

Access Management: The Challenge of Retrofit... Theory Versus Reality

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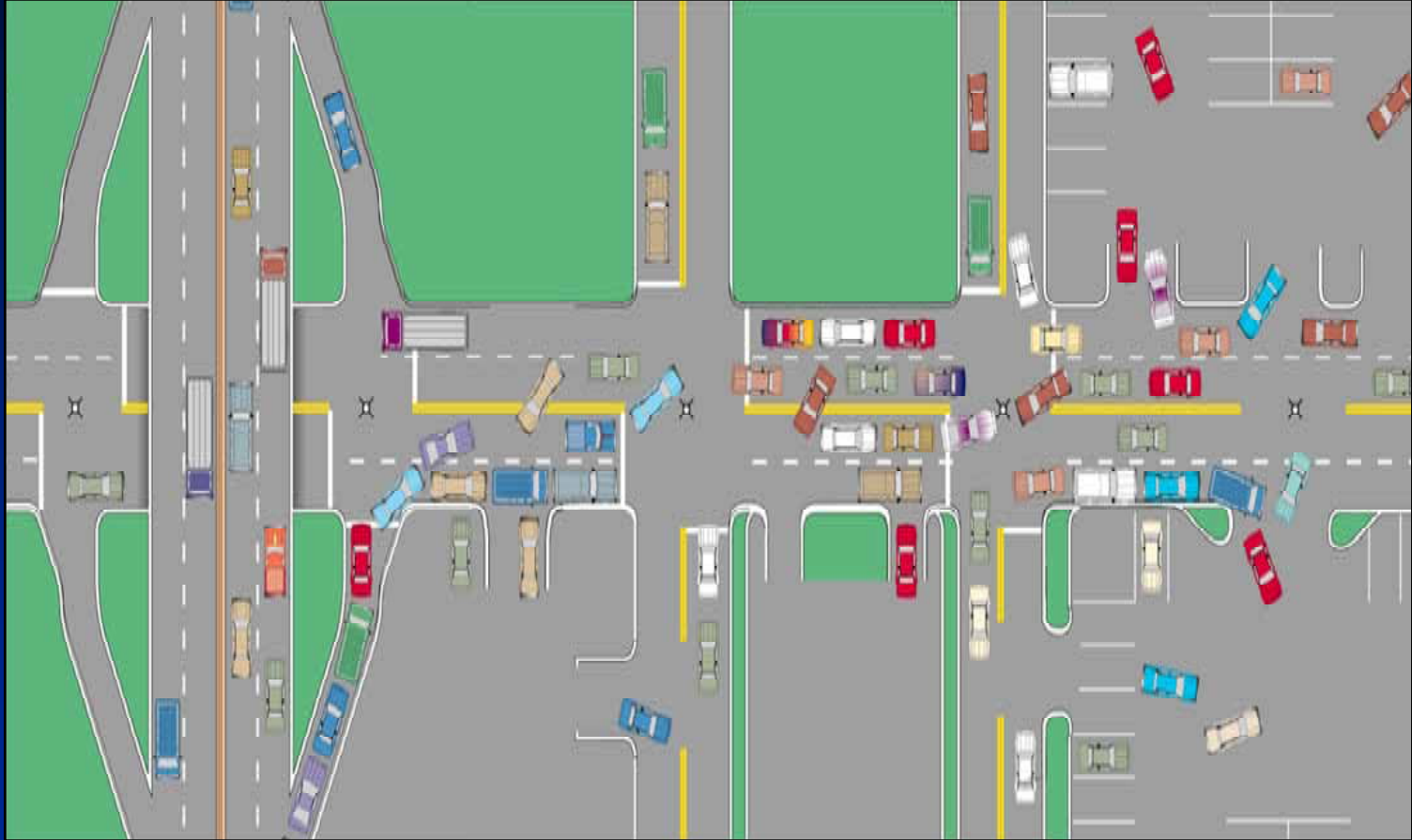
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Acknowledgements

NYSDOT Region 10 Planning
John Schabhutl

NYSDOT Region 10 Design
Elizabeth Chamakkala
Edward Beuel

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Atma Sookram
Joon Park





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Base Network

- Speed limits of 45 mph eastbound and 55 mph westbound
- Six-lane divided cross section
- Left- and right-turn lanes
- Access points as little as 100 feet apart
- Signals closely spaced -- 5 within 1,550 feet
- ADT volume of 66,100 vehicles
- Saturday peak-hour volumes -- 3,100 eastbound and 2,700 westbound

Existing Conditions

- *Traffic Safety - 0.5 Mile Section of NY27 From Sunrise Promenade to Old Sunrise Highway Has Accident Rates that Exceed the Statewide Average Due to the Frequency and Density of Conflicting Traffic Movements*
- *High Traffic Volumes*
- *Frequent Driveways*
- *Closely Spaced Signals*
- *Heavy Left-Turn Movements*
- *Overlapping Traffic Backups*

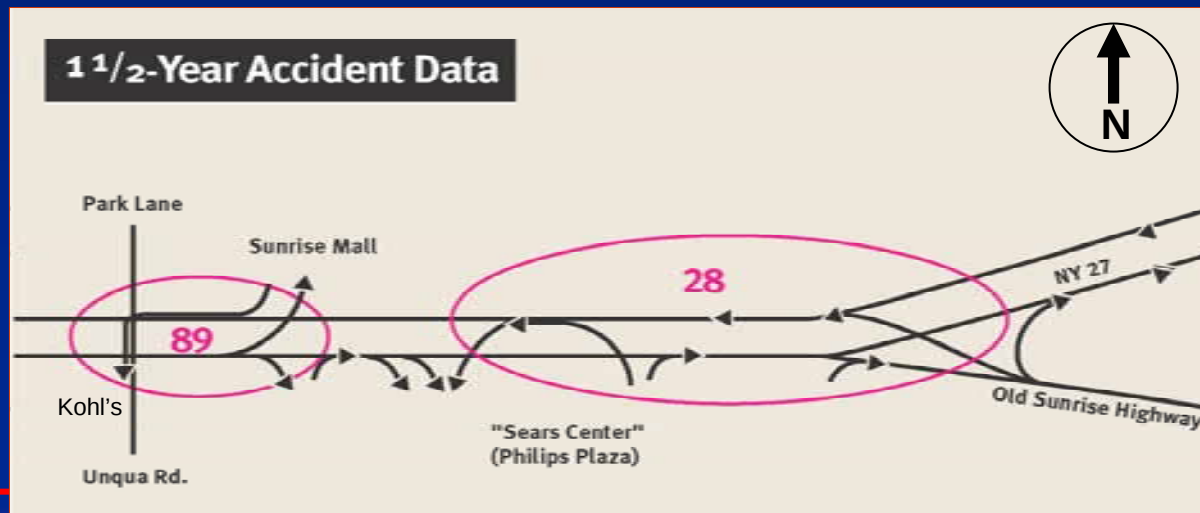
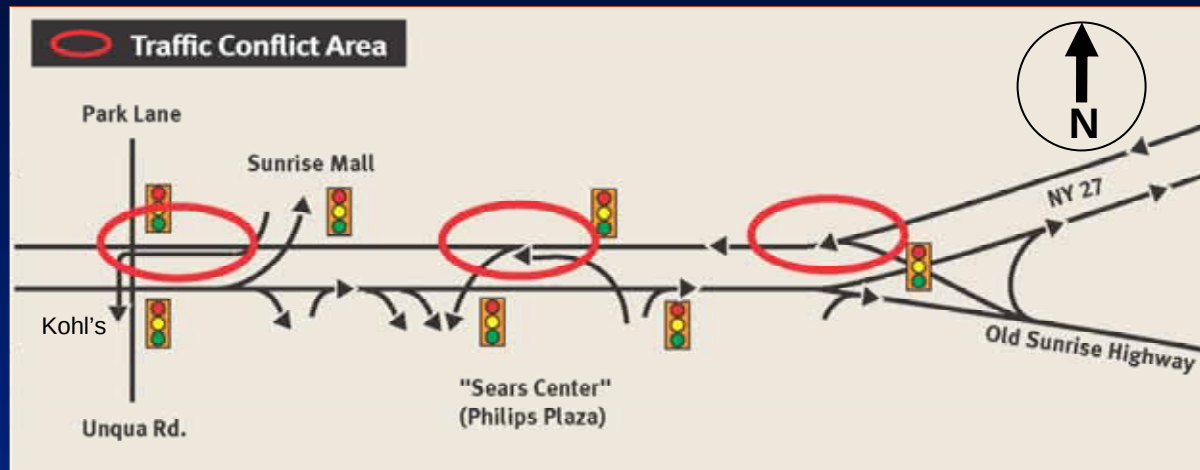
Traffic Condition on NY27 Near Unqua Road



NY27 Near Philips Plaza & Old Sunrise Hwy.



Conflicting Traffic Movements & Accidents East of Unqua Road



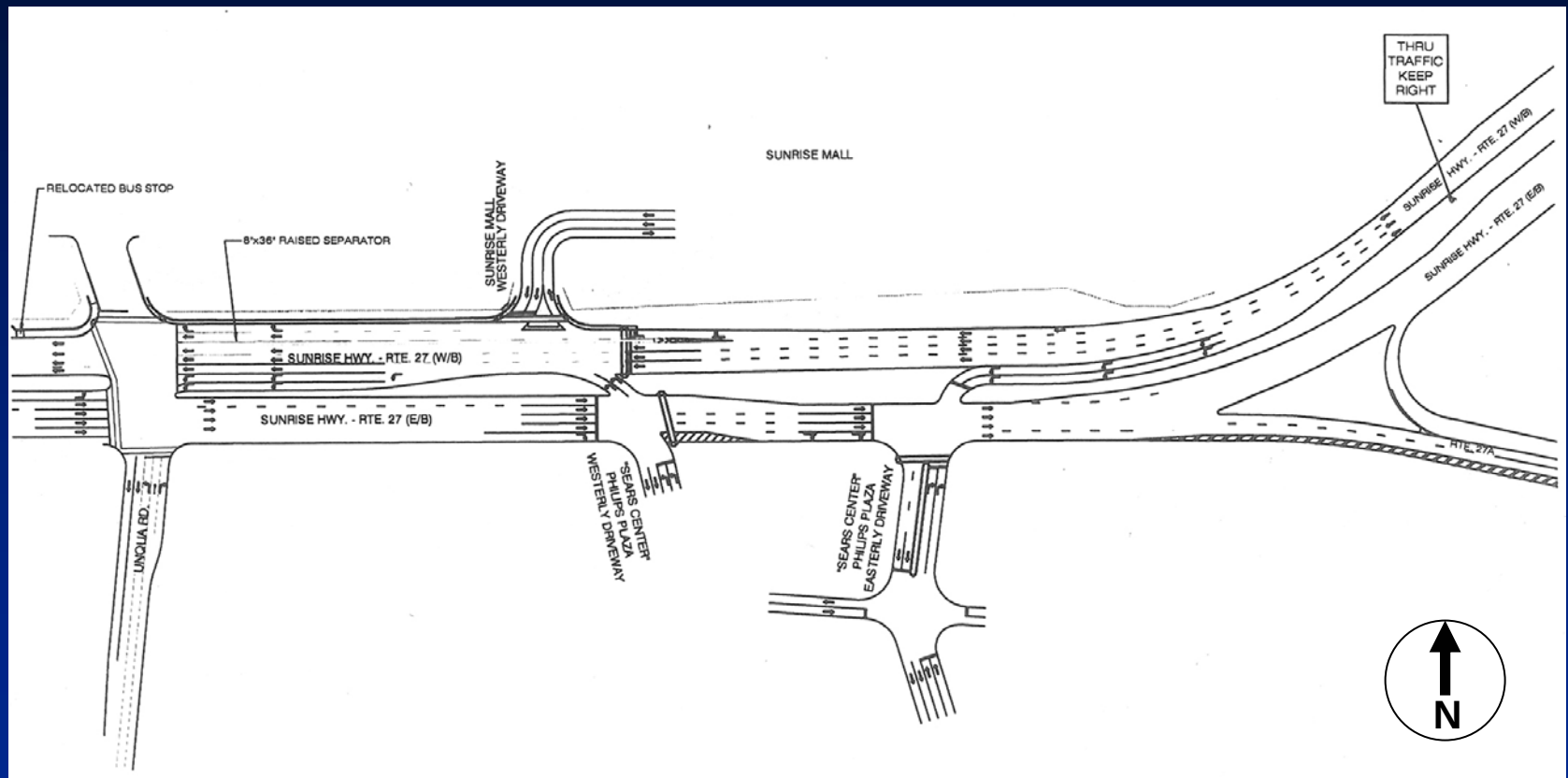
Project Objectives

- Improve Traffic Safety Along Sunrise Highway
- Improve Traffic Operations Along Sunrise Highway
- Maintain Reasonable Access to Abutting Properties
- Preserve Aesthetics of Area

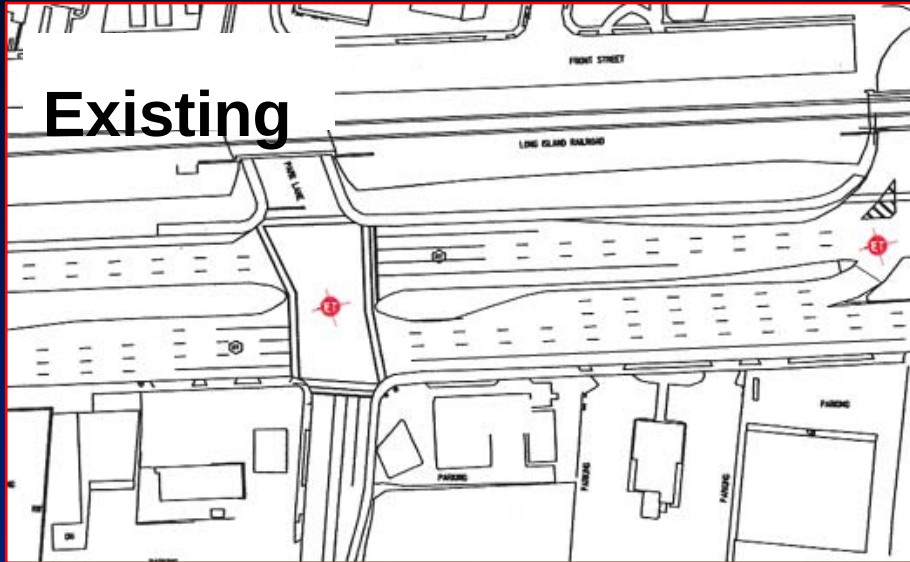
Concepts:

- Reduce the Number of Conflicting Traffic Movements
- Increase the Spacing between Conflict Points
- Remove Turning Vehicle Queues From Through Lanes
- Add Auxiliary Lanes

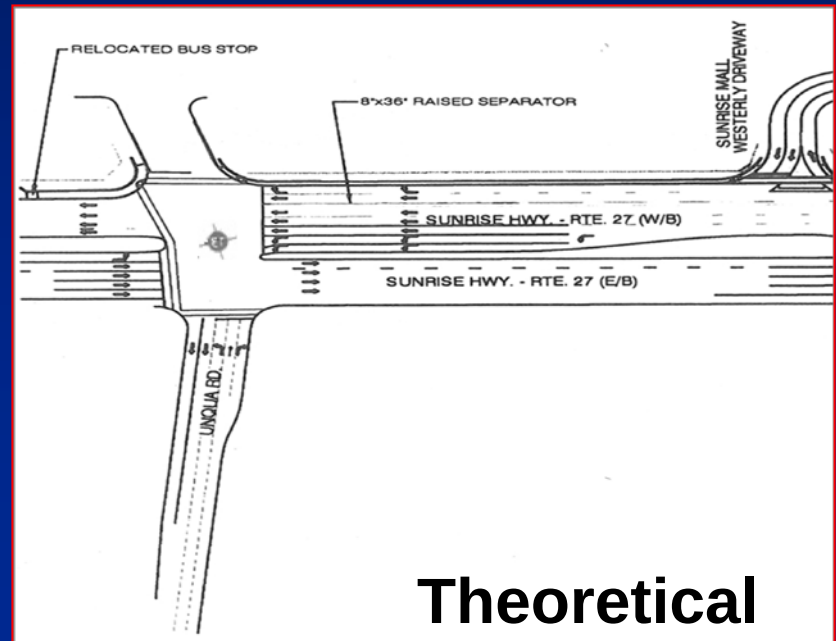
Theoretical Arrangement



Unqua Road

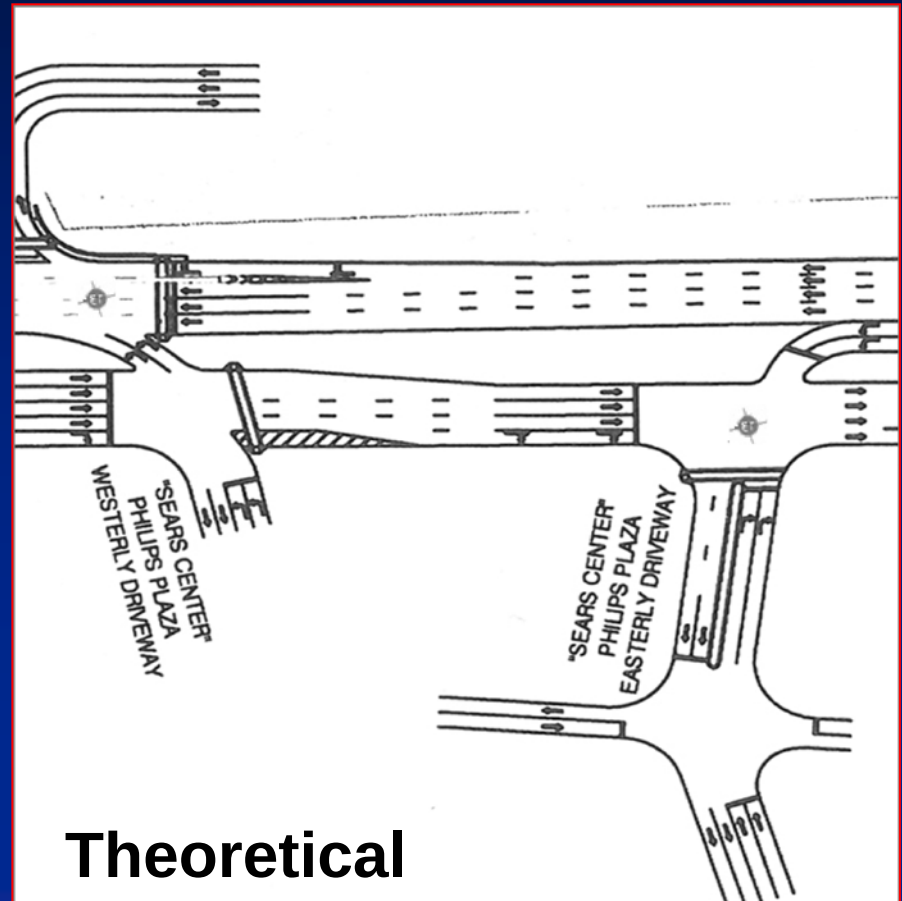
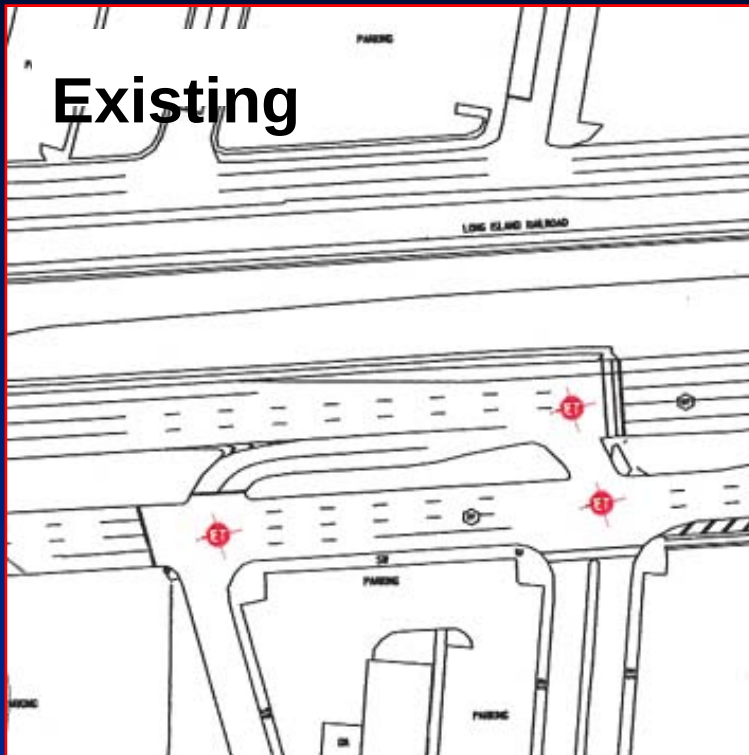


- Provide Additional Through Lane on Westbound NY27
- Increase Left-Turn Storage
- Provide a Raised Separator on Westbound NY27
- Eliminate Eastbound Left Turn into Sunrise Mall Westerly Driveway



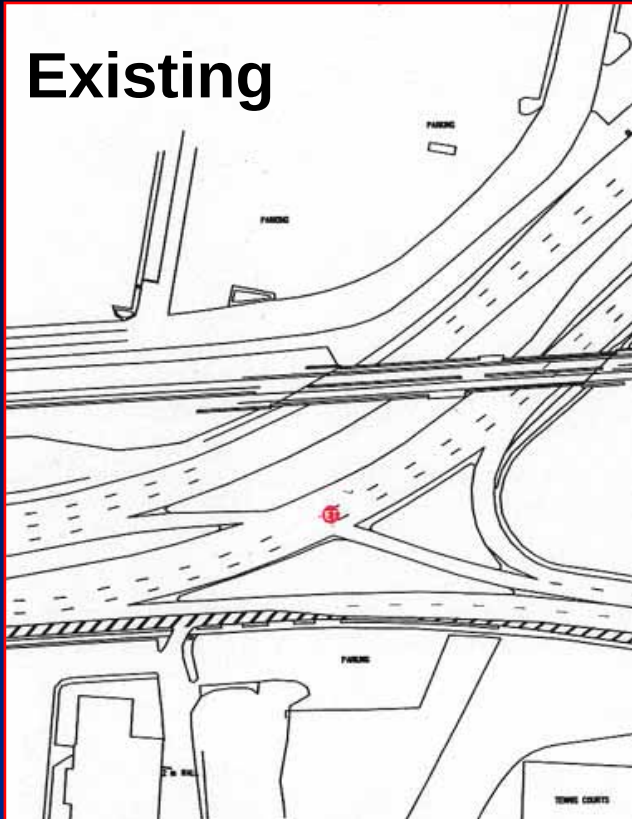
"Sears Center" (Philips Plaza)

- Reconfigure Access
- Revise Internal Circulation

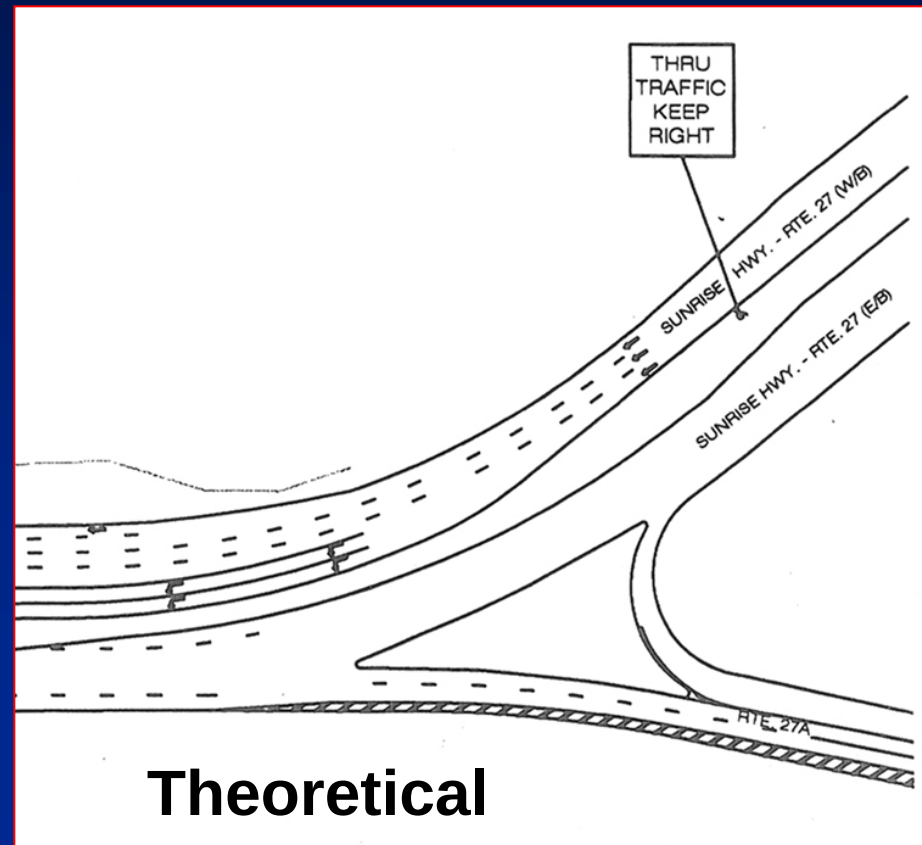


Old Sunrise Highway

Existing

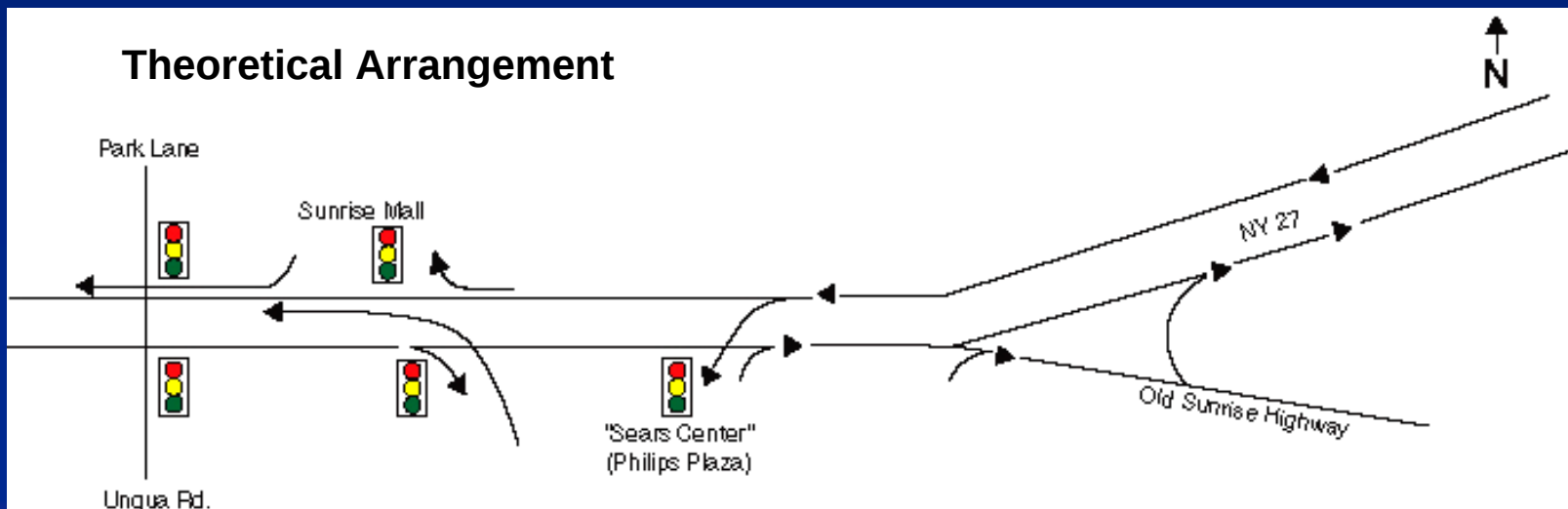
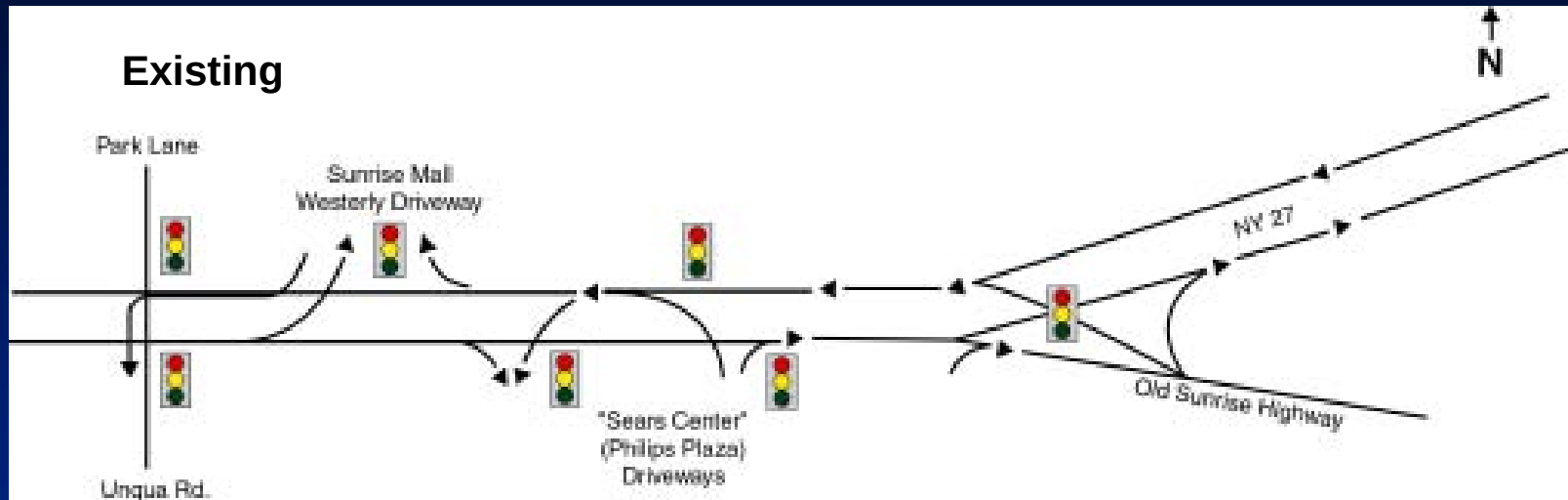


- Eliminate Westbound Connection
- Eliminate Traffic Signal on NY27 Eastbound



Theoretical

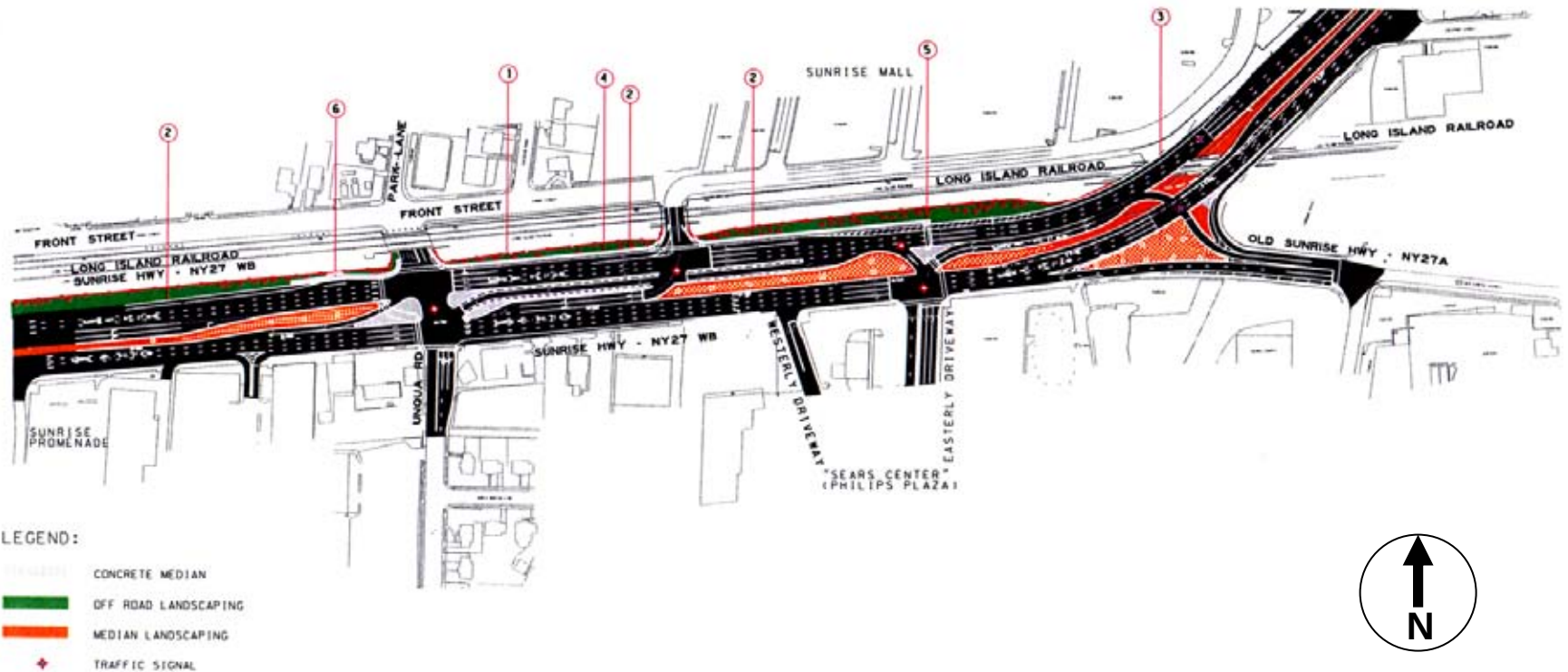
Major Turning Movements East of Unqua Road



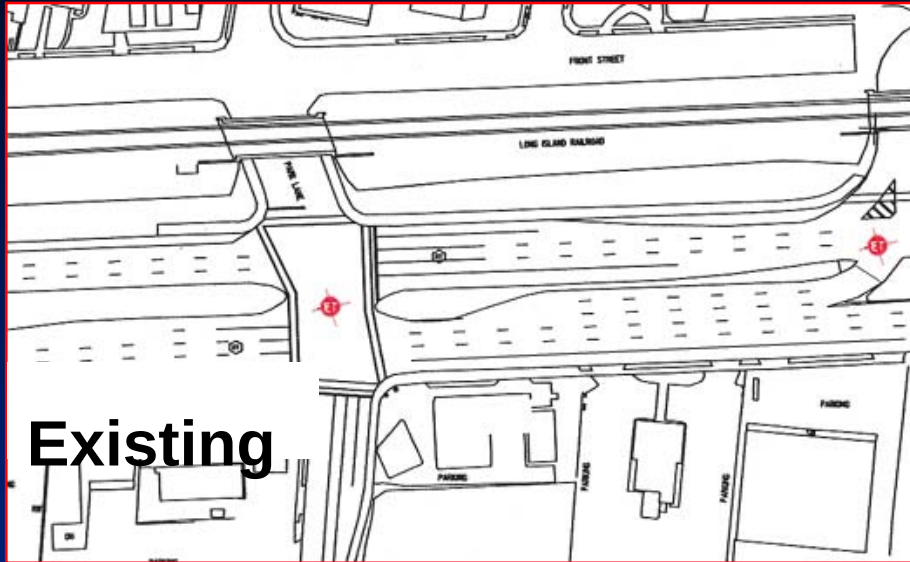
Theoretical Alternative -- Issues Raised by Stakeholders

- Additional pavement that pedestrians would need to cross on NY27
- Desire to preserve the character and aesthetics of NY27
- Potential economic impact of access restriction on businesses
- Major internal circulation changes that would be needed for the reconfigured access
- Potential reduction in the number of parking spaces
- Rerouting of some school buses to/from an area school

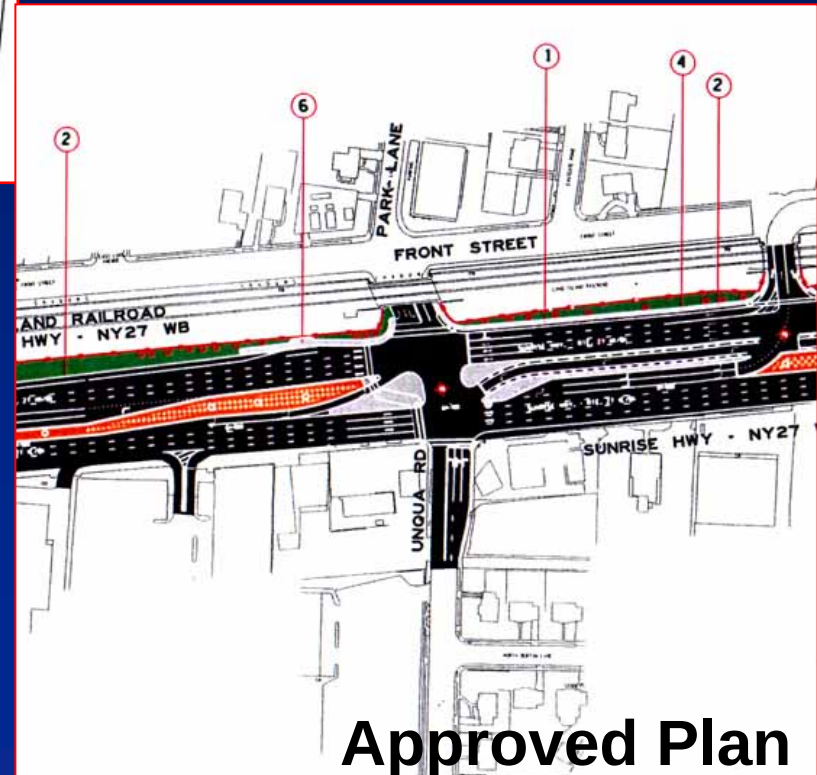
Approved Plan



Unqua Road

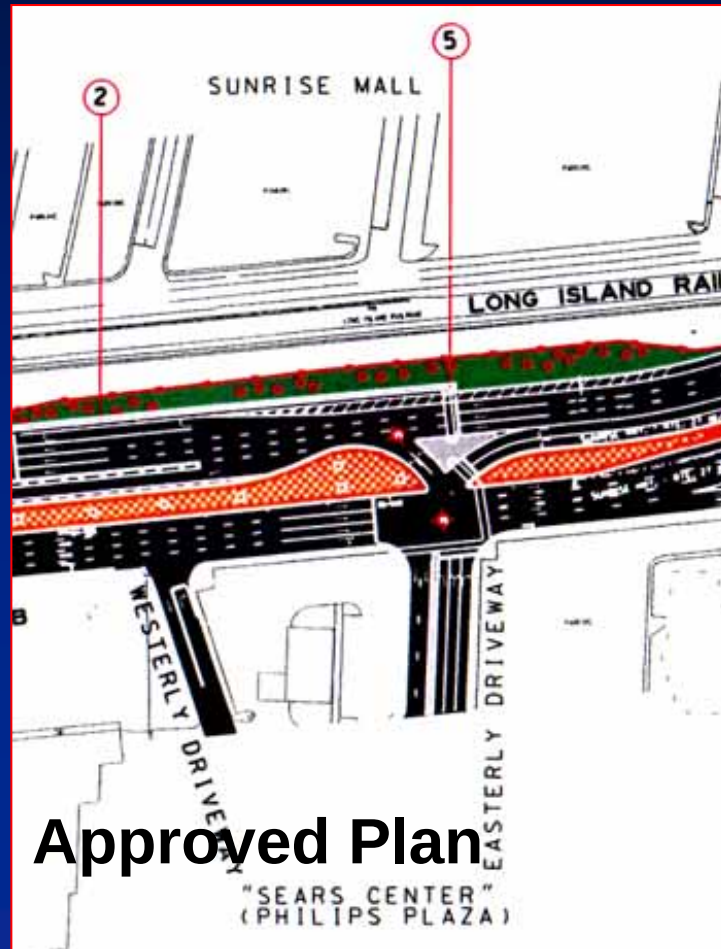
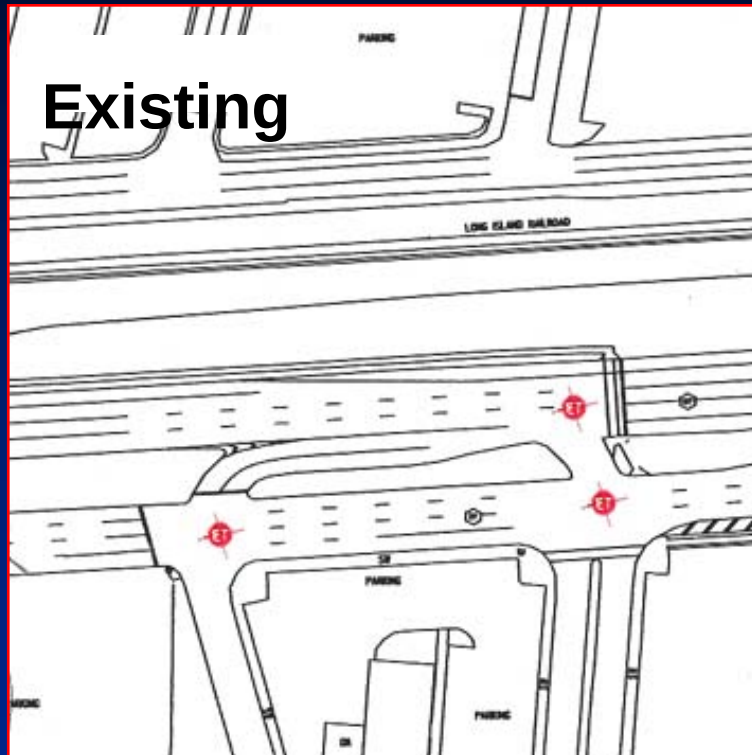


- Provide Additional Through Lane on Westbound NY27
- Increase Left-Turn Storage
- Provide a Raised Separator on Westbound NY27



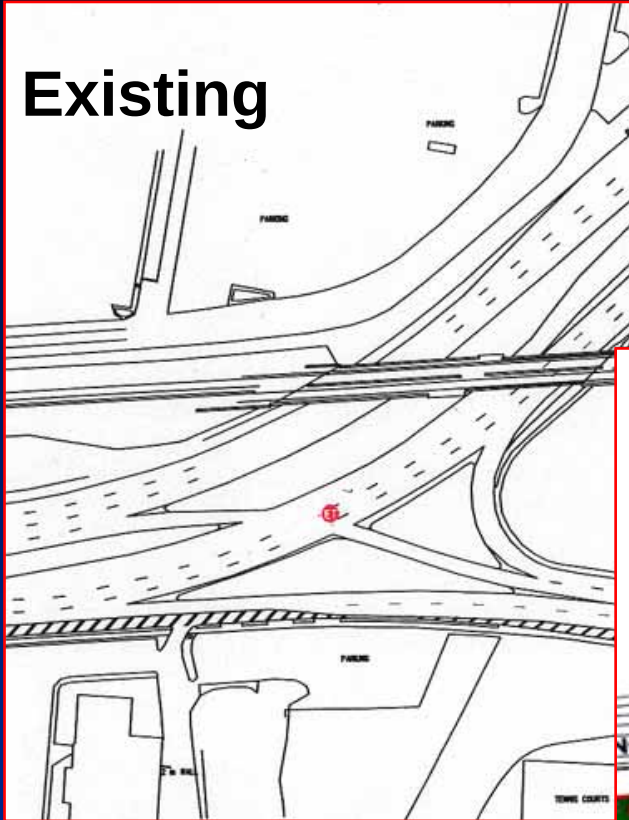
“Sears Center” (Philips Plaza)

- Reconfigure Access
- Eliminate Traffic Signal at Westerly Driveway

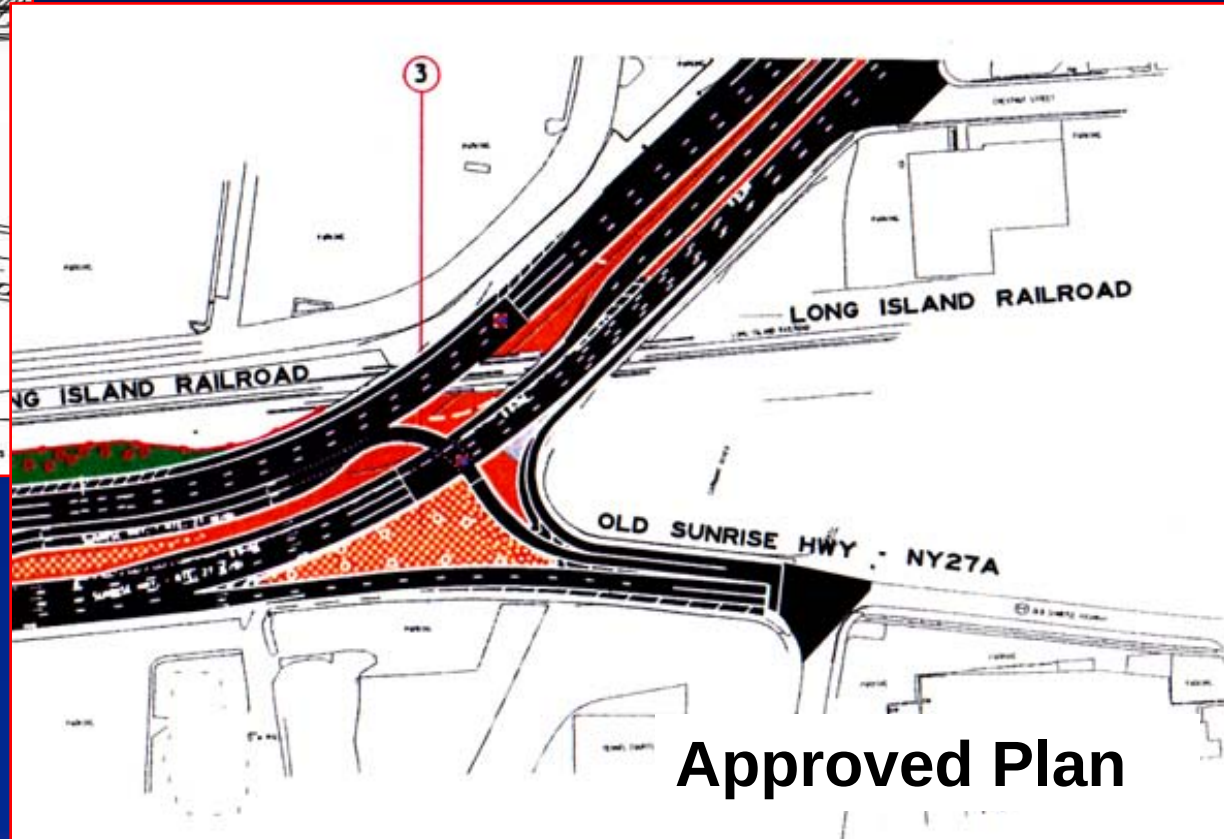


Old Sunrise Highway

Existing

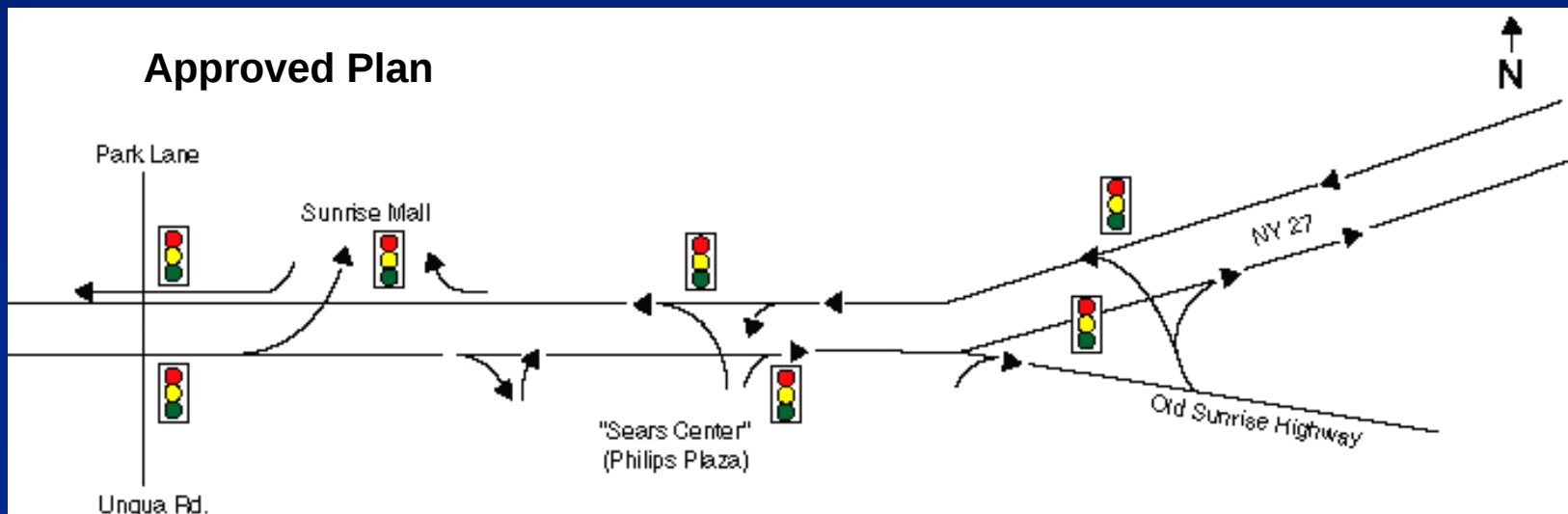
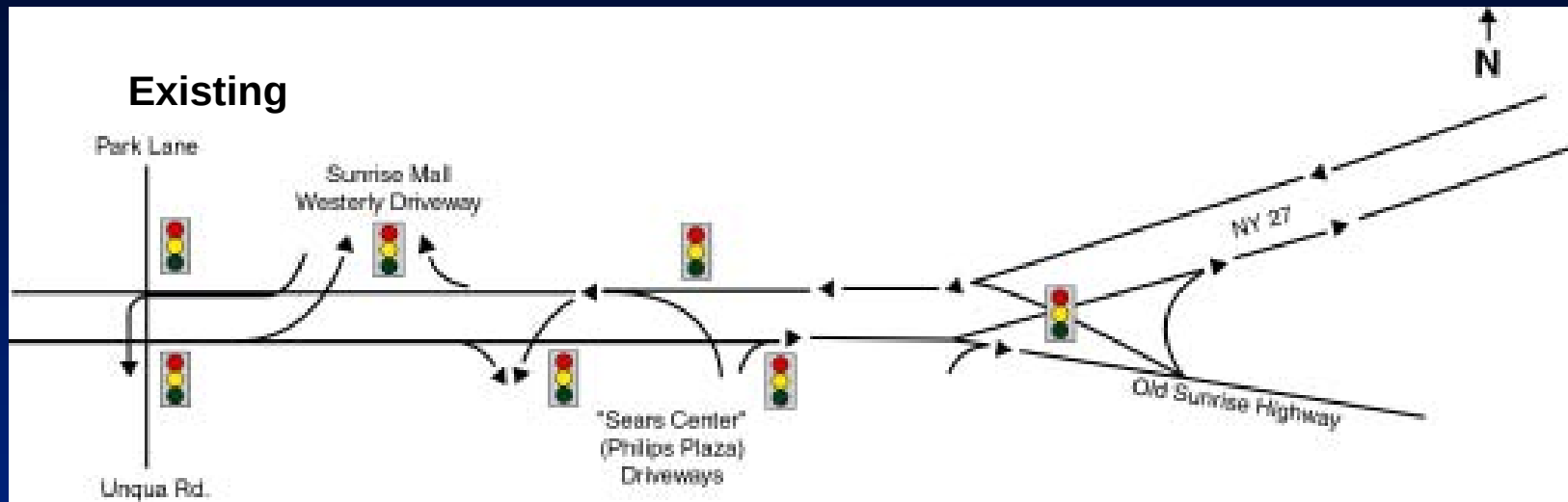


- Relocate Westbound Connection
- Add Traffic Signal on Westbound NY27



Approved Plan

Major Turning Movements East of Unqua Road



Approved Plan

- Eliminated modifications that were opposed by specific interests
- Appears to be implementable within a reasonable timeframe
- Would improve conditions compared to the no-build scenario
- Does not provide the same level of operational or safety benefits as the theoretical alternative



Accident Frequency & Reduction

LOCATION	Current Number of Accidents *	Estimated Accident Reduction	
		Theoretical Arrangement	Approved Plan
Unqua Road/ Sunrise Mall Westerly Driveway	89	53%	46%
“Sears Center” (Philips Plaza)	13	77%	51%
Old Sunrise Highway	15	48%	30%

* 1½ - Year Accident Data



Projected Operations with Approved Plan

	SPEED (MPH)	
	No Build Scenario	Build Scenario
Eastbound NY27	8.7 (14.0)	10.4 (16.7)
Westbound NY27	6.5 (10.4)	13.6 (21.9)



→ **Conclusions/Lessons Learned**

- Coordinate land use with available transportation resources.
 - Provide the appropriate transportation agency an opportunity to review while there is still a chance to be proactive.
 - Assess conditions at locations that extend beyond the immediate vicinity of the site.
 - Consider conditions beyond the time of the development review.
 - Identify if a supporting road system needs to be developed.
 - Include provisions for cross access to allow for internal circulation.
 - Identify the long-term implications and cumulative impacts of access-related decisions.
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