



- A technical memorandum will be prepared
- The selection will be presented at upcoming CWG meeting
- Minutes from Corridor Working Group Meeting 3
 - Minutes were approved with no changes

Corridor A and B Overview

- Overview from David Whyte
- Corridor A
 - Ongoing Crystal City/Potomac Yard Transitway project, environmental documentation
 - Looking for CWG and public input south of Braddock Road
- Corridor B
 - Duke Street or Eisenhower Street

Corridor C

- Presentation by David Whyte
- 7 preliminary alternatives subjected to preliminary screening
- 3 alternatives were selected for further evaluation along with a baseline alternative
- Baseline alternative is similar to Alternative B, funded by a TIGER grant
- CWG discussion/questions
 - Did the travel time analysis take into account mixed flow operations in the non-HOV direction on I-395?
 - Response: Yes, the travel time analysis did account for this
 - Is there off-board fare collection?
 - Response: Off-board fare collection is not funded by the TIGER grant
 - Were there changes to the routes between the preliminary alternatives and the selected alternatives?
 - Response: The routes were not changed, but some optional pieces are included
 - There will be a three hour-long peak period at the Mark Center, was that included in the planning?
 - Response: The operations assumptions included weekday peak periods with shorter headways and the three selected alternatives include dedicated lanes for the transit due to traffic congestion
 - Do SmarTrip cards eliminate the need for off-board fare collection?
 - Response: There are some differences between a pre-paid fare card and off-board fare collection that have to do with the time it takes to tap the card and only being able to board via a single door rather than multiple doors that increase dwell time when compared to off-board fare collection
- Presentation of detailed evaluation
 - Detailed secondary screening of alternatives included estimated future travel times, preliminary ridership projections, and cost evaluation
 - Feasibility-level impacts evaluation does not assume removal of general purpose travel lanes, requires property acquisition, show small environmental impacts
 - Operating hours and headway assumed to be the same for all alternatives and are complimentary to Metrorail service
 - Right-of-way costs include a streetcar maintenance yard
- CWG discussion/questions
 - Does the evaluation assume the same number of vehicles for each alternative?
 - Response: The number of vehicles is based on the operations of the alternative, specifically the round trip travel time, and varies by alternative. It is assumed that less streetcars will be purchased because the system will tie into Arlington's Columbia Pike streetcar

- Are bus and streetcar modes both one vehicle?
 - Response: Yes, each type of vehicle is articulated
- For Alternative G, are the vehicles the same as Arlington's streetcar?
 - Response: Yes, the same vehicle is assumed and an economy of scale/cost-sharing is assumed for the streetcar with Arlington. The evaluation assumes that Alexandria is responsible for only the operations cost for the portion of the transit service that runs in the City
- Can you take seats out of the bus and get the same capacity standing as a streetcar?
 - Response: To some extent, but there are some physical differences such as the wheel wells on a bus
- Do you have any idea of what the "+ transfer" time listed in the travel time would be?
 - Response: Depends on the operations, but about half the headway is a good rule-of-thumb. In this case for a weekday peak period, assume three to four minutes
- The standard deviation for travel time of a rapid bus is much higher than a mode in a dedicated lane
 - Response: Yes, the travel time for rapid bus will be somewhat more unreliable than a mode in primarily dedicated lanes. The rapid bus will still benefit from queue jump lanes and transit signal priority.
- With a transfer there is a facility cost, assuming a relatively robust facility is needed?
 - Response: Allocating for a larger vehicle space is an incremental cost in terms of land and other features, rather than an order of magnitude cost
- The baseline condition is in mixed flow and only shows a three to four minute travel time difference in the corridor [between the Van Dorn Metrorail station and Mark Center]
 - Response: Yes, but reliability is not reflected in the travel time, a significant traffic event would have a larger effect on the baseline condition traveling in mixed flow
- Would like to see probability for travel time included in the analysis
 - Response: That will be part of the next steps for implementing transit in the corridor, an alternatives analysis
- What was considered for Beauregard density in the ridership analysis?
 - Response: The Beauregard development projections presented in CWG meeting 2 were and approved development plans for Landmark/Van Dorn were used along with MWCOG projections for the area. MWCOG projections are vetted regionally to account for anticipated regional growth
- Does the analysis include any idea of how to reconfigure existing bus service?
 - Response: That will be part of the next steps for implementing transit as part of an alternatives analysis. DASH would look for a study to reconfigure the existing service to act as circulators and feeders to the high-capacity transit. Ideally the same number of buses as under existing conditions would serve more population
- Why are streetcar ridership projections higher? Is it a function of where the transit goes?
 - Response: National examples show that streetcar systems attract more riders
- There are examples of national streetcar ridership bias in which rail ridership is overestimated. Ridership is a result of travel time savings
- CWG comments regarding preferences for the alternatives
 - *John Komoroske*
 - Gut feel is that the money is very important
 - The baseline alternative will be a great precursor to build transit interest
 - Take small steps, build ridership, phase system, eventually consider rail
 - Hearing speculation that Arlington may not put their yard at NVCC and extend streetcar to NVCC, without it Alexandria will have to pay more to extend the streetcar
 - It is very nice to have a seat for a long ride such as what is being discussed



- *Councilman Paul Smedberg*
 - Keep in mind the need to think in the short- and long-term
 - In the long-term, the group should not think of cost alone as a decision factor because the transit system will be with the City for a long time
- *Donna Fossum*
 - Concern regarding building the \$15 million investment (Alternative B) and not making further investment
 - Issue of equity, reference to figures with population reports from latest census that show 43% of population is in the West End, West End has no rail service
 - The West End is already a bus city and none of the alternatives presented are significantly better than what is already there except the streetcar
 - The West End deserves rail yesterday
- *Nancy Jennings*
 - Headways will make the system work, but is not convinced the City can deliver
 - Not convinced the right route has been selected
 - Suggests the City run a bus along the route today and see if it attract ridership
- *Dak Hardwick*
 - Based on the termini and travel times, people that want to travel between Landmark and Pentagon will use Metrorail
 - Question: Beyond financing, what are the differences between New Starts and Small Starts?
 - Response: New Starts requires more elaborate analysis, documentation, etc. because of the scale of funding being offered. The impacts and costs drive up the documentation. The New Starts process will take approximately 5 to 10 years whereas the Small Starts process is about one and a half years long. Alternative G is on the low end of a New Starts project
 - Question: If the City wanted to move forward with Alternative G, could it join Arlington in their environmental process?
 - Response: No, and there is no guarantee that the FTA will agree with Arlington regarding Columbia Pike as a streetcar. The FTA likes to compare alternatives to a bus mode
 - Important for the transit service to have a low operating cost because that is funded by the City's General Fund
 - Already approved density at Landmark/Van Dorn is about 12.5 millions square feet
- *Anna Bentley*
 - Glad that all alternatives assume dedicated right-of-way
 - Right-of-way impacts do not appear to be as severe as expected based on graphic presented
 - Question: How many and which of the federal funding recipients are building on existing systems? Can these types of projects be funded if conditions warrant it?
 - Response: Dallas DART and Seattle in the last couple of years
 - Glad a maintenance facility was considered, this is important
 - The environmental impacts of vehicles vary by type
 - Regarding Census and MWCOG data, not only the numbers of residents but the age brackets, i.e. baby boomers, working-age group, will dictate the types of trips needed and transit-reliance
- *Poul Hertel*
 - A report from Munich shows growth in the interest in streetcar in the U.S., but studies are incomplete regarding ridership optimism and mode bias
 - Streetcars requiring standing is a problem
 - Would like to see a more thorough research of user costs



- Environmental costs are not included and should be an add-on
 - The mode should be as fast as possible
 - Eliminate Alternative E
 - Concern regarding Alternative B in mixed traffic, would like to see a statistical analysis of the effect of traffic events on travel time
 - If the City were to get Alternative D, will the West End be in perennial redevelopment mode? In the East part of the City, redevelopment does not benefit residents, maybe it benefits the City
 - In Potomac Yard, all of the development-generated revenue is going toward the Metrorail station
- *Public Comment on Corridors A and B*
 - Residents of Patrick and Henry Streets have their windows four feet from the street
 - Environmental impacts should consider impacts to households
 - Residents offer to provide a walk-thru of their neighborhood
 - Response: The evaluation criteria can be adjusted to reflect specific concerns, look more closely and noise, vibration, streetscape, and structural impacts. A field trip may be scheduled as part of a CWG meeting
 - Patrick Street has parking on both sides and 3 lanes, but only after I-495 clears out
- *Public Comment on Corridor C Secondary Screening and Alternatives*
 - Feel there is pressure on West End residents to accept a streetcar, take streetcar out of the equation
 - Streetcars do not make sense, Columbia Pike is already having cost overruns
 - Interest rates for bonds are increasing, bonding will go down
 - There are an existing high number of bus riders, there is no Metro
 - Do not ignore costs because there are bonding needs and bond interest rates are going up
 - Need a cost-benefit analysis
 - Test ridership with a bus, start small and do it right
 - Coordinate with the BRAC transportation plan
 - Get the best transit system the City can afford
 - Concerned with starting with rapid bus/low-end BRT because it can get a bad reputation
 - Need high-end BRT to get speed in the service
 - Do not need streetcar for the snob appeal
 - Question: can cars use the bus lanes?
 - Response: No, dedicated BRT lanes would be separated by a median barrier
 - Question: Do ridership projections only of riders with origins in Alexandria?
 - The projections are for the whole route, but do not include ridership projections for Columbia Pike
 - Suggestions to look at mass transit in Utah originating with the Olympics
 - Standing is a very significant issue, vehicles should hold lots of people sitting
 - The location of storage and maintenance facilities will be controversial, look early and expect push back
 - Higher end rail is more successful in generating ridership in the long-term
 - Operations costs is critical in the long-term
 - Keep the needs of bicycles and pedestrians in mind
 - Need a multi-phased approach and commitment for the long-term from the City to keep the transit in the plan and search for the needed money
 - Transit service will require dedicated lanes
 - Streetcars are the best option
 - There are studies that say planners underestimate rail ridership in projections



- Not thrilled with density, but if you cannot go out, you must go up
- Question: How long is a queue jump lane?
 - Response: Depends on the location and is a compromise between impacts, need, and cost-effectiveness. Usually the lanes are several hundred feet in length
- Question: Will the three high-capacity transit corridors be one ride or will they require transfers?
 - Response: Current assumption is line-haul and require transfers between them
- In the inner suburb of Alexandria with many workers commuting into and out of the CBD, the flaw with a Columbia Pike connection is the length of the trips
 - Response: Yes, but commuters will not always have to go north, they could go south and get on Metrorail
- Question: Could there be with a streetcar a transfer to an express bus for the I-395 corridor?
 - Response: Yes
- Question: In the next phase, will there be a cost-benefit analysis and handicapping of the alternatives regarding the probability of receiving federal funding?
 - Response: Will look at that in the implementation plan for the selected alternative
- Question: Has the City consulted any nearby jurisdictions that already have light rail?
 - Response: The City is coordinating with Arlington and Fairfax Counties. The consultant team works on streetcar and BRT projects nationwide
- Impact of removing the center green way on Beauregard Street is substantial
- What happened with BRAC is causing problems, bringing density that is unwanted, and attracting more people. Need to wait and see what will work and what people will use
- CWG comments
 - *Councilman Paul Smedberg*
 - At a minimum, keep Alternatives D and E on the table
 - Look long-term and consider neighboring jurisdictions
 - What is built will be with the City for the long-term
 - Need dedicated lanes to address issues
 - Question: The engineering works out for streetcar in the corridor because Alternative G is still being considered?
 - Response: Yes, with some creative engineering and careful location of stations
 - Regarding funding, the importance should not be dismissed but if high-capacity transit is important to the community in the long-term, bonding is an option
 - *Poul Hertel*
 - Hearing that citizens want a rail system
 - Regarding estimation bias, a cost/benefit study found that every system aside from Chicago has a negative result
 - Need an un-biased analysis of ridership and to eliminate personal bias against buses
 - *Councilman Rob Krupicka*
 - Have to think about financing but also do what works in the corridor and is best for the community
 - Need to plan for dedicated lanes and leave long-term flexibility for future and evolving technologies

Conclusions

- Project team will take Corridor C alignment comments into account
- The next meeting is April 21, 2011
 - Recommendations for Corridor C
 - More detailed information for Corridors A and B
 - Location will be announced at a later date



Logistics and Next Steps

- The next meeting will be Thursday, April 21, 2011. The standing meeting is the third Thursday of each month at 7:00pm.
 - A survey for Corridors A and B was available at the meeting and on the project website
 - General comments are accepted on the project website
-