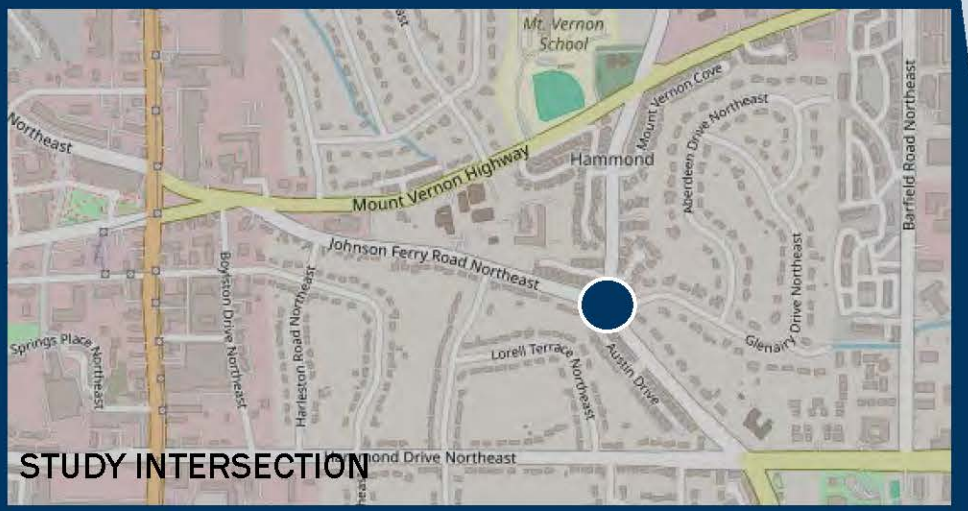
T-7249 - Intersection Concept Study

Johnson Ferry Road at Glenridge Drive & Glenairy Drive

City of Sandy Springs Public Meeting
February 6, 2025



SANDY SPRINGS
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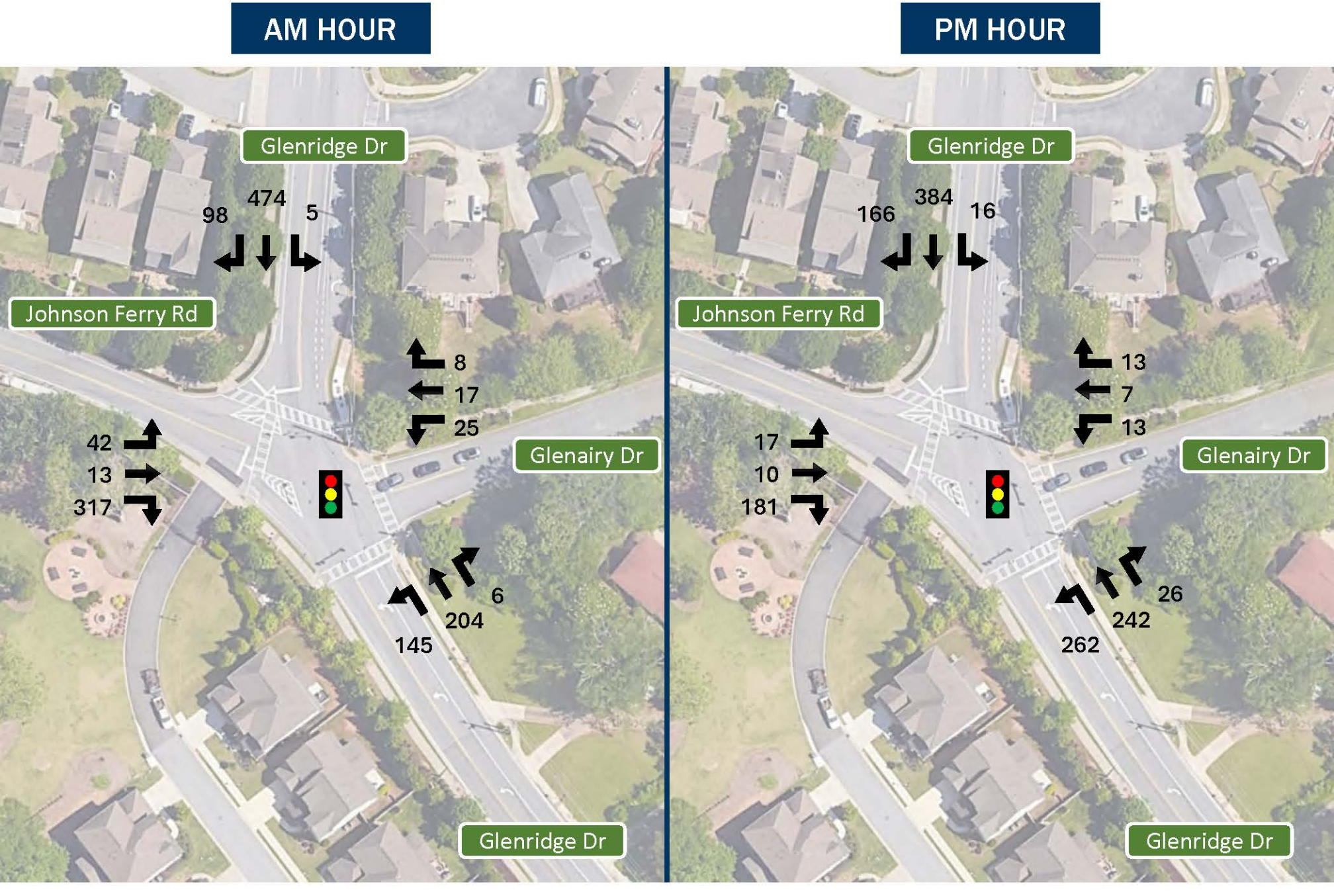
KCI
TECHNOLOGIES

EXISTING CONDITIONS & CONCERNS

- Traffic signal at four-leg intersection
- Intersection has skewed eastbound and westbound approaches
- The traffic signal phasing (split phasing) increases delay for the eastbound and westbound approaches
- Approximately 10 crashes per year; with 75% rear end crashes and 12% angle crashes
- Vehicles turning right from Johnson Ferry Road often yield instead of making a full stop
- Pedestrian crosswalks do not meet current design standards

EXISTING TRAFFIC VOLUMES



DRONE VIDEO OF EXISTING CONDITIONS

IMPROVED TRAFFIC SIGNAL LAYOUT

Alternative – Improved Traffic Signal:

- Improved alignment of all approaches
- Improves signal operation (removes split phasing)
- Removes the channelized islands and tightens the Johnson Ferry Road right turn radius
- ROW impacts primarily in NE corner

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BARGE DESIGN SOLUTIONS

SCALE IN FEET
0 30 60 120

REVISION DATES

SIGNAL CONCEPT LAYOUT
JOHNSON FERRY RD @
GLENRIDGE DR AND GLENAIRY DR

CHECKED: DATE:
BACKCHECKED: DATE:
CORRECTED: DATE:
VERIFIED: DATE:

DRAWING No.
1 OF 2

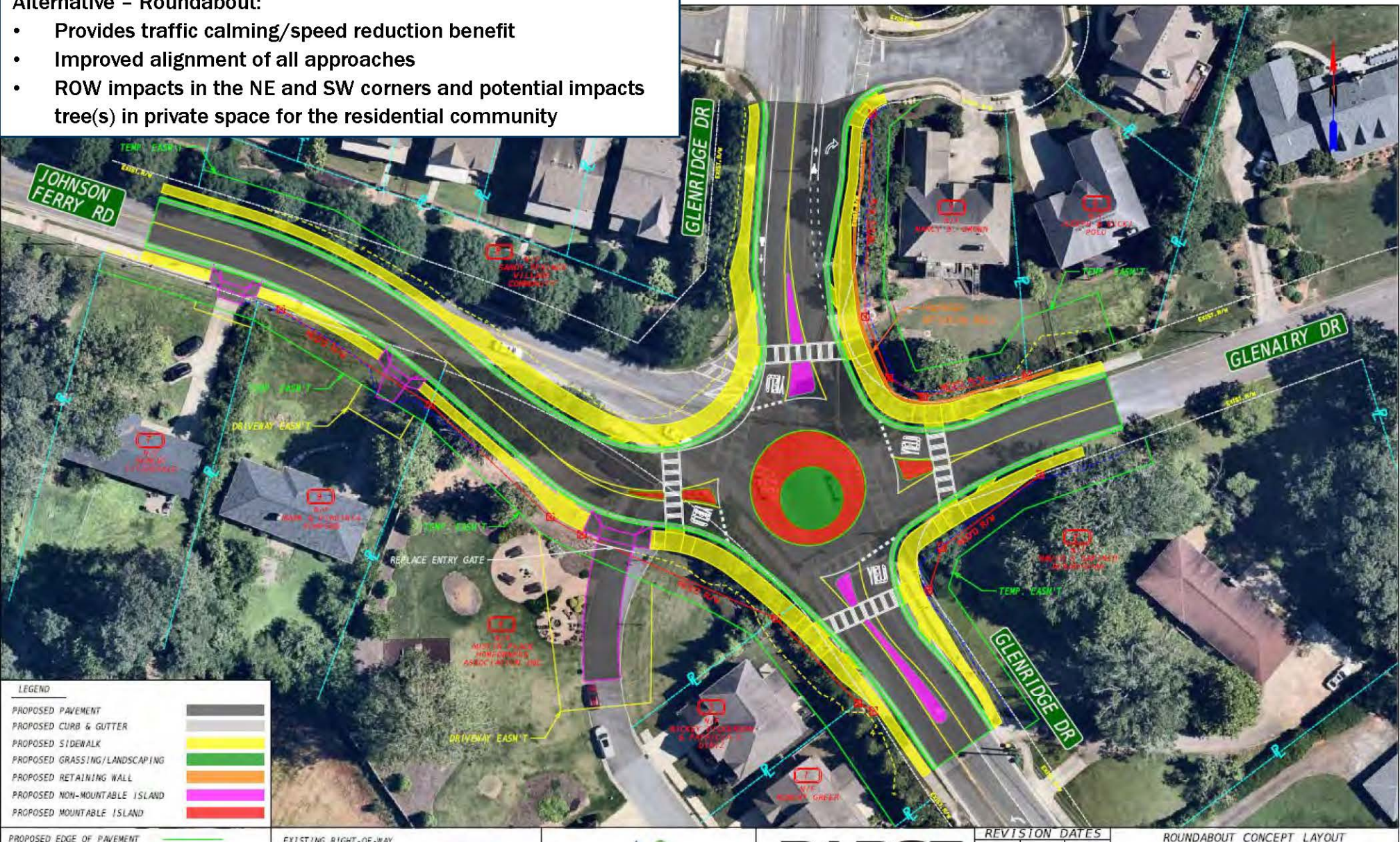
IMPROVED TRAFFIC SIGNAL SIMULATION

IMPROVED TRAFFIC SIGNAL SIMULATION

ROUNDABOUT LAYOUT

Alternative – Roundabout:

- Provides traffic calming/speed reduction benefit
- Improved alignment of all approaches
- ROW impacts in the NE and SW corners and potential impacts tree(s) in private space for the residential community



SANDY SPRINGS
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BARGE DESIGN SOLUTIONS

SCALE IN FEET
0 25 50 100

REVISION DATES

ROUNDABOUT CONCEPT LAYOUT
JOHNSON FERRY RD @
GLENRIDGE DR AND GLENAIRY DR

CHECKED:		DATE:	DRAWING No.
BACKCHECKED:		DATE:	2 OF 2
CORRECTED:		DATE:	
VERIFIED:		DATE:	

ROUNDABOUT SIMULATION

ROUNDABOUT SIMULATION

COMPARISON OF INTERSECTION ALTERNATIVES

Feature	Improved Traffic Signal	Roundabout
Design Year 2045 – AM Peak Hour Average Vehicle Delay (Level of Service)	30 seconds (LOS C)	17 seconds (LOS B)
Design Year 2045 – PM Peak Hour Average Vehicle Delay (Level of Service)	15 seconds (LOS B)	15 seconds (LOS B)
Safety	Reduction in crashes	Reduction in crashes
CST Cost	$1,960,000	$2,150,000
ROW Cost	$990,000	$1,250,000
Total (CST + ROW) Cost	$2,950,000	$3,400,000
Benefit-to-Cost Ratio	0.54	2.23

- For comparison, the Existing Year traffic operations without modifications is LOS D (38 seconds) during the AM and LOS B (20 seconds) during the PM
- For comparison, the Design Year traffic operations without modifications is LOS E (77 seconds) during the AM and LOS C (23 seconds) during the PM
- Both alternatives accommodate MARTA buses and trucks
- The benefit-to-cost ratio compares the combined operations and safety benefit versus the total project cost. The higher value indicates better performance.

Receive Community Input

Finalize Study

Program Project Funding