Slides showing “+“ reflect the addition of new information (added 8.13.19)

Existing Traffic Conditions

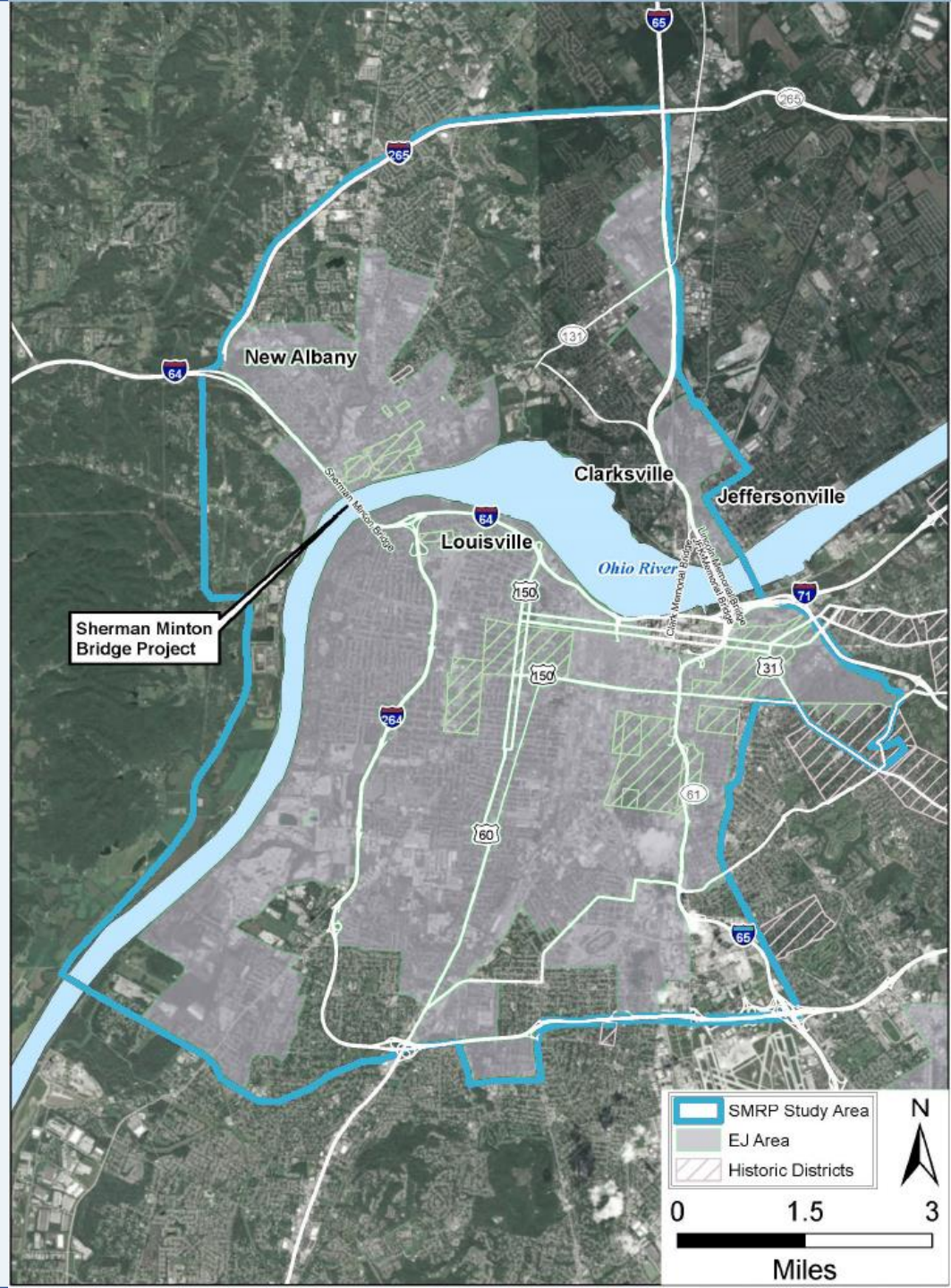
- Data presented in the following slides are based solely on existing conditions
- Assumptions:
  - Existing network is fully operational
  - No modifications have been made to the roadway network
  - The Clark Memorial Bridge is fully open to traffic
- Traffic management measures will be further studied and applied to the MOT options

Existing Traffic Conditions

- Network has far more capacity than during 2011 emergency closure
- Traffic patterns, trips have shifted with new bridges
- Recurring bottlenecks in study area
    - EB I-64/US 150 merge
    - WB I-64 at WB I-264 interchange
    - Downtown Louisville
- Clark Memorial Bridge is at capacity (AM and PM peak)

Study Area Characteristics

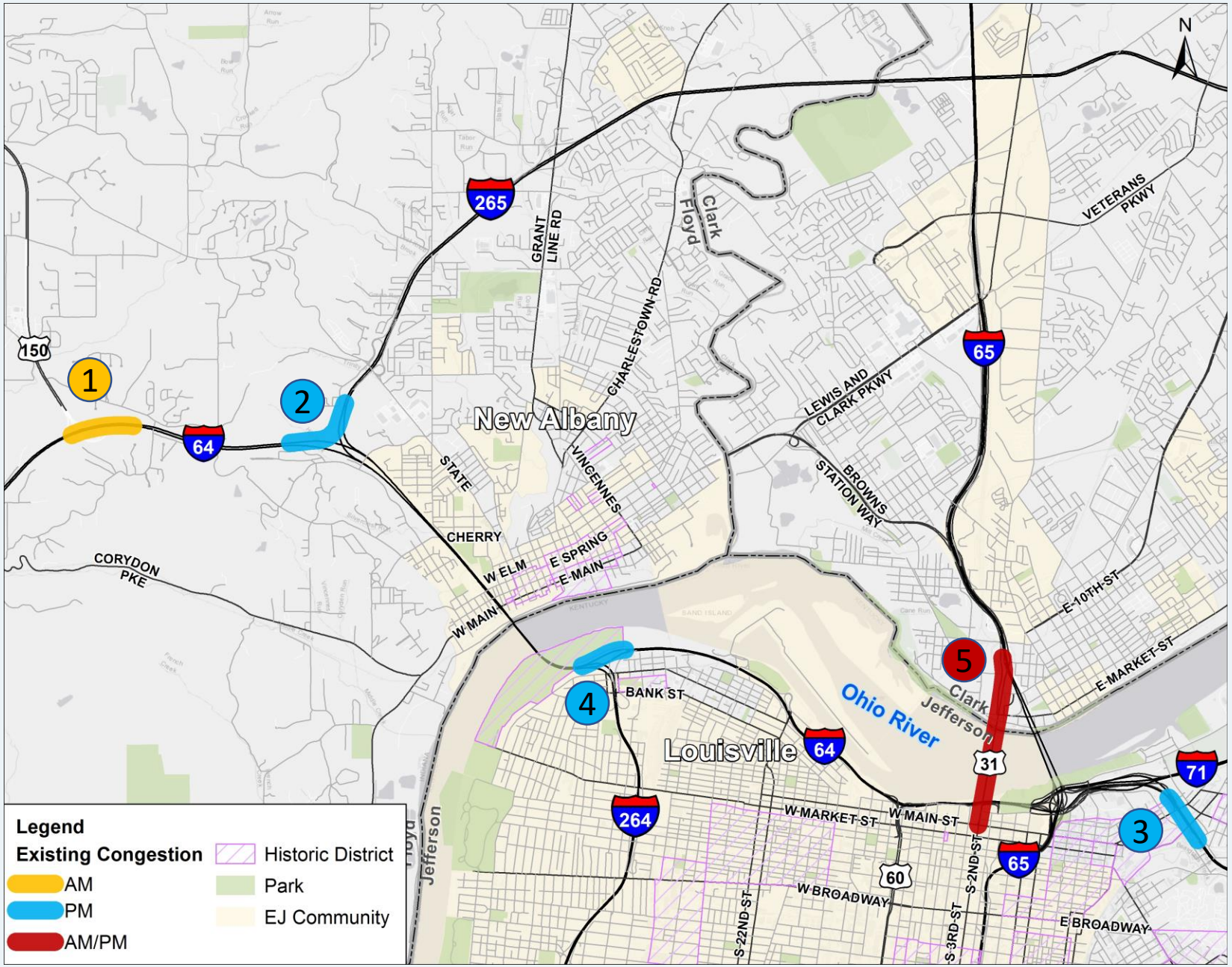
- Four Bridge Crossings
- Env. Justice/Historic areas
- IN and KY sides are distinct
- IN to KY travel dominates
  - 2.5:1 AM Peak Hour (EB)
- KY to IN travel dominates
  - 2:1 PM Peak Hour (WB)



Existing Bridge Volumes

BRIDGE CROSSING	2018 AADT	TRUCK %
I-64, Sherman Minton	90,000	11%
US 31, Clark	44,800	4%
I-65, Kennedy/Lincoln	64,200	24%
IN - SR 265, Lewis & Clark	21,200	17%
TOTAL	**220,200**	**14%**

Existing Network



Existing Congestion Locations

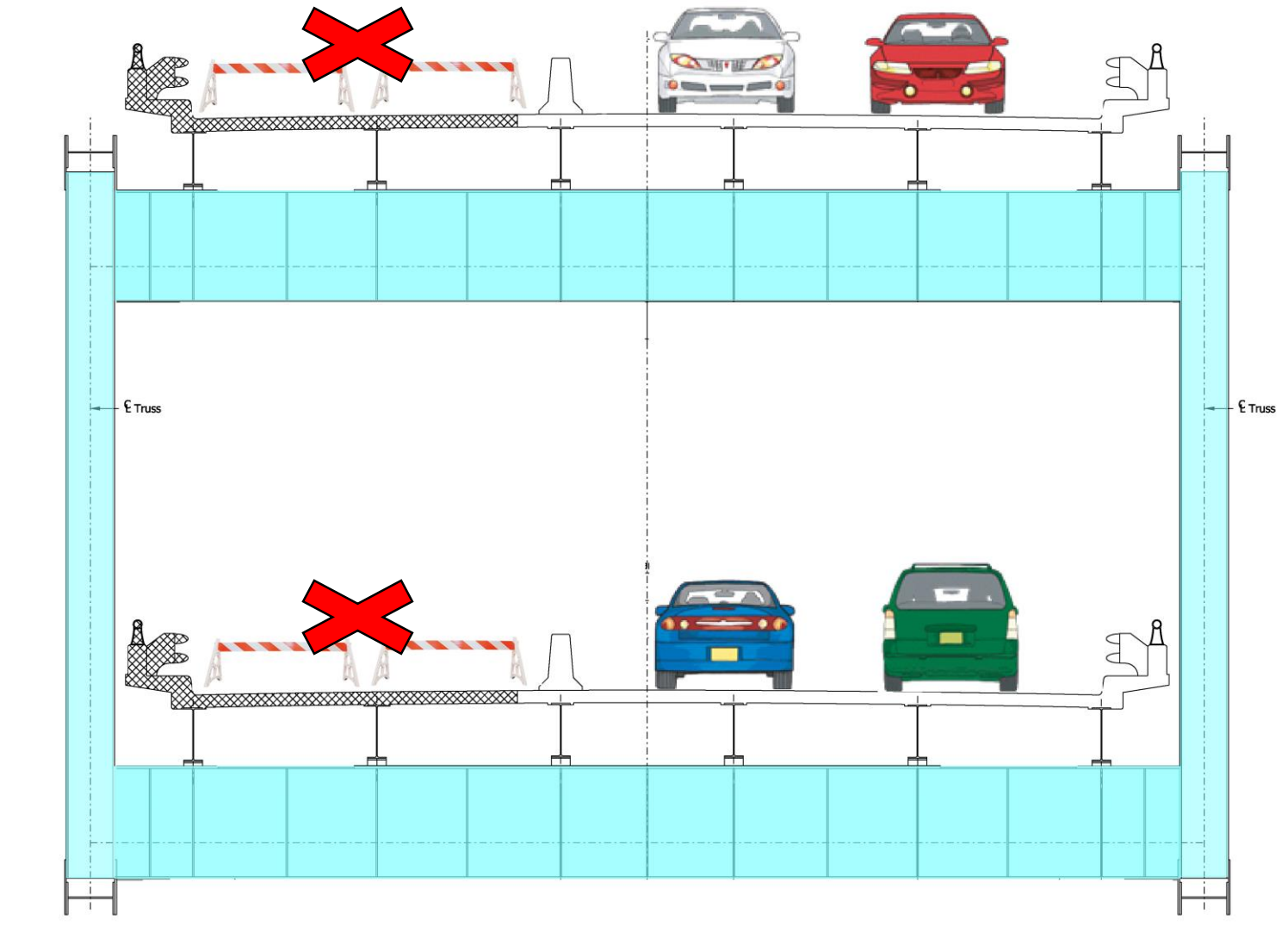
- **AM Congestion:**
  1. EB I-64 at US 150
- **PM Congestion:**
  2. WB I-265 to WB I-64 ramp
  3. EB I-64
  4. WB I-64 at WB I-264
- **AM & PM Congestion:**
  5. Clark Memorial Bridge

With no mitigative strategies considered

Maintenance of Traffic Options

- Two lanes, two decks open (Option 1)
- One lane, two decks open (Option 2)
- Full closure (Option 5)
- One deck closure
  - Alternating directions AM/PM (Option 3)
  - Reversible lanes AM/PM (Option 4)
  - One direction, two phases (Option 6)

Two Lanes, Two Decks Open – Option 1



Estimated Duration:

- 21-37 Months

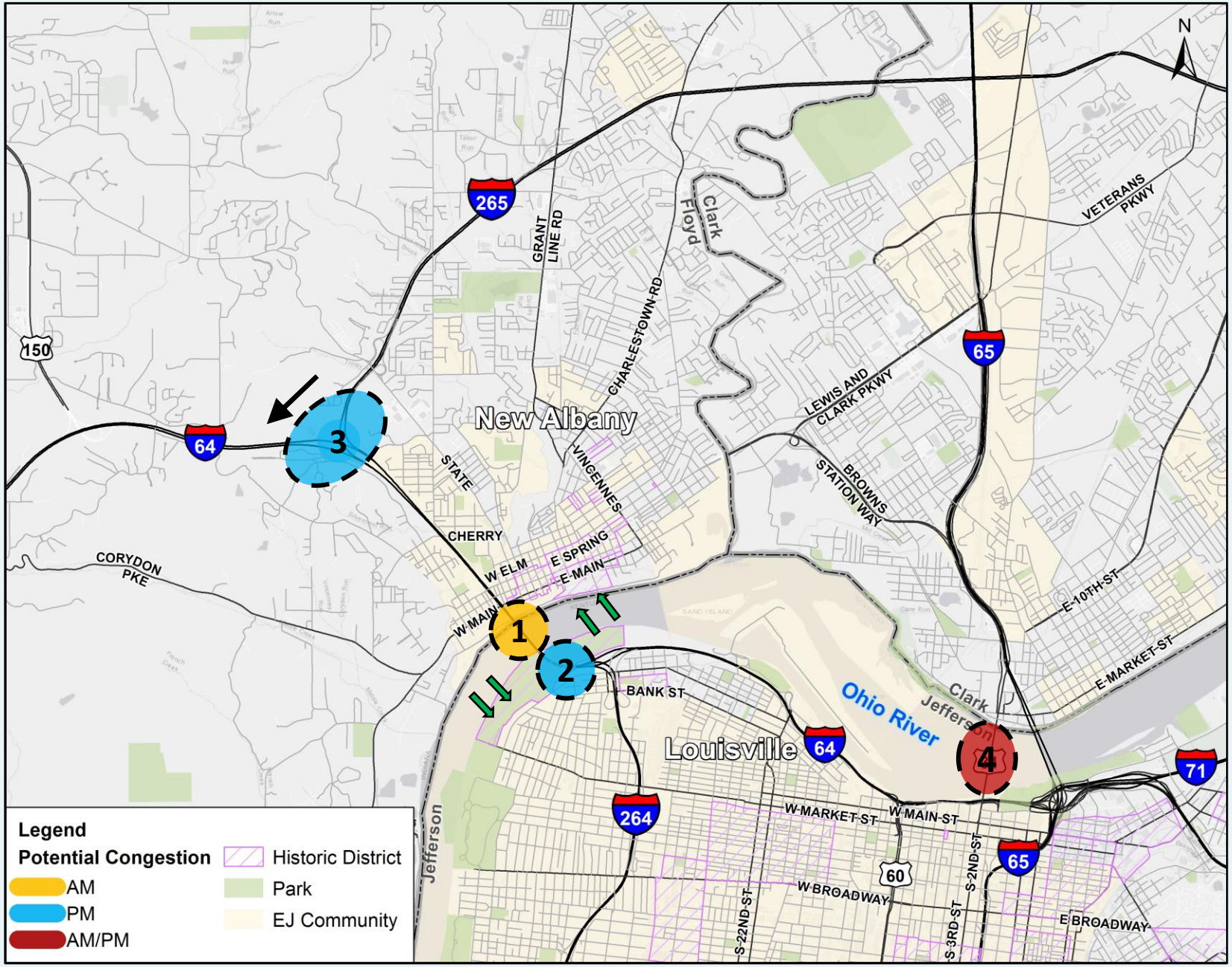
Access:

- 2 Lanes (EB & WB)
- Ramps
  - All open

Closures:

- 1 Lane (EB & WB)

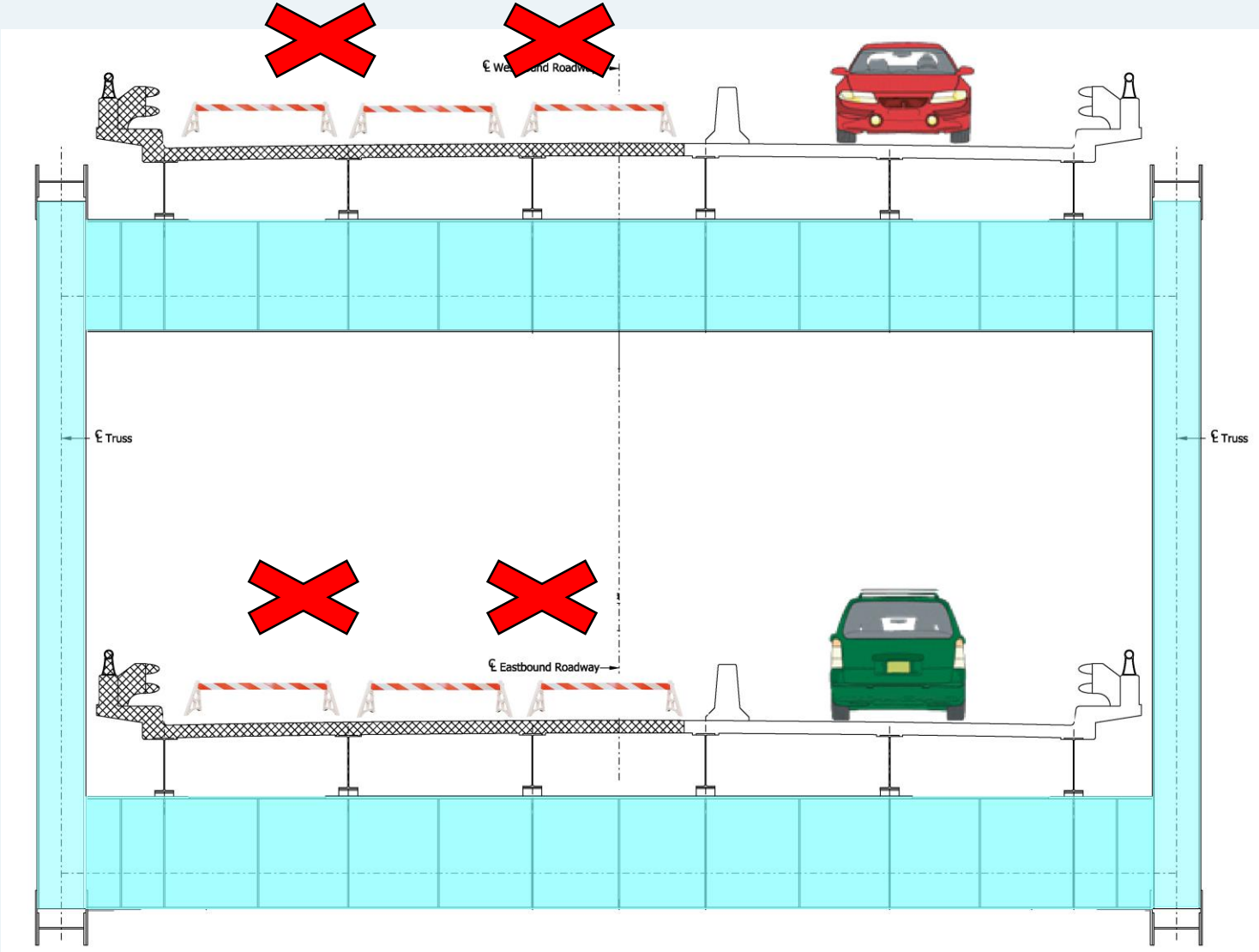
Potential Congestion Areas: Two Lanes, Two Decks Open – Option 1



- **AM Congestion:**
  1. EB I-64 (Bridge)
- **PM Congestion:**
  2. WB I-64 (Bridge)
  3. SB I-265 to WB I-64*
- **AM & PM Congestion:**
  4. Clark Memorial Bridge*

*Has Existing Congestion

One Lane, Two Decks Open – Option 2



Estimated Duration:

- 18-28 Months

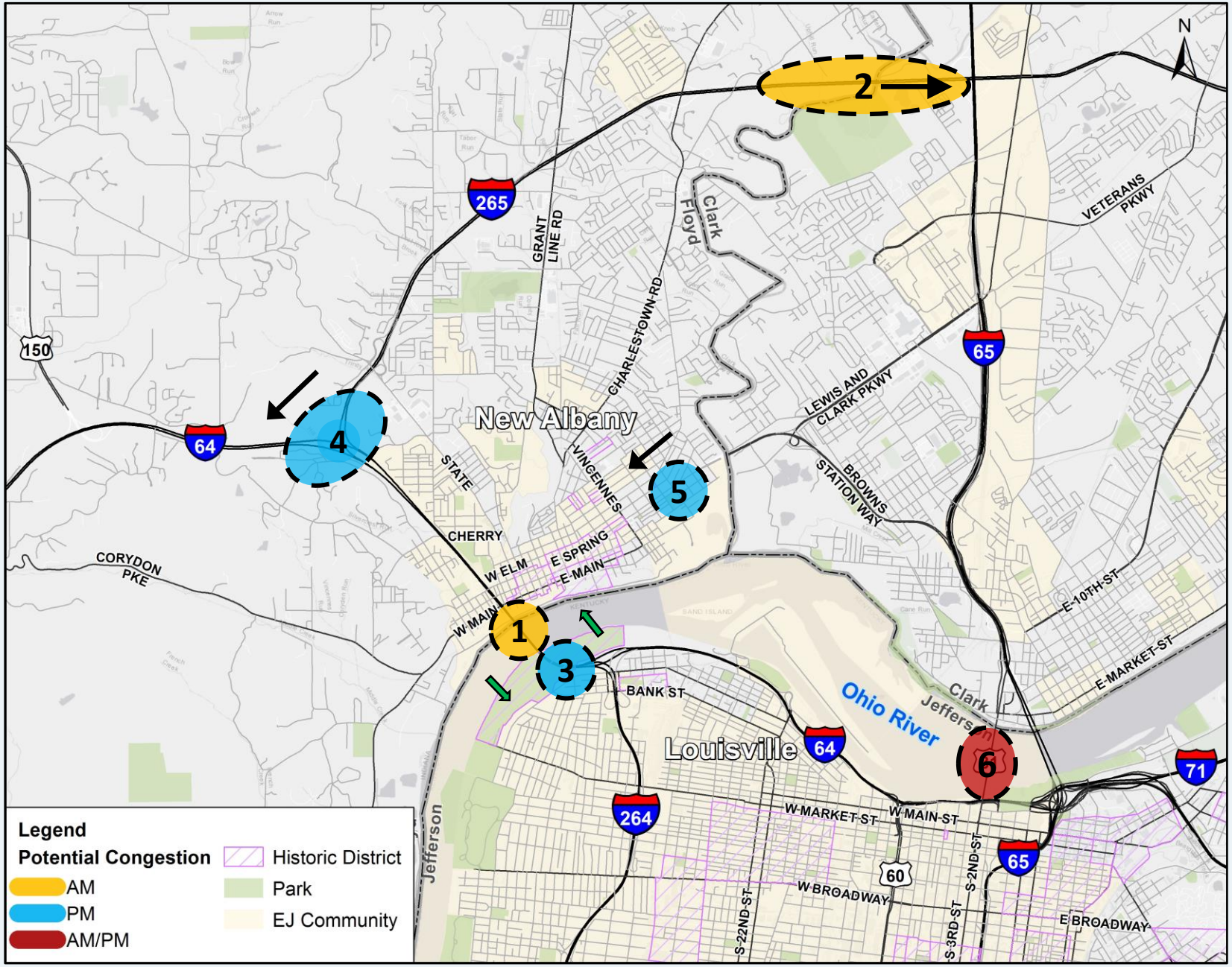
Access:

- 1 Lane (EB & WB)
- Ramps
  - All open

Closures:

- 2 Lanes (EB & WB)

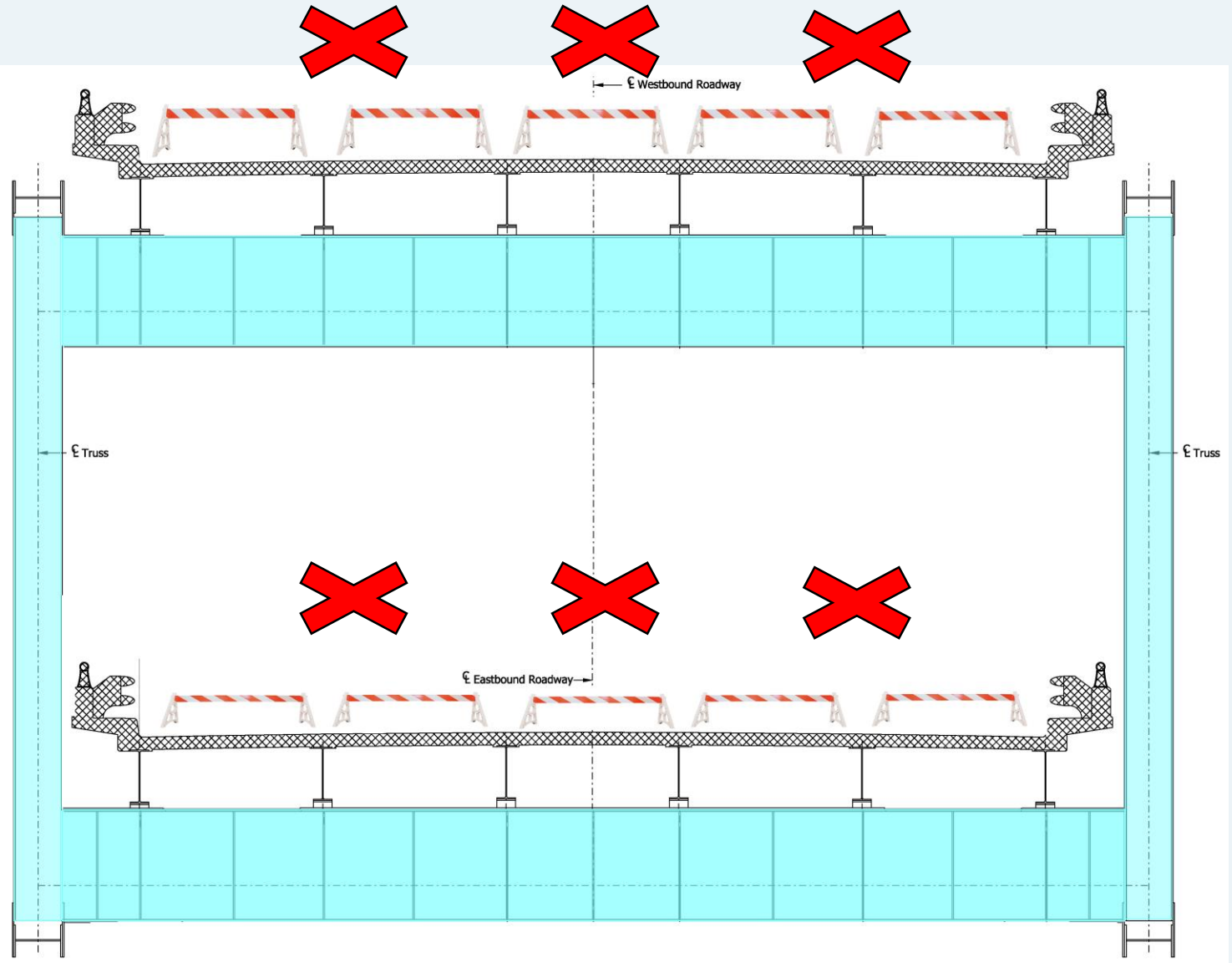
Potential Congestion Areas: One Lane, Two Decks Open – Option 2



- **AM Congestion:**
  1. EB I-64 (Bridge)
  2. I-265 EB to I-65
- **PM Congestion:**
  3. WB I-64 (Bridge)
  4. WB I-265 to WB I-64*
  5. WB Spring Street
- **AM & PM Congestion:**
  6. Clark Memorial Bridge*

*Has Existing Congestion

Full Closure – Option 5



Estimated Duration:

- 15-23 Months

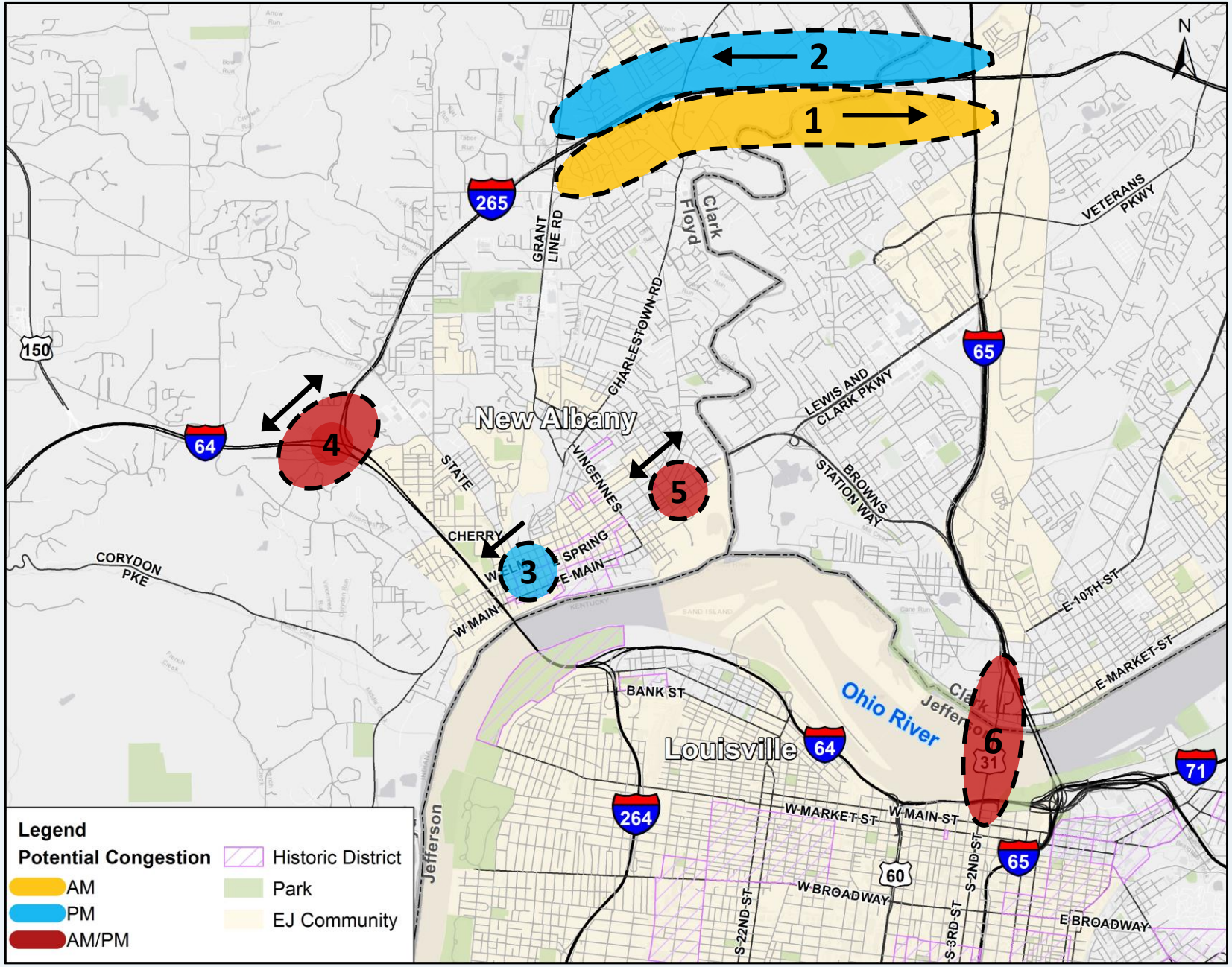
Access:

- None
- No ramps to bridge open

Closures:

- 6 lanes (Both decks)
- All ramps at bridge

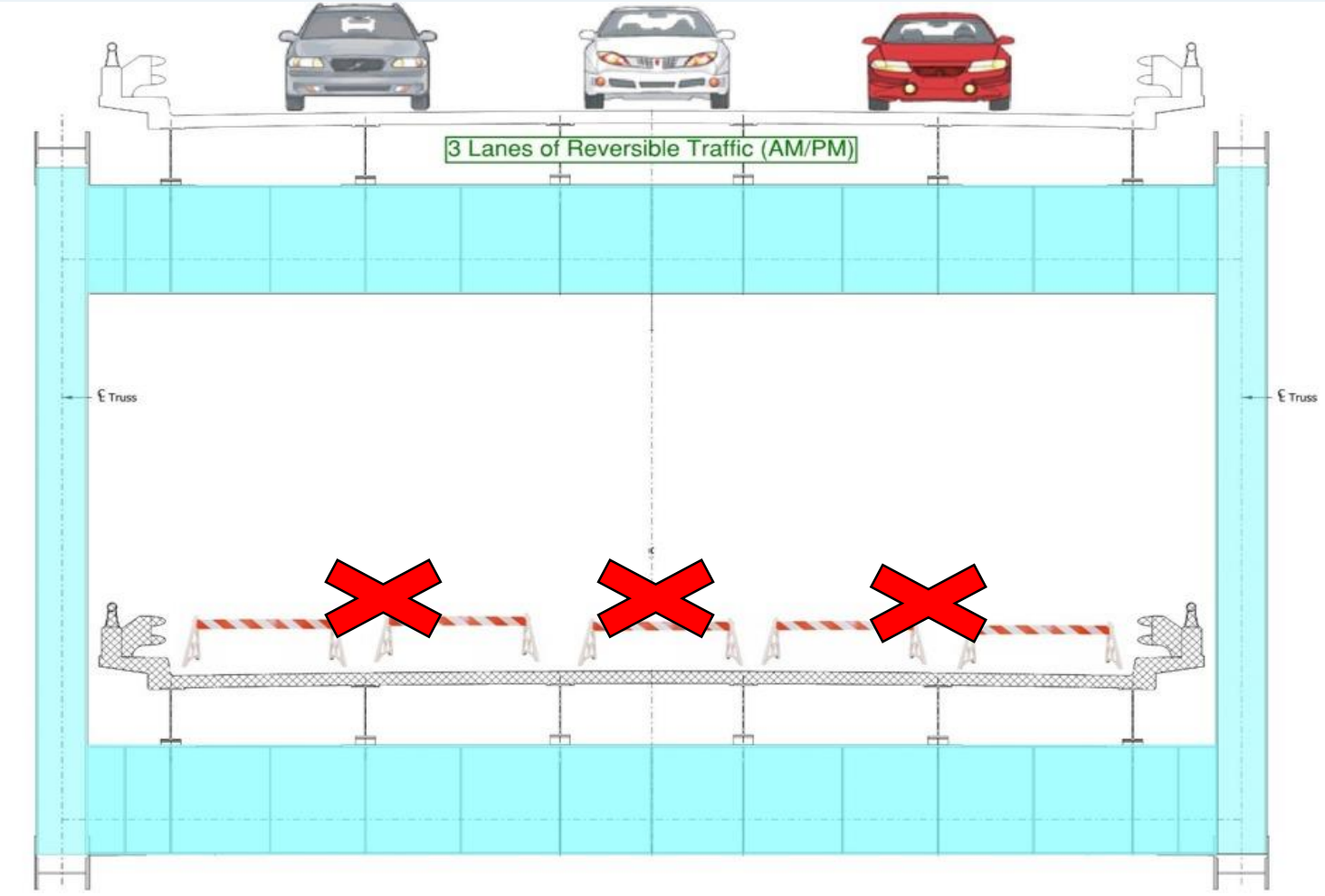
Potential Congestion Areas: Full Closure – Option 5



- **AM Congestion:**
  1. EB I-265 to SB I-65
- **PM Congestion:**
  2. WB I-265
  3. WB Spring Street – Downtown New Albany
- **AM & PM Congestion:**
  4. EB I-64 to EB I-265 / WB I-265 to WB I-64*
  5. EB and WB Spring Street
  6. Clark Memorial Bridge*

*Has Existing Congestion

One Deck Open (Alternating AM/PM) – Option 3



Estimated Duration:

- 26-38 Months

Access:

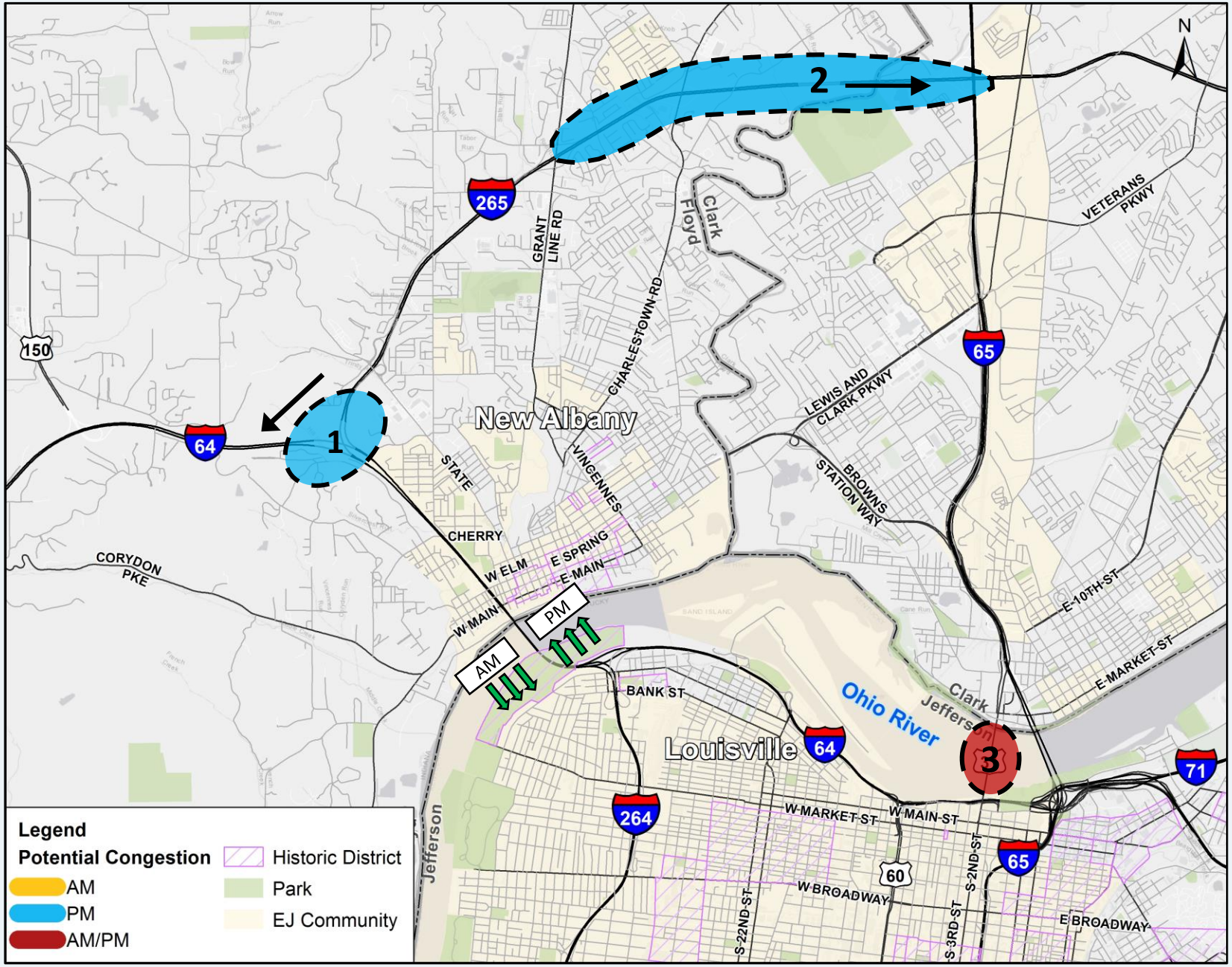
- 3 Lanes (EB) in AM
- 3 Lanes (WB) in PM
- Ramps – varies on deck & time of day

Closures:

- 3 Lanes (WB) in AM
- 3 Lanes (EB) in PM

*This option takes approximately 1.5 hours, twice per day (a 24 hr. period) and will require full closures to safely implement the reversible lanes.

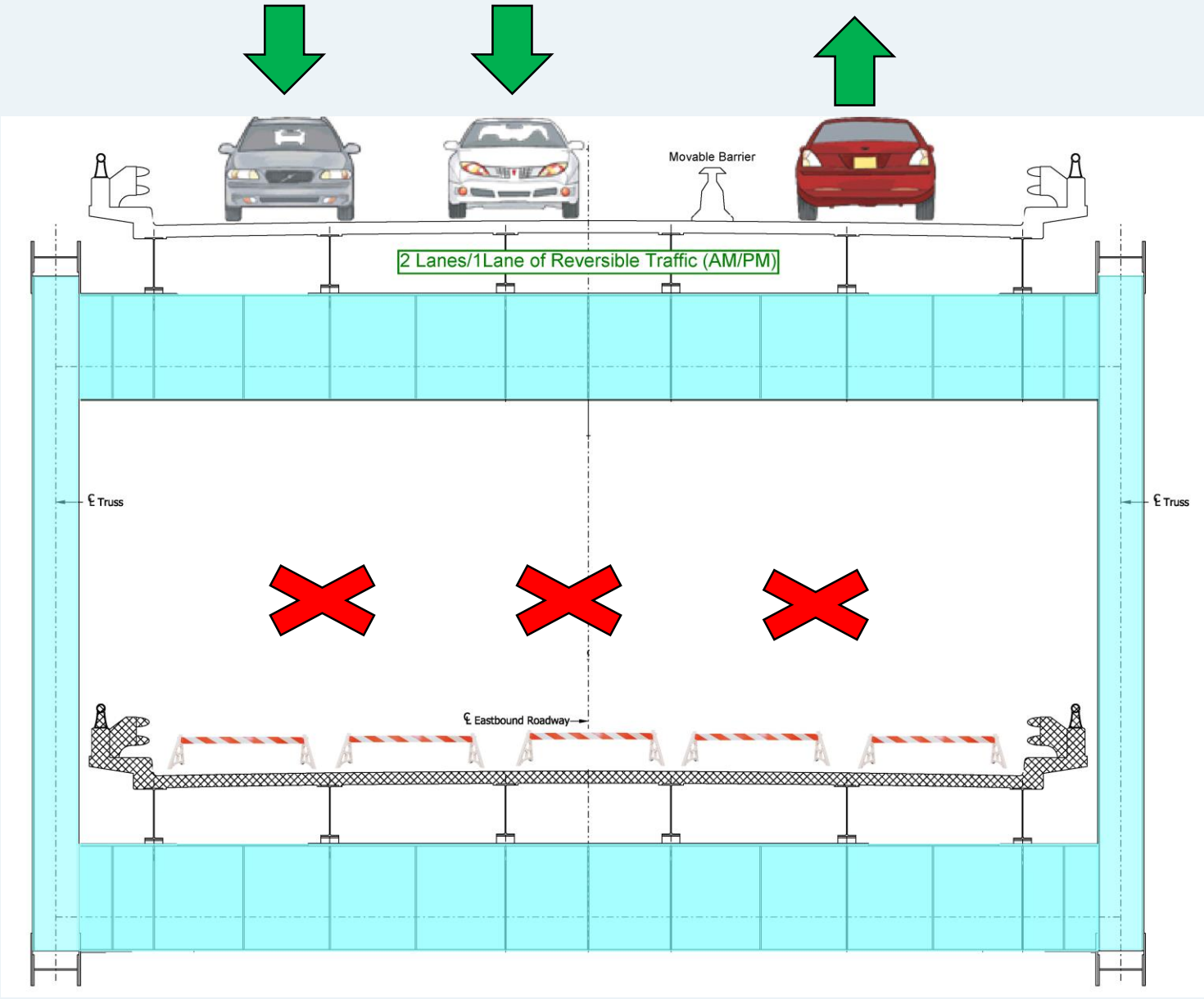
Potential Congestion Areas: One Deck Open (Alternating AM/PM) – Option 3



- **PM Congestion:**
  1. WB I-265 to WB I-64*
  2. EB I-265 to I-65
- **AM & PM Congestion:**
  3. Clark Memorial Bridge*

*Has Existing Congestion

One Deck Open (Reversible Lane AM/PM) – Option 4



Estimated Duration:

- 26-38 Months

AM Access:

- 2 Lanes EB
- 1 Lane WB
- Ramps – varies based on deck

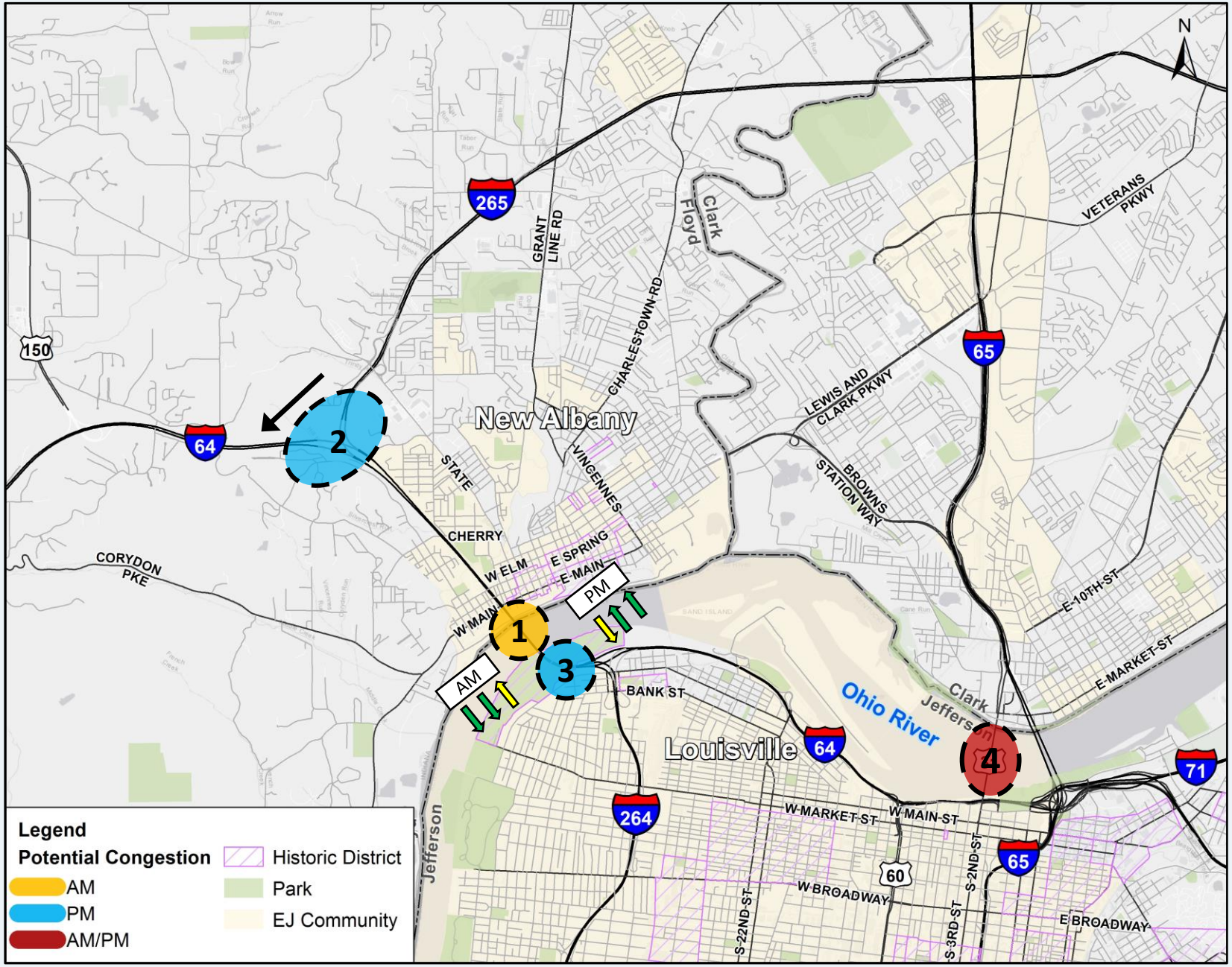
PM Access:

- 2 Lanes WB
- 1 Lane EB
- Ramps – varies based on deck

Closures:

- 3 Lanes (one deck)

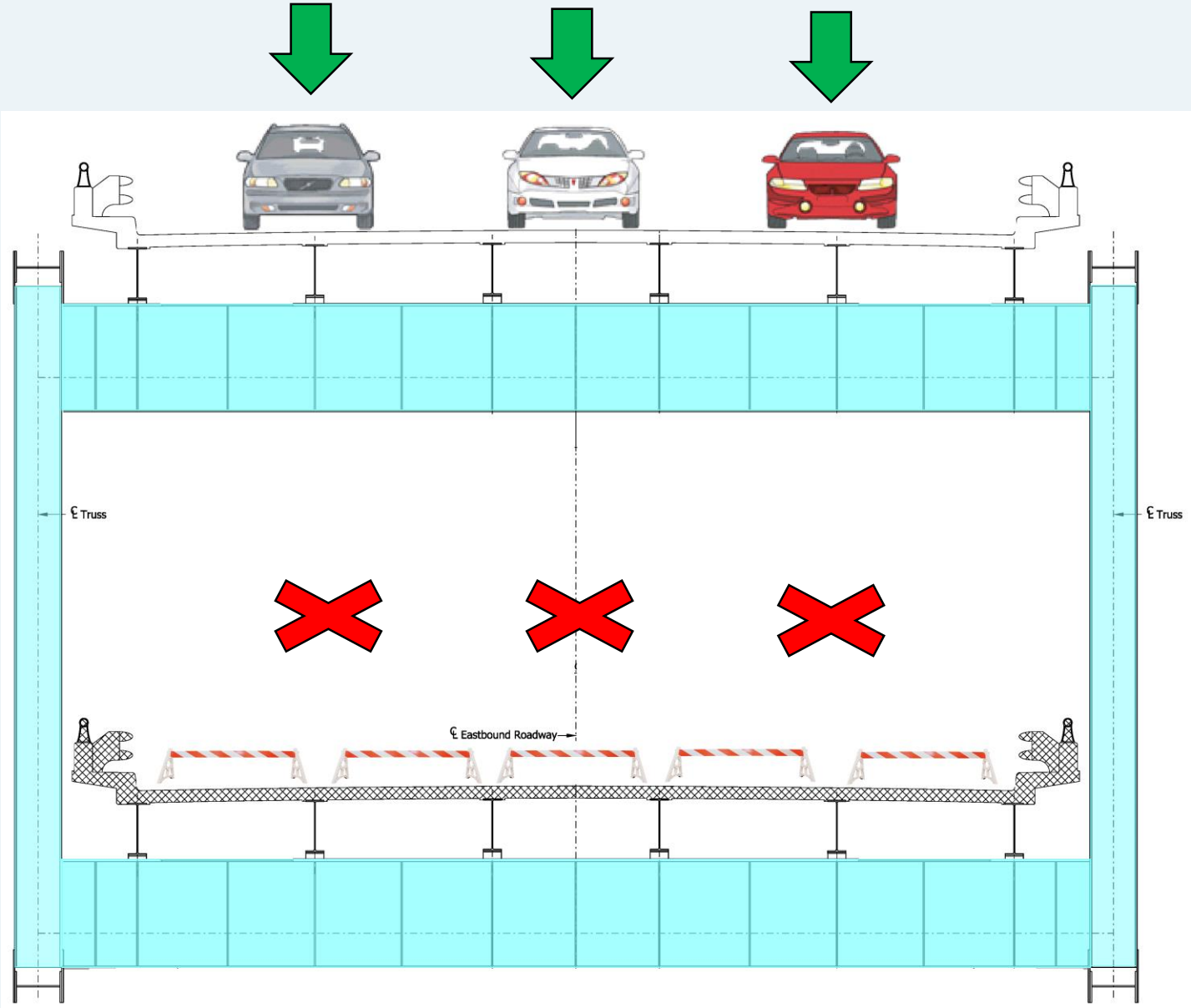
Potential Congestion Areas: One-Deck Open (Reversible Lane) - Option 4



- **AM Congestion:**
  1. EB I-64 (Bridge)
- **PM Congestion:**
  2. WB I-265 to WB I-64*
  3. WB I-64 (Bridge)
- **AM & PM Congestion:**
  4. Clark Memorial Bridge*

*Has Existing Congestion

One Deck Open (One Direction) – Option 6 (Phase 1 shown)



Estimated Duration:

- 26-38 Months

Access:

- Phase 1 Access: 3 Lanes WB
- Phase 2 Access: 3 Lanes EB
- Ramps – varies based on deck (phase)

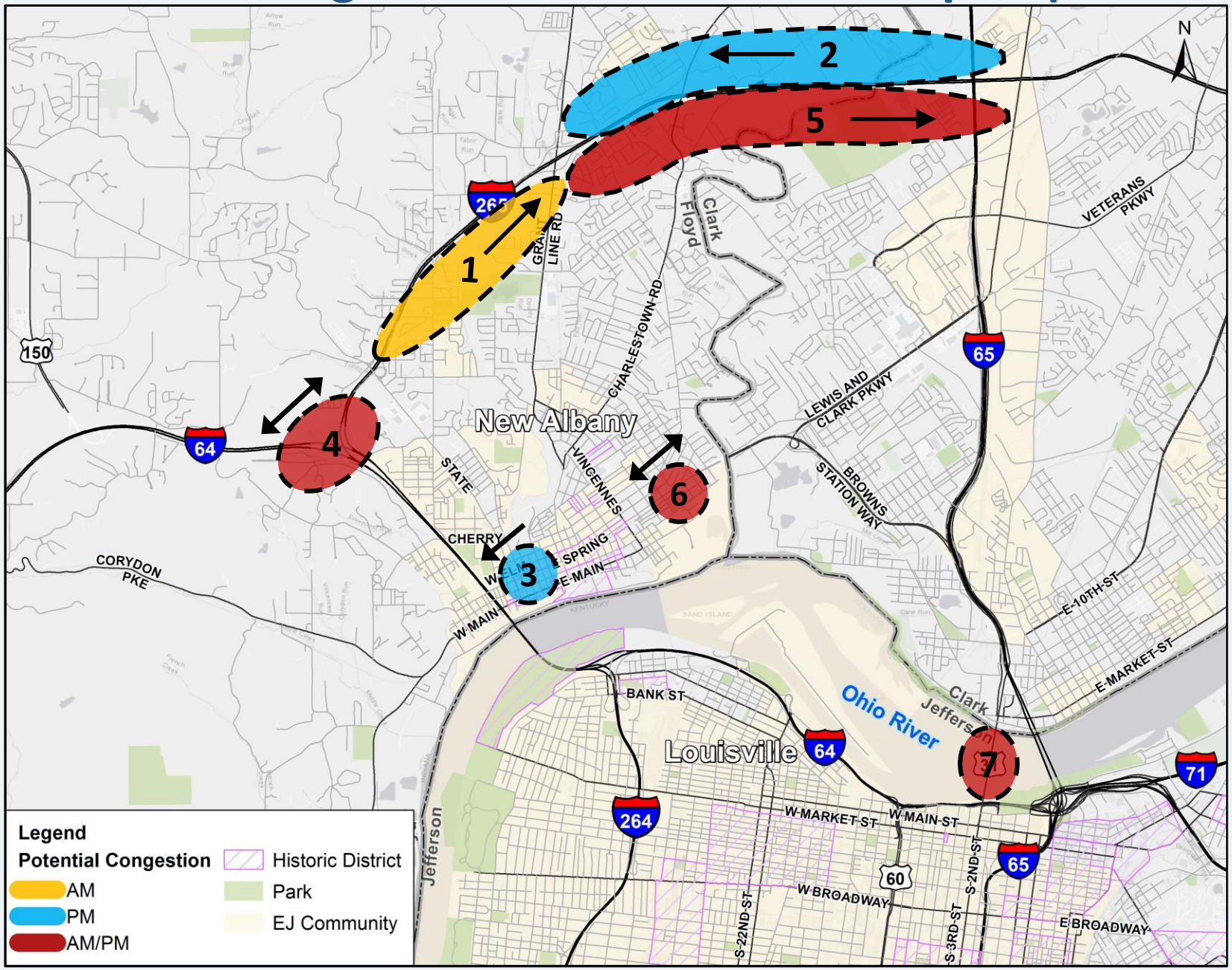
Closures:

- 3 Lanes (one deck, two phases)

Phase 1 Closure: 3 Lanes EB

Phase 2 Closure: 3 Lanes WB

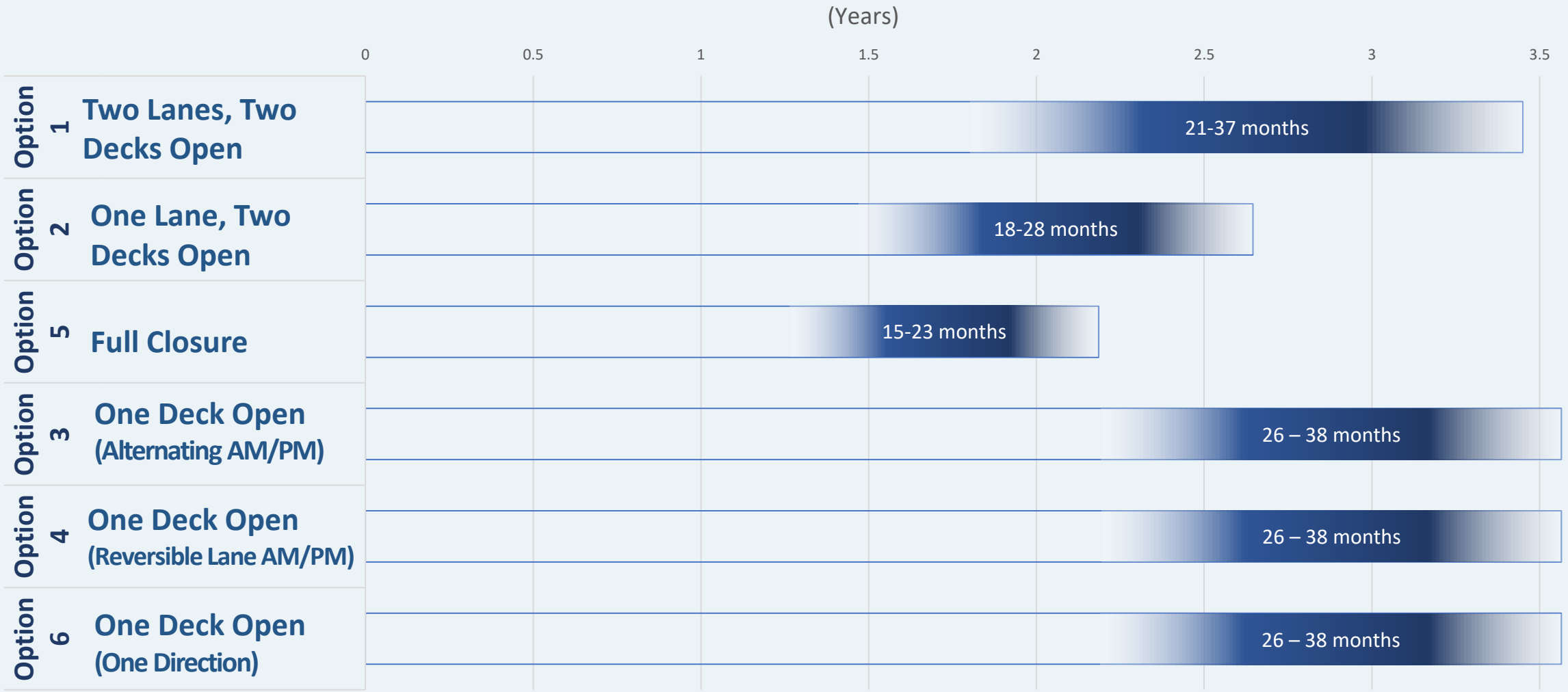
Potential Congestion Areas: One Deck Open (One-Direction) – Option 6



- **AM Congestion:**
  1. EB I-265 *(Ph1)*
- **PM Congestion:**
  2. NB I-65 to WB I-265 *(Ph2)*
  3. WB Spring Street – Downtown New Albany *(Ph2)*
- **AM & PM Congestion:**
  4. EB I-64 to EB I-265 *(Ph1)* / WB I-265 to WB I-64* *(Ph1 & Ph2)*
  5. EB I-265 to SB I-65 *(Ph1)*
  6. EB Spring St. *(Ph1)* / WB Spring St. *(Ph2)*
  7. Clark Memorial Bridge*

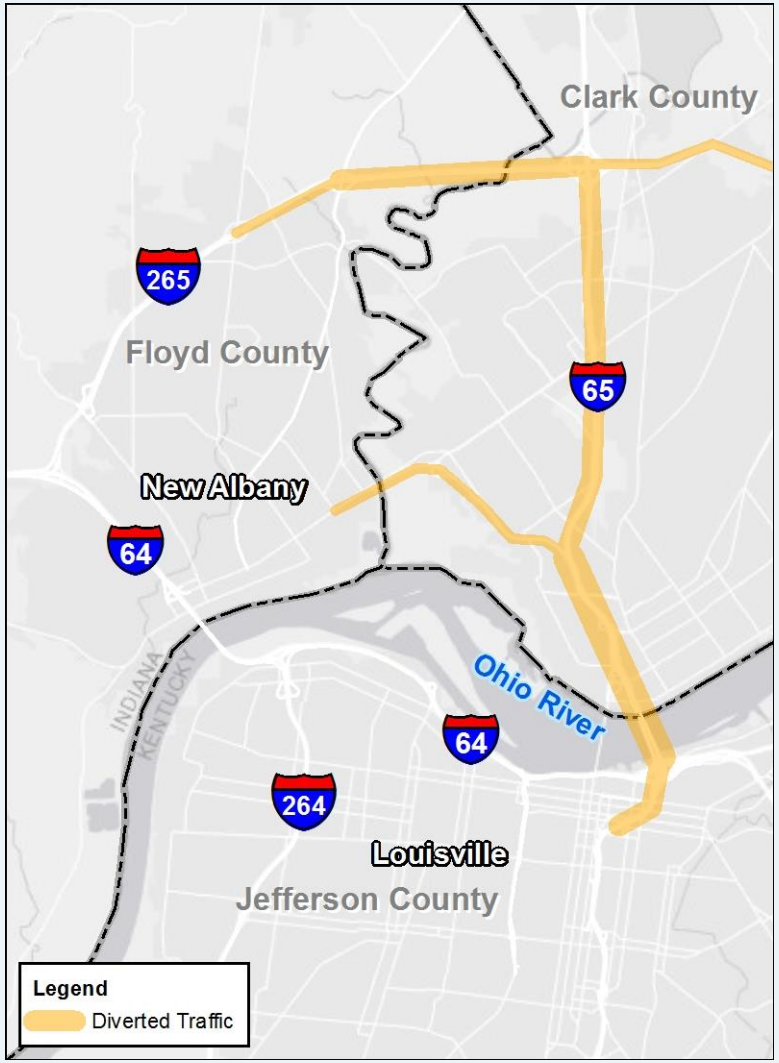
*Has Existing Congestion

Construction Duration



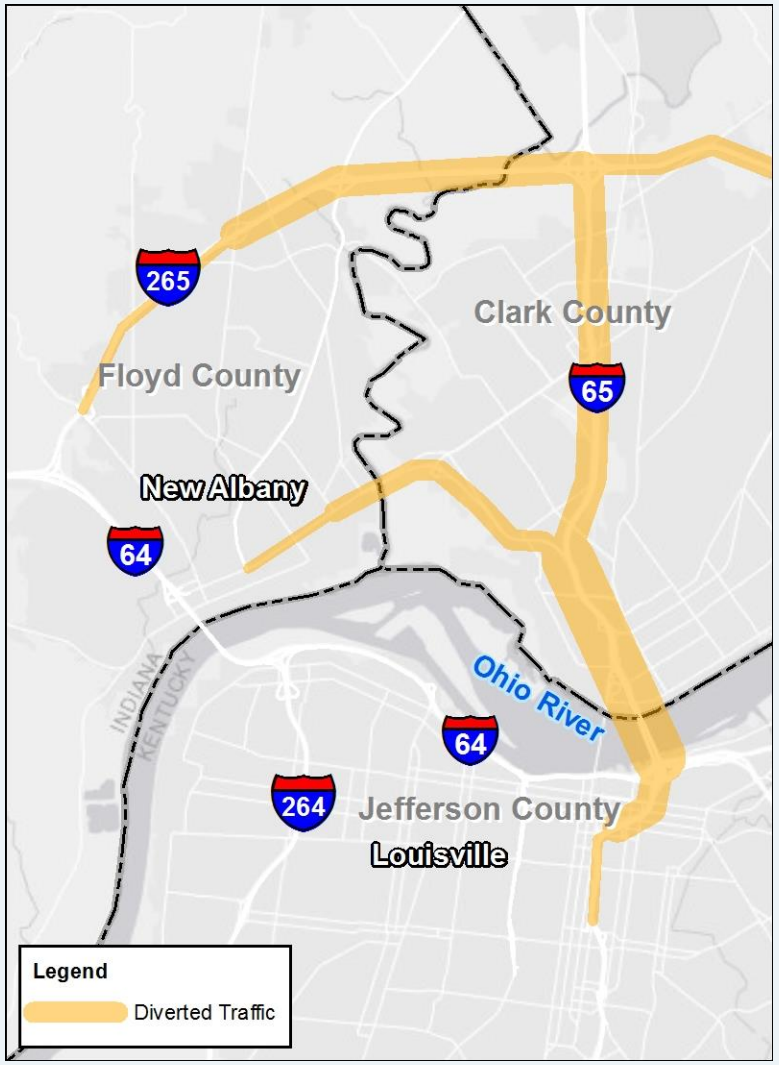
The durations shown above are schedule approximations, based on performing only the MOT Scenario depicted for the full duration of the project. The contractor team will be encouraged to minimize impacts to the public, and may utilize more combinations of these MOT options to reduce the overall impact or construction duration.

General Diversion Patterns



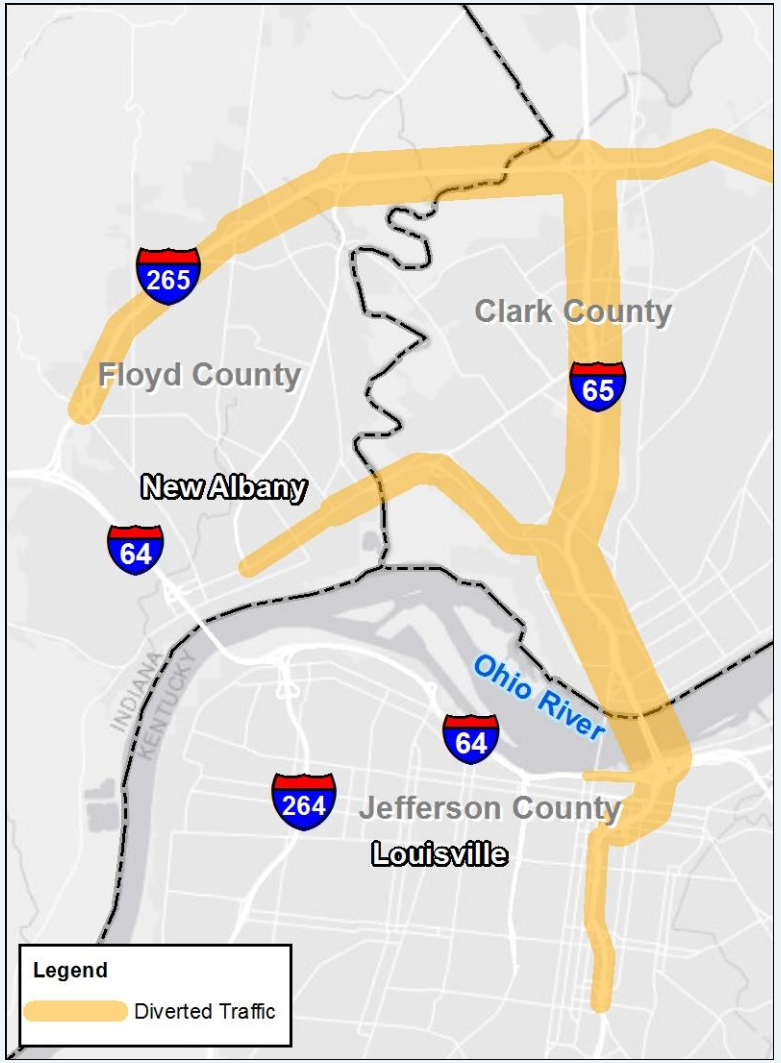
2 Lanes Open

7,400 vehicles (8%)



1 Lane Open

33,400 vehicles (37%)



Full-Closure

90,000 vehicle(100%)

Traffic Diverted from Sherman Minton
Daily Volumes

	Base	Option 1	Option 2	Option 5	Option 3	Option 4	Option 6
Sherman Minton Bridge	90,000	82,600	56,600	0	49,400	70,300	43,400
Diverted Traffic	0	7,400	33,400	90,000	40,600	19,700	46,600
Clark Memorial*		9%	13%	13%	18%	17%	14%
Kennedy/Lincoln		77%	71%	72%	68%	69%	72%
Lewis & Clark		14%	17%	15%	14%	14%	14%

* Because Clark Memorial Bridge is at capacity, a nearly equivalent amount of traffic also shifts from Clark Memorial Bridge to Kennedy/Lincoln bridges

Average Travel Time
All Cross-River Trips (AM & PM periods)

MOT OPTION	CARS		TRUCKS	
	MINUTES	CHANGE	MINUTES	CHANGE
Base	33.0		46.3	
Option 1	34.0	3%	46.7	1%
Option 2	35.3	7%	47.3	2%
Option 5	37.0	12%	48.3	4%
Option 3	33.9	3%	46.9	1%
Option 4	34.4	4%	46.9	1%
Option 6	35.1	6%	47.3	2%

Per Trip User Costs = Time($) + Distance($) + Tolls
All Cross-River Trips (AM & PM periods)

MOT OPTION	CARS		TRUCKS	
	COST	CHANGE	COST	CHANGE
Base	$ 17.49		$ 79.36	
Option 1	$ 18.01	3%	$ 80.06	1%
Option 2	$ 18.91	8%	$ 81.62	3%
Option 5	$ 20.40	17%	$ 84.89	7%
Option 3	$ 18.30	5%	$ 81.77	3%
Option 4	$ 18.30	5%	$ 80.68	2%
Option 6	$ 19.00	9%	$ 82.22	4%

Note: Toll cost based on average toll of $2.74 / Car Crossing and $8.03 / Truck Crossing (July 2019)

Per Trip User Cost Calculation

- Average All Cross-River Trips ***Example*** (AM & PM periods)
  - User Cost = (Travel Time x Value of Time) + (Distance x Operating Cost) + Toll Paid
  - User Cost = (32.94 min x $0.3771/min) + (18.64 miles x $0.22/mile) + $0.97
  - User Cost = $12.42 + $4.10 + $0.97 = $17.49 *(Base Case)*

- Source of Data
  - **Value of Time** *($/min)* - based on a % of regional median income *(US Census)*
  - **Operating Cost** *($/mile)* - includes fuel, maintenance, repair and tires

    (American Automobile Association 2018)
  - **Toll Paid** ($) - is based on current toll rates

    (Provided by Riverlink for vehicle type/transponder/account type)

Public Involvement Schedule 2019

Summer 2019

- Key officials briefings
- CAC and EJ meetings
- Open houses: July 23 (KY) & July 25 (IN)

Fall/Winter 2019

- Public hearing

Thank You

SHERMAN
MINTON
RENEWAL