

Transportation Advisory Committee Belmont Center Improvements



TAC Forum #2 – Review of Transportation Options
Town of Belmont

November 4, 2010

Participants

Linda Nickens Belmont Traffic Advisory Committee

Glenn Clancy Belmont Town Engineer

Peter Briere Traffic Engineer, BSC Group

Marybeth Murphy Landscape Architect, BSC Group

Charles Kalauskas Planner, BSC Group

Purpose of Project

1. Analyze alternatives
2. Determine preferred alternative relative to:
 - Roadway
 - Sidewalk
 - Parking
 - Landscape
3. Initiate design & construction

Project Schedule

BELMONT CENTER - PROJECT DEVELOPMENT

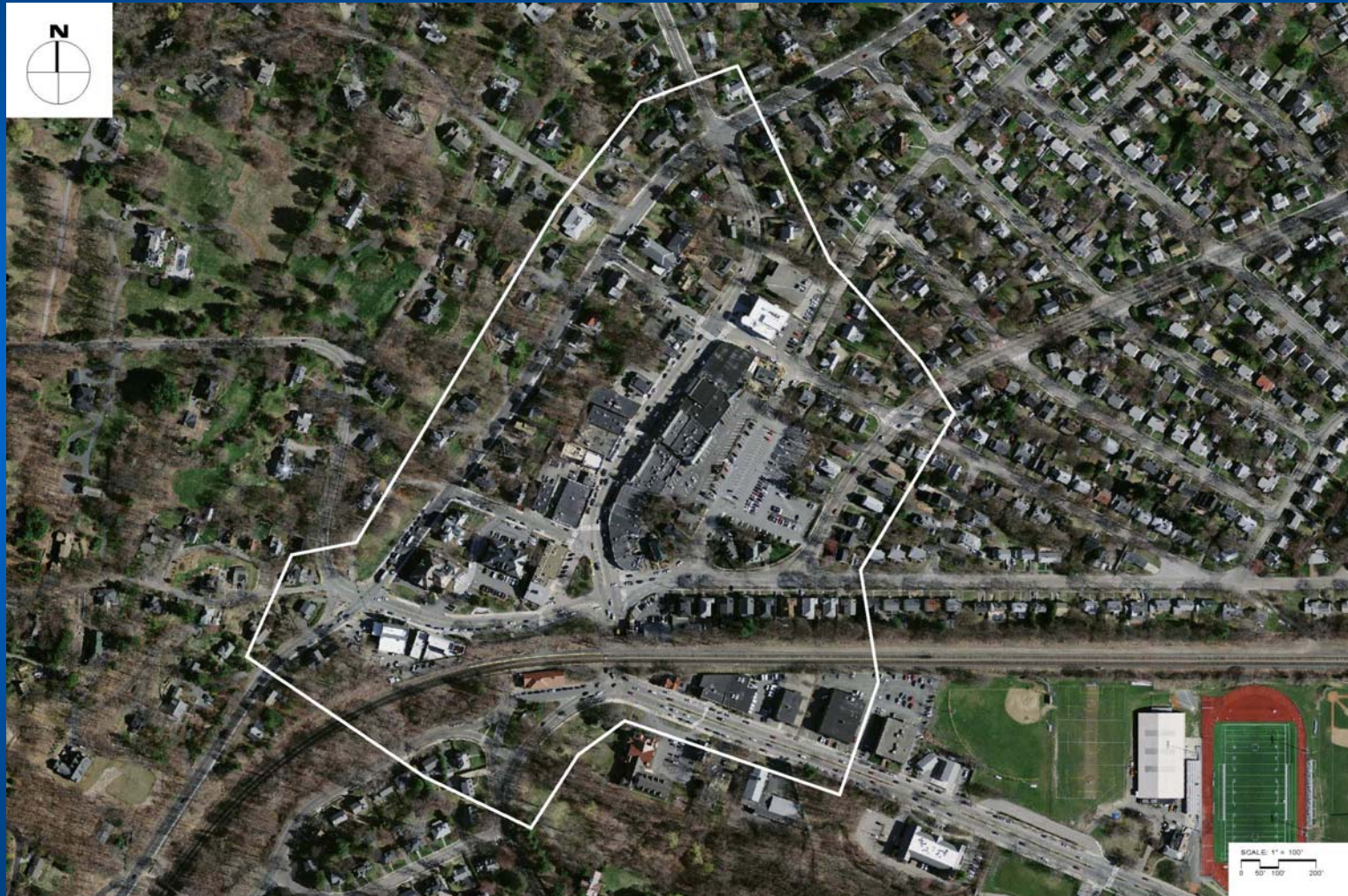
PROJECT SCHEDULE

(Revised 9/20/2010)

	YEAR MONTH WEEK ENDING	(Revised 9/20/2010)																																																							
		AUG							SEP							OCT							NOV							DEC							2011 JAN							FEB							MAR						
		7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25	2	9	16	23	30	6	13	20	27	6	13	20	27																						
1	Research																																																								
2	Base Plan Preparation																																																								
3	Data Collection & Analysis																																																								
4	Conceptual Rdwy D & A																																																								
5	Conceptual Streetscape																																																								
6	Parking Management																																																								
7.1	Kick Off																																																								
7.2	Public Part. TAC #1																																																								
7.3	8 Alternatives TAC #2																																																								
7.5	2 Alternatives TAC #3																																																								
7.6	Preferred TAC #4																																																								
7.7	Meeting with Selectmen																																																								

Study Area Context

Belmont Center



Comments from First Meeting

- Improve Pedestrian Facilities
- Improve Public Transportation
- Identify Priorities
- Improve Bicycle Accommodations
- Identify Budget Constraints
- Explore Re-opening the Clark Street Bridge

Process

Transportation Advisory Committee #2 (Thursday November 4, 2010)

- Seven or Eight Traffic Patterns
- Pros and Cons of Each
- Select Two Preferred Alternatives

Analysis Tools

With the Traffic Patterns being reviewed, we will evaluate:

- Traffic Operations
- Parking Supply
- Bicycle Accommodations
- Pedestrian Access
- Streetscape Opportunities

Using the following Symbols:

- + Positive Impact
- o No Impact
- - Negative Impact

Analysis Tools

Sample Chart

Leonard/Concord/Channing	
Traffic Operations	0
Parking	0
Bicycles	+
Pedestrians	-
Streetscape	0

Traffic Patterns to Review

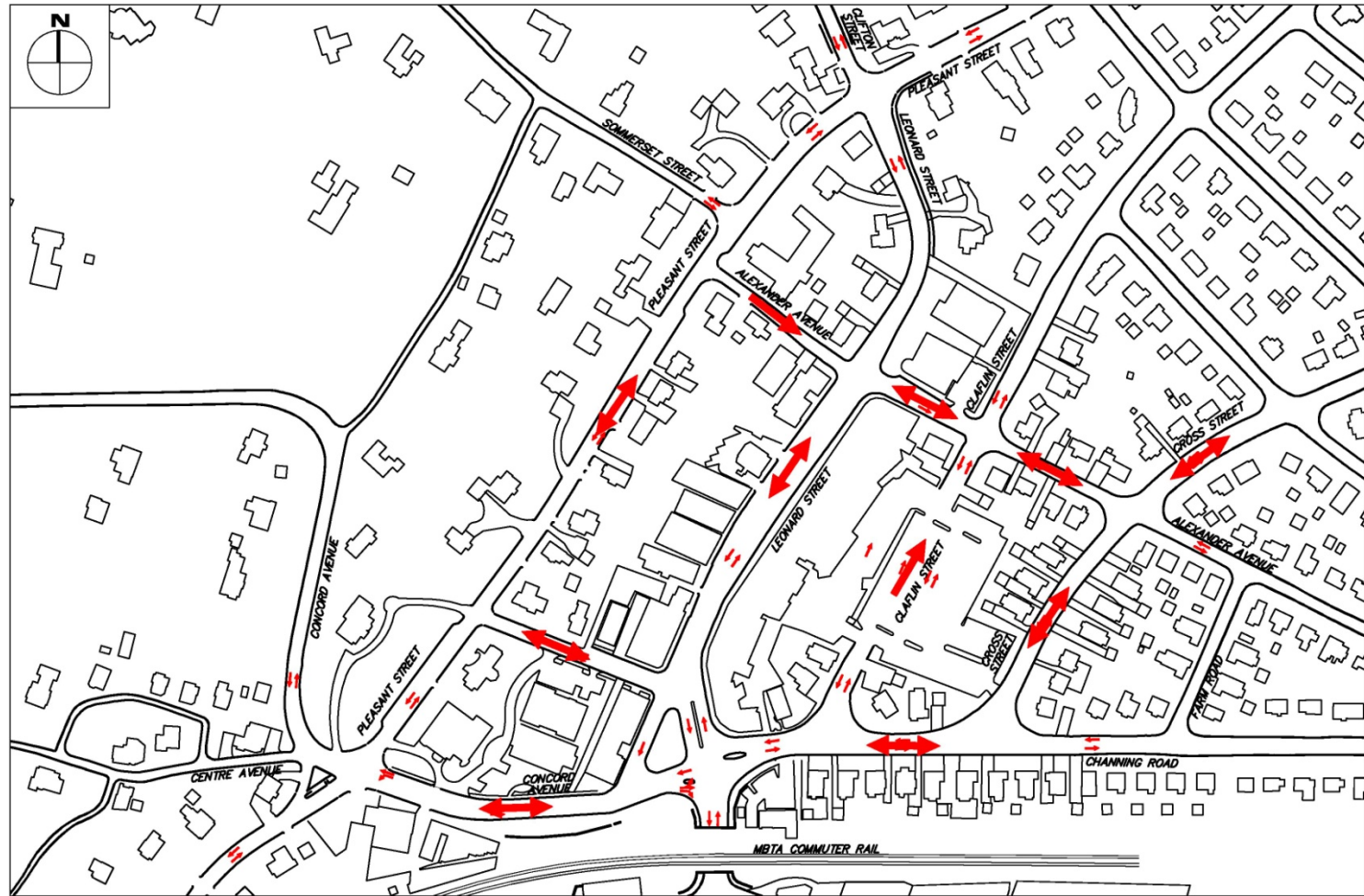
- Existing
 - North Side of Bridge
 - South Side of Bridge
- One Way Pairs
 - North of Bridge
 - Claflin / Leonard
 - Pleasant / Leonard
 - Cross / Leonard
 - South of Bridge
 - Common / Royal
 - Common / Royal with Restriction

Traffic Patterns to Review (cont)

- Close Leonard Street
- Roundabouts
 - North of Bridge
 - South of Bridge
- Traffic Signals
 - North of Bridge
 - South of Bridge

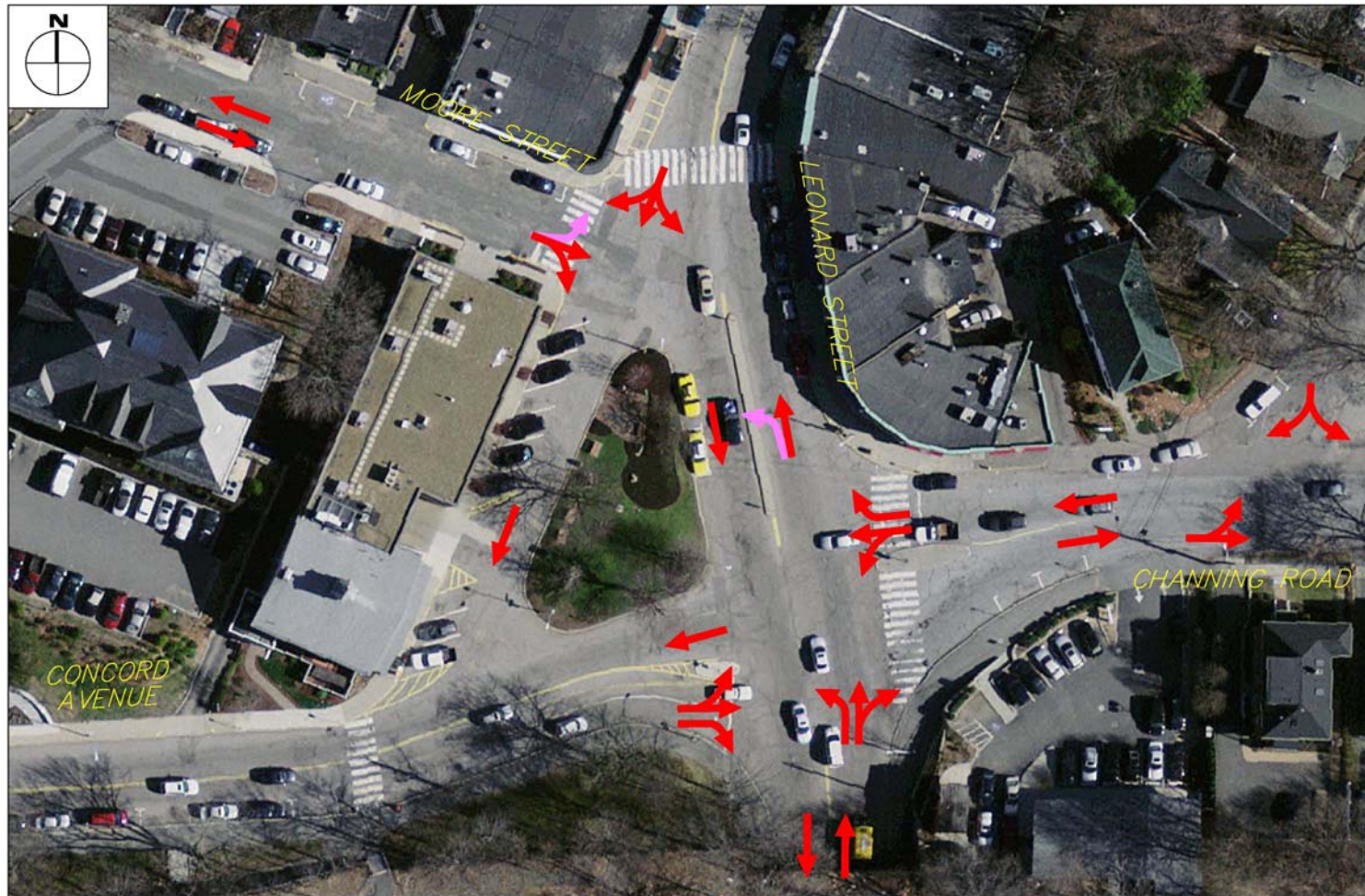
Alternative Traffic Patterns

Existing - North of Bridge



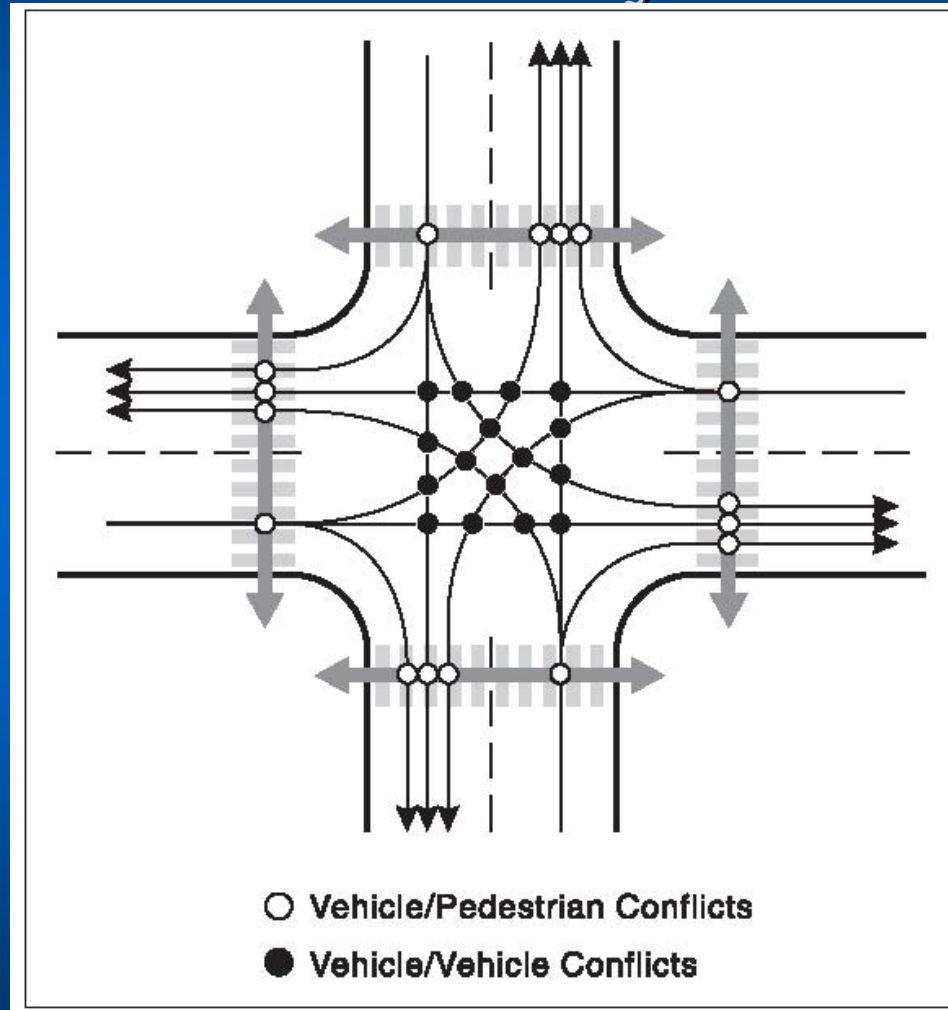
Alternative Traffic Patterns

Existing - North of Bridge



Traffic Conflicts

Standard Four-Way Intersection



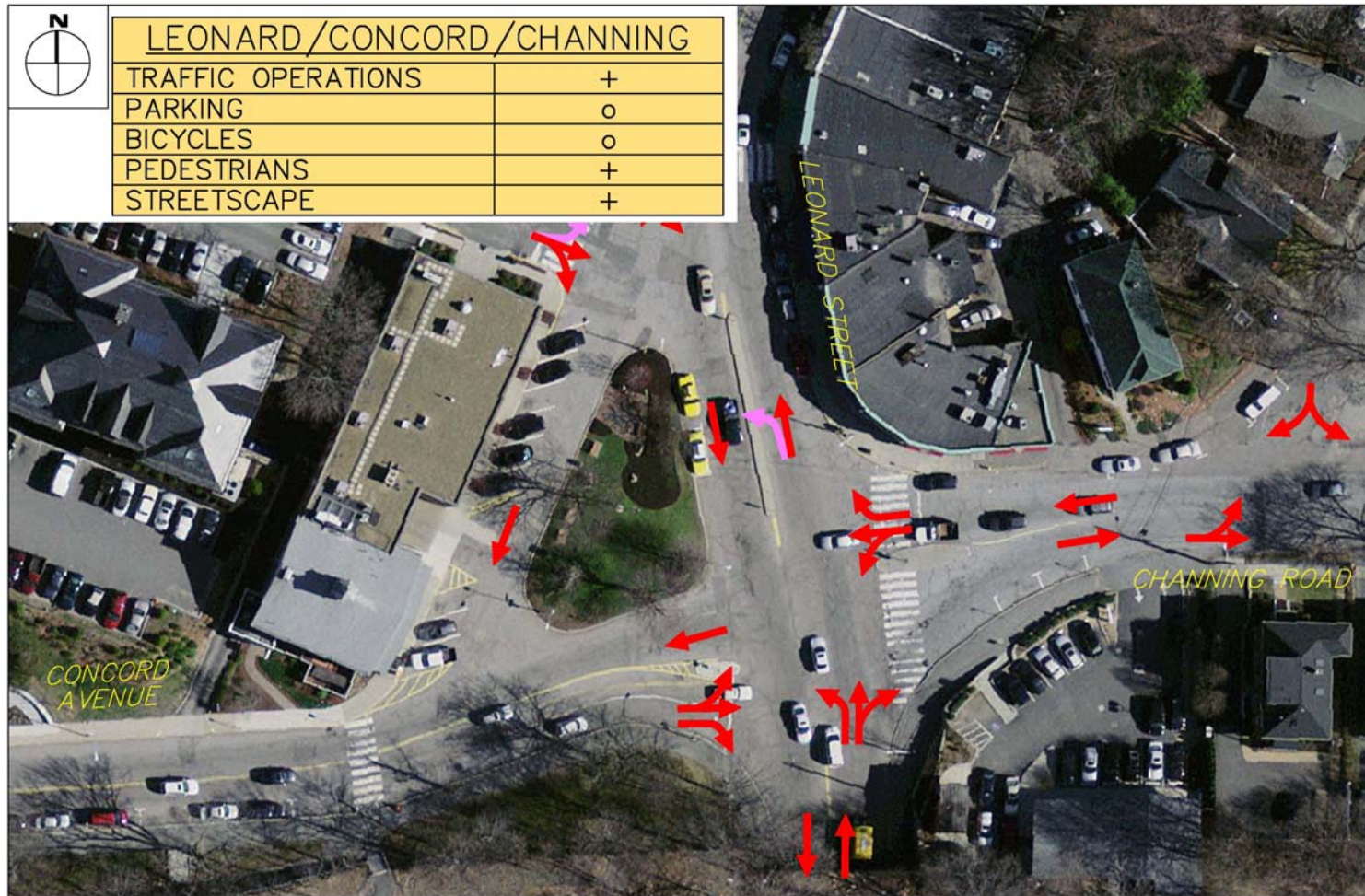
Alternative Traffic Patterns

Existing - North of Bridge with Modifications



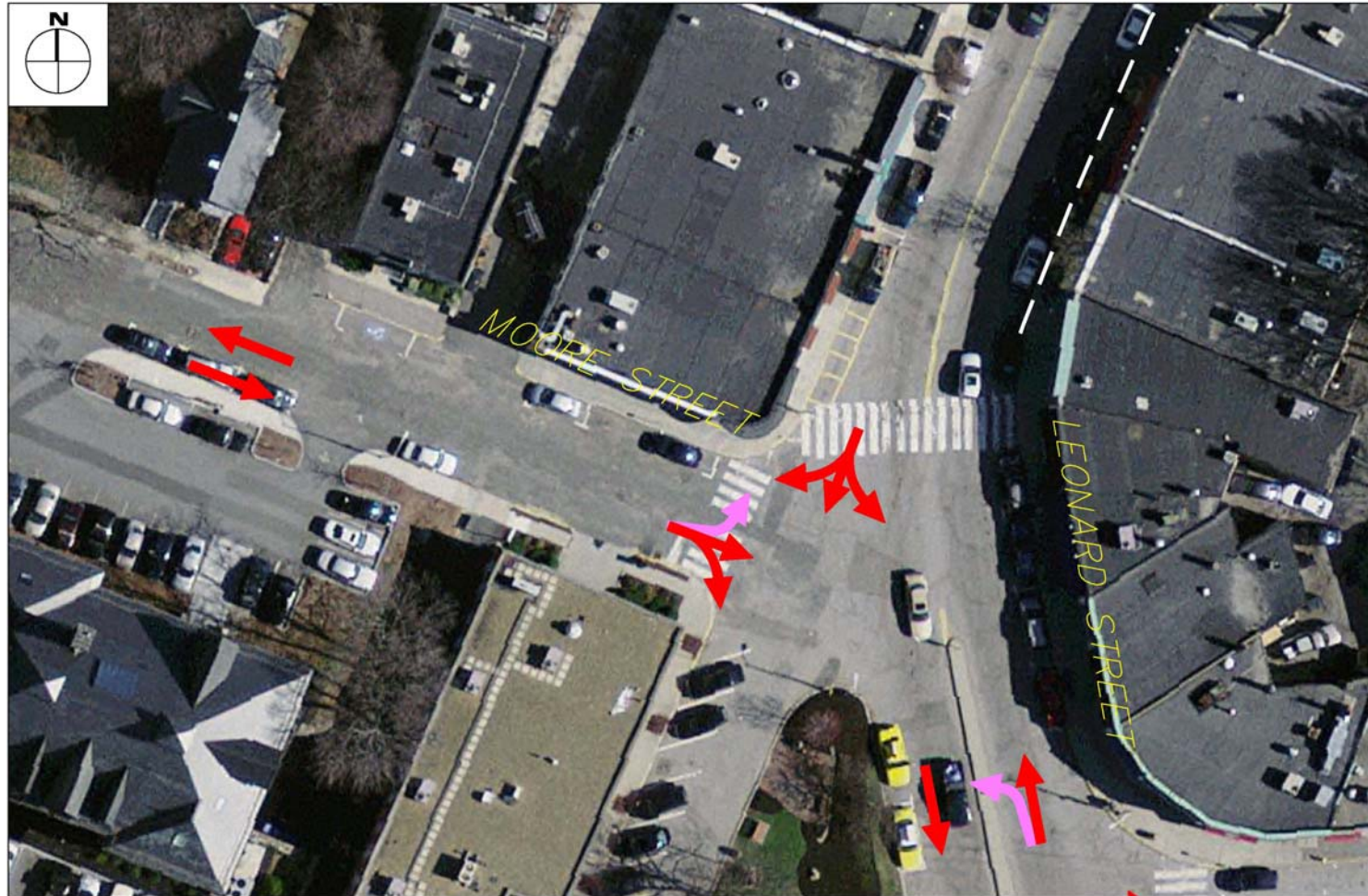
LEONARD/CONCORD/CHANNING

TRAFFIC OPERATIONS	+
PARKING	o
BICYCLES	o
PEDESTRIANS	+
STREETSCAPE	+



Alternative Traffic Patterns

Existing - North of Bridge



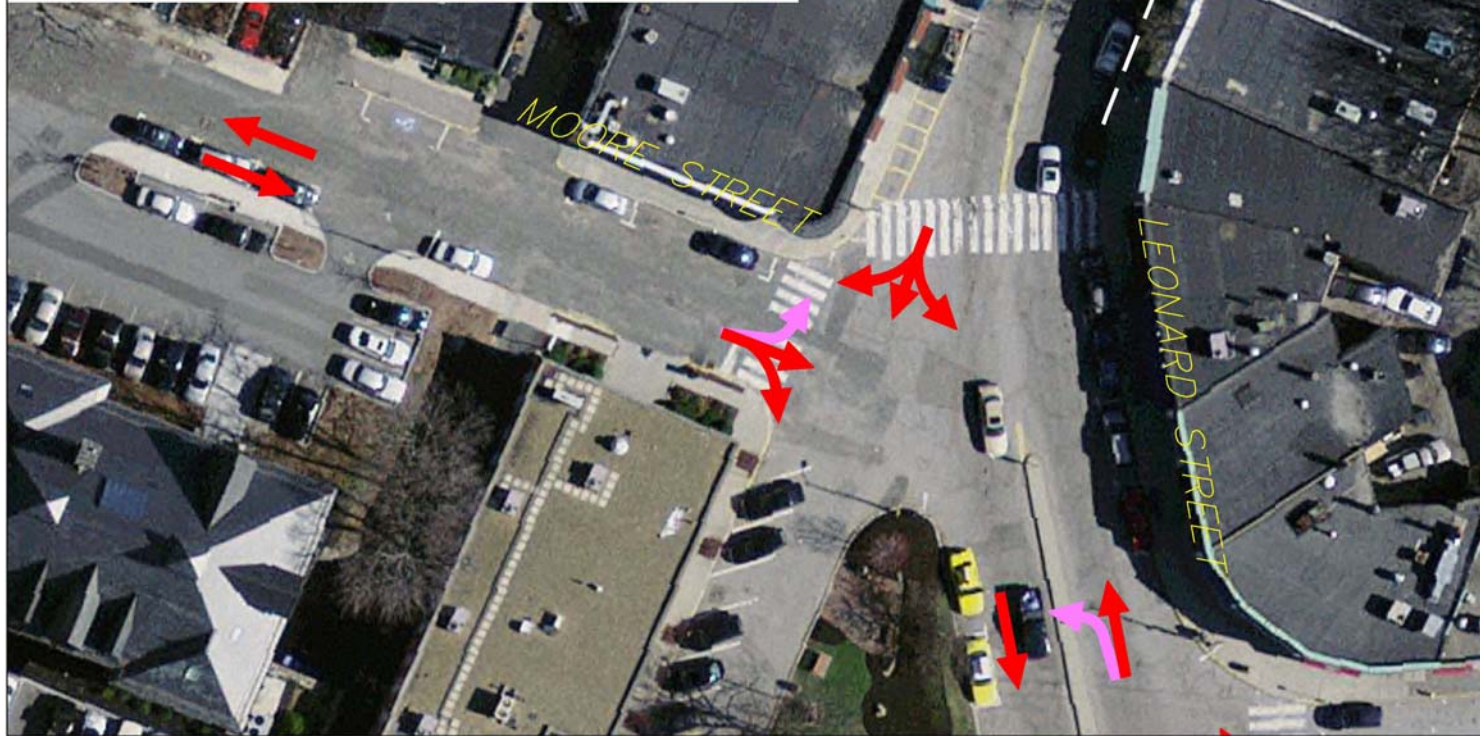
Alternative Traffic Patterns

Existing - North of Bridge with Modifications



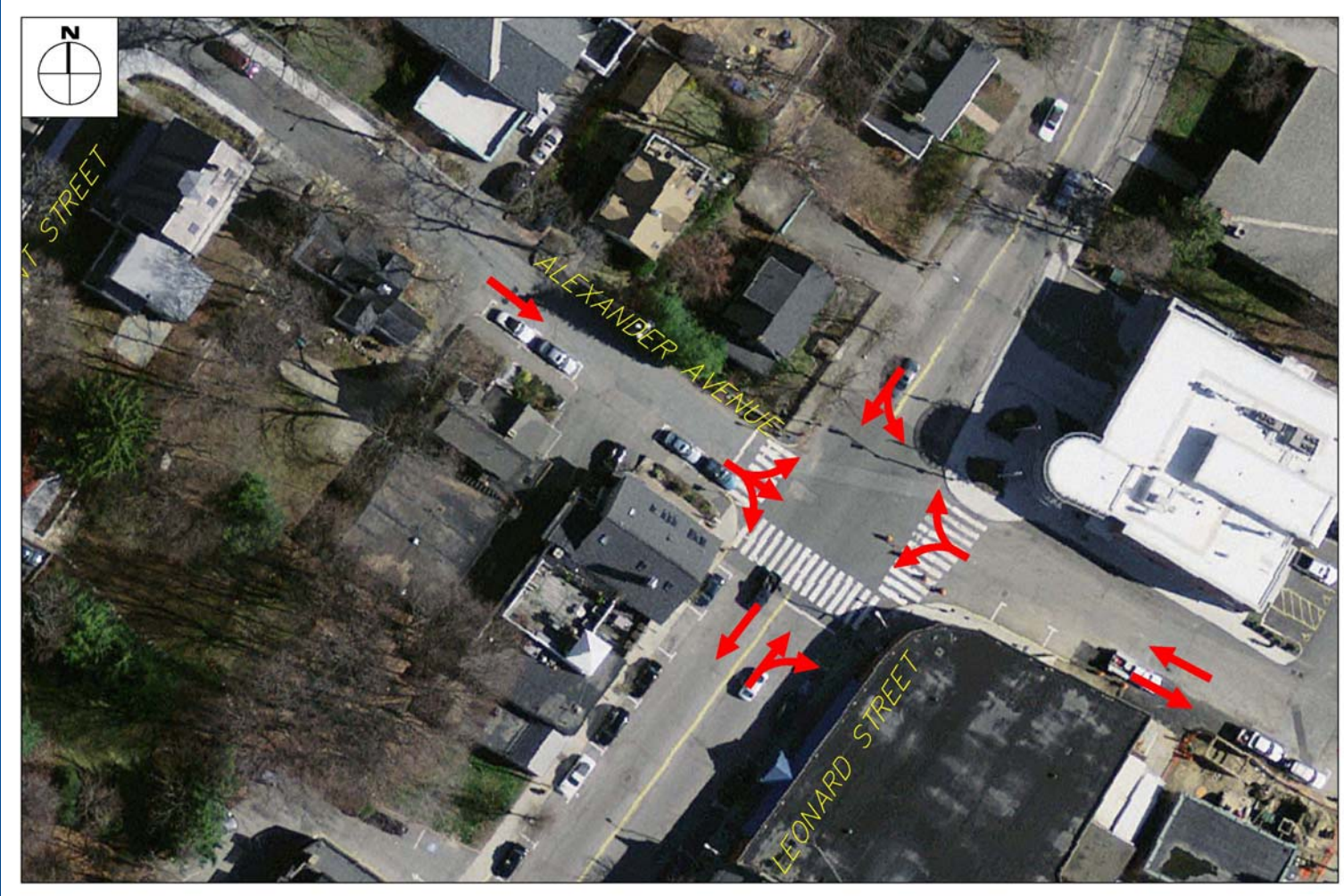
LEONARD/MOORE

TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	o
PEDESTRIANS	+
STREETSCAPE	o



Alternative Traffic Patterns

Existing - North of Bridge



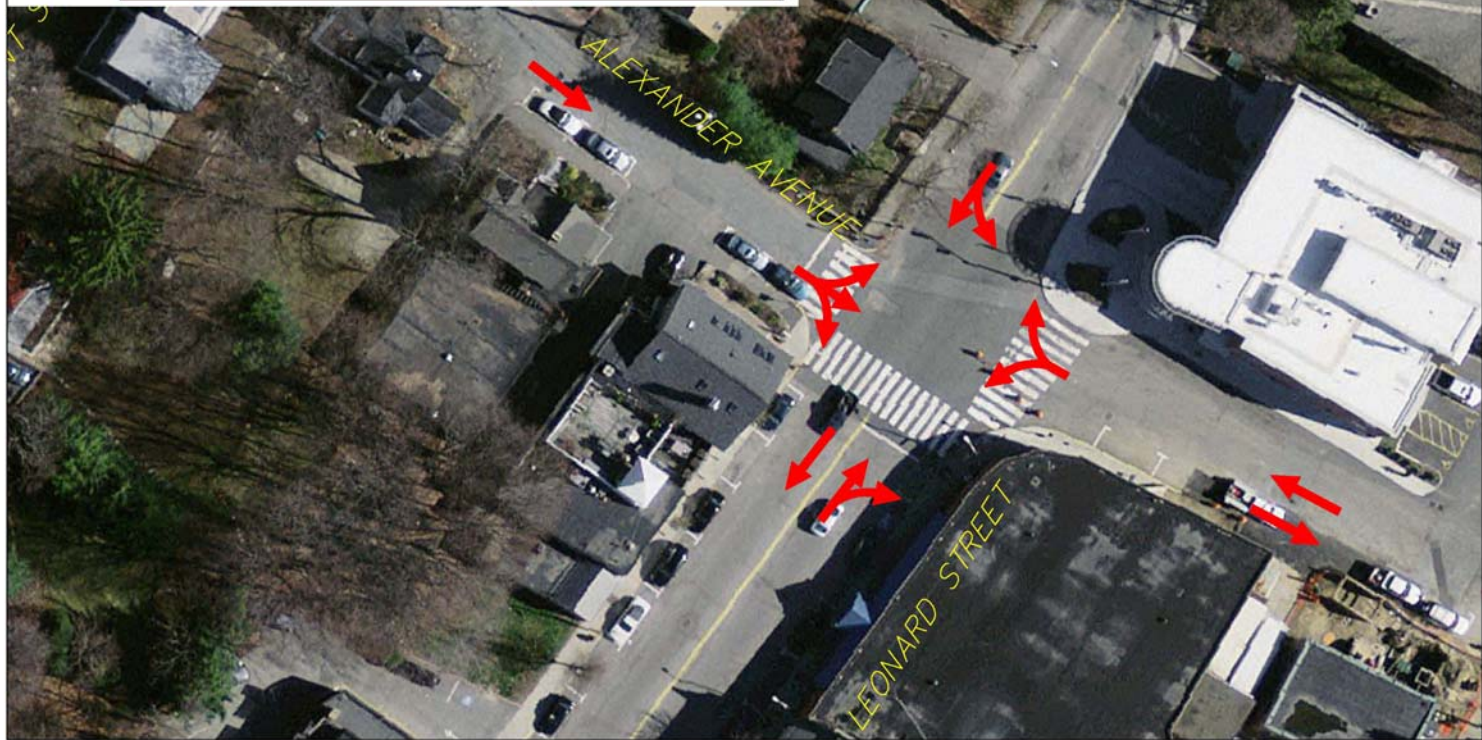
Alternative Traffic Patterns

Existing - North of Bridge with Modifications



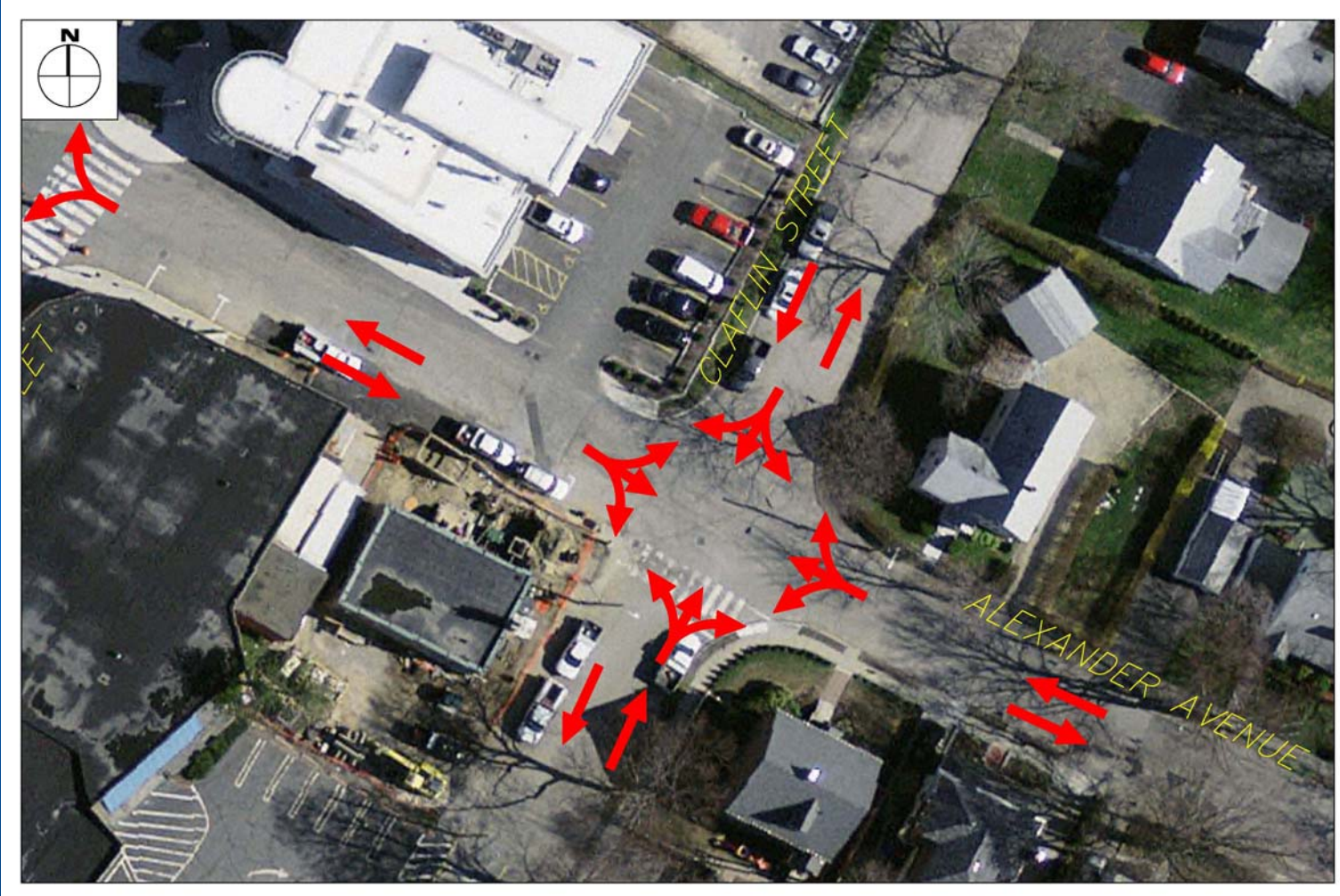
LEONARD/ALEXANDER

TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	o
PEDESTRIANS	+
STREETSCAPE	+



Alternative Traffic Patterns

Existing - North of Bridge



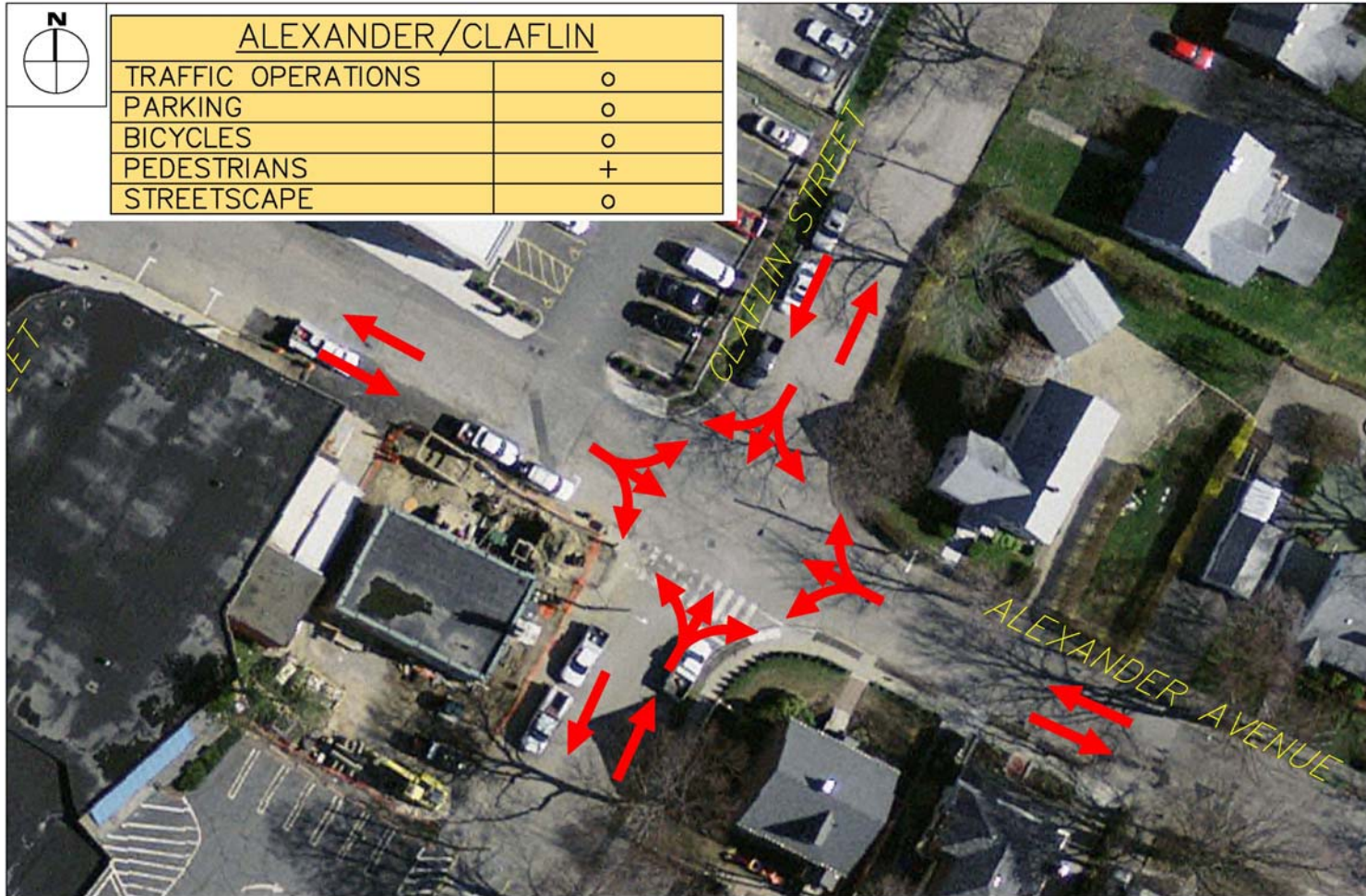
Alternative Traffic Patterns

Existing - North of Bridge with Modifications



ALEXANDER/CLAFLIN

TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	o
PEDESTRIANS	+
STREETSCAPE	o



Alternative Traffic Patterns

Existing - North of Bridge



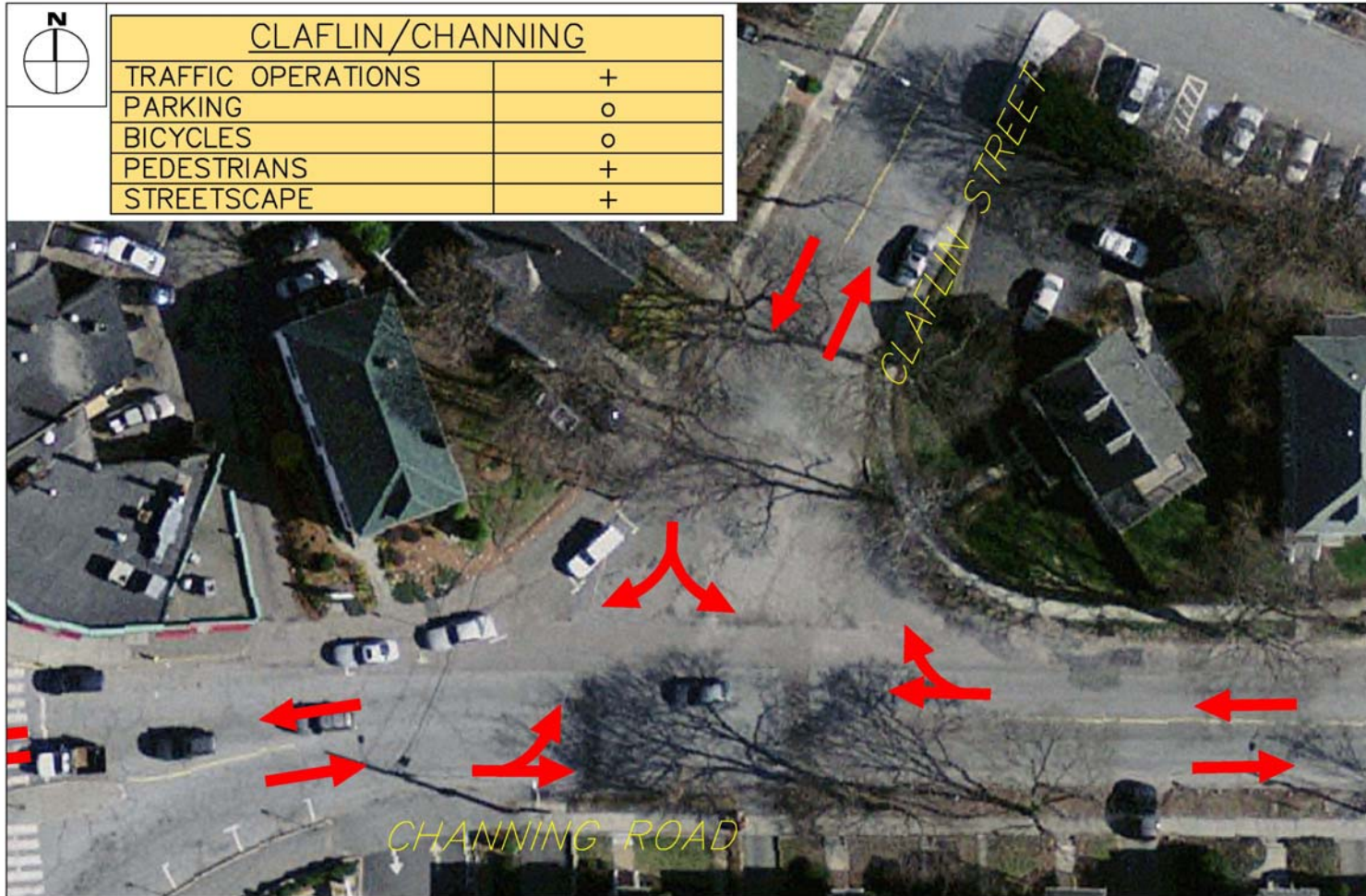
Alternative Traffic Patterns

Existing - North of Bridge with Modifications



CLAFLIN/CHANNING

TRAFFIC OPERATIONS	+
PARKING	o
BICYCLES	o
PEDESTRIANS	+
STREETSCAPE	+



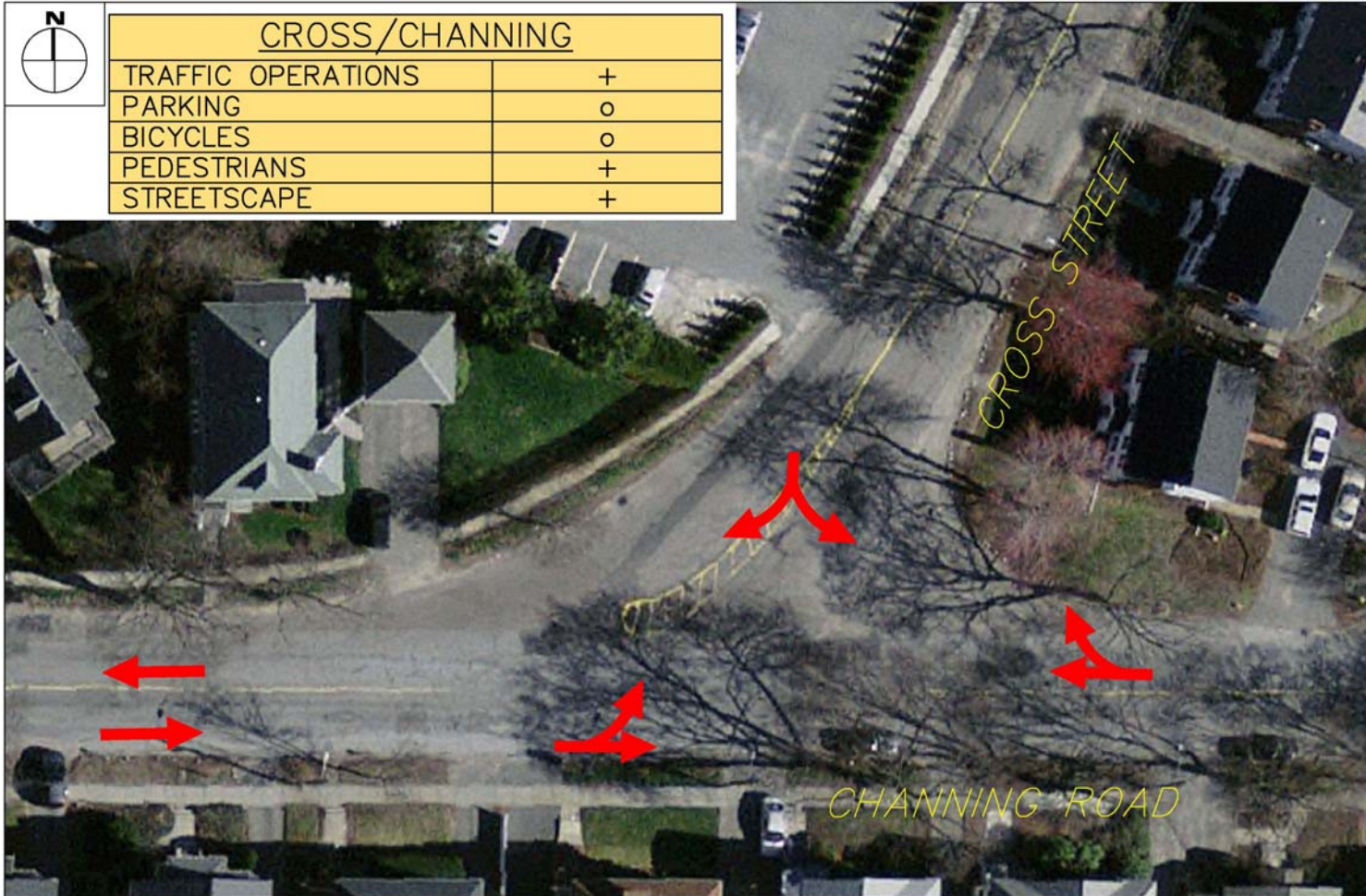
Alternative Traffic Patterns

Existing - North of Bridge



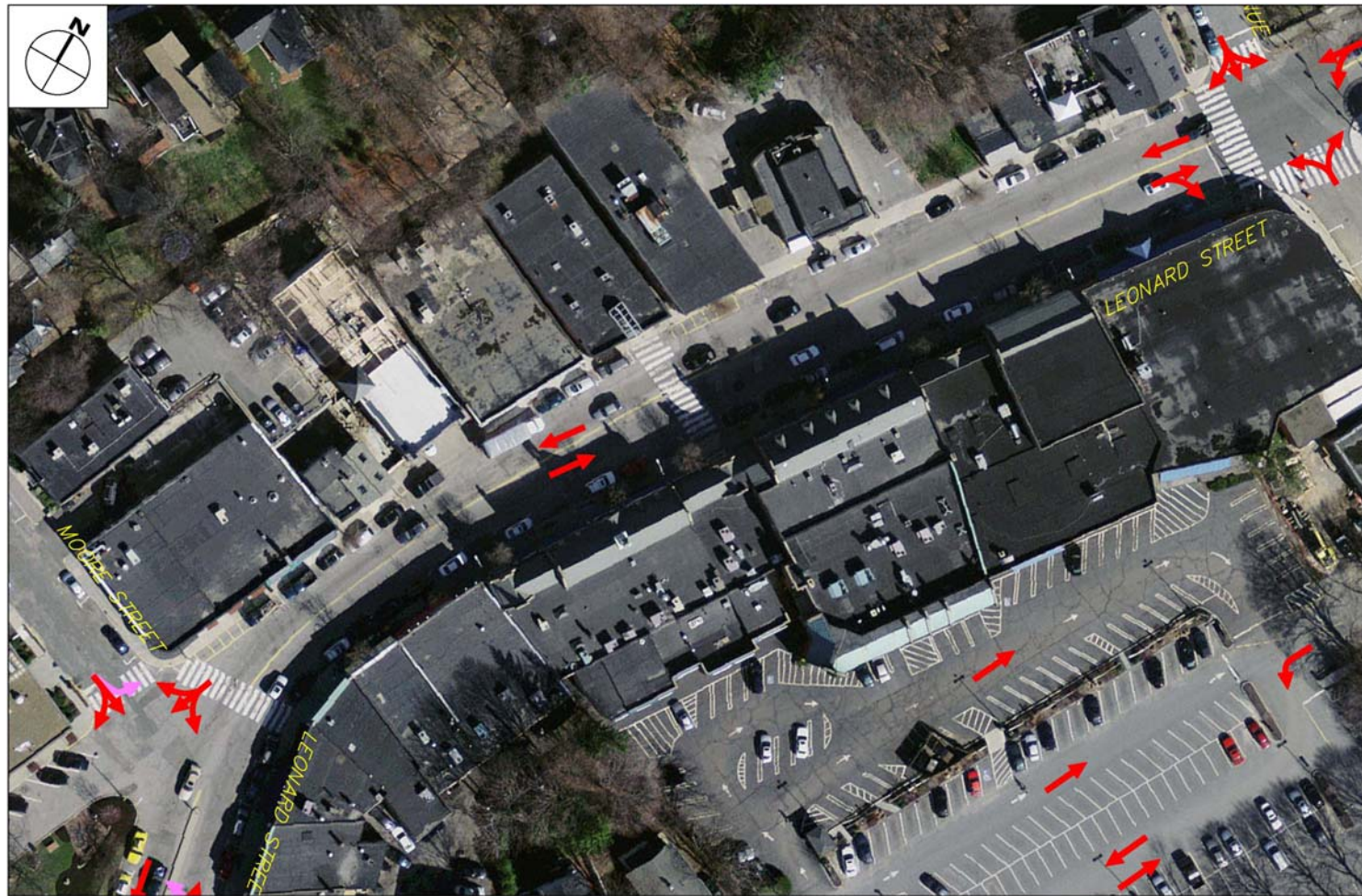
Alternative Traffic Patterns

Existing - North of Bridge with Modifications



Alternative Traffic Patterns

Existing - North of Bridge



Alternative Traffic Patterns

Existing - North of Bridge with Modifications



LEONARD STREET

TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	+



Alternative Traffic Patterns

Existing - North of Bridge



Alternative Traffic Patterns

Existing - North of Bridge with Modifications



Alternative Traffic Patterns

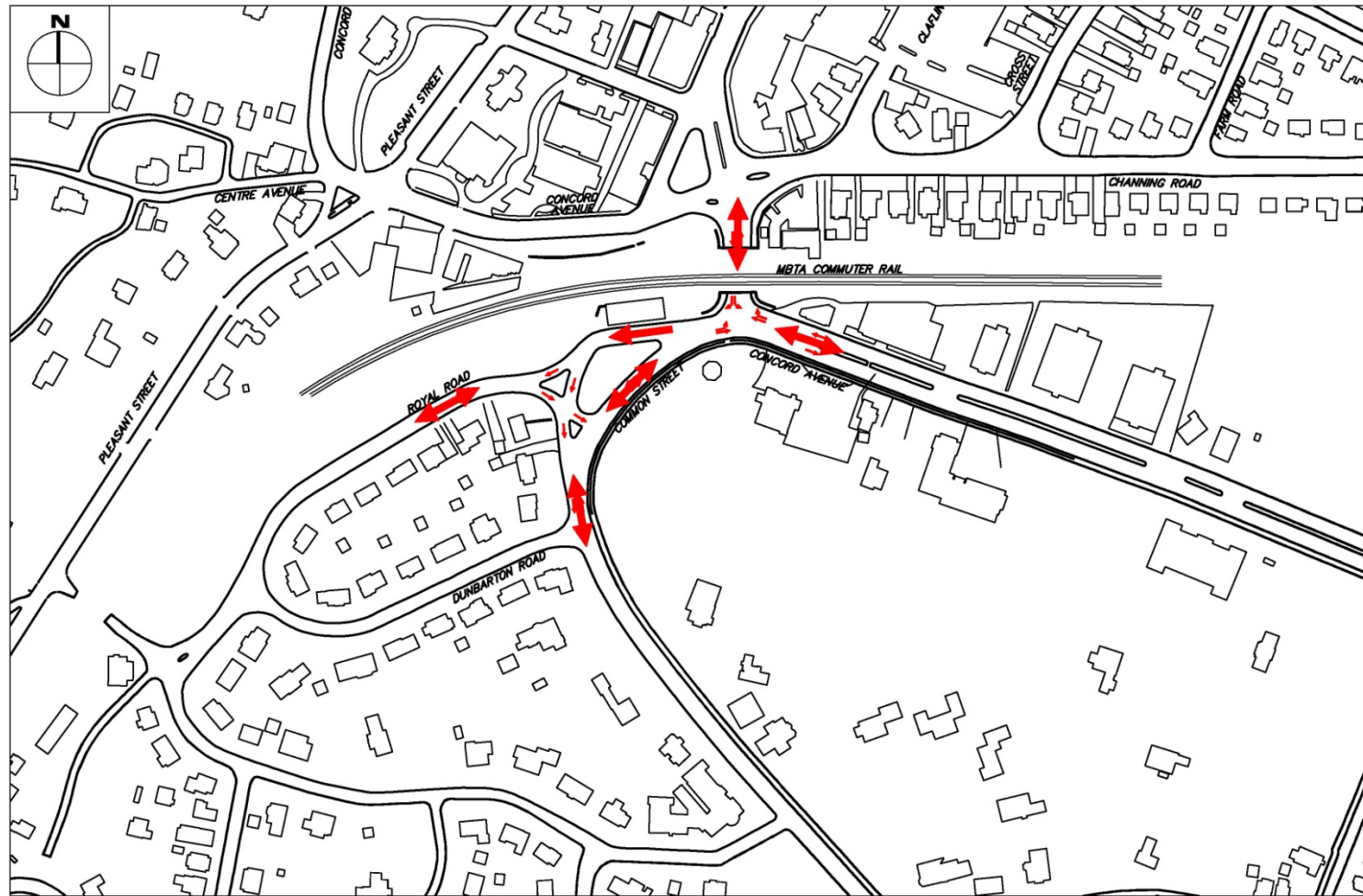
Existing – North of Bridge

Summary/Discussion



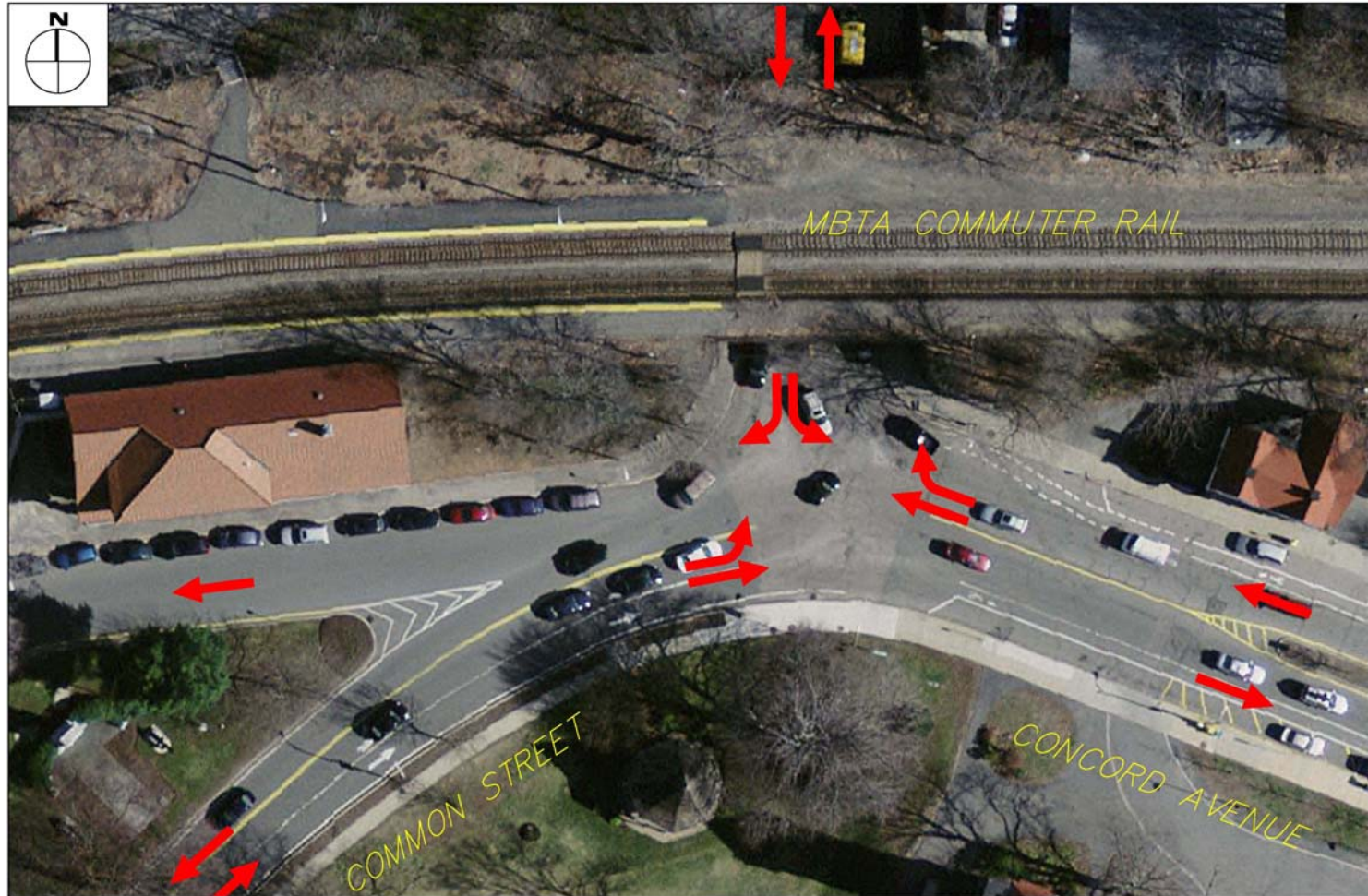
Alternative Traffic Patterns

Existing - South of Bridge



Alternative Traffic Patterns

Existing - South of Bridge

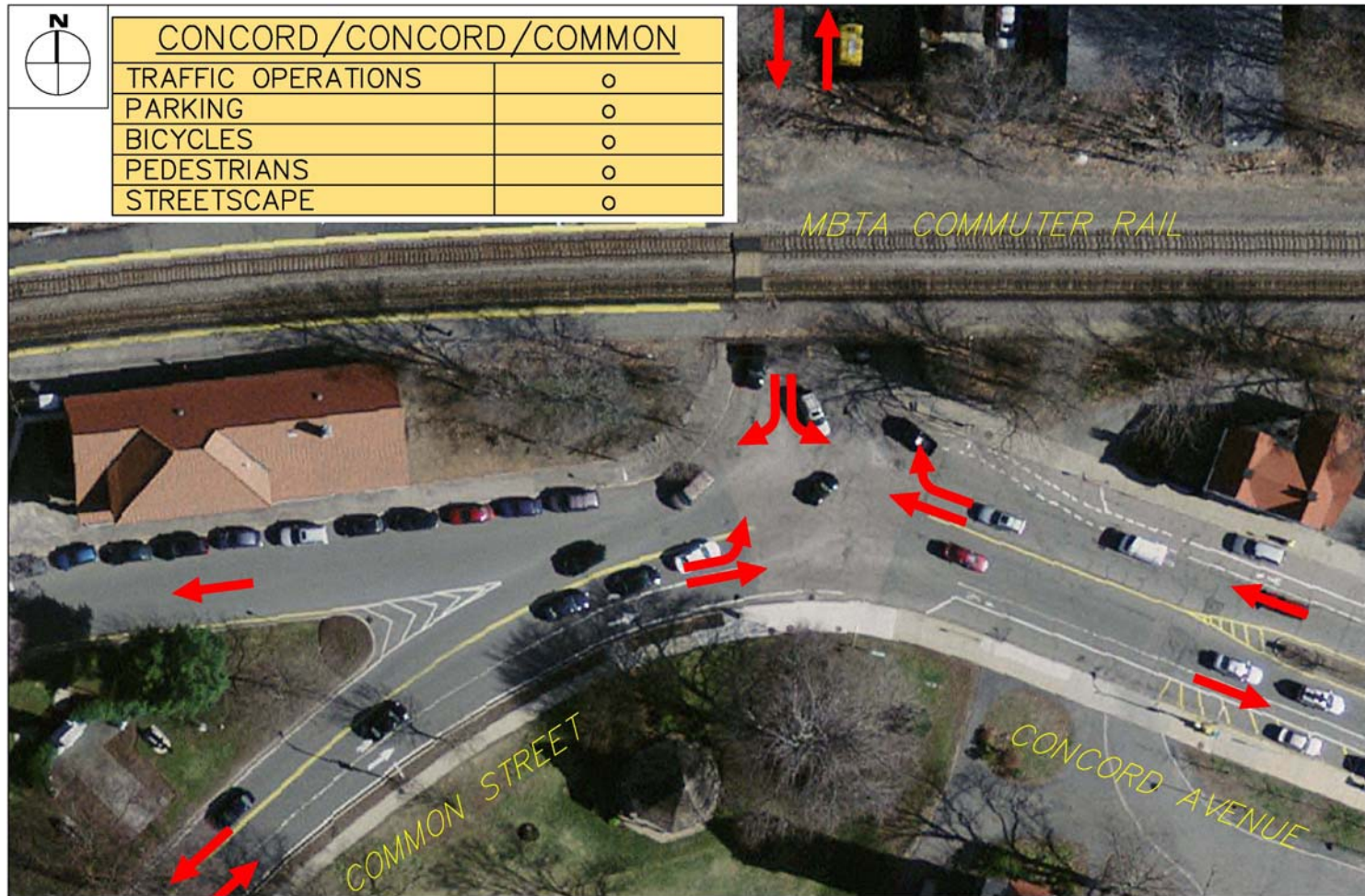


Alternative Traffic Patterns

Existing - South of Bridge with Modifications



CONCORD / CONCORD / COMMON	
TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	o
PEDESTRIANS	o
STREETSCAPE	o



Alternative Traffic Patterns

Existing - South of Bridge

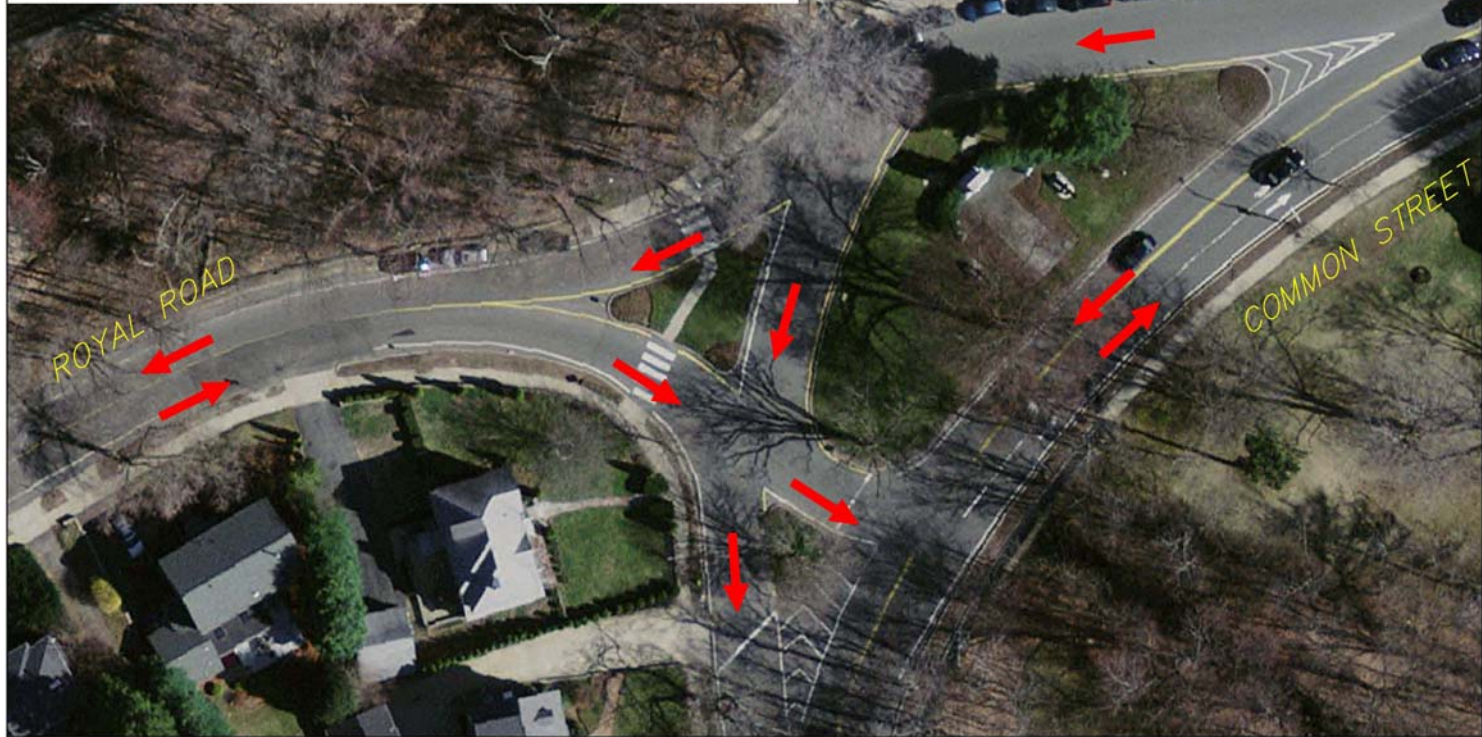


Alternative Traffic Patterns

Existing - South of Bridge with Modifications

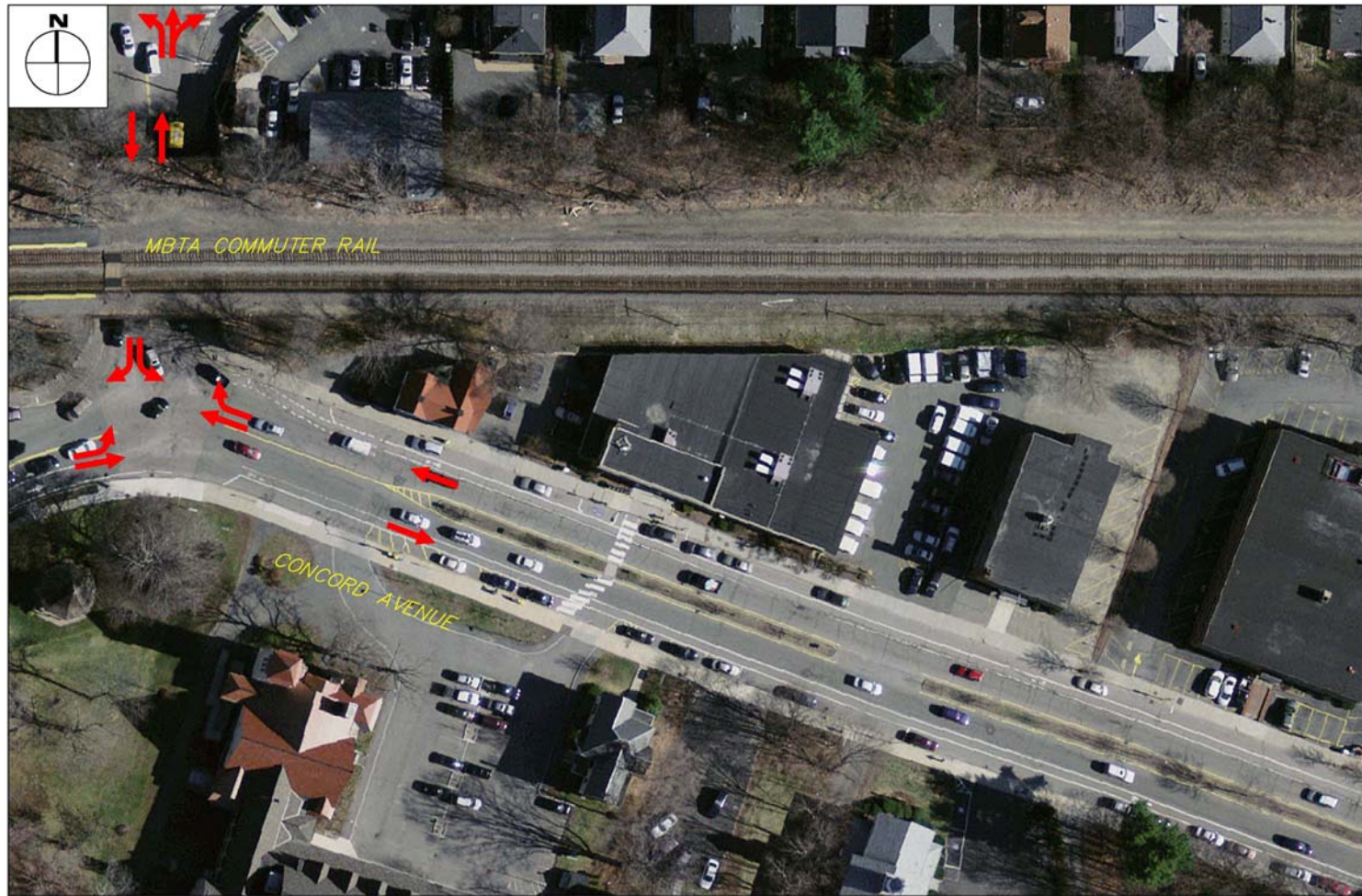


COMMON/ROYAL	
TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	o
PEDESTRIANS	o
STREETSCAPE	+



Alternative Traffic Patterns

Existing - South of Bridge

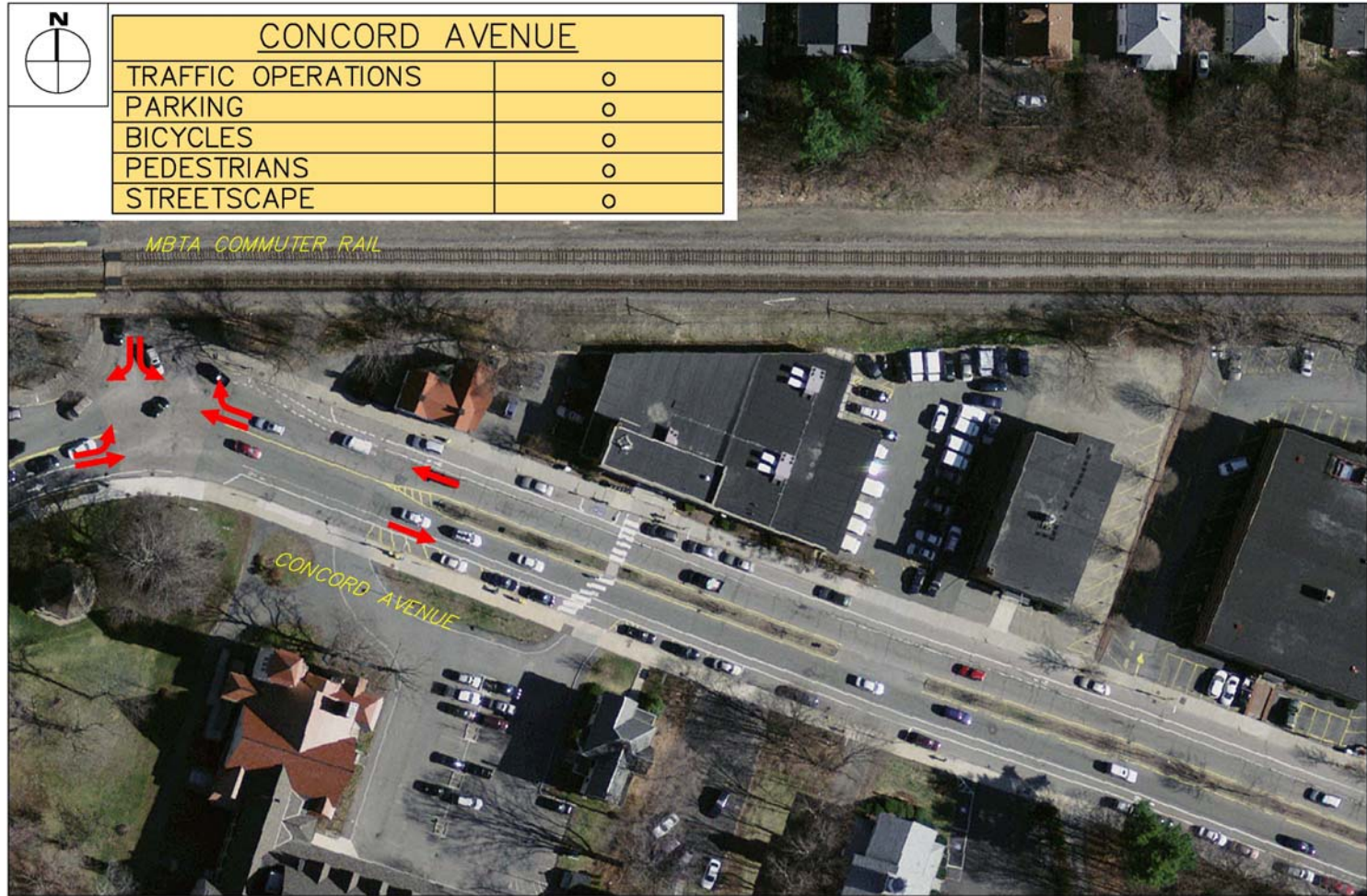


Alternative Traffic Patterns

Existing - South of Bridge with Modifications

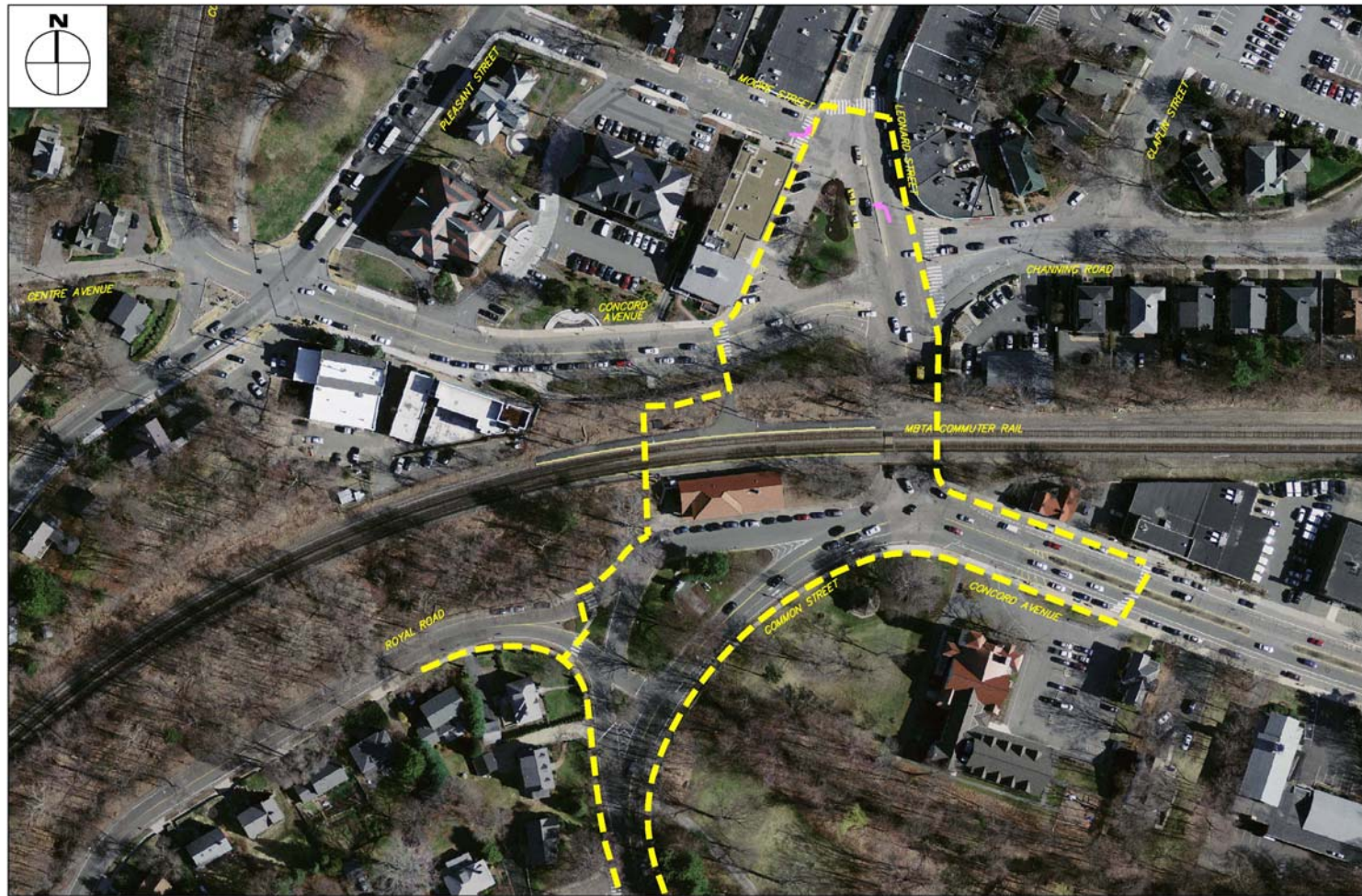


CONCORD AVENUE	
TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	o
PEDESTRIANS	o
STREETSCAPE	o



Alternative Traffic Patterns

Existing



Alternative Traffic Patterns

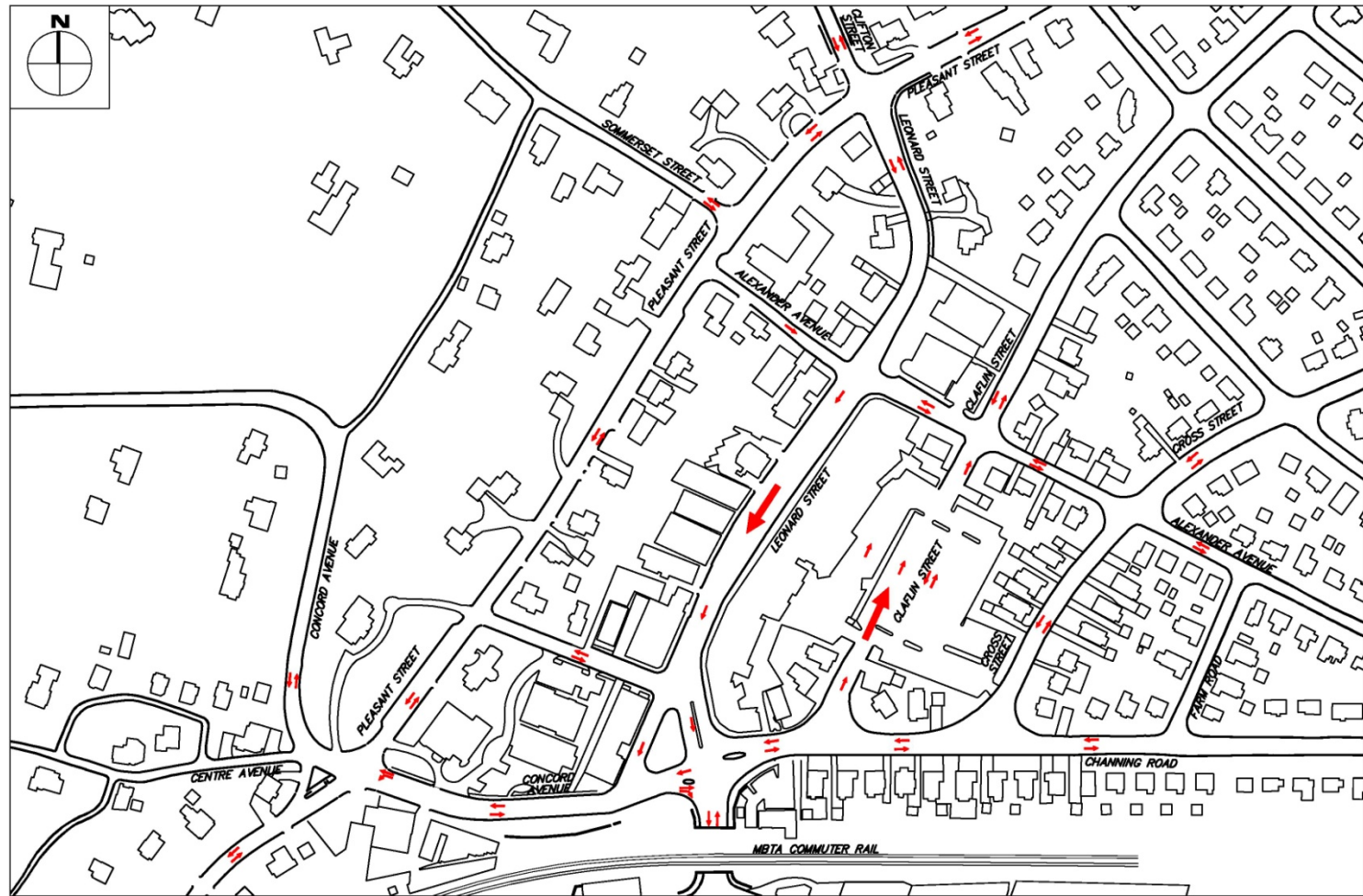
Existing – South of Bridge

Summary/Discussion



Alternative Traffic Patterns

One-Way Pair – Leonard/Claflin



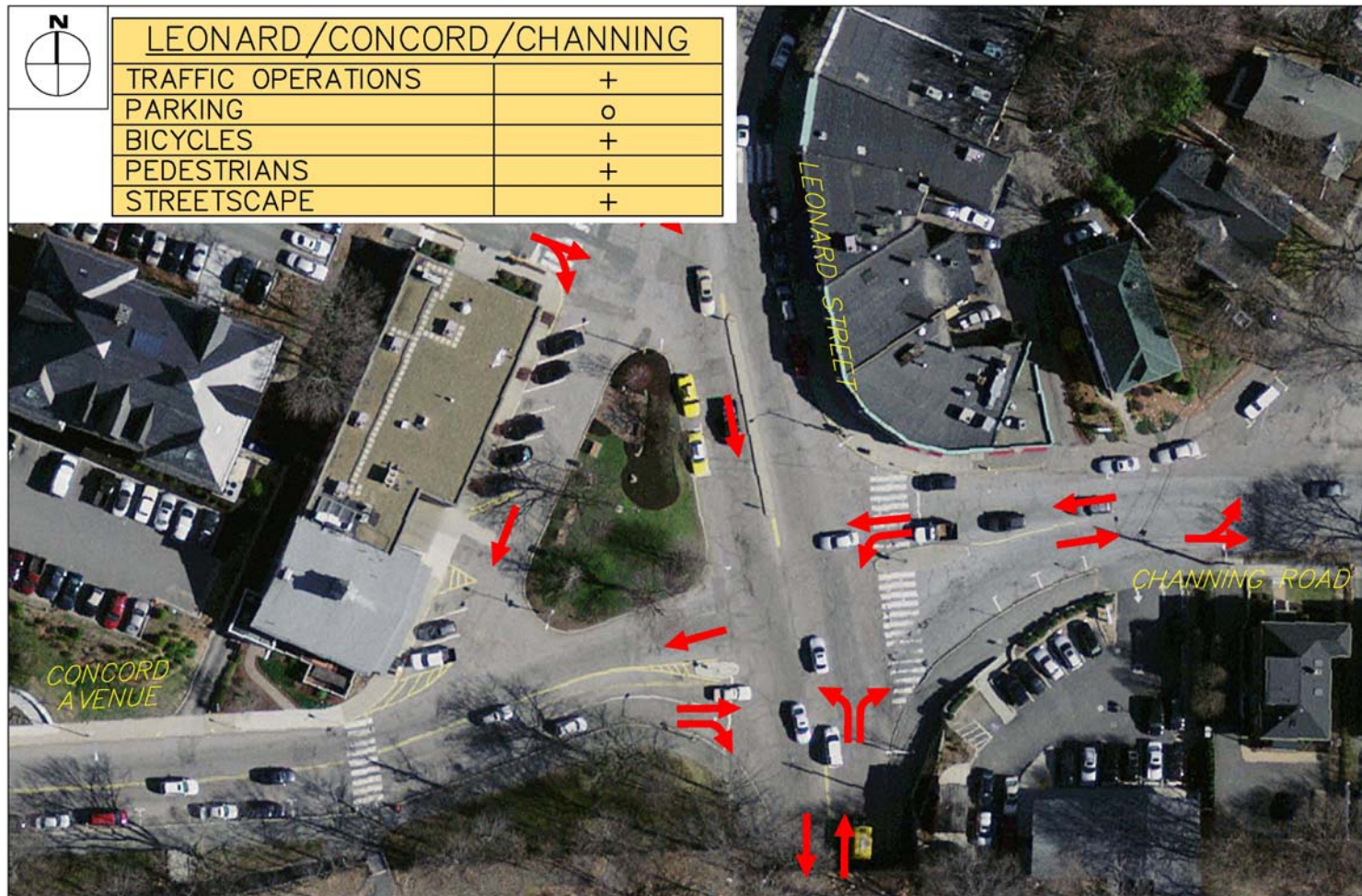
Alternative Traffic Patterns

One-Way Pair – Leonard/Claflin



LEONARD/CONCORD/CHANNING

TRAFFIC OPERATIONS	+
PARKING	o
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	+



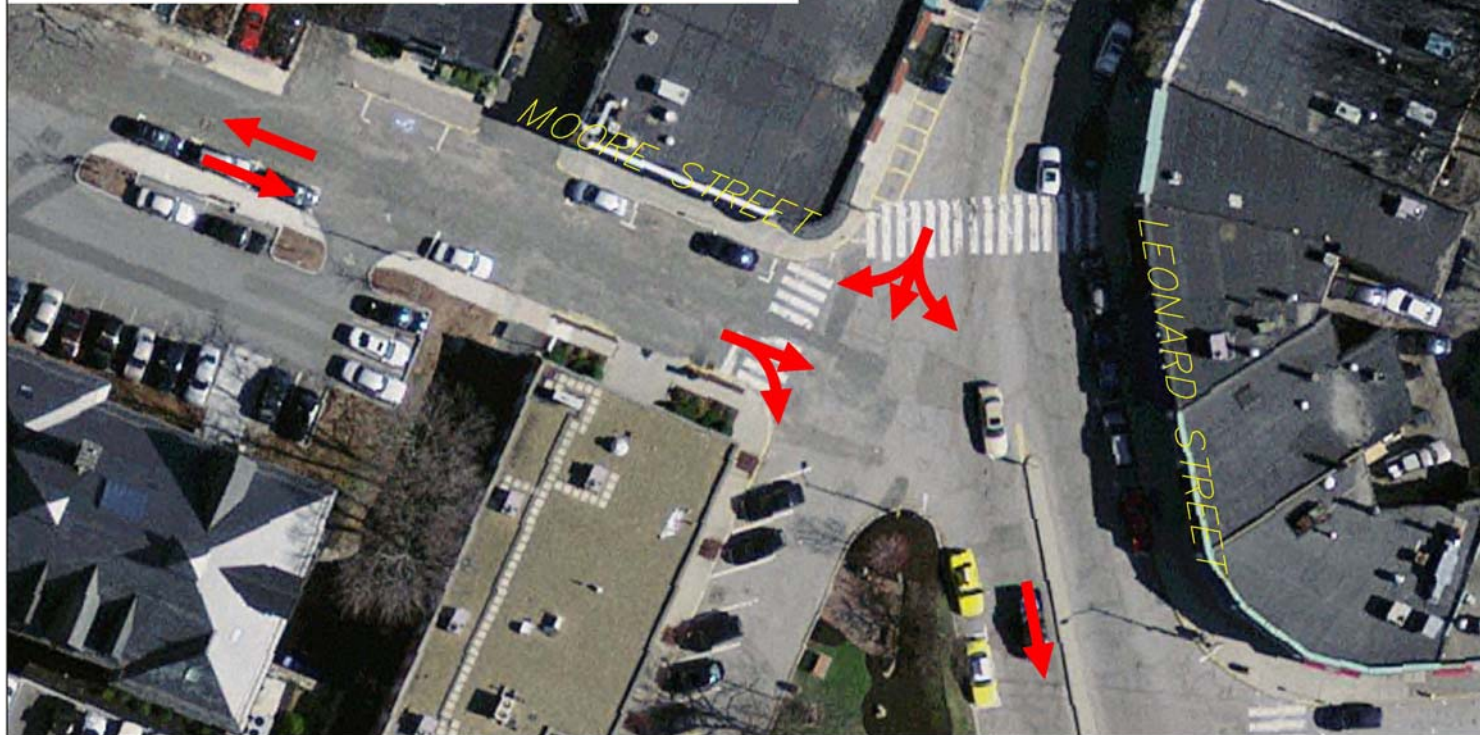
Alternative Traffic Patterns

One-Way Pair – Leonard/Claflin



LEONARD/MOORE

TRAFFIC OPERATIONS	+
PARKING	o
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	+



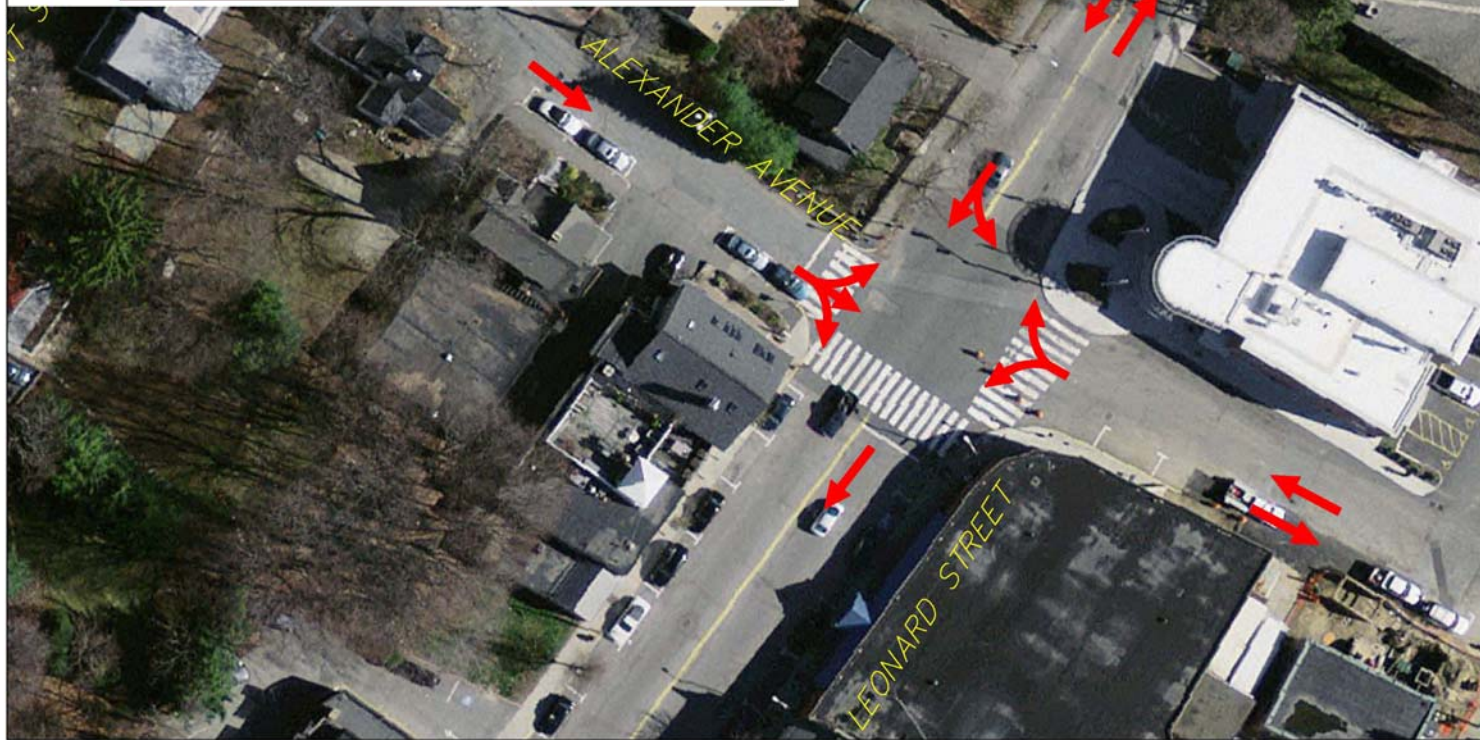
Alternative Traffic Patterns

One-Way Pair – Leonard/Claflin



LEONARD/ALEXANDER

TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	+
PEDESTRIANS	o
STREETSCAPE	+



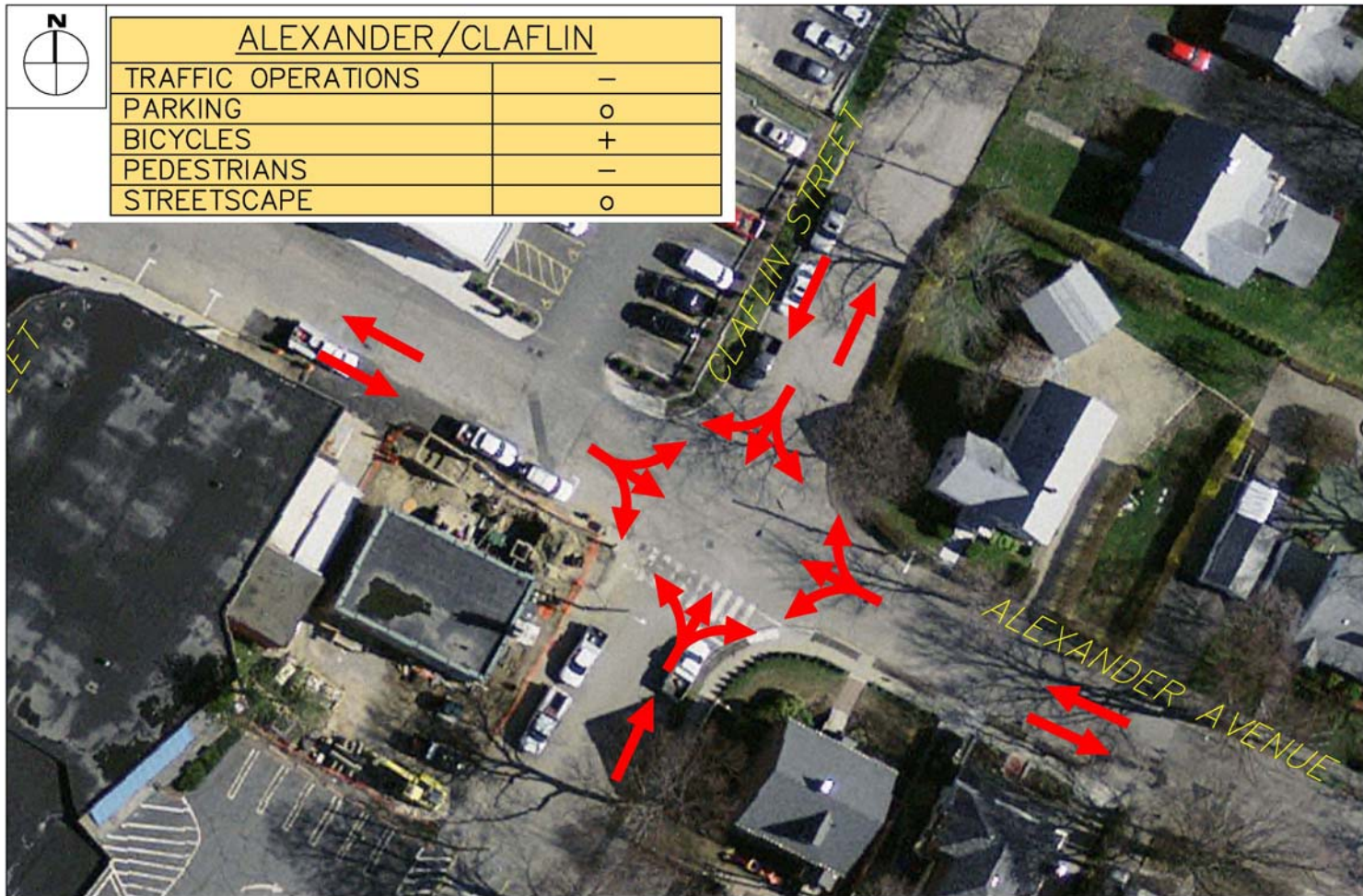
Alternative Traffic Patterns

One-Way Pair – Leonard/Claflin



ALEXANDER / CLAFLIN

TRAFFIC OPERATIONS	—
PARKING	o
BICYCLES	+
PEDESTRIANS	—
STREETSCAPE	o

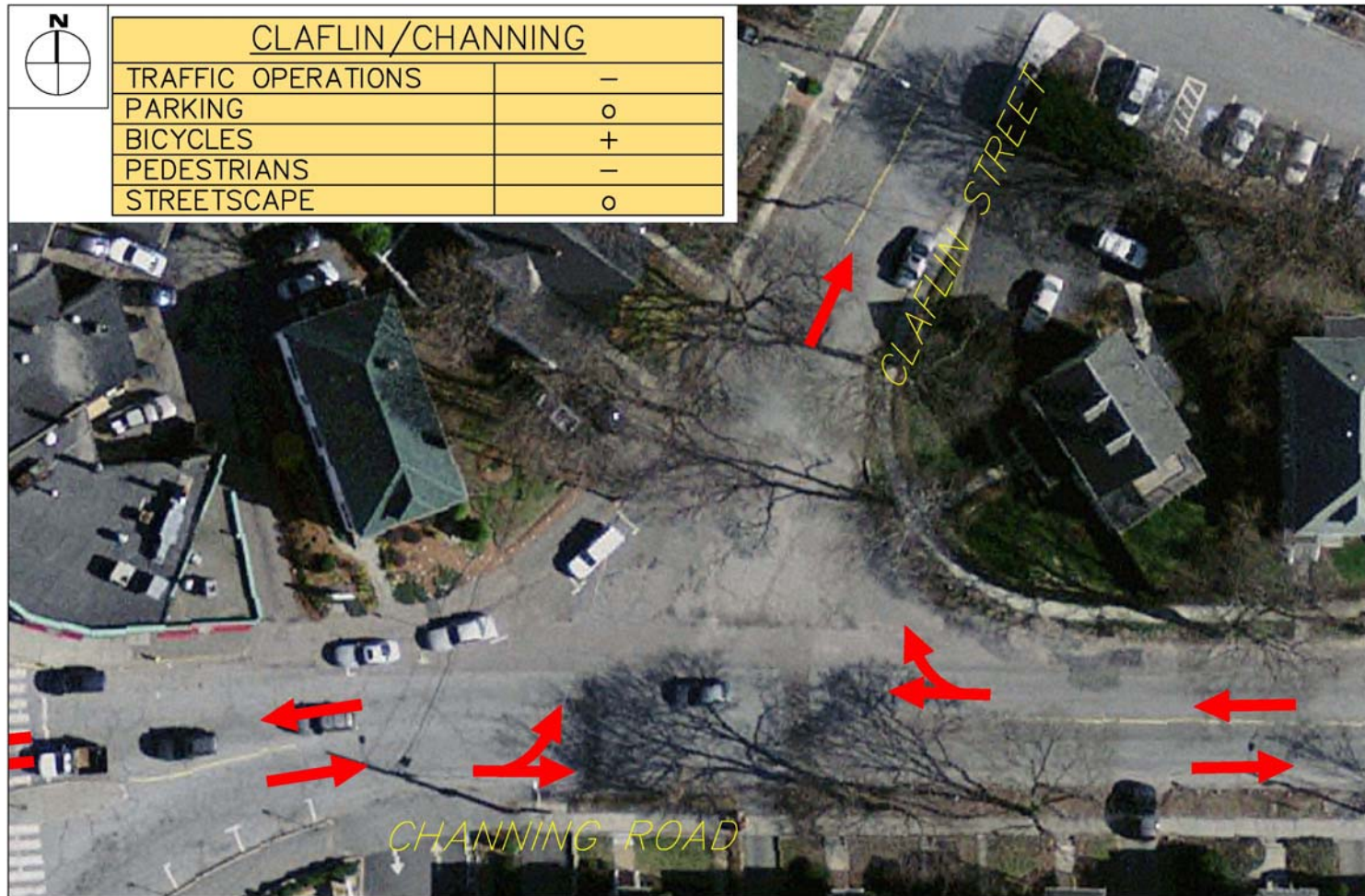


Alternative Traffic Patterns

One-Way Pair – Leonard/Claflin



CLAFLIN/CHANNING	
TRAFFIC OPERATIONS	—
PARKING	o
BICYCLES	+
PEDESTRIANS	—
STREETSCAPE	o



Alternative Traffic Patterns

One-Way Pair – Leonard/Claflin



CROSS/CHANNING

TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	o
PEDESTRIANS	o
STREETSCAPE	o



Alternative Traffic Patterns

One-Way Pair – Leonard/Claflin



LEONARD W/ANGLE PARKING

TRAFFIC OPERATIONS	o
PARKING	+
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	o



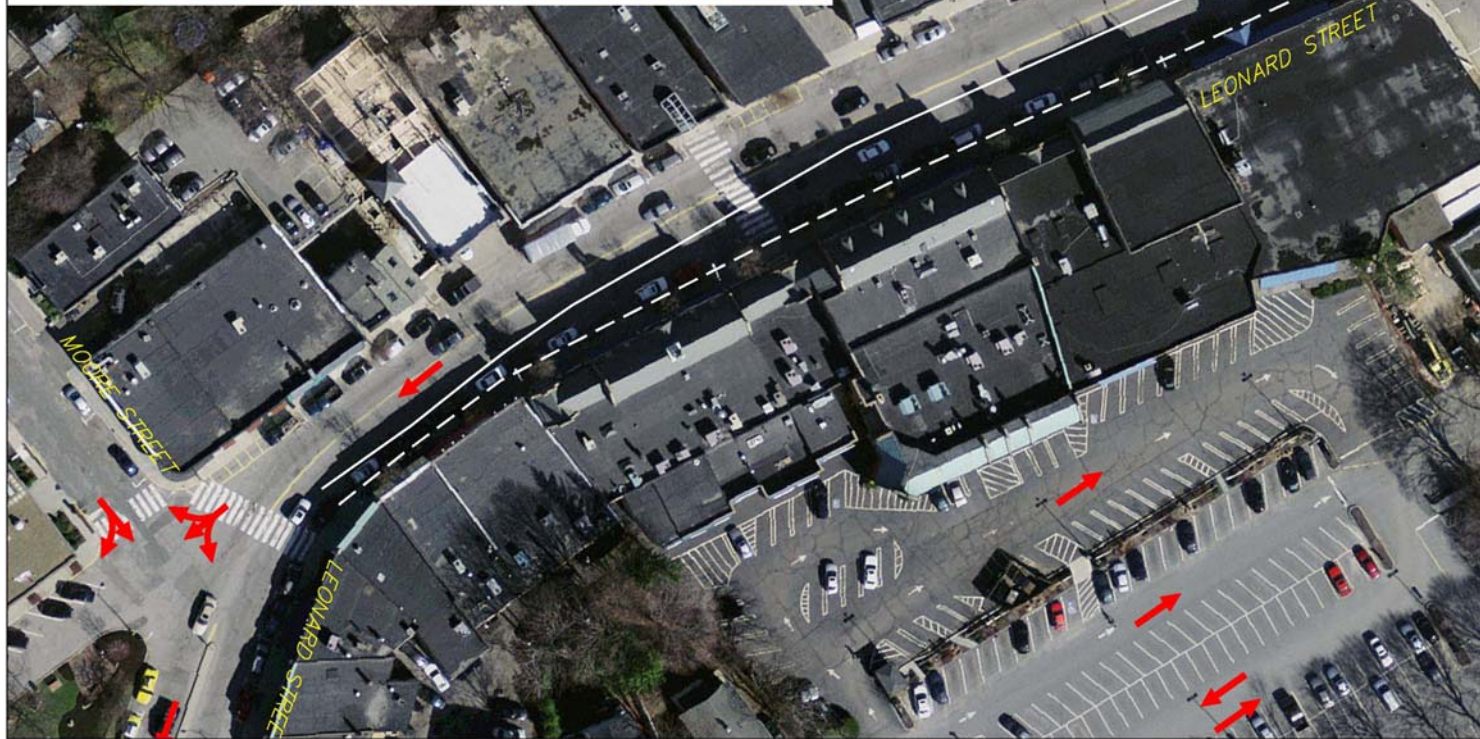
Alternative Traffic Patterns

One-Way Pair – Leonard/Claflin



LEONARD W/ PARALLEL PARKING

TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	+



Alternative Traffic Patterns

One-Way Pair – Leonard/Claflin



CLAFLIN STREET

TRAFFIC OPERATIONS	—
PARKING	o or —
BICYCLES	+
PEDESTRIANS	o
STREETSCAPE	o



Alternative Traffic Patterns

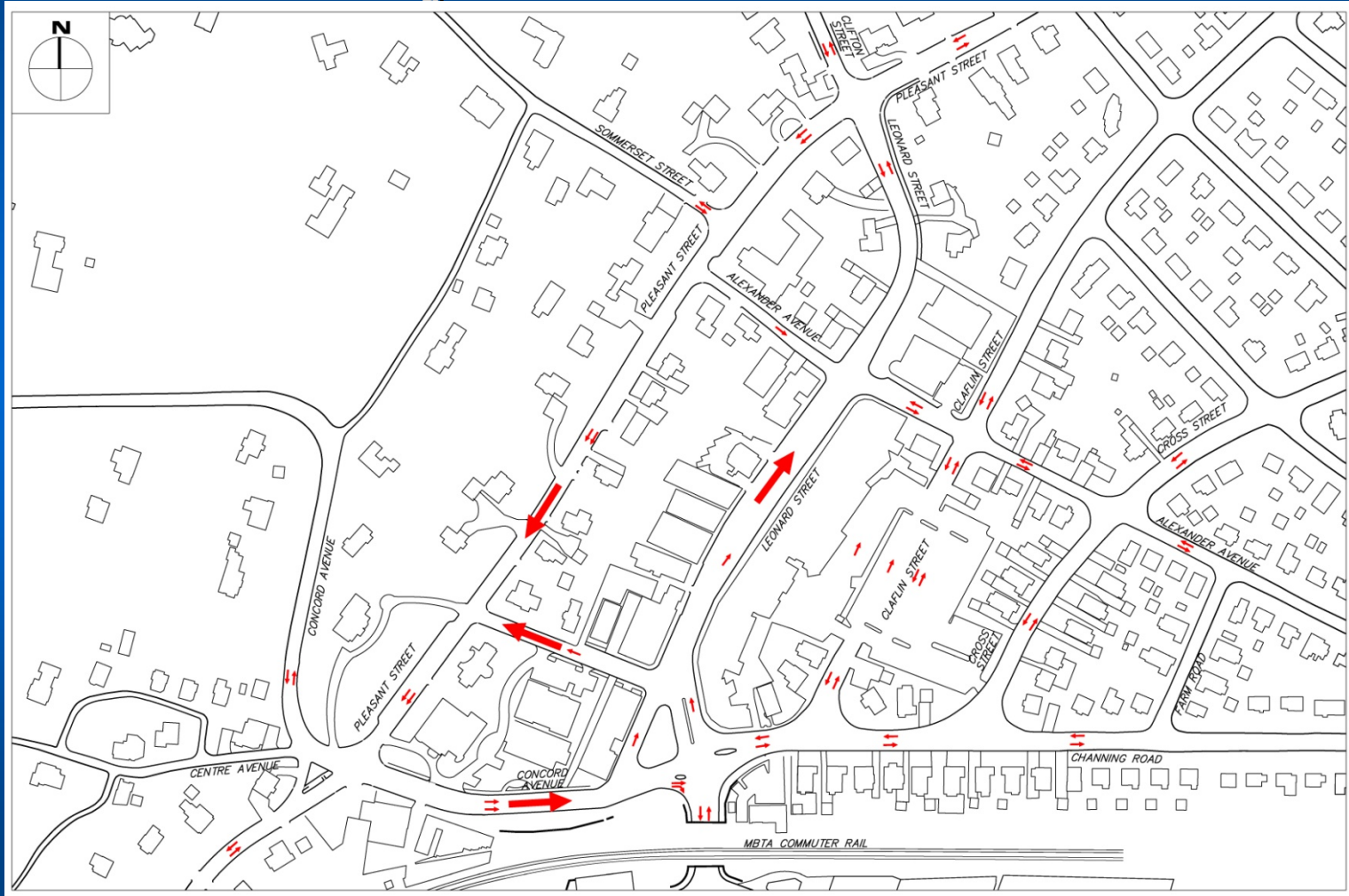
One-Way Pair – Leonard/Claflin

Summary/Discussion



Alternative Traffic Patterns

One-Way Pair – Leonard/Pleasant



Alternative Traffic Patterns

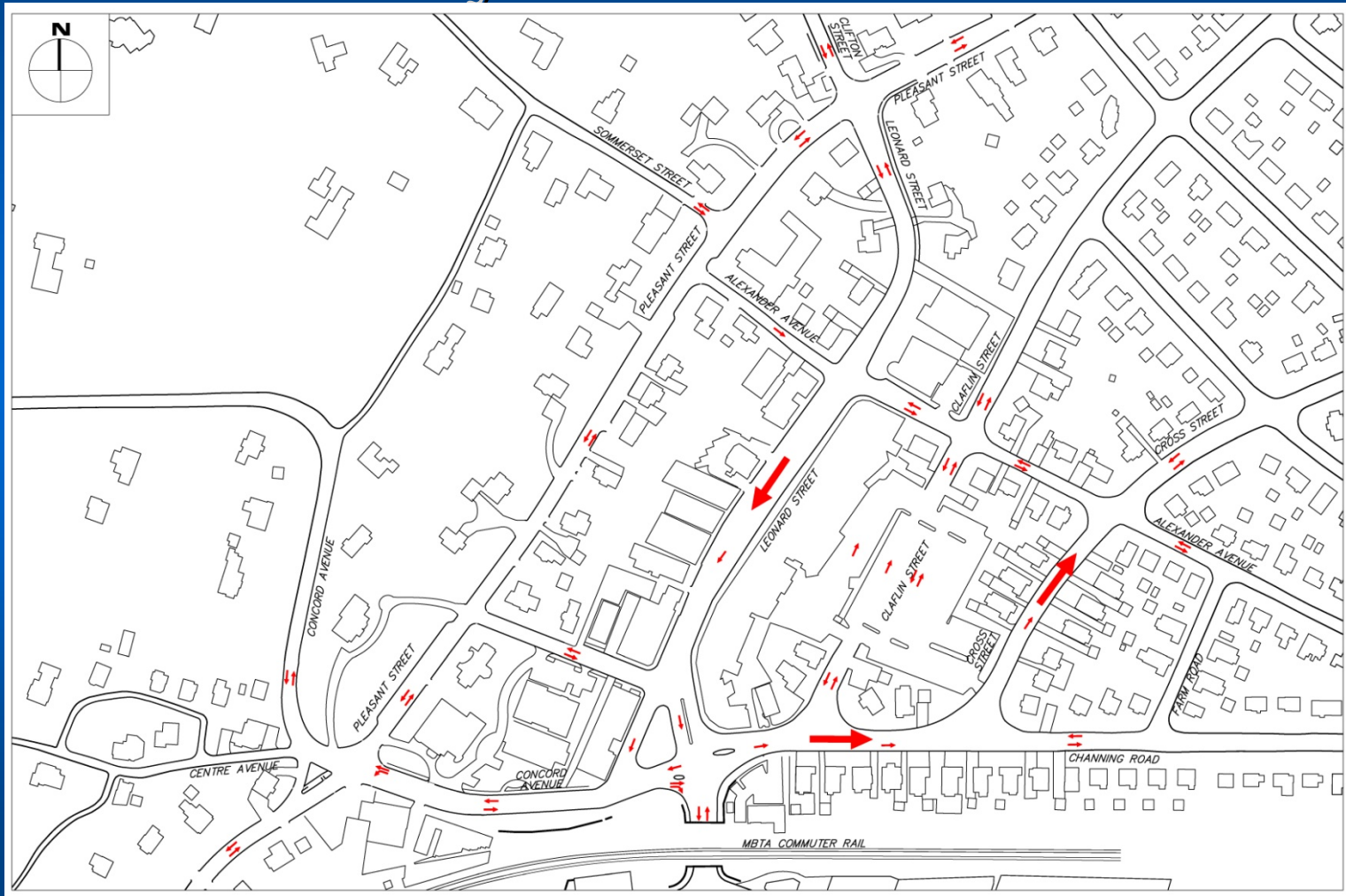
One-Way Pair – Leonard/Pleasant

Summary/Discussion



Alternative Traffic Patterns

One-Way Pair – Leonard/Cross



Alternative Traffic Patterns

One-Way Pair – Leonard/Cross



CLAFLIN/CHANNING

TRAFFIC OPERATIONS	+
PARKING	o
BICYCLES	+
PEDESTRIANS	-
STREETSCAPE	+



Alternative Traffic Patterns

One-Way Pair – Leonard/Cross



CROSS/CHANNING	
TRAFFIC OPERATIONS	+
PARKING	+
BICYCLES	+
PEDESTRIANS	-
STREETSCAPE	+



Alternative Traffic Patterns

One-Way Pair – Leonard/Cross



CROSS/ALEXANDER	
TRAFFIC OPERATIONS	o
PARKING	+
BICYCLES	+
PEDESTRIANS	-
STREETSCAPE	o

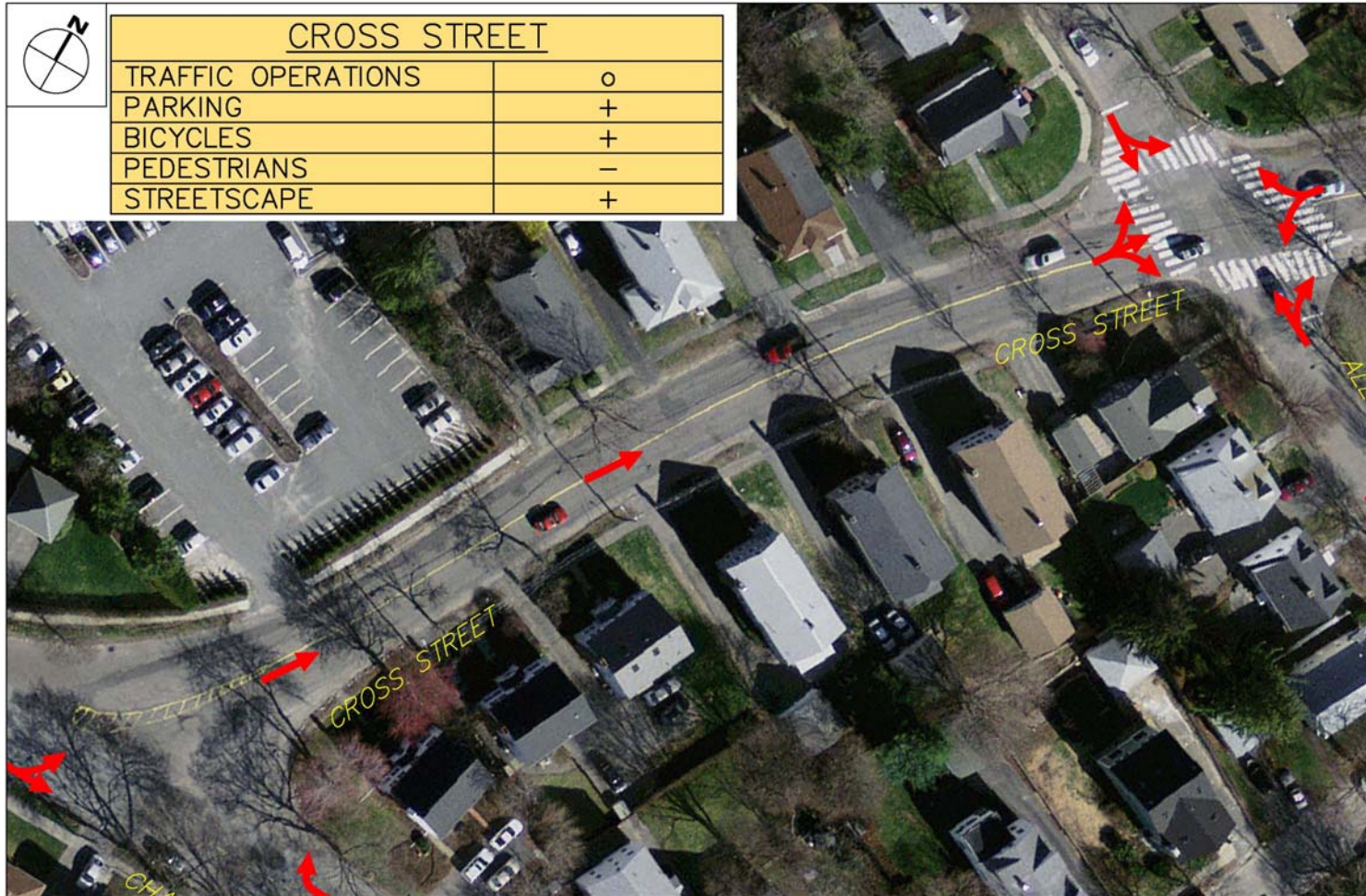


Alternative Traffic Patterns

One-Way Pair – Leonard/Cross



CROSS STREET	
TRAFFIC OPERATIONS	o
PARKING	+
BICYCLES	+
PEDESTRIANS	-
STREETSCAPE	+



Alternative Traffic Patterns

One-Way Pair – Leonard/Cross



CHANNING ROAD	
TRAFFIC OPERATIONS	—
PARKING	o
BICYCLES	+
PEDESTRIANS	o
STREETSCAPE	+



Alternative Traffic Patterns

One-Way Pair – Leonard/Cross



ALEXANDER AVENUE	
TRAFFIC OPERATIONS	—
PARKING	o
BICYCLES	—
PEDESTRIANS	—
STREETSCAPE	o



Alternative Traffic Patterns

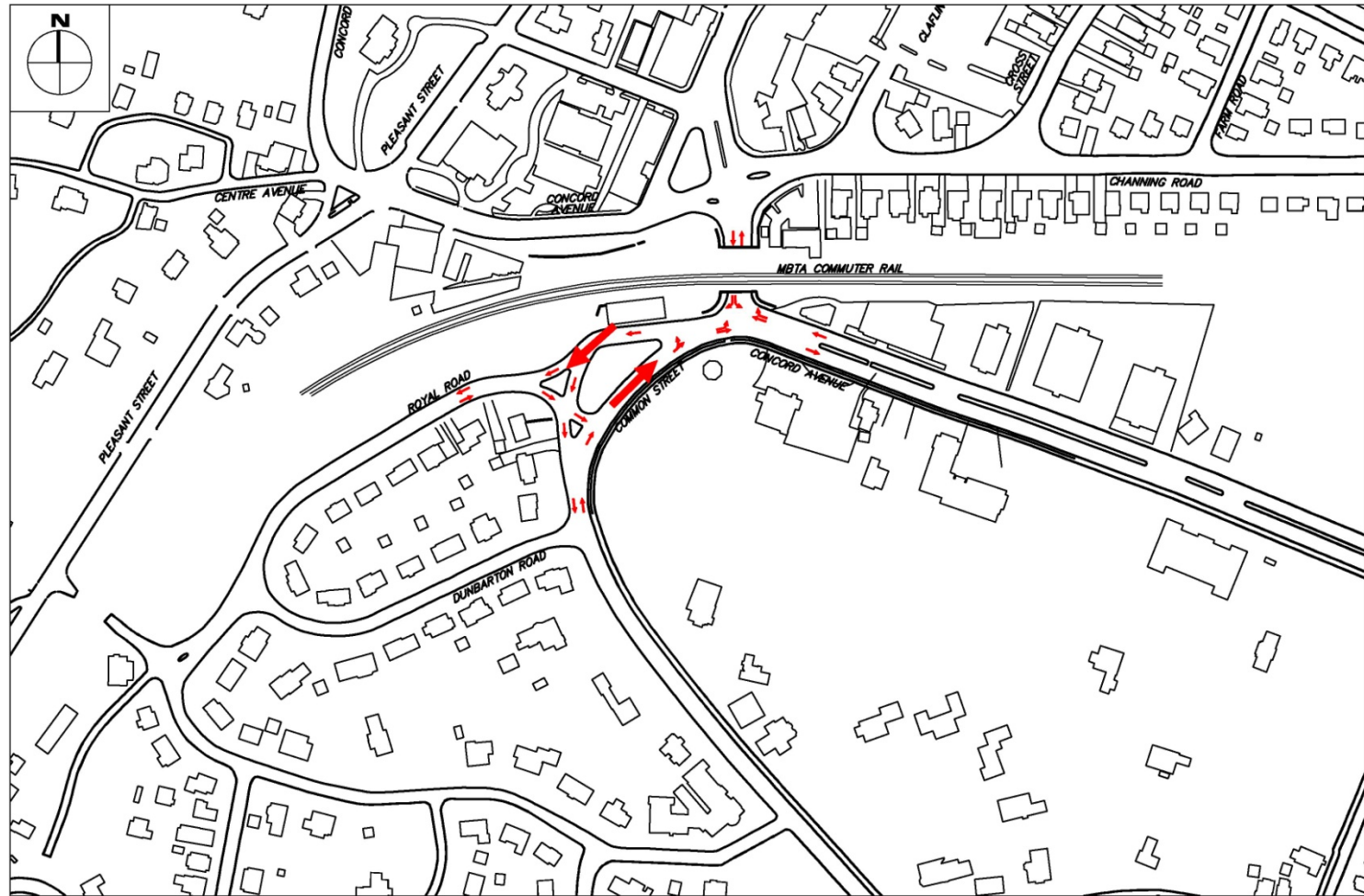
One-Way Pair – Leonard/Cross

Summary/Discussion



Alternative Traffic Patterns

One-Way Pair – Common/Royal



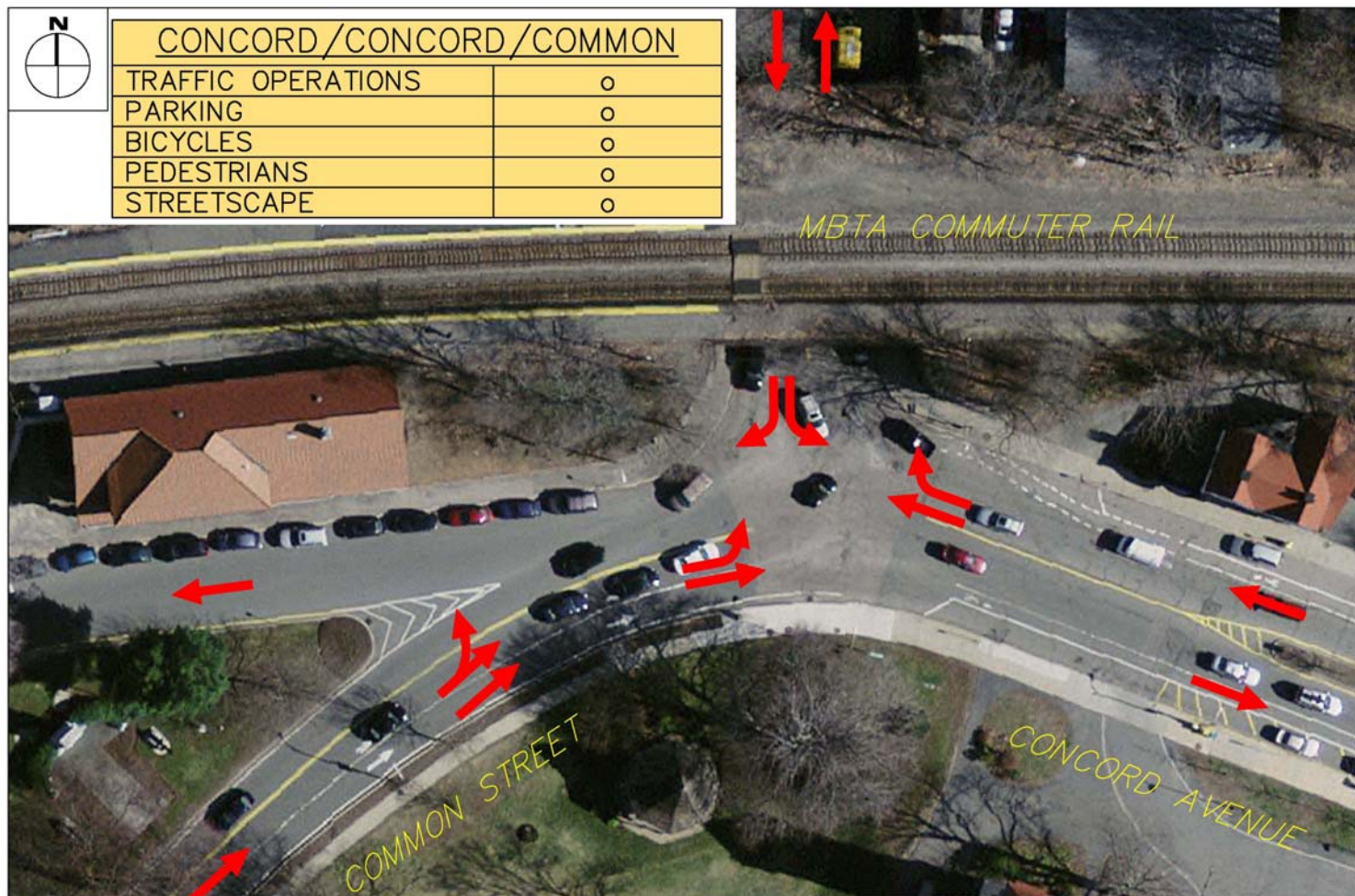
Alternative Traffic Patterns

One-Way Pair – Common/Royal



CONCORD / CONCORD / COMMON

TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	o
PEDESTRIANS	o
STREETSCAPE	o



Alternative Traffic Patterns

One-Way Pair – Common/Royal



COMMON/ROYAL	
TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	+



Alternative Traffic Patterns

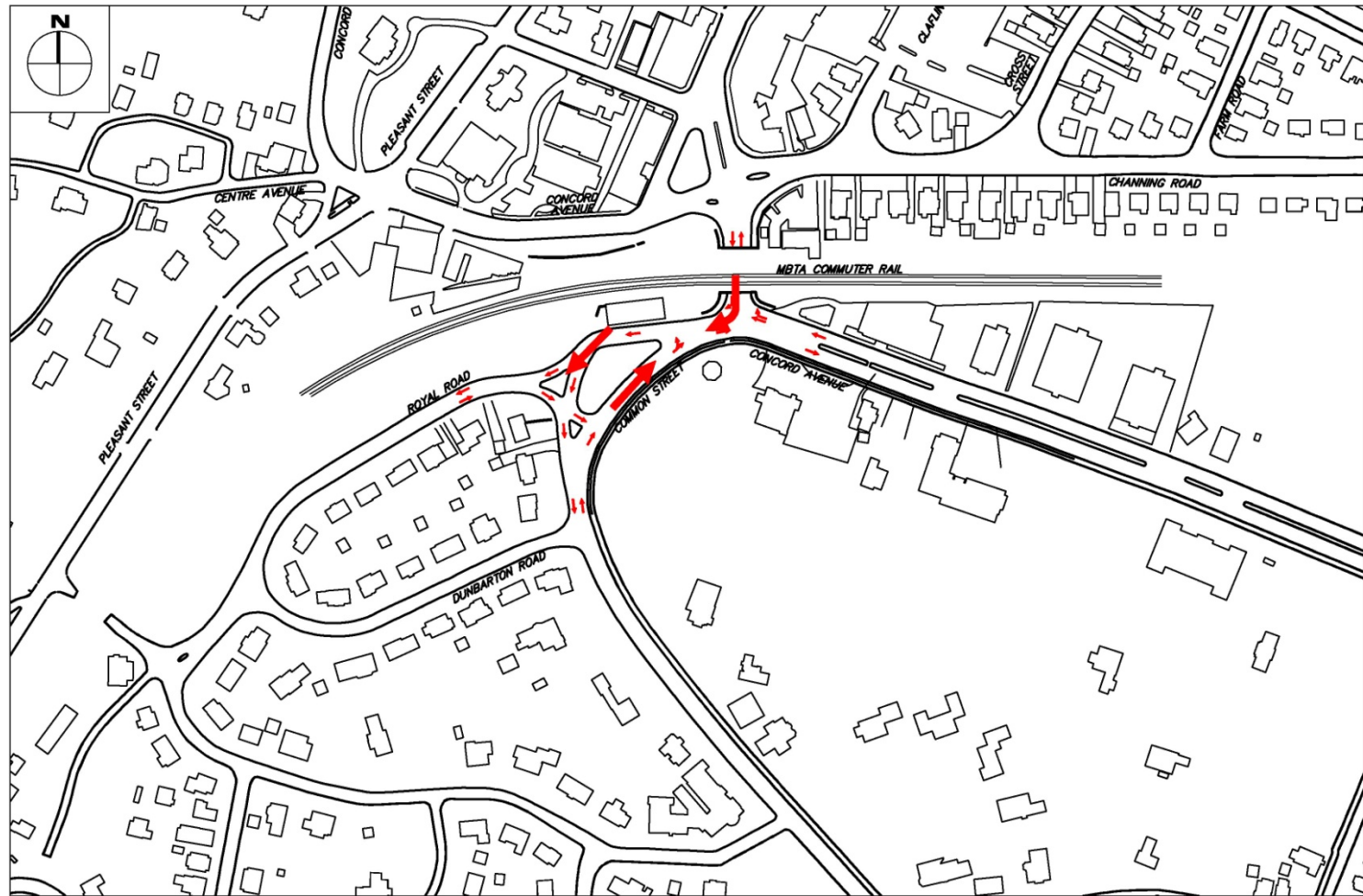
One-Way Pair – Common/Royal

Summary/Discussion



Alternative Traffic Patterns

One-Way Pair – With Restriction



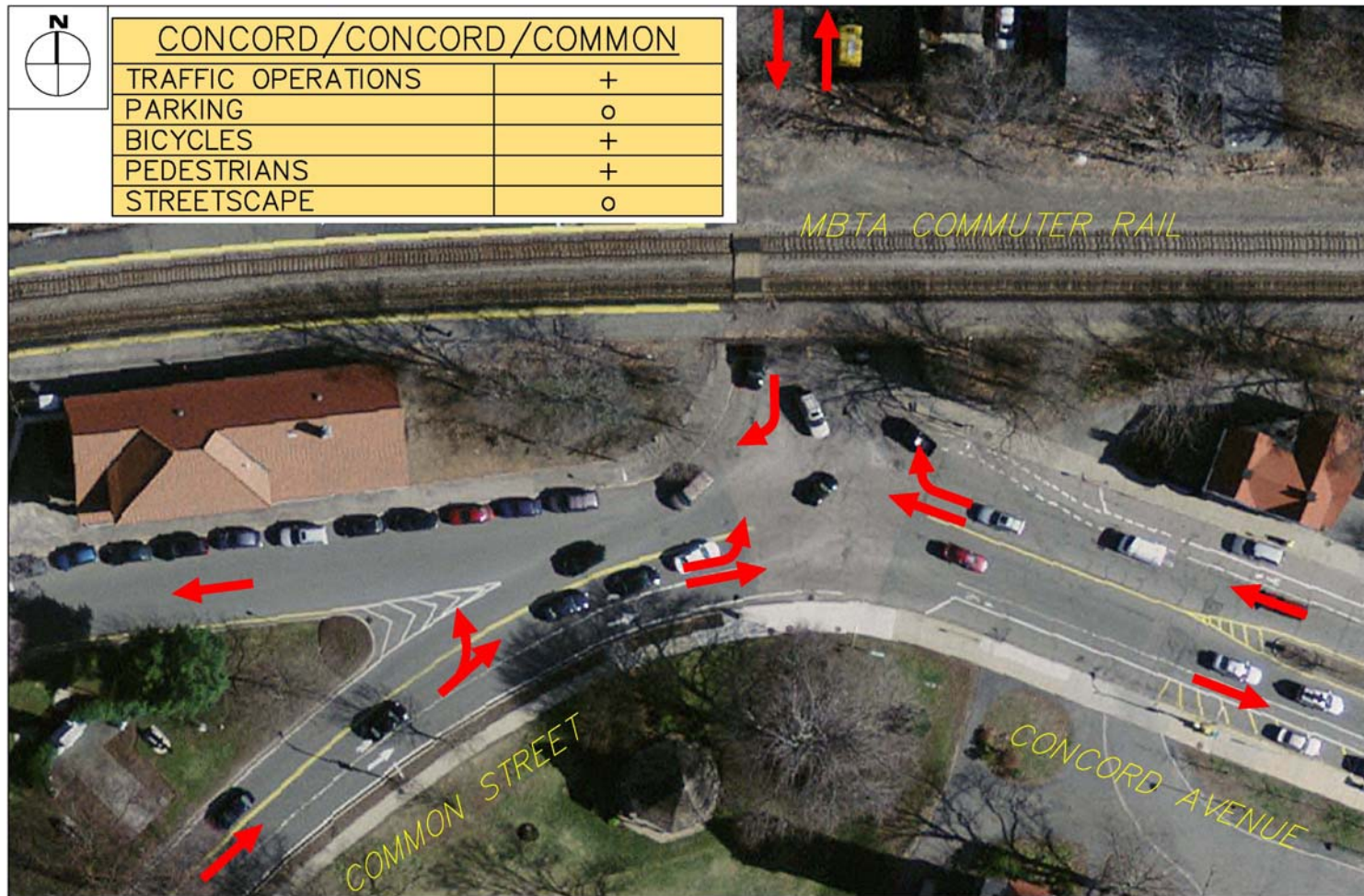
Alternative Traffic Patterns

One-Way Pair – With Restriction



CONCORD / CONCORD / COMMON

TRAFFIC OPERATIONS	+
PARKING	o
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	o

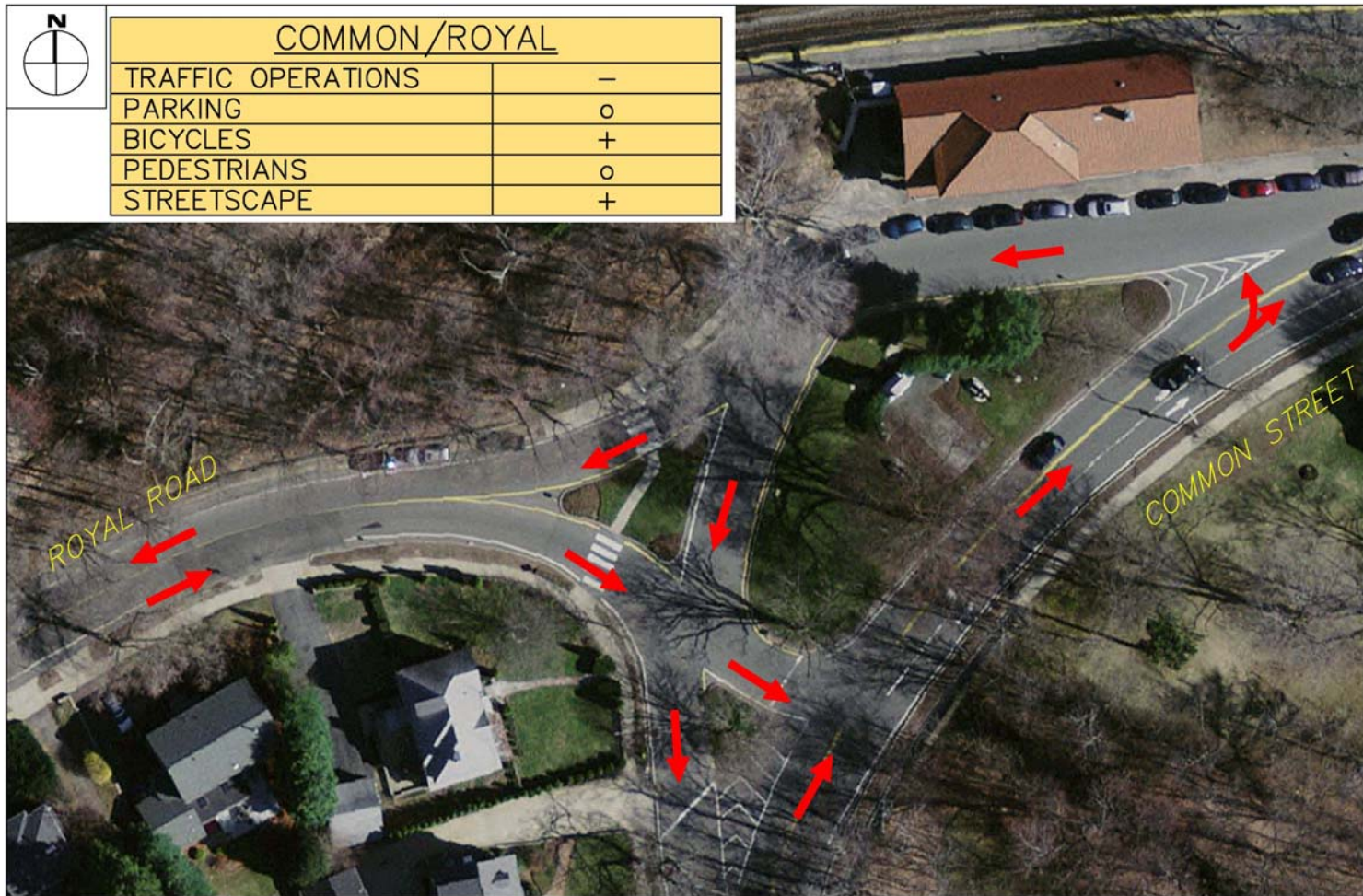


Alternative Traffic Patterns

One-Way Pair – With Restriction



COMMON/ROYAL	
TRAFFIC OPERATIONS	—
PARKING	o
BICYCLES	+
PEDESTRIANS	o
STREETSCAPE	+



Alternative Traffic Patterns

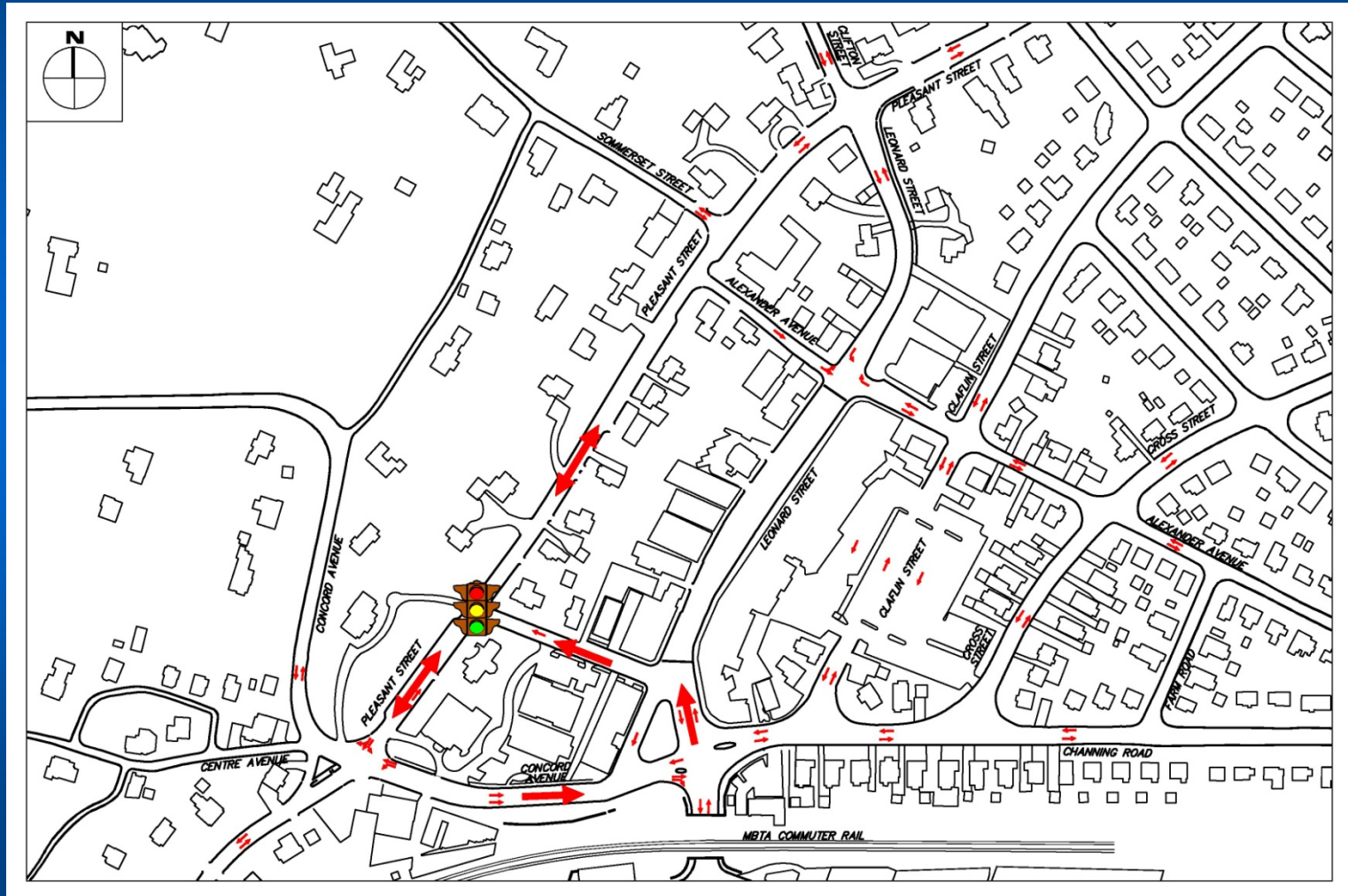
One-Way Pair – With Restriction

Summary/Discussion



Alternative Traffic Patterns

Close Leonard Street



Alternative Traffic Patterns

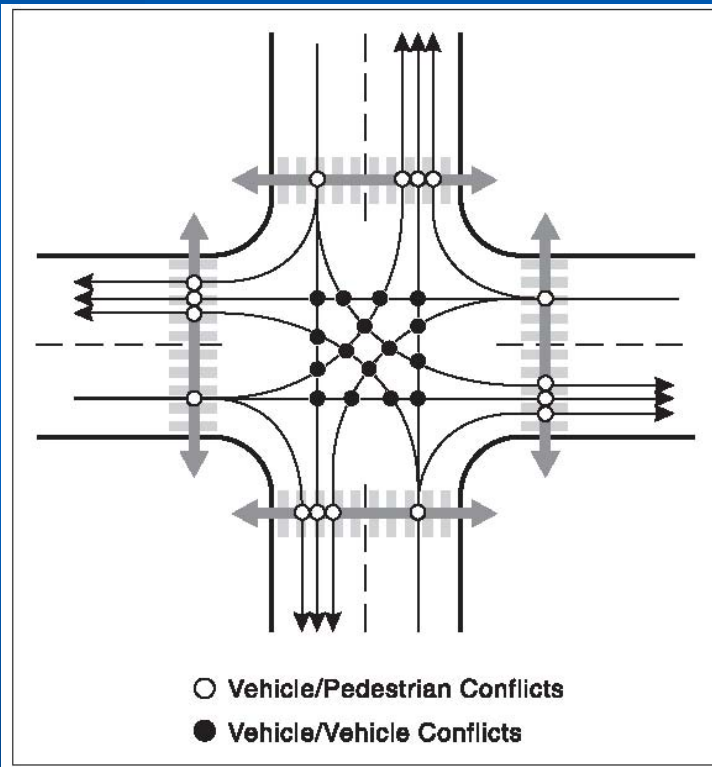
Close Leonard Street

Summary/Discussion

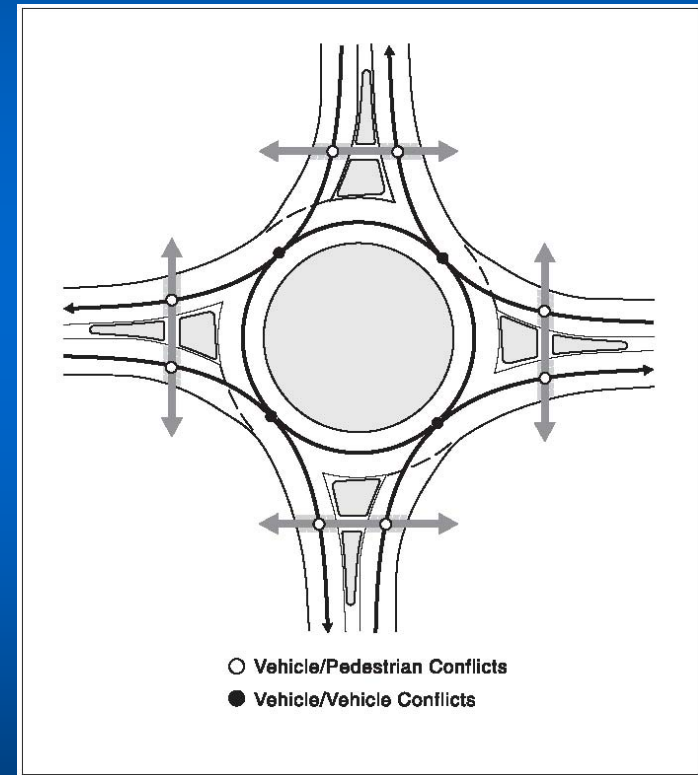


Traffic Conflicts

Four-Way Intersection



Roundabout



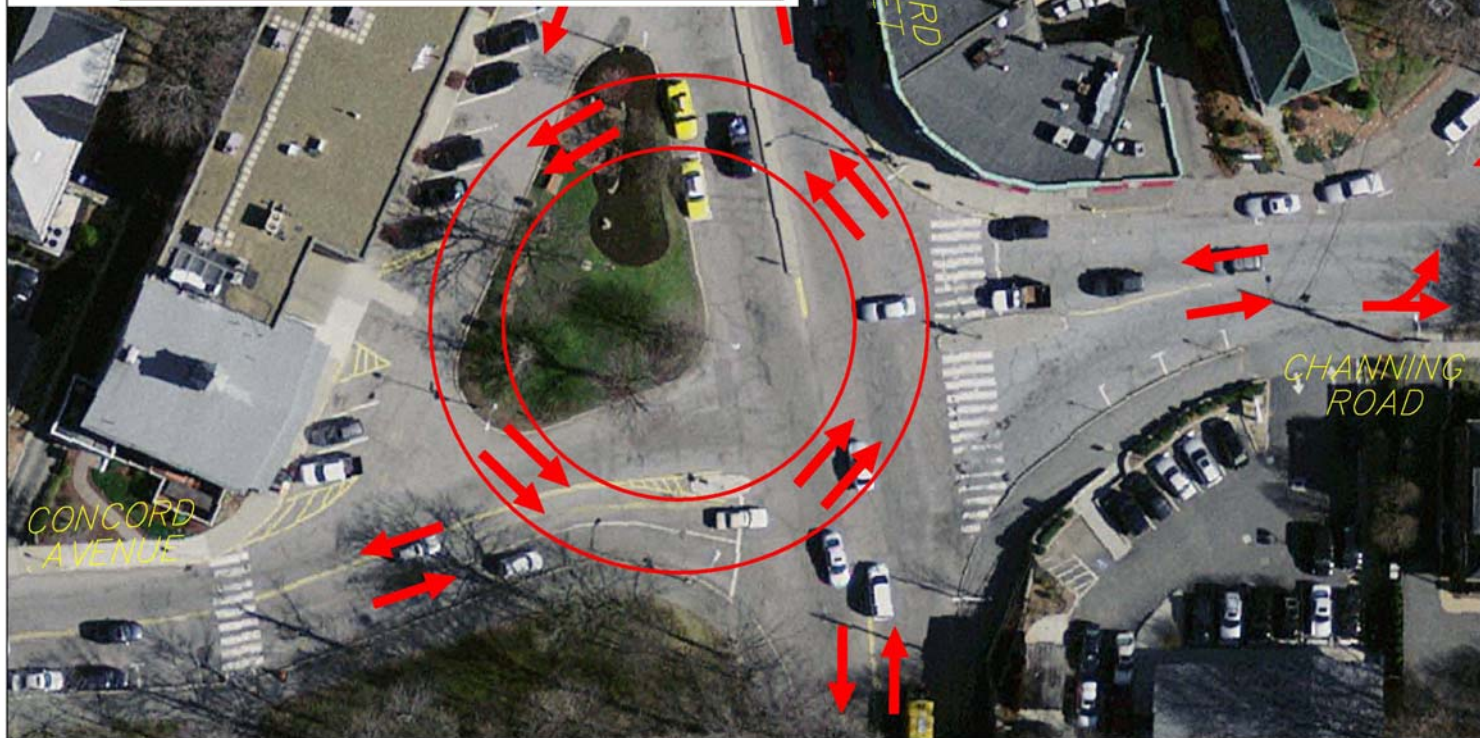
Alternative Traffic Patterns

Roundabout



LEONARD/CONCORD/CHANNING

TRAFFIC OPERATIONS	+ & -
PARKING	o
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	+



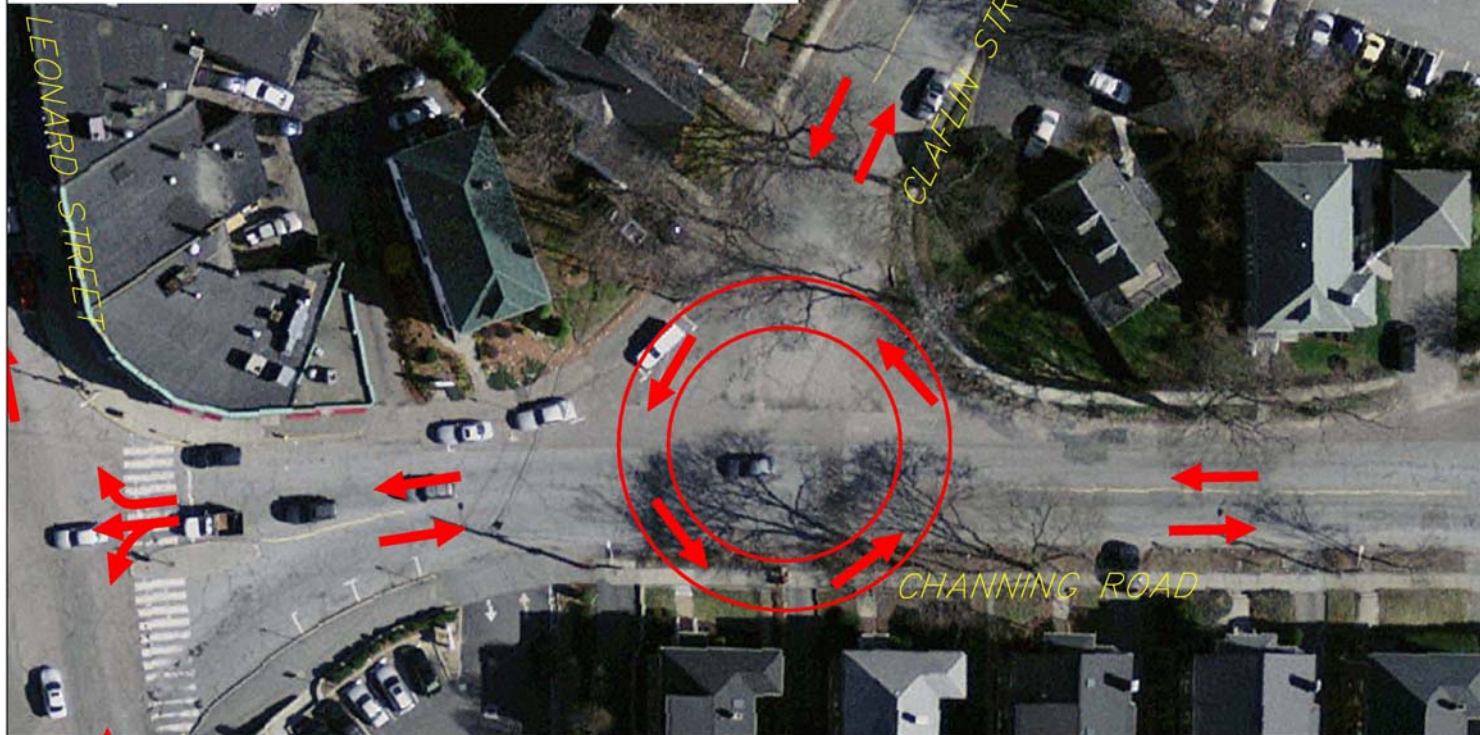
Alternative Traffic Patterns

Roundabout



CLAFLIN/CHANNING

TRAFFIC OPERATIONS	—
PARKING	o
BICYCLES	o
PEDESTRIANS	+
STREETSCAPE	+



Alternative Traffic Patterns

Roundabout



CROSS/CHANNING

TRAFFIC OPERATIONS	—
PARKING	o
BICYCLES	o
PEDESTRIANS	+
STREETSCAPE	+

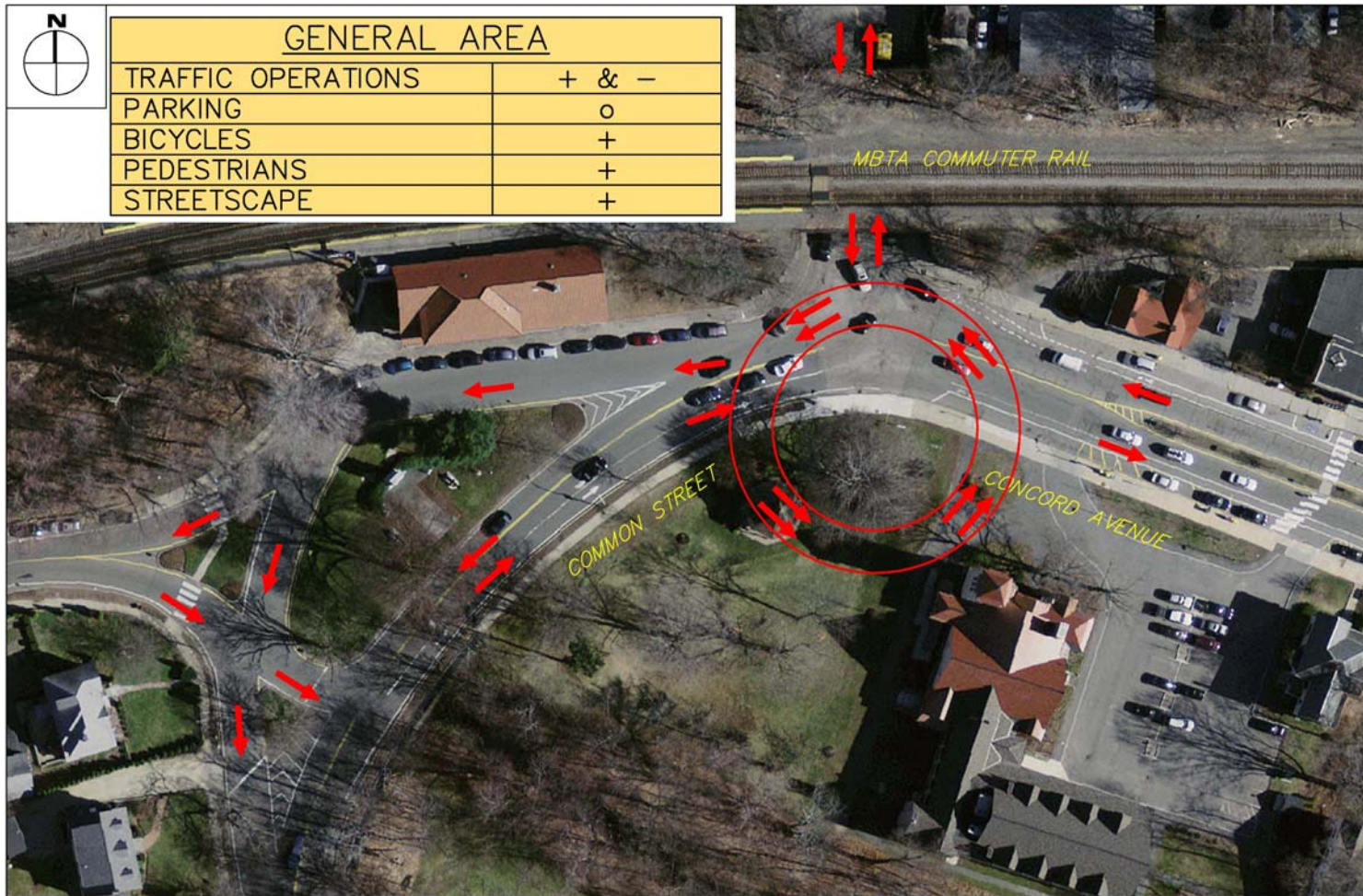


Alternative Traffic Patterns Roundabout



GENERAL AREA

TRAFFIC OPERATIONS	+ & -
PARKING	o
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	+



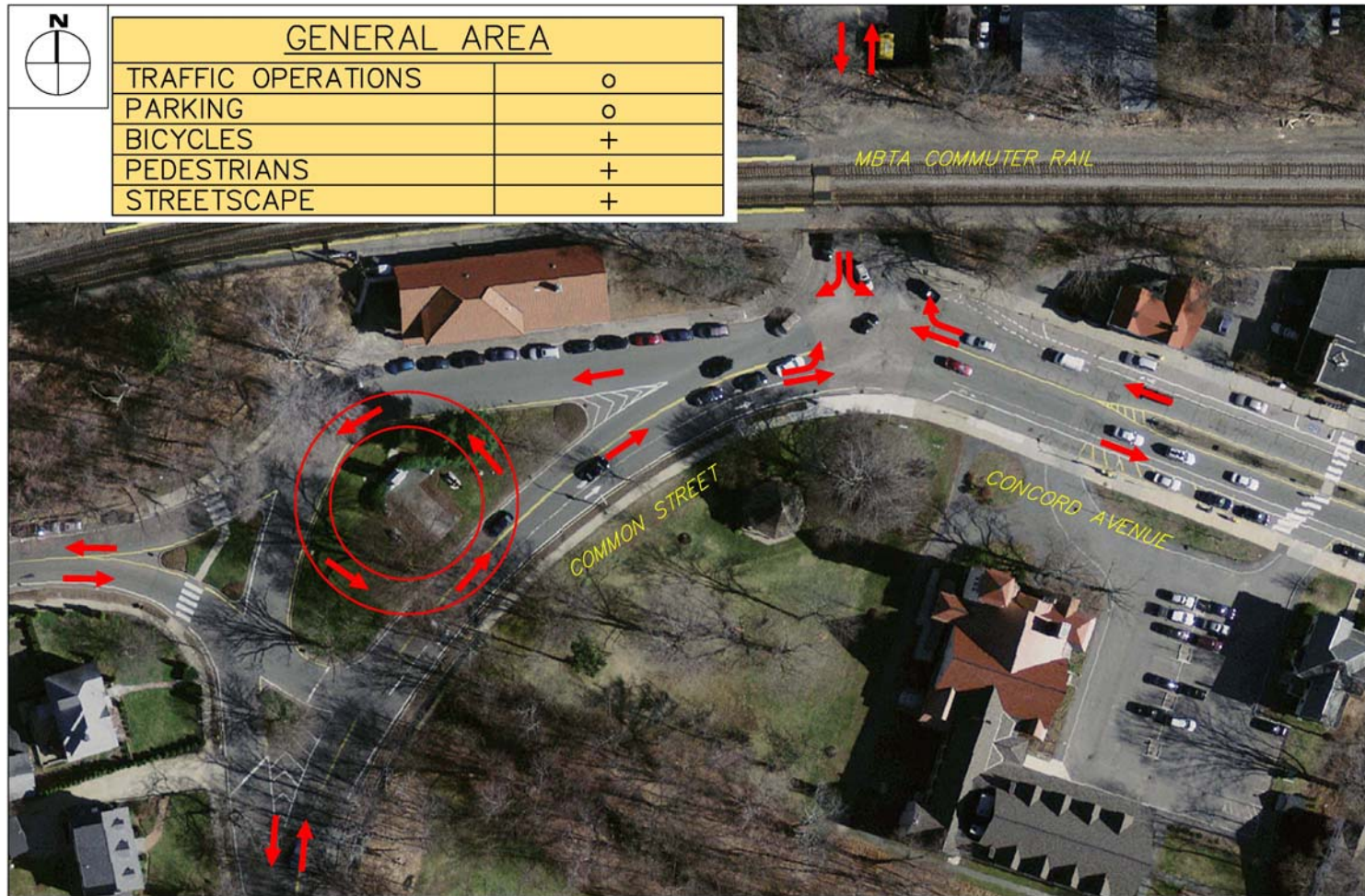
Alternative Traffic Patterns

Roundabout



GENERAL AREA

TRAFFIC OPERATIONS	o
PARKING	o
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	+

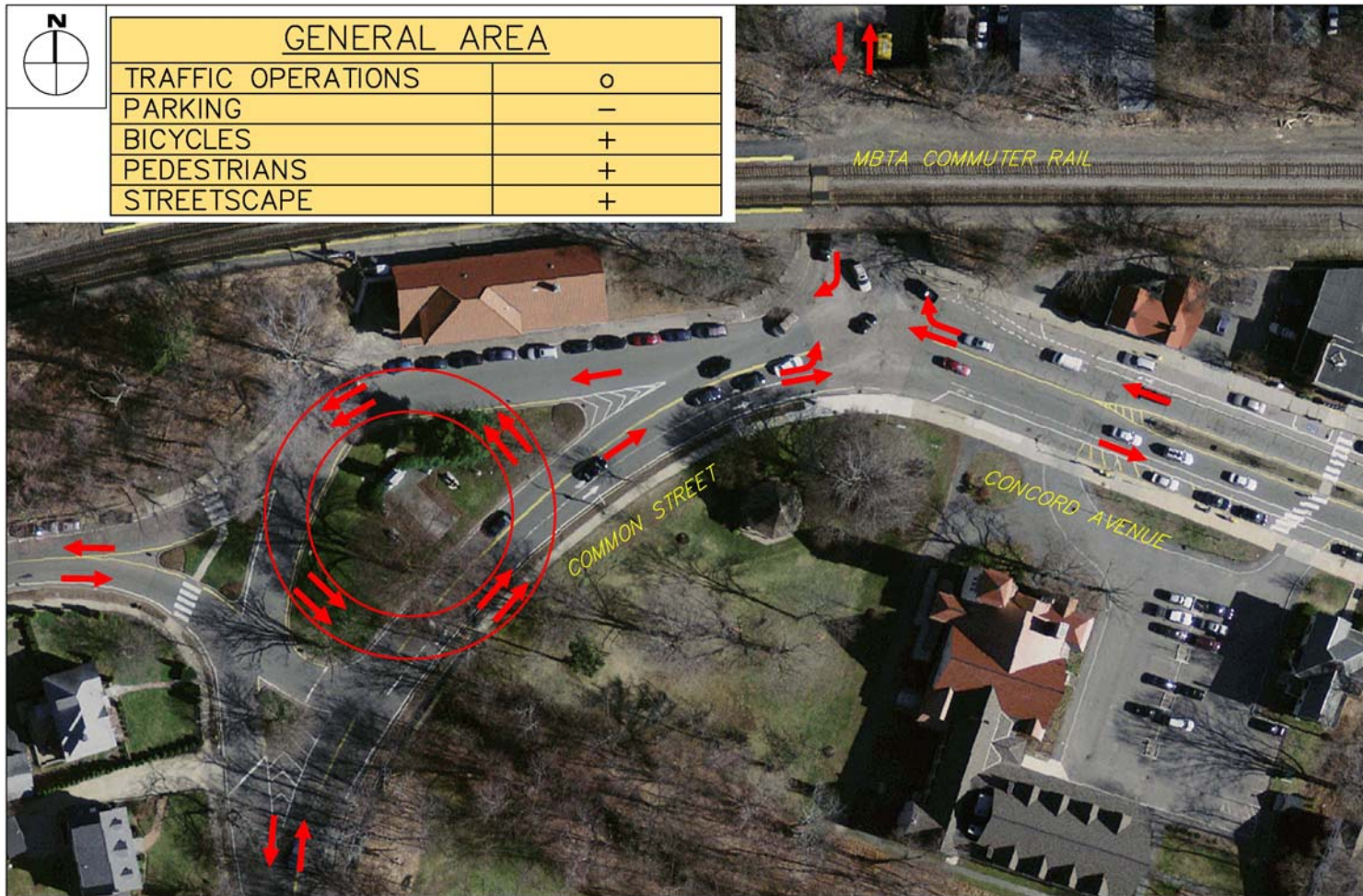


Alternative Traffic Patterns

Roundabout with Restriction



GENERAL AREA	
TRAFFIC OPERATIONS	o
PARKING	-
BICYCLES	+
PEDESTRIANS	+
STREETSCAPE	+



Alternative Traffic Patterns

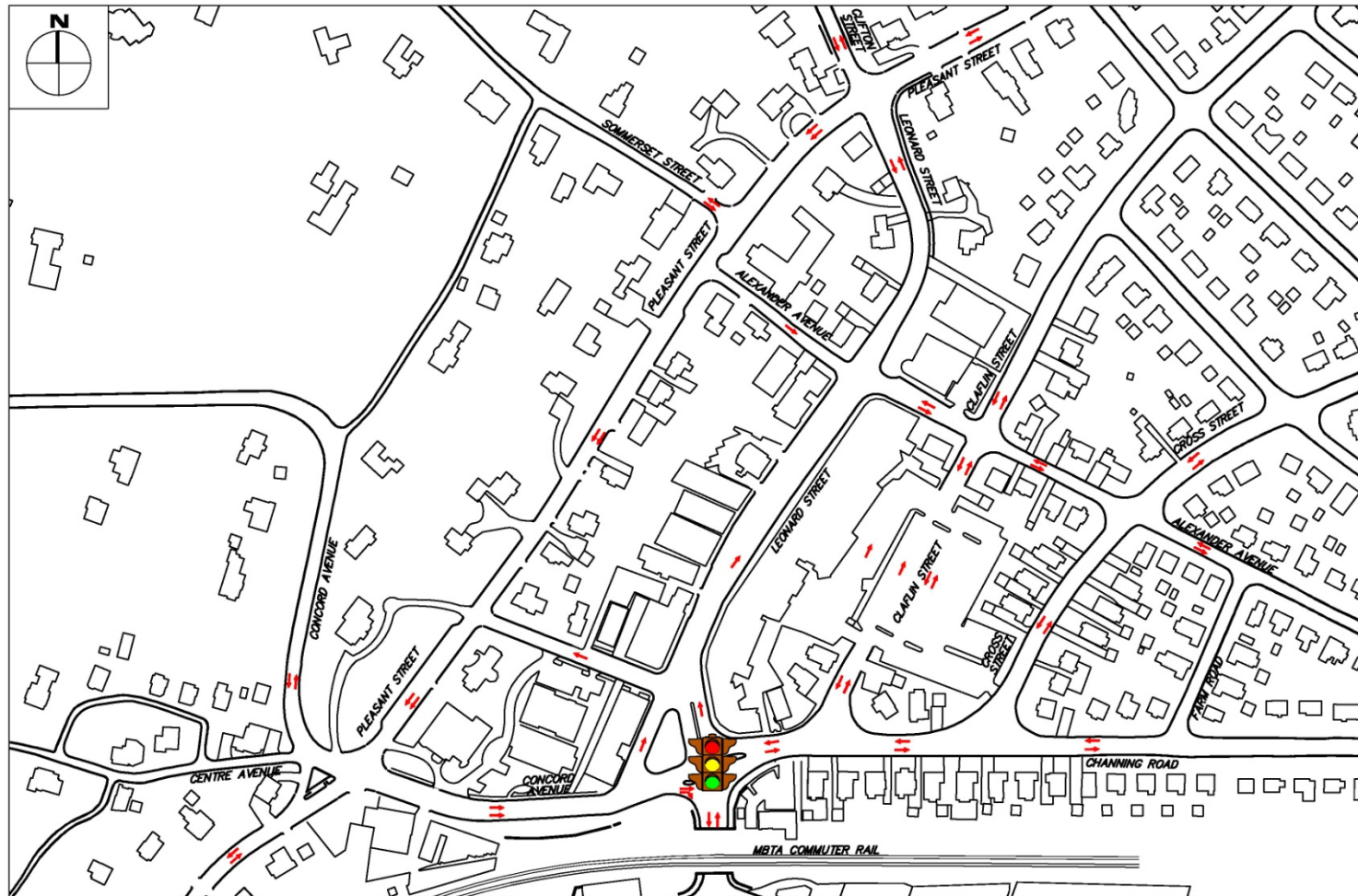
Roundabout

Summary/Discussion



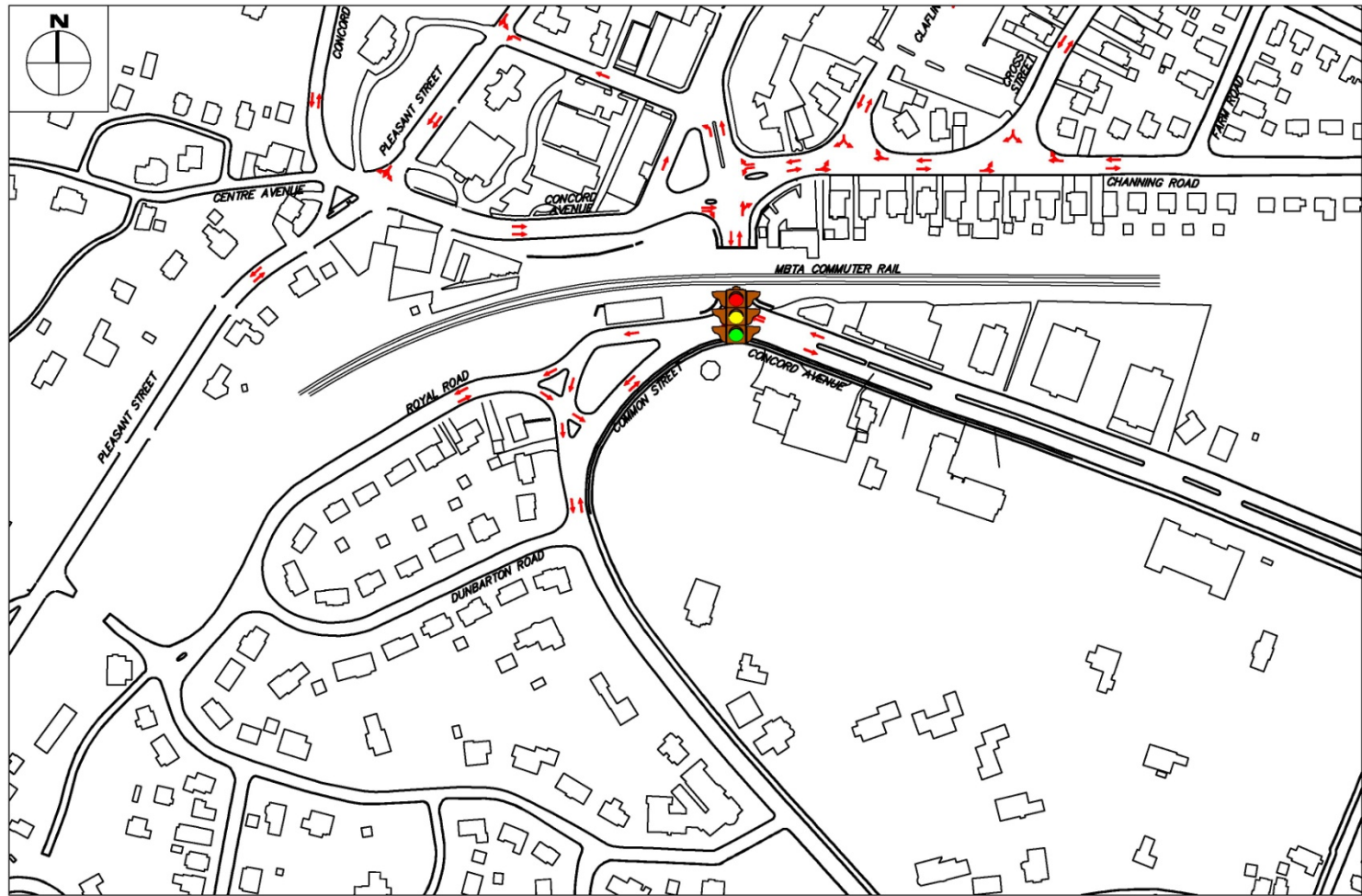
Alternative Traffic Patterns

Traffic Signal – North of Bridge



Alternative Traffic Patterns

Traffic Signal – South of Bridge



Alternative Traffic Patterns

Traffic Signals

Summary/Discussion



Traffic Patterns to Review

- Existing
 - North Side of Bridge
 - South Side of Bridge
- One Way Pairs
 - North of Bridge
 - Claflin / Leonard
 - Pleasant / Leonard
 - Cross / Leonard
 - South of Bridge
 - Common / Royal
 - Common / Royal with Restriction

Traffic Patterns to Review (cont)

- Close Leonard Street
- Roundabouts
 - North of Bridge
 - South of Bridge
- Traffic Signals
 - North of Bridge
 - South of Bridge