Skyway Subcommittee & Skyway Advisory Group Meeting #2

Date: **October 12, 2015**
Time: **2:00 - 4:00 p.m.**
Location: **JTA Boardroom**

Agenda

2:00 – 2:10 Welcome

2:10 – 2:15 Work Plan Update
- *Meeting 1 Recap*

2:15 – 2:35 System Condition Assessment

2:35 – 3:00 Review of Skyway Options/Mode Comparisons

3:00 – 3:15 Peer Cities/Downtown Circulators

3:15 – 3:35 Meeting 1 Follow Up
- *Questions*
- *Skyway Customer Profile/Surveys*

3:35 – 3:45 Questionnaire #1 – Review of Responses and Additional Questions
- *What do you need to know to develop an informed opinion on the Skyway's future?*
- *What is important to you in making this decision? Please rank.*
    - *Downtown mobility*
    - *Capital costs and long term operating costs*
    - *Downtown Economic Development*
    - *Connectivity with larger transit system*
    - *Relationship with funding partners*
    - *City Image*

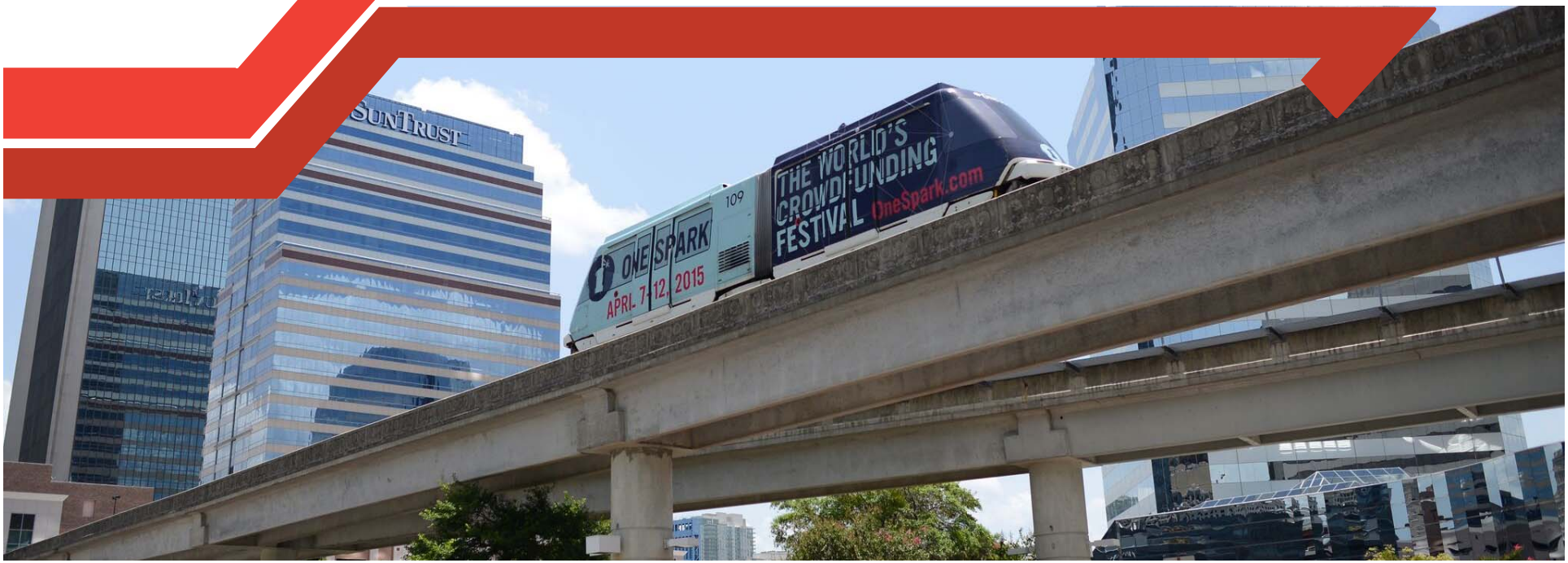
3:45 – 3:55 Public Comment

3:55 – 4:00 Comments from Chair/Next Meeting
- *Meeting 3 – October 26, 4:00 – 5:00 p.m., Main Library, followed by Public Forum 5:30 – 7:00 p.m.*

4:00 Adjourn

JTA SKYWAY SUBCOMMITTEE AND SKYWAY ADVISORY GROUP

MEETING #2
OCTOBER 12, 2015



Agenda

- Meeting Minutes
- Meeting #1 Review/Work Plan Update
- Skyway Condition Assessment/Maintenance Activities
- Review of Options/Mode Comparisons
- Peer Cities/Downtown Circulators
- Meeting #1/Questionnaire Follow Up Items
- Public Comment

Mtg #1 Review/Work Plan Update

Skyway Condition Assessment

CONDITION ASSESSMENT
VEHICLES
&
OPERATING SYSTEM

Vehicles

Train	Operational Readiness	Mileage (07/2014)
101	In Service	421863
102	In Service	472169
103	In Service	431855
104	Out of Service	284555
105	Out of Service	326452
106	Out of Service	408385
107	Out of Service	288004
108	In Service	306184
109	Out of Service for Maintenance	425333
110	In Service	303008

Vehicle Propulsion & Bogie

- Issues
  - Propulsion Long Repair Lead Time
  - Propulsion Drive Controller Circuit Boards Availability
  - Bogie “wobble” on a horizontal curve (Central-Hemming Plaza)

Electromagnetic Compatibility (EMC)

- Issues
  - Permissible Movement Authority (PMA)
  - Antenna connections and routing (on-board)
  - Propulsion cable shielding
  - Communication cable conditions
    - Excessive cable splicing
    - Cable Sag

Operating System

- Issues
  - Supervisory Control and Data Acquisition (SCADA):
    - Obsolete – power supply and distribution needs upgrade
    - Control Center console upgrade
  - Other Operating Systems
    - Remote Feed Boxes – Train Communication Cable
    - Guideway Intrusion Detection System
    - Fare Collection System
    - Signal and Ground Rail attachments
    - Switchbeams need paint
    - Water Accumulation/ Corroded Conduits

Vehicles & Operating System Condition Assessment Summary

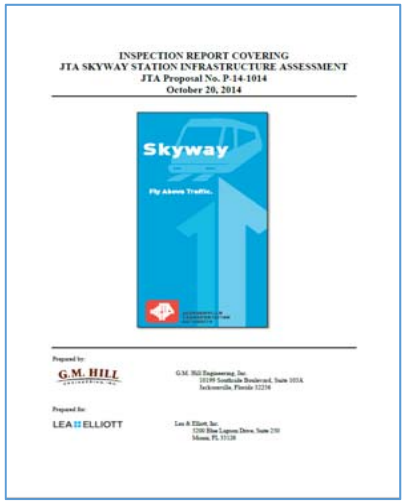
Key Subsystem	Status	Comments
Vehicles	4 out of 10 vehicles out of service primarily due to EMC issues Propulsion system obsolescence leading to failures	Highest mileage vehicle at 472,000 miles. Structural Integrity is not likely an issue but non-destructive testing can be done Upgrade/replace in kind to address obsolescence Propulsion replacement uncertainty
Power Distribution System	In fair condition	Minor upgrades required
Automatic Train Control	EMC/noise and PMA failures	Re-baseline and resolve EMC/PMA issues
SCADA	Obsolescence of PLCs	Upgrade to resolve issues

Programmable Logic Controllers (PLCs)
Electromagnetic Compatibility (EMC)
Permissible Movement Authority (PMA)

CONDITION ASSESSMENT INFRASTRUCTURE

Stations

- Stations are generally in good condition
  - Signage upgrade
  - Roofs replacement (including translucent roof)
  - Fire Alarm/Security upgrade
  - PA system upgrade
  - Elevators rehabilitation
  - Escalators replacement
  - Station lighting upgrade


INSPECTION REPORT COVERING
JTA SKYWAY STATION INFRASTRUCTURE ASSESSMENT
JTA Proposal No. P-14-1014
October 20, 2014

Skyway

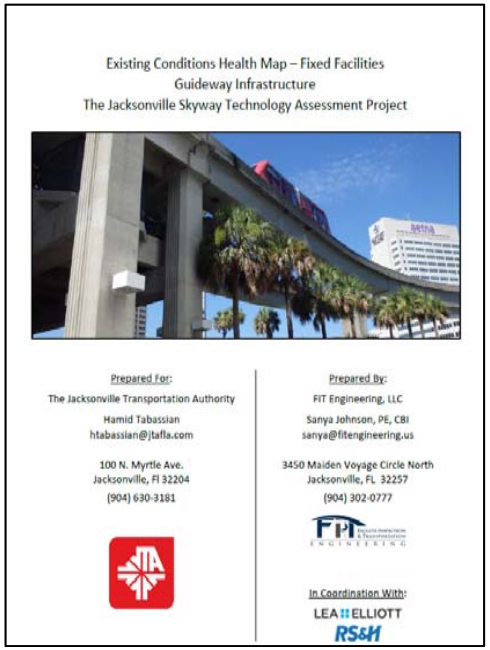
Fly Above Traffic.

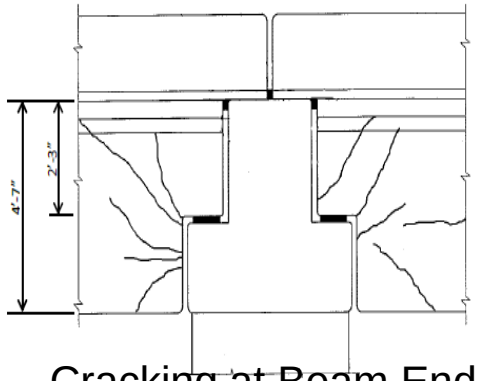
G.M. HILL

LEA ELLIOTT

Guideway and Piers

- Guideway
  - Deck
  - Concrete Beams
    - Overall Satisfactory
    - Diagonal and Radial Cracking
  - Steel Box Girders
    - Overall Satisfactory Condition
- Piers and column supports
  - Overall Satisfactory Condition





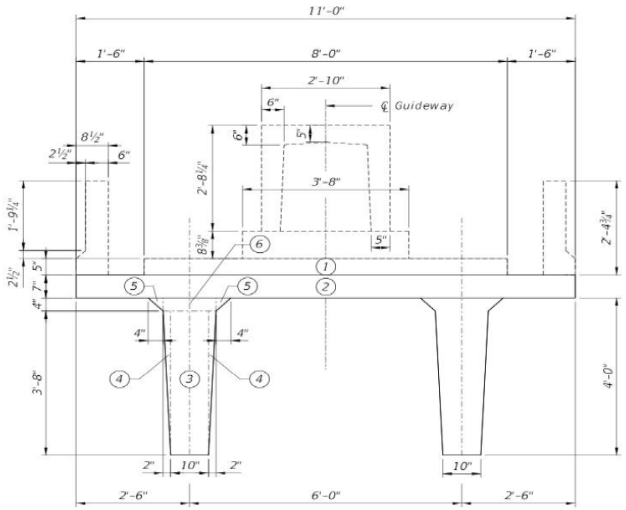
Cracking at Beam Ends

Infrastructure

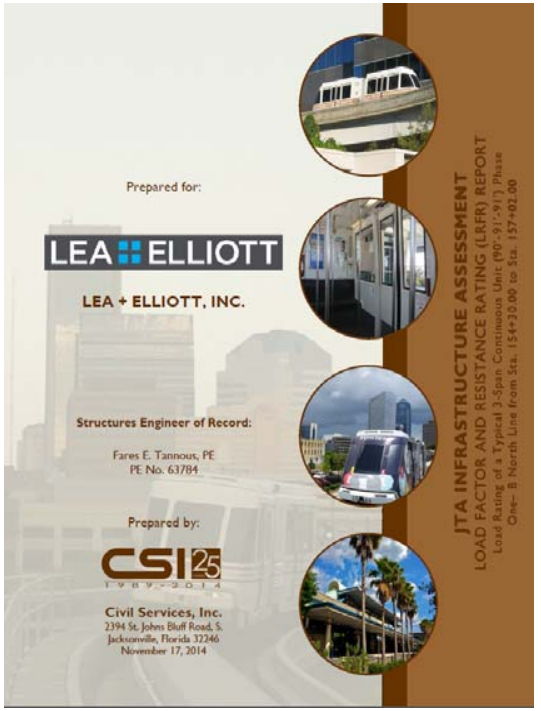
- Ongoing Preventive Maintenance Activities
  - Drainage system Maintenance
  - Repair Spalls
  - Repair Expansion Joints
  - Retrofit Drainage System
  - Retrofit Expansion Joints
  - Paint Steel Beams
  - Crack Control
    - Monitoring
    - Maintenance

Load Rating
(Live Load Carrying Capacity)

- Load Rating performed for a typical span
- New vehicles will need to be analyzed



GUIDEWAY HALF-SECTION AT MIDSPAN



Planned Capital Improvements

- Supervisory Control and Data Acquisition (SCADA) System
- Signage upgrade
- Roofs replacement (including translucent roof)
- Fire Alarm/Security upgrade
- PA system upgrade
- Elevators rehabilitation
- Escalators replacement
- Station lighting upgrade
- Guideway drainage improvements

Review of Options/ Mode Comparison

Automated People Mover

Characteristics

- High reliability and speed
- Higher capital costs
- Rail or rubber-tired
- May be considered intrusive for residential areas

Jacksonville Considerations

- Major infrastructure in place
- Issues with obsolescence

- Detroit
- Miami
- Indianapolis
- Las Vegas
- Seattle
- Airports

Streetcar

Characteristics

- Mixed traffic or dedicated right-of-way
- Electric power from overhead catenary (inductive power an emerging option)
- Lower speed than APM
- Often an effective tourism or economic development tool
- High capital and O&M but typically less than APM

Jacksonville Considerations

- Issues with crossing river or freight rail
- Could serve as extension of Skyway but too heavy to put on elevated structure
- May be considered like-kind replacement of Skyway

Trolley/Circulator Bus

Characteristics

- Flexible
- Low cost
- Mixed economic development potential
- May need to take road capacity for dedicated lanes

Jacksonville Considerations

- JTA building BRT infrastructure for First Coast Flyer
- May not be considered like-kind replacement for Skyway
- Parts and equipment readily available

Personal Rapid Transit

Characteristics

- Point-to-point on demand transit
- Larger fleet of smaller vehicles
- Lower cost per mile compared to APM
- Extensions into residential areas could be resisted
- Has not been fully deployed as urban circulator

Jacksonville Considerations

- Might be able to reuse Skyway infrastructure
- Risk of being beta or pilot system again

Elevated Multi-Use Path

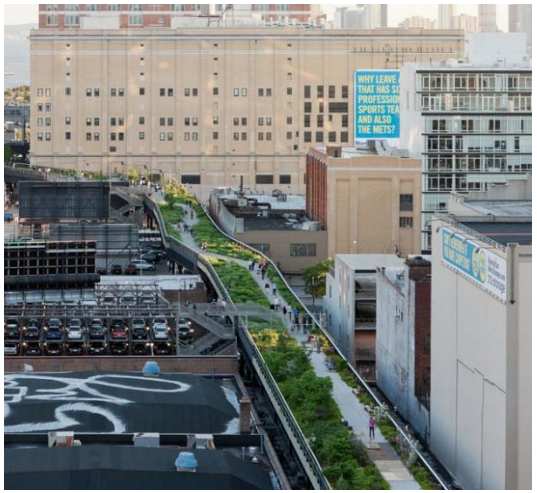
Characteristics

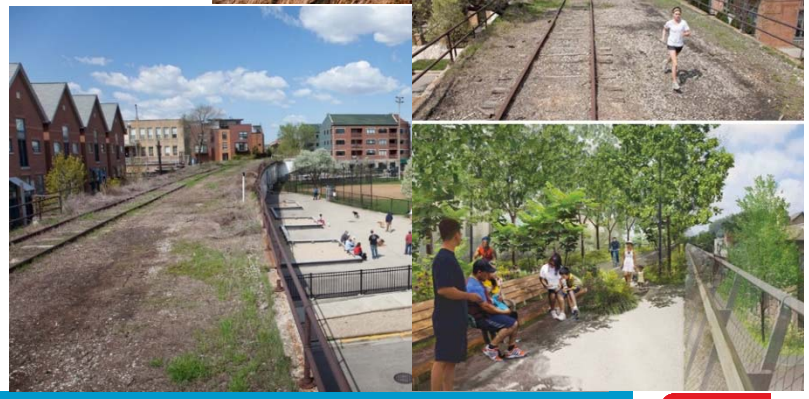
- Reuse of elevated guideway
- High and uncertain cost for retrofitting structure
- Requires long-term maintenance commitment
- Seen as tool for economic revitalization

Jacksonville Considerations

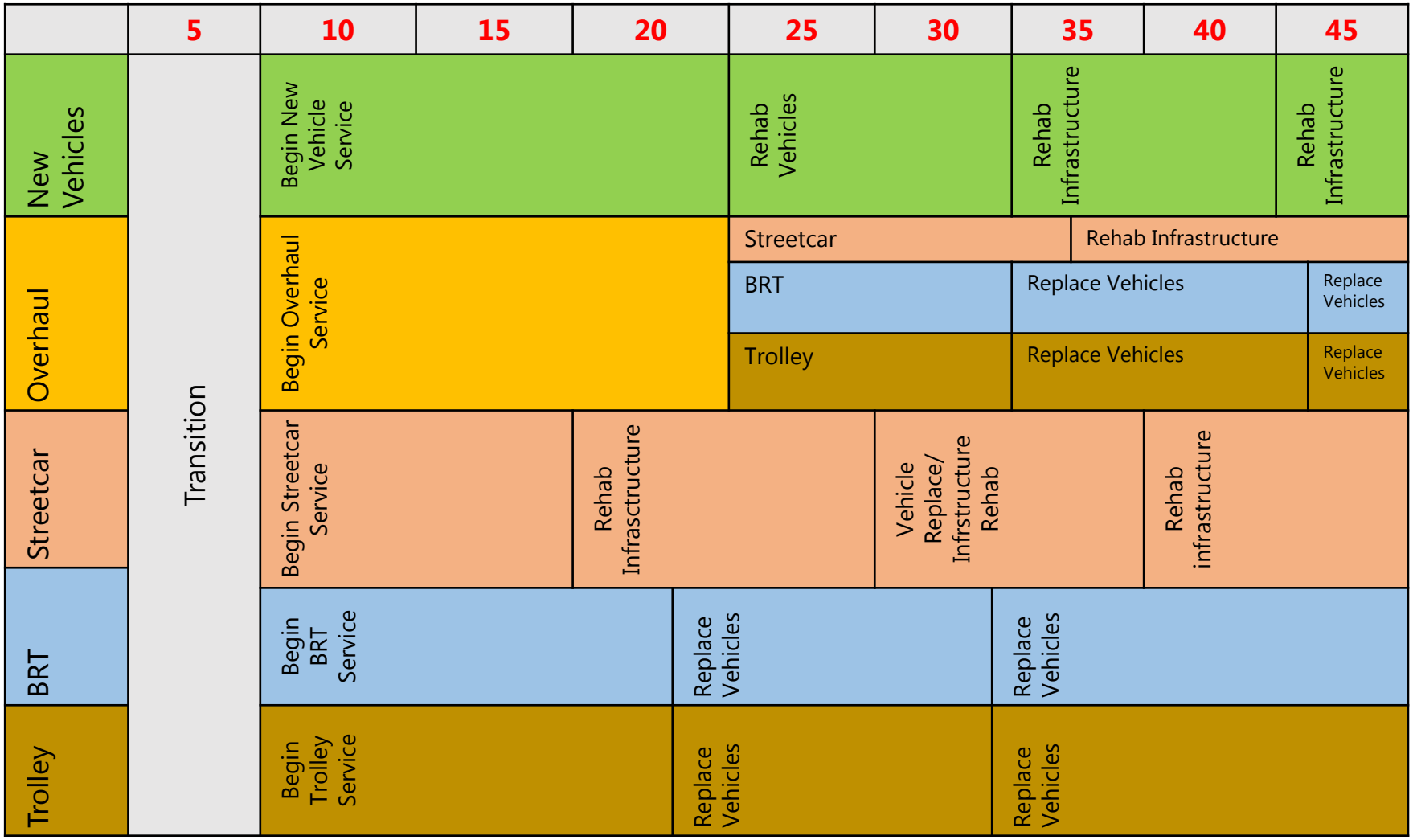
- Question regarding grant payback if reused for transportation purpose
- Safety and security concerns
- Could have mixed economic impacts

  - New York High Line
  - Chicago Bloomingdale Trail and “606”





Life Cycle Cost Analysis



Peer Cities/ Downtown Circulators

Peer Cities Downtown Service

Streetcar

- Tampa
- Charlotte
- Memphis

Replica Trolley

- Tampa
- St. Petersburg

Peer Cities Downtown Service

BRT

- Orlando
- Kansas City

Special Circulator

- Nashville
- Louisville
- Columbus

Peer Cities Downtown Service

- Three peers offer only regular bus service
- Most systems (7 of 10) offer discounted (4) or free (3) service downtown
- Numerous other cities offer free downtown service – Miami, Denver, Raleigh, Fort Worth, West Palm Beach, and others

Meeting #1/ Questionnaire Follow Up

Questions/Request for Information

➢ Economic Impact →	• Ad Valorem/TIF Impacts • Housing Tax Credits • DRI/Mobility Fee • Development • Tourism • Job Access
➢ Ridership Profile →	• Who Rides • Trip Purpose • When
➢ Financial →	• JTA/Skyway Budget • JTA Funding • FTA Payback • Long Term Maintenance
➢ Peer Cities →	• System Types • Downtown Profile • Fare Free
➢ Operations →	• Service Overview • Frequency

Ridership Profile

- Survey conducted in Spring 2014
- Male: 55% Female: 45%
- 13% are disabled
- 63% are under age 45
- 57% use daily
- 22% are students
- 55% rode the bus, 26% walked and 17% drove to Skyway (return same)
- 35% used to get to work
- 78% have household income below $50,000

Financial Information

- The FY16 Skyway operating budget: $6.3M
- The past 5 years Skyway average annual operating expenses: $6M
- The past 5 years Skyway average annual capital expenditures: $1.6
- Operating expenses are paid by a combination of:
  - Federal preventative maintenance funds
  - Local Option Gas Tax and
  - Parking/farebox revenues
- Capital expenditures are paid by grant funds

Operational Information

- 6 to 7 minute headway in Peak
- Service Hours: 6AM to 9PM
- Peak Hour times: 6-9AM and 4-7PM
- Peak service routings (5 trains)
  - Two (2) Trains Convention to Rosa Parks (FSCJ)
  - Three (3) Trains Kings Ave to Rosa Parks
- Off peak service routings (4 trains)
  - One (1) Train shuttle Convention to Central Station
  - Three (3) Trains Kings Ave. to Rosa Parks

Questions/Roundtable

Public Comment

Adjourn

Next Meeting October 26
4:00-7:00 P.M.
Downtown Public Library