



Central Corridor
Light Rail Transit
 Metropolitan Council

A Response to the District Councils Collaborative Research Report “Additional Stations: Making the Case for Western, Victoria, and Hamline”

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This memorandum was prepared in response to a report prepared by the District Councils Collaborative of Saint Paul and Minneapolis, titled “Additional Stations: Making the Case for Western, Victoria, and Hamline.” It is being prepared at the request of Chair Peter Bell of the Central Corridor Management Committee as a means of informing that group’s deliberations regarding the Central Corridor LRT project.

The District Councils Collaborative (DCC) report was published in November 2007 and received by the Project Office in December. The goal of the research was to make the case that additional stations are warranted at Hamline, Victoria, and Western avenues in the City of St. Paul. The DCC report stands in counterpoint to a technical report developed as part of the Central Corridor LRT preliminary engineering process by DMJM Harris titled “Central Corridor Light Rail Transit: Evaluation of Western, Victoria, and Hamline Station Options, Issue #15a, 15b, and 15c” dated November 2007. The District Councils Collaborative report broadens the conversation regarding the issue of infill stations on the Central Corridor LRT line by making the case for additional stations based on a variety of different grounds, including ridership potential, socio-economic and demographic characteristics of the corridor, trip-making characteristics, land use and planning issues, and consistency with CCLRT goals and objectives as detailed in the Draft Environmental Impact Statement (DEIS).

The Influence of Density and Land Uses on Ridership

On pages 2-4, the DCC report discusses the influence of density and land uses on ridership and their presence in the Central Corridor. Research reports are cited to bolster findings regarding trip-making characteristics and the likelihood of increased ridership based on trip-making origins and destinations. Although the research cited contains interesting findings that appear to have applicability to Central Corridor conditions, the reality is that transportation research reports alone do not constitute or qualify as accepted FTA future ridership forecasting methodology.

Future conclusions regarding LRT ridership along the Central Corridor will only be accepted by the FTA if they emerge from an approved future forecasting methodology and forecasts based solely on transportation research reports would not qualify as such.

Station Proximity and its Relationship to Proposed Station Spacing

On pages 5-8 of the DCC report, there is a discussion of the influence of station proximity on ridership and its relationship to proposed station spacing in the Central Corridor. Research is cited here indicating a decrease in willingness to walk to rail transit stations based on increasing distance.

In the Twin Cities, based on analysis of the 2005 Transit On-Board survey, riders of the Hiawatha LRT who accessed the station by walking traveled on average a distance of 0.45 miles.

Socio-economic Factors Influencing Transit Ridership

On pages 10-15 of the DCC report, there is a discussion of socio-economic factors influencing transit ridership and their presence in the Central Corridor. The report cites widely established research findings regarding the correlation between income and transit ridership, namely that lower average annual household incomes correspond to higher likelihood of transit usage. There is no question that the Midway area of Saint Paul is home to high numbers of transit dependent populations, persons who do not have mobility options beyond public transit. The DEIS prepared for the Central Corridor LRT project in April 1996 supports this conclusion and is cited in the DCC report. However, concluding that residents of the Midway area will not be served by public transit in the future based on LRT station spacing is inaccurate.

Route 16 bus service on University Avenue will continue to serve persons making local trips between LRT station stops. Feeder buses will bring people directly to Central Corridor LRT stations all along the corridor. In fact, between Rice Street and Snelling Avenue, almost all residents living within a one-mile distance from the Central Corridor will be within a ¼-mile walking distance of a Metro Transit bus route.

The Influence of Weather and Feeder Bus Service

On page 16 of the DCC report there is a brief discussion of the influence of weather and feeder bus service on transit ridership.

The Regional Model uses actual trip-making behavior in the Twin Cities metropolitan area. Since the FTA-approved Summit ridership forecasting model is calibrated to actual Hiawatha LRT ridership, the future forecasts generated for Central Corridor do account for the influence of weather on trip-making behavior.

Transportation Service Equity

On pages 17-18 of the DCC report there is a discussion that additional stations will provide transportation service equity. As documented in the “Scoping Summary Report” published by the Ramsey County Regional Railroad Authority in December 2001, evaluation criteria used in the siting of stations included, 1) service to major travel markets, 2) intermodal connectivity, 3) major employment centers served, 4) residential population served, 5) consistency with land use patterns, 6) proximity to planned development, 7) proximity to developable and redevelopable land, 8) potential to support smart growth, and 9) compatibility with community character. Transportation service equity was not a criteria established in this process. The DCC report also states that environmental justice policies “require that transportation *benefits* [emphasis in original] and burdens be shared fairly, with special protection extended to neighborhoods like those along University Avenue that have high concentrations of minority and moderate and low-income residents.”

As enacted in a presidential Executive Order signed by President Bill Clinton in 1996 (E.O. 12898), the aims of environmental justice are to identify and address, as appropriate, “disproportionately high and adverse human health or environmental effects of [federal agencies’] programs, policies, and activities on

minority populations and low-income populations.” A requirement to ensure that benefits are proportionately realized by all populations is not part of this executive order.

Corridor Supports Local Trips, Station Spacing

On page 18, there is a discussion under the heading “corridor supports local trips, station spacing doesn’t.” The assertion is made that the CCLRT is being “developed as a commuter line between the two downtowns.” This assertion is not, in fact, the case.

It has been acknowledged as an output of the ridership forecasting conducted for Central Corridor that trip-making characteristics of this corridor are different than would be expected for a more traditional, commuter-oriented transit line.

One-mile Station Spacing is Inconsistent with Policy and Practice in Other US Cities

On pages 18-24, there is a discussion under the heading “1-mile station spacing along University Avenue is inconsistent with policy and practice in other US cities.” The DCC report provides information on station spacing policies from the cities of Portland, Oregon and Denver, Colorado in addition to information from a scan of other LRT systems around the country.

Station Spacing in the Twin Cities

Station spacing along Central Corridor used evaluation criteria developed during earlier stages of project development (as described above). There are no approved LRT station-spacing policies currently in the Twin Cities metropolitan area. As documented in the technical report prepared by the CCPO, published in November 2007, adding stations at Western, Victoria, or Hamline avenues results in a net increase in LRT operating time and a loss in overall Central Corridor ridership and user benefits. The end result of these two conditions is an overall increase in the project’s cost-effectiveness index (CEI), which is used by the FTA to evaluate and approve projects.

Additional Stations Create Opportunities for Economic Development.

On pages 25-26, there is a discussion under the heading “additional stations can create more opportunities for economic development.” A figure from the City of Saint Paul’s “Central Corridor Development Strategy” report is reproduced here. This figure does indicate areas around Hamline Avenue as having the potential for “Major Opportunities for Investment.” There are no areas noted as “Major Opportunities for Investment” in the area surrounding Victoria Avenue and a limited number of parcels around Western Avenue so identified.

The City of Saint Paul will be working to complete station area land use plans for the areas surrounding Western, Victoria and Hamline avenues. Additionally, the Supplemental Draft Environmental Impact Statement (SDEIS) will examine the social, environmental and economic impacts of stations at these locations.

Additional Stations Better Address the Goals of the Draft Environmental Impact Statement (DEIS)

On page 26-27 there is a discussion under the heading “additional stations will better address the goals of the Draft Environmental Impact Statement (DEIS).”

As noted above, the Supplemental Draft Environmental Impact Statement (SDEIS) that is being prepared will examine the social, environmental and economic impacts of stations at Western, Victoria and Hamline avenues. The analysis in this document will address the goals of the project as they relate to all alternatives analyzed in the SDEIS, including potential additional stations in the area between Snelling Avenue and Rice Street.

Traditional Transportation Modeling and the Cost Effectiveness Index (CEI).

On pages 27-30 there is a discussion under the heading “traditional transportation modeling and the cost effectiveness index (CEI).” On page 28, the DCC report states that Poticha pointed out that "actual ridership on many recently built transit lines is higher than predicted by the FTA's Transit System User Benefit or "TSUB" model." The FTA TSUB model, also known as the FTA Summit model, aggregates results from a region's travel demand forecast model and forecasts travel time saved by people using Central Corridor LRT versus other modes.

The model developed as part of Central Corridor LRT project development has been closely reviewed by FTA as part of the approval process to enter into preliminary engineering. It was compared and calibrated to observed boardings on the Hiawatha LRT line. The Metropolitan Council has worked with FTA to ensure that the forecasts that generated by the model are reasonable and credible, particularly in the eyes of FTA.

Also, on page 28, the DCC report indicates that the regional model may be underestimating the number of riders and trips in the Central Corridor. The report also refers to “off-model” analysis. This has not been done for the Central Corridor up to this point.

The Twin Cities Regional Model and its Capabilities

In 2000 – 2001 the Metropolitan Council, in cooperation with Mn/DOT, conducted the 2000 Travel Behavior Inventory (TBI). This study included two origin-destination surveys: a Home Interview Survey and an External Station Survey. It also conducted a highway speed survey. The surveys provided data to update and recalibrate the region’s travel demand model. This model is a state of the practice four-step travel demand model. The four steps are trip generation, trip distribution, mode choice, and assignment to the highway and/or transit systems. The model was reviewed by the FTA subsequent to the model's development over a two year period before the release of the Central Corridor DEIS. As part of that review the mode choice portion of the model was calibrated to the observed ridership counts of the Hiawatha line to ensure a realistic forecast of future ridership in the Central Corridor (the TBI survey was conducted and the initial model was developed prior to the opening of the Hiawatha LRT corridor).

Much time and effort has been invested by FTA, consultants and Metropolitan Council staff to ensure that the model is as accurate as possible.

Off-Model Capabilities

Any "off-model" analysis is reviewed by FTA with extreme skepticism. It would be particularly difficult to get FTA to buy into considering "pedestrian trips to transit" as a special market in need of off-model analysis.

On page 30 of the DCC report, the Fehr and Peers **Direct Transit Ridership Model** is discussed. This model is a multivariate regression based model. It can be tailored to use those independent variables which best explain changes in transit station patronage. However, it must be noted that (based on information on the Fehr and Peers website) this model is designed to estimate the usage of a station by boarding and alighting passengers. It can compare station locations or changes in things such as nearby land uses or development intensities; feeder bus frequency; park and ride spaces; etc. and assess the impacts of these changes on station usage. What it appears this model cannot do is generate station-to-station movements, it cannot breakdown the total trips by trip purpose, or link the trips to actual origins and destinations.

Given limitations of the Fehr and Peers model, it cannot be used to develop the user benefits that are the basis for the CEI evaluation. The development and use of this model, integrated with the regional model, would no doubt require close and extended coordination with FTA.

In summary:

1. Assertions made regarding the potential for increased ridership on the Central Corridor LRT with the addition of three infill stations at Western, Victoria and Hamline avenues are not derived from FTA-accepted transit ridership and user benefit forecasting methodology.
2. Saint Paul's *Central Corridor Development Strategy* identifies areas of change and stability along the corridor, in keeping with public and other input received. Although the area surrounding Hamline Avenue was identified to have several parcels that were major opportunities for investment, the areas surrounding Western and particularly Victoria avenues were not identified as areas with major opportunities for investment.
3. While the CEI test is extremely stringent, it is an obligation that must be met in order for the Central Corridor LRT project to qualify for federal funding.
4. While it is possible to negotiate with FTA to use alternative methodologies to calculate future ridership, as well as user benefits (used in calculating the project's CEI), the process of negotiations would be time-consuming and cause delay to the current project schedule. The process of securing FTA approval of the current model took two years to complete. The cost of delaying the Central Corridor project by just one year has been estimated at approximately \$40 million.