

# FRANCIS SCOTT KEY BRIDGE IMPACT ANALYSIS

#### **BMC PRESENTATION**

June 2024

# **TRAFFIC AND TRANSPORTATION**

- FSK Averaged 34,000 crossings per day (4,000 commercial)
  - 39,000 weekday
  - 20,400 weekend
- Harbor Tunnel an Fort McHenry Tunnel average 198,000 crossings combined
  - Harbor Tunnel: 81,000 weekday, 71,300 weekend
  - FMT: 128,300 weekday, 99,600 weekend
- HAZ-MATS must find a new route (+/- 1,200 trucks daily)
- What will be the impact on the region?
- What are the long term solutions?







Morning Peak **Rerouting of** Traffic Flows – **Inner Loop** of Beltway



Prior to Collapse





Afternoon Peak **Rerouting of** Traffic Flows – **Outer Loop** of Beltway







# Work versus Non-Work Trips 2022 Daily Trips





# Day of Week Breakdown 2022 Daily Trips





# 2022 Key Bridge Inner Loop Mon-Thu Home to Work Origins





2022 Key Bridge Inner Loop Mon-Thu Home to Work Destinations





# 2022 Key Bridge Outer Loop Mon-Thu Home to Work Origins





2022 Key Bridge Outer Loop Mon–Thu Home to Work Destinations





# 2050 Modeling With and Without FSK (Daily Trips)

2050	InSITE T	ravel Dema	nd Model	With and W	/ithout FSk	K
Year	Year	I-695 Key Bridge	I-895 Harbor Tunnel	I-95 Fort McHenry Tunnel		Total Harbor Crossings
Without Bridge	2050	0	117,715	180,147		297,862
With Bridge	2050	51,034	99,909	153,941		304,884
	2023	33,693	79,113	121,481		234,287
	2022	33,195	77,033	118,287		228,515
	2021	33,215	68,861	119,887		
	2020	32,244	39,533	112,510		
	2019*	40,365	47,480	140,185		
	2018*	30,982	75,488	125,930		232,400
	2017	32,343	77,814	124,391		
	2016	31,242	77,235	122,820		
	2015	30,707	77,248	115,615		
	2014	29,598	71,315	114,386		





Source: BMC InSITE Travel Demand Model.

# **Increased Congestion Segments AM Peak**





# **Increased Congestion Segments PM Peak**





## **Other Roadway Segments Experiencing Congestion**

Segments	Peak	3/27-4/30/2023 Minutes	3/26-4/30/2024 Minutes	% Inc
MD-295 NB from Patapsco Ave to Bayard St	PM (4-7 PM)	3.23	6.44	99%
Hanover Street NB (I-895 to Cromwell)	PM (4-7 PM)	3.1	4.3	39%
US-40/Pulaski Hwy WB from City Line to N Haven St	AM (6-9 AM)	3.69	5.03	36%
MLK Blvd SB from W Baltimore St to I-395	PM (4-7 PM)	1.99	2.49	25%
I-395 SB to I-95 NB (East Pratt to I-95)	PM (4-7 PM)	3.42	4.42	29%
I-395 SB to I-95 SB (East Pratt to I-95)	PM (4-7 PM)	3.12	3.56	14%



# **TRAFFIC MONITORING AND UPGRADES**

- Weekly Traffic Coordination Meetings
  - MDOT/SHA/MdTA/MTA/Port/Unified Command/FHWA/BCDOT/BCDPWT/AADPW/BMC
- Weekly Traffic Monitoring of Major Diversion Routes
  - FMT, BHT, I-695 West Leg, I-70, I-83
  - All Vehicles and Trucks Comparison Current vs. 2022-2023 Historic
- Week Long Traffic Counts on Other Major Diversion Routes
- Potential Enhancement to FSK Detour Routes
  - Signal Upgrades/Adaptive Traffic Response/CCTV/DMS
- Review of Truck Routes
- Major Event/Construction Coordination







## **POPULATION**





## **INCOME LEVELS**





# Educational Attainment





# POVERTY STATUS





RACE



# **Environmental Justice**

#### • USDOT Environmental Justice (EJ) Principles

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects on minority and low-income populations
- Ensure the full and fair participation by all potentially affected communities in the transportation decisionmaking process
- Prevent the denial of, reduction in, or significant delay of these protections for minority and low-income populations

#### EJ Populations

- Low-income: BRTB defines low-income as population below 200% of poverty line
- Minority:
  - Person of origin in any of the black racial groups of Africa;
  - Person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin;
  - Person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
  - Person having origins in any of the original peoples of North America (American Indian, Alaskan Native) and who maintains cultural identification through tribal affiliation or community recognition; or
  - Person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.



# **Environmental Justice in TAZs**

- A Transportation Analysis Zone is defined as an EJ area if its share of lowincome OR minority population is greater than the Baltimore region average:
  - Low-income share > 21.4%
  - Minority share > 45.7%
- The Combined Impact Area has a higher share of EJ TAZs (61.7%) than the Baltimore Region (56%)





# **Environmental Justice TAZs**





#### **Environmental Justice by TAZ**

Low income population above regional average of 21.4%

Minority population above regional average of 45.7%

Minority population & low income population above regional average

Minority population & low income population below regional average

# **Environmental Justice in Impacted ZIP Codes**

Share of Low-Income and Minority Populations in Impacted ZIP Codes



Low-Income Population (Below 200% of Poverty Level)
Minority Population



### **JOBS**



Source: Lightcast 2023 data (2024.1 release) - QCEW Employees.



#### Jobs in Combined Impact Area by Industry



BMC

# **TRANSPORTATION AND WAREHOUSING JOBS**



Source: Lightcast 2023 data (2024.1 release) - QCEW Employees.



# **Distribution of Direct Port Jobs by Place of Residence**



Source: The 2023 Economic Impact of the Port of Baltimore in Maryland (Prepared by Martin Associates for the Maryland Port Administration).





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