Infrastructure
Management Group, Inc.

Memorandum

TO: Maria Johnson

FROM: Lou Wolinetz

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DATE: October 15, 2008

SUBJECT: **MDT's Orange Line New Starts Application Review – Final Memo**

Introduction

This memo summarizes the work conducted on our review of the local funding provisions for the Orange Line Phase II – North Corridor Metrorail Extension New Starts application.

On March 18, 2008, a resolution by the Board of County Commissioners directed the County Manager to utilize an independent financial consultant to examine the development of the New Starts North Corridor application. The resolution further directed the consultant "to examine the capital financial plan, and all supporting documents used to prepare the New Starts North Corridor application, and provide recommendations to secure the required local funding necessary to satisfy the Federal Transit Administration New Starts requirements." The review would need to be completed within fifteen (15) days of the effective day of the resolution. Because the project ultimately extended throughout the spring and summer of 2008, our analysis has been submitted over the course of various memos. Further, we have collaborated with County staff and consultants on updates to the New Starts application.

The following is a chronology of what we have accomplished to date:

- Initially, we reviewed the FY 2008 and FY 2009 New Starts Financial Plans and provided our findings and recommendations in a memorandum dated April 11, 2008.
- Next, we reviewed and commented on the County's pro forma for the transit system that would be the financial basis for the New Starts application for the North Corridor rail line (FY 2010). The pro forma, called "Orange Line Phase 2:

North Corridor Metrorail Extension Financial Plan—30 Year Operating Plan," was accompanied by the County Manager's 18-page memo that was presented to the BCC on July 17, 2008. We summarized our comments in a memorandum dated July 22, 2008.
- Subsequently, we reviewed the "Working Draft of the Orange Line Phase 2: North Corridor Metrorail Extension New Starts Interim Financial Plan" and provided our comments in a memorandum dated July 30, 2008.
- Finally, we reviewed the Orange Line Phase 2: North Corridor Metrorail Extension FY 2010 New Starts Financial Plan, dated August 2008

Documents Reviewed

FY 2008 and FY 2009 New Starts Financial Plans

Miami-Dade Transit (MDT) submitted financial plans for FY 2008 and 2009 in the fall of 2007 and 2008, respectively. We found that Federal Transit Administration's (FTA) conclusions and recommendations relating to MDT's FY 2009 New Starts submission were largely similar to those of the FY 2008 submission. Yet, the FY 2009 application received a "medium-low" rating as opposed to the "medium" rating received by the FY 2008 submission. A rating of at least "medium" is required for a project to be eligible for New Starts funding.

The key weakness of the FY 2009 Financial Plan was the failure of MDT to demonstrate adequate local financial capability or commitment. Documentation appeared to be complete and all key points were addressed. We feel that the reason for the "medium-low" rating was a reflection of the financial and operational realities facing MDT, specifically that MDT could not demonstrate that it would have the funds to keep its existing system in a state of good repair while simultaneously constructing and operating a major new project. In other words, significant new revenues or reductions in costs would be needed to improve the FTA rating.

Working Draft of FY 2010 New Starts Financial Plan

The Working Draft Financial Plan for FY 2010 depicted a financial plan by which, if all of the assumptions prove to be valid, financing of both components of the Orange Line (North Corridor and East-West) would be feasible. However, we felt that some key assumptions in the working draft financial plan were tenuous:

- Elimination of Surtax funding to municipalities
- The $0.02 increase per gallon in the local option gas tax
- Strong Surtax revenue growth
- Significant increases in Country maintenance of effort General Fund contributions
- An aggressive debt financing plan.

Final Submission of FY 2010 New Starts Financial Plan

The following is a summary of major assumptions, revenue issues, operating plan issues, and capital plan issues with the final FY 2010 submission.

Major Assumptions

Operating Revenue

Ridership on Metrobus, Metrorail, and Metromover is driven by travel demand model results. The underlying ridership growth for each mode is projected, along with incremental growth after the Orange Line corridor opens. Fare revenue is calculated by mode. The plan assumes a $0.50 increase in the cash fare in 2009 and $0.25 increases in 2022, 2027, 2032, and 2037. Additionally, there is an assumption that fare revenue increases by 15% due to implementation of a new fare collection system in 2010.

Operating Grant Funds & Subsidies

These funding sources include federal 5307 Formula Funds, state block grants and operating assistance, county Tri-Rail/SFRTA general fund support, local option gas tax, and Miami-Dade County general funds. PTP Surtax revenues are assumed to be flat through 2010 after which they ramp up to an annual long-term growth rate of 5.5%.

Operating Expenses

Direct operating expenses are driven by service level by mode. For example, bus revenue miles begin at the planned FY 2009 budget level of 28.1 million miles but grow linearly after 2015 to reach 42 million miles in 2030. Revenue hours and peak vehicles increase proportionately during those years. Metrorail service, as forecasted by revenue miles, revenue hours, track miles, and stations, increases with the opening of each new corridor. With respect to inflation, the unit costs associated with the various object classes that comprise MDT's operating budget are forecasted to grow at different rates. Operating savings are assumed due to the purchase of hybrid buses, reduction in absenteeism and for general and administrative costs. Other operating expenses include CITT staff, Tri-Rail/SFRTA, and the 20% municipal contribution paid from the PTP Surtax. However, the financial plan assumes that this municipal contribution will be phased out over a three-year period beginning in 2015.

Capital Funding Sources

Federal funding sources include Section 5309 New Starts, Section 5309 Rail Modification, Section 5309 Bus Funds, and JARC/New Freedom funding. For the New Starts funding, the North Corridor assumes a federal funding cap of $700 million regardless of project cost. The East-West extension assumes a federal contribution level of 50% of project cost, which is $1.2 billion out of a cost of $2.4 billion in the current financial plan (in year-of-expenditure or YOE dollars). Finally, an annual funding cap of $100 million in total New Starts funding for MDT is assumed. State funding sources include project matching grants for rail projects ($100 million for MIC-EH Connector and half of the non-federal share for North Corridor and East-West), match funding for bus purchases (approximately 10% of bus capital cost), and FDOT public works reimbursement based on an agreed-upon repayment schedule. The primary local funding source is the PTP Surtax revenue.

Capital Expenditures

Capital expenditures are inflated from their 2008 base year dollar cost estimates using FDOT construction cost index projections of July 2007. The rail service expansion projects comprise Phases 1, 2, and 3 respectively: the MIC-EH Connector assumed to open in FY 2012 (total YOE cost of $440 million), the North Corridor assumed to open in FY 2017 (total YOE cost of $1.283 billion), and the East-West extension assumed to open in FY 2024 (total YOE cost of $2.451 billion). Other capital projects include the short-term capital improvement program (CIP), which extends through 2014 and contains rehabilitation and replacement projects for a total of $725 million; the existing infrastructure renewal program of $1.3 billion; the Orange Line infrastructure renewal program of $550 million; bus acquisition; and public works projects that are funded out of the PTP sales tax.

Debt Financing

The financial plan assumes the use of revenue bonds backed by the PTP Surtax net of municipal contribution in order to finance the Orange Line and other capital investment projects. Additionally, the plan assumes a subordinate lien tax-exempt Commercial Paper program to finance capital investment.

Revenue Issues

Passenger Revenue

The FY 2010 Plan assumes a set schedule of revenue increases, with a $0.50 base cash fare increase in FY 2009 and then additional fare increases of approximately $0.25 in 2022, 2027, 2032, and 2037. The Board of County Commissioners (BCC) approved the $0.50 increase starting October 1, 2008, along with other increases in fees. Riders will pay $2.00, up from $1.50, for a full-fare trip by bus or Metrorail. Monthly passes will increase to $100 from $75, and discounted monthly passes for Medicare patients, the disabled and students will rise to $50 from $37.50. This is the second fare increase approved by the BCC for Transit in 18 years. However, the fare increases come at a time when bus service levels are being reduced from approximately 32.6 million miles to 30.5 million miles[1]. The fare increase passed in great part because of compelling arguments by MDT regarding the need to close the gap in the operation and maintenance budget, prevent many more bus routes from being eliminated, and to avoid dismissal of more than 700 employees at MDT.

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[1] While the FY 2010 Financial Plan calls for 28.1 million miles in FY 2009, the County Manager's memorandum of September 18, 2008 notes on page 9 that 30.5 million miles can be maintained due to the 50-cent fare increase.

The projected 15% increase in fare revenue beginning in 2010 due to new fare collection equipment is of concern; there is no justification provided, such as the experience of other agencies that have implemented similar equipment, nor is there discussion of higher “human” costs of fare collection and enforcement, such as increased enforcement personnel.

Surtax and Other MDT Funding

The FY 2010 Plan anticipates five years of limited Surtax growth, including zero growth in both FY 2009 and FY 2010, but growth is projected to be over 5 percent every year starting in 2013. This increase in Surtax revenues calls for a major rebound in the economy and continued growth in the face of major development limitations facing Miami-Dade County, such as water supplies and Urban Development Boundary constraints. Population growth in Florida has slowed in recent years, growing only 1.1 percent in 2007, compared to 1.8 percent in 2006 – the slowest pace in 10 years.

Elimination of the 20 percent Municipal Contribution is included as a key assumption in the FY 2010 Financial Plan. The plan assumes that, starting in 2015, the contribution to the municipalities would be eliminated over a three-year period and the funds retained by the County. This assumption requires that the County would assume the debt service that the localities have incurred using the Surtax funds. The elimination of Surtax funding to municipalities would also require an Ordinance change and possibly a redefinition of service within the municipalities, such as circulators.

The Local Option Gas Tax is assumed to be increased by 2 cents beginning in 2012. This increase in the local option gas conflicts with some BCC member’s expressed intent to decrease the current gas tax.

The financial plan includes County maintenance-of-effort funding that grows at 3.5 percent. In addition, the Plan assumes that additional County funds are provided to overcome shortfalls on an “as needed” basis[2]. These extra “as needed” funds, which have not been agreed to by the BCC, are assumed to grow from $8.5 million in FY 2010 to an additional $289.4 million by FY 2037.

Another important element for the financial plan is the elimination of the loan from the Surtax to MDT due to an assumed unification of the pre-PTP and “new” services. This particular item would require a change in law, inasmuch as the terms of the loan were stipulated in County Ordinance 05-148. It is important to note that MDT’s FY 2009 Budget includes an increase in the FY 2009 draw on the loan for existing services of $40.65 million[3]. This draw would push MDT’s borrowing to the maximum authorized amount of $150 million stipulated in the loan.

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[2] FY 2010 Financial Plan, Page 11
[3] Memo from George M. Burgess, County Manager, dated September 18, 2008, Subject: Information for Second Budget Hearing – FY 2008-09 Proposed Budget, Page 10 of 13, third paragraph.

<u>Revenue Uncertainty</u>

The most significant aspect of the revenue assumptions is that the feasibility of the financial plan depends on all of them being implemented. Most contemporary feasibility analysis includes the recognition of the uncertainty and risk associated with assumptions both individually and collectively, and the principle that there is usually more overall downside risk than upside. Therefore, the probability that all of the key revenue assumptions applied in developing the financial plan will be realized is low.

It is also important to note that the new sources of revenues included in the financial plan that require legislative action or long negotiations between governmental bodies are presented without an implementation plan or schedule, and they do not include costs to MDT for its implementation.

Operating Plan Issues

The final FY 2010 New Starts Financial Plan responds to concerns regarding the near-term reductions in bus service in draft versions by now projecting a "flat" level of service from FY09 to FY15 and then linear increases in bus service through 2030 (page 7)[4]. This approach is more reasonable than the FY 2009 Plan because it avoids the reduction of transit service supplied and consumed in the near term in order to pay for increases in following decades (page 7).

In reviewing Table 3.5 of the Financial Plan, Operating Service Level Assumptions, Existing and Orange Line, respectively (page 44), we found an inconsistency between the change in Metrobus operating speed assumption on page 7 and the service levels shown in the Table 3.5 (page 44). Metrobus Vehicle Revenue Miles are shown in Table 3.5 as increasing 49.5% from 2008 to 2030, while Vehicle Revenue Hours are shown as increasing 41.7%, which produces a 5% increase in average operating speed over this period. However, per page 7, the Plan states that "much of the growth in Metrobus service in response to slower bus speeds, which results in more revenue miles and hours of to maintain constant service frequencies." The slower bus speeds are likely due to increased future congestion. However, if bus operating speeds are decreasing while miles of service are increasing, then hours of service will necessarily increase faster than miles of service. In order to maintain constant headways (times between successive buses on the same route), then bus service hours will increase, but bus service miles will remain constant and the number of buses required to operate the service will increase.

MDT has elected operate in a manner that will create high operating costs:

- Running significantly shorter trains on the North Corridor than on the existing line. This has the positive effect of keeping headways to 6.5 minutes peak/ten

[4] Page and table references are to FY 2010 Financial Plan, August 2008

minutes off-peak (page 42), but also is more expensive than running longer trains less frequently[5].

- Retaining a policy of one seat per rider (i.e., that no one would be forced to stand)[6]. This is not common on urban heavy rail mass transit systems in the United States.

The Plan shows a 15-year replacement cycle for small (30-32 feet) and articulated buses (60-feet) (Table 2.13, page 39). This is longer than the 12-year, 500,000-mile minimum service life for large, heavy-duty transit buses of 35 feet or longer and 10-year, 350,000 for medium-sized, heavy-duty transit buses (approximately 30-feet) stipulated by the Federal Transit Administration[7]. While there is substantial experience in the transit industry for a 15-year service life for heavy-duty buses, adding the extra years of service over the FTA-stipulated minimums generally requires major rebuilding programs, increased regular and breakdown service as the buses age, and reductions in vehicle availability and reliability, the costs of which are not noted in the Plan. In reviewing the MDT bus data in the American Public Transportation Association's *2007 Transit Vehicle Database*, it does not appear that MDT is currently making extensive use of buses throughout 15 years of useful life.

We did not note specific provision for the capital renewal and replacement costs for Metrobus non-revenue vehicle assets nor Metromover, except for those comprehended during the period 2008-2014 (Table 2.11, page 37)

Capital Program Issues

The Capital Program included in the Financial Plan includes a completion date for the North Corridor Metrorail Extension of 2017, with a projected capital cost estimate of approximately $1.4 billion. The East-West Corridor Metrorail Extension is included in the Plan with a completion date of FY 2024, at a projected cost of $2.5 billion. The Phase 2 North Corridor and Phase 3 East-West Corridor federal share will not exceed $100 million in any given year. The total amount of federal funds available for the North corridor would be $700 million, or 50% of the project costs. The federal funds assumed for the East-West are estimated at 50% of the total project costs, with the remaining non-federal share being split evenly between FDOT and the County.

An Infrastructure Renewal Program for the existing system in the amount of $1.2 billion is included, as well as the Infrastructure Renewal Program for the Orange Line in the amount of $552.4 million.

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[5] Although not labeled as such, it appears that Tables 3.5 and 3.6 are referring to *vehicle* revenue miles and *train* revenue hours for Metrorail. Analysis of these tables finds that vehicle revenue miles per train is 152.75 for existing service, but only 74.41 for Phase 1 (EH-MIC) and 87.20 for Phase 2 (North Corridor), indicating trains with about half as many cars for the additions as for existing service.

[6] MDT FTA Criteria Report, July 2008, Page 4-2.

[7] Federal Transit Administration, Circular 5010.1C, "Grant Management Guidelines," 10-01-98, Chapter 1, ¶¶ 38.-40. http://www.fta.dot.gov/laws/circulars/leg_reg_4114.html

The capital improvements program for MDT also includes the following projects:

- Capital Improvement Program for the existing system
- Bus acquisition, renewal, and replacement program
- Rail rehabilitation for the new corridors
- Public Works projects

The capital plan has risk associated with escalation of construction costs, delays in federal funding, and potential project cost overruns. No details are provided that would enable an analysis of the Capital Program, such as what assumptions regarding inflation and contingencies are included. The financial plan feasibility does not allow for any additional costs or debt service. In other words, any increase in capital costs would increase the negative cash balance in FY 2037 and could demonstrate that MDT does not have enough financial capacity to operate the system.

Financing Plan Issues

While relatively few details of the financing plan are provided in the FY 2010 Plan, we feel that the proposed bond financing plan is risky for the following reasons:

- The financial plan calls for 40-year Surtax revenue bonds with payment of interest only during the first 15 years, followed by much larger payments including principal later;
- A long-term tax-exempt Commercial Paper is assumed with no discussion of whether it is realistic to have a letter of credit (LOC) to support such a program. It is not common for Commercial Paper programs to be this large (over $1.2 billion after 2024), nor stay in place for such a long term (30 years, with 15 years interest-only). Finding one or many banks to provide the LOC for such a program is likely to be very difficult.

Particularly in light of the current issues in the financial markets, the terms of the proposed financing are critical to analyzing the feasibility of the financial plan.

Furthermore, the debt service coverage ratio (DSCR) computations discussed in the financial plan reflects gross coverage, meaning that net O&M costs (i.e., the difference between operating revenue and operating costs), are not considered in the computation. While using a gross DSCR is all that is legally required, realistically, the FTA and County citizens will expect MDT to operate the transit system in addition to fulfilling its debt obligations. A net coverage calculation would provide a far more accurate assessment of MDT's projected financial capacity.

There appears to be some inconsistencies between statements made on page 33 (Section 2.6.4 Bond Financing Program) and the cash flows displayed in Table 4.1 (MDT 30-Year Sources and Uses of Funds) on page 55.

- On page 33 it states that the tax-exempt Commercial Paper (CP) program "assumes semi-annual interest payments at 5%." Based on this, the year 2012

issue of $695 million should reflect an annual interest payment of approximately $34.75 million. Instead, Table 4.1 shows an annual interest payment of $25.0 million starting in year 2013.
- In Table 4.1 under Debt Service Expenses, the line for CP is entitled "Commercial Paper (15 year interest and 30 year repayment)," implying that the first 15 years of the CP issuance is interest-only. If this is the case, then the year 2012 issuance should show repayment of principal starting after year 2027. However, this is not the case. In fact, there is an unexpected jump in CP debt service in year 2032 indicating that possibly the debt is structured with a 20-year interest-only period.

Uncertainty and Risk Analysis

The financial plan includes discussion of an uncertainty and risk analysis that was performed using Monte Carlo simulation. The analysis involved replacing point estimates of various risk variables with probability density functions which represent the range and relative likelihood of future outcomes. These risk variables include:

- Consumer inflation
- Construction cost index
- Surtax growth
- Petroleum products
- Electricity
- 3-month Treasury Bill
- Fare elasticity
- Service elasticity
- Ridership
- Project cost
- Annual cap on New Starts funding

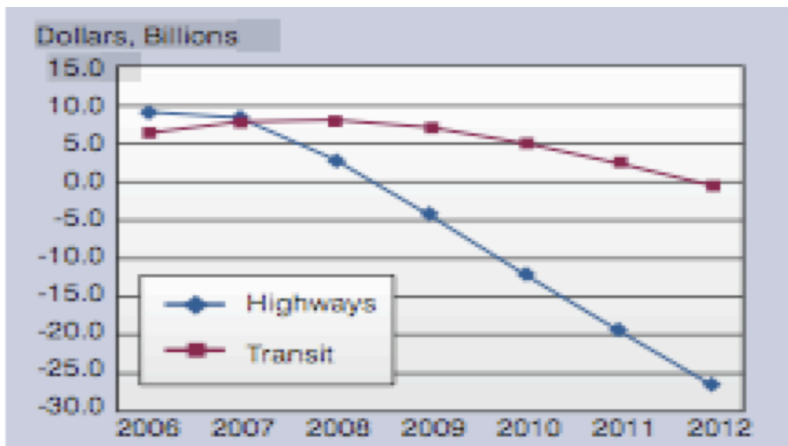
For each variable, a mean value, high value, and low value assumption is presented. While these input assumptions seem reasonable, the output that is analyzed is the gross debt service coverage ratio test. As discussed in this memo under "Financing Plan Issues" above, a net debt service coverage ratio test would be a more meaningful output to analyze since it would show that the system can pay debt service after maintaining its existing O&M obligations. A gross coverage test does not take into account the system's existing O&M expense obligations.

In addition the risk analysis results are highly dependent on the range over which the key variables are analyzed. There is no description of how the ranges were created, and some tend toward optimistic (e.g., the Surtax Growth variable ranges from -0.76% to 2.17%, meaning the analysis assumes it is approximately three times more likely that Surtax receipts will exceed projections than fail to meet expectations).

Other New Starts Issues

New Starts funding available could tighten in the coming years due to constraints at the federal level. As demonstrated by the chart below, which shows both the Highway Trust Fund and mass Transit Accounts will be in deficit by 2012. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which authorizes federal surface transportation programs, will expire after FY 2009. Until a successor bill is passed, the level of New Starts funding for projects such as the Orange Line will be uncertain. Given this environment, only the strongest New Starts applicants are likely to receive funding.

<u>Exhibit: Projections of Highway and Transit Account Balances through 2012</u>[8]



This exhibit shows projected balances in the Highway and Transit Accounts of the Highway Trust Fund through 2012 assuming no change in revenues or program levels.

Source: U.S. Department of the Treasury projections.

Conclusions

The Final MDT FY 2010 New Starts Financial Plan represents a significant improvement over the FY 2009 Plan and draft versions of the FY 2010 Plan.

1) Revenue assumptions are more reasonable
    - While we are still concerned that the long-term growth rate of the Surtax is high, slow growth in the early years provides recognition that in the current economic environment, the Surtax is unlikely to grow rapidly.
    - The schedule of fare increases is less aggressive.

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[8] Chart from Transportation for Tomorrow: Report of the National Surface Transportation Policy and Revenue Study Commission, December 2007.

    - The Board of County Commissioners has approved the 50-cent FY 2009 fare increase (and ancillary fee increases), meeting the assumption of the Plan and demonstrating increased local commitment. The resolution raising fares also calls for increasing the fares with the consumer price index (CPI) every three years, a significant step toward ensuring that revenues keep pace with inflation[9]. It will be important, however, to ensure that the ridership models account properly for elasticity of demand for transit service with rising fares.
2) The substantial costs of keeping the transit system in a state of good repair and replacing infrastructure are reflected in the Infrastructure Renewal Program added to the Plan.

Despite these improvements in the Plan, much more work will be needed for MDT to successfully compete for scarce New Starts funds. In particular:

1) The Plan assumes substantial increases in support from the County General Fund, which, to date, have not been enacted. Nor has the assumed increase in the Local Option Gas Tax.
2) Eliminating the 20% share of the Surtax that currently goes to County municipalities is a key assumption for which there is no current commitment.
3) While the Plan assumes operating costs (particularly labor costs) will grow much more slowly than in the past, there is little discussion of how the County intends to achive this goal. Much of the assumed savings will require successful negotiations with labor unions.
4) The Risk Analysis fails to demonstrate that the financial plan can withstand key assumptions missing targets because it considers only gross debt service coverage. No sensitivities accounting for operating and maintenance costs are presented.
5) The debt structure is highly aggressive. Senior Surtax bonds are assumed to be 40 year issuances with 15 years of interest-only payments. Furthermore, the County needs to demonstrate that the large, long-term tax exempt Commercial Paper program included in the Plan is realistic.
6) MDT needs to justify the expensive operating plan it is projected, which calls for short trains and a seat for every passenger.

[9] Resolution R-924-08, passed September 22, 2008