University Hill Transportation Study

Syracuse, NY

Study History

***Special Events Transportation Study* - 2000**

***University Hill Comprehensive Transportation Study* - 2003**

- **Started as a parking study and grew**
- **Existing Conditions Inventory**
- **Identification of Issues**
- **Stopped and we needed to refocus efforts and obtain a new consultant**

***University Hill Transportation Study* – Restarted in 2005**

- **Focused on Core Issues Prioritized by the Working Group**
- **Completed and finalized in November 2007**

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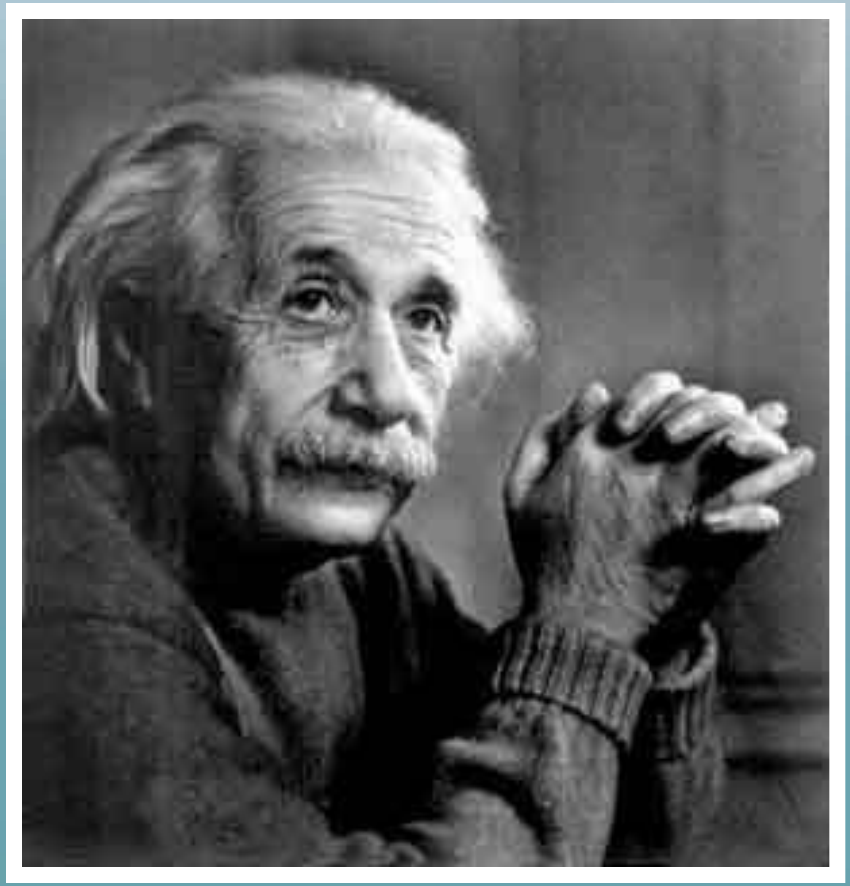
Defining the Problem



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Finding the real problem?

- Vehicle Ownership
- Vehicle Use
- Vehicle Occupancy
- Commuting

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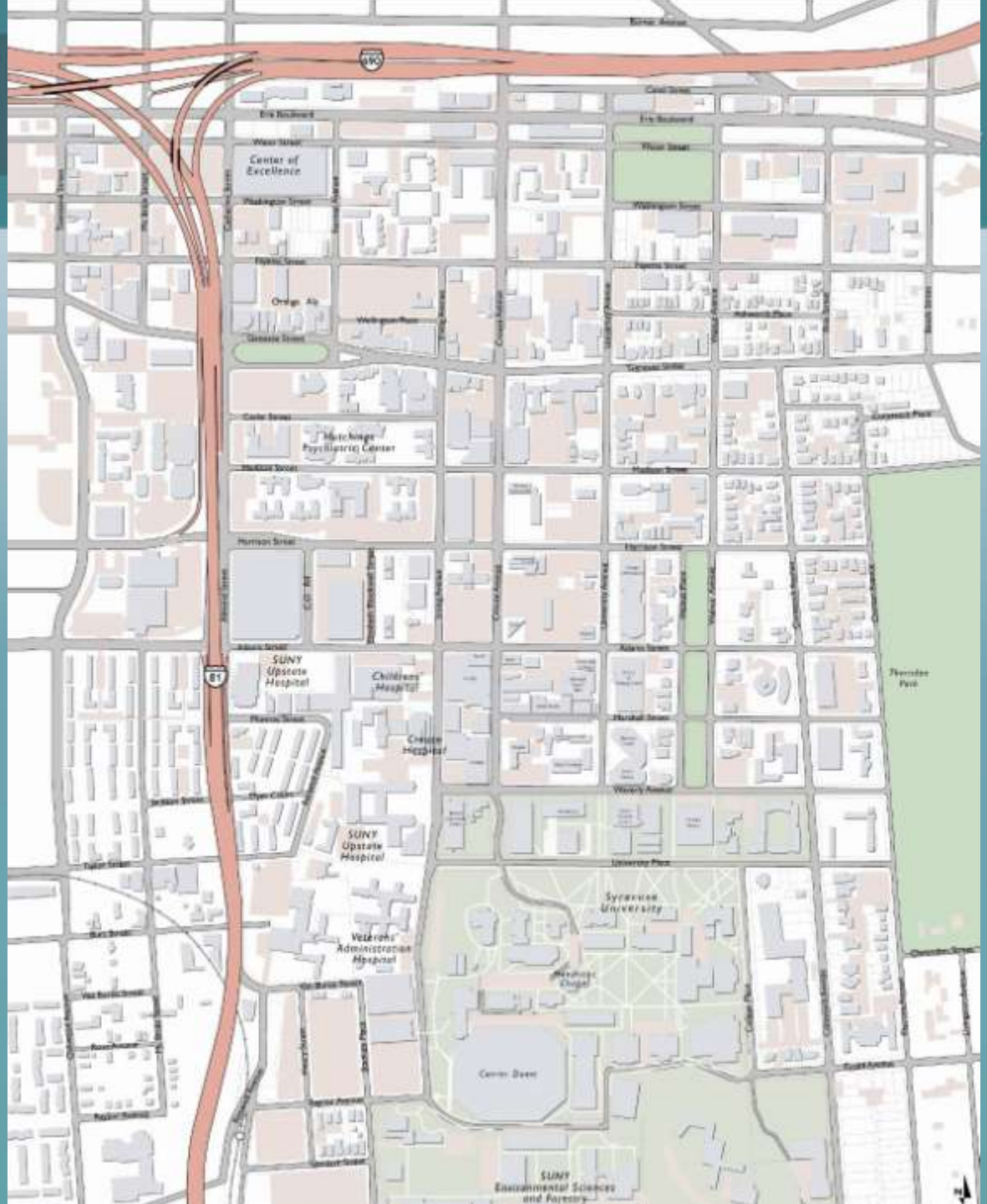
The Study Area



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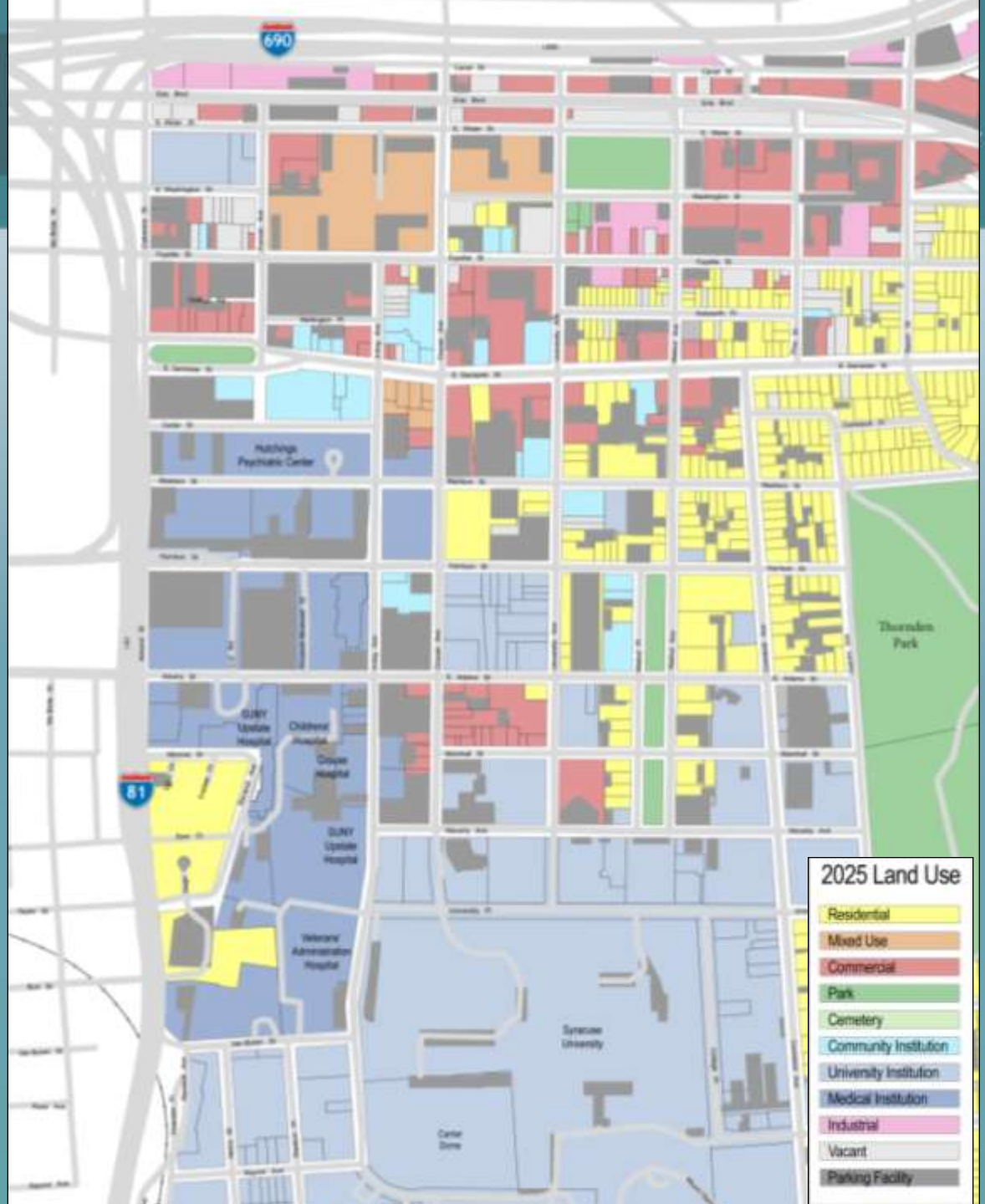
Future (2025) Land Use



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University Hill Proposed Development Totals*

	Parking Spaces	Residential Units	Retail SF	Commercial SF	Medical Related SF	Education Related SF
Recently Completed	1,475					85,000
Short-Term	120	150	15,000	4,400	258,000	399,000
Mid-Term	1,180			5,400	408,000	325,000
Long-Term		80	19,000	58,000		385,000
Total	2,775	230	34,000	67,800	801,000	1,194,000

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*does not include SU West Campus, Kennedy Square, or the Center of Excellence

Impacts of the CPV

	Existing Conditions (Year 2003)	Current Planned Vision (Year 2025)
Vehicle-Miles of Travel (24-Hour Day)[1]	272,000	307,000
Vehicle-Hours of Travel (24-Hour Day)	8,300	8,700
Transit Ridership (24-Hour Day)	2,900	2,700
Bicycle/Pedestrian Trips (24-Hour Day)	29,000	33,700
Number of Congested Roadway Segments (AM)[2]	4	15
Number of Congested Roadway Segments (PM)	5	11
Number of Roadway Segments Approaching Capacity (AM)[3]	17	28
Number of Roadway Segments Approaching Capacity (PM)	19	22

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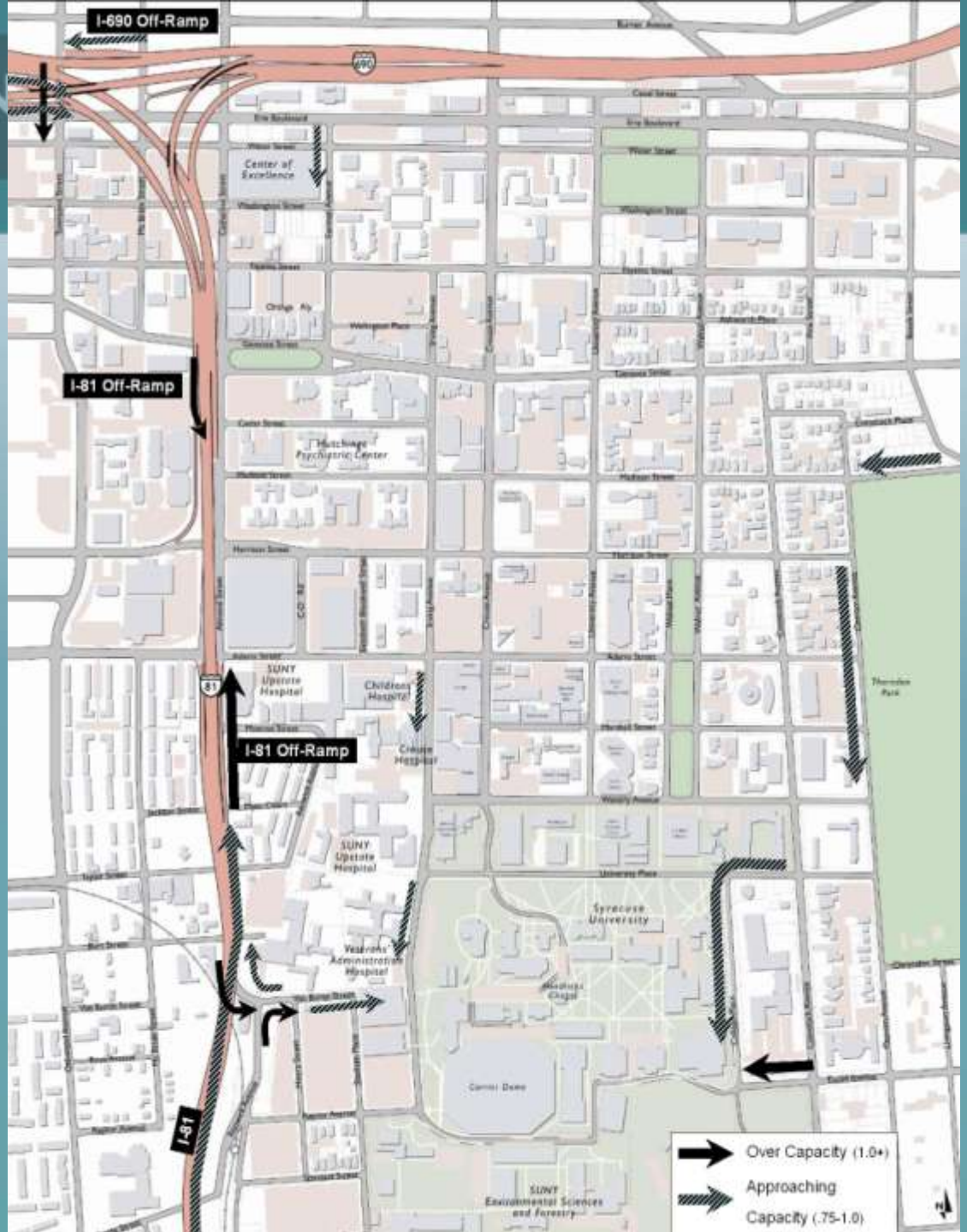
[1] Within area bound by I-81, I-690, SUNY ESF, and Ostrom Avenue/Beech Street

[2] 'Congested' defined as volume-to-capacity (v/c) ratio in excess o f 1.0

[3] 'Approaching capacity' defined as v/c ratio from 0.75 to 1.0

2025 AM Roadway Capacity Hotspots



TRIP SEGMENT	DISTANCE (miles)	TIME (minutes)	SPEED (mph)	DISTANCE SHARE (%)	TIME SHARE (%)
Walk to Car	0.01	0.2	3	0%	1%
Drive on Fairway Circle (local street)	0.3	1.7	9	2%	5%
Drive on Village Blvd. South (collector)	0.4	1.0	24	3%	3%
Drive on State Fair Road (arterial)	2.5	4.2	36	21%	13%
Drive on Interstates 690 and 81	8.0	13.8	35	67%	43%
Drive on Ramp, Almond and Adams Streets	0.5	3.2	9	4%	10%
Drive in Parking Structure	0.3	1.9	8	2%	6%
Walk to Office	0.1	6.0	1	1%	19%
Total/Average	12.0	33.8	21	100.0%	100.0%

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Future Isn't What It Used to Be

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Health Matters

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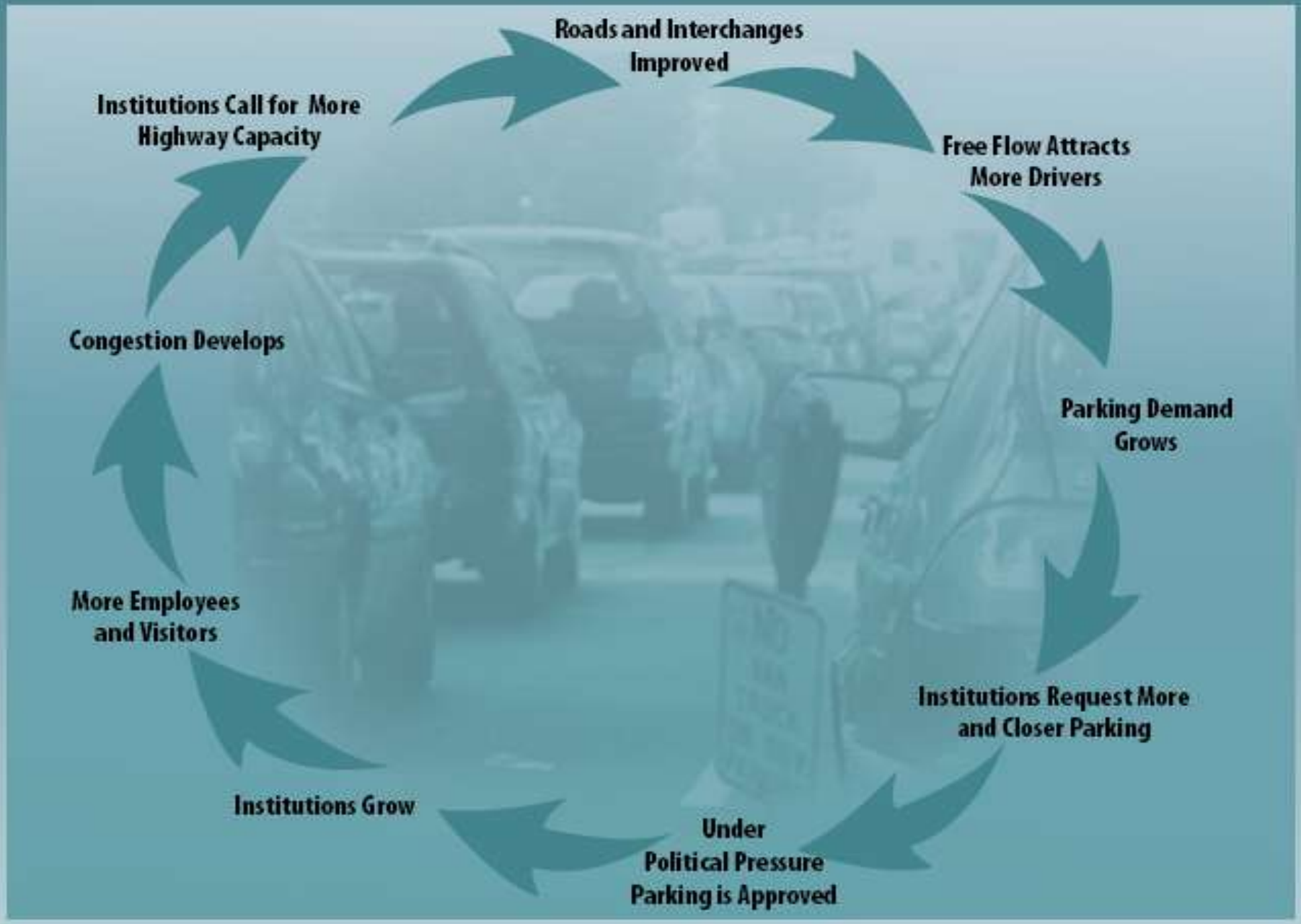
MOVE CARS CYCLE



STRATEGIES

MOVE PEOPLE

MOVE CARS

MORE

TRANSIT

- Fixed Route
- Bus Route
- On Demand
- Service Coordination

BIKING

- Lanes
- Boulevards
- Bike Storage

WALKING

- Sidewalks
- Complete Streets

PAVEMENT

- Interchanges
- Lanes
- Roads
- Paths
- Off Street Parking

EFFICIENCY

- Signal Timing
- Intelligent Transportation System (ITS)

IMPROVE

CONNECTIVITY

- Road Network
- Modes
- Lane Limits
- Activity Centers

SECURITY+SAFETY

- Eyes on Street
- Traffic Calming
- On-street Parking

LAND USE

- Mix
- Compactness
- Hidden Parking

DESIGN SPEED

- Lane Width
- Friction

HIGHWAY CAPACITY

- Interchange Spacing
- Level of Service (LOS)

PARKING VISIBILITY

- Block Size Structures
- Proximity

Redefining the Problem

- Move people, goods and minds
- Adapt to future forces.
- Meet institutional needs.
- Create a place that attracts talent.
- Integrate land use and transportation.

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Key Recommendations

1. Mixed Use Development
2. Prioritized Transit Network
3. Integrated Parking Strategy
4. Almond Street Corridor
5. Two-Way Streets
6. Bike Boulevard Network

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ONE CROUSE MEDICAL PLAZA

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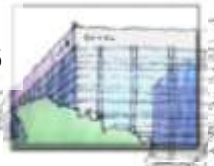
CREATING A MIXED USE PLACE – ADAMS STREET

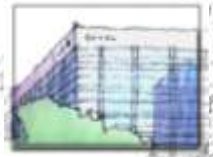
Medical workers/visitors create customers for restaurants and shops



What are the elements of a mixed use place?

Offices, academic space, and housing above retail support retail development.

Medical workers/visitors create customers for restaurants and shops



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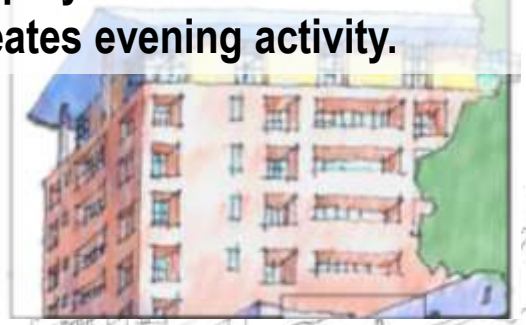
What are the elements of a mixed use place?

Offices, academic space, and housing above retail support retail development.

Housing also provides a place for employees/students to live and creates evening activity.



Medical workers/visitors create customers for restaurants and shops

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What are the elements of a mixed use place?

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Medical workers/visitors create customers for restaurants and shops

Restaurants and cafes are amenities and create sidewalk activity

Edwards and Kelcey

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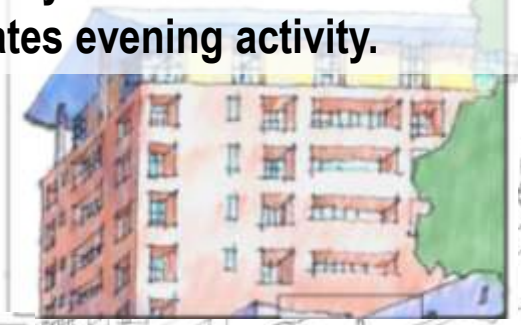

Medical workers/visitors create customers for restaurants and shops

Retail creates vibrant sidewalks

Restaurants and cafes are amenities and create sidewalk activity

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What are the elements of a mixed use place?

Offices, academic space, and housing above retail support retail development.

Housing also provides a place for employees/students to live and creates evening activity.

Medical workers/visitors create customers for restaurants and shops

Retail creates vibrant sidewalks

A campus bookstore is a destination.

Restaurants and cafes are amenities and create sidewalk activity

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What are the elements of a mixed use place?

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What does “mixed use” really mean for the user?

Professors discuss the next class

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Students visit the bookstore

Professors discuss the next class

Edwards and Kelcey

Nurses meet to talk after a shift

Students visit the bookstore

Professors discuss the next class

Edwards and Kelcey

Nurses meet to talk after a shift

Students visit the bookstore

Professors discuss the next class

Medical office workers shop on lunch break

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Nurses meet to talk after a shift

Students visit the bookstore

Professors discuss the next class

Medical office workers shop on lunch break

Grad students spend the morning in a cafe

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Creating a focal Point

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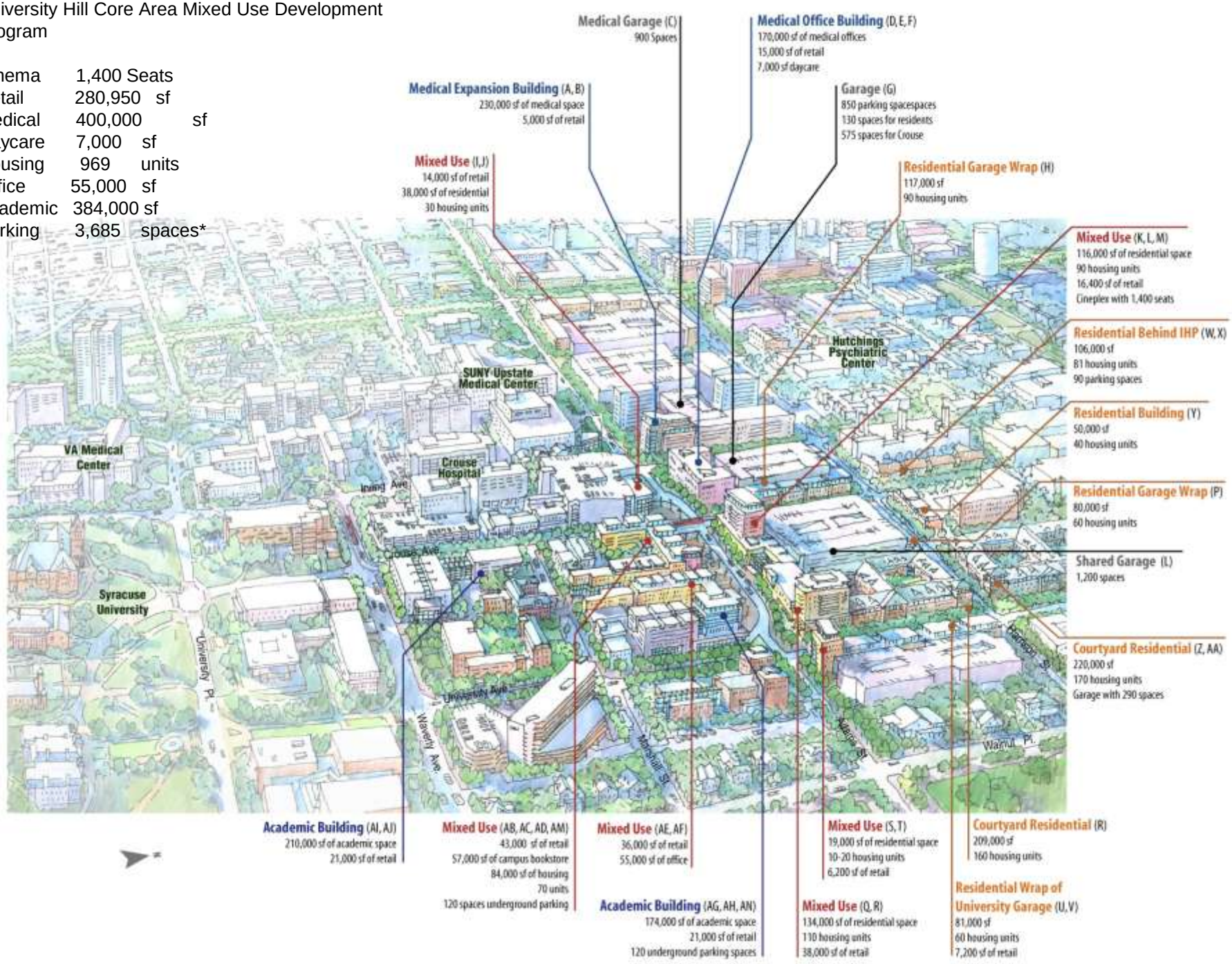
University Hill Core Area Mixed Use Development Program

Cinema	1,400	Seats
Retail	280,950	sf
Medical	400,000	sf
Daycare	7,000	sf
Housing	969	units
Office	55,000	sf
Academic	384,000	sf
Parking	3,685	spaces*



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Making Transit Matter

476

GENERAL ELECTRIC COMPANY

Schenectady, N. Y.

SALES OFFICES IN PRINCIPAL CITIES

This Equation Can Help You Solve Your Parking Problem

There's Plenty of Street Space for All the People -- But Not for All the Vehicles

When we think of the traffic problem as one of moving **people**, not **vehicles**, it's easy to see the importance of public transit in solving a city's parking and traffic problems. One trolley-coach line can carry as many people as six typical streets filled with private autos—one street-car line as many as nine streets.

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Prioritized Transit Network

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Making Transit Matter

Streetcar in Portland, OR

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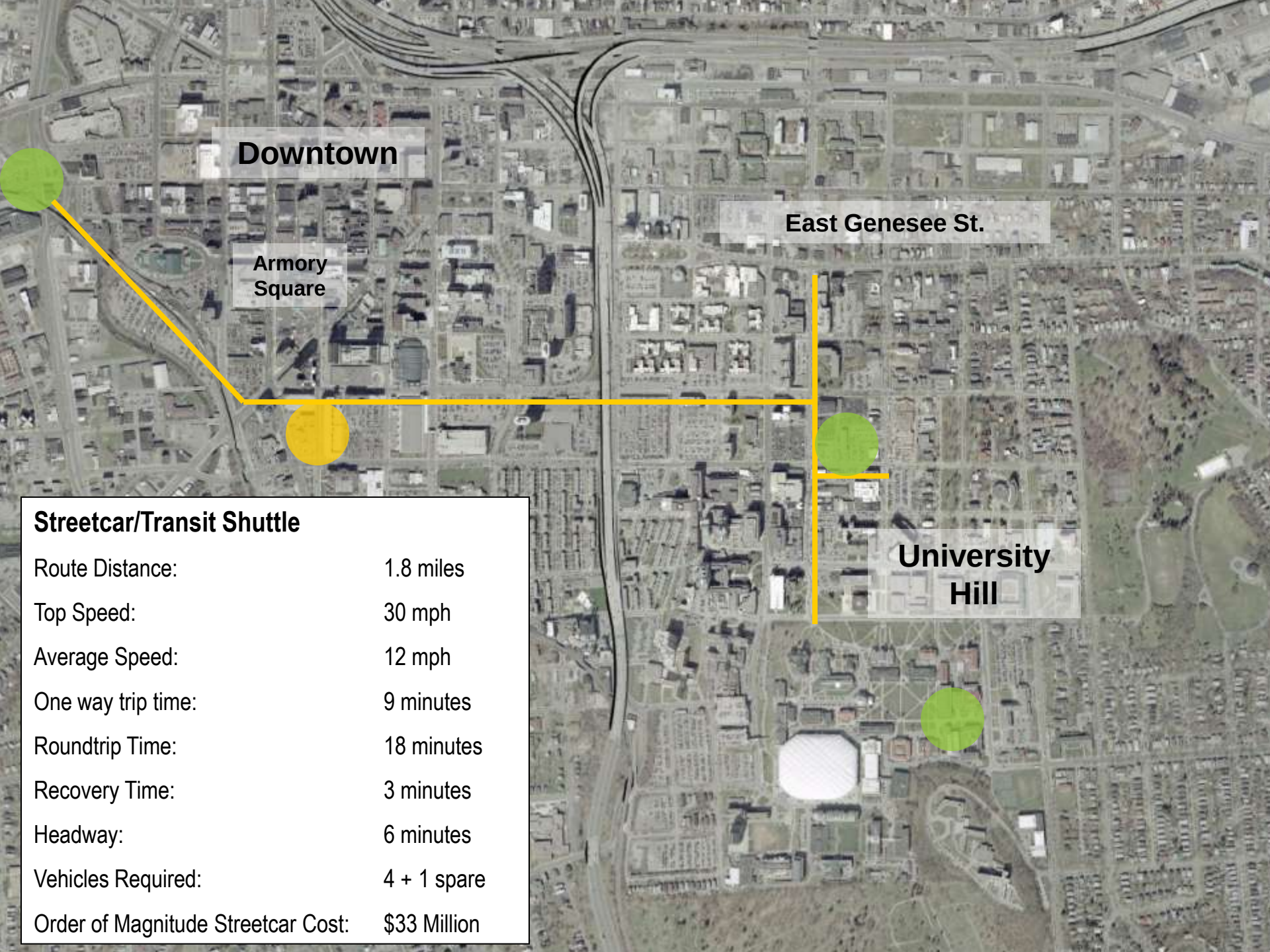

Streetcar/Transit Shuttle

Route Distance:	1.8 miles
Top Speed:	30 mph
Average Speed:	12 mph
One way trip time:	9 minutes
Roundtrip Time:	18 minutes
Recovery Time:	3 minutes
Headway:	6 minutes
Vehicles Required:	4 + 1 spare
Order of Magnitude Streetcar Cost:	$33 Million

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Integrated Parking Strategy

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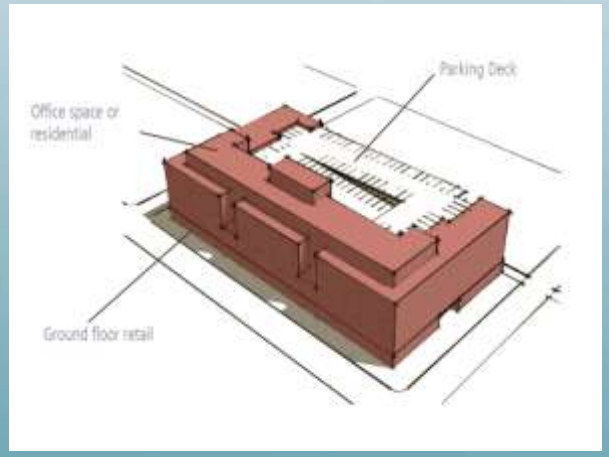
Parking



SMTC

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Land Use and Parking

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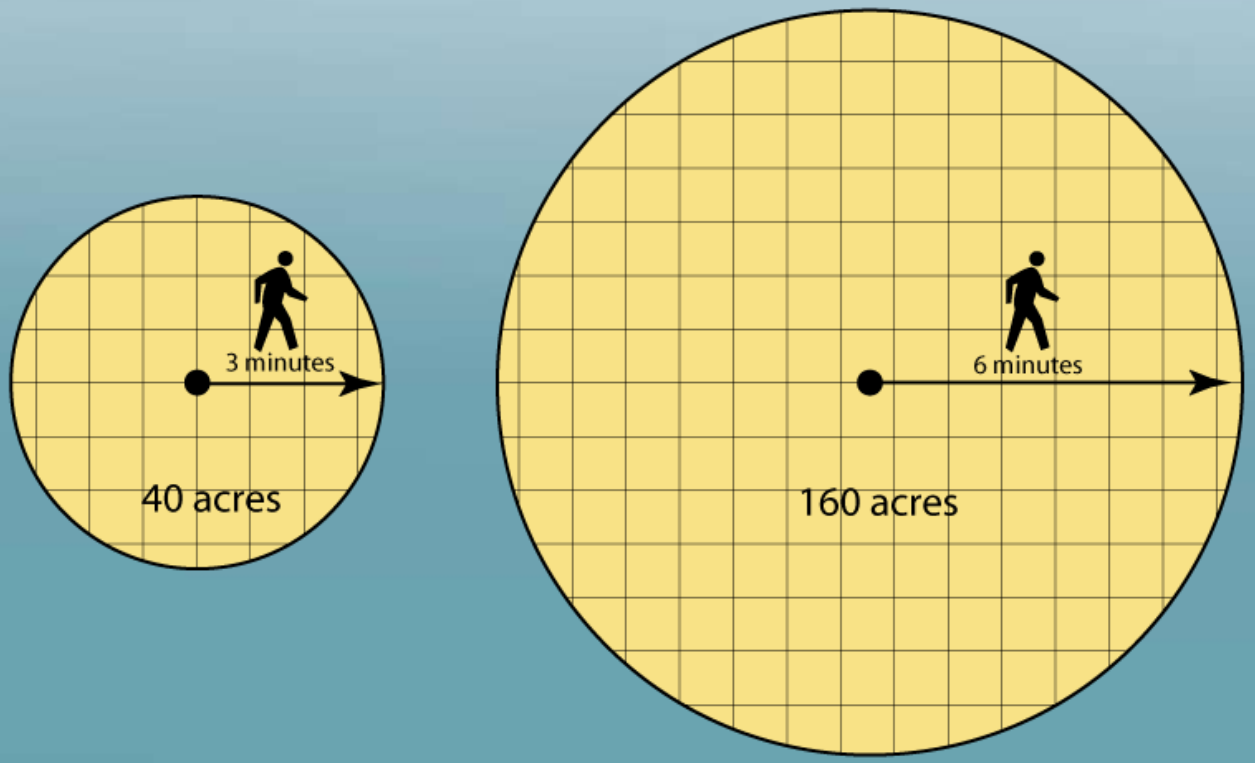
Walking Matters



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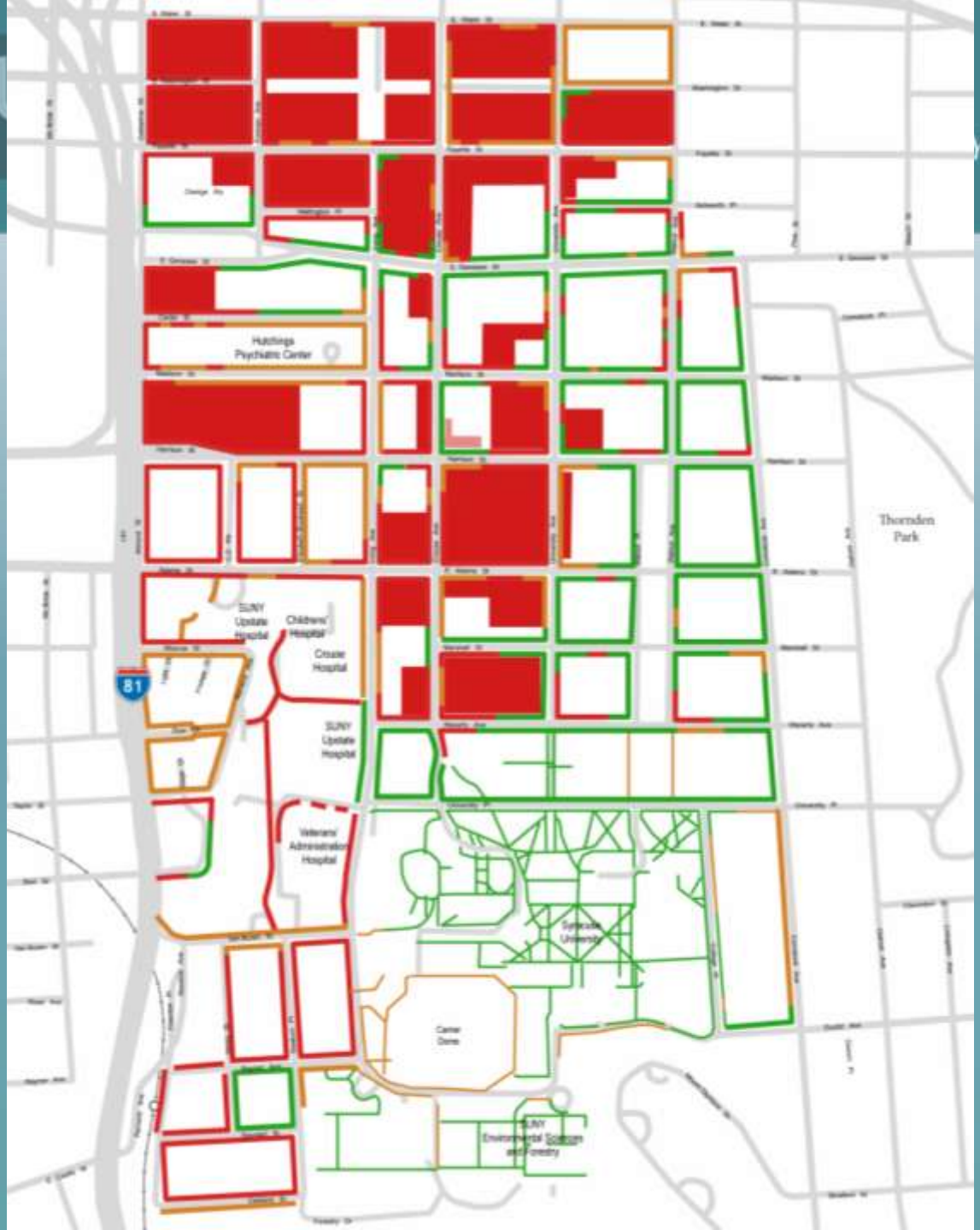
Pedestrian Environment

- High quality
- Moderate quality
- Low quality
- Potential infill



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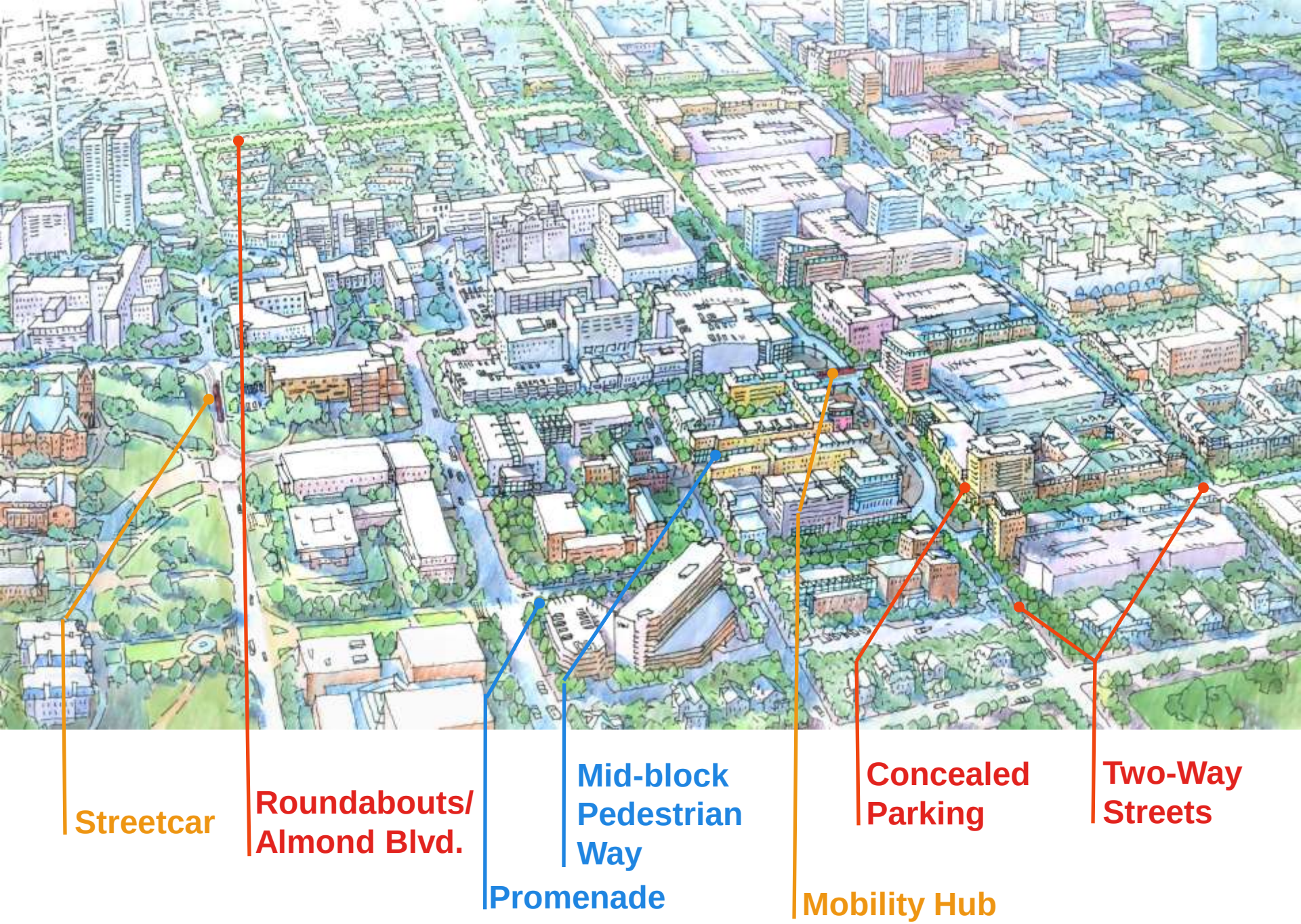
LE CHAMP DE MARS


Streetcar
Roundabouts/
Almond Blvd.
Promenade
Mid-block
Pedestrian
Way
Mobility Hub
Concealed
Parking
Two-Way
Streets

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Almond Street Corridor Improvements

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Emerging Concepts

Viaduct Treatment

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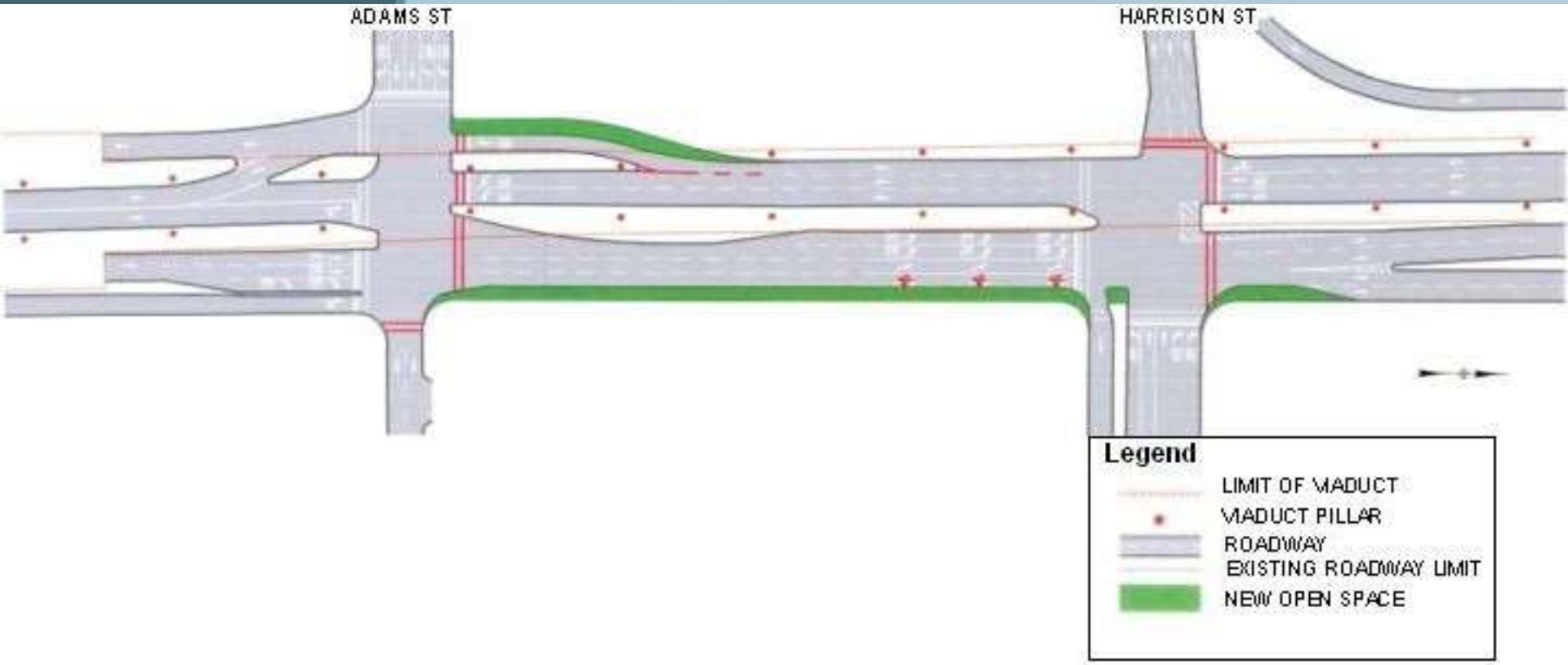

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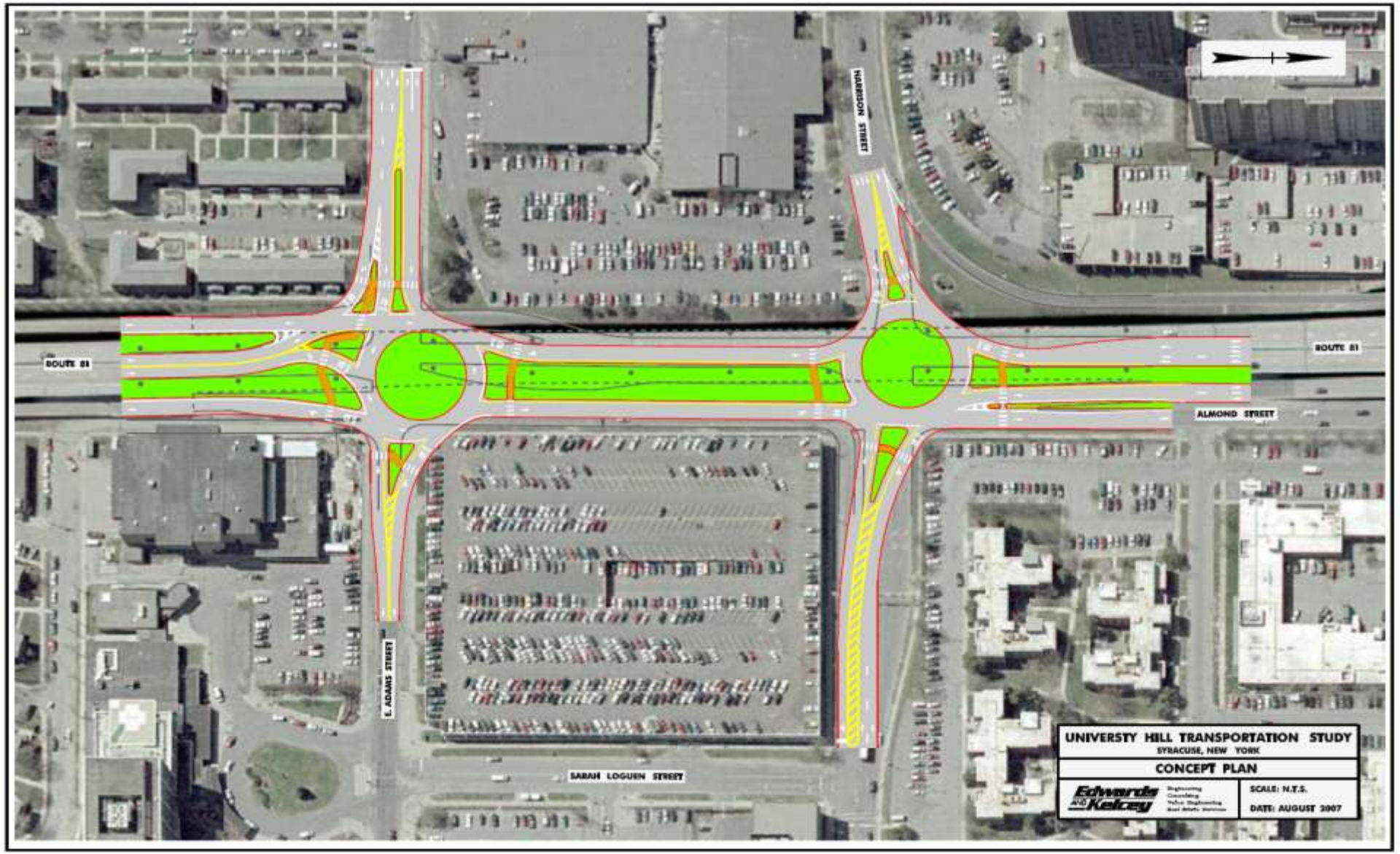
Narrowing Almond Street



Double Roundabout Concept Plan

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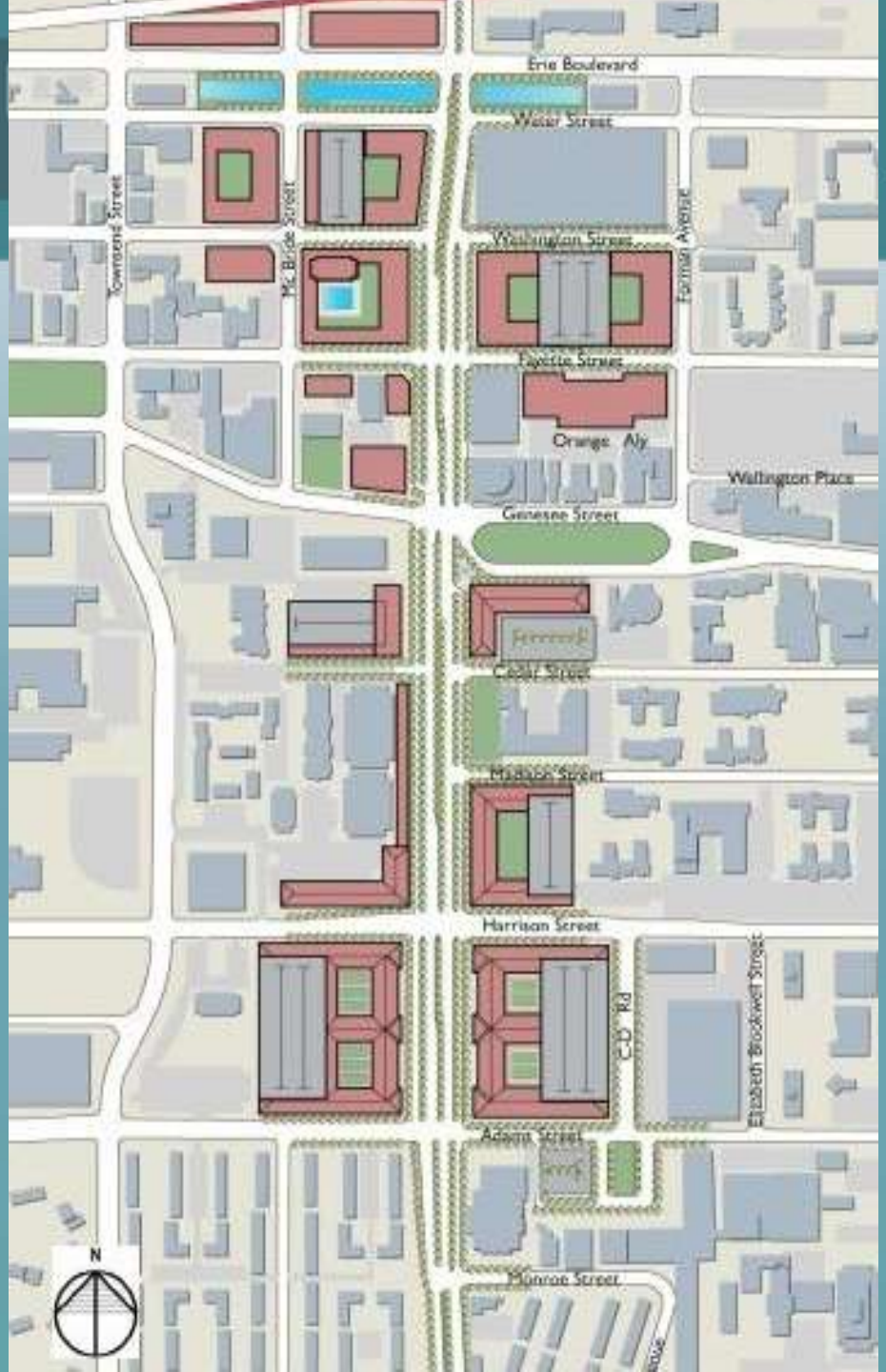
Almond Street Boulevard



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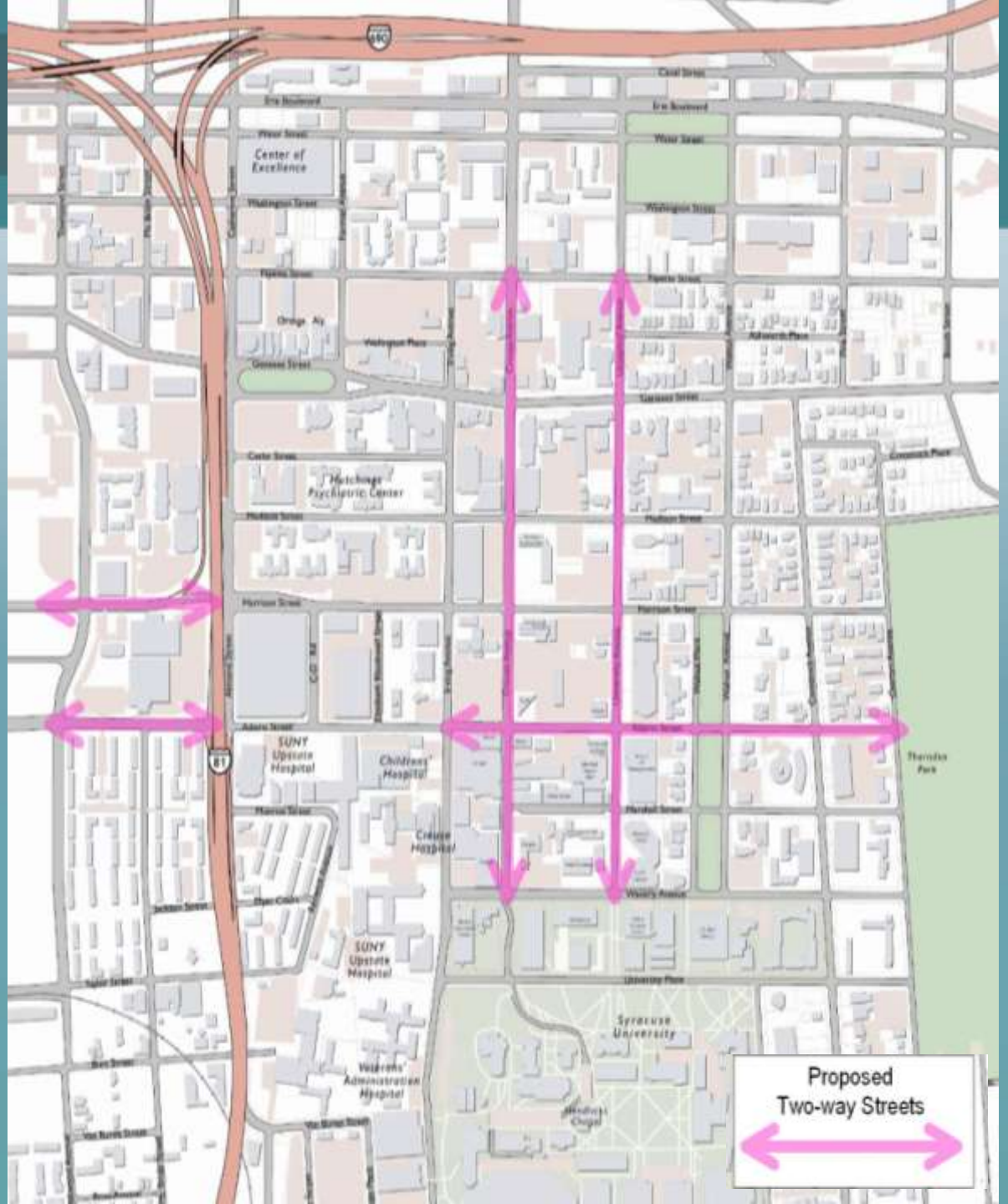
Two-Way Streets



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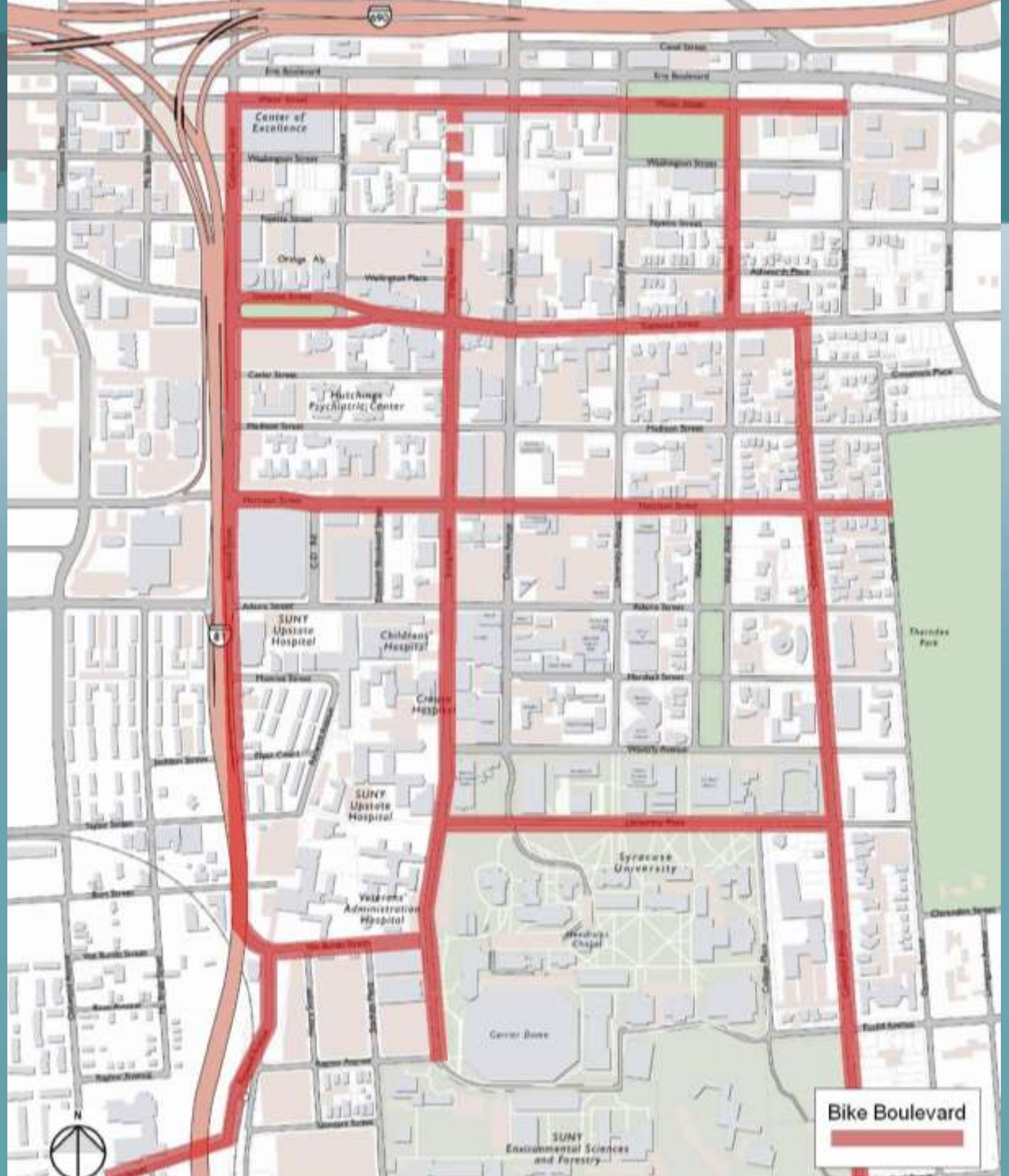
Bike Boulevard Network



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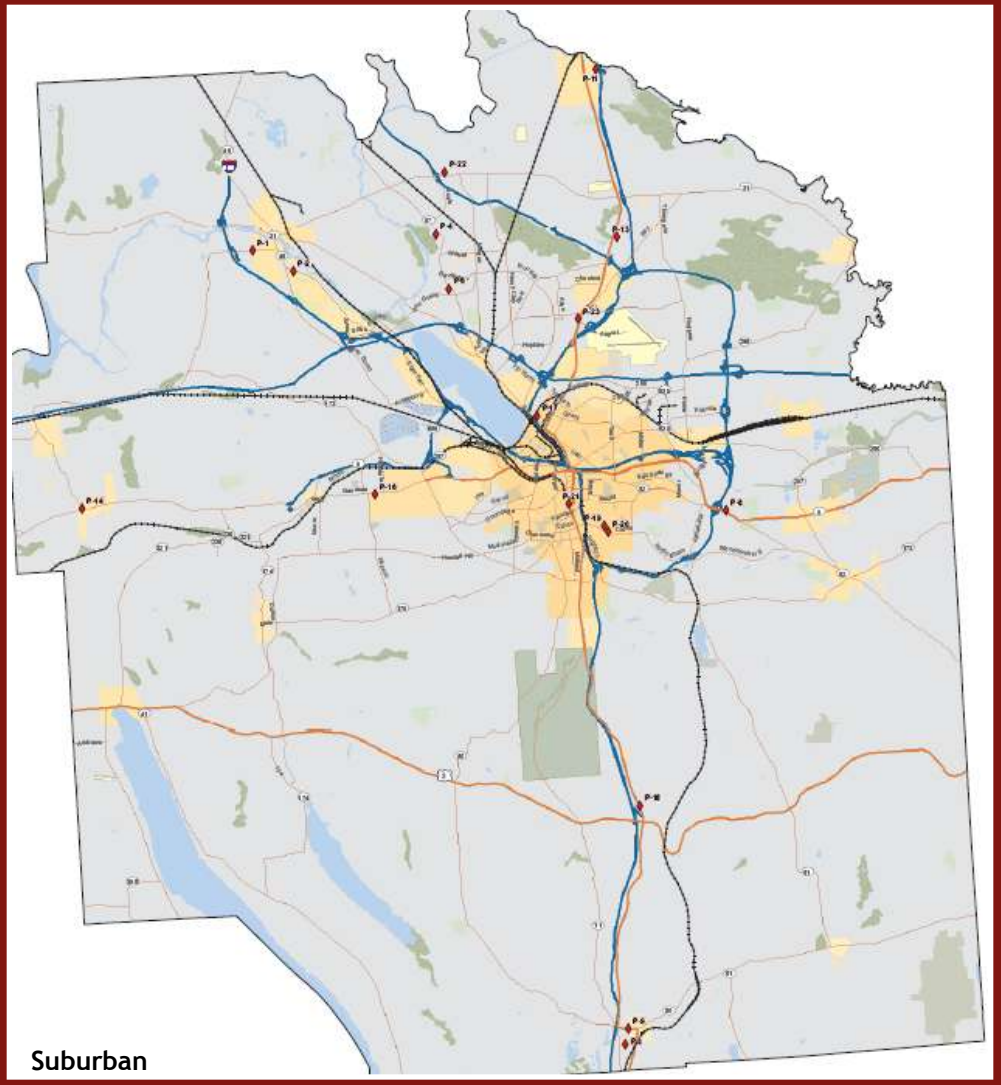
Significant Planning Activities That Have Occurred Since Study's Completion

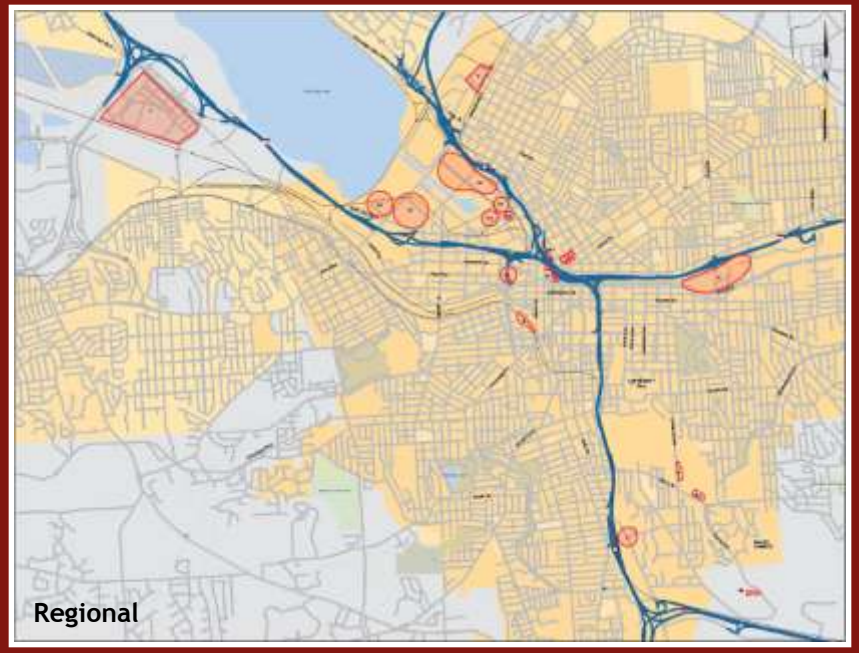
- University Hill Park and Ride Feasibility Study
- University Hill Phase II Feasibility Study: Short-Term Transportation Recommendations
- University Hill Bike Network Project

University Hill Park and Ride Feasibility Study

Existing Institutional Parking & Estimated Demand

Estimated Parking Demand (3-10 yrs.)		
Institution/ Organization	**Low**	**High**
SUNY Upstate	300	750
Syracuse University	0	0
Crouse Hospital	350	500
VA Medical Center	300	300
Hutchings	50	50
SUNY ESF	10	510
Crouse Marshall BD	50	50
Total	**1,060**	**2,160**





Potential Sites

Recommendations

Short-Term

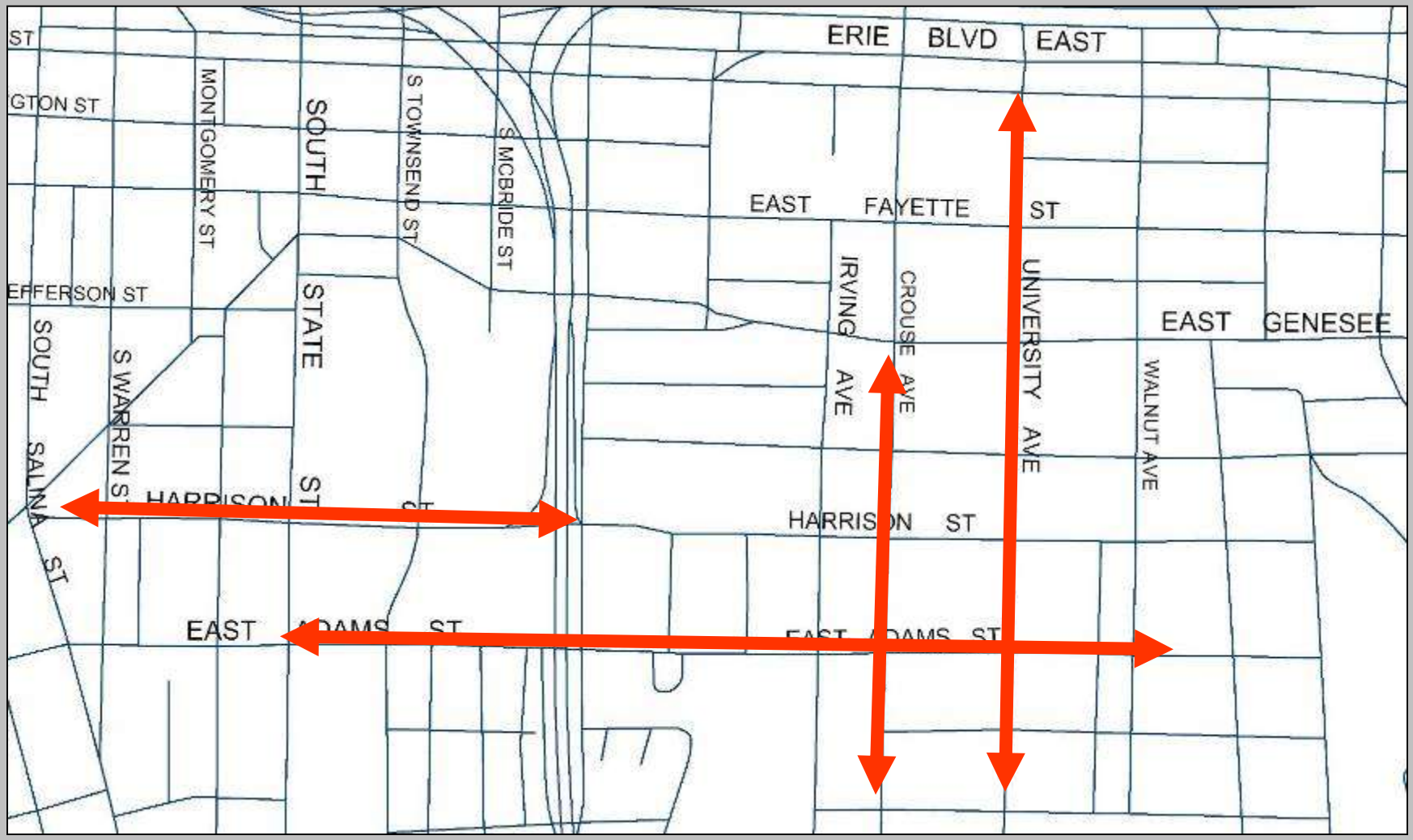
1. Enhance Centro Park-n-Ride service
    - Fayetteville/DeWitt
    - Camillus
    - Liverpool
2. Use Alliance Bank Stadium
3. Implement transportation demand management (TDM) program

Long-Term

1. Reassess demand
2. Mixed Use Garage – Kennedy Sq.
    - Shared parking
    - Wrap building
    - Shuttle to Hill institutions

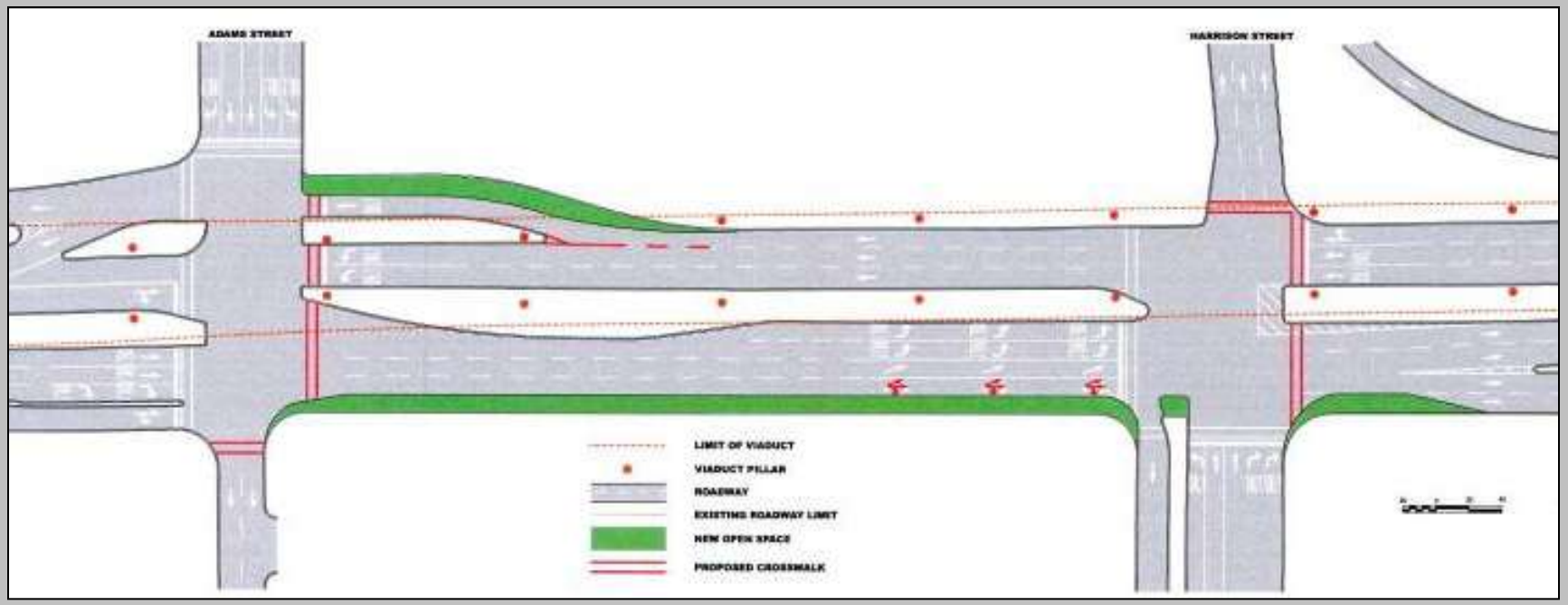
University Hill Phase II Feasibility Study: Short-Term Transportation Recommendations

Purpose



One-way to two-way conversions

Purpose



Almond Street Narrowing

Purpose

Almond Street Roundabouts

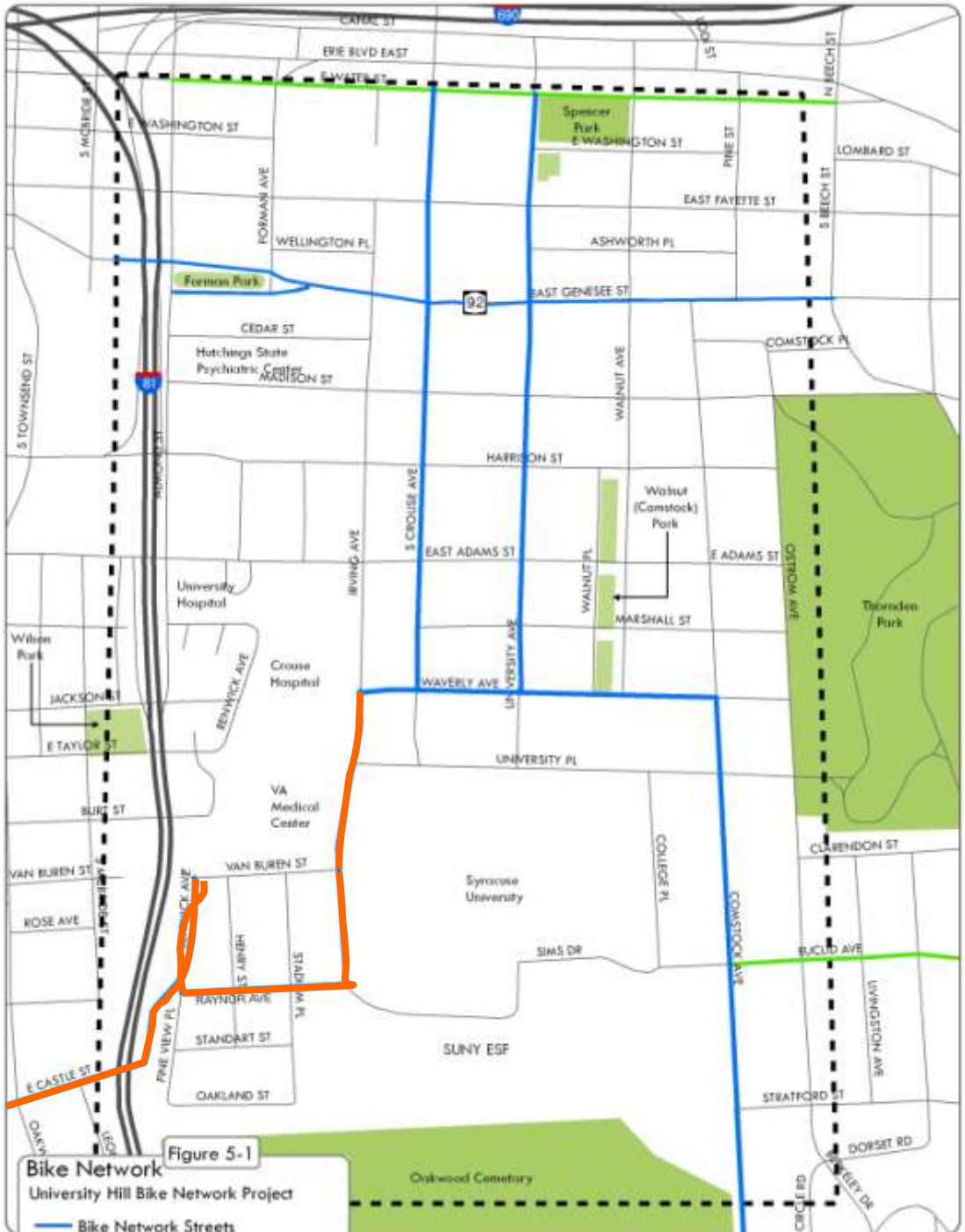
Conclusions

1. Positive effects on bike/pedestrian environment
2. Significant negative effect on traffic operations
    1. Queue lengths
    2. LOS at key intersections (already failing)
3. Worth retesting if transportation conditions change
4. Systemic change needed to implement solution

University Hill Bicycle Network Project

SMTC

Recommendations



S. Crouse Existing

S. Crouse Option A

S. Crouse Option B

S. Crouse Option C

Road Diet on Waverly Avenue
(looking west)

Before

Road Diet on Waverly Avenue
(looking west)

After

Road Diet on Waverly Avenue
(looking east)

Before

Road Diet on Waverly Avenue
(looking east)

After