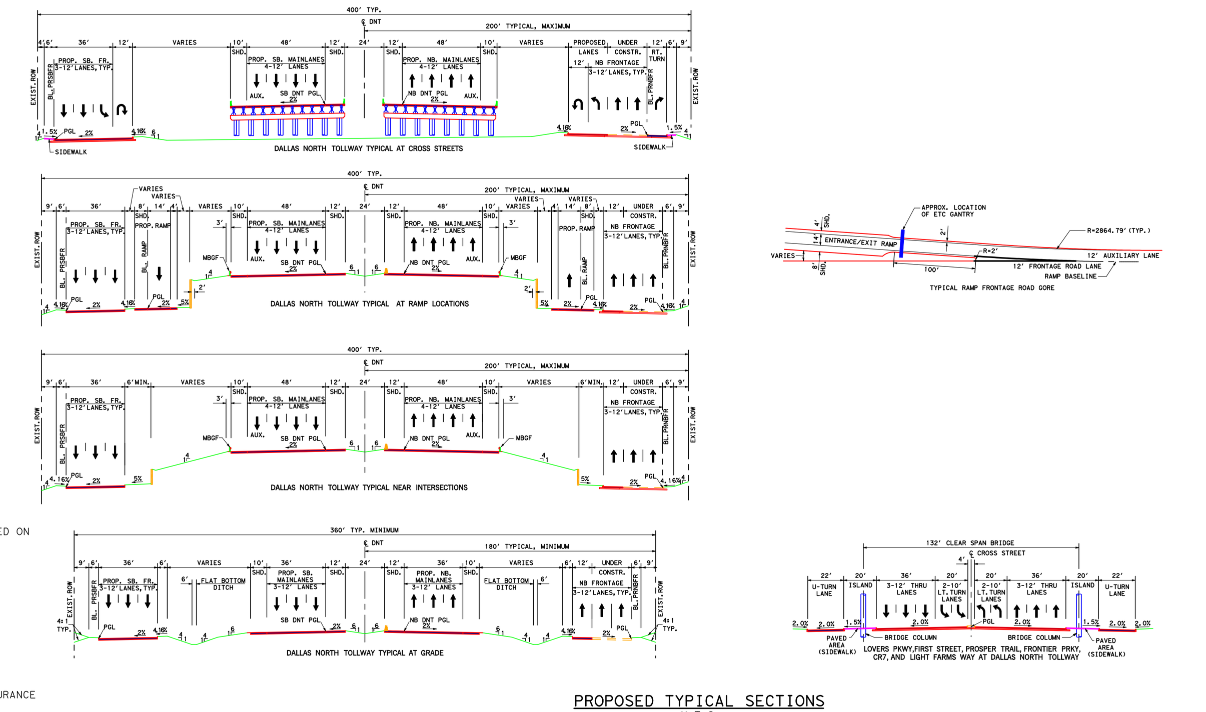
- EXIST. ROW
- PROPOSED R.O.W.
- PROPERTY LINE
- PROPOSED DRAINAGE EASEMENT
- 65 PROPERTY PARCEL #
- 100 YEAR FLOODPLAIN
- EXISTING STORM DRAINAGE
- PROPOSED STORM DRAINAGE
- STORM INLET
- DIRECTION OF TRAFFIC
- EXISTING POWER POLE
- GANTRY SYMBOL
- EXISTING CONTOURS
- PAVEMENT EDGE
- PAVEMENT TO BE REMOVED
- PROPOSED DNT 4A CENTERLINE
- PROPOSED RETAINING WALL
- PROPOSED NOISE WALL
- PROPOSED TWO WAY TRAFFIC BARRIER
- PROPOSED ONE WAY TRAFFIC BARRIER
- CONTROL OF ACCESS LINE
- PROPOSED PROJECT (BY OTHERS)
- PROPOSED BRIDGE
- PROPOSED DNT 4A MAIN LANES
- PROPOSED RAMP / DIRECT CONNECTOR
- PROPOSED FRONTAGE ROAD AND CROSS STREETS
- EXISTING FRONTAGE ROAD
- EXISTING CROSS & LOCAL STREET
- POTENTIAL DISPLACEMENTS
- PROPOSED TOLL GANTRY
- ADDITIONAL RIGHT-OF-WAY REQUIREMENTS
- FUTURE BRAIDED RAMP BRIDGE
- FUTURE BRAIDED RAMP PAVEMENT

NOTES:

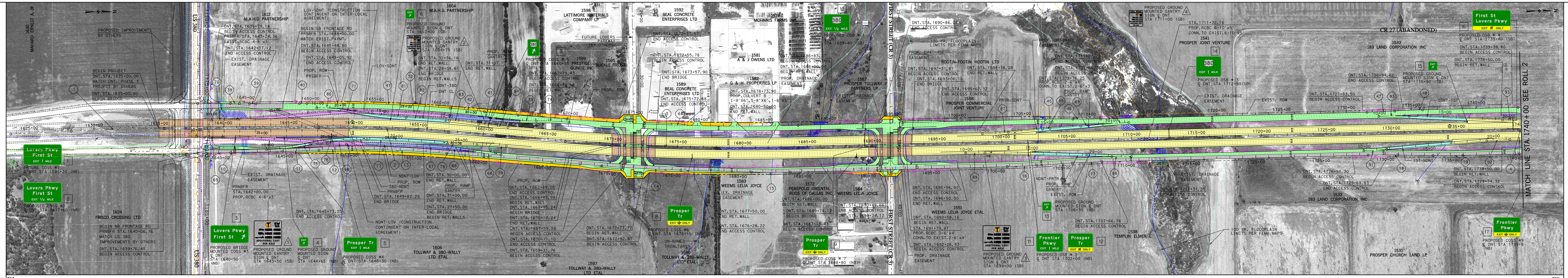
1.) EXISTING FEATURES WERE NOT FIELD SURVEYED. SCHEMATIC LAYOUTS ARE BASED ON AERIAL SURVEY, SUPPLEMENTAL FIELD SURVEYS AND RECORD PLANS ONLY.
2.) DIMENSIONS ARE FACE OF CURB OR TO EDGE OF UNCURBED PAVEMENT UNLESS NOTED OTHERWISE.
3.) TYPICAL CROSS STREET TURNOUT RADIUS EQUALS 75' TYPICAL, 50' MIN.
4.) EXISTING DRIVEWAYS WILL REMAIN UNLESS IT IS DETERMINED DURING DETAILED DESIGN AND COORDINATION WITH THE CITIES: THE DRIVEWAY WILL BE A SAFETY ISSUE AND/OR VIOLATES THE NEW CONTROLLED ACCESS REQUIREMENTS.
5.) TRAFFIC VOLUMES SHOWN HEREIN ARE BASED ON PROJECTIONS PROVIDED BY WILBUR SMITH ASSOCIATES ON APRIL 9, 2008.
6.) ALL SUPER ELEVATION AXIS OF ROTATION IS ABOUT THE PGL.
7.) APPROXIMATE 100 YEAR FLOODPLAIN LIMITS ARE BASED UPON FEMA FLOOD INSURANCE RATE MAPS, NUMBERS 48085C0125 G AND 48085C0255 G
8.) METAL BEAM GUARD FENCE AND CONCRETE TRAFFIC BARRIER (CTB) LOCATIONS TO BE DETERMINED IN PS&E. CTB MAY ALTERNATE FROM NB TO SB SHOULDER DEPENDING ON MAINTENANCE ACCESS NEEDS AND PS&E REFINEMENT.

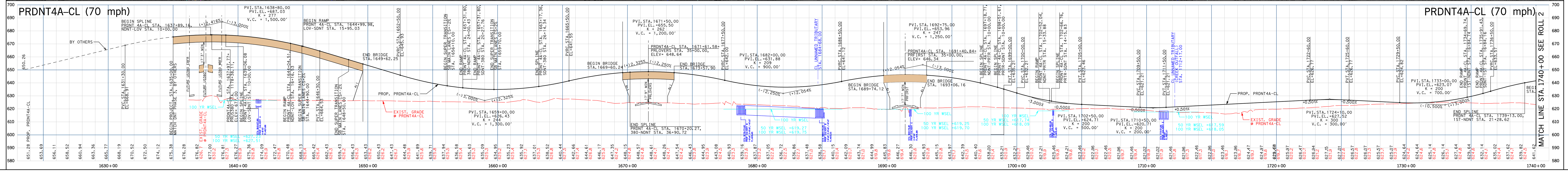


TRAFFIC VOLUME DIAGRAM
N.T.S.



PROPOSED TYPICAL SECTIONS
N.T.S.





PROPOSED CURVE DATA

DNT 4A BASELINE CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
1	PRDNT4A-CL-1	1631+82.32	2° 23' 07.36"	17188.73	357.86	715.61	N 1° 37' 07.27" W	715.56	1628+24.46	1635+40.08
2	PRDNT4A-CL-2	1652+32.14	4° 59' 59.37"	11459.16	500.30	999.96	N 2° 04' 26.10" E	999.65	1647+31.84	1657+31.80
3	PRDNT4A-CL-3	1675+35.28	5° 59' 59.37"	17188.73	900.80	1799.95	N 1° 34' 26.09" E	1799.13	1666+34.48	1684+34.43
4	PRDNT4A-CL-4	1744+32.51	2° 59' 59.99"	17188.73	450.10	900.00	N 0° 04' 26.41" E	899.90	1739+82.41	1748+82.41

NORTHBOUND FRONTAGE ROAD CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
10	PRNBFR-1	1641+10.11	0° 56' 04.42"	2000.00	16.31	32.62	N 0° 53' 35.80" W	32.62	1640+93.79	1641+26.42
11	PRNBFR-2	1646+32.04	1° 30' 00.00"	10806.08	141.46	282.90	N 2° 06' 38.00" W	282.89	1644+90.58	1647+73.48
12	PRNBFR-3	1650+20.36	4° 56' 04.00"	5729.58	246.87	493.44	N 0° 23' 36.00" W	493.29	1647+73.48	1652+66.93
13	PRNBFR-4	1655+13.37	2° 30' 00.00"	11294.16	246.44	492.80	N 3° 19' 26.00" E	492.76	1652+66.93	1657+59.73
14	PRNBFR-5	1672+63.25	3° 00' 00.00"	11624.16	304.39	608.64	N 3° 04' 26.00" E	608.57	1669+58.86	1675+67.50
15	PRNBFR-6	1682+61.49	2° 59' 59.59"	5729.58	150.03	299.99	N 0° 04' 26.20" E	299.95	1681+11.46	1684+11.45
16	PRNBFR-7	1701+98.45	2° 17' 26.20"	5729.58	114.55	229.06	N 2° 34' 16.69" W	229.05	1700+83.91	1703+12.97
17	PRNBFR-8	1706+98.82	2° 17' 26.20"	5729.58	114.55	229.06	N 2° 34' 16.69" W	229.05	1705+84.28	1708+13.34
18	PRNBFR-9	1729+79.39	2° 17' 26.20"	5729.58	114.55	229.06	N 0° 16' 50.49" W	229.05	1728+64.85	1730+93.91
19	PRNBFR-10	1734+79.76	2° 17' 26.20"	5729.58	114.55	229.06	N 0° 16' 50.49" W	229.05	1733+65.22	1735+94.28
20	PRNBFR-11	1744+74.59	3° 00' 00.00"	17003.73	445.26	890.31	N 0° 04' 26.41" E	890.21	1740+29.33	1749+19.64

SOUTHBOUND FRONTAGE ROAD CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
38	PRSBFR-0	1644+29.24	2° 00' 00.00"	2000.00	34.91	69.81	N 0° 34' 26.02" E	69.81	1643+94.33	1644+64.15
39	PRSBFR-1	1645+66.72	1° 52' 56.22"	1500.00	24.64	49.28	N 0° 37' 57.91" E	49.28	1645+42.08	1645+91.36
40	PRSBFR-2	1649+55.49	0° 33' 51.72"	5729.58	28.22	56.44	N 0° 35' 26.07" W	56.44	1649+27.28	1649+83.71
41	PRSBFR-3	1655+37.58	5° 26' 47.70"	11644.16	553.87	1106.90	N 1° 51' 01.93" E	1106.49	1649+83.71	1660+90.62
42	PRSBFR-4	1662+21.76	2° 37' 20.44"	5729.58	131.14	262.23	N 5° 53' 06.00" E	262.21	1660+90.62	1663+52.85
43	PRSBFR-5	1664+83.99	2° 37' 20.44"	5729.58	131.14	262.23	N 5° 53' 06.00" E	262.21	1663+52.85	1666+15.08
44	PRSBFR-6	1678+85.21	5° 59' 59.40"	17015.73	891.73	1781.83	N 1° 34' 26.08" E	1781.02	1669+93.48	1687+75.31
45	PRSBFR-7	1707+86.59	2° 08' 27.88"	5729.58	107.07	214.11	N 0° 21' 19.66" W	214.10	1706+79.52	1708+93.63
46	PRSBFR-8	1710+00.69	2° 08' 27.87"	5729.58	107.07	214.11	N 0° 21' 19.66" W	214.10	1708+93.63	1711+07.74
47	PRSBFR-9	1732+66.31	2° 08' 27.86"	5729.58	107.07	214.11	N 2° 29' 47.52" W	214.09	1731+59.24	1733+73.35
48	PRSBFR-10	1734+80.42	2° 08' 27.86"	5729.58	107.07	214.11	N 2° 29' 47.52" W	214.09	1733+73.35	1735+87.46

NORTHBOUND DNT TO LOVERS PKWY CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
65	NDNTLOV-1	11+00.04	4° 00' 00.00"	2864.79	100.04	200.00	N 1° 34' 26.41" E	199.96	10+00.00	12+00.00
66	NDNTLOV-2	20+83.52	2° 55' 45.03"	2864.79	73.25	146.46	N 2° 06' 33.90" E	146.44	20+10.28	21+56.74
67	NDNTLOV-3	25+47.38	3° 56' 56.44"	11331.16	390.64	780.98	N 2° 37' 09.60" E	780.83	21+56.74	29+37.72
68	NDNTLOV-4	30+40.92	4° 07' 34.91"	2864.79	103.20	206.32	N 6° 39' 25.28" E	206.27	29+37.72	31+44.04
69	NDNTLOV-5	32+47.74	4° 08' 46.74"	2864.79	103.70	207.32	N 6° 38' 49.37" E	207.27	31+44.04	33+51.35

LOVERS PKWY TO SOUTHBOUND DNT CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
70	LOVSDNT-1	11+00.04	4° 00' 00.00"	2864.79	100.04	200.00	N 2° 25' 33.59" W	199.96	10+00.00	12+00.00
71	LOVSDNT-2	20+77.25	6° 29' 59.59"	2865.29	162.70	325.05	N 1° 10' 33.79" W	324.88	19+14.55	22+39.60
72	LOVSDNT-3	25+85.87	2° 29' 59.77"	11587.16	252.83	505.57	N 3° 19' 25.89" E	505.53	23+33.04	28+38.61
73	LOVSDNT-4	33+78.08	5° 08' 12.36"	2864.79	128.51	256.84	N 2° 00' 19.60" E	256.75	32+49.57	35+06.41
74	LOVSDNT-5	36+33.41	5° 04' 35.21"	2864.79	126.99	253.82	N 1° 58' 31.03" E	253.74	35+06.41	37+60.23

US 380 TO NORTHBOUND DNT CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
75	380NDNT-1	11+71.84	10° 16' 57.26"	1909.8593	171.8377	342.7524	N 6° 30' 06.63" W	342.29	10+00.00	13+42.75
76	380NDNT-2	15+61.79	13° 05' 05.24"	1909.8593	219.0326	436.1596	N 5° 06' 02.64" W	435.21	13+42.75	17+78.91
77	380NDNT-3	20+89.75	3° 07' 55.80"	11369.1559	310.8341	621.5135	N 3° 00' 27.88" E	621.44	17+78.91	24+00.43
78	380NDNT-4	25+14.06	4° 32' 34.18"	2864.789	113.6302	227.1414	N 2° 18' 08.69" E	227.08	24+00.43	26+27.57
79	380NDNT-5	27+41.20	4° 32' 34.18"	2864.789	113.6302	227.1414	N 2° 18' 08.69" E	227.08	26+27.57	28+54.71

SOUTHBOUND DNT TO US 380 CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
80	SDNT380-1	11+44.49	11° 31' 13.36"	1432.39	144.49	288.01	N 5° 15' 41.57" E	287.52	10+00.00	12+88.01
81	SDNT380-2	14+91.02	8° 06' 24.92"	2864.79	203.01	405.35	N 6° 58' 05.79" E	405.01	12+88.01	16+93.36
82	SDNT380-3	18+60.57	1° 39' 32.45"	11549.16	167.22	334.41	N 3° 44' 39.55" E	334.40	16+93.36	20+27.76
83	SDNT380-4	21+41.39	4° 32' 34.18"	2864.79	113.63	227.14	N 6° 50' 42.87" E	227.08	20+27.76	22+54.91
84	SDNT380-5	23+68.54	4° 32' 34.18"	2864.79	113.63	227.14	N 6° 50' 42.87" E	227.08	22+54.91	24+82.05

NORTHBOUND DNT TO PROSPER TRAIL CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
85	NDNTPRTR-1	10+75.02	3° 00' 00.00"	2864.79	75.02	150.00	N 0° 04' 26.41" E	149.98	10+00.00	11+50.00
86	NDNTPRTR-2	22+02.32	3° 00' 00.00"	2864.79	75.02	150.00	N 0° 04' 26.41" E	149.98	21+27.30	22+77.30

PROSPER TRAIL TO SOUTHBOUND DNT CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
87	PRTRSDNT-1	11+00.04	4° 00' 00.00"	2864.79	100.04	200.00	N 3° 25' 33.59" W	199.96	10+00.00	12+00.00
88	PRTRSDNT-2	14+93.84	1° 09' 34.23"	2864.79	28.99	57.98	N 4° 50' 46.47" W	57.97	14+64.85	15+22.83
89	PRTRSDNT-3	17+89.98	1° 09' 34.23"	2864.79	28.99	57.98	N 4° 50' 46.47" W	57.97	17+61.00	18+18.97
90	PRTRSDNT-4	20+31.52	4° 00' 00.00"	2864.79	100.04	200.00	N 3° 25' 33.59" W	199.96	19+31.48	21+31.48

1ST STREET TO NORTHBOUND DNT CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
91	1STNDNT-1	10+88.97	3° 33' 27.64"	2864.79	88.97	177.88	N 3° 12' 17.41" W	177.86	10+00.00	11+77.88
92	1STNDNT-2	20+39.71	3° 33' 27.64"	2864.79	88.97	177.88	N 3° 12' 17.41" W	177.86	19+50.74	21+28.62

SOUTHBOUND DNT TO 1ST STREET CURVE DATA

CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
93	SDNT1ST-1	11+17.29	4° 41' 20.23"	2864.789	117.2893	234.4477	N 0° 01' 20.98" E	234.3823	10+00.00	12+34.45
94	SDNT1ST-2	20+44.32	3° 35' 56.85"	2864.789	90.0077	179.9563	N 0° 34' 02.67" E	179.9267	19+54.31	21+34.27

SUPERELEVATION DATA

PRDNT4A-CL-2

E	-2.00%	W	36
CS(NB)		G	0.4
CS(SB)	2.00%	"CS(NB)	
Lct(min)	207	"CS(SB)	4.0
		Lct(SB)	360
		Lct(SB Inside Curve)	120 STA. 1648+50.00 , 1656+10.00
		Lct(SB Outside Curve)	240 STA. 1644+90.00 , 1659+70.00

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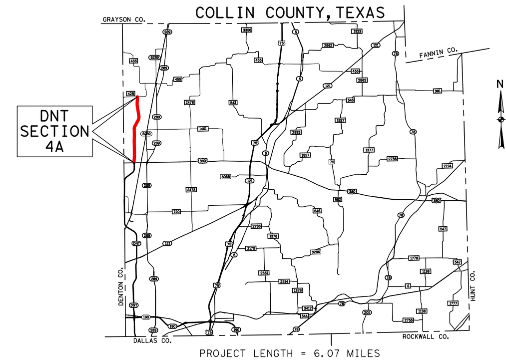
5900W. Plano Pkwy, Plano, Texas 75093
Jorge Figueredo, Executive Director
DALLAS NORTH TOLLWAY EXTENSION
SECTION 4A
FROM US380 TO FM428
DESIGN SCHEMATIC
DESIGN SPEED
AVERAGE DAILY TRAFFIC
COLLIN COUNTY, TEXAS



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HALFF
DATE APPROVED | DESIGN SCHEMATIC NOT INTENDED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES | DATE SUBMITTED
PRELIMINARY
DRAFT SUBJECT TO CHANGE
ROLL 1 OF 6
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