



# Rehabilitation of the West 79<sup>th</sup> Street Rotunda Complex and West 79<sup>th</sup> Street Bridge Over Amtrak

Manhattan Community Board 7  
May 9, 2019



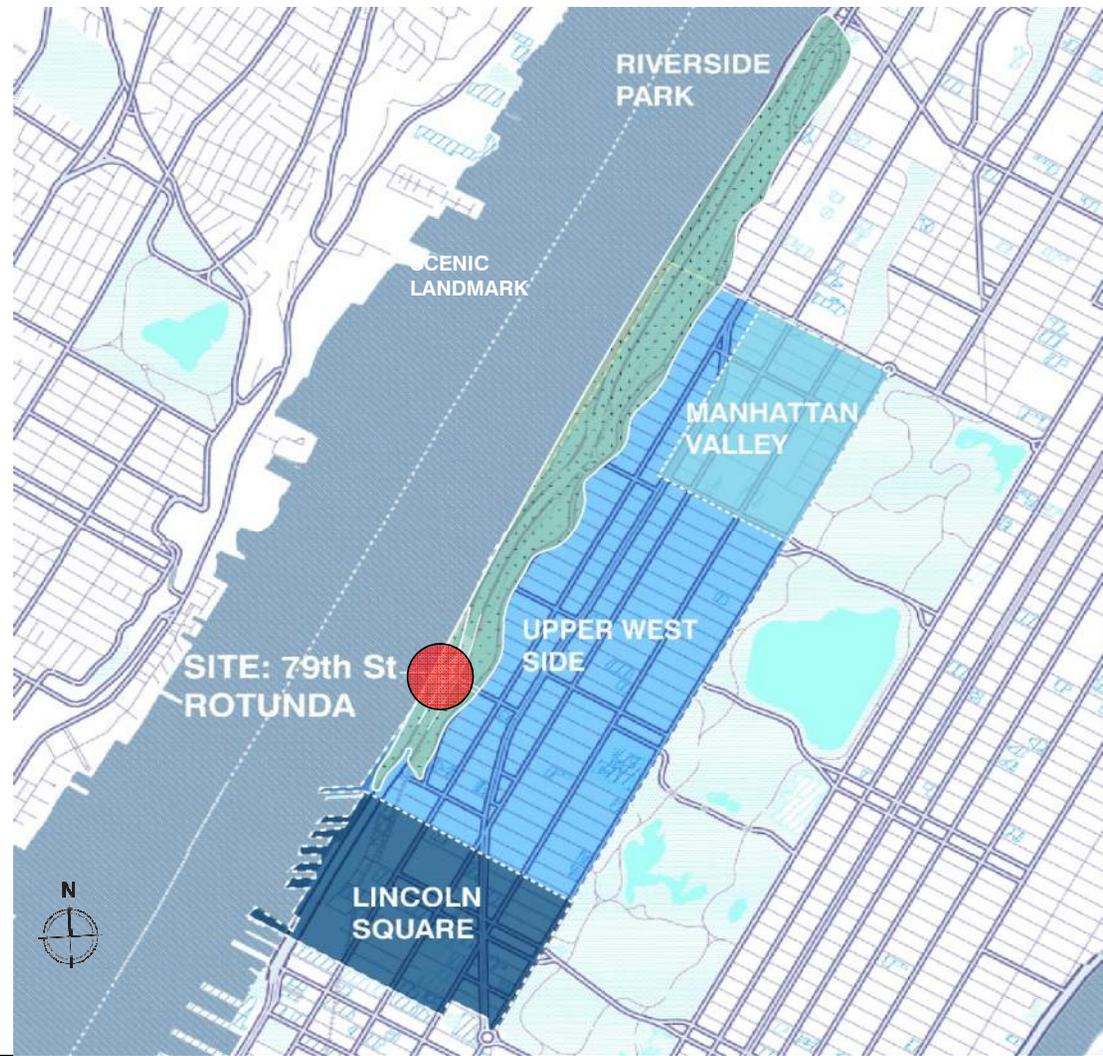
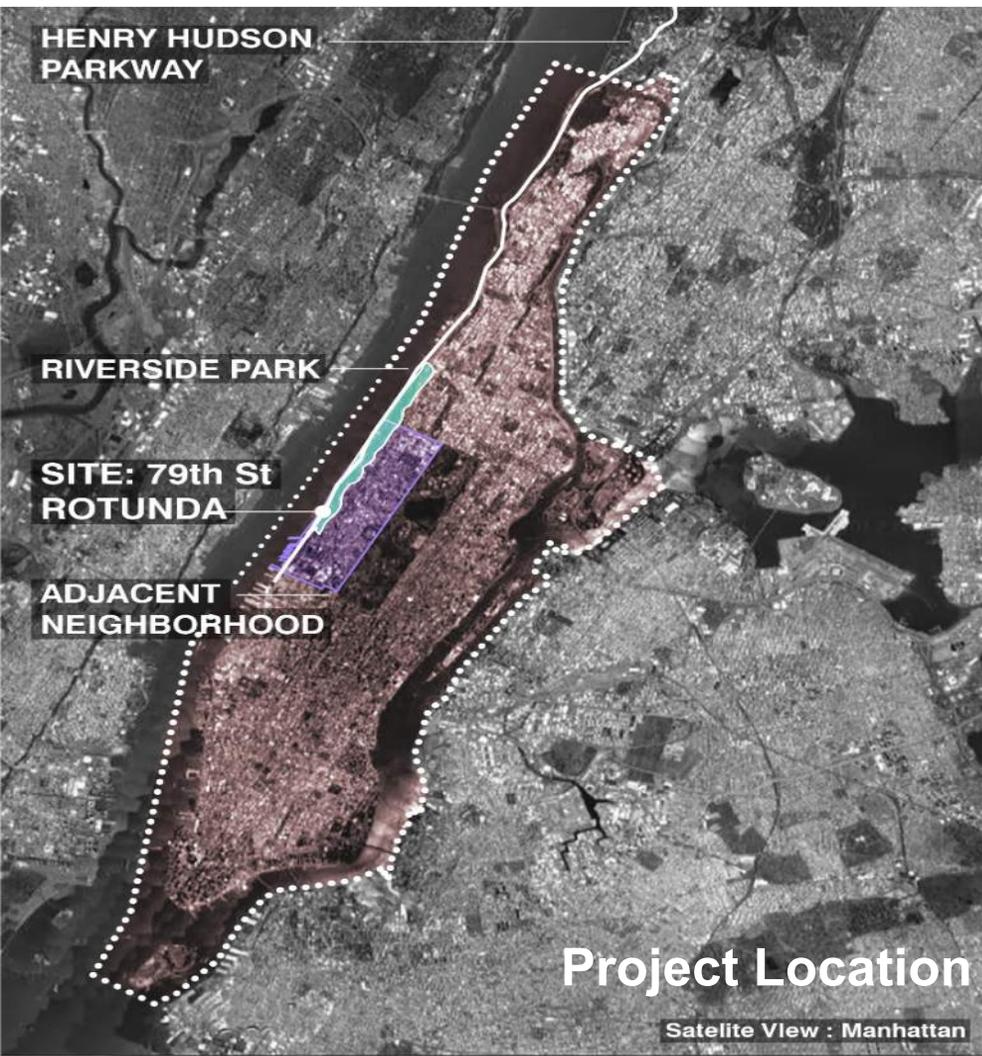
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Title

1



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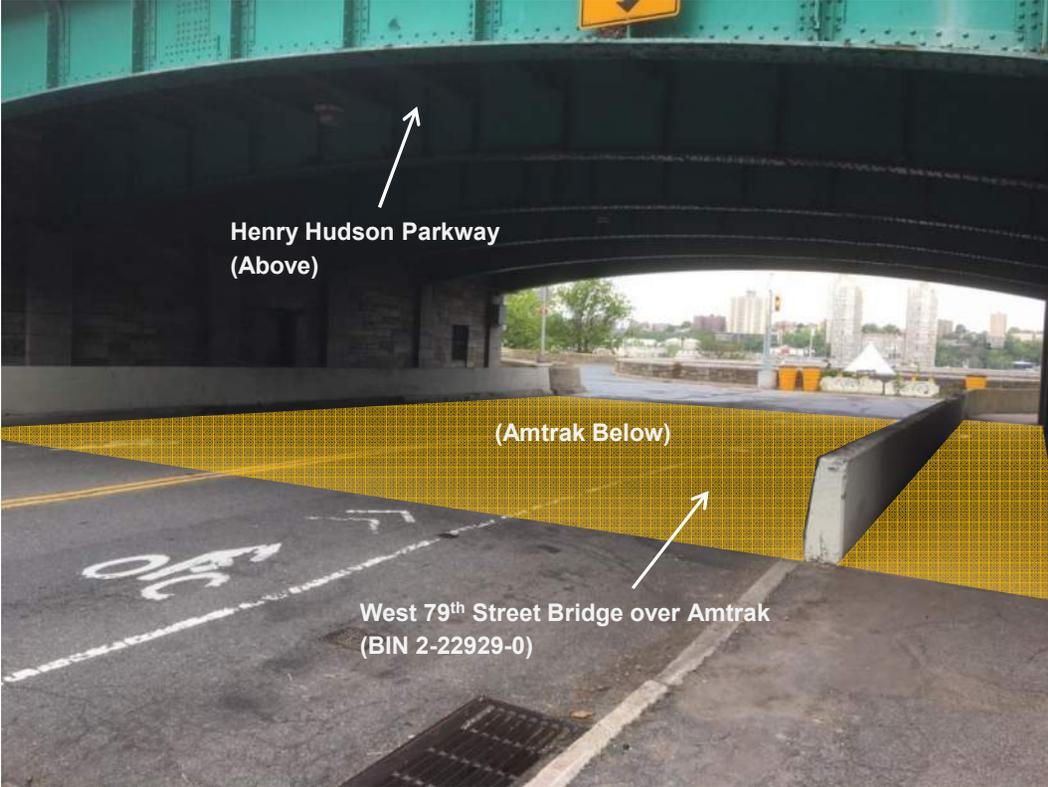
Project  
 Location  
 2

# Project History / Existing Structure Characteristics

## West 79<sup>th</sup> St. Bridge Over Amtrak

(BIN 2-22929-0)

- Constructed in 1937
- Owned/Operated by NYCDOT
- Last Major Rehab 1975
  
- Carries E/W Traffic on West 79<sup>th</sup> Street over Amtrak
- 74'-3" Single Span Bridge
  - Reinforced Concrete Deck
  - Non-Composite Riveted Built-Up Plate Girders
  - Reinforced Concrete Gravity Abutment (East)
  - Multi-Column Steel Bent (West)
- 2 Travel Lanes, 2 Parking Lanes (Bus Layover Areas), Barrier Separated Sidewalks (Both Sides)
  - Out-to-Out Width = ± 64'-4"
  - Traveled Way Width = ±44'-1"
  - Sidewalk Widths = ± 6'-2"



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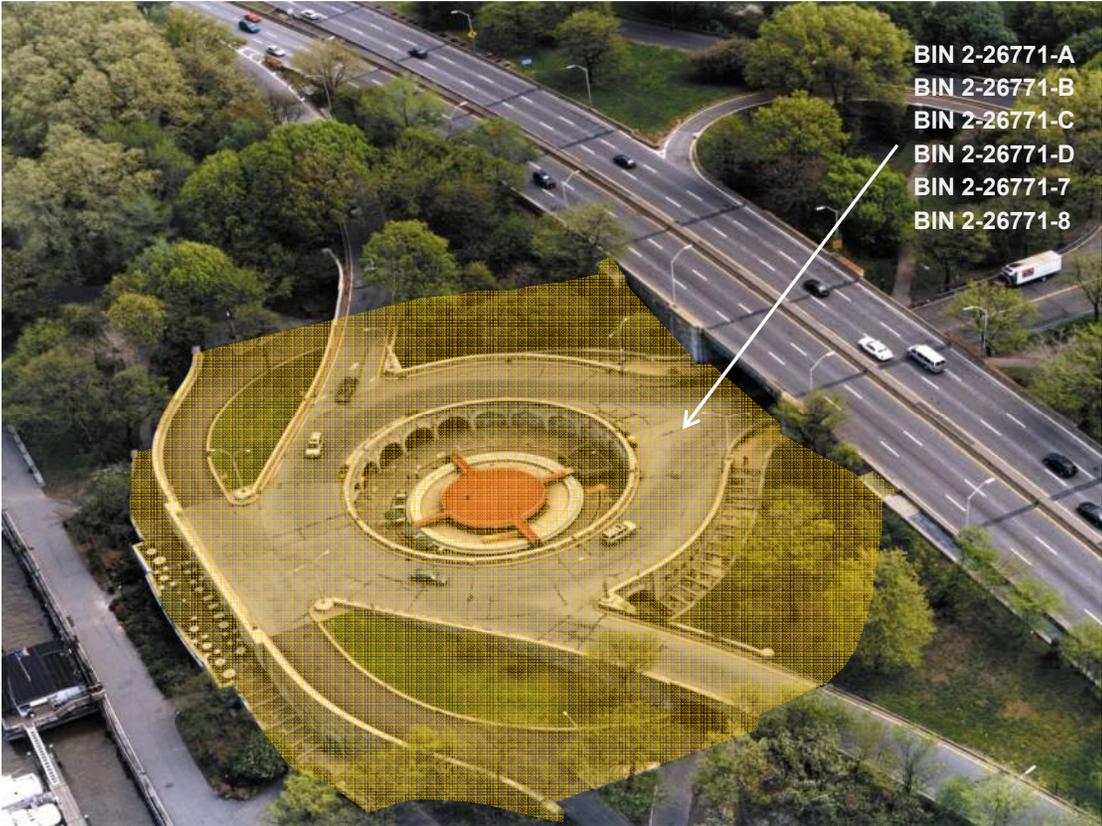
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# Project History / Existing Structure Characteristics

## Rotunda Structure

(Six Bridge Structures – Multiple BINS)

- Constructed in 1936
- Owned/Operated by NYCDPR
- No Major Rehabilitation Since Construction
- Three Level Multimodal Facility
  - Vehicles
  - Pedestrians
  - Bicycles
- Houses NYCDPR Maintenance and Operation Staff, Concessionaire, and Boat Basin Parking
- Terminus of West 79<sup>th</sup> Street and Interchange with Henry Hudson Parkway
- Concrete Encased Steel Superstructure
- 7.5” Reinf. Concrete Deck w/ Asphalt Overlay
- Supported on Concrete Filled Steel Piles
  - Column Grid System

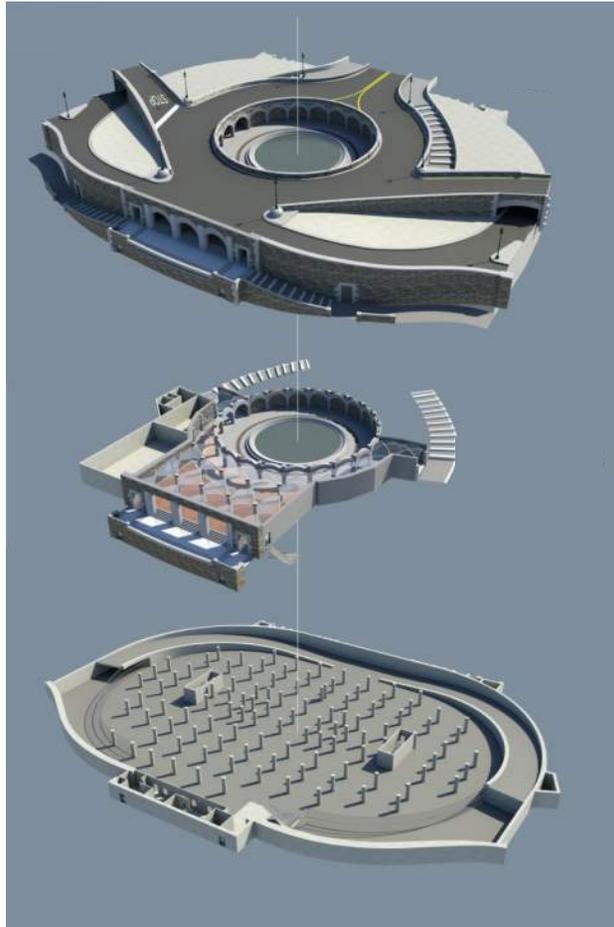


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# Rotunda Structure



**Traffic Circle Level**

**Pedestrian Plaza Level**

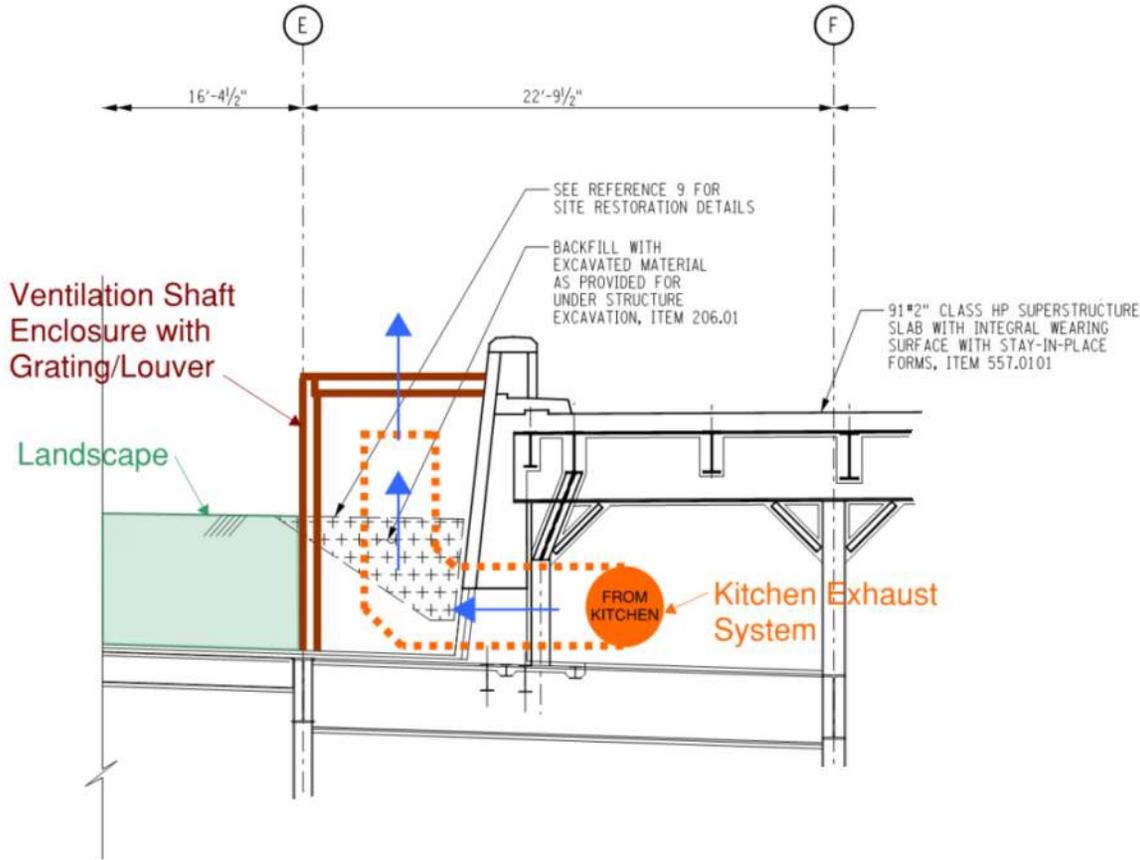
**Garage Level**

# Proposed Kitchen Exhaust Locations

- Designed for North and South NYCDPR Spaces
- Provides Flexibility of NYCDPR Operations
- Provides Symmetric Aesthetic
- Meets NYC Building Code Requirements
- Minimally Invasive Structural Modifications
- Reuse of Existing Stonework to Blend with Existing Structure



# Proposed Kitchen Exhaust Locations



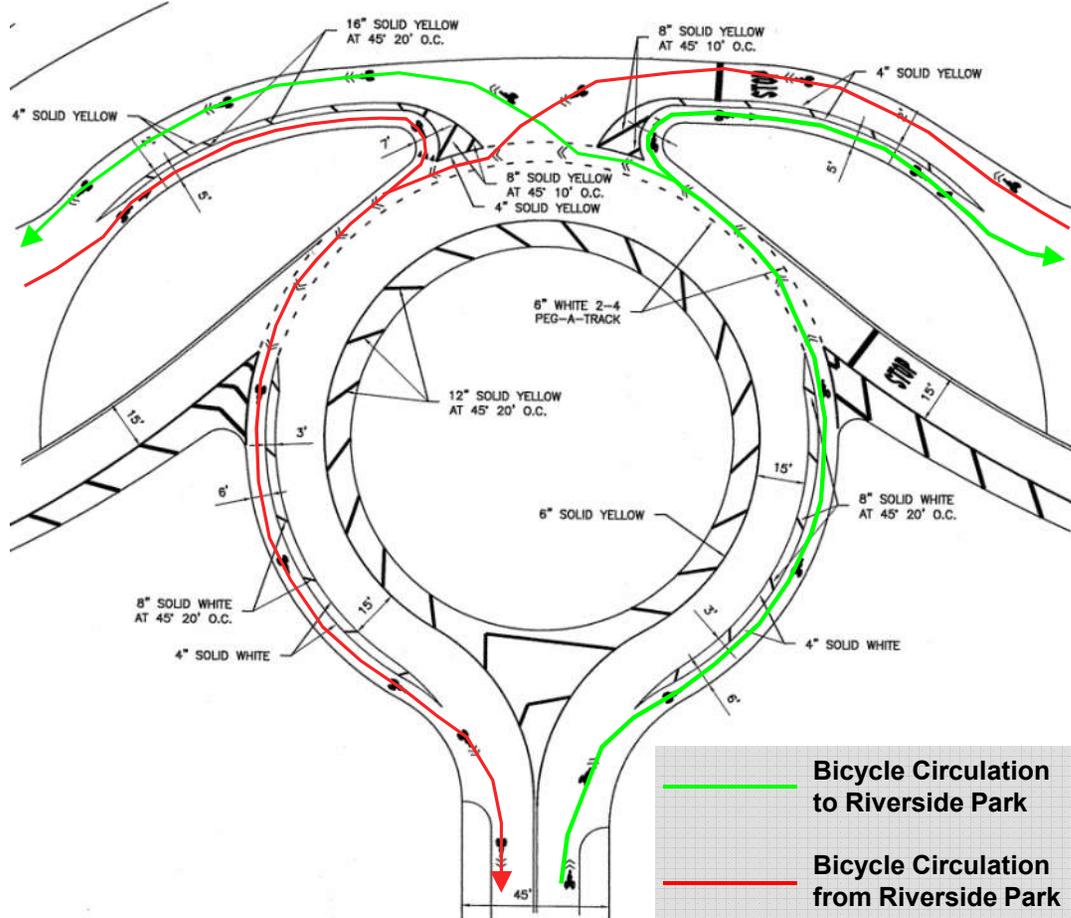
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Proposed Kitchen  
 Exhaust Locations

# Existing Conditions - Bicycle Design



- Stop Control at HHP Exit Ramp
  - Results in traffic queues that reach HHP mainline
- Pavement Markings
  - Directs traffic entering traffic circle from HHP Exit Ramp to turn away from traffic coming from the left
- Substandard Sight Distance for Vehicles on the HHP Exit Ramp to See & Avoid conflicts with other vehicles and cyclists
  - Sight Distance Provided = 40 feet
  - Standard Sight Distance = 80 feet
- Stop Control at HHP Exit Ramp
  - Intended to mitigate substandard sight distance
  - Vehicles are observed to not stop
  - Without proper enforcement, stop control is not effective in maintaining safe operations
- Substandard barrier heights for cyclists

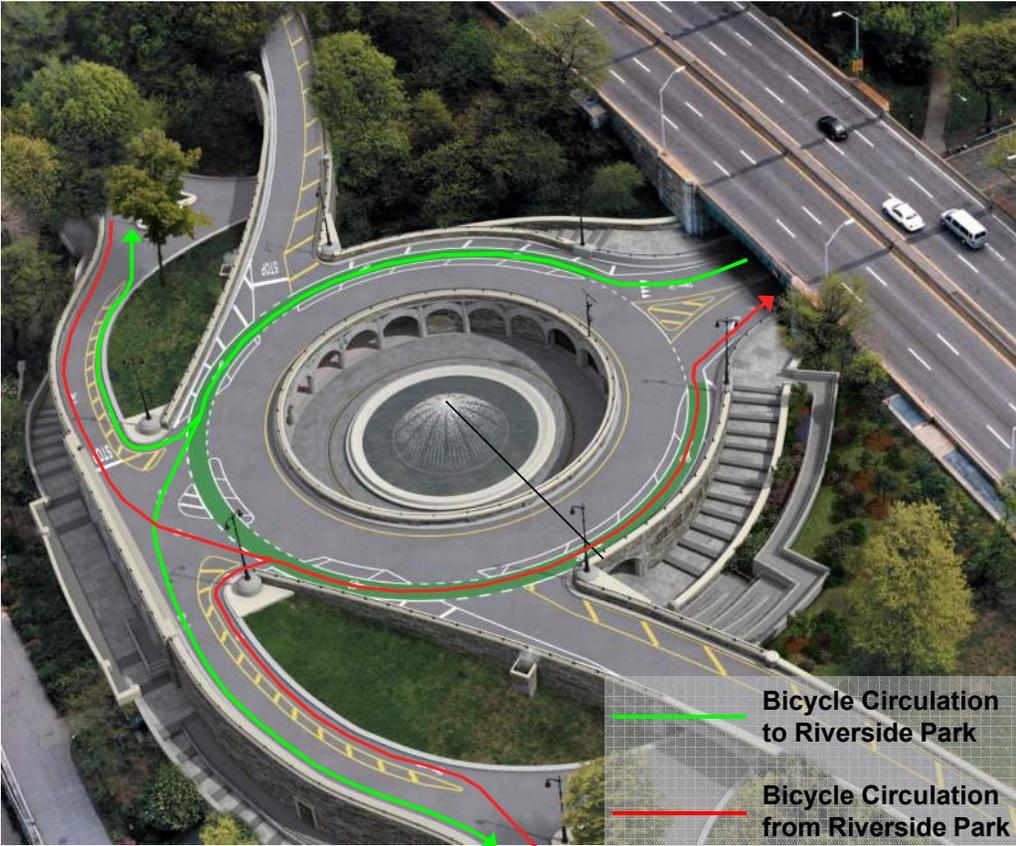


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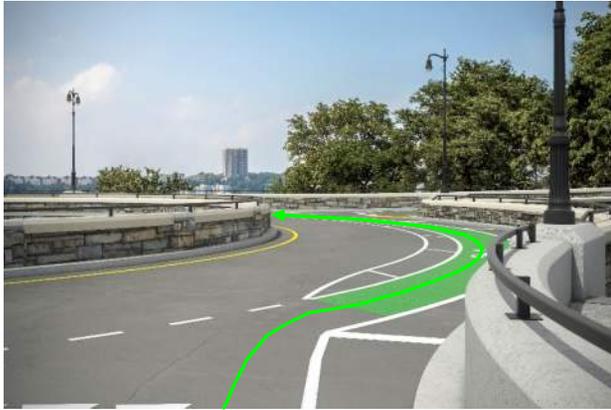
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# Proposed Conditions - Bicycle Design



- Improves Operations and Safety of HHP Interchange for All Users
- Stop Control and Advanced Signage at HHP Exit Ramp
  - Increases visibility of cyclists
  - Improves vehicle response times
- Pavement Marking Improvements
  - Narrower traffic lanes reduces speeds
  - Redirects traffic entering traffic circle from HHP Exit Ramp to reflect normal roundabout movements
  - Moving traffic away from wall increases sight distance

- Improves Sight Distance for Vehicles on the HHP Exit Ramp to See & Avoid conflicts with other vehicles and cyclists



- Provides NYSDOT standard barrier height for cyclists

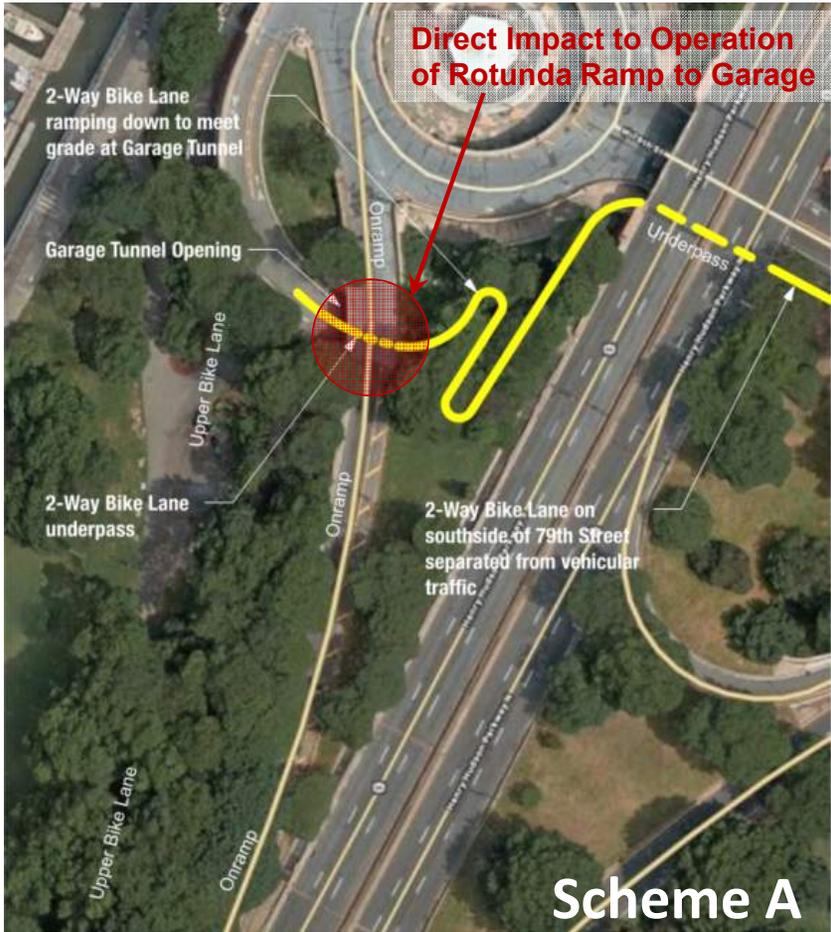


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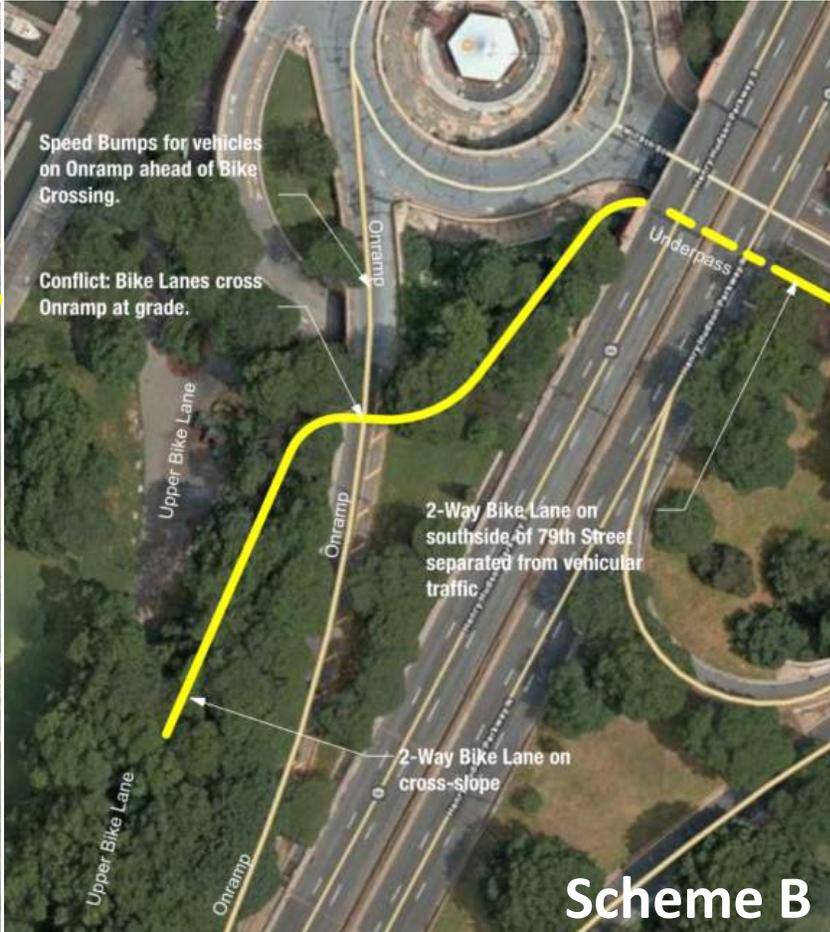
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# Community Generated Bicycle Scheme



**Scheme A**



**Scheme B**

## Schemes A & B Bike Lanes Outside Traffic Circle

- 2-Way Physically Separated Bike Lane on South Side of West 79<sup>th</sup> Street
- Across and Over HHP Entrance Ramp
- Connects to Riverside Park Upper Bike Lane

## Feasibility Study

**Scheme A - Infeasible** due to the direct impact on the operation of the Rotunda ramp to the Garage Level. Not Studied Further.

**Studied B - Infeasible** due to physical, geometric, safety constraints.



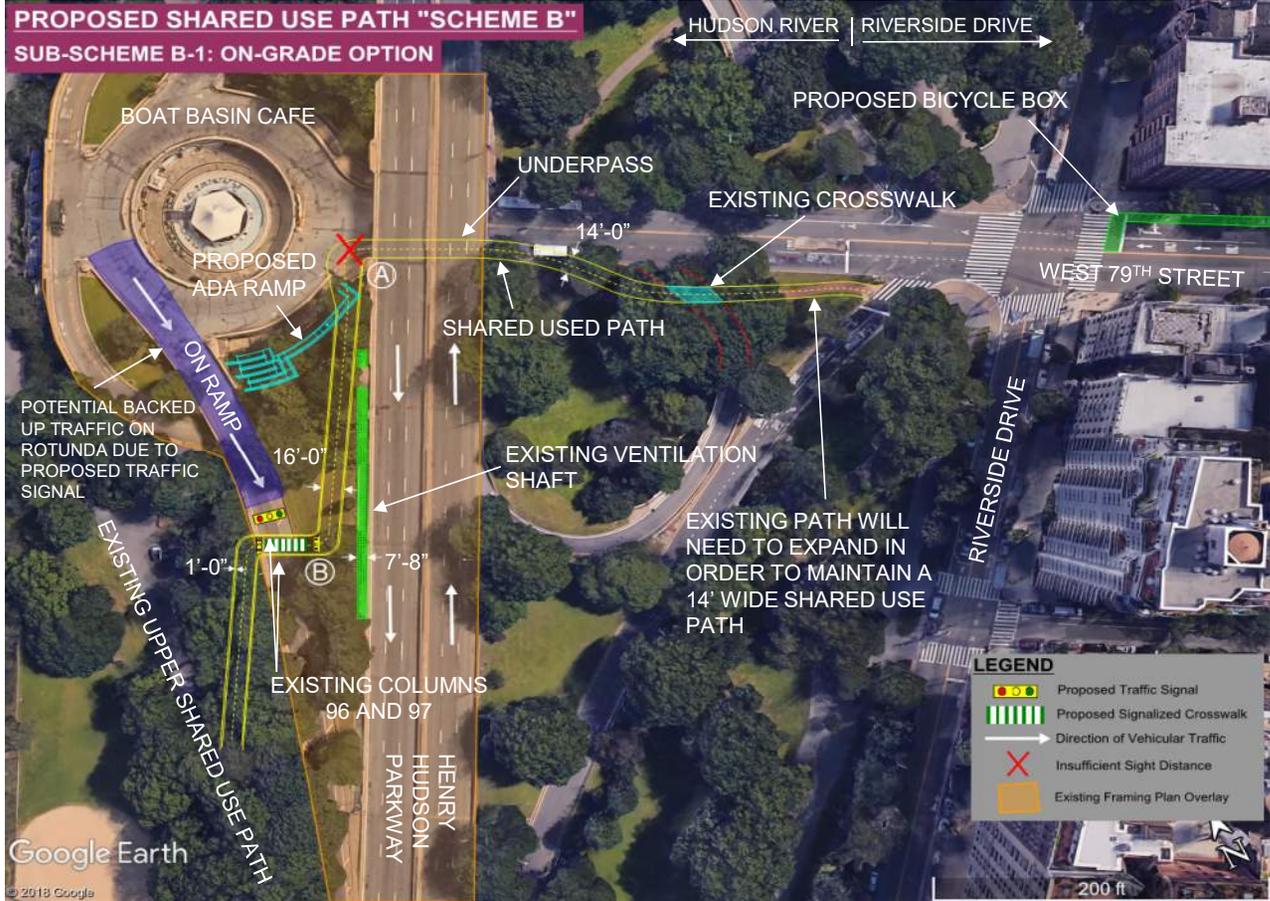
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# Community Generated Bicycle Scheme

## Sub-Scheme B-1: On-Grade Option



- Crosswalk on the entrance (acceleration) ramp to the Henry Hudson Parkway (HHP)
- Vehicles and cyclists (and other park users) will be in direct conflict creating an unsafe crossing
- Requires signalized crossing
  - Potential for traffic backup into traffic circle
  - Increases likelihood of rear-end collisions on entrance ramp
- No sight distance at key point of pedestrian/bicycle mixing
- Existing park path improvements
- W 79<sup>th</sup> Street/Riverside Drive intersection operation
- MTA Bus layover area conflict
- Significant impacts to parkland (landscaping/tree removals/drainage)

### Studied 2 Additional Sub-Schemes

#### Sub-Scheme B-2

- 2-way Shared Use Path with Overpass Structure at HHP Entrance Ramp

#### Sub-Scheme B-3

- 2-Way Shared Used Path with Underpass Tunnel/Structure at HHP Entrance Ramp



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# Community Generated Creative Idea – Reversal of Traffic Circle Flow

## Reversal of Traffic Circle Flow

## Reversal of Traffic Flow and Protected Bike Lane on Rotunda



- Reversal of Traffic Flow
  - Clockwise operation unfamiliar
  - Turning conflicts at West 79<sup>th</sup> Street
  - Increased potential for accidents
- Addition of Traffic Signals within Traffic Circle
  - Increased traffic queues on West 79<sup>h</sup> Street and HHP Ramp
  - Traffic Circle and HHP Interchange level of service significantly reduced
  - Negatively impacts response times of emergency vehicles
  - Affects M79 bus operation and schedule
- MTA Bus Operations on the West Half of Traffic Circle
  - Restricts NYCDPR and Public Access (Marina Residents) to the Rotunda Garage
- Geometric Considerations
  - Complex Left Turning Movements for Snow Plow/Emergency Vehicles

## Feasibility Study

**Studied from an operational perspective and determined to be infeasible** due to the direct impact on the operation and safety of the Rotunda Traffic Circle and Interchange with the HHP

## Potential Staging Areas

**West 79<sup>th</sup> Street Lanes:** Located within the existing travel lanes of West 79<sup>th</sup> Street east of the Rotunda between West End Avenue and Riverside Drive; deliveries via local roads.

**North Project Adjacent:** Located within Riverside Park; deliveries via local roads/park paths by construction barge in the Hudson River north of the NYCDPR Boat Basin.

**South Project Adjacent:** Located within Riverside Park in area currently occupied by ball fields; deliveries via local roads/park paths or by construction barge in the Hudson River south of the NYCDPR Boat Basin.

**96<sup>th</sup> Street Interchange:** Located within Riverside Park at the 96<sup>th</sup> Street interchange with the Henry Hudson Parkway; deliveries by local roads/park paths.

**Riverside Drive Adjacent:** Located within Riverside Park near the northwest corner of Riverside Drive and West 79<sup>th</sup> Street; deliveries by local roads/park paths.

**South Track:** Located within Riverside Park at West 74<sup>th</sup> Street; deliveries via local roads/park paths or by construction barge in the Hudson River at West 74<sup>th</sup> Street.

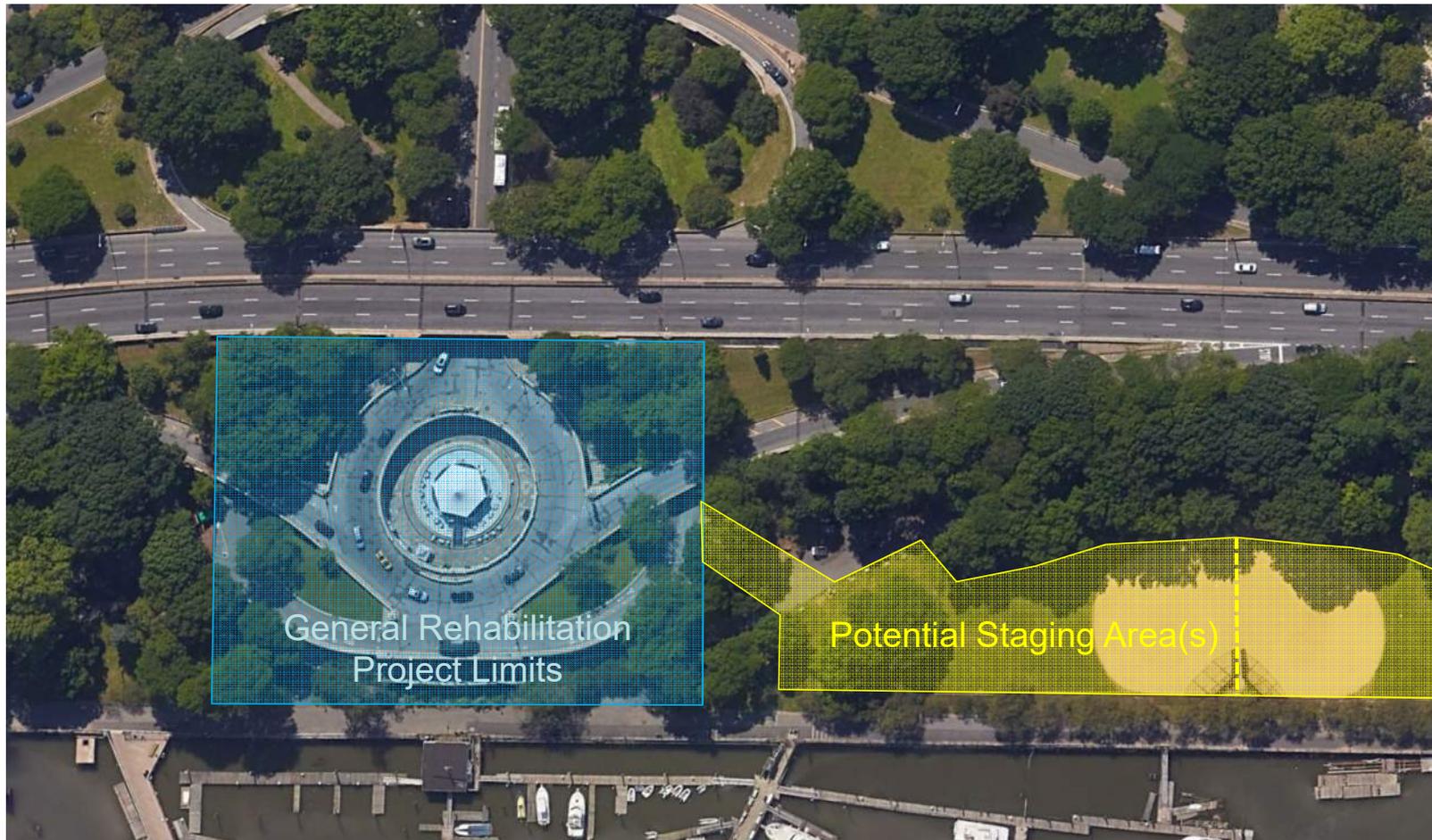


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## Proposed Staging Area - South Project Adjacent



- Utilize one ballfield at a time to minimize impacts
- Switch ballfield location during little league offseason, resulting in 2 new fields.
- Possible to receive deliveries from HHP
- Hudson River Greenway open during construction
- Provides a greater amount of suitable land available for construction equipment
- Close proximity to work area reduces construction duration and cost

# Aerial Rendering



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Conceptual Aerial  
Rendering