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September 12, 2012

Ms. Janice D. Davis Chief Financial Officer North Texas Tollway Authority 5900 West Plano Parkway, Suite 100 Plano, TX 75093

Re: North Texas Tollway Authority (NTTA) System Traffic and Revenue Update

Dear Ms. Davis:

Pursuant to your recent request, CDM Smith is pleased to provide you with a letter update of the traffic and revenue (T&R) estimates for the North Texas Tollway Authority System (NTTA System). It is our understanding that this letter update is intended to support the upcoming System Revenue Refunding Bonds, Series 2012C and Series 2012D, scheduled for November 2012. Currently, the NTTA System consists of the Dallas North Tollway (DNT), the President George Bush Turnpike (PGBT), the President George Bush Turnpike Eastern Extension (PGBT EE), the Sam Rayburn Tollway (SRT), the Addison Airport Toll Tunnel (AATT), the Mountain Creek Lake Bridge (MCLB) and the Lewisville Lake Toll Bridge (LLTB).

## Background

CDM Smith prepared the NTTA System Investment Grade Traffic and Toll Revenue Study report in October 2011 (the "October 2011 Report"). The October 2011 Report incorporated the data and models from the Mobility 2035 Plan, which was approved by the Regional Transportation Council (RTC) in March 2011 and received air quality conformity determination from FHWA in July 2011. The demographic forecasts released in early 2011 by the North Central Texas Council of Governments (NCTCOG) were revised by Research and Demographic Solutions (RDS) in mid-2011. Also incorporated in the October 2011 Report were these revised demographic datasets provided by RDS and travel demand models that were refined based on information gathered from traffic count, travel time study and travel survey programs that were completed in late 2010/early 2011 along NTTA System corridors. In addition, the TollTag/ZipCash transaction share and ZipCash revenue recovery assumptions incorporated into the October 2011 Report were mutually agreed upon by NTTA and CDM Smith staff and were based on observed data through mid-2011.

Since the completion of the October 2011 Report, there have been no changes to the regional mobility plan or the regional official demographic forecasts from NCTCOG. However, the



following new information became available in February 2012, which warranted minor changes to the NTTA System T&R forecasts:

- Due to changes made to the project agreement between the Texas Department of Transportation (TxDOT) and the NTTA, a new PGBT EE toll rate schedule was adopted by the NTTA Board in December 2011. CDM Smith updated the NTTA System T&R estimates in early December 2011 and provided a Traffic Engineer's certificate to reflect these changes ("December 2011 Update")
- PGBT EE opened on December 21, 2011, ten days earlier than what was assumed in the October 2011 Report
- CDM Smith and NTTA mutually agreed in early 2012 to change the TollTag/ZipCash transaction distribution and ZipCash revenue recovery assumptions, and
- Refinements to the traffic and revenue forecasting models were made in early 2012 by CDM Smith to reflect the trends seen through January 2012.

The February 2012 NTTA System letter update (the "February 2012 Update") incorporated the above new information and included revised NTTA System T&R projections from years 2012 through 2062.

# Validity of the February 2012 Update

### **Underlying Demographic Forecasts and Regional Mobility Plan**

The underlying demographic forecasts remain the same as presented in the October 2011 Report and February 2012 Update. These reports incorporated results of an independent economic review by RDS of NCTCOG's latest official demographic forecasts. CDM Smith feels that no additional modifications are required to the revised set of demographics, and thus are valid for continued use.

Since the completion of the February 2012 Update, there have been no changes in relation to the regional mobility plan. However, CDM Smith has become aware that an amendment to the Mobility 2035 ("2013 Amendment") is expected to be adopted by RTC in March 2013, and air quality conformity determination by FHWA is expected in July 2013. CDM Smith will evaluate impacts of the 2013 Amendment on the NTTA System T&R estimates once the 2013 Amendment is adopted by NCTCOG.

### **Underlying Economic Climate**

In September 2010, the National Bureau of Economic Research (NBER) announced that the nation-wide recession that began in December 2007 ended in June 2009 and that recovery began in that month. As can be seen in **Figure 1**, the actual annualized percentage change in the national Gross Domestic Product (GDP) has been positive through the second quarter of 2012.



CDM Smith tracks the monthly Economic Forecasting Surveys published by The Wall Street Journal (WSJ). Also illustrated in **Figure 1** are the average GDP change monthly forecasts from April 2011 through August 2012. It is forecasted that the national GDP will continue to show positive growth through the end of 2013. However, the latest forecasts made in August 2012 project lower GDP growth rates than the forecasts made in January 2012.

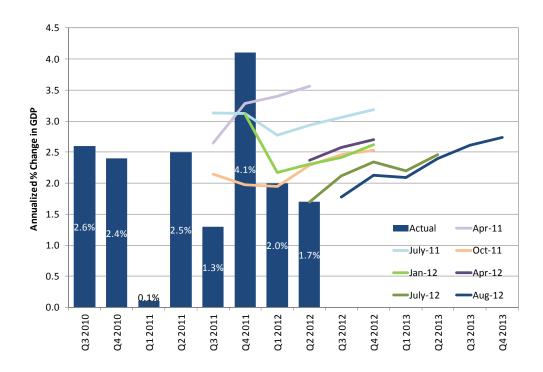


Figure 1: Historical and Forecasted GDP Growth Comparisons by Date of Forecast Source: Wall Street Journal Economic Forecasting Survey, US Bureau of Economic Analysis (Aug. 2012)

Texas continues to experience a relatively smaller impact from the recent recession and seems to be on a faster track for recovery than many other parts of the country. Economists have referred to this as the "last in-first out" effect. **Figures 2 and 3** illustrate that the DFW area has been performing better than the rest of the nation in terms of unemployment rates and employment growth. However, in a report by the Federal Reserve Bank of Dallas dated August 3, 2012 it was reported that "Regional indicators point to a slowing in economic growth. Texas employment growth was more modest in the second quarter than in the first, although growth is still outpacing the nation due in part to strength in the energy sector. The recent slowdown appears to be related to weaknesses in the global economy and general uncertainty about the pace of the current U.S. expansion."



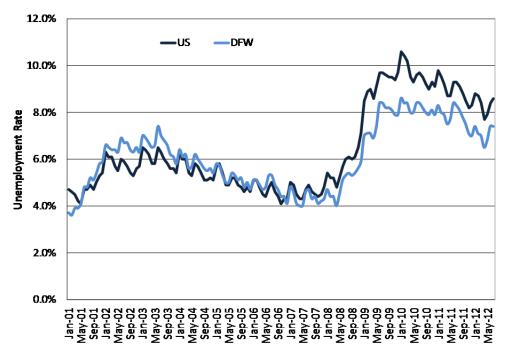


Figure 2: Unemployment Rate Comparisons Source: Texas Workforce Commission (Aug. 2012)

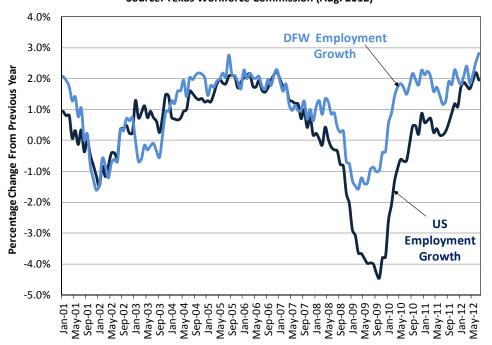


Figure 3: Employment Growth Comparisons Source: Texas Workforce Commission (Aug. 2012)



**Figure 4** includes single family and multi family dwelling unit permits in the Dallas, Fort Worth and Arlington MSAs from 2000 through July 2012. As can be seen, there was a steady decline in the number of permits from 2007 through 2010, with 2011 posting a recovery in the permits. Data through July of this year indicate that the annual total permits for 2012 could be close to the levels seen in 2008. Also shown are the average months of inventory in Dallas MLS, Fort Worth MLS, Collin County MLS and Denton County MLS. Lower months of inventory numbers (typically 1-4 months) represent a "seller's market" and appreciation in home values, and higher months of inventory (typically 7+ months) represent a "buyer's market" or price depreciation. The recent trends in this parameter indicate a continued recovery in home sales and home values in the Dallas/Fort Worth Metroplex.

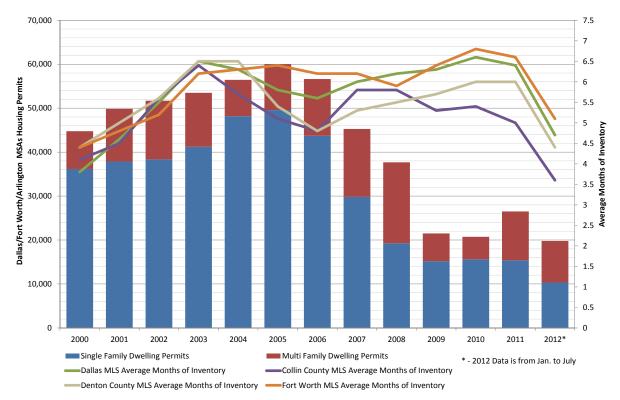


Figure 4: Building Permits and Average Months of Inventory Trends Source: Texas A&M Real Estate Center (Sep. 2012)



**Figure 5** shows average weekly gasoline price in Texas since January 2008. The average weekly gasoline price in Texas was almost \$4.00 per gallon in summer of 2008 but had fallen sharply to \$1.50 per gallon by December 2008. Gasoline price increased steadily between December 2011 and April 2012 to more than \$3.80 per gallon and then dropped to about \$3.10 per gallon by July 2012. Prices have risen steadily since then and were around \$3.70/gallon at the end of August 2012. Gasoline prices in August 2012 were about 4.0 percent greater than those in August 2011.



Figure 5: Weekly Gasoline Prices since 2008 Source: US Energy Information Administration (Sep. 2012)

**Figure 6** shows the average national crude oil prices from June 2010 to June 2012 and price forecasts through December 2013 by the WSJ. The WSJ projected in January 2012 that prices in December 2012 will be close to \$100/barrel. The latest forecasts, however, expect average crude oil prices to remain between \$90/barrel and \$95/barrel through December 2013.





Figure 6: Historical and Forecasted Crude Oil Price Comparisons by Date of Forecast Source: Wall Street Journal Economic Forecasting Survey, US Energy Information Administration (Aug. 2012)

As shown in CDM Smith's report, "The Impacts of Gasoline Price on Traffic and Toll Revenue", dated August 2008, transactions on the NTTA System facilities seem to be relatively inelastic to gasoline price increases. However, sharp increases in gasoline price in mid-2008 combined with the recession produced some small noticeable impacts on NTTA System transactions at that time. The following are some excerpts from a toll road sector study by the National Public Finance Guarantee in early 2010:

- "....it is apparent that Vehicle Miles Traveled (VMT) is more closely correlated to Gross Domestic Product than to the price of gasoline."
- "Regardless of the price of gasoline, individuals still need to commute for employment and businesses requiring an efficient road network for the shipment of manufactured products. On a more discretionary basis, family members go shopping and transport children to and from activities. There may be an inflection point where higher energy prices trigger a decline in GDP and thereby indirectly lead to a decline in VMT but the direct correlation between gasoline prices and toll ridership appears weak."



For the purposes of this analysis, CDM Smith assumes that the crude oil prices in the near term will be below \$120 per barrel and will not adversely impact economic recovery and traffic patterns.

#### **Recent Traffic Patterns and Characteristics**

**Table 1** shows the monthly transactions for DNT, PGBT, SRT and NTTA System from January 2007 through August 2012. SRT transactions are included from September 2008. NTTA System transactions shown in the table include transactions on DNT, PGBT, SRT, PGBT EE, AATT, MCLB and LLTB.

Between 2007 and 2008, transactions on the DNT increased by 6.1 percent, mainly due to the opening of the DNT Extension Phase 3 from SRT to US 380 in the fall of 2007. As can be seen, there was a drop in DNT transactions in early 2009 due to the economic downturn. The reduction in transactions seen in the latter part of 2009 is most likely due to the NTTA System toll rate increases that went into effect in September 2009. DNT transactions had a growth of 0.4 percent between 2009 and 2010. However, 2011 transactions were greater than the corresponding transactions in 2010 by 4.8 percent, which can be attributed to the continued recovery from the recession and conversion of the DNT to an all-Electronic Toll Collection (all-ETC) system in late 2010. Through August, the growth on the DNT transactions between 2011 and 2012 was 9.2 percent.

There was a decrease in PGBT transactions starting in 2007 through late-2009 mostly attributable to the economic downturn, toll rate increases and the opening of SRT Segment 1 in mid-2006 and opening in late 2008 of the SRT Segment 2 mainlanes, which compete with sections of the PGBT. The opening in August 2009 of the PGBT Western Extension (PGBT WE) Phase 2 mainlanes and PGBT-WE Phase 3 in April 2010 continues to help the growth of PGBT transactions, especially in its westernmost sections. The recent opening of the PGBT EE had a positive impact on the PGBT ramp and mainlane gantry transactions near the PGBT EE. In addition, the construction along IH 635, which began in early 2011, most likely had a positive impact on the PGBT transactions. The continued economic recovery, conversion of PGBT to all-ETC in July 2009, ongoing LBJ construction and the openings of the western and eastern extensions of PGBT contributed to the transaction growth of 3.6 percent between 2009 and 2010 and a growth of 5.6 percent between 2010 and 2011. The transaction growth on PGBT was 12.6 percent between 2011 and 2012 through August.

SRT's Segment 1, Segment 2 and Segment 3 opened in July 2006, August 2008 and September 2009, respectively. SRT's Segment 4, which includes the SRT/US 75 interchange, opened to traffic in late 2010 and Segment 5, which includes the SRT/DNT interchange, was substantially completed in late 2011. SRT showed strong growth trends, with a transaction growth of 28.5 percent from 2009 to 2010, a growth of 11.3 percent from 2010 to 2011 and a growth of 13.9 percent through August in 2012 compared to 2011.



Table 1: Monthly Transaction Trends (see end notes on Page 13<sup>i</sup>)

		,							,		
	2007	% Change	2008 Txns	% Change	2009 Type	% Change	2010 Type	% Change	2011 Type	% Change	2012 Txns
	(millions)	Citalige	(millions)	Citalige	(millions)	Change	(millions)	Cilalige	(millions)	Cilalige	(millions)
Dallas North Tollway											
January	14.74	16.2	17.13	-3.7	16.49	-1.5	16.25	3.2	16.76	13.0	18.94
February	14.67	14.3	16.77	-3.7	16.16	-4.9	15.36	-4.8	14.62	26.2	18.45
March	16.67	3.9	17.32	0.9	17.49	1.5	17.75	6.1	18.84	4.8	19.73
April	16.03	10.8	17.77	-1.0	17.58	0.2	17.62	4.7	18.45	3.9	19.17
May	16.79	6.6	17.91	-1.1	17.71	-1.0	17.54	5.5	18.50	8.3	20.04
June	16.06	6.9	17.16	2.6	17.62	-1.0	17.44	4.9	18.28	6.0	19.39
July	16.07	8.4	17.43	0.2	17.46	-1.5	17.21	2.3	17.60	8.4	19.08
August	16.93	2.8	17.40	0.4	17.47	0.3	17.53	6.0	18.58	6.6	19.81
September	15.68	7.1	16.79	-1.8	16.49	2.0	16.82	7.4	18.06		
October	17.93	1.2	18.15	-4.2	17.39	2.5	17.82	5.6	18.81		
November	16.79	-3.4	16.22	-0.3	16.17	2.8	16.63	9.2	18.16		
December	17.00	1.5	17.25	-1.5	17.00	5.0	17.86	6.2	18.97		
Total	195.37	6.1	207.31	-1.1	205.03	0.4	205.83	4.8	215.64		
Total (Jan-August)									141.63	9.2	154.60
President George Bus	sh Turnpike										
January	13.87	8.6	15.06	-8.4	13.80	0.7	13.90	6.1	14.74	12.8	16.62
February	13.77	7.5	14.81	-8.8	13.51	-2.2	13.21	-5.4	12.50	32.0	16.49
March	15.65	-2.7	15.22	-2.9	14.78	4.8	15.49	5.8	16.40	9.0	17.87
April	15.26	3.2	15.75	-5.8	14.84	4.4	15.49	3.9	16.09	8.9	17.52
May	16.06	-1.4	15.84	-5.8	14.92	4.4	15.57	5.3	16.40	13.8	18.66
June	15.58	-2.3	15.22	-1.3	15.03	3.1	15.50	8.0	16.73	9.0	18.23
July	15.53	-0.9	15.40	-2.9	14.95	2.7	15.36	4.9	16.11	11.1	17.90
August	16.53	-7.7	15.25	-0.7	15.14	4.3	15.80	7.9	17.04	9.3	18.63
September	15.07	-3.1	14.60	-0.8	14.48	4.8	15.18	8.3	16.44		
October	16.03	-3.8	15.42	-1.3	15.22	4.6	15.93	6.9	17.02		
November	14.90	-7.9	13.72	3.2	14.17	5.1	14.90	7.4	15.99		
December	14.68	-1.9	14.39	0.4	14.45	5.6	15.27	6.6	16.28		
Total	182.93	-1.2	180.69	-3.0	175.28	3.6	181.58	5.6	191.73		
Total (Jan-August)									126.00	12.6	141.92
Sam Rayburn Tollway	,				4.72	27.2	6.47	16.7	7.55	111	0.62
January					4.72	37.2	6.47	16.7	7.55	14.4	8.63
February					4.65	32.1	6.14	5.5	6.47	30.9	8.47
March					5.25	38.5	7.27	14.9	8.35	10.2	9.20
April					5.40	35.3	7.31	11.8 11.8	8.18	11.7 13.3	9.13
May June					5.55 5.81	38.3 32.5	7.67	12.8	8.58 8.68	11.4	9.72
July					5.99	30.5	7.70	9.4	8.55	11.4	9.50
August					5.91	33.8	7.81	10.1	8.72	12.4	9.79
September			4.64	30.2	6.04	23.9				12.4	3.73
October							7.49				
November				35.2			7.49	11.3	8.34 8.62		
			4.92	35.2 42.2	6.65	18.8	7.91	9.0	8.62		
December			4.92 4.65	42.2	6.65 6.61	18.8 13.8	7.91 7.53	9.0 11.7	8.62 8.41		
December Total			4.92 4.65 4.98		6.65 6.61 6.89	18.8 13.8 17.0	7.91 7.53 8.06	9.0 11.7 11.0	8.62 8.41 8.95		
Total			4.92 4.65	42.2 38.4	6.65 6.61	18.8 13.8	7.91 7.53	9.0 11.7	8.62 8.41	13.9	74.13
Total Total (Jan-August)			4.92 4.65 4.98	42.2 38.4	6.65 6.61 6.89	18.8 13.8 17.0	7.91 7.53 8.06	9.0 11.7 11.0	8.62 8.41 8.95 <b>99.39</b>	13.9	74.13
Total Total (Jan-August) NTTA System			4.92 4.65 4.98 19.19	42.2 38.4 	6.65 6.61 6.89 <b>69.48</b>	18.8 13.8 17.0 28.5	7.91 7.53 8.06 <b>89.27</b>	9.0 11.7 11.0 11.3	8.62 8.41 8.95 99.39 65.08		
Total Total (Jan-August) NTTA System January	   29.02	12.3	4.92 4.65 4.98 <b>19.19</b> 32.58	42.2 38.4  8.7	6.65 6.61 6.89 <b>69.48</b>	18.8 13.8 17.0 28.5	7.91 7.53 8.06 <b>89.27</b> 37.17	9.0 11.7 11.0 11.3	8.62 8.41 8.95 <b>99.39</b> <b>65.08</b>	17.8	46.72
Total Total (Jan-August) NTTA System January February	29.02 28.86	12.3 10.9	4.92 4.65 4.98 <b>19.19</b> 32.58 31.99	42.2 38.4  8.7 8.5	6.65 6.61 6.89 69.48 35.40 34.71	18.8 13.8 17.0 28.5 5.0	7.91 7.53 8.06 <b>89.27</b> 37.17 35.24	9.0 11.7 11.0 11.3 6.7	8.62 8.41 8.95 <b>99.39</b> <b>65.08</b> 39.66 34.11		46.72 45.90
Total Total (Jan-August) NTTA System January February March	29.02 28.86 32.80	12.3	4.92 4.65 4.98 19.19 32.58 31.99 32.97	42.2 38.4  8.7	6.65 6.61 6.89 <b>69.48</b>	18.8 13.8 17.0 28.5	7.91 7.53 8.06 <b>89.27</b> 37.17	9.0 11.7 11.0 11.3	8.62 8.41 8.95 <b>99.39</b> <b>65.08</b>	17.8 34.6	46.72
Total Total (Jan-August) NTTA System January February March April	29.02 28.86 32.80 31.75	12.3 10.9 0.5 7.0	4.92 4.65 4.98 19.19 32.58 31.99 32.97 33.96	8.7 8.5 15.1 12.7	6.65 6.61 6.89 <b>69.48</b> 35.40 34.71 37.94 38.27	18.8 13.8 17.0 28.5 5.0 1.5 8.4 7.3	7.91 7.53 8.06 <b>89.27</b> 37.17 35.24 41.13 41.06	9.0 11.7 11.0 11.3 6.7 -3.2 7.7 5.7	8.62 8.41 8.95 99.39 65.08 39.66 34.11 44.28	17.8 34.6 11.9 11.8	46.72 45.90 49.54 48.51
Total Total (Jan-August) NTTA System January February March	29.02 28.86 32.80 31.75 33.34	12.3 10.9 0.5	4.92 4.65 4.98 19.19 32.58 31.99 32.97 33.96 34.20	8.7 8.5 15.1	6.65 6.61 6.89 <b>69.48</b> 35.40 34.71 37.94 38.27 38.62	18.8 13.8 17.0 28.5 5.0 1.5 8.4	7.91 7.53 8.06 <b>89.27</b> 37.17 35.24 41.13 41.06	9.0 11.7 11.0 11.3 6.7 -3.2 7.7	8.62 8.41 8.95 99.39 65.08 39.66 34.11 44.28 43.41 44.18	17.8 34.6 11.9	46.72 45.90 49.54 48.51 51.31
Total Total (Jan-August) NTTA System January February March April May June	29.02 28.86 32.80 31.75	12.3 10.9 0.5 7.0 2.6	4.92 4.65 4.98 19.19 32.58 31.99 32.97 33.96	8.7 8.5 15.1 12.7	6.65 6.61 6.89 <b>69.48</b> 35.40 34.71 37.94 38.27	18.8 13.8 17.0 28.5 5.0 1.5 8.4 7.3 7.2	7.91 7.53 8.06 <b>89.27</b> 37.17 35.24 41.13 41.06	9.0 11.7 11.0 11.3 6.7 -3.2 7.7 5.7 6.7	8.62 8.41 8.95 99.39 65.08 39.66 34.11 44.28	17.8 34.6 11.9 11.8 16.2	46.72 45.90 49.54 48.51 51.31 50.10
Total (Jan-August)  NTTA System January February March April May	29.02 28.86 32.80 31.75 33.34 32.10	12.3 10.9 0.5 7.0 2.6 2.2	4.92 4.65 4.98 19.19 32.58 31.99 32.97 33.96 34.20 32.82	8.7 8.5 15.1 12.7 12.9 18.5	6.65 6.61 6.89 <b>69.48</b> 35.40 34.71 37.94 38.27 38.62 38.88	18.8 13.8 17.0 28.5 5.0 1.5 8.4 7.3 7.2 6.1	7.91 7.53 8.06 <b>89.27</b> 37.17 35.24 41.13 41.06 41.42 41.25	9.0 11.7 11.0 11.3 6.7 -3.2 7.7 5.7 6.7 7.6	8.62 8.41 8.95 99.39 65.08 39.66 34.11 44.28 43.41 44.18	17.8 34.6 11.9 11.8 16.2 12.9	46.72 45.90 49.54 48.51 51.31 50.10 49.26
Total Total (Jan-August) NTTA System January February March April May June July	29.02 28.86 32.80 31.75 33.34 32.10	12.3 10.9 0.5 7.0 2.6 2.2 3.7	4.92 4.65 4.98 19.19 32.58 31.99 32.97 33.96 34.20 32.82 33.26	8.7 8.5 15.1 12.7 12.9 18.5 16.7	6.65 6.61 6.89 69.48 35.40 34.71 37.94 38.27 38.62 38.88	18.8 13.8 17.0 28.5 5.0 1.5 8.4 7.3 7.2 6.1 5.6	7.91 7.53 8.06 <b>89.27</b> 37.17 35.24 41.13 41.06 41.42 41.25	9.0 11.7 11.0 11.3 6.7 -3.2 7.7 5.7 6.7 7.6 4.7	8.62 8.41 8.95 99.39 65.08 39.66 34.11 44.28 43.41 44.18 44.39	17.8 34.6 11.9 11.8 16.2 12.9 14.8	46.72 45.90 49.54 48.51 51.31 50.10 49.26
Total Total (Jan-August) NTTA System January February March April May June July August	29.02 28.86 32.80 31.75 33.34 32.10 32.06 33.91	12.3 10.9 0.5 7.0 2.6 2.2 3.7 -2.4	4.92 4.65 4.98 19.19 32.58 31.99 32.97 33.96 34.20 32.82 33.26 33.09	8.7 8.5 15.1 12.7 12.9 18.5 16.7 18.3	6.65 6.61 6.89 69.48 35.40 34.71 37.94 38.27 38.62 38.88 38.82 39.16	18.8 13.8 17.0 28.5 5.0 1.5 8.4 7.3 7.2 6.1 5.6 7.0	7.91 7.53 8.06 <b>89.27</b> 37.17 35.24 41.13 41.06 41.42 41.25 41.00	9.0 11.7 11.0 11.3 6.7 -3.2 7.7 5.7 6.7 7.6 4.7	8.62 8.41 8.95 99.39 65.08 39.66 34.11 44.28 43.41 44.18 44.39 42.92	17.8 34.6 11.9 11.8 16.2 12.9 14.8	46.72 45.90 49.54 48.51 51.31 50.10 49.26
Total Total (Jan-August) NTTA System January February March April May June July August September	29.02 28.86 32.80 31.75 33.34 32.10 32.06 33.91 31.15	12.3 10.9 0.5 7.0 2.6 2.2 3.7 -2.4	4.92 4.65 4.98 19.19 32.58 31.99 32.97 33.96 34.20 32.82 33.26 33.09 36.46	8.7 8.5 15.1 12.9 18.5 16.7 18.3 3.1	6.65 6.61 6.89 69.48 35.40 34.71 37.94 38.27 38.62 38.88 38.82 39.16 37.59	18.8 13.8 17.0 28.5 5.0 1.5 8.4 7.3 7.2 6.1 5.6 7.0	7.91 7.53 8.06 <b>89.27</b> 37.17 35.24 41.13 41.06 41.42 41.25 41.00 41.90	9.0 11.7 11.0 11.3 6.7 -3.2 7.7 5.7 6.7 7.6 4.7 7.5 8.5	8.62 8.41 8.95 99.39 65.08 39.66 34.11 44.28 43.41 44.18 44.39 42.92 45.02	17.8 34.6 11.9 11.8 16.2 12.9 14.8	46.72 45.90 49.54 48.51 51.31 50.10 49.26
Total Total (Jan-August) NTTA System January February March April May June July August September October	29.02 28.86 32.80 31.75 33.34 32.10 32.06 33.91 31.15 34.37	12.3 10.9 0.5 7.0 2.6 2.2 3.7 -2.4 17.1	4.92 4.65 4.98 19.19 32.58 31.99 32.97 33.96 34.20 32.82 33.26 33.09 36.46 38.93	8.7 8.5 15.1 12.7 12.9 18.5 16.3 3.1 2.4	6.65 6.61 6.89 69.48 35.40 34.71 37.94 38.27 38.62 38.88 38.82 39.16 37.59	18.8 13.8 17.0 28.5 5.0 1.5 8.4 7.3 7.2 6.1 5.6 7.0 6.7	7.91 7.53 8.06 <b>89.27</b> 37.17 35.24 41.13 41.06 41.42 41.25 41.00 40.12	9.0 11.7 11.0 11.3 6.7 -3.2 7.7 5.7 6.7 7.6 4.7 7.5 8.5	8.62 8.41 8.95 99.39 65.08 39.66 34.11 44.28 43.41 44.18 44.39 42.92 45.02 45.02	17.8 34.6 11.9 11.8 16.2 12.9 14.8	46.72 45.90 49.54 48.51 51.31
Total Total (Jan-August) NTTA System January February March April May June July August September October November	29.02 28.86 32.80 31.75 33.34 32.10 32.06 33.91 31.15 34.37 32.07	12.3 10.9 0.5 7.0 2.6 2.2 3.7 -2.4 17.1 13.3 9.1	4.92 4.65 4.98 19.19 32.58 31.99 32.97 33.96 34.20 32.82 33.26 33.09 36.46 38.93 34.99	8.7 8.5 15.1 12.7 12.9 18.5 16.7 18.3 3.1 2.4	6.65 6.61 6.89 69.48 35.40 34.71 37.94 38.27 38.62 38.88 38.82 39.16 37.59 39.84	18.8 13.8 17.0 28.5 5.0 1.5 8.4 7.3 7.2 6.1 5.6 7.0 6.7	7.91 7.53 8.06 <b>89.27</b> 37.17 35.24 41.13 41.06 41.42 41.25 41.00 41.90 40.12 42.31 39.67	9.0 11.7 11.0 11.3 6.7 -3.2 7.7 6.7 -6.7 7.6 4.7 7.5 8.5 6.7 9.0	8.62 8.41 8.95 99.39 65.08 39.66 34.11 44.28 43.41 44.18 44.39 42.92 45.02 43.52 45.15	17.8 34.6 11.9 11.8 16.2 12.9 14.8	46.72 45.90 49.54 48.51 51.31 50.10 49.26



Transactions on the NTTA System grew by 6.5 percent between 2010 and 2011. NTTA System transactions in 2012 (through August) were greater than the corresponding 2011 transactions by 16.1 percent. This can be partly attributed to the continued economic recovery in the north Texas region, the recent openings of the PGBT EE and the DNT/SRT interchange and the absence of snow/ice related weather disruptions in early 2012.

**Figure 7** shows the actual NTTA System monthly transactions in comparison to the transactions estimated in the February 2012 Update for the period between February 2012 and August 2012. The actual transactions recorded on the NTTA System during this period were greater than the forecasts made in the February 2012 Update by 3.7 percent. This is largely attributable to the greater than anticipated growth in transactions on the PGBT EE, PGBT and SRT.

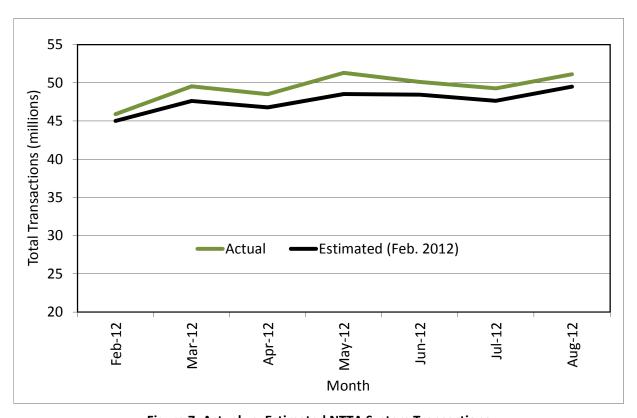


Figure 7: Actual vs. Estimated NTTA System Transactions

**Figure 8** shows average monthly TollTag share and TollTag/ZipCash monthly transactions trends from January 2011 through May 2012. The TollTag shares and transactions shown also include V-Tolls (transactions initially recorded at the roadway lane as ZipCash transactions, which are later identified and reclassified as TollTag transactions). The average daily TollTag



share across all NTTA facilities peaked near 81 percent in early 2011, has dropped to about 78 percent by the end of 2011 and was just below 79 percent in May 2012 (based on preliminary TollTag share information). The recent TollTag shares are slightly better than those forecasted in the February 2012 Update. This improvement could be attributed to the continued aggressive marketing of TollTags by NTTA and the recent changes implemented by NTTA to the business rules including the assessment of the ZipCash rate for a portion of V-Toll transactions.

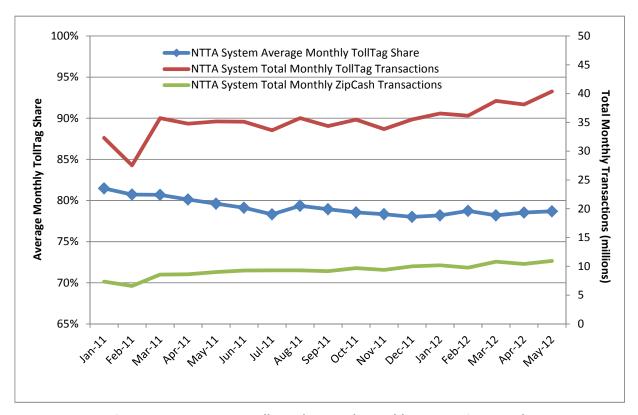


Figure 8: NTTA System TollTag Share and Monthly Transaction Trends

# Long-Term NTTA System Traffic and Revenue Estimates

Based upon the review of all pertinent assumptions supporting the February 2012 Update, it is CDM Smith's opinion that the resulting NTTA System-wide T&R estimates are still valid. We have assessed the potential impacts of the various changes and information mentioned above and have concluded that the net effect of these changes would not cause any material negative impacts to the NTTA System T&R estimates included in the February 2012 Update.

Therefore, CDM Smith recommends that the NTTA System T&R forecasts included in the February 2012 Update be used to support the issuance of the upcoming NTTA System revenue refunding bonds. **Table 2** shows the T&R estimates from 2012 through 2062, which were developed as part of the February 2012 Update.



Table 2: NTTA System T&R Forecasts from February 2012 Update (see end notes on Page 13<sup>ii</sup>)

Year	Toll Transactions	Toll Revenue
2012	563,503,600	\$442,688,000
2013	584,121,800	\$483,799,800
2014	601,761,100	\$523,299,400
2015	619,608,000	\$561,533,600
2016	639,156,200	\$598,431,100
2017	656,413,800	\$631,291,800
2018	676,550,300	\$668,641,900
2019	703,237,700	\$722,430,200
2020	723,908,100	\$774,056,100
2021	736,765,100	\$810,681,400
2022	749,730,900	\$850,410,700
2023	762,950,900	\$889,024,000
2024	776,334,700	\$931,248,900
2025		\$974,641,200
	790,369,900	
2026	804,582,100	\$1,021,840,100
2027	819,116,800	\$1,068,524,800
2028	833,773,700	\$1,119,147,300
2029	848,682,800	\$1,170,218,600
2030	863,722,400	\$1,223,961,700
2031	876,459,600	\$1,276,124,400
2032	889,320,500	\$1,332,407,900
2033	902,741,300	\$1,388,926,000
2034	916,190,300	\$1,449,806,700
2035	933,756,500	\$1,516,676,600
2036	947,685,100	\$1,585,080,500
2037	962,343,600	\$1,652,547,800
2038	977,076,900	\$1,725,359,500
2039	992,069,000	\$1,799,685,800
2040	1,007,126,400	\$1,879,144,700
2041	1,018,521,000	\$1,951,681,100
2042	1,029,873,500	\$2,029,084,700
2043	1,041,405,700	\$2,108,158,000
2044	1,052,835,000	\$2,193,075,300
2045	1,064,793,500	\$2,277,311,600
2046	1,076,068,400	\$2,366,968,700
2047	1,087,149,200	\$2,456,770,600
2048	1,097,457,100	\$2,551,276,100
2049	1,108,352,200	\$2,645,842,100
2050	1,119,096,100	\$2,747,684,800
2051	1,129,794,100	\$2,848,654,400
2052	1,140,415,800	\$2,957,273,200
2053	1,151,686,100	\$3,067,705,400
2054	1,162,877,300	\$3,186,214,900
2055	1,174,198,600	\$3,304,638,900
2056	1,184,826,900	\$3,429,656,300
2057	1,195,477,600	\$3,552,938,800
2058	1,104,930,400	\$3,300,949,800
2059	911,381,600	\$2,626,874,600
2060	917,080,600	\$2,718,556,100
2061	922,988,500	\$2,809,142,300
2062	928,605,300	\$2,905,801,500
Total	46,778,873,600	\$91,107,889,700
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We hope this summary meets your needs. Please do not hesitate to call if you have any questions or if any additional information is required.

Very truly yours,

Kamran Khan Senior Vice President CDM Smith, Inc.

i Notes:

- (1) DNT Phase 3 opened to traffic at the end of September 2007. Toll Rates on the NTTA System were increased during the same month.
- (2) Sam Rayburn Tollway Segment 2 opened to traffic on August 31, 2008.
- (3) LLTB opened to traffic on August 1, 2009.
- (4) PGBT WE Phase 2 mainlanes between SH 183 and Egyptian Way opened to traffic on August 2, 2009.
- (5) Speed-limit increases on various sections of NTTA System were implemented starting late August 2009.
- (6) System-wide toll rates increase implemented on September 1, 2009.
- (7) SRT segment 3S opened to traffic on September 1, 2009 and SRT segment 3N opened to traffic on September 29, 2009.
- (8) Opening of PGBT WE Phase 3 mainlanes beginning April 10, 2010.
- (9) Substantial opening of SRT Segment 4, including the SRT/US 75 interchange, and completion of All-ETC conversion on all NTTA System facilities in late 2010.
- (10) NTTA Board approved speed limit increases on AATT, MCLB and LLTB in June, 2011.
- (11) Toll rates on the NTTA System and PGBT WE were increased in July, 2011.
- (12) Substantial opening of DNT and SRT interchange by November, 2011.
- (13) PGBT EE opened to traffic on December 21, 2011.
- (14) NTTA System transactions include transactions on DNT, PGBT, SRT, PGBT EE, AATT, MCLB and LLTB. SOURCE: North Texas Tollway Authority (unaudited numbers)

#### ii Key assumptions:

- (1) Background transportation networks based on the Mobility 2035 Plan.
- (2) Background demographics based on Mobility 2035 Plan demographics revised by RDS in mid-2011.
- (3) System-wide toll rate increases on July 1 of every odd year starting July 1, 2011 by applying an annual toll increase of 2.75 percent.
- (4) Improvements on DNT between PGBT and SRT by Dec. 31, 2015.
- (5) Expansion of SRT between Bus-121 and US 75 from three to four lanes per direction by Jan. 1, 2019. Congestion pricing on SRT is assumed to start with this expansion.
- (6) Expansion of PGBT between IH 35E and SH 78 from three to four lanes per direction by Jan. 1, 2019.
- (7) Expansion of SH 161 between Belt Line Road and SH 183 to eight lanes by January 1, 2020.
- (8) DNT Extension Phase 4A is assumed to open to traffic by January 1, 2020.



- (9) PGBT East Branch is assumed to open by January 1, 2035.
- (10) 2058 is the  $50^{th}$  year of operation of SRT as part of the NTTA System. SRT is expected to be returned to TxDOT at the end of August 2058.
- (11) TollTag share and ZipCash revenue recovery trends to not significantly deviate from the assumptions included in this letter. NTTA would employ business rules to encourage increases in TollTag shares on its facilities and to increase the ZipCash toll revenue recovery.
- (12) In accordance with the existing practice of the NTTA, all NTTA System facilities will be well-maintained, efficiently operated, and effectively signed to encourage maximum usage.
- (13) Growth in vehicle operating costs (which include fuel, maintenance, and tires) will not significantly deviate from the assumed inflation rate.
- (14) No local, regional, or national emergency will arise which would abnormally restrict the use of motor vehicles.

### **DISCLAIMER**

Current accepted professional practices and procedures were used in the development of these traffic and revenue forecasts. However, as with any forecast of the future, it should be understood that there may be differences between forecasted and actual results caused by events and circumstances beyond the control of the forecasters. In formulating its forecasts, CDM Smith has reasonably relied upon the accuracy and completeness of all of the information provided (both written and oral) by NTTA and several local and state agencies. Publicly available and obtained material has neither been independently verified, nor does CDM Smith assume responsibility for verifying such information. CDM Smith has relied upon the reasonable assurances of the independent parties that they are not aware of any facts that would make such information misleading.

CDM Smith has made qualitative judgments related to several key variables within the analysis used to develop the traffic and revenue forecasts that must be considered as a whole; therefore selecting portions of any individual results without consideration of the intent of the whole may create a misleading or incomplete view of the results and the underling methodologies used to obtain the results. CDM Smith gives no opinion as to the value or merit to partial information extracted from the report.

All estimates and projections reported herein are based on CDM Smith's experience and judgment and on a review of independent third party projections and information obtained from multiple state and local agencies including NTTA. These estimates and projections may not be indicative of actual or future values, and are therefore subject to substantial uncertainty. Future developments cannot be predicted with certainty, and may affect the estimates or projections expressed in the report, such that CDM Smith does not specifically guarantee or warrant any estimate or projections contained within this report.