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Memorandum

To: Grady Rankin
From: David C. Miller and Sergio Masvidal, The PFM Group
CC: David Joyner
Re: Triangle Turnpike Preliminary Financial Plan

Public Financial Management, Inc. (“PFM”), as financial advisor to the NCTA, has prepared a financial analysis for the Triangle Turnpike (consisting of Western Wake Parkway, Triangle Parkway and 540P projects). PFM has made some assumptions described herein as a means to make the project toll revenue bonds feasible and acceptable to credit market investors and to the principal parties of the overall financing plan. Our preliminary analysis - summarized below - sets forth a financing plan which we believe to be financially feasible from a credit market perspective.

It should be noted that, beyond the “numbers”, there are other issues of importance to credit rating analysts which will need to be covered as part of the credit process. These other issues include:

- A final Wilbur Smith “investment grade” traffic & revenue report,
- An HNTB consulting engineer’s report, including the attributes of construction and a detailed construction cost estimate,
- Various project agreements relating to funding and operations, in particular any agreement that sets forth loans and/or additional non-toll revenues to fill the project “gap”, and
- Development of a Toll Revenue Bonds Resolution and other financing documents.

PFM has assumed interest rates that are reflective of a “BBB” category credit quality. As noted above, there are a number of to-be-determined factors that must successfully come together to achieve a “BBB” credit rating. Furthermore, we have assumed current market tax-exempt interest rates which are, of course, subject to economic conditions and will change in the future. Any adverse changes in credit and/or market conditions that materially increase interest rates will also have an adverse impact on the financial plans and would increase the project funding gaps described herein.

Our financial analysis (the “Plan of Finance”) is based upon WSA’s estimated Scenario 1A, Western Wake Parkway, Triangle Parkway WITHOUT Extension to McCrimmon Pkwy., and I-540 from NC 54 to NC 55 toll revenues and toll collection expenses (herein the, “Updated WSA Forecast”). The updated WSA Forecast assumes that 540P, Western Wake and Triangle Parkway are all tolled. Our analysis also incorporates the updated HNTB construction cost estimates of \$593.2 million for Western Wake Parkway, \$155.7 for Triangle Parkway, and \$108.7 million for 540P (which was funded by NC DOT and contributed to NCTA). O&M and R&R expenses were previously provided by HNTB, and not updated for this financial analysis.



Plan of Finance

There are three important components to the Plan of Finance. These include toll revenue bonds, a subordinate TIFIA loan, and an annual non-toll stream of revenues.

The toll revenue bonds are structured as current interest bonds (CIBs) and 0% coupon, capital appreciation bonds (CABs) in order to improve debt service coverage in the early years of operations and create ascending debt service in the later years. The mix of CIBs versus CABs targets average debt service coverage of at least 2.35 times, with a minimum coverage of 2.00 times gradually increasing over time. We assume a 39-year financing horizon with debt amortization over 34 years from 2013 through 2046.

The maximum US DOT (TIFIA) loan amount is used, which is equal to 1/3 of gross construction costs (which include the costs of Western Wake Parkway, Triangle Parkway and I-540P), the debt service reserve fund, and the capitalized interest fund. The TIFIA loan is a relatively low-cost borrowing through US DOT and is to be repaid subordinate to the toll revenue bonds. As we have noted before, while TIFIA loans are an excellent financing alternative to be pursued, NCTA should not expect that every project will receive a TIFIA loan. In such cases, a State or market alternative would be needed. The Plan of Finance assumes that the TIFIA loan would be repaid 27 years after construction was completed (2038).

Finally, the Plan of Finance uses an annual \$12 million non-toll stream of revenue. Including these revenues from a reliable source leads to a more effective debt structure, stronger credit ratings, and lower cost of capital. With these revenues the minimum necessary debt service coverage is assumed to be 2.00 times, with an average coverage of 2.35 times.

Also, by incorporating these annual revenues into the Plan of Finance, the cost of borrowing decreases significantly, saving as much as 50 basis points on the cost of the bonds. These interest rates are reflective of a high "BBB" investment grade quality. If these additional revenues were not used, there would be an initial financing gap of approximately \$203 million, with the TIFIA loan fully repaid in 35 years (2046). It should be noted that 35 years is the longest standard repayment term for a TIFIA loan.

Because there are no toll revenues during construction, we would capitalize interest via bond proceeds to cover interest on the CIBs. The amount of capitalized interest would be sized to cover interest on the bonds until 9 months beyond an assumed construction completion date of October 2011, in order to allow for construction delays. We assumed, however, that the supplemental revenues begin at bond closing, paying a portion of the interest on the CIBs and reducing the amount required of the capitalized interest fund. There are also debt service reserve funds that are sized pursuant to the applicable Treasury regulations regarding such funds.

These preliminary Plans of Finance are subject to change as there are a number of variables that could greatly affect the results of the financial analyses. These variables include but are not limited to: fluctuations in market interest rates, availability of TIFIA loans and other governmental funds, changes to traffic & revenue estimates, changes in construction and operating cost estimates, and, changes to the order of cash flows and reserve fund requirements. PFM will continue to update the financial analyses as any of these changes occur until the completion of the financing.



A table summarizing the plan of finance is shown below (dollar amounts in millions).

Triangle Expressway (Base Case)	(\$ Millions)	% of Project
Total Gross Project Costs	\$857.6	100.0%
Financing & Other Sources		
Current Interest Bonds	\$278.7	
Capital Appreciation Bonds	\$144.9	
TIFIA Loan	\$300.1	33.3%
NC DOT 540-P	\$108.7	
Construction Fund Earnings	\$72.0	
Financing & Other Uses		
540-P Construction Costs	\$108.7	
Triangle/Western Wake Cost	\$748.9	
Capitalized Interest Fund	\$0.3	
Debt Service Reserve Fund	\$42.4	
Cost of Issuance	\$4.0	
Financing Stats		
TIFIA Fully Paid In:	2038	
Average Debt Service Coverage	2.38	
Effective TIC	5.70%	
Additional Annual Revenues	\$12.0	
Upfront Gap without Annual Revenues	(\$203.5)	23.7%



Appendices:

Debt Service Coverage

and

Flow of Funds



Debt Service Coverage

Date	A Toll Revenues (1)	B Plus: Non-Toll Revenues (2)	C Less: Operations Expense (3)	D Plus: Pledged Interest Income	E Equals: Pledged Revenues	F Net Debt Service (4)	G Coverage (E/F)
F.Y.2011	12,079,000		(6,911,541)	10,055	5,177,514		
F.Y.2012	17,362,000		(7,503,690)	110,085	9,968,396		
F.Y.2013	21,755,000	12,000,000	(8,028,622)	196,046	25,922,425	12,290,129	2.11x
F.Y.2014	24,835,000	12,000,000	(8,451,148)	250,000	28,633,852	12,806,667	2.24x
F.Y.2015	30,502,000	12,000,000	(8,686,313)	250,000	34,065,687	15,394,914	2.21x
F.Y.2016	32,776,000	12,000,000	(9,008,361)	250,000	36,017,639	15,502,737	2.32x
F.Y.2017	35,224,000	12,000,000	(9,348,006)	250,000	38,125,994	16,498,164	2.31x
F.Y.2018	37,860,000	12,000,000	(9,703,435)	250,000	40,406,565	17,390,987	2.32x
F.Y.2019	40,697,000	12,000,000	(10,077,826)	250,000	42,869,174	18,511,541	2.32x
F.Y.2020	47,820,000	12,000,000	(10,375,077)	250,000	49,694,923	19,201,950	2.59x
F.Y.2021	50,726,000	12,000,000	(10,739,209)	250,000	52,236,791	22,491,829	2.32x
F.Y.2022	53,818,000	12,000,000	(11,120,303)	250,000	54,947,697	23,694,271	2.32x
F.Y.2023	57,108,000	12,000,000	(11,518,531)	250,000	57,839,469	24,990,031	2.31x
F.Y.2024	60,610,000	12,000,000	(11,935,087)	250,000	60,924,913	26,375,101	2.31x
F.Y.2025	72,071,000	12,000,000	(12,253,497)	250,000	72,067,503	27,144,627	2.65x
F.Y.2026	75,942,000	12,000,000	(12,670,326)	250,000	75,521,674	32,282,118	2.34x
F.Y.2027	80,026,000	12,000,000	(13,103,664)	250,000	79,172,336	33,739,417	2.35x
F.Y.2028	84,334,000	12,000,000	(13,554,679)	250,000	83,029,321	35,395,853	2.35x
F.Y.2029	88,878,000	12,000,000	(14,024,553)	250,000	87,103,447	37,145,830	2.34x
F.Y.2030	99,373,000	12,000,000	(14,313,497)	250,000	97,309,503	38,059,501	2.56x
F.Y.2031	101,440,000	12,000,000	(14,647,786)	250,000	99,042,214	42,585,980	2.33x
F.Y.2032	103,550,000	12,000,000	(14,989,196)	250,000	100,810,804	43,154,509	2.34x
F.Y.2033	105,705,000	12,000,000	(15,339,813)	250,000	102,615,187	43,900,188	2.34x
F.Y.2034	107,904,000	12,000,000	(15,698,697)	250,000	104,455,303	44,665,812	2.34x
F.Y.2035	121,352,000	12,000,000	(16,088,969)	250,000	117,513,031	44,373,263	2.65x
F.Y.2036	123,917,000	12,000,000	(16,465,380)	250,000	119,701,620	50,103,873	2.39x
F.Y.2037	126,536,000	12,000,000	(16,851,375)	250,000	121,934,625	50,893,235	2.40x
F.Y.2038	129,210,000	12,000,000	(17,246,040)	250,000	124,213,960	51,863,467	2.40x
F.Y.2039	131,942,000	12,000,000	(17,649,484)	250,000	126,542,516	52,853,367	2.39x
F.Y.2040	143,688,000	12,000,000	(18,071,346)	250,000	137,866,654	52,591,898	2.62x
F.Y.2041	145,125,000	12,000,000	(18,433,477)	250,000	138,941,523	57,539,077	2.41x
F.Y.2042	146,576,000	12,000,000	(18,803,193)	250,000	140,022,807	57,953,980	2.42x
F.Y.2043	148,042,000	12,000,000	(19,181,589)	250,000	141,110,411	58,423,489	2.42x
F.Y.2044	149,523,000	12,000,000	(19,568,753)	250,000	142,204,247	58,899,263	2.41x
F.Y.2045	151,018,000	12,000,000	(19,964,766)	250,000	143,303,234	59,374,495	2.41x
F.Y.2046	152,528,000	12,000,000	(20,369,731)	250,000	144,408,269	18,104,819	7.98x
	\$3,111,852,000	\$408,000,000	(\$492,696,956)	\$8,566,187	\$3,035,721,230	\$1,216,196,380	

(1) Tolls provided by Wilbur Smith and Associates' Scenario 1A WW Pkwy, Triangle Pkwy, W/out Mccrimmon Ext, and I-540 from NC 54 to 55 (11/10/06 Table 1).

(2) Non-toll revenues received from 2008 through 2012 are used to pay capitalized interest.

(3) Projected expenses provided by WSA' Scenario 1A WW Pkwy, Triangle Pkwy, W/out Mccrimmon Ext, and I-540 from NC 54 to 55 (11/10/06 Table 2) and HNTB's 5/31/06 "Annual Costs" spreadsheet and includes 1% NCTA administration fee.

(4) Net Debt Service is Gross Debt Service less DSRF interest earnings and capitalized interest.



Flow of Funds

Date	Pledged Revenues	Less: Net Debt Service	Less: DSRF Deposit	= Excess Project Revenues	Less: O&M Deposit	Less: R & R Expense	= Surplus Project Revenues	Less: Loan Repayment	= Deposit to General Reserve
F.Y.2011	5,177,513.89			5,177,513.89	(1,131,791.83)	(1,532,000.00)	2,513,722.05	(2,010,977.64)	502,744.41
F.Y.2012	9,968,395.63			9,968,395.63	(89,886.46)	(1,532,000.00)	8,346,509.17	(6,677,207.33)	1,669,301.83
F.Y.2013	25,922,424.76	(12,290,129.12)		13,632,295.64	(80,166.96)	(1,532,000.00)	12,020,128.68	(9,616,102.95)	2,404,025.74
F.Y.2014	28,633,851.69	(12,806,666.59)		15,827,185.11	(65,287.80)	(1,532,000.00)	14,229,897.31	(11,383,917.85)	2,845,979.46
F.Y.2015	34,065,686.73	(15,394,914.44)		18,670,772.30	(29,749.16)	(1,532,000.00)	17,109,023.14	(13,687,218.51)	3,421,804.63
F.Y.2016	36,017,639.40	(15,502,736.99)		20,514,902.42	(49,884.56)	(1,532,000.00)	18,933,017.86	(15,146,414.29)	3,786,603.57
F.Y.2017	38,125,994.39	(16,498,164.05)		21,627,830.33	(52,527.50)	(1,532,000.00)	20,043,302.83	(16,034,642.27)	4,008,660.57
F.Y.2018	40,406,565.25	(17,390,987.01)		23,015,578.24	(54,844.86)	(1,532,000.00)	21,428,733.38	(17,142,986.71)	4,285,746.68
F.Y.2019	42,869,174.38	(18,511,541.16)		24,357,633.22	(57,670.14)	(1,532,000.00)	22,767,963.07	(18,214,370.46)	4,553,592.61
F.Y.2020	49,694,922.99	(19,201,949.83)		30,492,973.16	(37,670.23)	(1,532,000.00)	28,923,302.93	(23,138,642.34)	5,784,660.59
F.Y.2021	52,236,791.06	(22,491,828.62)		29,744,962.45	(55,845.32)	(1,532,000.00)	28,157,117.13	(22,525,693.70)	5,631,423.43
F.Y.2022	54,947,697.34	(23,694,270.85)		31,253,426.49	(58,362.29)	(2,114,000.00)	29,081,064.20	(23,264,851.36)	5,816,212.84
F.Y.2023	57,839,469.27	(24,990,030.74)		32,849,438.54	(60,888.01)	(2,114,000.00)	30,674,550.53	(24,539,640.42)	6,134,910.11
F.Y.2024	60,924,913.01	(26,375,100.71)		34,549,812.29	(63,589.38)	(2,114,000.00)	32,372,222.91	(25,897,778.33)	6,474,444.58
F.Y.2025	72,067,503.33	(27,144,627.39)		44,922,875.94	(33,966.61)	(2,114,000.00)	42,774,909.32	(34,219,927.46)	8,554,981.86
F.Y.2026	75,521,673.66	(32,282,118.40)	(3,786,409.34)	39,453,145.93	(63,019.94)	(2,114,000.00)	37,276,125.98	(29,820,900.79)	7,455,225.20
F.Y.2027	79,172,336.01	(33,739,417.40)	(797,120.00)	44,635,798.61	(65,416.28)	(2,114,000.00)	42,456,382.33	(33,965,105.87)	8,491,276.47
F.Y.2028	83,029,320.91	(35,395,853.35)	(814,130.00)	46,819,337.55	(67,989.18)	(2,114,000.00)	44,637,348.37	(35,709,878.70)	8,927,469.67
F.Y.2029	87,103,447.43	(37,145,829.86)	(835,544.50)	49,122,073.07	(70,738.91)	(2,114,000.00)	46,937,334.16	(37,549,867.33)	9,387,466.83
F.Y.2030	97,309,503.11	(38,059,500.77)		59,250,002.35	(30,665.72)	(2,114,000.00)	57,105,336.63	(45,684,269.30)	11,421,067.33
F.Y.2031	99,042,213.94	(42,585,980.01)	(5,649,737.00)	50,806,496.93	(52,269.86)	(2,114,000.00)	48,640,227.07	(38,912,181.65)	9,728,045.41
F.Y.2032	100,810,804.29	(43,154,508.87)	(991,376.00)	56,664,919.42	(53,384.94)	(2,706,000.00)	53,905,534.48	(43,124,427.59)	10,781,106.90
F.Y.2033	102,615,186.90	(43,900,188.01)	(1,012,972.00)	57,702,026.89	(54,844.57)	(2,706,000.00)	54,941,182.33	(43,952,945.86)	10,988,236.47
F.Y.2034	104,455,302.82	(44,665,812.30)	(1,033,253.00)	58,756,237.52	(56,149.01)	(2,706,000.00)	55,994,088.50	(44,795,270.80)	11,198,817.70
F.Y.2035	117,513,031.39	(44,373,263.05)		73,139,768.34	(42,631.90)	(2,706,000.00)	70,391,136.43	(56,312,909.15)	14,078,227.29
F.Y.2036	119,701,620.18	(50,103,872.54)	(4,785,248.00)	64,812,499.64	(58,460.20)	(2,706,000.00)	62,048,039.44	(49,638,431.55)	12,409,607.89
F.Y.2037	121,934,624.93	(50,893,234.88)	(473,839.00)	70,567,551.05	(59,967.54)	(2,706,000.00)	67,801,583.51	(54,241,266.81)	13,560,316.70
F.Y.2038	124,213,959.55	(51,863,466.50)	(477,282.00)	71,873,211.05	(61,320.90)	(2,706,000.00)	69,105,890.15	(33,730,800.84)	35,375,089.31
F.Y.2039	126,542,516.04	(52,853,366.63)	(483,621.00)	73,205,528.42	(62,687.25)	(2,706,000.00)	70,436,841.16		70,436,841.16
F.Y.2040	137,866,654.44	(52,591,897.89)	(483,119.00)	84,791,637.55	(50,733.60)	(2,706,000.00)	82,034,903.95		82,034,903.95
F.Y.2041	138,941,522.80	(57,539,076.52)	(485,513.00)	80,916,933.28	(57,960.27)	(2,706,000.00)	78,152,973.01		78,152,973.01
F.Y.2042	140,022,807.12	(57,953,980.28)		82,068,826.84	(59,200.95)	(1,554,000.00)	80,455,625.90		80,455,625.90
F.Y.2043	141,110,411.30	(58,423,488.59)		82,686,922.71	(60,622.64)	(1,554,000.00)	81,072,300.07		81,072,300.07
F.Y.2044	142,204,247.08	(58,899,263.15)		83,304,983.93	(62,059.04)	(1,554,000.00)	81,688,924.89		81,688,924.89
F.Y.2045	143,303,234.01	(59,374,494.75)		83,928,739.27	(63,510.51)	(1,554,000.00)	82,311,228.75		82,311,228.75
F.Y.2046	144,408,269.36	(18,104,819.18)		126,303,450.18	(64,977.44)	(1,554,000.00)	124,684,472.74		124,684,472.74
	3,035,721,230.41	(1,216,196,380.40)	(22,109,163.84)	1,797,415,686.18	(3,140,741.77)	(72,822,000.00)	1,721,452,944.40	(810,938,627.85)	910,514,316.55



Flow of Funds Explanation

The flow of funds, that is the priority of toll revenues to repay the bonds and loan, is as follows:

- Pledged Revenues is equal to Gross Toll Revenues less O&M costs (including NCTA administration expenses), i.e. net operating revenues, plus any State revenues as applicable. Interest earnings from the O&M Reserve Fund are also included. A future discussion point with NC DOT is whether or not they will pay for maintenance and/or operations, and whether or not they would seek reimbursement of the same after debt service is paid.
- Pledged Revenues cover Net Debt Service which is gross annual debt service on the bonds less capitalized interest and less interest earnings on the debt service fund.
- PFM recommends a gradual “funding up” of the debt service reserve fund (“DSRF”) over time from toll revenues. The DSRF deposit which can be legally funded from bond proceeds will be limited to less than the maximum annual debt service (“MADS”). Additional funding of the DSRF up to MADS will create a stronger security for those investors buying in the later years. The DSRF is restricted in use to the payment of bond debt service.
- PFM recommends an operations and maintenance reserve to be funded from toll revenues at two months worth of O&M expenditures. O&M Reserve balances would be restricted in use to O&M expenditures and to debt service on the bonds in the event annual cash flow was insufficient for such purposes.
- A renewal & replacement expense should be paid annually from toll revenues. We are assuming that no balance is kept for R&R purposes and expenses are paid by revenues as they are incurred.
- A loan repayment account should be established within the bond resolution flow of funds for the payment of the governmental (TIFIA) loan. I assumed interest on unpaid balances would accrue at 5.00% per annum and would be paid from surplus toll revenues. I assumed that loan repayments would come after the R&R expenses, but that would be a subject for future discussion.
- Finally, the “bottom bucket” in the flow of funds would be a general reserve fund. Moneys deposited in the general reserve could be used for any lawful purpose of the NCTA. For credit purposes, however, I would suggest that the bond resolution be closed, i.e. that balances in the general reserve be limited to any of the above listed purposes, capital improvements to the NCTA system or related transportation improvements, and the redemption of outstanding bonds.

As indicated, the bonds achieve adequate cumulative coverage which PFM believes will warrant a high “BBB” investment grade rating if the traffic and revenue study is well received and the other credit issues are addressed.