



CITY OF SAINT PAUL

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TRANSPORTATION COMMITTEE OF THE PLANNING COMMISSION

Monday, October 15, 2012, 4:00 p.m. – 5:30 p.m.

All meetings are held in the City Hall Annex 13th floor

Conference room at 25 West 4th Street in Saint Paul

1. Presentation on the East Metro Rail Capacity Study – Mike Rogers, Ramsey County Regional Rail
2. Update on Gateway Corridor – Allen Lovejoy, Public Works

Upcoming Transportation Committee Meetings

- October 29 – Streetcar Feasibility Study: “Streetcar 101” presentation, vehicle types, corridor screening criteria
- November 5 – Gateway Corridor

Meetings are open to the public. The Chair may allow five minutes for informal public comment (from non-committee members) at the beginning of each agenda as needed. Additional time may be allocated for comments or further discussion at the discretion of the Chair. Meetings will be cancelled if there is not a quorum expected, or if there are no agenda items. For additional information on the Transportation Committee of the Planning Commission, please visit our website at bit.ly/StPaulTC or contact Christina Morrison at christina.morrison@ci.stpaul.mn.us or 651-266-6546.

Transportation Committee Staff Report

Committee date: 10/15/12

Project Name	East Metro Rail Capacity and Engineering Improvements Study
Geographic Scope	BNSF, Canadian Pacific, and Union Pacific Rail Corridors on the East Side of St. Paul to Hastings.
Ward(s)	Improvements identified for 2 and 7, but modeling limits include all Wards.
District Council(s)	Improvements identified for 1,3,4, and 5.
Project Description	The Ramsey County Regional Railroad Authority (RCRRA) has commissioned the East Metro Rail Capacity Study (The Study) to identify impacts and recommend capacity solutions to the freight rail network for the introduction of commuter, high speed, and passenger rail to the Union Depot in downtown St. Paul, Minnesota. The Study has been done in collaboration with the BNSF, Canadian Pacific, Union Pacific, Amtrak, multiple short line railroads, and multiple government agencies. (see included fact sheet)
Project Contact	Michael Rogers
Contact email/phone	Michael.rogers@co.ramsey.mn.us 651-266-2773
Lead Agency/Department	Ramsey County Regional Railroad Authority/Red Rock Corridor Commission
Purpose of Project/Plan	Introduction of commuter and high speed passenger rail into the Union Depot in downtown St. Paul.
Planning References	Red Rock Corridor Feasibility Study, Red Rock Corridor Alternatives Analysis, LOCATE Study, Midwest Regional Rail Initiative Studies.
Project stage	Planning
General Timeline	Initiated in 2010, the study will be finalized in October, 2012.
District Council position (if applicable)	<i>Support/oppose/conditions</i>
Level of Committee Involvement	Inform committee
Previous Committee action	None, briefing on 5/16/11
Level of Public Involvement	Inform public
Public Hearing	None, but open houses have been as part of the project
Public Hearing Location	N/A
Primary Funding Source(s)	Federal and State funding
Cost	\$2.1 million

Staff recommendation	
Action item requested of the Committee	None requested
Committee recommendation	

East Metro Rail Capacity Study

Transportation Committee

City of St. Paul

October 15, 2012

The study shows the logos of a number of partners on the project, including:

- BNSF railway
- Amtrak
- Minnesota Commercial Railway
- Canadian Pacific
- Union Pacific
- Twin Cities & Western Railway Company
- Metropolitan Council
- MnDOT
- Rush Line Corridor
- Minnesota High Speed Rail
- Washington County
- Dakota County
- Ramsey County
- Union Depot
- Gateway Corridor
- Hastings
- St. Paul
- St. Paul Park
- Maplewood
- Newport

The map shows the many railway lines that intersect in the East Metro, including lines owned by CP, BNSF, and UP.

A more detailed map shows the location of the Robert Street railroad bridge over the river, Westminster Junction, The Wye/Hoffman Interlocking just east of Lowertown, and the Hoffman Freight Yards along Highway 61.

The Study Answers the following questions:

- What Capacity Improvements are Needed to Implement Commuter and Higher Speed Intercity Passenger Rail?
- How Will Impacts to Freight Railroads be Mitigated?

The study objectives are:

- Identify contributors to congestion
- Identify capacity solutions to address the long-term needs first
- Address technical issues and constructability
- Identify phasing opportunities

The Study approach is:

- Must accommodate freight trains
 - 150+ existing freight moves in the Hoffman Area
 - 10,000 freight cars a day
 - Yard Operations (BNSF, CP, UP)
- Must accommodate existing passenger trains
- Must accommodate growth
 - 36% freight growth
 - 10 Red Rock trains
 - 12 higher speed trains to Chicago
- Graduated approach to improvements

A chart shows that freight train speed suffers with added volume. As growth occurs, average miles per hour train speed decreases.

- 115 daily trains in 2006
- 141 daily Trains forecast - 36% growth
- Significant speed reductions due to congestion
- Infrastructure improvements are needed to accommodate growth

Proposed Improvements

Phase 1: Hoffman Interlocking upgrades, new main tracks, yard improvements, passenger flyover into Union Depot, CP siding, UP/CP connection, UP siding

Phase 2: All of Phase 1, plus extension of new main track south, upgrade switches/crossovers, reconfiguration of Newport and St. Croix Junctions

Phase 3: All of Phases 1 and 2 plus extension of the main line south, second rail crossing at Hastings, St. Croix Flyover, relocation of BNSF main track

Passenger Traffic will be Empire Builder plus Red Rock and Amtrak Higher Speed Intercity. The chart shows, under different build scenarios, average freight transit speed assuming 36% growth, and % change of average freight train speed over/under the baseline.

- No build shows 17.9 miles per hour speed , which is well below the baseline

- Phase 1 shows 21.1 miles per hour speeds, which is slightly below the baseline
- Phase 2 shows 23.7 miles per hour speeds, which is above the baseline
- Phase 3 shows 25.9 miles per hour speeds, which is above the baseline

What we learned

1. Cottage Grove Auto Facility
 - Serving facility reduces network to single track
2. Hoffman Interlocking/East Metro Yards
 - Yard work dramatically limits trains in/out of Hoffman Interlocking
 - Turnout size limits speed; Lower speed reduces capacity of Hoffman Interlocking
 - Separation of yard and through movements will increase capacity
 - Crew changes use up track capacity
3. St. Croix Junction
 - At-grade crossovers cause congestion, limit capacity

Key Corridor Bottlenecks

1. Hoffman Interlocking and yards in St. Paul
2. St. Croix Junction north of Hastings

Regional and Statewide impact

- Three Class 1 freight railroads (BNSF, CP, UP)
- Limit maximum number of trains to the Twin Cities and Minnesota
- If nothing is done:
 - Train diversion to other states
 - More trucks on the highways
 - Less competitive transportation system
 - Less economic development

The map shows the location of three key areas, from north to south – Hoffman/East metro Yards, Cottage Grove, and St. Croix Junction. More detailed maps shows the individual rail line improvement proposed in those three locations.

Estimated costs in 2011

Improvements by phase:

- Phase 1 - \$226 Million
- Phase 2 - \$118 Million
- Phase 3 - \$483 Million
- Total - \$827 Million

Conclusions

- Without changes, average train speed will begin to degrade before 36% freight growth volumes are reached, even without additional passenger traffic.
- With Phase 1 infrastructure changes, RRs can maintain current velocity as freight volume grows.
- With Phases 2 and 3 infrastructure improvements, RRs can improve current speeds, even with increased freight volume and new passenger trains.

- Phase 3 is the optimal layout for handling 36% freight growth and new passenger trains.
 - Minimizes train delays as passenger and freight volumes grow;
 - Allows flexibility so regional rail system remains competitive;
 - Eases bottleneck through St. Croix, reducing risk that traffic be diverted elsewhere on national freight network;
 - Reduces risk of BNSF track flooding;
 - Provides maintenance access to tracks through St. Croix area, minimizing track down-time.

Next Steps

- Develop memorandum of understanding between railroad stakeholders and MnDOT/other public agencies
- Incorporate in local comprehensive plans
- Establish sequence of capital improvements... Dependent on timing of passenger service implementation, freight growth
- Pursue funding opportunities

MEMORANDUM

Gateway Corridor Project Update

PREPARED FOR: St. Paul Transportation Committee

PREPARED BY: Washington County Staff

DATE: October 10, 2012

1. Background

Eight alternatives for improving transit in the Gateway Corridor were evaluated, ranked and presented to the public in March/April 2012. Public and agency comments helped identify some changes that might increase the benefits and/or decrease the costs of some alternatives. Changes that were evaluated through this “optimization” process included slight changes to the design of the alternatives, changing or adding stations, and changing or reducing transit service frequency. The results of this evaluation will help lead to a decision on the best alternatives for the Corridor.

The following is a table that outlines the optimization factors that were determined to have positive overall impacts on the alternatives. The Gateway Corridor Commission approved conducting full model runs for Alternatives 3, 5 and 8. It was determined that the sketch-plan ridership estimation for Alternatives 4 and 6 was sufficient because there were only a few factors that impacted those alternatives.

Alternative 3 (BRT along Hudson Rd / 1-94) optimizes in the following ways:

- Reduce Off-Peak Service
- Adjust Dwell Time
- Travel Time Refinement
- Remove W-100
- BRT Constant
- BRT Bypass Lanes
- Realign East of 494/694
- Add Landfall Station

Alternative (LRT along Hudson Rd / I-94) optimizes in the following ways:

- Reduce Off-Peak Service
- Adjust Dwell Time
- Travel Time Refinement
- Remove W-100
- Realign East of 494/694
- Add Landfall Station

Alternative 8 (BRT Managed Lane) optimizes in the following ways:

- Reduce Off-Peak Service
- Adjust Dwell Time
- Travel Time Refinement

- Remove W-100
- BRT Constant
- Shorten MOS to Manning
- Shift WBA & McKnight Stations

2. Results of Optimization Process

2.1 Overview of Optimization Results

- Ridership, new transit trips, and user benefits increased for all Optimized Alternatives
- Capital and operating and maintenance costs decreased for all Optimized Alternatives
- Economic development opportunity increased for Alternatives 3 (BRT) and 5 (LRT)
- Cost Effectiveness improves for all Optimized Alternatives

Significant analysis was also preformed on the width of the BRT and LRT alternatives along East 7th Street, White Bear Avenue and Hudson Road because many concerns were expressed about the high property impacts associated with building these options. The analysis determined that the transitway/roadway could only be narrowed by a maximum of 4 feet and still operate safely and properly, which was not enough to decrease property impacts. It was determined that the design would need to be narrowed at least 12 feet to have any meaningful impact on reducing property acquisition. Therefore, these changes will not be incorporated into the alternatives.

2.2 Change in Rankings

In the spring of 2012, the alternatives were ranked based in terms of their ability to meet project goals. Below is a side by side comparison of the initial and updated draft rankings after the optimization process.

3 – BRT along Hudson Rd/I-94 OPTIMIZED. High in Spring 2012, High in Updated Draft

5 – LRT along Hudson Rd/I-94 OPTIMIZED. Medium in Spring 2012, Medium in Updated Draft

8 – BRT Managed Lane OPTIMIZED. High in Spring 2012, Medium in Updated Draft

2 - TSM OPTIMIZED. Medium in Spring 2012, Low in Updated Draft

4 – BRT along E 7th/White Bear Ave/Hudson Rd. Low in Spring 2012, Low in Updated Draft

6 – LRT along E 7th/White Bear Ave/Hudson Rd. Low in Spring 2012, Low in Updated Draft

Following optimization, Alternative 3, BRT-Hudson Road received a medium or high ranking under all project goals, resulting on it becoming the highest ranked option overall. Optimized Alternative 5, LRT-Hudson Road, received a low ranking for cost but medium or high ranking for all other goals, resulting in its continued “Medium” ranking. Optimized Alternative 8, BRT Managed Lane changed from “High” to “Medium” because economic development potential was comparatively lower than Alternatives 3 and 5, once those two alternatives were optimized by shifting the alignment out of the freeway median.

Alternatives 4 and 6, BRT and LRT along city streets, both alternatives had strong ridership and economic development potential along portions of east 7th Street, but impacts to existing property were high enough to limit the viability of these options. Therefore they were both rated low.

3. Decision Making Process

On September 19th, the Policy Advisory Committee (PAC) recommended to:

- Advance Optimized Alternative 3 – BRT adjacent to Hudson Road / I-94 into the DEIS as the preferred option.
- Advance Optimized Alternative 5 – LRT adjacent to Hudson Road / I-94 into DEIS for comparative purposes to BRT.

The Policy Advisory Committee did not recommend advancing:

- Optimized Alternative 8 – BRT Managed Lane for the following reasons: Fewer stations and their location within the freeway median, offer less opportunity for economic development around stations for communities in the corridor compared to the other alternatives. A managed lane does not qualify for FTA New Starts funding under MAP-21, and there is no equivalent program on the highway side to fund a project of this scale.
- Alternatives 4 and 6 – BRT and LRT along city streets for the following reason: Even though both alternatives performed well under ridership, cost and economic development goals, the number of property impacts were deemed to be too high to consider either alternative realistic.

On October 11th, the Gateway Corridor will decide on which alternatives to carry forward into the Draft Environmental Impact Statement (DEIS) based on the PAC recommendation outlined above. The final report for the Alternatives Analysis will be released at the end of October. At that time, there will be a public comment period on the report until December 3rd. The Gateway Corridor Commission will approve the final report at their December 13th meeting.

The DEIS is anticipated to begin in early 2013. A locally preferred alternative (LPA) will be determined during the NEPA phase. Gateway Corridor staff will be giving a presentation at the November 5th Transportation Committee meeting.

Until that time, more information can be found at the Gateway Corridor website

(www.TheGatewayCorridor.com) or by contacting Andy Gitzlaff at
Andy.Gitzlaff@co.washington.mn.us or 651-430-4338.