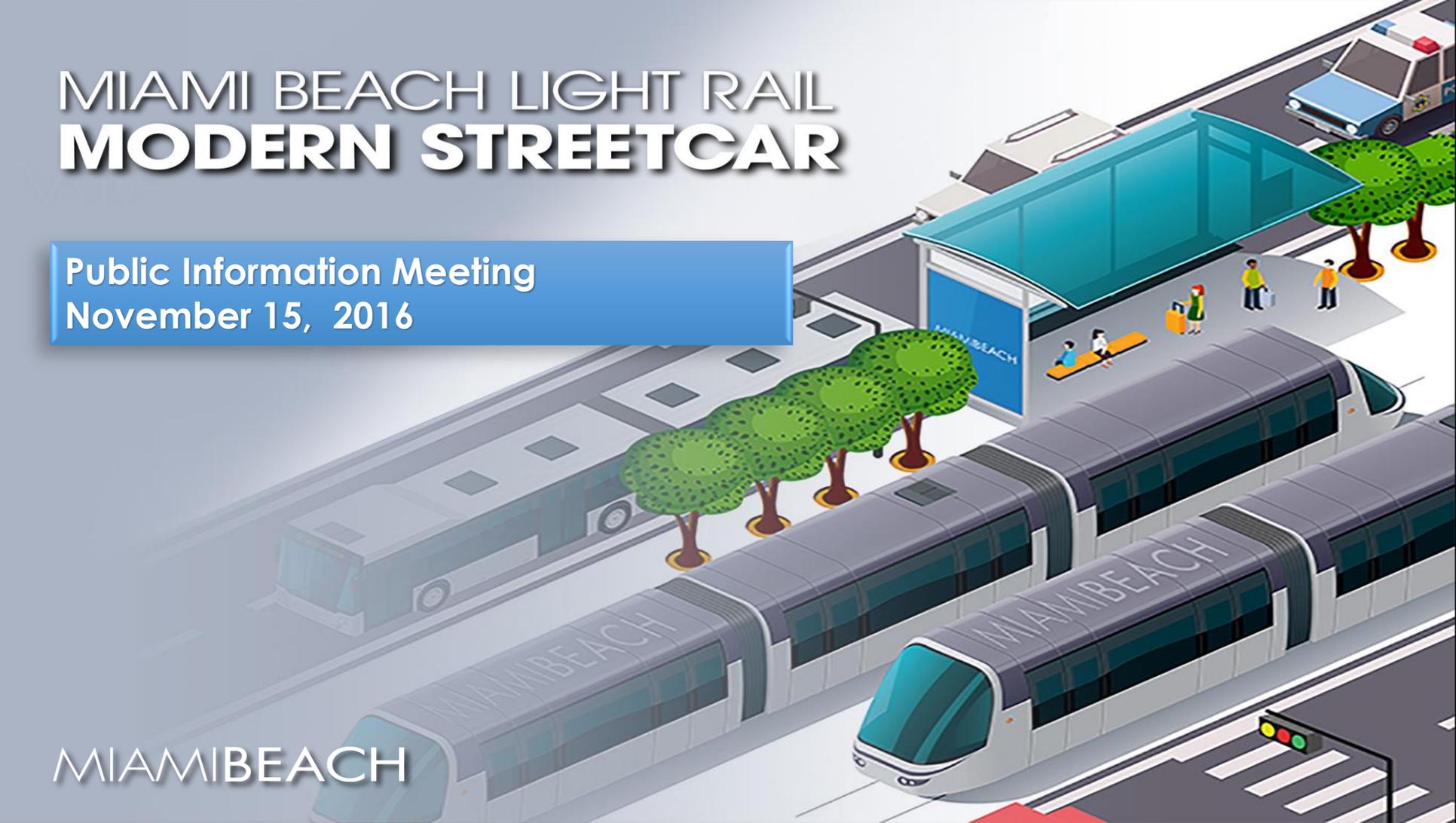


MIAMI BEACH LIGHT RAIL **MODERN STREETCAR**

Public Information Meeting
November 15, 2016

MIAMIBEACH





Transportation Master Plan

Public meetings

Commission Workshops:

- March 18, 2015
- December 16, 2015

Public Workshops:

- June 16, 2015
- January 12, 2016

Adopted by Commission:

- April 13, 2016

**TRANSPORTATION
MASTER PLAN
FINAL REPORT**



MIAMI BEACH

City of Miami Beach Mayor and Commissioners

Mayor Philip Levine
Commissioner John Elizabeth Alemán
Commissioner Ricky Arriola
Commissioner Michael Grieco
Commissioner Joy Malakoff
Commissioner Kristen Rosen Gonzalez
Commissioner Micky Steinberg

City of Miami Beach Management Team

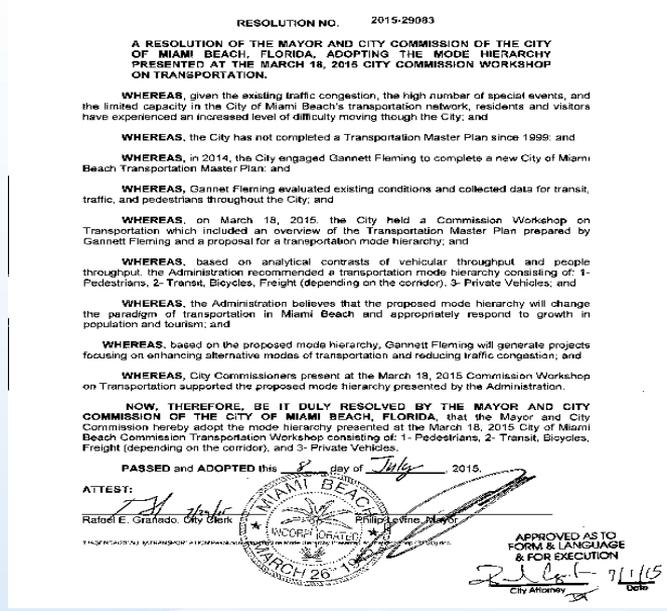
Jimmy L. Morales, City Manager
Kathie G. Brooks, Assistant City Manager
Jose R. Gonzalez, P.E., Transportation Director
Josiel Ferrer-Diaz, E.I., Transportation Manager
Milosh Majstorovic, M.S.C.E., Transit Operations Supervisor
Xavier R. Falconi, P.E., Bicycle & Pedestrian Coordinator





Modal Priority

- Commission Resolution adopting Modal Priority
 - March 18, 2015
1. Pedestrians
 2. Transit
 2. Bicyclists
 2. Freight
 3. Private Vehicles



*This is not a 'done deal'
We are in the fact finding stage*



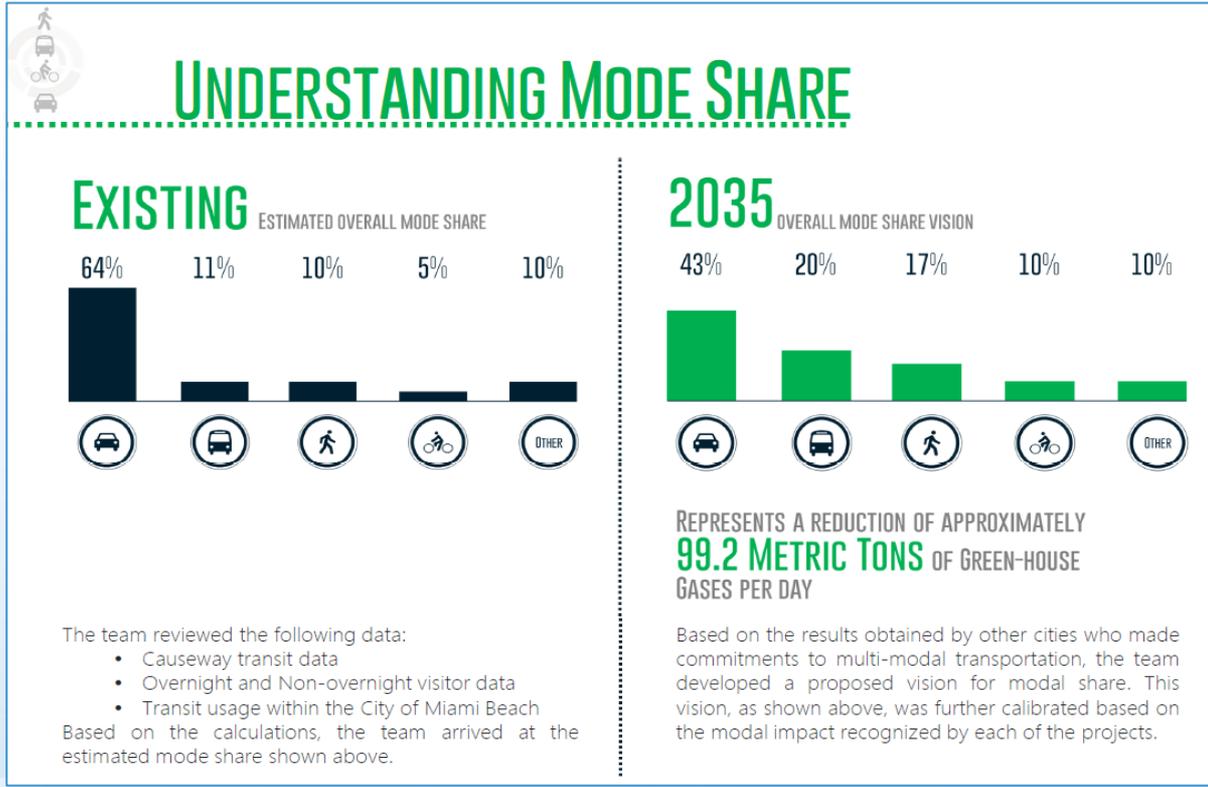
Transportation Master Plan: Mode Share Vision

Today:

- Pedestrians: 10%
- Autos: 64%

Year 2035:

- Pedestrians: 17%
- Autos: 43%



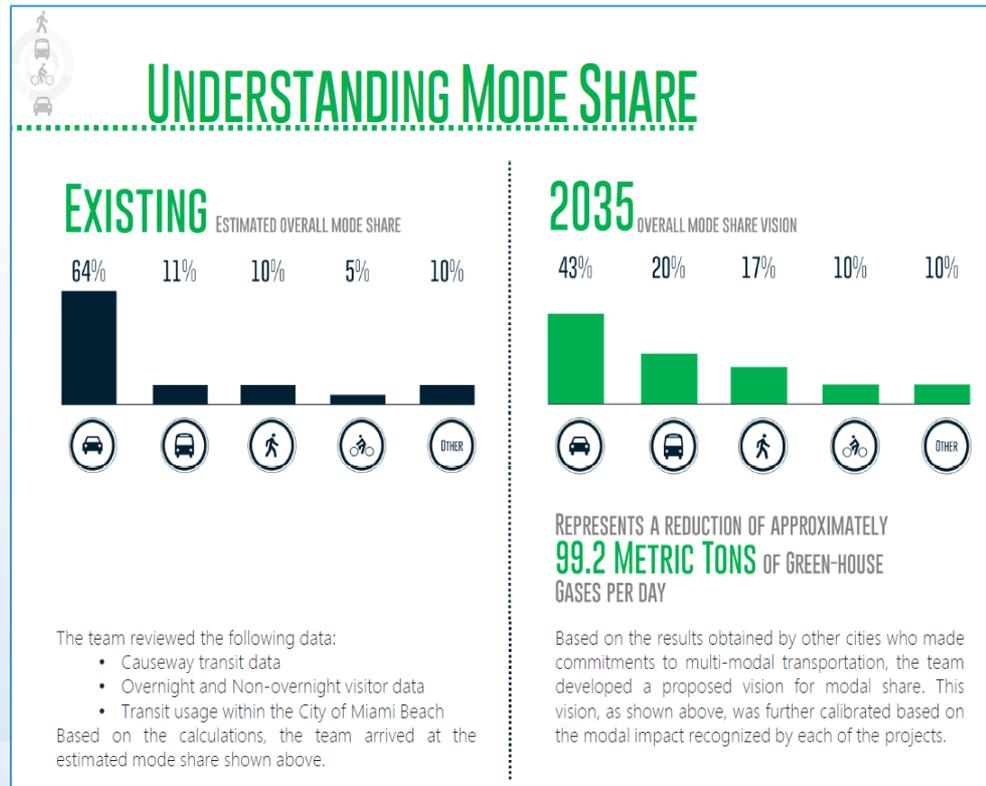


Transportation Master Plan: Mode Share Vision

Ultimate Citywide Goal:

If we realize our mode split vision, Miami Beach could reduce greenhouse gas emissions by estimated 99.2 metric tons/day

Source: Miami Beach Transportation Master Plan





Sustainable Cities & Resident Well-Being

Gallup & Healthways poll findings:

Environments that encourage physical activity and moderate the use of cars help to improve residents' well-being levels

"Having robust built structure does not ensure well-being outcomes, but it does increase the chances of good well-being outcomes," Dan Witters, Gallup's chief scientist of workplace management and well-being.

It's No Accident Some Cities Have Higher Well-Being—It's Because They Discourage Driving

People who are more active are happier—but it's harder to be active in a city that requires you to sit in your car to get anywhere.



[Photo: Bruce Yuanyue Bi/Getty Images]



BEN SCHILLER | 10.12.16 | 6:15 AM

When cities create environments that encourage physical activity and moderate the use of cars, they improve the well-being levels of their residents, a new report shows. In effect, investments in walking, biking, parks, and transit are investments in health outcomes.



Sustainable Cities & Millennials

- Millennial preferences for practical, accessible, and environmentally friendly modes of transportation
- The number of cars purchased by people aged 18 to 34 fell almost 30%

Millennials Don't Care About Owning Cars, And Car Makers Can't Figure Out Why

Driving numbers are down for younger people and the auto industry hasn't found a way to respond. It's because they don't understand why millennials could possibly not want to drive.



[Image: Young people walking via Shutterstock]



DARREN ROSS | 03.26.14 | 10:16 AM

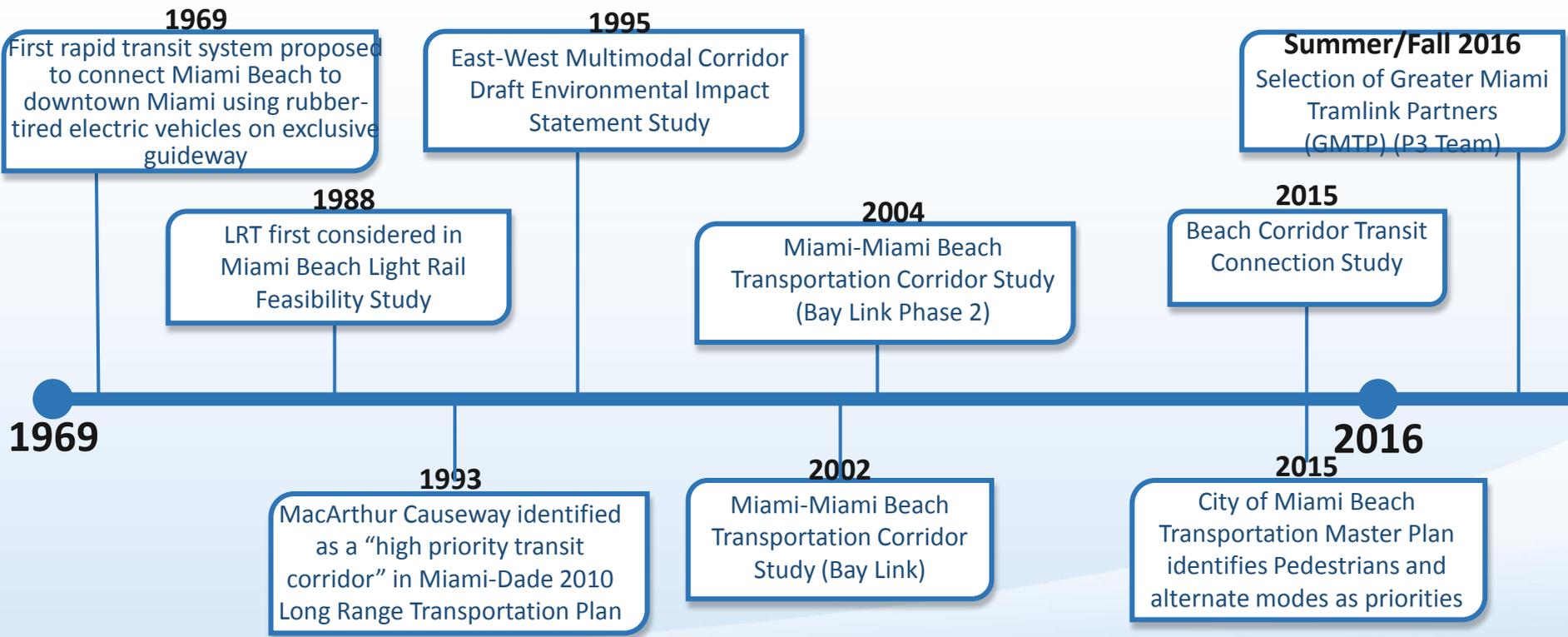
Auto manufacturers today are scratching their heads, trying to figure out why the millennial generation has little-to-no interest in owning a car. What car



Miami Beach Light Rail/Modern Street Car Project Update



Project Timeline: 1969 - 2016





Beach Corridor Direct Connection Project





Beach Corridor Direct Connection MOU

2016-29505

RESOLUTION NO.

A RESOLUTION OF THE MAYOR AND CITY COMMISSIONERS OF MIAMI BEACH, FLORIDA, APPROVING A MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF MIAMI BEACH, CITY OF MIAMI BEACH, FLORIDA, MIAMI-DADE COUNTY, FLORIDA, FLORIDA DEPARTMENT OF TRANSPORTATION, DISTRICT FOR BEACH CORRIDOR DIRECT CONNECTION PROJECT ENVIRONMENTAL STUDIES, PROJECT DEVELOPMENT PHASES, FUNDING, SPONSORSHIP, AND OPERATING AGENCY, AND AUTHORIZING THE CITY CONTRIBUTION OF \$417,000, OF THE OVERALL STUDY COST.

WHEREAS, In 2003 - 2004, the Miami-Dade Metropolitan Planning Organization (MPO) prepared environmental and engineering studies as part of the Beach Corridor Transportation Study, and

WHEREAS, In October 2013, pursuant to requests from the cities of Miami, the MPO contracted a planning-level study entitled, The Beach Corridor Study (the "Study"), that refined and updated the discussed partnership with Miami-Dade Transit (MDT), Florida Department of Transportation (FDOT), and the City of Miami Beach and the City of Miami; and

WHEREAS, the Study was completed in June 2015 and reaffirmed the MPO's recommendation of a light rail or "enhanced" light rail transit/modern streetcar system within each urban area as the preferred vehicle technology, and further recommended an off-peak or "weekend" light rail transit/modern streetcar system for exclusive lanes for the transit vehicles in order to provide reliable service;

WHEREAS, Phase 1 of the recommended route alignment from downtown via MidFlorida Causeway, 17th Street, and Washington Avenue to Beach Convention Center (the "Direct Connection Project"), and

WHEREAS, the Study recommended a second phase of the Beach Corridor Project, that includes an alignment along Alton Road and 17th Street;

WHEREAS, a Policy Executive Committee (PEC) of the MPO, officials from Miami-Dade County, the City of Miami Beach, and the City of Miami, among other things, give direction for the development of the Beach Corridor Project; and

WHEREAS, the PEC endorsed moving forward with the Direct Connection Project, via a public-private partnership (P3) delivery method and the Miami Beach and Miami portions of the project (to the extent that the rest of the project); and

WHEREAS, on February 4, 2016, the PEC endorsed moving forward with the project;

2004), shall serve as the basis for proceeding, and the analysis and technical work that went into developing the Direct Connect alternative shall be used as the foundation for the NEPA and Project Development work.

9. **Obligations.** Through this MOU, the Parties express their mutual intent to move in a diligent and thorough manner to develop the two projects during the NEPA and Project Development phases, but understand this MOU is by its nature a preliminary agreement outlining commitments to be made in this process, and imposes no legally enforceable contractual obligations on any party, other than the obligations set forth in Paragraph 2(a) through (3) herein.

10. **Effective Date.** This MOU shall take effect when executed by all Parties, on the last date shown below, and shall expire upon completion of the two projects, unless extended in writing by the Parties.

11. **Counterparts.** This MOU may be executed in counterparts, and when taken together, the same shall constitute a binding agreement on all Parties.

WHEREFORE, the Parties have each executed this MOU on the dates below written.

Florida Department of Transportation

By: *[Signature]*
Name: Debra J. Meyer
Title: Deputy Director
Date: 7/26/16

By: *[Signature]*

City of Miami
By: _____
Name: _____
Title: _____
Date: _____

Miami-Dade County

By: *[Signature]*
Name: Alina J. Huchak
Title: Deputy Mayor
Date: 7/26/16

By: *[Signature]*

City of Miami Beach
By: *[Signature]*
Name: Philip Levine
Title: Mayor
Date: _____

Legal Review:
By: *[Signature]*
Date: _____

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Florida Department of Transportation

By: _____
Name: _____
Title: _____
Date: _____

City of Miami
By: *[Signature]*
Name: Yvonne Argueta
Title: Mayor
Date: _____

Legal Review:
By: *[Signature]*
Date: _____

Miami-Dade County

By: _____
Name: _____
Title: _____
Date: _____

City of Miami Beach
By: *[Signature]*
Name: Philip Levine
Title: Mayor
Date: _____

Legal Review:
By: *[Signature]*
Date: _____

- FDOT, Miami-Dade County, City of Miami, City of Miami Beach
- Executed July 2016
- Two Projects:
 1. Federal-eligible: Miami Causeway portion of Beach Corridor Direct Connection Project; and
 2. Non-Federal, locally funded: Miami Beach Light Rail/Streetcar Project
- Basis:
 - Beach Corridor Transit Connection Study Report (June 2015)
 - Draft Environmental Impact Statement (BayLink; 2002, 2004)
- Status:
 - Fiscally constrained LRTP amended to include the Beach Corridor Direct Connection Environmental Study



Beach Corridor Direct Connection Project With Extensions





Transit Technologies Considered*

TABLE 3.1: TIER 1 TECHNOLOGY EVALUATION SUMMARY IN 2004 STUDY

	BRT	LRT	AGT	RRT	Ferry	Cable Car	Monorail
Operational Flexibility	●	○	◐	○	◐	◐	◐
Future Expansion	●	○	◐	◐	◐	○	◐
Capital Cost	●	○	◐	◐	◐	◐	◐
O&M Cost	○	○	◐	●	◐	◐	◐
Distribution	●	●	◐	◐	◐	◐	◐
ROW	●	○	◐	◐	◐	◐	◐
Fixed Investment	◐	●	●	●	◐	◐	●
Image	◐	●	◐	◐	○	◐	○
Environmental	◐	●	●	●	◐	◐	●
Urban Integration	◐	●	◐	◐	●	○	◐
Proprietary Technology	●	●	◐	●	●	○	◐
Capacity	○	●	●	●	◐	◐	◐
Fire Life Safety	●	●	●	●	◐	○	◐
Best	●	○	◐	◐	○	○	○
Worst	○	○	○	○	○	○	○
U-Unknown	◐	◐	◐	◐	◐	◐	◐

Transit Technologies Legend:

BRT: Bus Rapid Transit

LRT: Light Rail Transit

AGT : Automated Guideway Transit (Miami Metromover)

RRT: Rapid Rail Transit (Miami Metrorail)

Ferry: Passenger ferry boat

Cable Car : Elevated, suspended, cable driven passenger gondolas

Monorail: A form of AGT operating on a single support beam

* Source:

Miami-Miami Beach Transportation Corridor Study Technology Assessment Report, March 2002

Beach Corridor Transit Connection Study – Final Report, June 2015



Conclusions: Transit Technologies *

TABLE 3.1: TIER 1 TECHNOLOGY EVALUATION SUMMARY IN 2004 STUDY

	BRT	LRT	AGT	RRT	Ferry	Cable Car	Monorail
Operational Flexibility	●	○	◐	○	◐	◐	◐
Future Expansion	●	○	◐	◐	◐	○	◐
Capital Cost	●	○	◐	◐	◐	U	◐
O&M Cost	○	○	◐	●	◐	U	◐
Distribution	●	●	◐	◐	◐	◐	◐
ROW	●	○	◐	◐	◐	◐	◐
Fixed Investment	◐	●	●	●	◐	◐	●
Image	◐	●	◐	◐	○	◐	○
Environmental	◐	●	●	●	◐	◐	●
Urban Integration	◐	●	◐	◐	●	○	◐
Proprietary Technology	●	●	◐	●	●	○	◐
Capacity	○	●	●	●	◐	○	◐
Fire Life Safety	●	●	●	●	◐	○	◐
Best ● ○ ◐ ◑ ◒ Worst U-Unknown							

- LRT ranked highest in 8 of thirteen evaluation criteria – the highest of modes evaluated
- Some deciding factors:
 - Environmental Factors
 - Urban Integration
 - Capacity
 - Image
 - Fire Life Safety

* Source:
 Miami-Miami Beach Transportation Corridor Study Technology Assessment Report, March 2002
 Beach Corridor Transit Connection Study – Final Report, June 2015



Examples of Proposed Technology



France



Brazil



Dubai



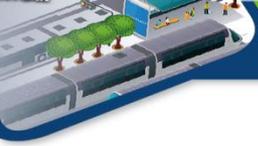
Kansas City



Spain



Cincinnati



Community Preference – 2004 Study

- **Future mass transit should**
 - Use wireless technology, **no** overhead wires or catenary poles
 - Be at street level, **not** elevated
 - Be compatible with City's **unique urban form**
- **Results:**
 - Following an extensive public involvement program +
 - Results of technology/mode comparison
 - LRT/Modern Streetcar was adopted as the preferred mode by the MPO in 2004
 - LRT/Modern Streetcar was endorsed by a Miami Beach community straw vote in 2004



Project Facts

- This is a work in progress – we are in the planning process
- Several concurrent Technical Analyses underway
 - Assessment of potential environmental and community impacts
 - Assessment of Technical Feasibility
 - Interoperability with Beach Corridor Direct Connection
- Following the FDOT Project Development Process
 - Proactive community outreach to inform Commission decision making

*This is not a 'done deal'
We are in the fact finding stage*



Project Facts: Key Coordination Factors

- Coordinated with Miami-Dade County
 - Interoperability
 - Fare Collection Policy
 - Traffic Signal Policy
 - Funding Plan
- FDOT
 - Review of Environmental and Technical Documents
 - Traffic Analysis
 - Funding Plan
 - Proactive community outreach to inform Commission decision making

*This is not a 'done deal'
We are in the fact finding stage*



Technical Studies (in Progress)

Endangered Species/Biological Assessment	Cultural Resources Assessment Survey (CRAS)
Wetlands/Essential Fish Habitat	Traffic
Contamination Screening Evaluation Report	Ridership
Socio-Cultural Effects	Operating Plan
Noise and Vibration	Cost Estimates
Air Quality	Concept Plan

- Public Involvement Report
- Concept Design Report
- Interoperability Plan

*This is not a 'done deal'
We are in the fact finding stage*



Purpose of the Miami Beach LRT/ Modern Streetcar Project



To provide the **first link** of a regional rail transit system connecting Miami and Miami Beach



To **improve mobility** for the residents, workers, and visitors traveling in the South Beach area of Miami Beach



To provide a convenient, reliable, and attractive **alternative** to vehicular travel, by promoting **walkability**, and prioritizing **pedestrian** travel



Reduce greenhouse gas emissions, carbon footprint



Need for the Miami Beach LRT/ Modern Streetcar Project



Traffic congestion is **increasing** and the roadway system is **constrained** by adjacent uses.



The **quality and reliability** of existing bus transit service is negatively impacted by traffic congestion



The City seeks to encourage **smart, sustainable development** in the project area



To maintain a sustainable **environmental balance**, the City seeks to identify and develop alternative forms of public transportation

Project Overview

Began with recommendations from 2015

MPO Study

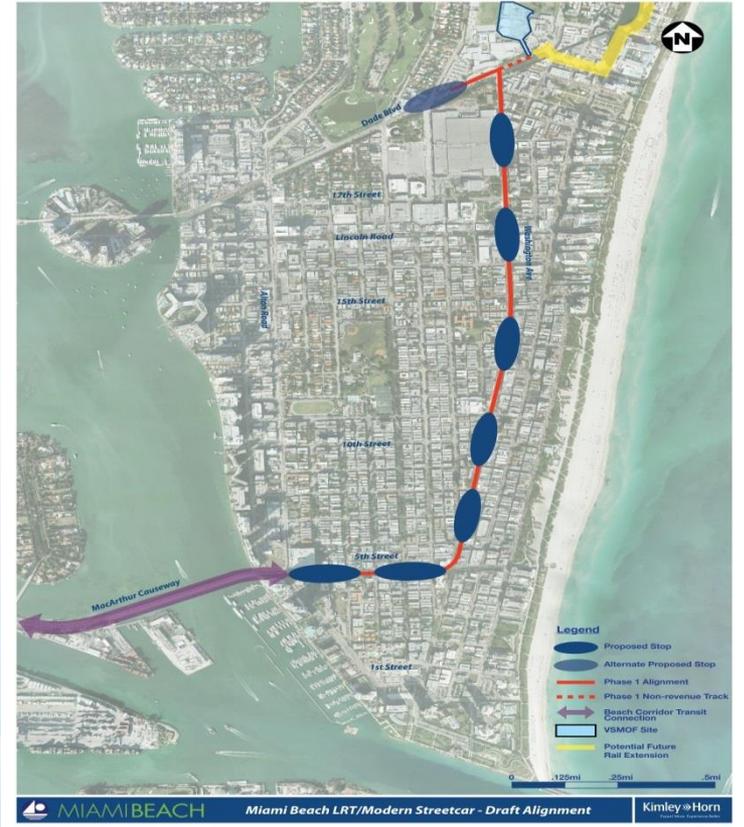
- Exclusive lanes for rail transit
- No overhead wire
- Center running tracks; side running on 5th
- Stops located approximately 3 per mile
- Vehicle Storage, Maintenance & Operations Facility (VSMOF) Site
- Interface with planned parking garages in the south beach area
- Bus-Rail intermodal transfer in the vicinity of Alton and 5th



Phased Project Development

Phase 1

- More feasible to fund with existing sources
- Lower capital and O&M costs (fewer vehicles required)
- Shorter schedule for delivery
- Reserves potential for Federal funding for future phases
- Facilitates much-needed transformational change for Washington Avenue
- Maintains interoperability with future rail project



Citywide Trolley Service

- Complementary feeder system would be provided
- City goal to ensure comprehensive local area circulation
- “Front door access”
- South of Fifth Neighborhood connection
- South Beach Local: Pending separate decision on future technology and future operator





Washington Avenue – One Lane Each Direction

WASHINGTON AVENUE LOOKING SOUTH





Washington Avenue – Two Lanes Each Direction

WASHINGTON AVENUE LOOKING SOUTH





Washington Avenue Evaluation

Four (4) Lanes Option (Outside lane for loading in off-peak hours)	Two (2) Lanes Option
Flex-time for loading zones (only from 6 AM to 10 AM)	Permanent Loading zones
Valet operations moved to side streets	Permanent valet operations
10' sidewalks	11' to 13' sidewalks
No Bulb outs at intersections	Bulb outs at intersections
No Parklets	Parklets
Buses stop in traffic lane	Bus bays/pullouts
Enforcement required to prohibit loading in traffic lane	Less enforcement required
Operates at adopted LOS standard	Operates at adopted LOS standard
Adds 3,700 peak hour person throughput capacity	Adds 1,850 peak hour person throughput capacity
Less traffic diversion from corridor	30% Traffic diversion from corridor
Not consistent with City's Transportation Master Plan	Consistent with City's Transportation Master Plan
Encourages mode shift	Encourages greater mode shift
Auto Centric design - prioritizes automobiles	Complete Streets design - accommodates all users

**No Exclusive Bicycle Lanes on Washington Avenue; Meridian Avenue planned for bicycle facilities*

Recommendation: 2-Lane Option



Parking

- *On-street parking replaced/enhanced with planned parking garages in study area*
- *Funding programmed*
- *Scheduled to Open 2020*
 - *10th Street and Washington Avenue*
 - *Collins Avenue & 13th Street*
 - *Liberty & 23rd Street*
 - *West Avenue & 16th Street*



Phase 1 Cost Estimate & Potential Funding

- Planning Level Project Costs (2016)
 - \$245M Capital Costs
 - \$7M Annual Operating Costs (indexed to inflation over term)
- Potential Funding Sources:
 - City – 50%
 - County - 25%
 - State – 12.5% - 25%
 - Other – To be determined
- Farebox Revenue:
 - \$2.8M Annual

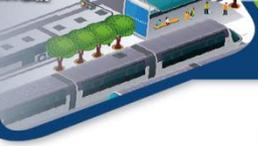


Interim Agreement

Purpose: Interim proposer has exclusive ability to develop price, schedule, technical commitments

- City is under no obligation to accept any proposal or move forward with the project
- Term: 375 days; City can terminate at any time without penalty
- Scope: to develop, design, build, finance, operate and maintain the Project over a 35-year term
- Early Deliverables:
 - Vehicle and systems certification
 - Interoperability
 - Preliminary cost estimates
 - Detailed schedule
- No compensation to Proposer during Interim Agreement phase

*This is not a 'done deal'
We are in the fact finding stage*



Interim Agreement: How did we get here?

- Competitive procurement solicitation initiated January 2016
- Minimum requirements
 - Interoperability with County's Light Rail/Modern Streetcar Project (MacArthur Causeway)
 - Wireless Technology
 - Capacity to accommodate projected MacArthur Causeway ridership
- Three proposals received May 2016
- Evaluation, interviews & ranking conducted June-July 2016
- Administration directed to negotiate with top-ranked proposer
- Option to move to 2nd rank, then 3rd in event of unsuccessful negotiations

*This is not a 'done deal'
We are in the fact finding stage*



Interim Agreement with Proposer

Interoperability:

- Ensure interoperability of Proposer's vehicles and systems with any future provider selected by Miami-Dade County
- Track and stations to accommodate modern streetcars currently in use on comparable systems within the United States
- Proposer to commit to make equipment and associated software commercially available

Safety Certification:

- Proposer to document compliance with the FDOT Safety and Security Oversight Program

Open Book Pricing:

- City's process for review of pricing consistent with the Federal Government's competitive negotiation process
- Federal Acquisition Regulations

*This is not a 'done deal'
We are in the fact finding stage*



Interim Agreement: Benefits to the City?

- Schedule
- Would provide a “shovel-ready” project
- Facilitates eligibility for other funding
- Risk-free opportunity to explore streetcar program
- Serves as catalyst for County’s regional rail program
- Allows time for County to strengthen commitment, implementation partners

*This is not a ‘done deal’
We are in the fact finding stage*



Resiliency Program Coordination

- Resiliency-related work to be completed in areas impacted by the proposed project
- Recently conducted a topographical survey confirms elevation of most of Washington Avenue is at 3.7 NAVD – the City’s resiliency standard
- Resiliency-related work to be funded from anticipated City, County and State funds
- Resiliency-related work would be needed with or without the proposed rail project



Public Involvement Program

Past Events:

- June 6, 7, 8: Open House Events
- June 28: Project Update - SOFNA
- July 7: Washington Avenue Property Owners
- July 26: Project Update - Tuesday Morning Breakfast Club
- August 25: Meeting with Mayor Levine, Robert Lansburgh
- September 6: Project Q&A at WAVNA Monthly Meeting
- September 7: Project Update - Palm-Hibiscus-Star Island Association
- October 4: Project Update - New World Symphony
- October 20: Project Summary - MB United Forum
- October 27: Project Update to SOFNA

Proposed Upcoming Events:

- November 8: Budget Advisory Committee
- November 15: Public Meeting
- December 5: Flamingo Park Neighborhood Assn
- December 8 : North Beach Neighborhood
- December 13: Mid-Beach Neighborhood
- January 3: WAVNA – Project Update
- Feb 2017: Public Meeting
- April 2017: Public Hearing

- Scheduling for many more community meetings
- Social Media Outlets
- Website: www.keepmbmoving.com
- Additional Social Media to be added shortly



Public Involvement Program

Contact us:

To schedule a project update/presentation, voice your concerns, ask questions

- E-mail: mbrail@miamibeachfl.gov

Visit our website for updated project information

- Website: www.keepmbmoving.com



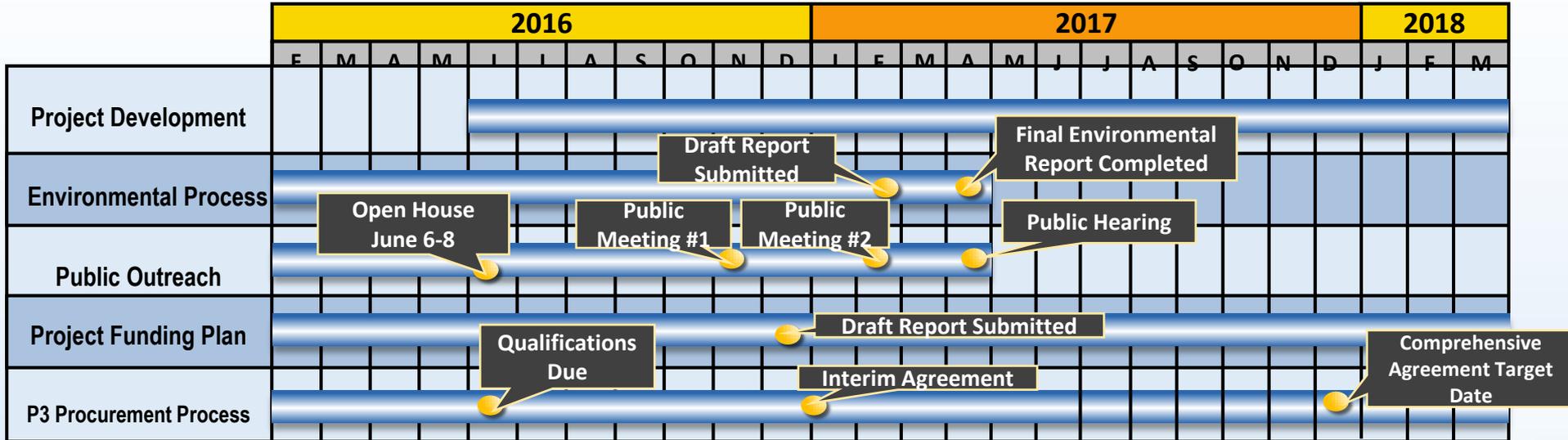
Study Timeline

Proposed Action	Projected Date
Commission consideration of Interim Agreement with P3 Developer (Resolution required for approval)	Dec 2016/Jan 2017
Transmittal of Draft Environmental Impact Report	February 2017
Commission consideration of Final Environmental Impact Report (Resolution required for approval)	April-May 2017
Commission consideration of Comprehensive Agreement with P3 Developer (Resolution required for approval)	Late 2017 (In negotiation)

*This is not a 'done deal'
We are in the fact finding stage*



Project Schedule



Project Schedule as of October 17, 2016



Video



Questions and Discussion



Vehicle Storage, Maintenance and Operations Facility

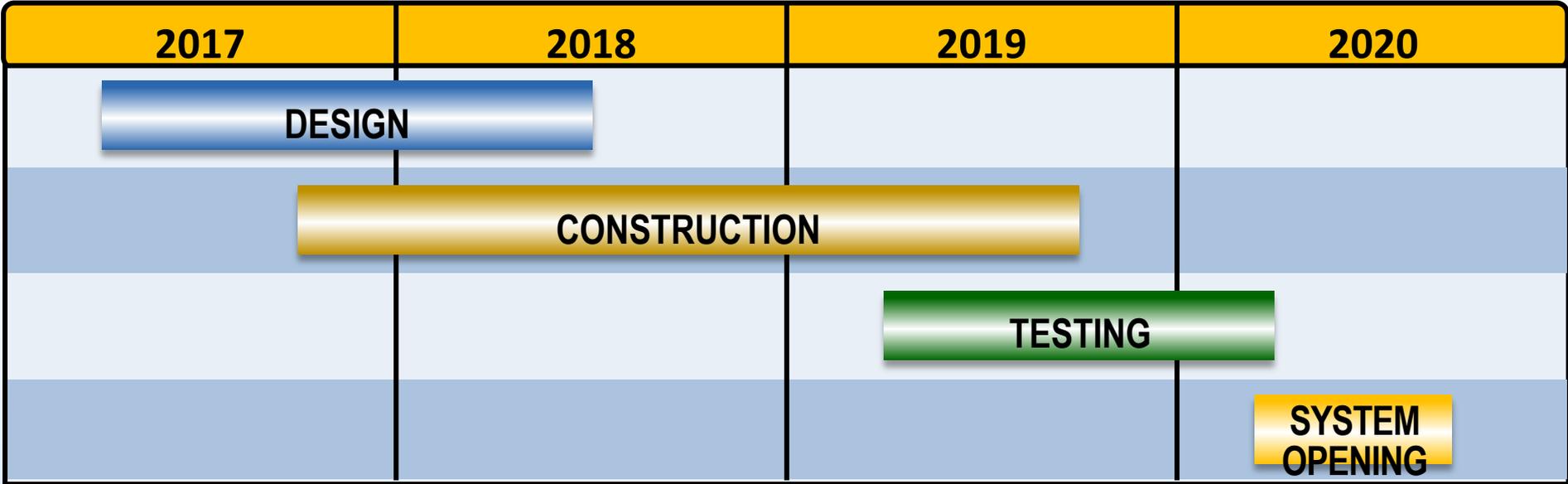
- Provides for rail vehicle storage, operations and maintenance
- Existing City Public Works site
- Concept design for joint use facility includes:
 - Replacement of Public Works facilities and parking
 - Parking for MB Fire Department
 - Building space and parking for Emergency Management Department
 - Building space and parking for City Sanitation Department



MIAMI BEACH STREETCAR - VEHICLE MAINTENANCE FACILITY
PUBLIC WORKS SITE STUDY - OVERALL PLAN
06/25/2016



Project Schedule





Miami Beach Light Rail/Modern Streetcar Project

U.S. MODERN STREETCAR STATISTICS

City	Project Name	Date Opened	Length (miles)	Ridership
Portland	Portland Streetcar	07/21/01	4.8	1,365,000/yr
Tacoma	Tacoma Link	08/22/03	1.6	785,100/yr
Seattle	South Lake Union Trolley	12/12/07	2.6	413,900/yr
Salt Lake City	S Line	12/08/13	2.0	305,000/yr
Tucson	Sun Link	07/25/14	3.9	1,200,000/yr
Seattle	First Hill Streetcar	01/23/16	2.2	3,000/day (average)
Washington, DC	H/Benning Streetcar	02/27/16	2.4	2,739/day (average)
Kansas City	KC Streetcar	05/06/16	2.2	May-Aug 17: 700,000+
Cincinnati	Cincinnati Bell Connector	09/09/16	3.6	4,750/day