

Welcome

Town of East Greenbush / Town of North Greenbush /
Transportation Council
US Route 4 Corridor Study
Study Advisory Committee (SAC) Meeting #4
Monday, September 11, 2023, 11:00am
East Greenbush Town Hall
255 Columbia Tpke, Rensselaer, New York 12144



CAPITAL REGION
**Transportation
Council**



Agenda

- 1. Welcome**
- 2. Concept Overview**
- 3. Corridor Improvement Phases**
- 4. Discussion**
- 5. Next Steps**



Welcome

Project Sponsors

Town of East Greenbush / Town of North Greenbush / Transportation Council

Consultant

MJ Engineering & Land Surveying, P.C.

Study Advisory Committee

Josh Giller (Town of East Greenbush)

Chaim Simon (Transportation Council)

Chris Bauer (Transportation Council)

Dan Fiacco (Town of East Greenbush)

Ethan Warren (CDTA)

Greg Wichser (NYSDOT Region 1)

Jack Conway (Town of East Greenbush)

Kelley Kircher (NYSDOT Region 1)

Linda von der Heide (Rensselaer County)

Mark Saunders (NYSDOT Rensselaer County Residency)

Michael Chaires (Town of North Greenbush)

Joe Bott (Town of North Greenbush)



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Concept Overview

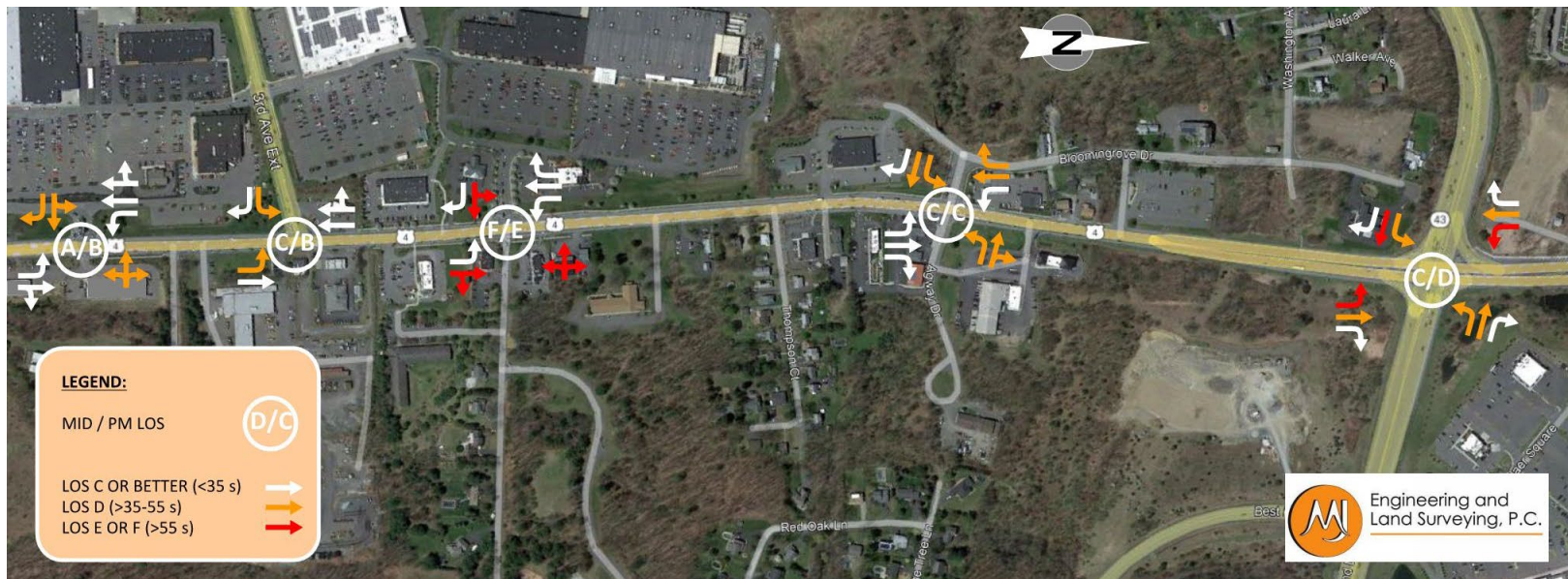
Draft Concepts

- Concept No. 1 – Optimized Signal Timing (OST) & Improved System Coordination (ISC)
- Concept No. 3 – OTS & ISC with Additional US Route 4 Northbound Lane
- Concept No. 3A – Concept No. 3 with Left Turn Lane added to Grandview Drive
- Concept No. 4 – Roundabout Intersections
- Concept No. 5 – Combination of Signalized and Roundabout Intersections
- Concept No. 4A/5A – Concept No. 4/5 with Left Turn Lane on Grandview Dr. into Starbucks
- Concept No. 2 – OTS & ISC with added Service Road Option

Draft Concept No. 1

Optimized Signal Timing & Improved System Coordination

- Maintains the Existing Geometry
- Signal Timings Modified
 - Coordinated from Agway/Bloominggrove to Walmart Plaza
 - Improves progression through corridor
 - Reduces queue spilling over to other intersections (3rd Ave Left Turns)
 - Possible Adaptive Signal Control System application



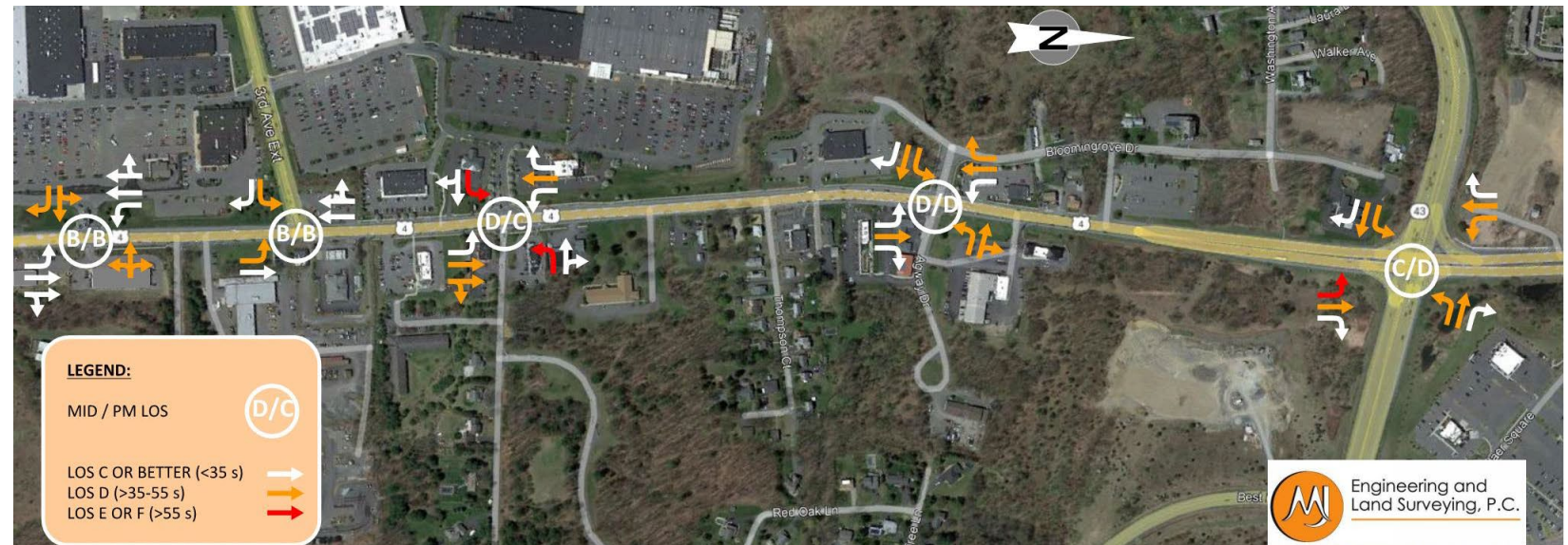
Estimated Cost
2023 - \$400,000
2028 - \$464,000

Draft Concept No. 3

Optimized Signal Timing & Improved System Coordination with Additional US Route 4 Northbound Lane

- Coordinated from Agway/Bloominggrove to Walmart Plaza
- Improves progression through corridor
- Additional Northbound Lane from Thompson Hill Road to 625 feet south of NY Route 43
- Added Capacity
- Possible Adaptive Signal Control System application

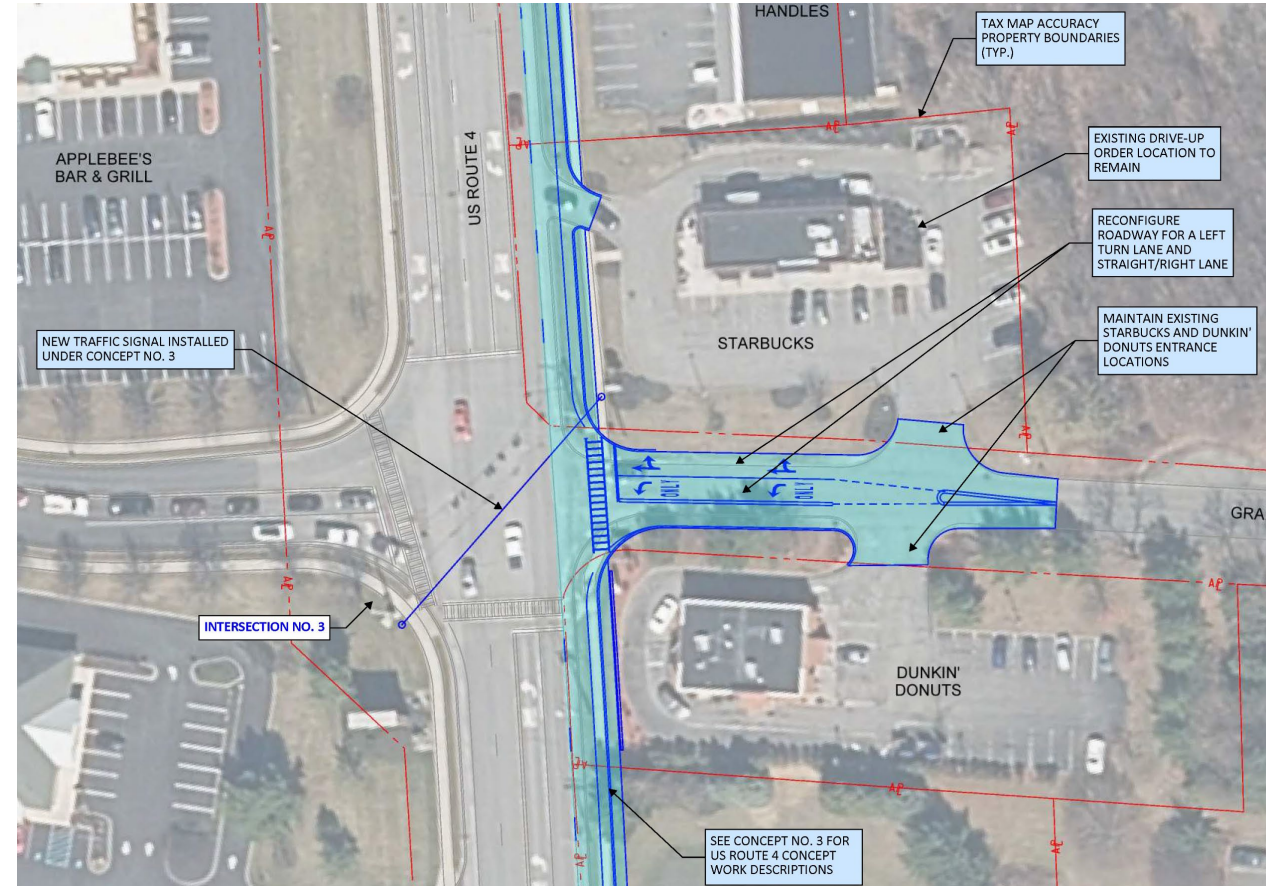
Estimated Cost
2023 - \$6,254,000
2028 - \$7,251,000



Draft Concept No. 3A

Optimized Signal Timing & Improved System Coordination with Additional US Route 4 Northbound Lane

- US Route 4 Same as Concept No. 3
- Add Left Turn Lane on Grandview
- Add Capacity for Heavy Left Turn Volume



Draft Concept No. 4

Roundabout Intersections

- Five (5) Study Intersections converted to Roundabouts
- Modified 2-Lane Roundabouts
- Varying Approach Lane Configurations
- Two-way Left-turn Lane between NY Route 43 and Grandview Drive
- Raised Median between Grandview Drive and Walmart Plaza
- Volume distribution at NY Route 43 does not support a Roundabout



Estimated Cost
2023 - \$19,619,000
2028 - \$22,744,000

Draft Concept No. 5

Combination of Signalized and Roundabout Intersections

- Combines Concept Nos. 3 and 4
- Signals at NY Route 43 and Bloominggrove Drive
- Roundabouts at Grandview Drive, 3rd Avenue Extension, and Walmart Plaza
 - These three (3) intersections spaced close – All Roundabouts

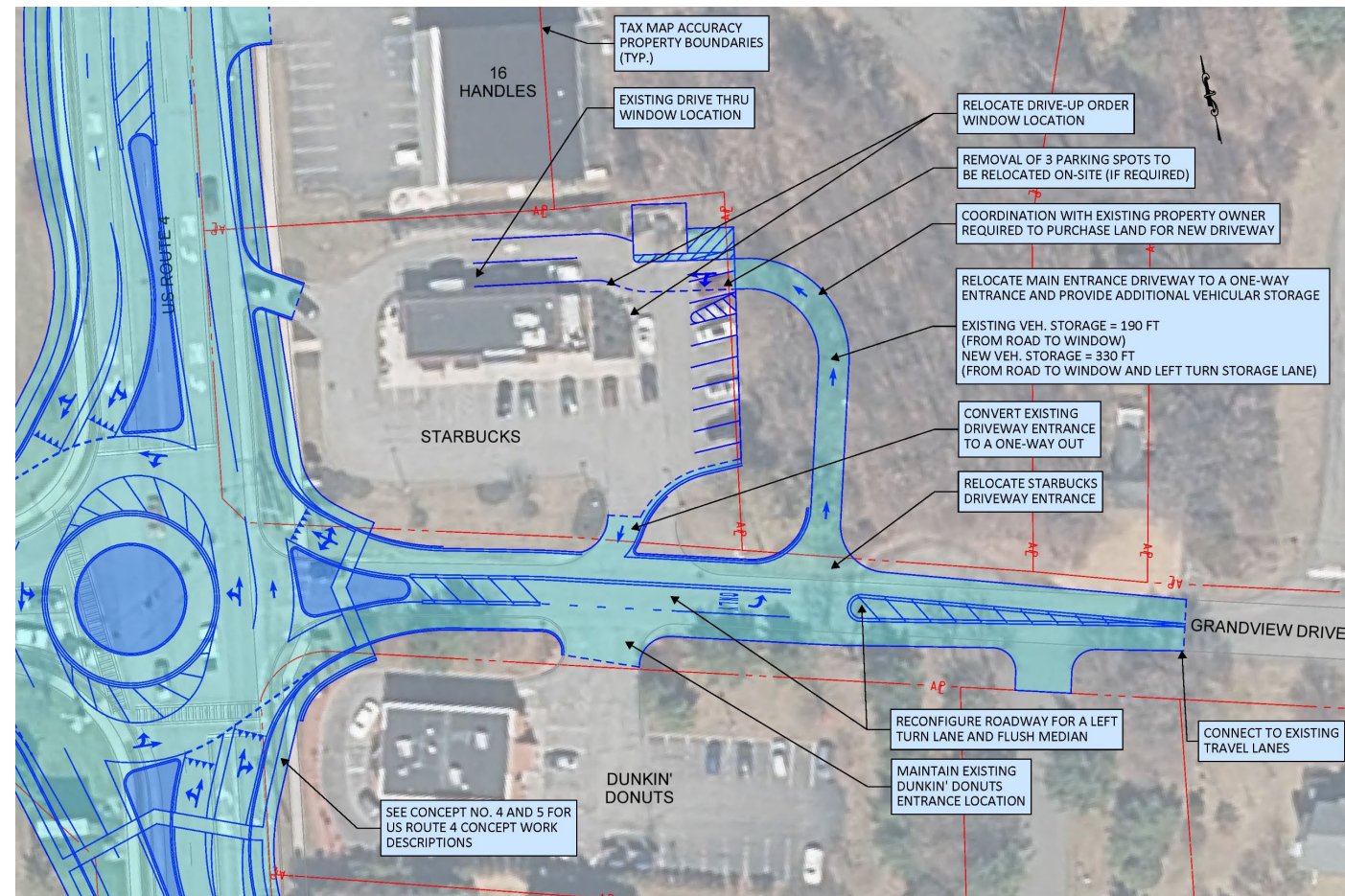


Estimated Cost
2023 - \$13,582,000
2028 - \$15,746,000

Draft Concept No. 4A & 5A

Combination of Signalized and Roundabout Intersections

- US Route 4 Same as Concept Nos. 4/5
- Add Left Turn Lane into Starbucks
- Reduce Spilling of Drive-Thru Traffic onto US Route 4
- Reduce blocking of Grandview Drive



Draft Concept No. 2

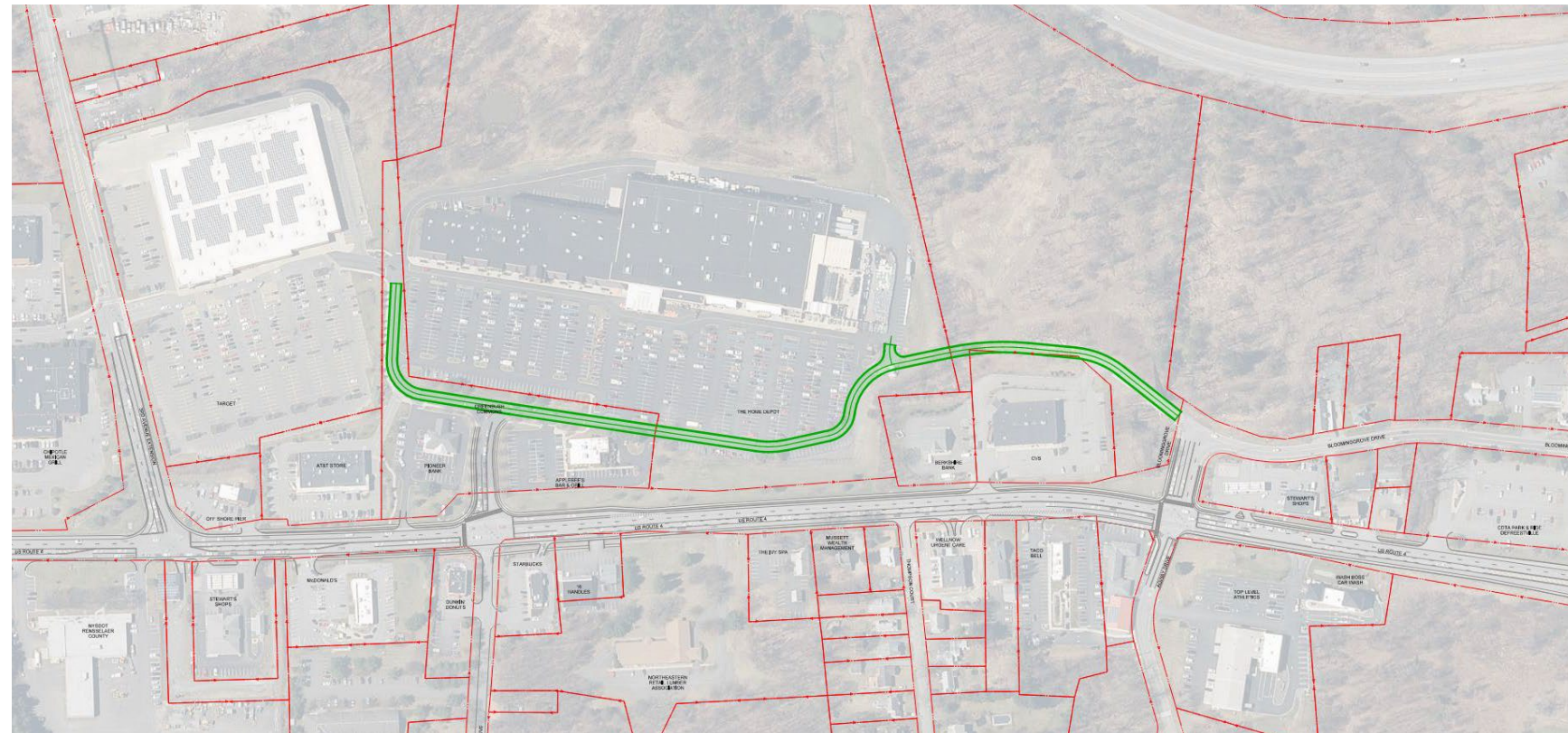
Service Road Options

- Initial Options
 - Four (4) configurations with six (6) total concepts
 - Additional two (2) concepts include 2-way travel
- Additional Options
 - List modified to remove some initial options and add new
 - Resulting in ten (10) total concepts
- Parallel Access Road Reduces Vehicle Load on US Route 4
- Analyzed as part of all other concepts

Draft Concept No. 2

Concept 2A

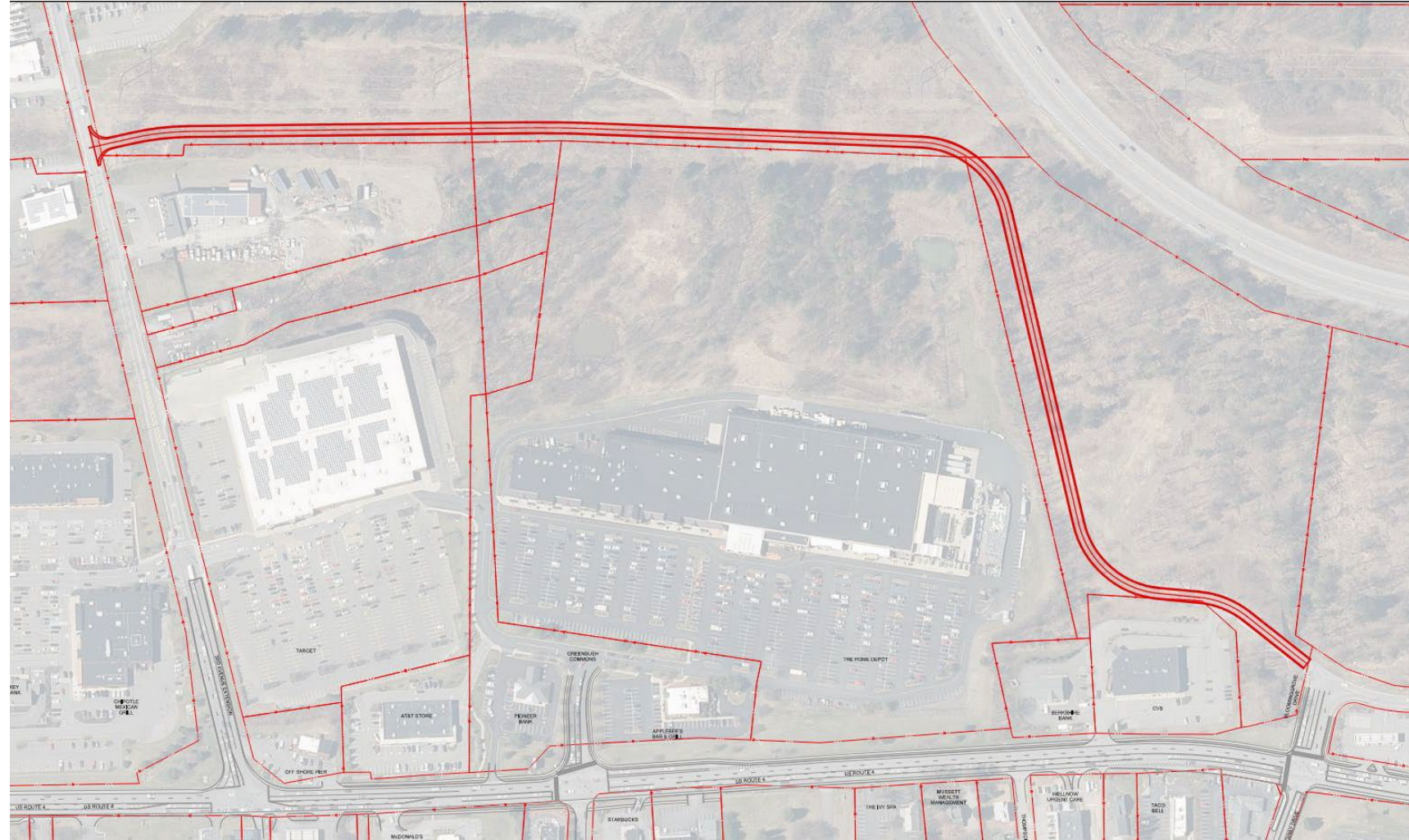
- Two-way connection to end of Bloomingrove Drive
- Ties into the parking lot near Home Depot in the Greenbush Commons shopping plaza



Draft Concept No. 2

Concept 2B

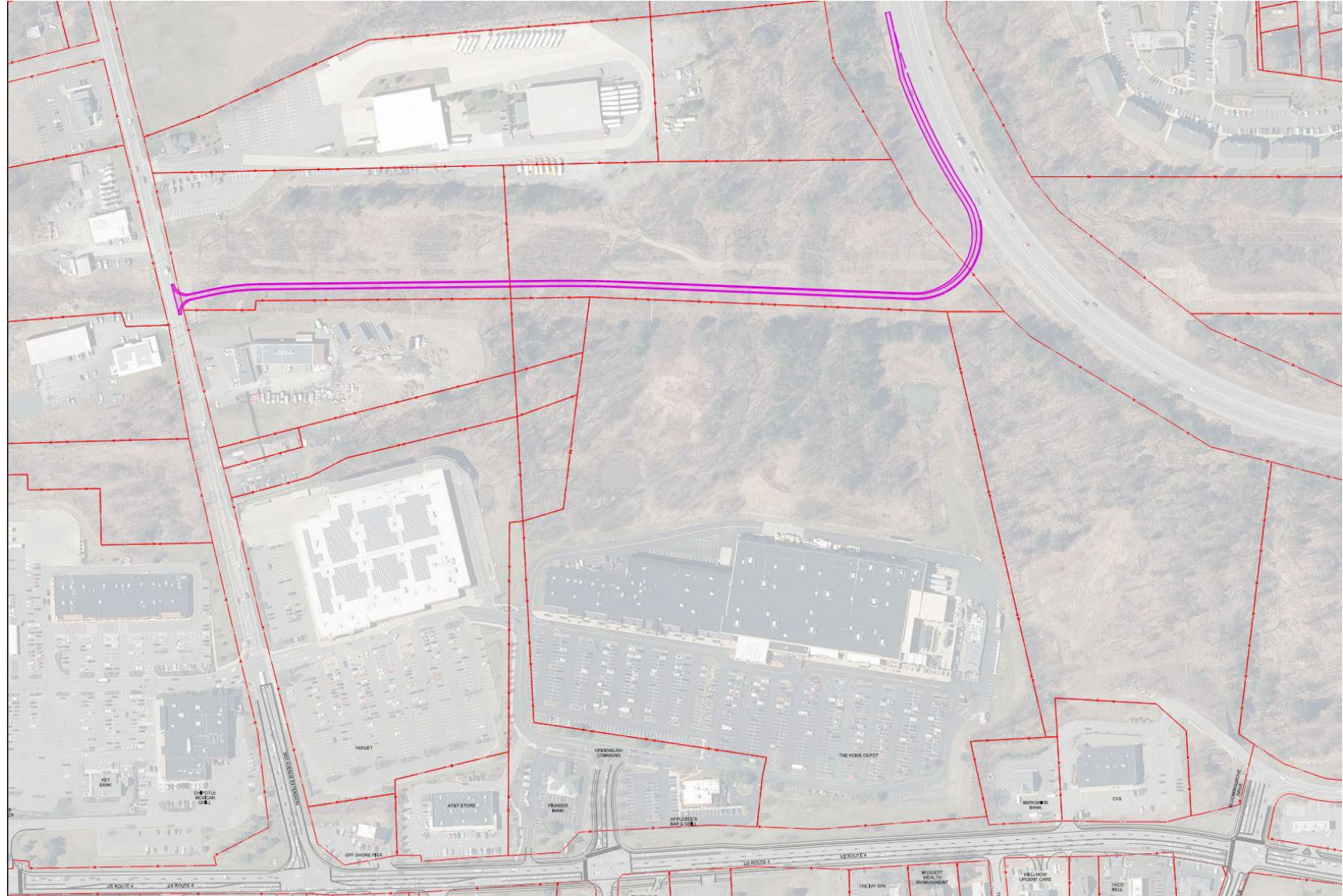
- Begins at the end of Bloominggrove Drive
- Continues south to near the property line for Greenbush Commons then turns west for 1,000 feet
- The service road then turns south to the terminus at 3rd Avenue Extension



Draft Concept No. 2

Concept 2C

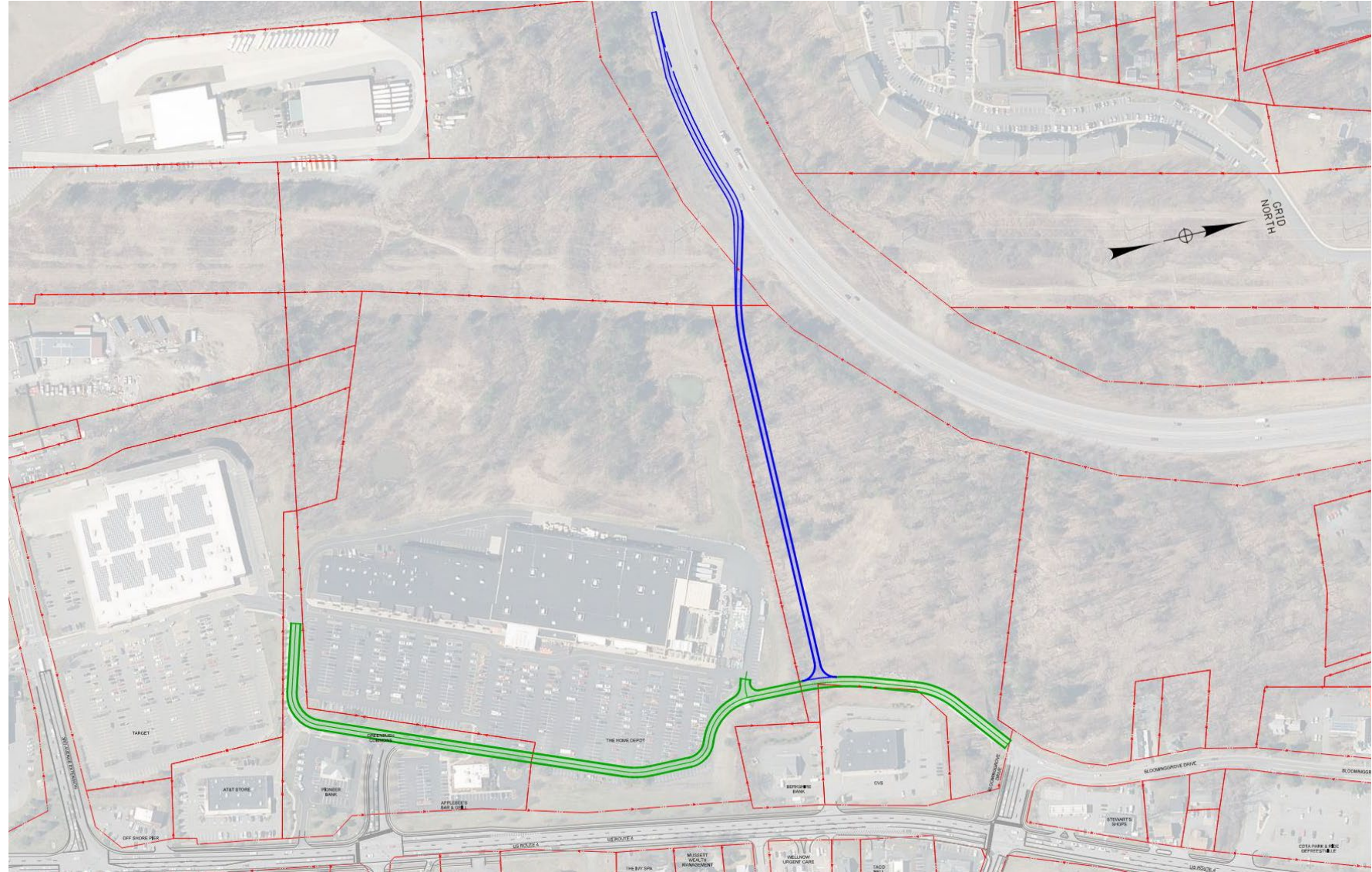
- Begins at NY 43 in divided section of ramp from I-90 with a deceleration lane
- Continues south one-way until the intersection with 3rd Avenue Extension.



Draft Concept No. 2

Concept 2D

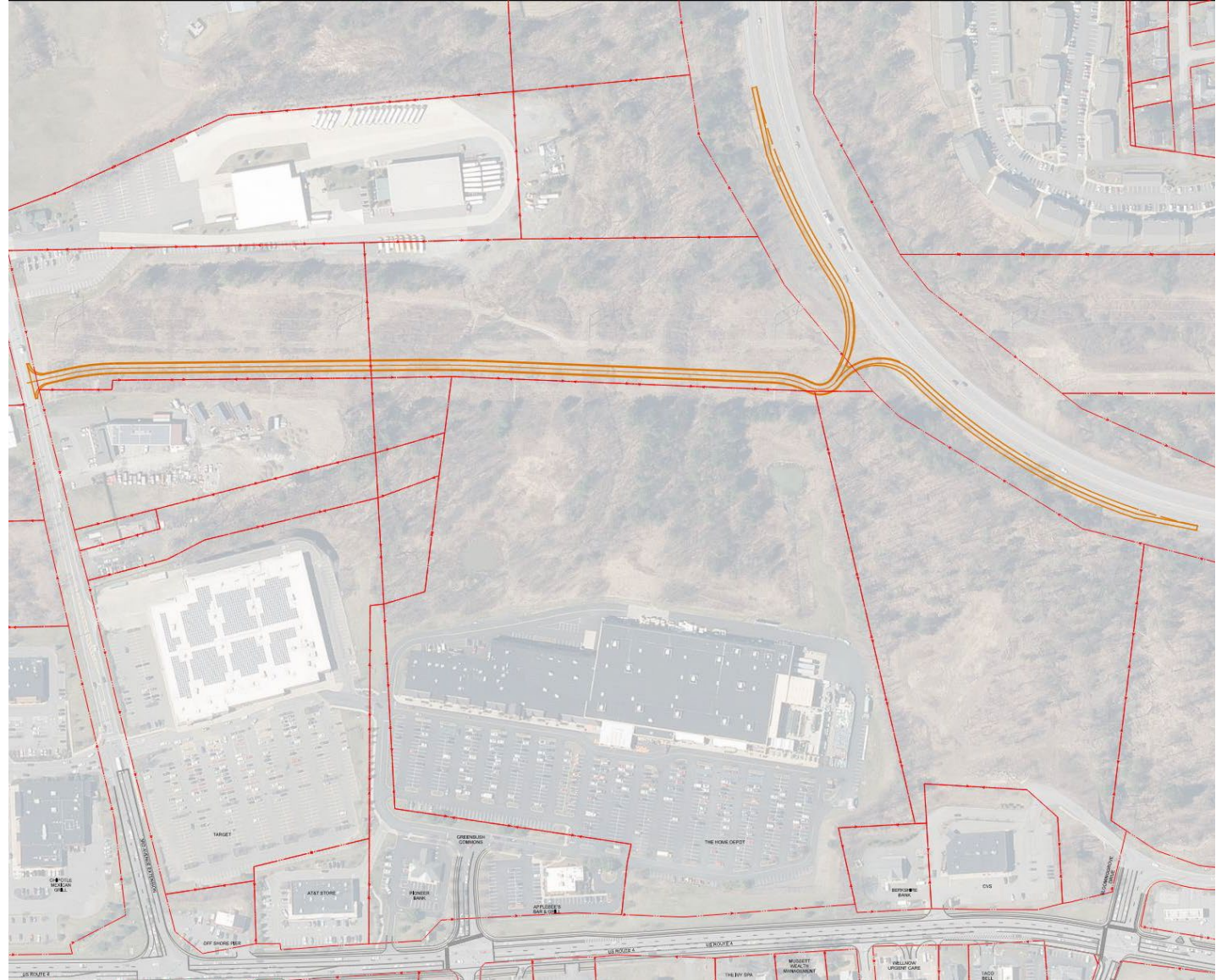
- Builds on Concept 2A
- Addition of a connection from NY 43 in the divided section with a deceleration lane
- Connects to Concept 2A alignment north of Home Depot.



Draft Concept No. 2 - New Options

Concept 2E

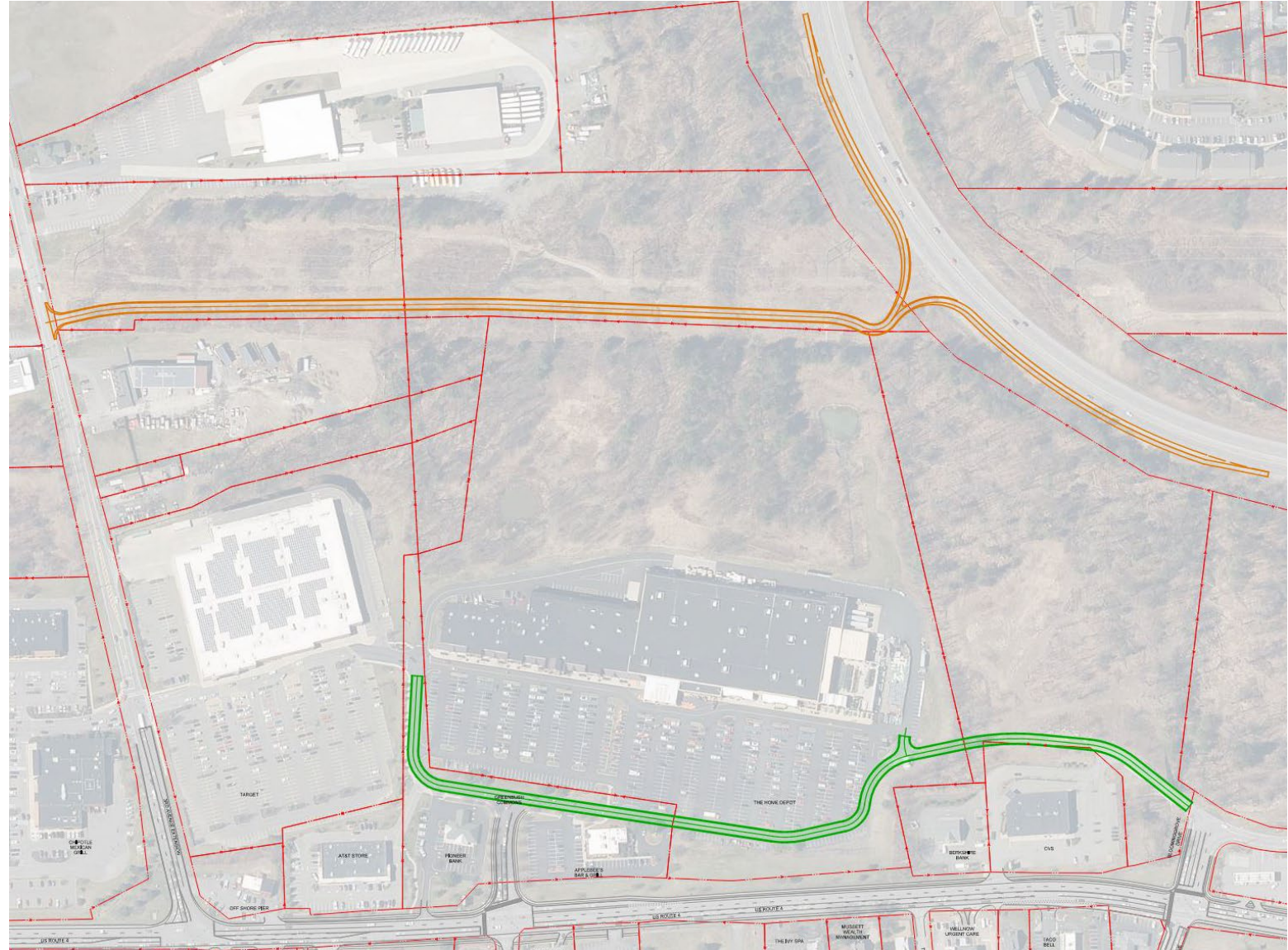
- Same as 2C above with a two-way connection
- Right-in/right-out only intersection with NY 43



Draft Concept No. 2 - New Options

Concept 2F

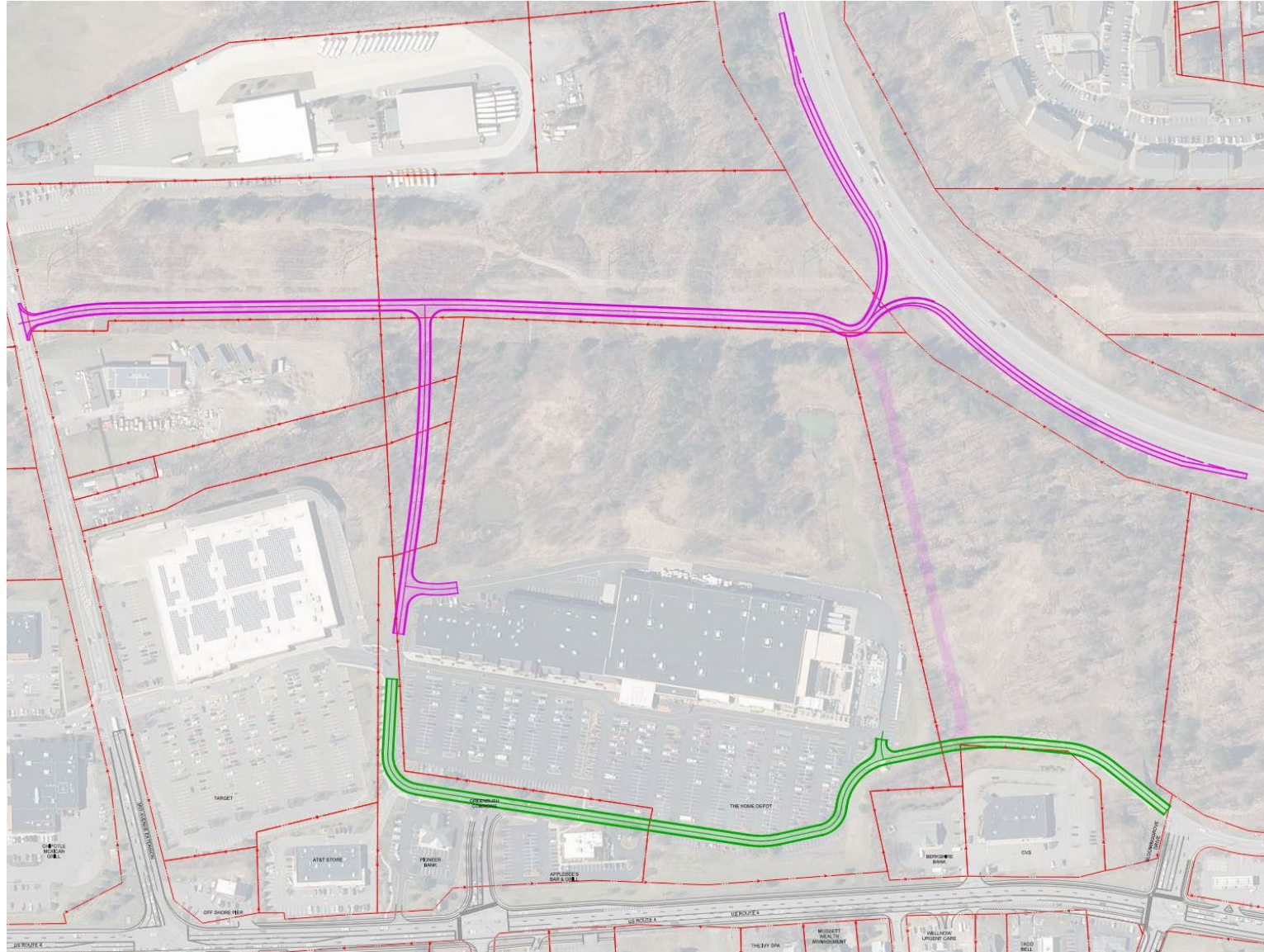
- Includes roadways and access described in Concepts 2A & 2E
- One connects to the end of Bloomingrove Drive continuing south and ties into the parking lot near Home Depot
- Other is a two-way connection between NY 43 and 3rd Ave Extension, with a right-in/right-out only intersection with NY 43.



Draft Concept No. 2 - New Options

Concept 2G

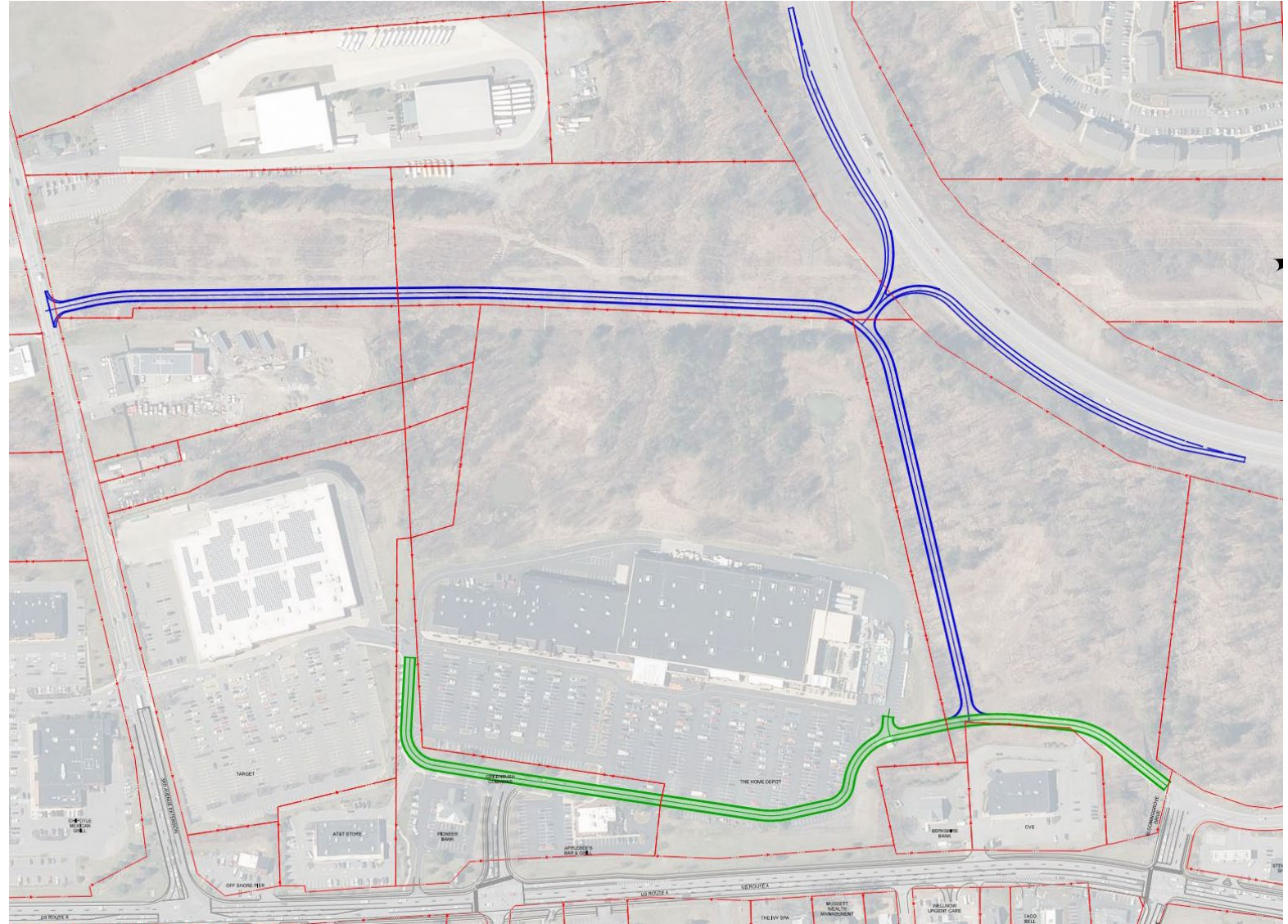
- Includes roadways from Concept 2F above
- Includes a two-way connection from Concept A to Concept F
- Includes a running between Target and Home Depot
- This option assumes a right-in/right-out only intersection with NY 43



Draft Concept No. 2 - New Options

Concept 2H

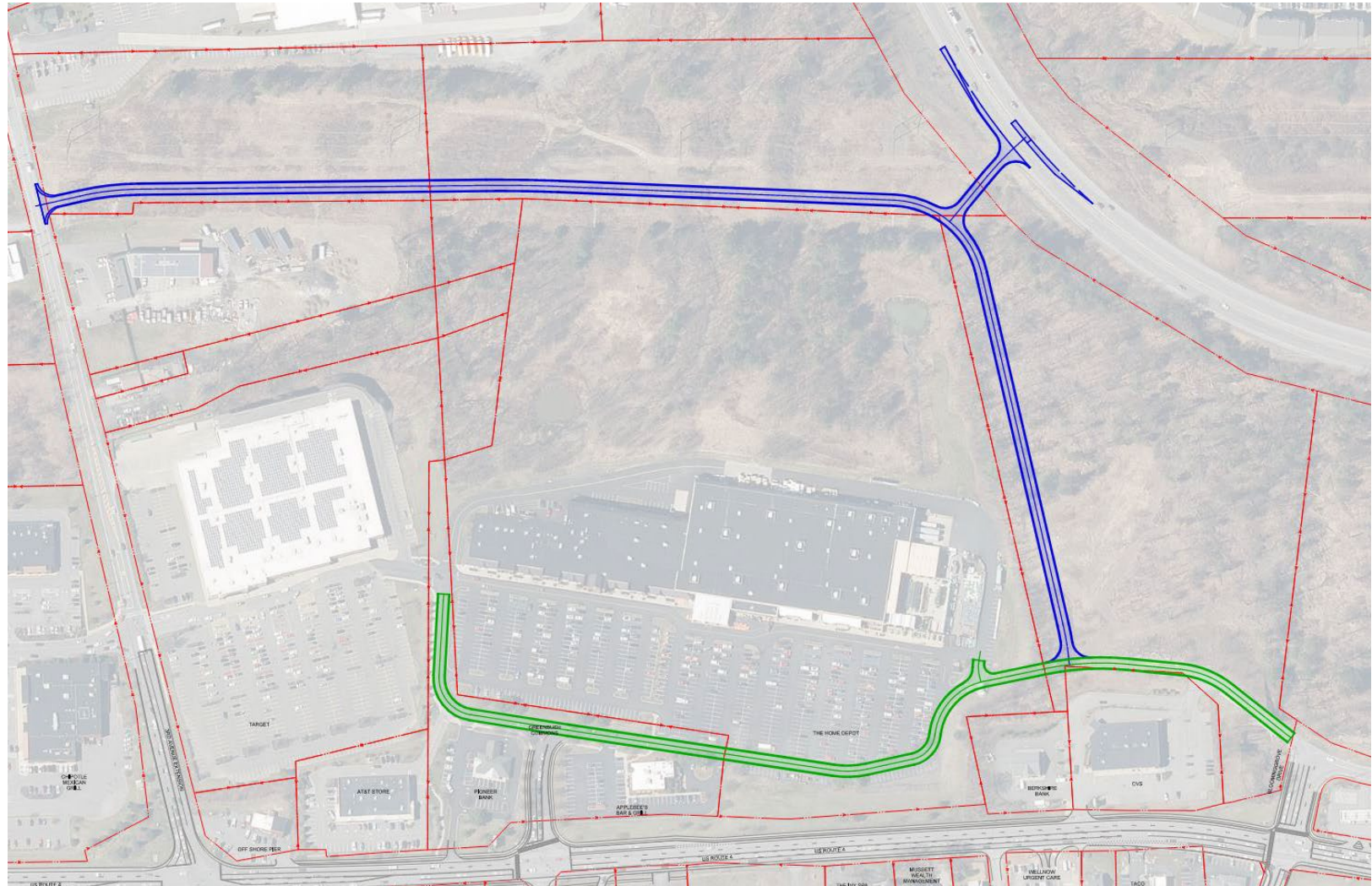
- Includes all the roadways from Concepts 2A, 2B, 2C, and 2D
- Right-in/right-out only intersection with NY 43



Concept No. 2 - New Options

Concept 2I

- Includes all the roadways from Concepts 2A, 2B, 2C, and 2D
- Full access intersection with NY 43.



Draft Concept No. 2 – Options

Traffic Pattern Impact

- Transportation Council utilized the Systematic Transportation Evaluation and Planning (STEP) Model, the regional travel demand model
- Analyze PM peak hour impacts and benefits

Results

- Percent (%) reduction of PM peak hour volumes
- All concepts reduced vehicle load on US Route 4 to some degree
- To account for variation, top four (4) service road options chosen
- Lowest percentages utilized to be conservative
- US Route 4 volumes were adjusted based on lowest percent (%) reduction

SERVICE ROAD VOLUME ADJUSTMENTS				
Concept No.	US Route 4 Northbound		US Route 4 Southbound	
	3 rd Ave to Bloomingrove	Bloomingrove to NY-43	NY-43 to Bloomingrove	Bloomingrove to 3 rd Ave
2A	25%	15%	25%	49%
2F	24%	14%	23%	48%
2G	23%	13%	27%	53%
2I	23%	12%	27%	54%

Concept	Est. 2023 Cost	Est. 2028 Cost
A	\$2,294,000	\$2,660,000
F	\$4,291,000	\$4,975,000
G	\$4,704,000	\$5,454,000
I	\$4,093,000	\$4,745,000

Level of Service Summary

FUTURE 2045 - OVERALL INTERSECTION

LEVEL OF SERVICE

	INT	EXISTING GEOMETRY	PROPOSED GEOMETRY	P.G. W/ SERVICE RDS
		PM	PM	PM
		CONCEPT 1	1	E (70.3)
SIGNAL COORD.	2	C (27.2)	C (27.5)	C (22.6)
	3	E (64.7)	F (80.7)	E (56.0)
	4	C (22.2)	C (22.6)	C (26.0)
	5	B (14.3)	B (10.1)	B (10.1)

FUTURE 2045 - OVERALL INTERSECTION

LEVEL OF SERVICE

	INT	EXISTING GEOMETRY	PROPOSED GEOMETRY	P.G. W/ SERVICE RDS
		PM	PM	PM
		CONCEPT 4	1	E (70.3)
RA's	2	C (27.2)	A (5.3)	A (5.5)
	3	E (64.7)	B (10.3)	A (4.4)
	4	C (22.2)	A (5.5)	A (5.5)
	5	B (14.3)	A (4.7)	A (4.0)

CONCEPT 3	1	E (70.3)	C (29.5)	C (29.0)
	2	C (27.2)	C (23.4)	C (20.8)
	3	E (64.7)	C (31.0)	C (30.5)
	4	C (22.2)	C (23.2)	C (26.9)
	5	B (14.3)	B (10.4)	B (12.0)

CONCEPT 5	1	E (70.3)	D (39.8)	D (38.8)
	2	C (27.2)	C (24.1)	C (21.3)
	3	E (64.7)	B (10.1)	A (4.3)
	4	C (22.2)	A (5.1)	A (5.2)
	5	B (14.3)	A (4.1)	A (5.9)

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Corridor Improvement Phases

Phase 1

- Short-Term Improvements

Phase 2

- Medium-Term: Building on Success

Phase 3

- Long-Term: Full Buildout



Short-Term Improvements

Optimized Signal Timing & Improved System Coordination

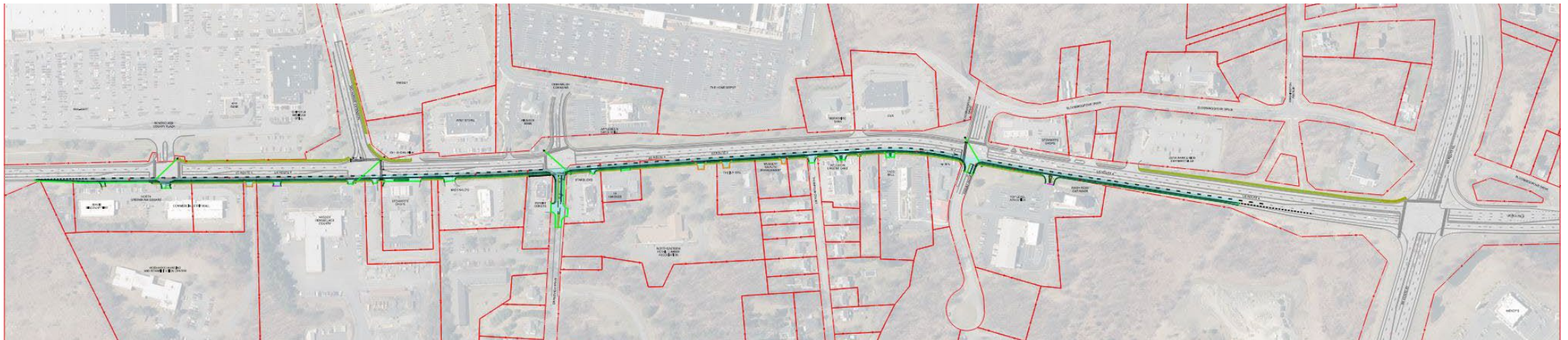
- Maintains the Existing Geometry
- Lowest cost to implement
- Signal Timings Modified
 - Coordinated from Agway/Bloominggrove to Walmart Plaza
 - Improves progression through corridor
 - Reduces queue spilling over to other intersections (3rd Ave Left Turns)
 - Possible Adaptive Signal Control System application
- Coordinate with local property owners as redevelopment occurs for sidewalk inclusion



Medium-Term: Building on Success

Additional US Route 4 Northbound Lane with possible parallel Service Road

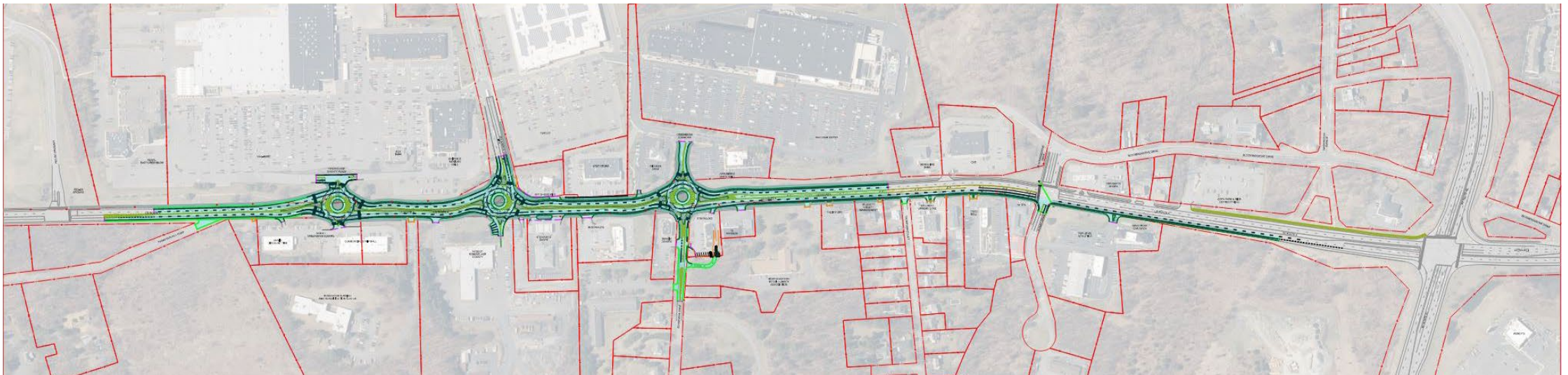
- Additional Northbound Lane from Thompson Hill Road to 625 feet south of NY Route 43
- Update signal timings to further improves progression through corridor
- Additional Northbound Capacity
- Fill any gaps in sidewalk network
- Possible Adaptive Signal Control System application
- Analysis during design phase to determine Service Road needs



Long-Term: Full Buildout

Concept with Parallel Service Roads

- Three (3) Study Intersections converted to Modified 2-Lane Roundabouts with Varying Approach Lane Geometry
- Two Updated/New Traffic Signals
- Two-way Left-turn Lane between NY Route 43 and Grandview Drive
- Raised Median between Grandview Drive and Walmart Plaza
- Analysis during design phase to determine Service Road needs



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Next Steps

- Public Meeting #2 TBD
 - Venue?
- Draft Report Preparation
- SAC #5 TBD





**Thank
you!**