Let's Talk LRVs – the new streetcars
What we heard

September 2007

EHC
Ehl Harrison Consulting Inc.

Let's Talk LRVs
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1.0 Innovative Public Consultation Program Launched

The TTC needs to replace its existing fleet of 248 streetcars, which is approaching the end of its 30-year design life, and which cannot practically be retrofitted to be made accessible for people with mobility difficulties. A large number of new light rail vehicles (LRVs) will also be required for the TTC's Transit City plan – an integrated, 120 kilometre, network of new lines to be built across the City by 2021.

Starting on June 14, 2007, the Toronto Transit Commission (TTC) began an innovative public consultation program called "Transfer to the Future: Toronto is Transit City, Let's talk LRVs – the new streetcars." The intent of the program was to engage a large number of customers and other stakeholders, from all corners of Toronto, in a discussion about their opinions, priorities and preferences related to the design of new streetcars for Toronto. Thousands of people were involved.

The project was led by a team from the TTC (Service Planning, Marketing and Public Affairs), Ehl Harrison Consulting (public consultation specialists) and Infinite Media (web and creative design). The public consultation involved an interactive website, public events in four prominent locations across the City, a media launch and a supporting promotions program. The input received during the consultation program provides important information to the TTC as it develops the technical specifications for its new streetcars and a request for proposals (RFP) for their production.

When a supplier has been chosen, and an initial prototype has been developed, stakeholders will be engaged again so that they can "see and touch" the new LRVs and assist in the process of finalizing the design. The first prototype vehicles are to arrive in Toronto by 2010 and production vehicles are to begin arriving by 2012.

The remainder of this report documents the consultation process, and stakeholder preferences. It should be noted that the terms "streetcar" and "Light Rail Vehicle" have been used interchangeably in this report to reflect both Toronto-speak of "streetcar" and the more common industry terminology of "LRV".

2.0 Consultation Process

"Let's talk LRVs" was launched on June 14 and was concluded on July 31. This section describes who the stakeholders were, what was done to get them involved, and what they said about the process.

2.1 Parts of the Whole

"Let's talk LRVs" consisted of a number of parts, each contributing to a far-reaching, high-impact consultation effort.

1. Unique project identity. *Transfer to the Future: Toronto is Transit City and www.mynewstreetcar.ca.* This project identity was used across all consultation and communications mediums. It reflects the current plan to replace existing streetcars with new, modern, light rail vehicles, as well as the TTC's plan to construct an expanded network of new light rail lines across Toronto.

   Consistent messaging. *Let's talk LRVs – the new streetcars,* was the invitation to stakeholders to get involved in this important public discussion. Whether stakeholders

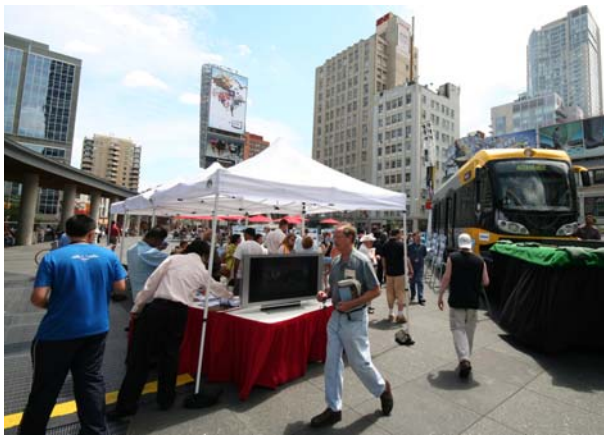
were involved through the project website or at a public event, the information available and the opportunity to participate were similar.

2. Interactive Website. People were taken on virtual tours of the latest designs from around the world and of the TTC's current streetcars and asked, through open-ended questions, to report what they liked, disliked and what was most important to them. In addition, a series of closed-ended questions guided stakeholders to reflect on their priorities, and demographics. Stakeholders were also invited to provide feedback on what they liked and did not like about the consultation process.

   One of the innovations of this consultation was that the website was JAWS enabled. People with visual difficulties were able to manipulate the look of the site to meet their unique needs.

3. Public Events. Four public events were held across Toronto. The locations were strategically chosen to ensure that people in all parts of Toronto, not just in areas with existing streetcar service, were consulted. At each location, there was the potential of a broad range of stakeholders who would be passing by and have the opportunity to get and give information. The time for the public events, from noon to 8:00pm, was strategically chosen to cover the lunch and evening rush hours, and enable people to attend after dinner. If people did not have time to provide in-person feedback, of if they appeared to be passing by the exhibit, they were asked to visit the project website and were provided a card with the web address. The following events were held:

   June 25Finch Station
   June 26Scarborough Centre Station, Albert Campbell Square
   June 27The Albion Centre
   June 28Yonge-Dundas Square

   All of the events included a series of poster boards that duplicated the website information, a written feedback form, the project video, and a number of TTC and support staff. There was a model LRV on display at the Yonge-Dundas Square event, which successfully drew the attention of thousands of passers by.

4. Media Campaign. A comprehensive media campaign was launched on June 14 to support the consultation efforts. The Ontario Science Centre hosted a modern LRV model and a media event, where the TTC Chair and Vice-Chair launched the consultation. The consultation program was covered in each of the major daily newspapers, by a number of broadcast media outlets, by various smaller circulation papers and by a number of blogs.

"*The TTC wants the public's input on what will become the new symbol of Toronto, according to transit chair Adam Giambrone."* Toronto Star, June 14, 2007

"The debate over the new look of Toronto's venerable streetcar begins today." Toronto Sun, June 14, 2007

"The TTC wants to hear from its passengers to help design the inside of its new streetcars." National Post, June 15, 2007

> *"The TTC launched a new web-site yesterday to consult Torontonians about what they want to see in the next generation of the city's streetcars as the transit agency prepares to spend more than $1 billion to replace North America's biggest light-rail fleet."* Globe and Mail, June 15, 2007

5. Advertising. Starting on June 14 and for the duration of the consultation period, weekly advertisements were published in the *Metro*, a daily newspaper distributed at GTA transit stations, and posters and tear-off brochures were placed in all TTC vehicles. A link to the mynewstreetcar.ca project website was also placed on the TTC and Transit City websites. All of these mediums provided information about the public events and the project website.

6. Project Video. A creative, edgy, one minute video was created, showing various LRVs from around the world traveling the streets of Toronto. The video promoted the positive aspects of modern LRVs, including their accessibility and environmentally friendly features. At the end of the video, there was the invitation to "Tell Us What You Think", along with the web address for the project. This video was played on a screen at all of the public events, in TTC stations on OneStop monitors for the duration of the consultation, and for two weeks as part of a loop on the large screen at the north-west corner of Yonge-Dundas Square.

2.2 Stakeholders

The TTC wanted to get broad and meaningful advice.
The target audience for this consultation included:

- TTC customers;
- the Advisory Committee on Accessible Transportation and others with mobility challenges;
- the bicycle community,;
- Toronto residents and business people;
- Greater Toronto Area (GTA) commuters; and
- any other interested stakeholders.

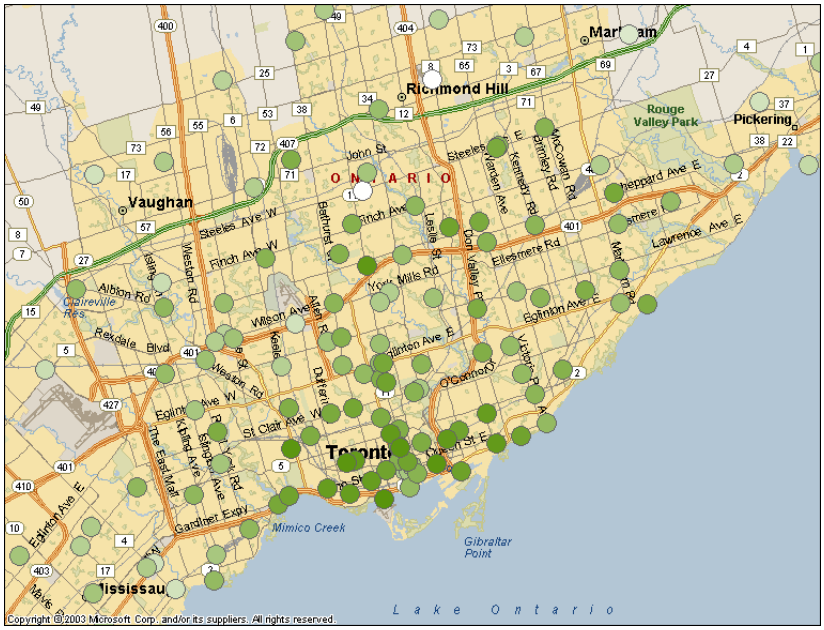
Thousands of people showed interest.
Over the course of the project, there were approximately 282,500 "hits" or visits to the project website by over 29,000 people. It is difficult to determine the number of people who visited public events. According to staff at Yonge-Dundas Square, daily combined vehicular and pedestrian traffic is 117,000. Many of these people will have at least seen the displays. Each of the other three events had hundreds of passers by. Staff was engaged throughout the day at all of the events with people who were interested in providing the City with their opinion.

Thousands joined the discussion.
Approximately 10,700 people provided their opinions.

- 480 people filled out comment forms at the four public events.
- 10 comment forms were mailed in.
- 10,225 people provided comments through the project website.

Who participated?
Stakeholders were asked a series of demographic questions. The majority of respondents were GTA males, between the age of 25 and 40. Approximately 6,900 people provided demographic information.

- 75% of respondents were male, 25% were female.
- About half of the responses were from people who are between 25 and 40 years of age. 28% are under 25 years old; 20% are between 40 and 65; and 3% were over 65.



According to postal code information that was provided, responses were received from across Canada – Vancouver to Halifax – and many points in between, including Calgary, Winnipeg, Ottawa and Montreal. By far the majority of responses were from Toronto, particularly in the downtown core area, as shown on the adjacent map. Dark green dots show postal areas where between 20 and 180 people responded. Light green dots indicate 2 – 19 responses and white dots show areas where there was one response.

Over 3,000 respondents indicated that they would like a summary of stakeholder feedback.

2.3 What did stakeholders say about the process?

To ensure a comprehensive process, and to provide an opportunity for continuous improvement, stakeholders were asked for feedback on the consultation process – what they liked, and what could be improved.

An overwhelming majority found that the website and public events were useful and provided a meaningful opportunity to be involved in this process.

> *"Change nothing, very useful."*
> *"Staff was very knowledgeable and helpful."*
> *"I love the accessibility of the website. It is fabulous."*

Some felt that a decision had already been made.

> *"This was great if you actually use the information and listen to the people. I'm worried this is just a form of lip service and some backroom dealings will override everything and make this a waste of time. Please listen to the people! We care."*

Many suggestions for improvements were made, including:

- **General Comments**. Add more information about the LRV pictures from around the world; provide more process information; ask more questions; advertise more broadly; provide options to comment in different languages; identify concept vehicle (or top five design proposals) for public comment; provide models/illustrations of the preferred LRV designs as the project develops; identify the environmental benefits of LRVs; describe how the LRVs would work in Toronto, including scheduling. There were also suggestions to publish the results of the consultation along with feedback to the responses provided.
- **Website Comments.** Slow down the scrolling pictures; provide more room for comments.
- **Public Event Comments**. Host more events; provide additional staff to answer questions.

These comments provide valuable guidance to future TTC consultation initiatives.

3.0 Many messages were loud and clear

Tell us what you think. This was the invitation that thousands of Torontonians accepted. Through a series of questions, stakeholders provided key messages, priorities, and vehicle preferences. Many of the responses were very detailed; some were humorous; some provided feedback not necessarily related to the purchase of new LRVs.

> *"Please destroy, bury and eject into space any and all combinations of red "velvet" and faux wood paneling."*

Analysis uncovered a number of contradictions (e.g. wider aisles vs. more seating; futuristic vs. retro look; more hand holds vs. less clutter; seats that are easy to clean vs. soft, comfortable seating). This is illustrative of the trade-offs that will likely need to be made on some aspects of the vehicle design. Analysis of the responses also uncovered areas where there are strong preferences (e.g. more seats, low floor design).

This section identifies the priorities, key themes, and preferences. The question stakeholders were asked is noted, followed by a synopsis of the responses received.

3.1 Messages for decision-makers

Question: "If there was one message that you could give us about what you'd like to see in Toronto's new Light Rail Vehicles, what would it be? "

Stakeholders offered this advice.

- Be a leader.
- Do this quickly.
- Be competitive with cars.
- Pay for quality.
- Improve your service.

> *"Make sure they look cool so people will want to ride them. If it's just a minor change people won't care. They have to look futuristic. I love the TTC, but my friends don't."*
>
> *"Lead the world for once. I hate making excuses for why our transit isn't as good as (insert European City Here). Make us the envy of someone, that'd take care of everything."*
>
> *"Build a LRV the City can be proud of both in its form and function. I feel this is an opportunity for Toronto to showcase our innovation, care for the environment and civic sense of duty."*

3.2 Priorities

Question: "Let us know which features are important to you. Choose your top 5." People were given the following choices:

- more seats;
- low-floor design (e.g. no steps at the entrance);
- comfortable and easy to access seats;
- wide aisles;
- wide doors;
- audio and visual announcements of stops;
- more handholds/stanchions to hang on to;
- windows that you can easily open; and
- other (please indicate).

More seats and low floor design are the top priorities for people, followed by comfortable and easy to access seats. Since this was a comparative exercise, it can be noted that while audio and visual stop announcements, wide doors, more hand holds, and windows that can be easily opened were ranked lower, it should not be interpreted to mean they are not very important to people.

1st Rank
65% of those who placed 1st rank votes selected "More Seats ".
25% of those who placed 1st rank votes selected "Low Floor Design".

2nd Rank
50% of those who placed 2nd rank votes selected "Low Floor Design".
28% of those who placed 2nd rank votes selected "Comfortable and Easy to Access Seats".
15% of those who placed 2nd rank votes selected "Wide Aisles".

3rd Rank
40% of those who placed 3rd rank votes selected "Comfortable and Easy to Access Seats".
28% of those who placed 3rd rank votes selected "Wide Aisles".
18% of those who placed 3rd rank votes selected "Wide Doors".

4th Rank
Those who placed 4th rank votes, made the following selections:

- "Wide Aisles" (32%)
- "Audio and Visual Stop Announcements" (31%)
- "Wide Doors" (18%)
- "More Hand Holds" (13%).

5th Rank
Those who placed 5th rank votes, made the following selections:

- "More Hand Holds" (27%)
- "Wide Doors" (26%)
- "Windows that can be Easily Opened" (24%)
- "Audio and Visual Stop Announcements" (16%).

Other features of importance that were written in by participants include items such as air conditioning, dedicated family seating for strollers, bike storage, and garbage containers.

3.3 Key Themes

Stakeholders were invited to go on a pictorial tour of current TTC vehicles and modern LRVs that are in use around the world. Stakeholders could comment on all or none of the pictures, and on any of the features they showed. After reviewing all of the comments that were submitted, a number of key themes emerged. It should be noted that a number of the comments would be appropriate under various themes; however, to avoid duplication, each comment, or theme, appears only once.

This section outlines that information that was derived from the feedback from participants. Direct quotes have been included to provide a flavour and range of the opinions expressed.

Vehicle Design and Appearance

> *"Sleek, efficient, sufficient room, but still a RED rocket (don't try changing colours, because TTC is a specific brand and it looks good)"*
>
> *Rider friendly. Remember... each rider uses the TTC for different reasons. Some to take their children to daycare, some to shop, some to get to the park... the new vehicle must be able to adapt...*

Various aspects of vehicle design and appearance have been grouped in this section. It should be noted that the majority of the comments relate to this group of topics.

A) Accessibility

> *"The stairs have got to go. The only thing I dislike about Toronto's streetcars is that they are not accessible for people with disabilities or parents with strollers. Street-level floors are a MUST."*
>
> *"Although I'm not disabled or handicapped in anyway I feel that street cars should be designed to be as accessible as possible to bring the disabled closer to equality. "*
>
> *"It is of the utmost importance that light rail be accessible to persons requiring accommodation. This includes not having steps onto the car, as well as announcing each stop as it approaches."*
>
> *"Everything must be scooter, bike, baby-carriage accessible, and it's also great for anyone with a cane, walker, etc. Stairs just don't make sense anymore."*

- Many stakeholders commented on accessibility in general and various features that could enhance the design for various customers. There is great support for the purchase of LRVs that are accessible for wheelchairs, mobility scooters, strollers, bicycles, people with mobility challenges and passengers carrying groceries and large packages. There should be dedicated spaces for strollers, wheelchairs and large mobility scooters.
- Accessibility for those who are visually impaired should include large, high contrast signs, brightly-coloured (yellow) handholds and a tactile way to find the doors.
- Accessibility is something that runs through the entire design (e.g., placement of poles should not hamper entrance onto the LRV or passage through aisles, especially for single or double strollers and mobility devices, sizes of aisles, seats, wide doors, more than one entry/exit point, etc.)

B) Seating design and configuration

> *"As a regular commuter, I feel all TTC (vehicles) need more seats, particularly in rush hours. I support compactly designed maximum seats for each street car."*
>
> *"Softer, comfortable seats with covers that can be cleaned/sterilized to kill germs would be most appropriate."*
>
> *"I like flip up seats and lots of bars to hang onto for those standing."*

- As with accessibility, seating was a key area of comments. Stakeholders are interested in a seating configuration that maximizes the number of seats available.
- Forward-facing seats are preferred over side or backwards-facing seats.
- Folding seats are welcomed to accommodate more standing room during busier times.

- High seats that provide head and neck protection are requested.
- There are mixed comments on seats which people must step up to (e.g., would enable passengers to better see sites through windows and would provide leg room for taller passengers, but could present difficulties for elderly to use).
- The chairs should not look cheap.

C) Distinctive design
- The LRVs should have an iconic design that stands out from other cities and makes a statement to the world; it should be futuristic (sleek and modern), futuristic with character or have a distinctive retro look.
- Most comments on wood paneling are negative; although some do think it has a good retro look.
- Distinctive exterior headlights (e.g., three headlights) and/or coloured light (e.g., the traditional green streetcar light) that identified street car to patrons at a distance.
- Keep a distinctive bell that people and cyclists can easily recognize as belonging to a streetcar, so that they are warned of its approach.

D) Colour
- There were many calls to keep the TTC's red/white colours. The exterior colour should make the LRV stand out from traffic/background. Other colours suggested included blue and green.

E) Doors
- The new LRVs should have large/wider doors, with more exits/entrances, located to best improve flow
- A push-button system of door opening is preferred by many respondents; there are also comments about preferring the current method (i.e., standing on steps). Appropriate signage should be present to clearly explain whatever method is used for door opening for newcomers or visitors.
- Wide, sliding doors that open quickly are preferred to folding doors. If there is automatic door closure, it needs to make certain that all passengers can exit before they close.
- Doors must be designed to require minimal maintenance.
- Some preferred folding doors to maintain heritage.
- There are numerous comments suggesting passengers only enter at the front and exit at the rear.

F) Windows
- Large windows are preferred since they increase visibility and light, and should allow people to see outside when standing (although some concern was noted about impact on energy efficiency and heating and cooling).
- Tinting/blinds is suggested to keep out sun's rays during warm days (though there are concerns about maintenance for blinds and how much use a short-term rider would get from shading).
- Prevent fogging up in winter.
- There are some suggestions for windows that can open far enough to provide reasonable air flow. Enable the driver to auto-lock windows that can open when air conditioning is operating.
- The large windows should protect against UV rays.
- Remove ledges on windows to minimize collection of litter.
- A sunroof could be installed to provide more natural light.

G) Articulation
- There were comments requesting ways to improve a standing passenger's stability in the articulation joint (e.g., hand holds, something to lean on) and flush joints so

passengers do not trip on them. The TTC could also provide seats in the articulation joint since passengers have difficulty standing there.
- Consider both articulated LRVs (ability to link two or more units, and/or longer than the current articulated ones) for peak service and smaller non-articulated LRVs for off-peak service.

H) Use recycled/recyclable materials in the design.
I) Provide an area for large dogs.
J) There were a number of comments suggesting the use of double-decker LRVs on at least some routes.

Comfort and cleanliness

"The worst thing about Toronto transit is the garbage that people leave on the trains and buses. If they don't care about their surroundings they sure won't care about anything else."

Stakeholders offered a wide range of feedback related to comfort and cleanliness.
- The LRVs should have good environmental controls – air conditioning and heating. The temperature in winter should not be kept too high, or in summer, too low.
- Provide garbage/recycling bins, newspaper holders (to keep papers off the floor and allow for their reuse).
- Have a "no eating or drinking" policy.
- There should be many handholds or stanchions (metal poles). Stanchions were preferred to straps, or swinging handholds. Horizontal stanchions along the ceiling could be functional and give a less-cluttered appearance. Colour all handholds one colour, such as yellow, for greater visibility. Keep them clean
- There needs to be options for shorter people (including straps, lower stanchions) who cannot reach overhead stanchions. Handles on the back of seats increase stability versus overhead handles. Provide stop request buttons on poles at different heights to accommodate short/tall people. The stop request cord currently being used cannot be reached by everyone.
- The interior of the LRVs should be designed to facilitate cleaning (e.g., no cloth seats). The interior colour scheme should make the interior look bright and non-dingy. Flooring should be non-slip, non-staining and should promote draining/cleaning.
- There was a wide variety of comments received regarding seat comfort (e.g., there is a preference for softer seats as opposed to harder plastic seats, a request for more leg room for taller people/variety of seats to accommodate different heights, consideration of accommodating plus sized people)
- Many commented that seats should be easy to clean.

Safety and security

"I believe that the most important things about our public transit should be safety and for it to be environmentally friendly. There is no need for fancy or "futuristic" type designs."

"Safety first!! Make sure there are plenty of seats and they are comfortable."

- Some respondents felt that it would be safer for the driver to be separated from the passengers,
- Other respondents wanted the driver to be accessible to them because to provide a more welcoming environment and passengers would feel safer. .The drivers also know the routes and are able to provide directions.
- Concern was expressed about boarding and alighting LRVs.

  - Vehicle exit/entrance must be safe from motorists. These were some requests for curbside loading/offloading, as opposed to islands.
  - There should be warnings (e.g., flashing lights or a stop sign) to warn motorists that doors are opening.
  - There should also be warning for disembarking passengers to watch out for traffic.
  - A mirror (popping out as the doors open) should be located outside the doors to help passengers to look for traffic.
  - The streets at LRV stops should have highly visible warning signs for motorists.
- The vehicle interior must be as safe as possible since passengers are jostled as the LRV moves (e.g., care must be taken with protrusions).
- Have security cameras (e.g., to catch cars that do not stop for exiting riders, and to keep the driver informed of activities inside at the back).
- Cover wheels to make it less intimidating to cycle or walk around. Also, it will baffle some of the noise.
- Limit blank space to discourage graffiti.
- Enforce severe penalties for vandalism.
- Emergency exits should be as accessible as possible to wheelchairs, etc.
- Interior steps, on models with partial low-floors, may be a trip hazard.
- Use large exterior signage (e.g., route/number) that is clearly visible from a distance at the front. There are some problems with reflection obscuring current signs behind the windshield.

Convenience

"Get up to date. Our streetcars look like stone aged machines compared to our European counterparts. Digital advertising (LCD monitors onboard) and Cell/Internet access onboard (Modernize it!!!)"

"Television panels, vending machines, and payphone stalls in the LRV. Please bring the new fleet in as soon as possible since Toronto is seriously lagging behind other major cities."

A) Fare Vending Machines
- Fare vending machines are recognized as a good idea. However, there is concern that this could cause congestion and delays during vehicle boarding.
- Employ debit or credit cards to speed up the system.
- The automated machine could be for fare/ticket validation only, rather than purchasing fares or providing change, to prevent congestion.
- Vehicles with proof-of-payment (POP) systems should be policed to prevent "cheating".
- There should be a dual entry lane: one line for manual ticket validation and another for electronic validation to accelerate loading.
- Fair collection/vending could also be done at stops to accelerate boarding.
- Have two vending machines: near driver, and at rear exit.
- There is also concern for needing to go through wallets for money or entering PIN numbers in a tight public place.

B) Video Monitors and Electronic Displays
  - Video Monitors could be used to provide useful information (e.g., next stop announcements, route information including depiction of all stops, local weather or news, current events, emergencies/delays, Amber Alerts, map of location/real time tracking of LRV on route, alternate languages, etc.). LED/pixel boards were suggested as adequate instead of monitors.

- Although video monitors were often recognized as a needed or useful revenue generator, there is a preference to minimize advertising on them. Advertising should not be blatant or intrusive (e.g., no sound). Most riders who commented on this felt that advertising clutters the LRV and that they are subject to enough advertising on the TTC.
- Provide signs at stops indicating when the next LRV will arrive, with update of route delays.
- Some people wanted television and public art in the LRVs; others did not.
- Provide screens to indicate which side of doors will open to exit (on vehicles with doors on both sides).
- Include a clock in every LRV.

C) On Vehicle Storage

- Some felt that having baggage/storage racks is a good idea and others feel TTC users would not leave their baggage unattended.
- There is support for bike racks, but with some concern about space usage and difficulties with maneuvering a bike during crowed times, or delays associated with loading and unloading bikes. Stakeholders suggested that to successfully accommodate bicycles, storage outside the LRV might work. Racks should be easy to use (even for people who cannot lift their bikes). Bike storage should be/should not be allowed even during rush hour, and perhaps only some LRVs should be designated for bike storage. This space could be multi-purpose, for bikes, standing, wheelchairs, strollers, or even general seating. There is concern related to how safe bike racks would be for adjacent passengers (e.g., handlebar encountering passengers).

D) Auditory Announcements

- There should be auditory/automatic announcements for destination, next stops, and large signs noting the next stop/stop requested.

E) Electronic Devices

- Provide wireless Internet access, as well as GPS and radio frequency identification (RFID) to implement live street car tracking via mobile phones or the internet, or telephone voice service.
- Include electrical outlets for electronic devices.

Vehicle Performance

- The motors should be energy efficient and able to capture (kinetic) energy when breaking so that less energy is wasted. The LRVs should be designed with lighter materials to improve energy efficiency. Use solar power to power some systems, to lesson draw from the electricity grid.
- It is suggested that the new LRVs should have an improved mechanism (i.e., a pantograph) to collect the electricity to minimize current problems with the current mechanisms jumping lines.
- The new LRVs should operate quietly (e.g., prevent wheel squeal on turns, eliminate high-pitched metallic whine when LRVs are at speed on straight track) for the benefit of people inside and outside the LRV.
- External noise should be attenuated inside the LRV.
- Minimize energy consumption from lighting (e.g., turn off lights when there is sufficient natural ambient light). Maximize natural lighting. Make sure artificial lighting is warm and not glaring.

TTC service and vehicle operation *(Right-Of-Way (ROW), preferential traffic signaling for LRVs, scheduling)*

> *"There should be fast and frequent service. Reduce the stops like most streetcars have nowadays. Incorporate audio visual interactive maps, airport services and connections with other GTA transport systems."*
>
> *"Provide fast reliable efficient service that will not lead to additional fare increase."*

- There is strong support for dedicated ROWs. Some associated comments included: make sure there are safe crossings for bicycles; LRVs should have preference for traffic signals at intersections/transit priority routes; use existing ROWs (e.g., hydro).
- There is the expectation that ROWs would make service faster and safer for loading/disembarking.
- Do not allow LRVs to impede the flow of other traffic.
- There were many positive comments about greening ROWs by having grass between tracks. There were some concerns expressed about the cost of maintenance (e.g. need for watering) and public safety (i.e., preventing children and dog-walkers from using the area). Some suggested planting trees/brush along the ROWs/medians.
- The streets on LRV lines should have centre pedestrian islands, for both directions.
- Major stops could have a platform on either side of the LRV to utilize doors on both sides.
- Various proposals were presented for improved routing and service.
- There needs to be faster, more frequent and reliable service, with shorter waiting times. The LRVs must be on time.
- A solution needs to be found to prevent broken down-street cars from stopping traffic (e.g., towing).
- Articulated joints are generally welcomed because they increase vehicle capacity and reduce driver costs. However, some felt that larger vehicles would imply that there would be less frequent service, which is not desirable.

4.0 Conclusion

> *"Our streetcars are a moving landmark. The world knows Toronto for its streetcars and its time we get some that are not only cutting edge, but one that looks the part and gives a good first impression."*

There is a great deal of interest in Toronto about public transit and in the future of its streetcars. Thousands of people had an interest in this project. Over 10,000 people told the TTC their thoughts, priorities and preferences not only about streetcars but about how they want to be consulted. Many comments were received on a range of other important aspects of the LRV and TTC service.

A review of all of the comments revealed that many stakeholders have a preference for and support of:

- Low floor design;
- Accessibility features;
- Seating design, specifically favouring many, comfortable seats;
- Large, wide doors;
- Distinctive Toronto design;
- Safety, especially as it relates to boarding through traffic; and,
- A reliable, safe, clean system.

The feedback described in this report provides valuable guidance to the process of seeking a supplier that will provide the City with the most suitable and accepted streetcar. The TTC can now translate this information into physical design specifications, so that new LRVs will exceed its customer expectations, build ridership and meet the physical demands of traveling Toronto's streets.

5.0 Recommendations

It is recommended that:

- Stakeholders who indicated that they would like to be informed about the outcomes of this process be circulated a copy of this report, and/or the associated staff report to the TTC.
- The feedback and preferences provided by Toronto stakeholders be incorporated into the Request for Proposals that is to be issued in Fall 2007 to potential LRV suppliers.
- TTC continue to consult as it moves towards the purchase of new streetcars. It will be important for customers and TTC operators to be able to "touch and experience" the potential vehicle prior to mass production.

6.0 Need More Information?

Any questions or comments about this report should be directed to:

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For more information about the Toronto Transit Commission, please visit www.ttc.ca.

For more information about the Transit City Plan, please visit www.transitcity.ca.

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