

Client: City of New Haven
Project Name: New Haven Downtown Streetcar
Location: New Haven, CT
Project No.: 36938392
Issue Date: July 15, 2010

To: Susmitha Attota, *City of New Haven*
Michael Piscitelli, *City of New Haven*
Raymond Smith, *City of New Haven*
From: Stephen Gazillo, *URS Corporation*

**New Haven Downtown Streetcar
Preliminary Alignment Screening and Implementation Plan**

As part of Task 3: Development of Stakeholder and Community Outreach Plan, URS will hold two Stakeholder Meetings. The following are the minutes of the first Stakeholder Meeting, which was held on July 12, 2010:

MEETING INFORMATION:

Type: Stakeholder Meeting
Date: July 12, 2010
Time: 3:00 pm
Location: New Haven City Hall (165 Church Street)
Meeting Room 1

ATTENDEES:

Name	Organization	Phone	Email
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Jim Redeker	CTDOT	(860) 594-2802	james.redeker@ct.gov
Michael Sanders	CTDOT	(860) 594-2829	michael.sanders@ct.gov
David Lee	CT Transit	(860) 522-8101 x203	dlee@cttransit.com
James Rode	SCRCOG	(203) 234-7555	jrode@scrcog.org
Bob Brinton	Town of Hamden	(203) 287-7044	rbrinton@hamden.com
Stephen Gazillo	URS Corporation	(860) 529-8882 x312	stephen_gazillo@urscorp.com
Greg Munden	URS Corporation	(860) 529-8882 x257	greg_munden@urscorp.com
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AGENDA ITEMS:

1. Streetcar Overview

- How do streetcar systems handle being compliant with the Americans with Disabilities Act (ADA)?
 - All modern streetcars are ADA compliant, and heritage and historic vehicles can be retrofitted for compliance.

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- Compliance can be achieved either by having sidewalks and floor heights even or through the use of ramps.
 - Another option is to only have one ADA compliant door and a small platform at each stop that lines up with this door.
 - How long will the streetcar be? For a moderate system, are two-unit streetcars appropriate?
 - Three vehicles of 45-60' in length and operating on 10-12 minute headways are being considered for New Haven.
 - Standard streetcars vary in length from 65 to 100 feet, but lengths can be adjusted by removing segments.
 - How will the streetcar turn around at the end of the line?
 - The cars will be able to travel in both directions, so at the end of the line, the car will just stop and then go in reverse.
 - Most electric conduits for traffic signals are 18-24" deep. This will likely be disturbed by streetcar construction, but they are relatively easy to replace.
 - What is the lifespan of a streetcar battery pack?
 - Batteries need to be recharged frequently.
 - The overall lifespan is yet to be determined because they are a relatively new technology.
 - In addition to battery packs, there are other new propulsion technologies for streetcars.
 - Power pick-up from the rails is not a viable option for the northeast.
 - Does a fuel cell prototype exist?
 - There is one for buses, but not yet for streetcars.
 - Will the catenary system on the alignment be unattractive?
 - San Francisco has done a good job mitigating the visual impacts of overhead power.
 - It is important to plan ahead; it is hard to make an unattractive system attractive after the fact.
 - The binder from the Streetcar Workshop includes examples of how to keep a catenary system from being an eyesore.
 - What impacts will streetcars have on snow removal?
 - The same system will be used on the tracks as is used on the street.
 - Sidewalks will have to be cleared at stops.
 - How do bicycles relate to streetcars?
 - It is important to include cyclists in the discussion from the beginning.
 - Bikes are not perfectly compatible with streetcars, but negative impacts can be mitigated through proper planning and design.
 - Can a streetcar have a bike rack?
 - Space could be dedicated on the inside of the streetcar. If there are space concerns, bikes can be prohibited during peak hours.
 - A bike sharing program could complement the streetcar.

2. The New Haven Streetcar / 3. Discussion

- Will the streetcar be running on any historic tracks?
 - The streetcar will be serving some of the historic routes, but there are no tracks remaining.
- Will there still be two lanes of car traffic?
 - Yes. The streetcar will not remove any vehicular travel lanes.
- Does the placement of the streetcar in the right travel lane preclude the painting of bike lanes?
 - No, but the location of bike lanes may need to be altered. Bike lane placement and design will be examined in more detail during the Alternatives Analysis.

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- Regional Alignment
 - There are two options for getting to Hamden.
 - The first option is Edwards Street. This route features some grade concerns, but it is a critical stop for the starter system because of its proximity to Science Hill and its parking garage. This alignment is preferable if it is physically possible.
 - The second option is Sachem Street. This route has no grade concerns but it would require either a backtrack from the Edwards Street stop or the elimination of that stop on the downtown system when converting to a regional system.
 - The system would include several routes: downtown circulator, Hamden-New Haven, West Haven-New Haven.
 - Signal prioritization is possible over the entire route. Prioritization will be even more critical over longer distances to allow for express regional service.
 - How long will trips take?
 - That has not yet been determined for the regional alignments, but three streetcars would be able to service the downtown alignment at 10 minute headways.
 - Will existing transit routes be changed because of the streetcar?
 - Some routes may be rerouted in order to clear space for the streetcar.
 - The necessity and implications of altering transit routes will be examined further in the Alternatives Analysis.
 - It makes sense to replace some Yale shuttles with the streetcar.
 - Some CT Transit bus routes cannot be replaced by the streetcar because riders are traveling past the end of the streetcar (i.e. up Whitney Avenue). People will not want to change modes mid-trip.
 - Will CT Transit operate the system?
 - This is to be determined.
 - The goal is not to have two competing transit companies.
 - Most streetcars are operated by an existing transit company.
 - The preliminary alignment of the New Haven Streetcar system is very similar to several projects that won TIGER grants (e.g. Tucson Streetcar).
 - The decision to run the streetcar in mixed traffic was a deliberate one; why was it made?
 - Running in mixed traffic is less complicated, less expensive, and takes up less space.
 - An alternative option would be to run the streetcar bi-directionally in an exclusive right-of-way on Church Street. This would leave four travel lanes for vehicular traffic and would only take one lane of on-street parking and a bus drop-off lane.
 - Running in mixed traffic does not preclude the streetcar from rush hour traffic congestion.
 - At what speed would the streetcar travel?
 - Maximum speeds would be 25-35mph, but the average operating speed would likely be around 15mph because of congestion and traffic lights.
 - Signals would be prioritized for the streetcar, and this would allow for slightly higher speeds.
 - Why don't we just make an exclusive streetcar lane?
 - A lane of street parking could be removed. The streetcar is trying to make transit a more attractive alternative, so removing parking would help achieve this.
 - In an exclusive lane, would the streetcar have its own signal?
 - Yes, especially at intersections because of safety concerns regarding vehicular right turns.
 - What lessons have been learned from the previous New Haven trolleybus service?
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- The previous system failed because it was a free circulator that operated infrequently (20-30 minute headways) and only during midday (starting at 11am).
 - The new system will serve emerging job centers, not mature terminus points.
 - The New Haven system would be the first streetcar system in Connecticut. There must be discussions with CT Transit and CTDOT. Who operates the system is less important than the cost structure for operation. It is essential to demonstrate to the FTA that there is a long-term operating plan.
 - The total operating cost for the streetcar will be similar to that of buses. The total operating cost for buses in New Haven is approximately \$80/hour.
 - These numbers need to be revisited.
 - Labor costs will be the same on buses and streetcars.
 - Streetcars will have different operating and maintenance costs than buses.
 - Administrative costs for the streetcar will be similar to those of buses because there will not be a need for an entire new office, but rather a few resources would need to be added to the existing administrative system used for buses.
 - Science Hill garage could be turned into a public, market-driven garage.
 - This could make it a true terminus for a streetcar.
 - Parking may be needed for new Science Hill jobs.
 - There won't be a lot of park-and-ride users for such a short trip unless parking downtown is overpriced or non-existent.
 - Gateway Community College is going to be located downtown.
 - Currently, Gateway students largely drive to school. The relocations may inspire students to seek alternative ways to travel to school. When Capital Community College moved to downtown Hartford, the mode split among students swung towards transit.
 - How will fare collection be handled on the streetcar?
 - The streetcar will not be free.
 - On-board collection would require many fare boxes if all doors were to open.
 - Off-board collection would require platforms.
 - Fare collection will likely be handled the same way as it is on the buses.
 - What are the best practices for fare collection on streetcars?
 - If you want to get mode share, make the streetcar free. You won't know what the loss of revenue is until you have a ridership projection.
 - The streetcar needs to serve the front door of Union Station, even if this costs more money.
 - Could the route that runs to Church and Union be extended to Union Station?
 - Yes, but it would need to continue running in mixed traffic because of the Church Street bridge.
 - Two options:
 - The first option would be to cross to the north of Union Avenue. This would be difficult due to signaling limitations, the width and grade of road, and the short length of the extension.
 - The second option would be to operate in an exclusive lane on Union Avenue. This would require the elimination of on-street parking on Union Avenue from the corner of Church Street South up to Union Station. Travel lanes would be shifted north. This option would require the building of a platform on the median in order not to disrupt the drop-off and taxi area in front of the station.
 - This alignment would eliminate the loop around the maintenance facility.
 - How is the New Haven TOD project progressing?
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- Not very quickly.
 - The City will give URS existing and future development data and ridership projections.
 - A site visit with FTA will be scheduled for mid-September.
 - This will allow time for polishing the alignment and finishing the utilities analysis.
 - Mike Sanders, David Lee, and Jim Redeker are encouraged to attend this meeting.
 - URS will contact FTA to offer updates on the project.
 - There is need for follow-up with the utility companies.
 - UI will spend eight hours looking into the alignment at no cost to the project, but they want to be paid for a more detailed effort.
 - Discussions must be detailed and memorialized.
 - Are there cost estimates for the system?
 - The system will cost more than TranSystems originally estimated.
 - The cost will be determined in the Alternative Analysis.
 - The cost is still within the range of a normal transit project of this magnitude.
 - Overall, does this alignment make sense to the stakeholders?
 - Yes, but the starter system needs to be considered as an independent downtown circulator.
 - Regional routes may be better accomplished by bus service or independent rail systems.

NEXT STEPS:

- Edit alignment to serve Union Station directly via Union Avenue.
- Obtain existing and future development data from the City, including:
 - Union Station TOD Plan
 - Ridership projections
- Update FTA about the first stakeholder meeting.
- Arrange a meeting with FTA for mid-September.
- Arrange a stakeholder meeting for early to mid-August.
- Follow-up with utility companies with thank you letters and copies of meeting notes.
- Draft a letter to UI requesting that they review the alignment. Send to the City for review.
- Arrange a meeting with CT Transit.
- Draft an Alternative Analysis Scope of work; send to the City.