

Meeting Notes

Meeting Date: September 22, 2009
Subject: Commuter Rail Grand Ave Corridor – PRT Meeting
In Attendance:

Kevin Wallace, MAG
Marc Pearsall, MAG
Rick Pilgrim, URS
Jennifer Pyne, URS
Matt Carpenter, URS
David Schwartz, Goodman Schwartz
Megan Casey, Goodman Schwartz

David Moody, City of Peoria
Bob Maki, City of Surprise
Denise Lacey, MCDOT
Stuart Boggs, RPTA
Jim Mathien, METRO
Wulf Grote, METRO
Scott Chesney, City of El Mirage

Introduction

Rick Pilgrim, MAG Study Team, initiated the meeting by introducing the presentation, which followed the agenda as outlined:

- Overall Project Progress
- Ridership Forecasting
- Preliminary Cost Estimate Information
- Vehicle Options and Recommendations
- Maintenance Facility Options and Recommendations
- Next Steps

Overall Project Progress

Rick Pilgrim reviewed the project progress since the June PRT Meeting. The Study Team has completed two rounds of ridership forecast modeling, completed preliminary work on cost estimates, and assessed vehicle technology and maintenance facility options. The team is now finalizing the cost estimates, conducting the final round of modeling, and refining the operations plan. At the November meeting they should be able to present a good road map of how to continue with commuter rail in the corridor.

Ridership Forecasting

Rick Pilgrim provided an overview of the ridership forecasting process. The first step consists of preliminary model runs, which modeled maximum service if unbounded by cost to define the limits of ridership. The second step consists of base model runs, which look at each corridor individually to start, and then interlined scenarios with other corridors. The next step consists of sensitivity test model runs to look at frequency and run time. The last step is systems analysis and corridor prioritization.

Rick also discussed a peer city comparison of recent commuter rail systems in other cities in the US and the ridership levels on those systems. Stuart Boggs, RPTA requested that, in addition to number of miles and daily ridership, the number of train trips per day also be added to the peer city comparison.

Bob Maki, City of Surprise asked if any of the peer city systems were operated by the Burlington Northern Santa Fe (BNSF) Railroad. Rick answered that the Sounder system in Washington is operated by BNSF but uses Seattle employees. The Railrunner system in New Mexico is owned by the State but it is an old BNSF track. The Front Runner system in Utah owns the old BNSF track but doesn't run the operations. Based on previous experience, BNSF will likely expect to run operations on Grand Ave.

Scott Chesney, City of El Mirage stated that there are rumors that BNSF will end their operations at the Surprise facility once it's completed. If that is true, MAG could look at trying for a locally operated system and negotiate this from the beginning. It may be good to test the waters to see what BNSF might agree to.

Matt Carpenter, MAG Study Team presented the results of the preliminary model runs. The results indicated that the West Wickenburg and Downtown Wickenburg stations were low-performing stations with fewer than 100 daily boardings. As a result, the Grand Ave base scenario was shortened to end the line at the community of Wittmann.

The inputs and assumptions for the base model run include 36 miles of track from Central Phoenix to Wittmann, headways of 30 minutes on-peak and 60 minutes off-peak, eight stations and a travel time of 42 minutes. The base model run results show total daily boarding of 2,830. Boardings by station are as follows:

Wittman	280
North Surprise	170
Surprise	590
El Mirage/Sun City	320
Peoria	490
Glendale	550
State Capitol	180
Downtown Phoenix	250

The boardings are higher in the middle of the corridor than at the ends, suggesting intra-corridor travelling to activity and employment centers throughout the line.

Wulf Grote, METRO asked if the base model assumes a second track. Matt Carpenter answered that in most places there is a second track added between the existing track and Grand Ave. The track has train signals the entire way and no yard limits for speed.

Matt Carpenter presented a brief summary of the daily boardings for all five corridors included in the Regional System Study, which is currently being undertaken by MAG. The Southeast corridor has the most daily boardings (6,450), Grand Ave has the

second-highest (2,830), followed by Chandler (2,240), Yuma West (1,420) and Tempe (950).

In order to compare systems of different length, boardings per revenue mile was calculated. Grand Ave has 1.6 boardings per revenue mile, just above the national average of 1.5. When compared to peer cities in the Western US, Grand Ave is higher than Los Angeles, but lower than Dallas and Seattle.

The vast majority of boardings occur during peak travel times, indicating very low ridership during off-peak periods. Rick Pilgrim said that ridership is very sensitive to train frequency. Wulf Grote asked what frequency Seattle runs. Rick replied they run 15 minutes on peak and 30 minutes off-peak. Wulf noted that this is twice the level of service, resulting in twice the ridership of Grand Ave.

Matt Carpenter reviewed the peak period mode of access for the Grand Ave corridor, which shows a total of 50% drive, 30% transfer and 20% walk. Mode of access was also broken down for each station along the corridor and includes both morning and afternoon peak travel. Wulf Grote commented that the transfer numbers for the Central Phoenix and State Capitol stations don't seem correct. Rick Pilgrim explained that there is much exchange along the corridor, where traditional commuter rail is work-trip oriented to a major employment center. For this corridor, Downtown Phoenix is not the primary destination. Jim Mathien, METRO commented that this shows an existing demand in the region for bus rapid transit or other service.

Scott Chesney, City of El Mirage commented that he is interested to see the interlined results with the other corridors. Rick Pilgrim said that is the next step, but these first results allow a close look at the Grand Ave corridor on its own. Scott said there will be a need to look at other destinations besides Downtown Phoenix. Wulf Grote, METRO commented that ASU has had a huge impact on light rail, but that is concentrated in the East Valley portion of the line. If existing light rail usage is any indication, there will be some increase to link to ASU via commuter rail, but not a dramatic amount.

Matt Carpenter reviewed the base model run observations. Overall, there is heavy peak use and low off-peak use. The corridor benefits from strong bus and light rail connections. The strongest ridership is throughout the middle of the corridor from Glendale to Downtown Surprise. Those two stations also have the highest boardings. Matt added that future modeling will include interlining with other corridors.

Wulf Grote asked for data on where riders go once they get off the train. Matt Carpenter replied that origin destination information is not available at this meeting, but the team will review the model information for additional insight on line loadings or other data that could provide a more detailed picture of origins and destinations.

Preliminary Cost Estimate Information

Rick Pilgrim, MAG Study Team presented the initial observations on the Grand Ave capital cost estimates. As expected, the first mile of the corridor is the hardest and most expensive. Just to initiate basic service requires substantial costs to address extensive railroad issues near downtown Phoenix. Adding additional service beyond the start-up mile is significantly less expensive. The biggest cost items are: trackwork/railroad relocation and upgrades (a second track is assumed and needed for almost the whole corridor), vehicles, quiet zones and contingencies. Extra track costs to extend from Wittman to Wickenburg may not be cost-effective given extremely low ridership (fewer than 100 boardings at Wickenburg stations). The cost estimates assume that BNSF is still using the Mobest Yard. The initial assessment reveals that the Grand Ave corridor is in the upper third of the national average for commuter rail per-mile capital costs (this figure includes dropping the Wickenburg stations).

The next steps are to continue to refine the cost estimates, including refinement of contingencies, prepare cost estimates for other corridors for comparison purposes, and being cost-effectiveness evaluations of this corridor and other corridors.

Vehicle Options and Recommendations

Matt Carpenter presented the vehicle technology recommendation. Locomotive hauled coaches (LHCs) are powered by one diesel-electric locomotive engine, which pulls the train in one direction and pushes the train in the other. A cab car with operating controls is put on one end of the train and a locomotive at the other end. LHCs can run with 2 to 12 cars with a seating capacity of 140 passengers in each double-deck passenger car. LHCs are Federal Railroad Administration (FRA)-compliant, meaning they meet federal requirements for crashworthiness and can share tracks with freight trains and operate concurrently with freight traffic. LHCs are used extensively in commuter rail systems throughout the US using off-the-shelf proven technology. Matt noted that it is common for cities to combine orders to save costs, and that used cars may even be an option.

Matt Carpenter presented information on LHC clean diesel technology. There are new EPA clean diesel standards. The Maryland Area Regional Commuter (MARC) Rail System introduced new fleets of "green" locomotives that can reduce emissions over current fleet. Several commuter rail systems throughout the US are testing the use of alternative fuels.

Scott Chesney noted that Maricopa County or Federal EPA funding may be available if the green options are used. Matt Carpenter said the funding would be examined. Rick Pilgrim added that they will estimate air quality savings and other issues in the analysis.

Maintenance Facility Options and Recommendations

Rick Pilgrim presented information on commuter rail maintenance facility (CRMF) options. A CRMF facility would repair, maintain, clean, fuel and store commuter rail vehicles. A centrally located facility may make the most sense with so many corridors in the system. Rick added that BNSF could potentially take on maintenance within existing structures for a Grand Ave corridor, but assuming that several corridors will be built in an overall system and facility could be needed. There is also an option to outsource heavy repairs in a one-corridor scenario.

There is also a need for layover facilities that are smaller than a maintenance facility. These would be used for vehicle storage and minor vehicle cleaning and inspection. Layover facilities at the end of the line would store at most half of the fleet so they are ready for the morning runs. They could also handle safety checks that are needed when trains are parked. These facilities are being taken into account in the cost estimating work being done.

Rick reviewed the criteria used to identify facility recommendations: ability to consolidate and/or share space with existing facilities, end-of-line locations and existing industrial zones. Potential CRMF/layover facility locations on the Grand Ave corridor are: Mobest Yard, Wittmann and near Loop 303.

David Moody, City of Peoria commented that BNSF is building a new site, and if we participate with them and help with the facility, commuter rail could possibly share the location.

Bob Maki, City of Surprise asked about the extent BNSF has been involved during the study. Rick Pilgrim answered that there have been several meetings with BNSF during the course of the study, including a high rail trip. The dialogue has been very good-BNSF has been proactive and there is an active interest level. BNSF is looking to improve the Ennis Wye for easier access. The Mobest Yard will not go away, even with a new Surprise facility. Talks will focus on joint operations with the railroad.

Wulf Grote commented that finding a site for the light rail maintenance center was a big challenge for METRO. Rick said that commuter rail in Denver had the same issue.

Next Steps

Rick Pilgrim reviewed the next steps for the study. The next round of modeling and finalized cost estimates and implementation requirements will be completed by the end of October. In November and December the Corridor Development Plan will be prepared.

David Schwartz, MAG Study Team added that the third Stakeholder meeting will be held in November, continuing in the same format at the last meeting. Rick Pilgrim added there will also be a meeting with the Grand Ave Coalition in early November.

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The next Grand Ave PRT Meeting is scheduled for Tuesday, November 17, 2009 at 9:00 am.