Skyway Subcommittee
Meeting #6

Date: **December 3, 2015**
Time: **3:00 - 5:00 p.m.**
Location: **Jacksonville Main Library**
303 N. Laura Street, Multipurpose Room 1

Agenda

3:00 Welcome

3:05 Review of Skyway Advisory Group Meetings

- Process Review
- Assessment Overview
- Options
- Life Cycle Cost Analysis
- Public Opinion Survey

3:25 Roundtable Discussion on Policy Statements and Recommendations

- Review of Key Considerations and Policy Statements
- Development of Recommendations
- Implementation Strategy

4:50 Public Comments

5:00 Closing Comments / Adjourn

5:30 Public Forum

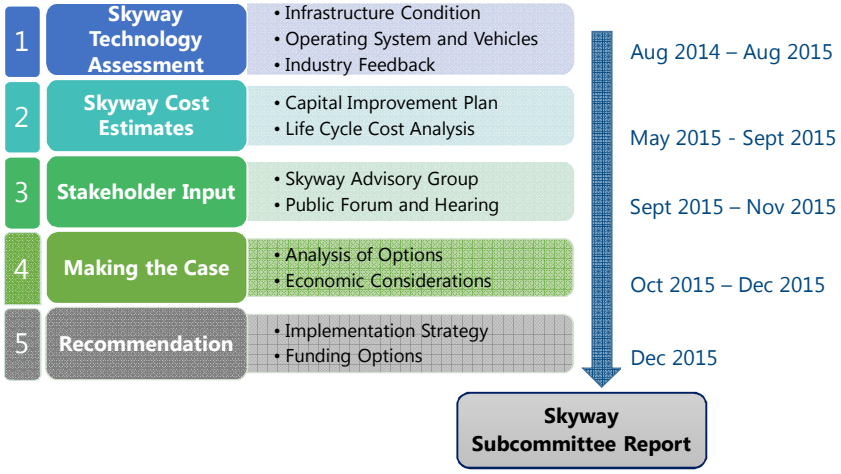
JTA SKYWAY SUBCOMMITTEE

DECEMBER 3, 2015

Agenda

- Review of Skyway Advisory Group Meetings
- Policy Statements and Recommendations
- Implementation Strategy

Skyway Assessment Process



Skyway Assessment Elements

- Assess Existing Conditions
  - Infrastructure
  - Operating System
  - Vehicles
- Scan of Technology Options
- Industry Feedback on Skyway Options
- Draft Technical Reports
- Life Cycle Cost Analysis
- Final Technical Reports and Committee Report with Recommendation (with Advisory Group Input)

Skyway Assessment Overview

Skyway Condition

Assessment — Infrastructure

- Overall satisfactory conditions but has areas that need attention
  - Drainage system in need of a redesign
  - Elevators need rehabilitation
  - San Marco, Riverplace and Kings Avenue stations escalators need replacing
  - Station lighting needs upgrading
- 15-year estimated state of good repair infrastructure needs - $24M

Skyway Condition

Assessment — Operating System

- Automated Train Supervision recently upgraded
- Most of the operating system has obsolescence issues
  - SCADA – Power supply and distribution
  - Remote Feed Boxes – Train Communication Cable
  - Automated Passenger Counter System
  - Fare Collection System
  - Guideway Intrusion Detection System
- 15-year estimated state of good repair operating system needs - $15-19M

Skyway Condition

Assessment — Vehicles

- Vehicles no longer produced by Bombardier
- Four out of 10 vehicles out of service
- Vehicle propulsion issues
  - Long repair lead time
  - Drive controller circuit boards availability
- Estimated state of good repair cost is $18M for overhaul and $35M for new vehicles

Industry Feedback

- Industry did not respond favorably to overhaul option
- No one offered rebuilding existing vehicles (Like-kind replacement)
- Modifying infrastructure to accommodate new vehicle is cost prohibitive
- Modifying new vehicle to run on Skyway infrastructure is viable option
- PRT option proposed as system replacement option but technology not proven

9

Key Findings and Considerations

- Skyway structure is sound and can last another 50 years if properly maintained
- Vehicles are obsolete resulting in high O&M costs and concerns about long-term reliability
- Skyway vehicles need to be overhauled or replaced
  - Significant risks associated with the cost and ability to complete a vehicle overhaul

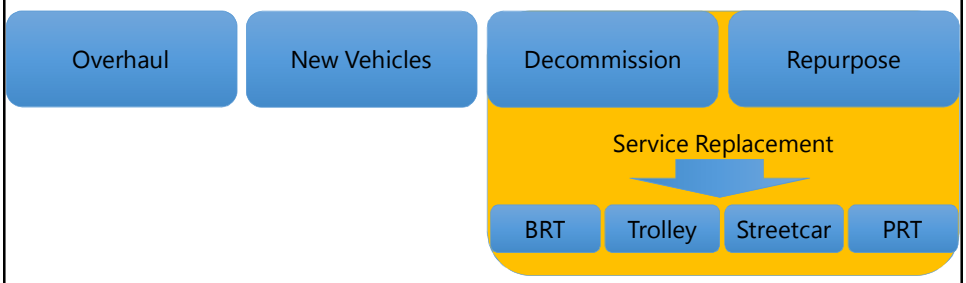
10

Options for Consideration

- Overhaul Vehicles
  - Keep existing vehicles; rehab operating system and infrastructure
- New Vehicles
  - Modify new vehicle to operate on existing infrastructure and operating system; rehab operating system and infrastructure
- Decommission
  - Run system without major improvements until vehicles can no longer operate safely or reliably.
  - Tear down infrastructure and replace with another system
    - Streetcar, BRT, Trolley or Personal Rapid Transit
- Decommission and Repurpose Infrastructure
  - Same as above and use stations and guideway for elevated bike and pedestrian walkway

11

Options



12

Overview of Options

	Option 1 – Overhaul	Option 2 – New Vehicles	Option 3 – Decommission	Option 4 – Repurpose
Vehicles	$18 million	$35 million	$6.4 million	$6.4 million
Operating Systems	$19 million (over 15 years)	$15 million (over 15 years)	$6.9 million (over 5 years)	$6.9 million (over 5 years)
Infrastructure	$24 million (over 15 years)	$24 million (over 15 years)	$9.2 million (over 5 years)	$9.2 million (over 5 years)
Demolition/Retrofit Cost	N/A	N/A	$20-25 million	$13.1-15.7 million
Contingency (15%)	$9.2 million	$12.3 million	$5.4-6.2 million	$4.4-4.8 million
Payback Obligations (FTA)	N/A	N/A	$24.8 million	$24.8 million
Total	$70.2 million	$85.1 million	$72.7-78.5 million	$64.8-67.8 million
Long term vision/extension	System not expandable	Expandable	N/A	N/A
O&M Cost	$6.3-$8 million (2016-2025)	$6.3-$7.5 million (2016-2025) (Reduction of $0.5M/yr from 2020)	$3.4 million (Bus Replacement)	$3.4 million (Buses) $1.0-2.0 million (Elevated bike/ped)
Life	20 years	25-40 years	5 Years	5 Years
Service Replacement	Not applicable	Not applicable	BRT, Trolley, Streetcar or PRT	BRT, Trolley, Streetcar or PRT
Advantages	• Maintains/Utilizes existing infrastructure • Adds 15 years to life of vehicles • No FTA payback • No/minor learning curve for staff • Can avoid major passenger service interruption	• Extended life (25 to 40 years) • Lower risk of cost escalation • New technology • Maintains/Utilizes existing infrastructure • Lower O&M costs • More capacity • Able to extend • Can avoid major passenger service interruption • Aesthetics	• Lower long-term operating and capital costs	• Lower long-term operating and capital costs • Reuse of infrastructure
Disadvantages	• High risk for cost escalation • Industry does not see favorably • Uncertainty about propulsion system • Unique and obsolete vehicle • Constrained for expansion • Does not fully cover remaining useful life of infrastructure • Higher O&M costs • Limited procurement competition	• Higher capital cost relative to overhaul • Unique vehicle • Limited procurement competition (but more than existing vehicles)	• Payback to FTA, FDOT and City for remaining useful life • Demolition cost (Estimated $20-25M) • Impact on future funding from FTA – First Coast Flyer BRT East and Southwest Corridors – This affects CNG Bus funding • Impact on Downtown and Image – Brooklyn redevelopment, Healthy Town, Shipyards • Inconsistent with JRTC Plans • Need to replace service lost – Replacement options less reliable than Skyway	• See decommissioning disadvantages, except demolition costs • Need to maintain infrastructure including stations (elevators) to maintain ADA accessibility • Would require significant guideway modification to make pedestrian walkway – Guideway beam removal or modification – Fencing for fall protection • Public safety

**Estimates based on best available data and will be thoroughly reviewed and refined prior to final recommendations

13

Transit Options

Mode	Cost	Frequency	Speed/ Reliability	Economic Impact	Other Considerations
Automated People Mover	Highest	High	High	Med-High	• Infrastructure in place • Obsolescence issues
Streetcar	High	Low	Med-Low	Highest	• Challenge with river crossing • Impact to existing road network • Depends on dedicated lanes
BRT	Medium	Medium	Med-Low	Medium	• Depends on dedicated lanes • Impact to existing road network • Could tie into First Coast Flyer • Payback issue
Trolley	Low	Medium	Low	Low	• Easiest transition • Payback issue

14

Payback Obligations

Payback Obligations			
	FTA	FDOT	CoJ
Current	$33.5M	$12.1M	$6.0M
5 Years	$24.8M	$9.0M	$4.3M
10 Years	$16.7M	$6.0M	$2.9M
15 Years	$10.6M	$3.8M	$1.9M
20 Years	$4.8M	$1.7M	$0.85M

- Demolition cost of the infrastructure is estimated at over $20 million

15

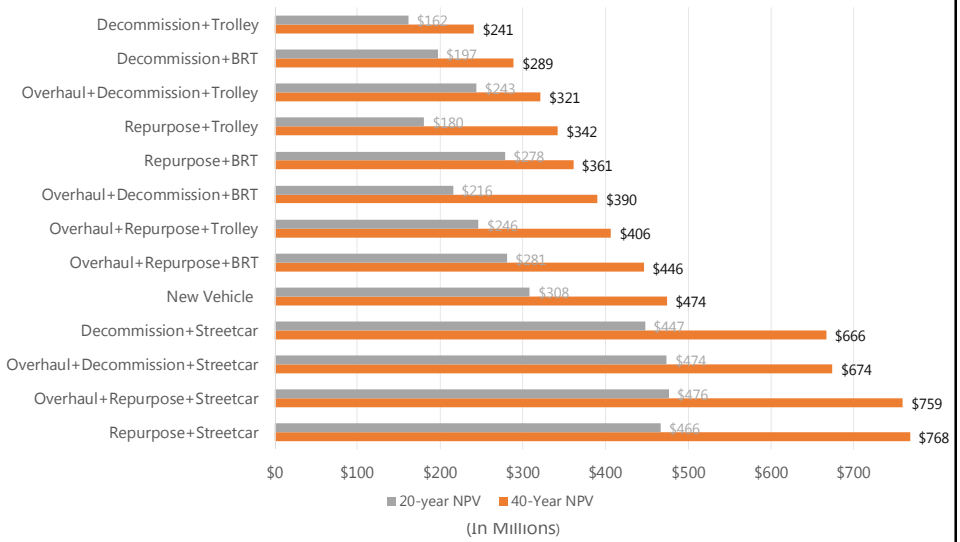
Life Cycle Cost Analysis

Key Assumptions

- All options include operation of existing system for five years
- Assume that each option provides same service as Skyway
- Geographical Skyway length 2.5 miles
- Replacement options double length to 5 miles
- Assume no FTA payback for overhaul, replacement or streetcar options

17

LCCA Findings



18

Summary of LCCA

- Generally, tracked systems (i.e., Skyway and Streetcar) have highest NPV
- Average Annual Cost is Less than Current Skyway for Decommission + BRT or Trolley and Overhaul+Decommission+BRT or Trolley options
- FTA Payback has minimal impact on NPV over life of system.
- Repurpose Option requires continued infrastructure capital investment.
- O&M Costs over life of system are most significant contribution to overall cost.

Public Opinion Survey

Public Feedback

- **Online Survey results (as of December 2)**
  - 1568 responses
  - 80% keep Skyway and expand system
  - 9% prefer converting to elevated multi-use path
  - Prefer extension to Sports Complex/Shipyards (83%) and Brooklyn (79%) and San Marco (66%)
- **Respondent profile**
  - 57% ride system (14% 4+times a week)
  - 11% live Downtown
  - 10% students
  - 63% drive to skyway

Public Comments from Survey

- Many believe the Skyway needs to be modernized and expanded to serve the urban core and connect to adjacent neighborhoods
- Some see Skyway as wasteful, others see tearing down as wasteful
- Some want elevated walkway/path if we decommission but not decommission so we can have elevated walkway and/or path
- Some say keep only if we expand
- Many see as sign of progress -- modern cities, and cities our size, have more advanced transportation systems like the Skyway

Key Considerations and Committee Comments

Key Considerations/Committee Comments

- Support the Downtown Vision
- Connectivity with other transportation modes and the larger regional transit system
- Compatibility with a Regional Transportation Plan
- Downtown mobility and transportation efficiency
- At-grade extensions
- Street level interaction and pedestrian accessibility
- Benefits of Elevated System vs At-Grade System (No traffic congestion, or traffic signals or rail interruptions, etc.)

Key Considerations/Committee Comments

- Value of the customer experience
- Public investment in Skyway to date
- Public preference
- Potential available funding (Federal, state and local participation)
- Potential for Public Private Partnerships
- Effect on JTA long term financial plan
- Initial cost for alternative going forward

Key Considerations/Committee Comments

- Life cycle cost of selected alternative
- How the Skyway investment affects other services (i.e. BRT, trolley, bus)?
- Flexibility - ability to adapt to changing conditions (i.e. economy, demographics, development trends, etc.)
- Ability to adapt to changing technology (i.e. autonomous vehicles)
- FTA, State, Local Payback and effect on future funding
- Don't treat different from roadways – have major maintenance and obsolescence issues too

Initial Draft Policy Statements and Consensus Statements

Policy Statements 1 and 6

POLICY STATEMENT 1

Original: It is important to have a high quality downtown transit circulator. (4.0)

Revised: **No revisions.**

POLICY STATEMENT 6

Original: The ultimate Skyway solution should be a collective effort among multiple stakeholders (e.g. federal, state, local and private sector). (4.0)

Revised: **No revisions.**

Policy Statement 2

POLICY STATEMENT 2

Original: The Skyway represents a significant investment by the taxpayers. JTA and the City should make the best use of that investment. (3.3)

Revised: The Skyway represents a significant investment by the taxpayers. JTA and the City should carefully consider that investment when making its decision about the future of the Skyway.

Comments:

- JTA should conduct cost benefit analysis on the final options
- Discussion and some disagreement about Skyway as a 2.5 mile system

29

Policy Statement 3

POLICY STATEMENT 3

Original: The Skyway should be modernized, including improvements to the operating system, stations, guideways and vehicles. (3.3)

Revised: The transportation system should be modernized, including improvements to the operating system, stations, guideways and vehicles.

Comments:

- Still some concern that Skyway is the final option but it's the first choice right now

30

Policy Statement 4

POLICY STATEMENT 4

Original: Future plans must support the vision for downtown development and that vision should drive decision-making for downtown transportation investments. (3.8)

Revised: Future plans must support the vision for downtown development consistent with the Downtown Investment Authority's Community Reinvestment Plan, and that vision should drive decision-making for downtown transportation investments.

Comments:

- Strong sense of tie to the DIA plan

Policy Statement 5

POLICY STATEMENT 5

Original: To reach its full potential, extensions should be considered to support the vision for Downtown Jacksonville. (3.8)

Revised: To reach its full potential, various extensions to the 2.5 mile transportation system in Downtown Jacksonville, without being specific as to mode and including expansion of operating hours, should be considered to support the Downtown Investment Authority's vision for downtown and be integrated into a regional transportation plan.

Comments:

- Be "agnostic" as to extension technology
- Concerns about whether elevated structure is best option for extensions
- Coordinate schedules to support downtown events and consider service later and on weekends
- Highlight Skyway is part of bigger system

Next Steps

- **Public Forum on Policy Statements (5:30)**
- **December 10 Board Consideration**