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**Minutes**  
**Tempe Streetcar Community Working Group**  
**July 25, 2011**

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**Meeting of the Tempe Streetcar Community Working Group was held on July 25, 2011, 5:00 PM at the Don Cassano Community Room of the Tempe Transportation Center, 200 E 5<sup>th</sup> St., Tempe, Arizona.**

**Members Present:**

Shana Ellis, Chair  
Michael DiDomenico  
Bob Gasser  
Karyn Gitlis  
Charles Huellmantel  
Margaret Hunnicutt  
Paul Kent  
Charles Lee  
Lisa Roach  
Janie Shelton  
David Strang  
Steve Tyree  
Mike Wasko

**Members Absent:**

Cheryl Hornyman  
Rebecka Johnson  
Frank Granillo  
Nancy Hormann  
Dale Larson  
Mary Ann Miller  
Chuck Newkirk  
Stephanie Nowack  
Sam Wheeler  
Manjula Vaz  
Mark Yslas

**METRO Staff & Consultants Present:**

Marc Soronson  
Ben Limmer  
Carla Kahn  
Howard Steere  
Tad Savinar  
Deron Lozano  
Wulf Grote  
Joe Racosky

**City Staff Present:**

Jyme Sue McLaren  
Nancy Ryan  
Shelly Seyler  
Cathy Hollow  
Bonnie Richardson  
Greg Jordan  
Shauna Warner

**Chairperson Ellis called the meeting to order at 5:15 PM.**

### **Agenda Item 1 – Welcome and Introductions**

Chairperson Ellis welcomed the members to the meeting and asked that the Tempe Streetcar Community Working Group (CWG) members, staff and audience members to introduce themselves.

### **Agenda Item 2 – Approval of Minutes from May 23, 2011**

Chairperson Ellis called for the review and approval of CWG minutes from June 27, 2011. A correction was made by Mike Wasko. Charles Huellmantel made the motion to approve the minutes with the corrections noted and Lisa Roach seconded the motion. The minutes were unanimously approved.

### **Agenda Item 3 – Public Appearances**

There were no requests to speak during the public appearances.

### **Agenda Item 4 – June Community Working Group Meeting Debrief**

Chairperson Ellis turned the discussion over to Marc Soronson.

Marc Soronson explained that in June the CWG was introduced to the concepts for locating traction power substation and how METRO would evaluate potential locations based upon specific criteria such as proximity to guide way, aesthetics, right-of-way availability and adjacent land uses to name a few.

Marc Soronson added that tonight they would provide a recap of the results from the June meeting discussion on track configuration and stop locations. Marc presented an overview noting the staff recommendations and recapped the results of input from the CWG members on preference to track configuration and stop locations, as follows:

- For the section along Mill Avenue between Southern Avenue and 13<sup>th</sup> Street, the recommendation includes one shared curb lane with modern streetcar and vehicle traffic, as well as one through vehicle-only travel lane in each direction with protected left hand turn pocket and a bike lane. For the section along Mill Avenue between 13<sup>th</sup> Street and University Drive, significant technical evaluation and design is still needed to formalize a recommendation.
- For the section along Mill Avenue between University Drive and Rio Salado Parkway, the recommendation is one shared through lane with modern streetcar and vehicle traffic, with left hand turn pockets, on-street parking and a bike lane. Southbound Mill Avenue would remain as it is today.
- For the section along southbound Ash Avenue between University Drive to Rio Salado Parkway, the recommendation calls for a transit and right turn only curb lane in conjunction with an exclusive transit lane north of where the right turn lane terminate, as well as one through vehicle-only travel lane in each direction and a bike lane. The continuous center left turn would be removed and replaced with a left turn bay sufficient for projected left turn storage. On-street parking along southbound Ash Avenue would be eliminated, but additional on-street parking would be added to northbound Ash Avenue.

Marc Soronson highlighted the comments received by CWG members at the previous meeting, as follows:

- Mill Avenue University to Rio Salado – Curb Lane running
  - Extra traffic lane for downtown should be considered
  - Access for disabled persons to the streetcar can be a challenge and is not clear
  - Bicyclist safety is a concern with bike lane location
  - Overhead catenary system will be obtrusive because of the poles and wires
- Stop Locations
  - Rio Salado Stop location does not serve Hayden Ferry Lakeside well
  - Gap between stops at 9<sup>th</sup> and 6<sup>th</sup> Street is too large
- Ash Avenue - Shared Curb Lane
  - Maintain consistency in placement of bike lane was a concern

### **Agenda Item 5 – Unresolved Issue – Ash Avenue Bike Lane Configuration**

Marc Soronson noted that the east and west curbs of Ash Avenue stay the same. He added that a reconfiguration of Ash will place the streetcar on the west curb, but it shares the curb lane with vehicle right turns at designated locations. He noted that 99% of the time the streetcar will be traveling in the southbound direction and will occasionally operate in the northbound direction during special events. He noted that the bike lane will be east of the streetcar. Marc Soronson said the street gets slightly reconfigured by removing the continuous left turn lane, but retaining the left turn pockets at intersections and adding new on-street parking on the east side of Ash. He stated that this addresses the questions about consistency on Ash and how the curb lane would operate.

He reviewed the cross sections that illustrated the intersection at 5<sup>th</sup> Street and Ash Avenue. Marc noted that from west to east there would be the streetcar lane (shared with right turn vehicles), bike lane, general purpose lane (southbound), left turn lane, general purpose lane (northbound) and bike lane. He continued to describe the cross section further north noting that by changing the center turn lane to a pocket allows parking on the east side of Ash Avenue. So the cross section further north would include (from west to east) streetcar lane, bike lane, general purpose lanes (southbound and north bound), bike lane and parking lane.

Marc asked if there were any question on that. No questions were asked.

### **Agenda Item 6 – Traction Power Substation Location Options**

Marc Soronson introduced Joe Racosky and noted that Joe would provide additional information on traction power substations. Joe explained that the Traction Power Substations (TPSS) provide the power to the vehicles. He said the substations are to be located up to ½ to ¾ mile apart, based on some refinement of the potential locations and the approach to make the substations smaller in appearance. Joe stated the typical dimension of a TPSS is 10 feet by 20 feet by 12 feet high as a composite size. Joe said that selection criteria for final sites will be based on:

- Regular spacing for distribution of power along the streetcar line;
- Access and setbacks for the substation, allowing for room to provide access for maintenance

- Connections to utility providers;
- Sensitive site avoidance such as parks, historic or culturally significant sites;
- Ability to minimize adverse effects on future development and redevelopment sites; and
- Minimizing visual intrusion.

Joe Racosky explained that METRO hopes to use prefabricated stations, rather than custom station; but to use the small but many boxes approach similar to the Portland system. Tad Savinar added that the example shown includes wrapping a pre-fab building with wood and an exterior treatment. He said there are lots of ways to deal with architectural treatment but the urban design guidelines will talk about the scale of the improvements at a human scale and the opportunity for screening walls, landscaping or art. Tad noted that the guidelines will state that the structures may be the same but the solutions for siting will be site specific. Joe continued to show examples of the substations from Portland and Seattle Streetcars and the Phoenix light rail system. He provided three examples to give a sense of scale for the substation structure and described each:

- Portland Streetcar TPSS is 10 feet wide by 15 feet long and 12 feet high
- Tucson Streetcar TPSS will be 14 feet wide by 28 feet long and 10 feet high
- Phoenix Light Rail TPSS is 23 wide by 44 feet long and 15 feet high

Joe Racosky noted that twenty candidate locations have been identified, and they have been vetted among METRO and Tempe staff to share with you as a universe of sites. Joe said he wanted to make sure that the CWG felt there were no fatally flawed locations. Joe explained that they have not spoken with any property owners, which will come later. Joe continued to say that the segments of the alignment are divided from A to F. Section A has three potential sites in the northern part of downtown along Ash Avenue. Section B has five potential sites on Ash Avenue further south to University including some within the Chase development where there is a loading zone tucked behind the garage and one building. The southernmost one is along Mill by a parking lot.

Bob Gasser asked if one of the locations near Chase was located at the entrance to PF Chang's restaurant. Jyme Sue McLaren noted that it further to the west, by a pedestrian driveway at mid-block. Charles Huellmantel responded that PF Chang's is at the corner adjacent to two new sub shops and a gate that would take you back to the office loading. Joe noted that there is a roll plot available to look at in greater detail if anyone is interested. Mike Wasko said that the three locations by Chase are less desirable options simply because it is congested and would be a more inviting area for pedestrians. Joe noted that the spots have been located generally without being sited in engineering plans.

Joe Racosky continued to say Section C has four potential sites on Mill Avenue between 10<sup>th</sup> Street and 13<sup>th</sup> Street, where most are near businesses or in the right-o-way. Section D has five potential sites in the area clustered near the railroad underpass, including near the hospital, railroad tracks and edge of the ball fields by the high school.

Lisa Roach asked how secure the buildings would be to vandalism near the high school. Ben Limmer noted that copper theft was an issue during construction. Wulf Grote said that he hadn't heard of any vandalism other than graffiti.

Joe Racosky said Section E has three potential locations on Mill between Broadmor and the Credit Union. He continue to say that Section F has two potential sites, one west and one east of Mill Avenue at the north end of the commercial centers. Joe noted that if the project were to be extended in the future, additional power substation would be added further down the line.

David Strang asked if these were maximum number of sites needed. Joe Racosky noted that these are the options and if the substations are the smaller sized substations it may require five or six site locations, and if it's the larger sized substations, three or four could be needed. The suggestion we have heard from city staff is to evaluate smaller substations that are easier to integrate into the existing environment. Joe asked the CWG if they were agreeable with that philosophy of using smaller substations that can be tucked into development and not be as visually obtrusive. Consensus around the table was yes. Mike Wasko asked if a combination of both large and small substations could be utilized, like a large one by the Light Rail TPPS and smaller ones near residential areas. Joe said that there is an opportunity for mixing sizes depending on the opportunities for sites and how the power connection works. Lisa Roach asked if both large and small substations were as cost effective. Joe noted that both can be considered cost effective.

David Strang asked what the impact would be if we chose to use a wireless technology for the vehicle. Wulf Grote stated that it depends on the type of wireless technology; and one of the technologies we talked about was batteries, but it would not be able to go the entire length, and TPSS's would still be required. In the case of batteries it could only go for a short stretch, like Mill Avenue in downtown. In the case of batteries you do not have to build the overhead lines (in that segment) and there could be fewer power substations as well. Wulf said another option is a streetcar with a linear induction system which means the power is imbedded in the ground, which is more costly to build than the overhead system. In that case you would probably still need all the TPSS's.

Margaret Hunnicutt asked when there would be an opportunity to make objections to the locations. Marc Soronson replied that it would be during the next stage of design when all the variables like to power loads and how many substations are needed; that is when the project team will better understand the needs. Jyme Sue McLaren noted that the project team has not looked at whether some of the TPSS's can be located within the right-of-way avoiding the need to acquire private property. Jyme Sue McLaren continued that some of the potential locations look like they are on private property, but there are instances where the locations may be able to squeeze into public right-of-way. Margaret asked if that also means that it does not have to be in front of the street, but could be at the back of the property in the same vicinity. Joe Racosky said yes, they will look for a place to hide it within a site. Wulf Grote shared that in Mesa where the light rail extension is in 50% design, they have not identified exactly where the TPSS's are located, and so for the streetcar this is not something that can be answered in the next few weeks or months. Wulf added that the locations are shown to identify and limit the number of alternative sites where TPSS's might be located.

### **Agenda Item 7 – Urban Design Guidelines Update**

Tad Savinar highlighted the discussion from the last meeting. He said that the overarching goals of the guidelines are to be something that works with the overall METRO system, but can be customized to fit the character of Tempe. He noted that the stops will be of materials easy to maintain, prudent, timeless and the concept that there are three segments with varying design rather than one size fits all as it passes through Tempe. Tad noted that there has been a lot of discussion about climate protection and how it needs to fit all the established Tempe Design guidelines. About 75% of the guideline content was taken from the City of Tempe design guidelines and the METRO design guidelines, and the other 25% has been created in response to conversations with CWG member, stakeholders and city staff.

Tad Savinar said that at the last meeting the CWG discussed overhead catenary poles and the idea of avoiding conflicts with the adjacent businesses and uses, and this language was added to the guidelines. Tad said the guidelines discuss painting the poles to match the adjacent streetlight pole to blend in, such as what was done with light rail. He continued to say that the guidelines would suggest a Tempe bronze or brown in the downtown area on Mill Avenue and Ash Avenue and light gray on Mill Avenue south of downtown. He noted that in Tempe Beach Park at Rio Salado has blue light fixtures present on the edge of the park, and it might be interesting to incorporate that theme into the poles along the park. He added that perhaps the stop location by Tempe Beach Park could celebrate arrival at the park.

Tad Savinar said that at the last meeting CWG members were concerned about bike safety with the streetcar rail/bike tire conflicts and car door openings by parking spaces, and as a result additional language has been added to the document to reflect these issues. He noted that pedestrian circulation and the potential for expansion of the sidewalks will be incorporated into the guidelines.

Tad Savinar said that the text with graphics will be circulated internally to METRO in August, to City staff in August and ultimately to the CWG in September. Tad noted that he will be back for the August meeting and if there is anything that the CWG is concerned about he will be there to answer questions. Tad asked if there are any issues to discuss at the next meeting.

Karyn Gitlis asked what this document encompasses. Tad replied, everything from design of the stops to landscaping, safety and security, lighting, signage, advertising, overhead catenary, poles, colors and branding, but it does not include the vehicle design. Karyn asked if the guidelines will address stop furnishings. Tad answered that it will have general parameters for the stops and any specific details like shade, safety, colors and materials. He said the guidelines will also address pedestrian and bike circulation and ADA requirements as a tool to point designers in the right direction. Tad noted that in some places it includes language that says “explore” or “consider” without being specific. He said it guides the designers to what Tempe and METRO have already agreed on related to the design. Jyme Sue McLaren noted that the design guidelines for the existing light rail project are available on-line, so CWG members can view the guidelines, as the streetcar design guidelines will be similar to the LRT guidelines.

Paul Kent asked if the design guidelines will be applicable to the power substations as well. Tad Savinar said that the guidelines will talk about how to site them, but will not talk about the number or size.

### **Agenda Item 8 – Streetcar Vehicle Overview**

Terry Nash of METRO said that he would speak on the emerging trends for streetcar vehicles in the US market. Terry noted that there are a number of streetcar manufacturers that have shown interest in joining the US manufacturing market. United Streetcar is the only current US manufacturer. He noted that the products entering the market have level boarding for passengers, much like the light rail cars, are being offered in standard widths of eight feet and eight and half feet; some have off wire (or wireless) technology and can be self-leveling (no bridge plate required for an accessible boarding). Terry listed the different companies that manufacture streetcars and their features which are:

- Bombardier – 100% low floor boarding, in-ground induction wiring as a wireless technology, which is more expensive than the catenary wire systems.
- CAF – a manufacturer from Spain, 100% low floor boarding with streetcar being 70 to 90 feet in length.
- Kinkisharyo – 100% low floor boarding, has Lithium ion battery option for short distances as well as catenary system.
- Siemens – was selected for the Salt Lake City streetcar, is 70 feet in length and has both wire and wireless technology.
- United Streetcar – has been selected by Tucson, has 70% low floor boarding (the remainder is step up), traditional overhead catenary wire, but a wireless option is being developed.

Terry noted that the Bombardier, CAF, Kinkisharyo and Siemens streetcars are much like their light rail cars (in bulk) but shorter. Terry Nash shared that a Kinkisharyo streetcar product will be on display in Phoenix and Tempe in September. He noted that the CWG would be invited to view the car when it is on display. He asked if the CWG had any questions.

Mike Wasko asked what the width difference between custom and standard vehicles was. Terry said that the custom vehicles have no standard sizes and are made to order. He continued saying that for example Bombardier has the eight and a half foot vehicle; Kinkisharyo said they can make an eight foot vehicle, but only the eight and a half foot width will be available within the streetcar timeframe.

Mike Wasko asked if METRO had looked at the Kawasaki vehicle. Terry Nash replied that Kawasaki has not showed interest in the US market, and it will be difficult to buy foreign produced streetcars with Buy America provisions required in federal funding.

Charles Lee asked if there are different color vehicles, and noted that he liked the Red colored vehicles because they are easily seen. Terry Nash replied that the colors can vary, and some vehicles could have full vehicle advertising like seen on some light rail cars.

A CWG member asked how METRO is approaching the criteria and selection of the streetcar. Terry Nash responded to say that METRO will meet the federal criteria and they want a variety of vendors to respond to encourage competition.

### **Agenda Item 9 – Wrap-up and Closing**

Marc Soronson noted that the meeting on August 22 will be the last one for the CWG. Marc Soronson said what will be covered on August 22 meeting.

- What we did over the last months
- How we got to those decisions
- Review the project definition to be advanced forward
- Upcoming public process with opportunities to comment before going to City Council
- Update on the Environmental Assessment.

Marc Soronson suggested that there would be coffee and cake to thank the CWG for all their commitment and work done as part of this process. He said that it had been a good process that METRO got everything for guidance that they needed to get out of it. Marc Soronson said that hopefully the CWG felt that the process offered a good opportunity to participate and provide input.

Chairperson Ellis asked to have a funding update for the group, since we are seeking all kinds of funding opportunities to get enough capital to build this. She said she wants the CWG to know the funding sources likely to be pursued, so that CWG members understand what it means for the project. Marc Soronson noted that he had previously discussed discretionary funding opportunities available for this type of project from the US Department of Transportation. He added that this project fits well into this type of program and METRO is preparing an application for funding through the Transportation Investment Generating Economic Recovery (TIGER III) grant program. He stated there will be heavy competition for these funds, but the streetcar project fits very well into the evaluation criteria. Ben Limmer agreed with Marc that it is highly competitive for the \$530 million dollars of funding nationwide. Ben Limmer added that METRO can talk about that as well as the other options next month.

Marc Soronson said that the public process to roll out the CWG findings will be shared in August. Chairperson Ellis asked if the dates for the Kinkisharyo streetcar visit would be available to share in August. Marc said yes that information would be available then.

Chairperson Ellis asked if there were any other items that METRO should address at the August meeting. Bob Gasser asked whether the schedule for construction would be covered. Chairperson Ellis noted that the schedule is driven by the funding, and added that it would be good to tie that with the discussion of funding.

### **Agenda Item 10 – Future Meeting Date**

Chairperson Ellis noted that the next meeting will be on August 22, 2011.

**Meeting adjourned at 6:25 PM**

Tempe Streetcar Community Working Group  
July 25, 2011

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Prepared by: Nancy Ryan  
Reviewed by: Jyme Sue McLaren

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Nancy Ryan  
Community Development