COMPARATIVE EVALUATION OF ALTERNATIVES

Project Elements:	
APM	Extension of Omni Loop Metromover to Midtown and Bay Crossing (Trunk Line); Bus/Trolley connections via Washington Avenue to Miami Beach Convention Center
LRT	Continuous LRT system from Design District to Midtown to Bay Crossing Trunk Line to Miami Beach Convention Center
Monorail	Monorail Bay Crossing Trunk Line with APM extension to Midtown/Design District and Bus/Trolley connections via Washington Avenue to Miami Beach Convention Center
BRT	Continuous BRT system from Downtown to Miami Beach Convention Center, via I-395/Washington Avenue or I-195/Collins Avenue

	Evaluation Categories and Measures		APM	LRT/Streetcar	Monorail	BRT I-395	*or*	BRT I-195
								
			5.6 miles/10 stations	7.5 miles/17 stations	3.3 miles/4 stations	6.6 Miles/10 Stations		10.8 miles/11 stations
	TRANSIT AND MULTIMODAL PERFORMANCE							
Primary Measures	Ridership	Average Weekday Ridership	Higher	Higher	Higher	Lower		Lower
Primary Measures	Travel Time	Minutes-End to End	18	22	18	18		20
Primary Measures	Interoperability/ Modal Integration	One-Seat Rides	To/from Downtown	From Midtown to Beach	Most Trip Pairs Require Transfer	From Downtown to Beach		From Downtown to Beach
Secondary Measure	Passenger Capacity	Peak Hour Per Direction (5 Minute Peak Headways)	2,400	2,880	2,140	1,200		1,200
			2 car train	single articulated train	2 car train	Articulated bus		Articulated bus
	ENVIRONMENTAL EFFECTS							
Primary Measures	Natural Resources	Water Resources, Habitat and Animals	Direct Impacts to seagrass, coral and mangrove; small increase in impervious surface	Direct Impacts to seagrass, coral and mangrove; additional indirect (shading) impacts; greater increase in impervious surface	Direct impacts to seagrass, coral and mangroves	Significant impacts to coral. Permitting and mitigation would be challenging-significant risk to cost & duration of project.		Bridge widening on I-195 would result in seagrass impacts that would require permitting and mitigation.
Primary Measures	Cultural Resources	# of Listed/Eligible Historic/Archaeological Resources	34	144	33	2		0
Primary Measures	Aesthetics and Visual	Views and Streetscape	Elevated guideway / stations impact views and streetscape	Elevated guideway / stations impact views in Bay Crossing segment; less impact in at-grade segments	Elevated guideway / stations impact views and streetscape	Buses/stops will have limited impact on view shed		Buses/stops will have limited impact on view shed
Primary Measures	Noise and Vibration	Number and Severity of Impacts by Type of Property/Use	1 Moderate Residential	1 Severe Residential and 1 Moderate Institutional	No Impacts	No Impacts		No Impacts
Primary Measures	Traffic Impacts	Impact to Existing Traffic Lanes	No impacts to at-grade traffic due to elevated guideway	At-grade segments impact traffic by dedicating lanes to transit	No impacts to at-grade traffic due to elevated guideway	Arterial segments impact traffic by dedicating lanes to traffic		Arterial segments impact traffic by dedicating lanes to traffic
Secondary Measure	Construction Impacts	Traffic, Noise and Habitat Impacts	Some intermittent lane closures, navigational impacts, noise and habitat impacts.	Long-Duration Lane Closures for Utility Relocation, Roadway Excavation, Track Installation and Paving	Some intermittent lane closures, navigational impacts, noise and habitat impacts.	Short-duration lane closures for pavement striping, signage and stop platform installation		Short-duration lane closures for pavement striping, signage and stop platform installation
	COST AND FEASIBILITY							
Primary Measures	Capital Cost	Total 2019 $	$862,360,000	$908,400,000	$891,610,000	$335,800,000		$375,650,000
Primary Measures	Operations and Maintenance Cost	Annual Total (2019 $)	$15,580,000	$16,750,000	$11,910,000	$4,660,000		$5,410,000
Secondary Measures	Lifecycle Cost	30 Year Discounted Capital, O&M & Major Maintenance	$1,251,000,000	$1,266,000,000	$1,200,000,000	$452,000,000		$506,000,000
Secondary Measures	Resiliency	Mitigation of Sea Level Rise Impacts	Elevated guideway and stations provides mitigation of predicted sea level rise.	Limited opportunity to mitigate sea level rise outside of Bay Crossing	Elevated guideway and stations provides mitigation of predicted sea level rise.	No mitigation of sea level rise risks		No mitigation of sea level rise risks
Secondary Measures	Time to Construct	Design-Bid-Build Delivery (Months)	48	54	48	33 - 36		33 - 36

EVALUATION MEASURE RATINGS				
Lower Performing	←		→	Higher Performing
1	2	3	4	5

DRAFT 9/06/2019