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

DALLAS NORTH TOLLWAY EXTENSION

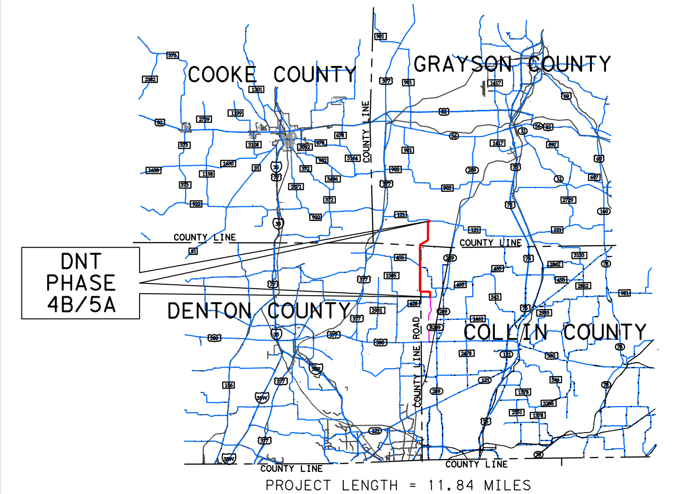
PHASE 4B / 5A
FROM FM 428 TO FM 121
DESIGN SCHEMATIC

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

TBD (2012)
TBD (2030)



PROJECT LENGTH = 11.84 MILES

MARCH 18, 2011
PRE-FINAL SUBMITTAL

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

Matthew G. Craig 69910 3-18-2011
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 2 OF 14

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

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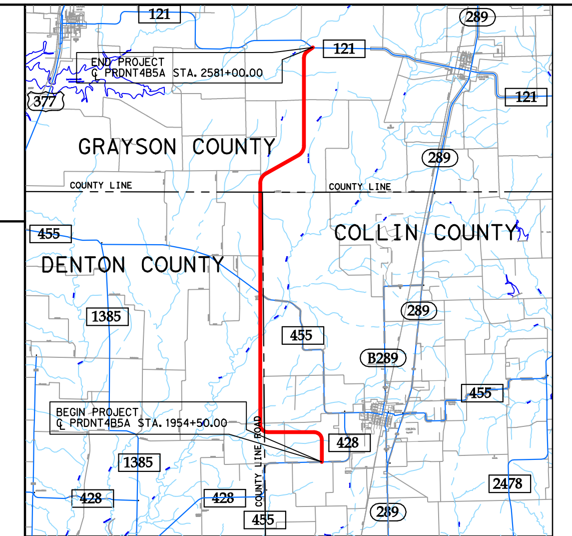
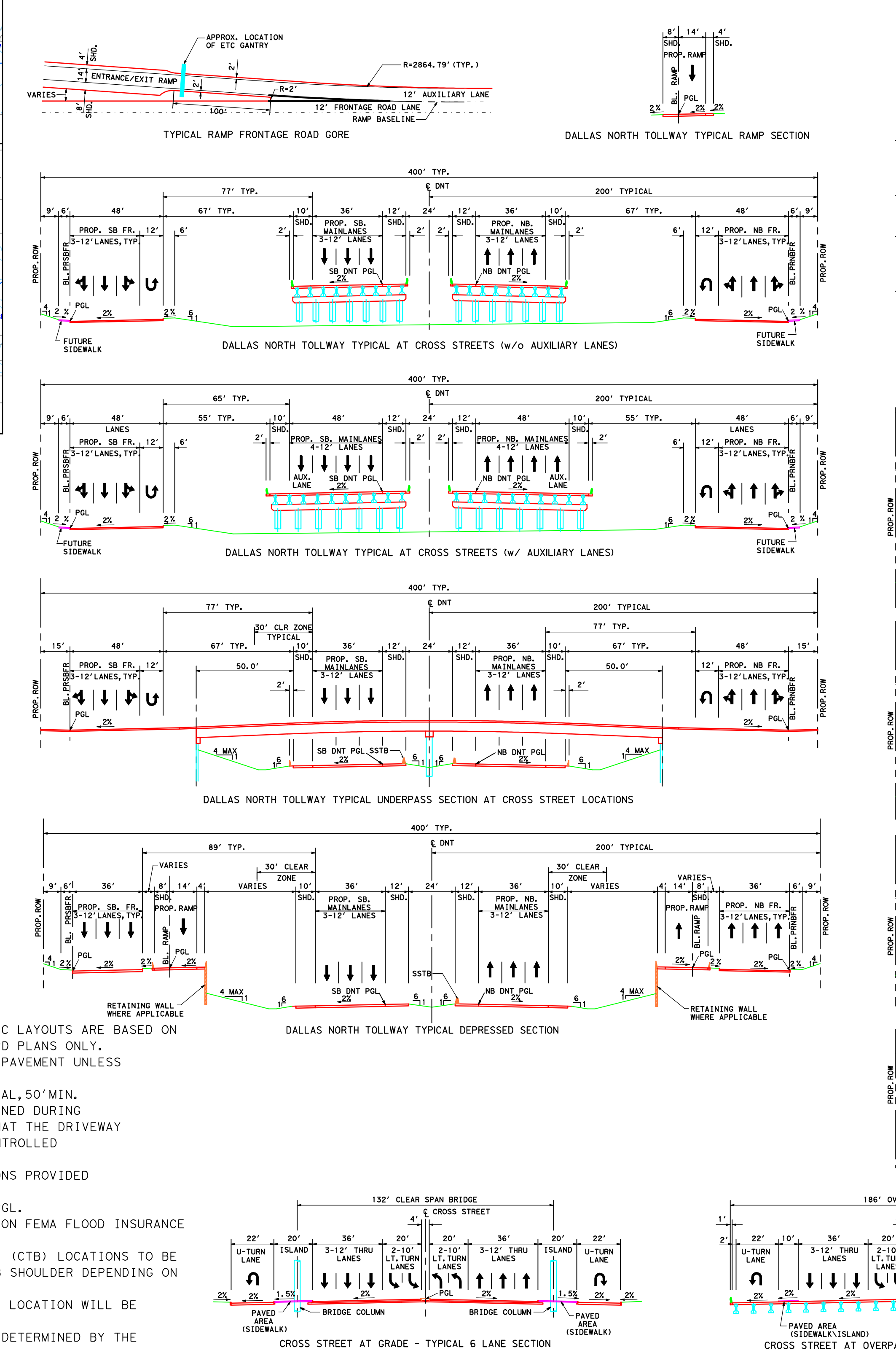


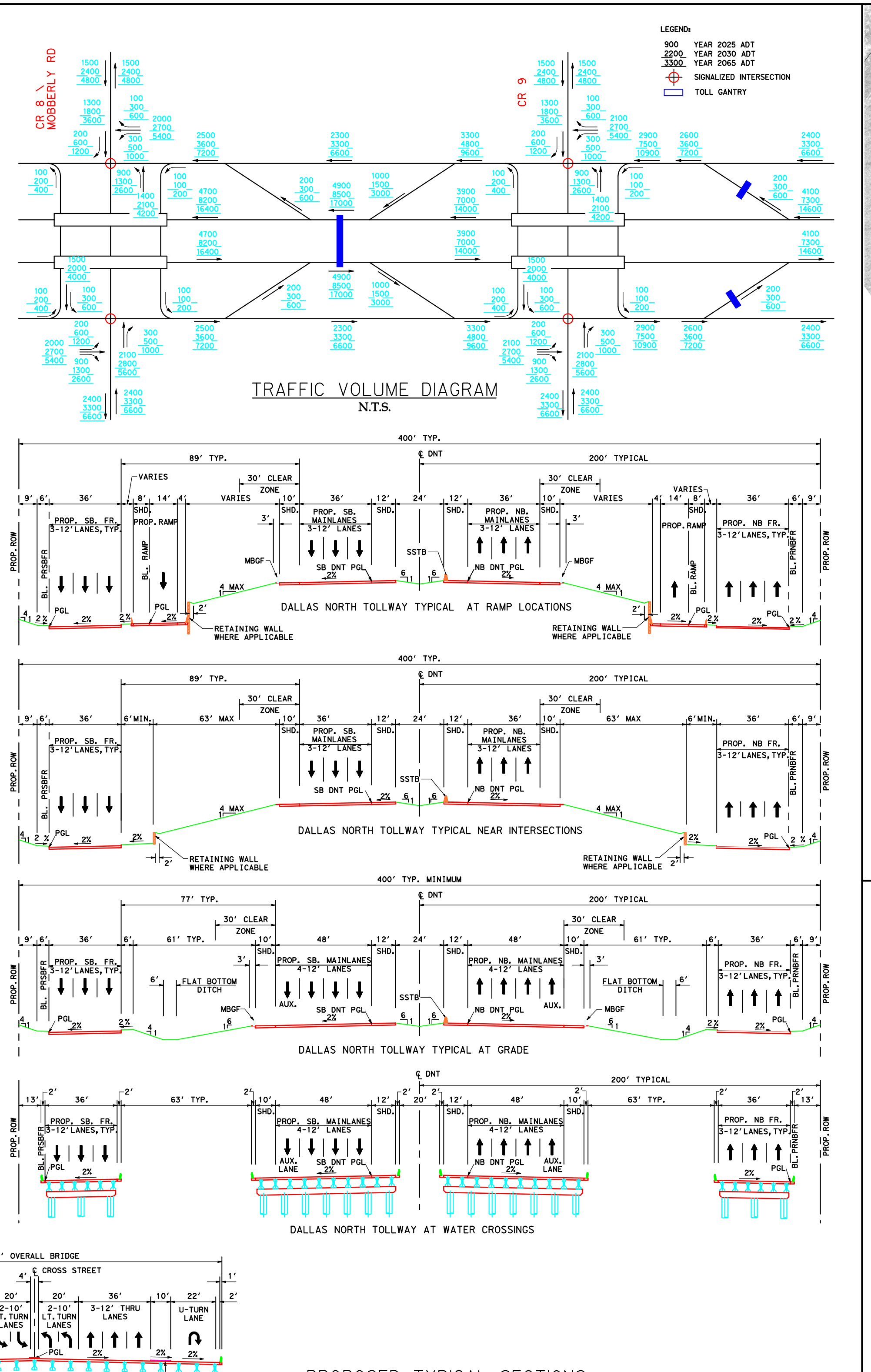
LOCATION MAP
N.T.S.

LEGEND:
- EXIST. ROW
- PROPOSED R.O.W.
- PROPERTY LINE
- PROPOSED DRAINAGE EASEMENT
- 65 PROPERTY PARCEL #
- 100 YEAR FLOODPLAIN
- EXISTING STORM DRAINAGE
- PROPOSED STORM DRAINAGE
- PROPOSED DRAINAGE CHANNEL
- DIRECTION OF TRAFFIC
- GANTRY SYMBOL
- EXISTING CONTOURS
- PAVEMENT EDGE
- PAVEMENT TO BE REMOVED
- PROPOSED DNT 4B/5A 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 MAINLANE BRIDGE
- PROPOSED CROSS STREET BRIDGES
- PROPOSED DNT 4B/5A MAIN LANES
- PROPOSED RAMP / DIRECT CONNECTOR
- PROPOSED FRONTAGE ROAD AND CROSS STREETS
- CROSS STREET ISLANDS
- PROPOSED TEMPORARY PAVEMENT
- EXISTING CROSS & LOCAL STREET
- POTENTIAL DISPLACEMENTS
- PROPOSED TOLL GANTRY
- ADDITIONAL RIGHT-OF-WAY REQUIREMENTS

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 THAT THE DRIVEWAY WILL BE A SAFETY ISSUE AND/OR VIOLATES THE NTTA CONTROLLED ACCESS REQUIREMENTS.
5.) TRAFFIC VOLUMES SHOWN HEREIN ARE BASED ON PROJECTIONS PROVIDED BY WILBUR SMITH ASSOCIATES ON NOVEMBER 17, 2010.
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.
9.) CROSS STREET ALIGNMENTS ARE PRELIMINARY ONLY, FINAL LOCATION WILL BE DETERMINED AT THE PS&E LEVEL.
10.) FINAL DETERMINATION OF CONTROL OF ACCESS WILL BE DETERMINED BY THE COUNTIES OR MUNICIPALITIES AT A FUTURE DATE.



PROPOSED TYPICAL SECTIONS
N.T.S.



TRAFFIC VOLUME DIAGRAM
N.T.S.

CURVE DATA

DNT 4B/5A BASELINE CURVE DATA										
CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
2	PRDNT4B5A-2	2055+34.02	89° 51' 52.98" (RT)	2,864.79	2,858.03	4,493.24	N 46° 00' 07.03" W	4,046.64	2026+75.99	2071+69.22
3	PRDNT4B5A-3	2091+77.16	1° 27' 11.44" (RT)	15,278.87	193.77	387.51	N 0° 20' 34.82" W	387.50	2089+83.40	2093+70.91
4	PRDNT4B5A-4	2132+16.17	8° 56' 40.29" (RT)	5,729.58	448.14	894.45	N 4° 51' 21.04" E	893.54	2127+68.04	2136+62.49
5	PRDNT4B5A-5	2146+12.44	8° 58' 50.01" (LT)	5,729.58	449.95	898.06	N 4° 50' 16.18" E	897.14	2141+62.49	2150+60.55

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-2	2056+38.56	89° 51' 52.98" (RT)	2,679.79	2,673.47	4,203.08	N 46° 00' 07.03" W	3,785.32	2029+65.09	2071+68.17
11	PRNBFR-3	2076+02.70	5° 21' 15.55" (LT)	2,864.79	133.96	267.716	N 3° 44' 48.32" W	267.62	2074+68.75	2077+36.46
12	PRNBFR-4	2078+70.42	5° 21' 15.55" (RT)	2,864.79	133.96	267.716	N 3° 44' 48.32" W	267.62	2077+36.46	2080+04.18
13	PRNBFR-5	2091+74.86	1° 27' 11.44" (RT)	15,118.87	191.74	383.4559	N 0° 20' 34.82" W	383.45	2089+83.12	2093+66.58
14	PRNBFR-6	2110+80.06	5° 21' 15.55" (RT)	2,864.79	133.96	267.716	N 3° 03' 38.67" E	267.62	2109+46.11	2112+13.83
15	PRNBFR-7	2113+47.78	5° 21' 15.55" (LT)	2,864.79	133.96	267.716	N 3° 03' 38.67" E	267.62	2112+13.83	2114+81.54
16	PRNBFR-8	2131+98.15	8° 56' 40.29" (RT)	5,544.58	433.67	865.5718	N 4° 51' 21.04" E	864.69	2127+64.48	2136+30.05
17	PRNBFR-9	2145+94.53	8° 58' 50.01" (LT)	5,914.58	464.48	927.0529	N 4° 50' 16.18" E	926.10	2141+30.05	2150+57.11

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
26	PRSBFR-2	2054+23.25	89° 51' 52.98" (RT)	3,049.79	3,042.60	4,783.40	N 46° 00' 07.03" W	4,307.96	2023+80.65	2071+64.05
27	PRSBFR-3	2079+09.71	5° 21' 15.55" (RT)	2,864.79	133.96	267.716	N 1° 36' 27.24" E	267.62	2077+75.75	2080+43.47
28	PRSBFR-4	2081+77.42	5° 21' 15.55" (LT)	2,864.79	133.96	267.716	N 1° 36' 27.24" E	267.62	2080+43.47	2083+11.18
29	PRSBFR-5	2091+74.80	1° 27' 11.44" (RT)	15,438.87	195.80	391.572	N 0° 20' 34.82" W	391.56	2089+79.00	2093+70.57
30	PRSBFR-6	2113+39.01	5° 21' 15.55" (LT)	2,864.79	133.96	267.716	N 2° 17' 36.88" W	267.62	2112+05.05	2114+72.77
31	PRSBFR-7	2116+06.72	5° 21' 15.55" (RT)	2,864.79	133.96	267.716	N 2° 17' 36.88" W	267.62	2114+72.77	2117+40.48
32	PRSBFR-8	2132+31.08	8° 56' 40.29" (RT)	5,914.58	462.61	923.333	N 4° 51' 21.04" E	922.40	2127+68.48	2136+91.81
33	PRSBFR-9	2146+27.23	8° 58' 50.01" (LT)	5,544.58	435.42	869.0589	N 4° 50' 16.18" E	868.17	2141+91.81	2150+60.87

COUNTY ROAD 8 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
54	8-NDNT-1	10+66.11	2° 37' 51.99" (LT)	2,878.79	66.11	132.20	N 4° 29' 45.08" W	132.19	10+00.00	11+32.20
55	8-NDNT-2	14+66.45	1° 04' 18.25" (RT)	5,729.58	53.59	107.17	N 5° 16' 31.95" W	107.17	14+12.86	15+20.04
55A	8-NDNT-3	23+61.63	3° 40' 12.29" (RT)	2,864.79	91.78	183.50	N 2° 54' 16.68" W	183.47	22+69.85	24+53.35

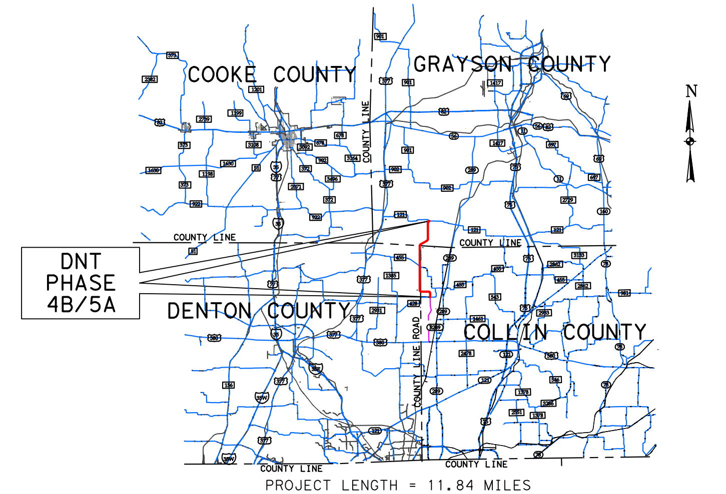
COUNTY ROAD 8 TO SOUTHBOUND DNT CURVE DATA										
CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
56	8-SDNT-1	18+97.15	31° 21' 08.63" (RT)	2,942.83	825.87	1610.33	N 54° 53' 31.14" W	1590.31	10+71.28	26+81.61
57	8-SDNT-2	32+91.96	19° 01' 14.42" (RT)	1,909.86	319.96	634.02	N 29° 42' 19.61" W	631.12	29+72.01	36+06.03

NORTHBOUND DNT TO COUNTY ROAD 9 CURVE DATA										
CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
58	NDNT-9-1	11+00.04	4° 00' 00.00" (RT)	2,864.79	100.04	200.00	N 2° 23' 00.90" E	199.96	10+00.00	12+00.00
59	NDNT-9-2	24+04.50	4° 00' 00.00" (LT)	2,878.79	100.53	200.98	N 2° 23' 00.90" E	200.94	23+03.97	25+04.95

COUNTY ROAD 9 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
60	9-SDNT-1	10+86.66	3° 27' 55.30" (LT)	2,864.79	86.66	173.27	N 1° 20' 56.75" W	173.24	10+00.00	11+73.27
61	9-SDNT-2	19+79.24	1° 04' 09.39" (LT)	5,729.58	53.47	106.93	N 3° 36' 59.10" W	106.93	19+25.77	20+32.70
61A	9-SDNT-3	24+47.79	4° 32' 04.69" (RT)	2,878.79	113.98	227.84	N 1° 53' 01.45" W	227.78	23+33.81	25+61.65

COUNTY ROAD 9 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
62	9-NDNT-1	10+63.24	2° 31' 00.90" (LT)	2,878.79	63.24	126.46	N 4° 07' 13.01" E	126.45	10+00.00	11+26.46
63	9-NDNT-2	14+80.72	2° 41' 20.94" (RT)	2,864.79	67.24	134.46	N 4° 12' 23.03" E	134.45	14+13.48	15+47.93
64	9-NDNT-3	24+14.87	6° 20' 57.07" (LT)	7,639.44	423.71	846.56	N 2° 22' 34.96" E	846.13	19+91.16	28+37.71
65	9-NDNT-4	31+39.52	1° 08' 44.75" (RT)	2,864.79	28.65	57.29	N 0° 13' 31.20" W	57.29	31+10.88	31+68.16

SOUTHBOUND DNT TO COUNTY ROAD 9 CURVE DATA										
CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
66	SDNT-9-1	11+59.40	6° 20' 18.76" (RT)	2,878.79	159.40	318.48	N 9° 48' 52.63" E	318.31	10+00.00	13+18.48
67	SDNT-9-2	23+86.33	12° 38' 10.84" (LT)	2,864.79	317.20	631.82	N 6° 39' 56.59" E	630.54	20+69.13	27+00.95

COUNTY ROAD 8 CURVE DATA										
CURVE NO.	CURVE	P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH	CHORD BEARING	CHORD LENGTH	P.C. STATION	P.T. STATION
68	PRD08-1	11+67.78	13° 21' 40.58" (RT)	1,432.39	167.78	334.03	S 63° 48' 54.96" E	333.28	10+00.00	13+34.03
69	PRD08-2	17+66.90	33° 37' 45.37" (LT)	1,432.39	432.86	840.73	S 73° 56' 57.35" E	828.72	13+34.03	21+74.76

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