M-1 RAIL Business Plan - Fare Box Assumptions

For planning purposes within the Business Plan, fare box revenues were computed by taking the annual estimated ridership and applying an annually-adjustable average fare level. M-1 RAIL intends to develop a comprehensive fare policy during the next phases of the project.

The M-1 RAIL streetcar proposes to use a proof-of-payment fare enforcement system with ticket vending machines at each station. M-1 RAIL also will encourage major employers, institutions and Wayne State University to participate in pre-paid transit pass programs similar to the Eco-Pass and U-Pass programs that are successfully used elsewhere in North America.

Ridership assumptions:

The ridership assumptions contained within the Business Plan were developed using a constellation approach of analyzing many different local data sources including existing transit ridership, existing land use, employment and housing data, and accounting for future land use and development plans. The data was then extrapolated to develop opening year and future ridership projections. Within the Business Plan, opening year (2015) ridership is assumed to be 6,000 unlinked trips per weekday. A comparison to other peer systems was also included in the Business Plan to further validate the ridership assumptions of a premium M-1 RAIL streetcar type service.

System	Weekday Unlinked Trips
Existing DDOT Route 53, Streetcar Segment	3,000
Tampa, Adjusted Ridership	3,200
Existing Private Shuttles	4,000
Tacoma, Adjusted Ridership	4,100
Memphis, Adjusted Ridership	5,300
M-1 RAIL Station-Level Forecast – Baseline 2015	6,000
Existing People Mover	5,500
M-1 RAIL Station-Level Forecast – High Activity 2022	8,300
Woodward Transit Catalyst Project	10,000
Portland, Adjusted Ridership	12,000

Weekday ridership is adjusted to annual ridership using an annualization factor of 300 weekdays per year. Annual ridership in 2015 would thus be 1.8 million unlinked trips if the service operated all year in its opening year. Ridership is assumed to build in a linear manner to the 3 million trips reflected in the 2007 *Woodward Transit Catalyst* study by 2035.

M-1 RAIL contracted with Fehr & Peers to conduct an independent ridership estimate using a Direct Ridership Forecasting (DRF) model calibrated and validated to existing streetcar systems in Portland, Seattle, and Tacoma. Direct Ridership Models (DRMs) are directly and quantitatively responsive to land use and transit service characteristics within the immediate vicinity and within the catchment area of transit stations. They can predict ridership at individual stations based on local station area and system characteristics. DRMs are based on empirical relationships found through statistical analysis of station

ridership and local station characteristics. The Fehr & Peers independent review validated the ridership estimates listed above. The ridership estimate contained within the Business Plan was also reviewed and validated by an independent review competed by the Southeast Michigan Council of Governments.

Fare-structure assumptions:

Walk-up customers (those who are not participants in universal pass programs) are assumed to pay an average fare of $1.50 in 2015, increasing with CPI in $0.05 increments every two years. M-1 RAIL believes the average fare will be competitive in the region for premium transit service and is comparable to base fares for streetcar systems around the country as shown in the table below:

City, State	Base Fare Structure (unlinked trip)
M-1 RAIL	$1.50 (proposed)
DDOT Bus	$1.50
SMART Bus	$2.00 - $4.00
People Mover	$0.75
Portland, OR	Free - $2.10 (daily) based upon zones
Seattle, WA	$2.50
Tacoma, WA	$2.00-$2.75
Kenosha, WI	$1.00 ($2.50 daily)
Little Rock, AR	$2.00
Memphis, TN	$1.00 ($1.75 daily)
New Orleans, LA	$1.25 ($5.00 daily)
Tampa, FL	$2.50 ($5.00 daily)

Pass-Program assumptions:

M-1 RAIL plans to initiate a universal pass program with one or more of the existing shuttle operators, as well as other major employers or institutions in the Woodward Avenue corridor. Based on the assumptions contained within the Business Plan, M-1 RAIL assumed that of the 1.8 million annual riders in 2015, the pass programs would account for 900,000 annual riders (unlinked trips) to the streetcar from major generators along the corridor including but not limited to Henry Ford Hospital, College of Creative Studies, Wayne State University, DMC, and other major employers. This annual pass assumption is equivalent to about 89% of the existing shuttle riders in the corridor and 94% of the ridership on the two largest shuttle systems (CCS and DMC). This participation level is assumed to remain constant (no growth) over time. As a result, the 50% of total riders who are assumed to be participants in universal pass programs in 2015 transitions gradually to 30% by 2035 as total ridership builds. The Financial Plan contained within the Business Plan also assumed that universal pass program revenue will amount to 90% of the base cash fare per passenger to allow for negotiated discounts or

differences between the ridership on which the annual fee was computed and actual ridership. Riders who are participants in universal pass programs are thus assumed to generate $1.35 of fare revenue per unlinked trip in 2015, increasing with CPI annually.

Base Fare-Box Revenue Estimates:

Taking into account the aforementioned assumptions and assuming a full year of operations, fare revenue is estimated to include $1.4 million from walk-up customers and $1.2 million from pass programs in 2015, or a total of $2.6 million. Accounting for ridership growth and $0.05 fare adjustments (tied to inflation every two years), fare box revenue is estimated to increase to $4.1 million by 2024; the last year of M-1 RAIL's commitment to operate the streetcar system.

During the time it operates the streetcar system, M-1 RAIL is not planning to offer any other discounted fares. However, when the streetcar system is turned over to a public transit agency in accordance with FTA's Half Fare Guidance, M-1 RAIL assumes a discounted fare structure will be developed. Based on the current ridership profile along Woodward Avenue, M-1 RAIL estimates that up to 20% of the ridership could qualify for a reduced fare under federal regulations. The net effect of implementing this half-fare reduces estimated annual fare box revenues by $300,000 in 2025.

Other Factors:

There are numerous variables which affect fare policy and fare box revenue assumptions besides ridership and fare-structure. Key assumptions included in the Business Plan were:

- M-1 RAIL assumes a uniform and coordinated fare policy would be developed in coordination with DDOT, SMART, and the Detroit People Mover to allow for seamless transfers between existing transit service providers operating within and adjacent to the Woodward Avenue corridor.
- M-1 RAIL did not assume any significant fare evasion within the Business Plan financial plan, partly because the associated staffing assumptions included within the M-1 RAIL O&M estimate assumes a fare inspector(s) would be deployed along the route.

Fare Box Risk Mitigation Measures:

As with every other aspect of the project, M-1 RAIL has built in a series of toll gates and risk mitigation measures to try to mitigate for potential unknown project risks should the assumptions included in the Business Plan not materialize. Specifically for fare box revenues risks, if M-1 RAIL does not realize the fare box revenues included in the Business Plan's financial plan section, M-1 RAIL is prepared to consider taking the following steps to mitigate this risk:

1. Transfer any remaining capital commitment balances from efficiencies achieved during delivery of the project to further support the annual operating subsidy for a period of up to 10 years
2. Evaluate reducing the fare discount associated with the pass program (current assumptions within the Business Plan are that pass program would cost $1.35/user)

3. Evaluate raising the base fare (current assumptions within the Business Plan are $1.50/unlinked trip)
4. Expand marketing opportunities to increase the amount of anticipated system-generated revenues
5. Raise additional revenue to further support the donor revenue operating subsidy for a period of up to 10 years.

Next Steps:

M-1 RAIL is early in the project development process and has yet to develop a comprehensive fare policy (for a traditional new fixed route transit project, a comprehensive fare policy is typically developed during the final design and final operations and commission stage once service plans are more further defined). M-1 RAIL will continue to develop its fare policy as further ridership projections, operational planning, operational and maintenance costs, and potential pass program participants are further defined.

Further, once operational M-1 RAIL intends to annually evaluate its fare structure and will continuously monitor its service plan to assure it is providing the highest level of premium transit service along Woodward Avenue as financially efficient as possible.