

Town of Belmont Intersection Improvements at Lexington Street & Sycamore Street

Transportation Advisory Committee Meeting

September 5th, 2019



TOWN OF BELMONT



Study Area



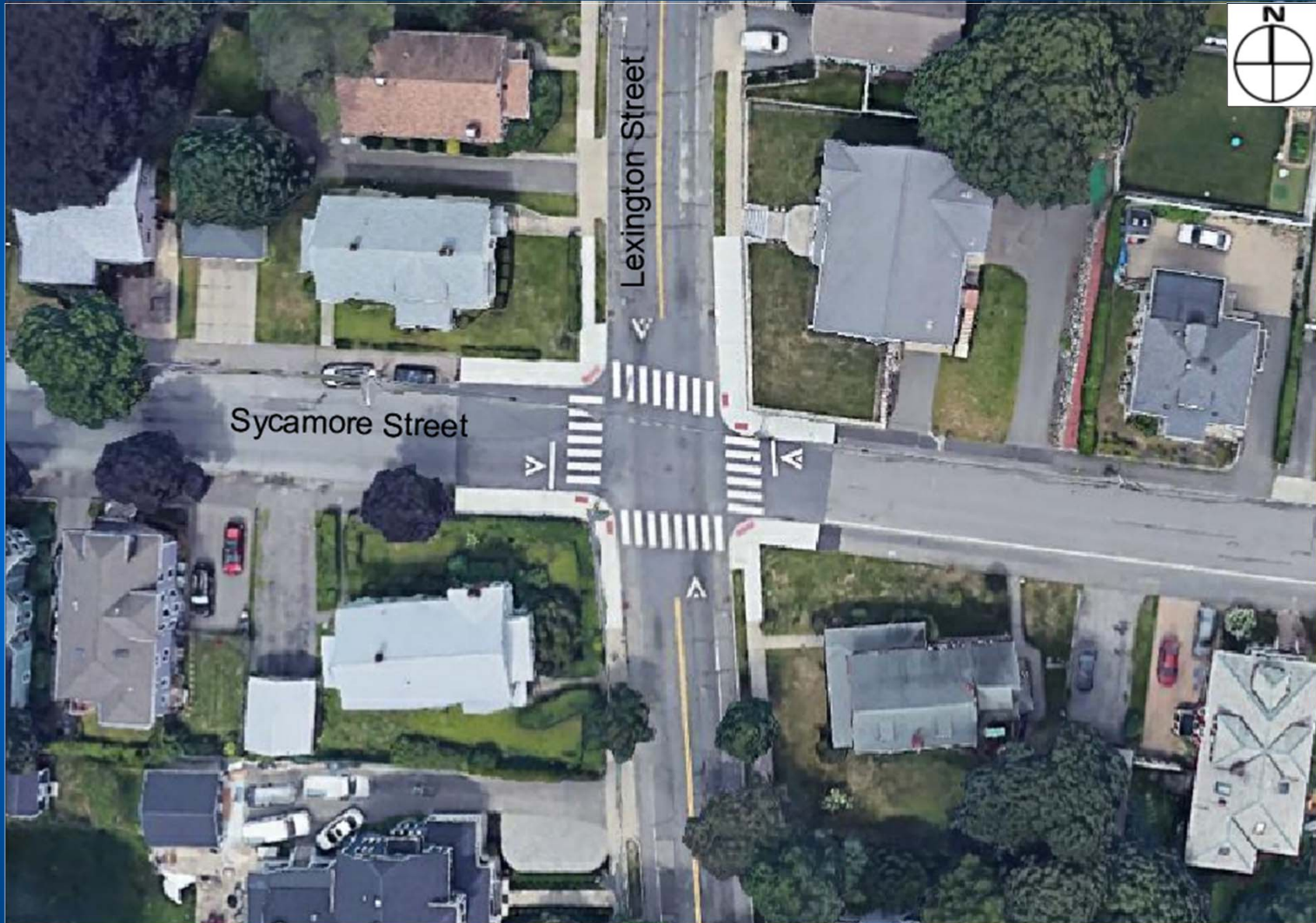
○ Study Area Intersection



TOWN OF BELMONT

 BSC GROUP

Project Area



TOWN OF BELMONT



Field Observations

- Sightlines at the eastbound and westbound approaches are limited by hedges and a stone wall
- Pedestrian crossings are impacted by backed up vehicles and high speeds



Traffic backed up into intersection as pedestrians look for safe gap to cross



Sightline diminished by hedge at Sycamore Street eastbound approach



Stone wall causes poor sightline for westbound approach

Field Observations

- Left-turning vehicles from Sycamore Street onto Lexington Street northbound experience long delays, and may turn while pedestrians are crossing
- Turning vehicles encroach on sidewalk resulting in safety concerns



Tire marks visible on sidewalk

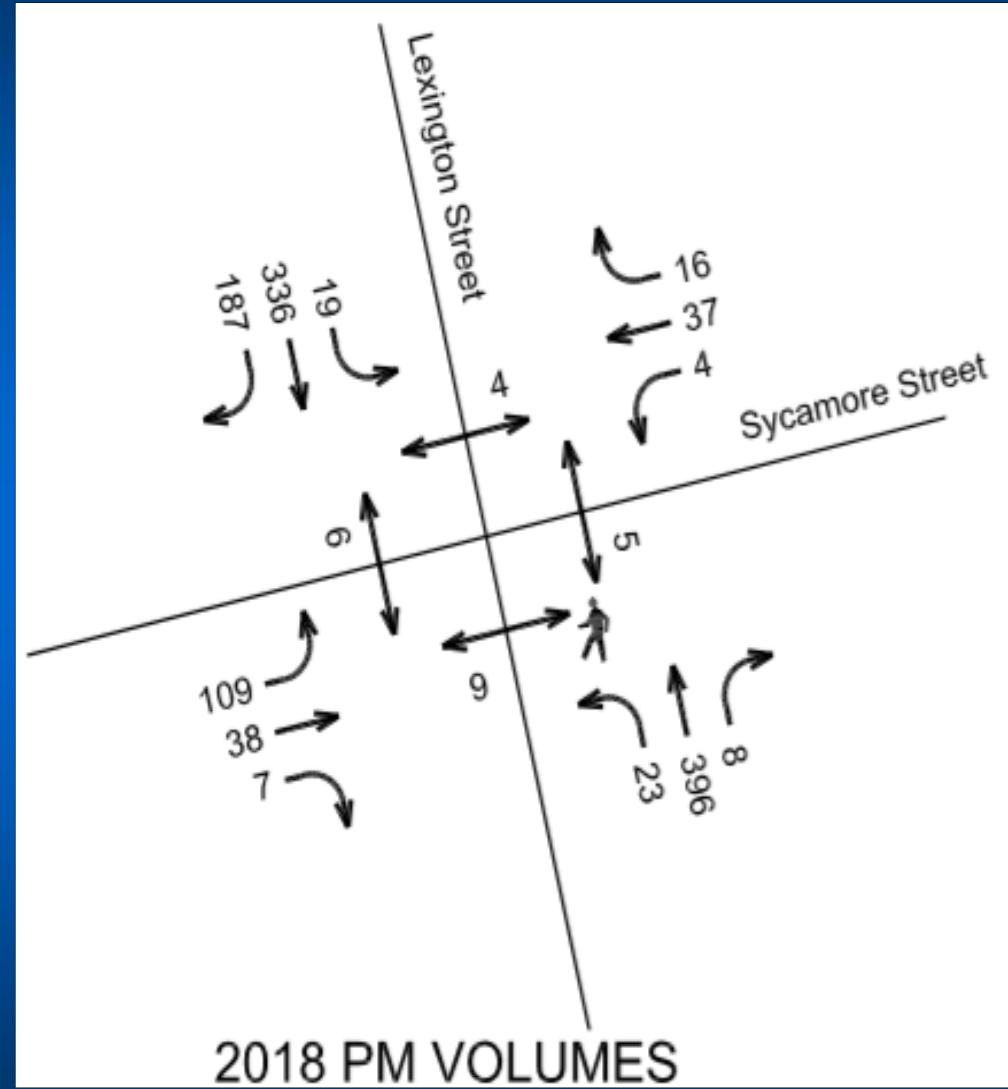
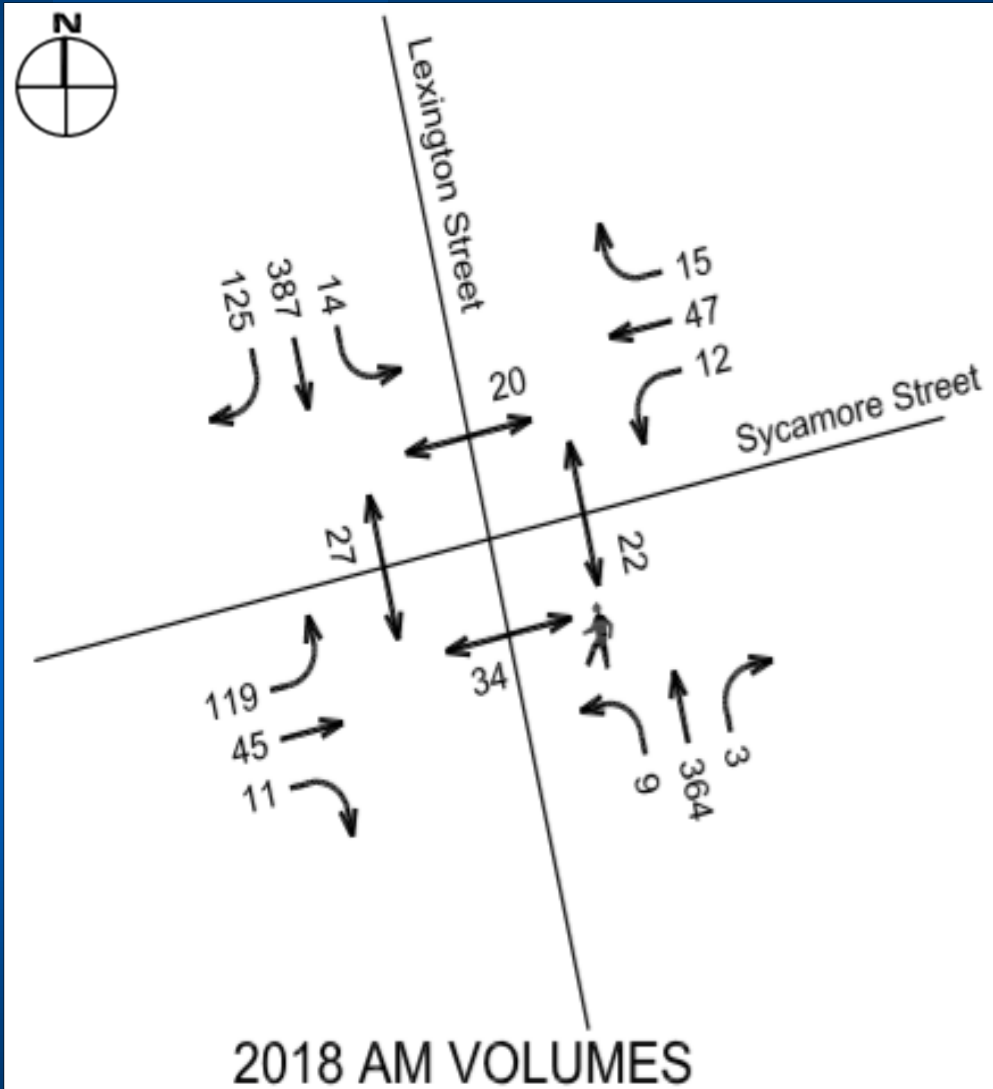


Vehicle encroaching on crosswalk looking for available gaps

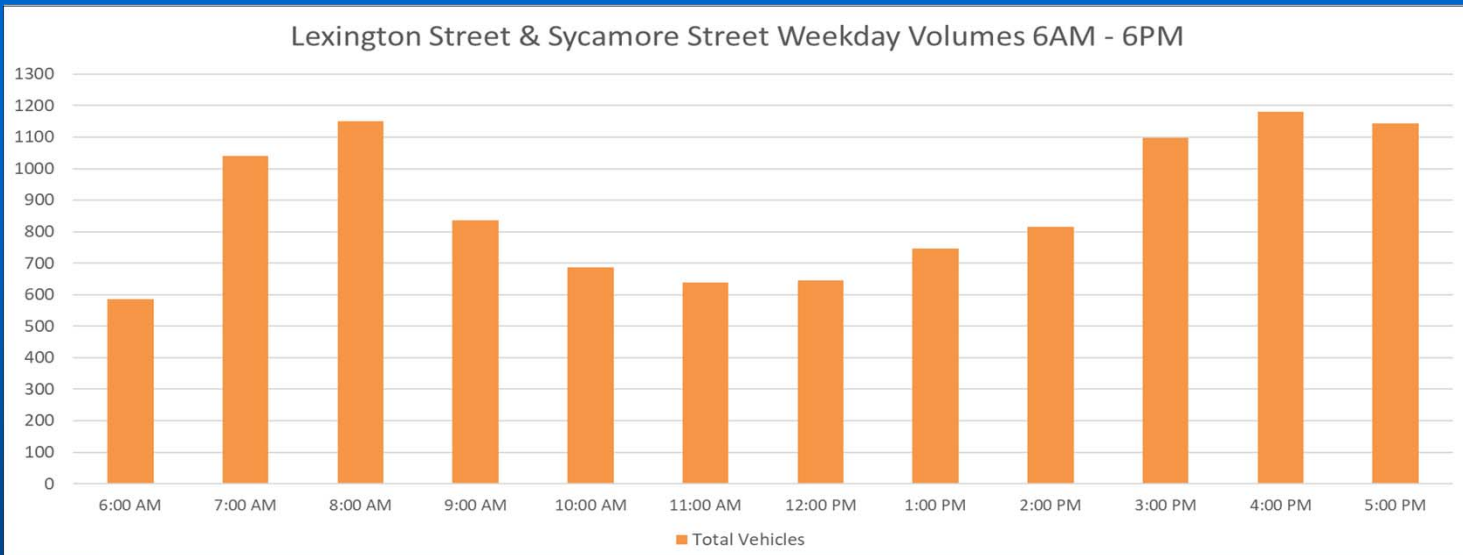
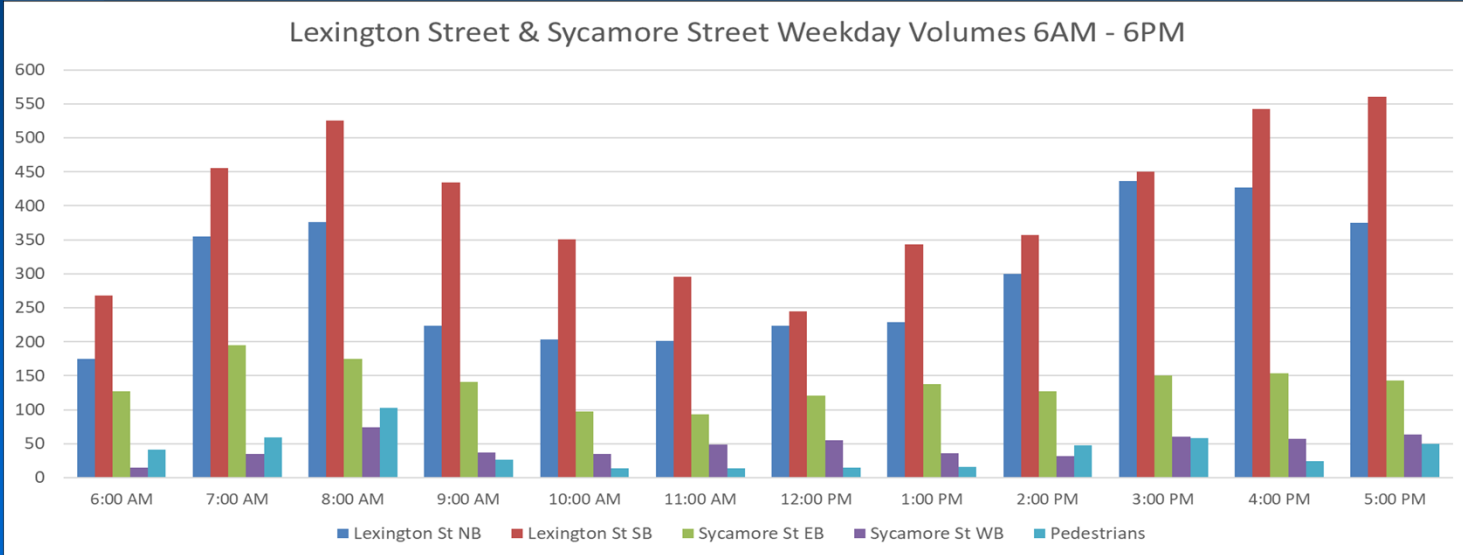


Lack of visibility and gaps in traffic on Sycamore Street approaches

AM & PM Peak Hour Weekday Turning Volumes



Intersection Weekday Volumes 6AM – 6PM



Counts conducted on Tuesday October 2nd 2018



Intersection Safety Analysis

- 2012 – 2016: Average of 8.2 crashes per year at Sycamore Street & Lexington Street
- Since raised intersection was installed in September 2016, average crashes have dropped to 3.3 per year
- Intersection crash rate of 1.75 exceeds MassDOT District 4 average of 0.57 for unsignalized intersections
 - 1.75 crashes per million vehicles entering the intersection
- 80% of crashes were angle collisions
- Pedestrian fatality occurred in 2018



Proposed Intersection Improvements

- Install fully actuated traffic signals, coordinated with existing signals at Lexington Street, Thayer Road, and Church Street
- Provide exclusive pedestrian phase
- Remove raised intersection
- Install “No Turn on Red” at all approaches
- Install new pedestrian ramps at crosswalks
- Trim hedges at intersection approaches to improve sight lines



Intersection Construction Plan

BELMONT
LEXINGTON STREET AT SYCAMORE STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NA	4	11

PROJECT FILE NO. BSC-28374.20
CONSTRUCTION PLAN



N/F
57-59 LEXINGTON
STREET CONDOMINIUM
BOOK 17375, PAGE
225
PID 28-127

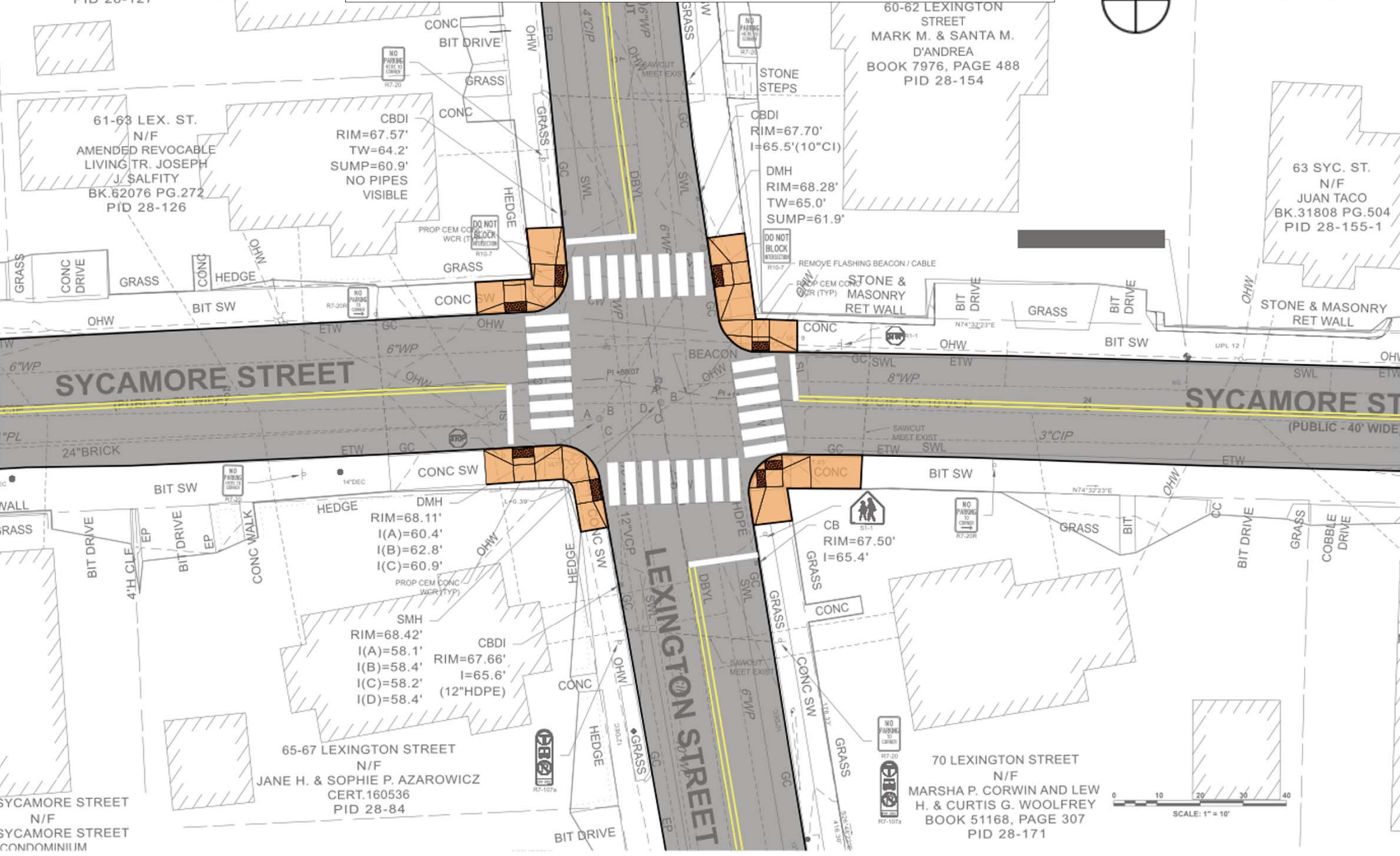
60-62 LEXINGTON
STREET
MARK M. & SANTA M.
D'ANDREA
BOOK 7976, PAGE 488
PID 28-154

61-63 LEX. ST.
N/F
AMENDED REVOCABLE
LIVING TR. JOSEPH
J. SALFITY
BK.62076 PG.272
PID 28-126

CBDI
RIM=67.57'
TW=64.2'
SUMP=60.9'
NO PIPES
VISIBLE

CBDI
RIM=67.70'
I=65.5'(10"CI)
DMH
RIM=68.28'
TW=65.0'
SUMP=61.9'

63 SYC. ST.
N/F
JUAN TACO
BK.31808 PG.504
PID 28-155-1



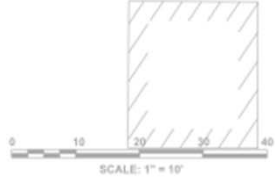
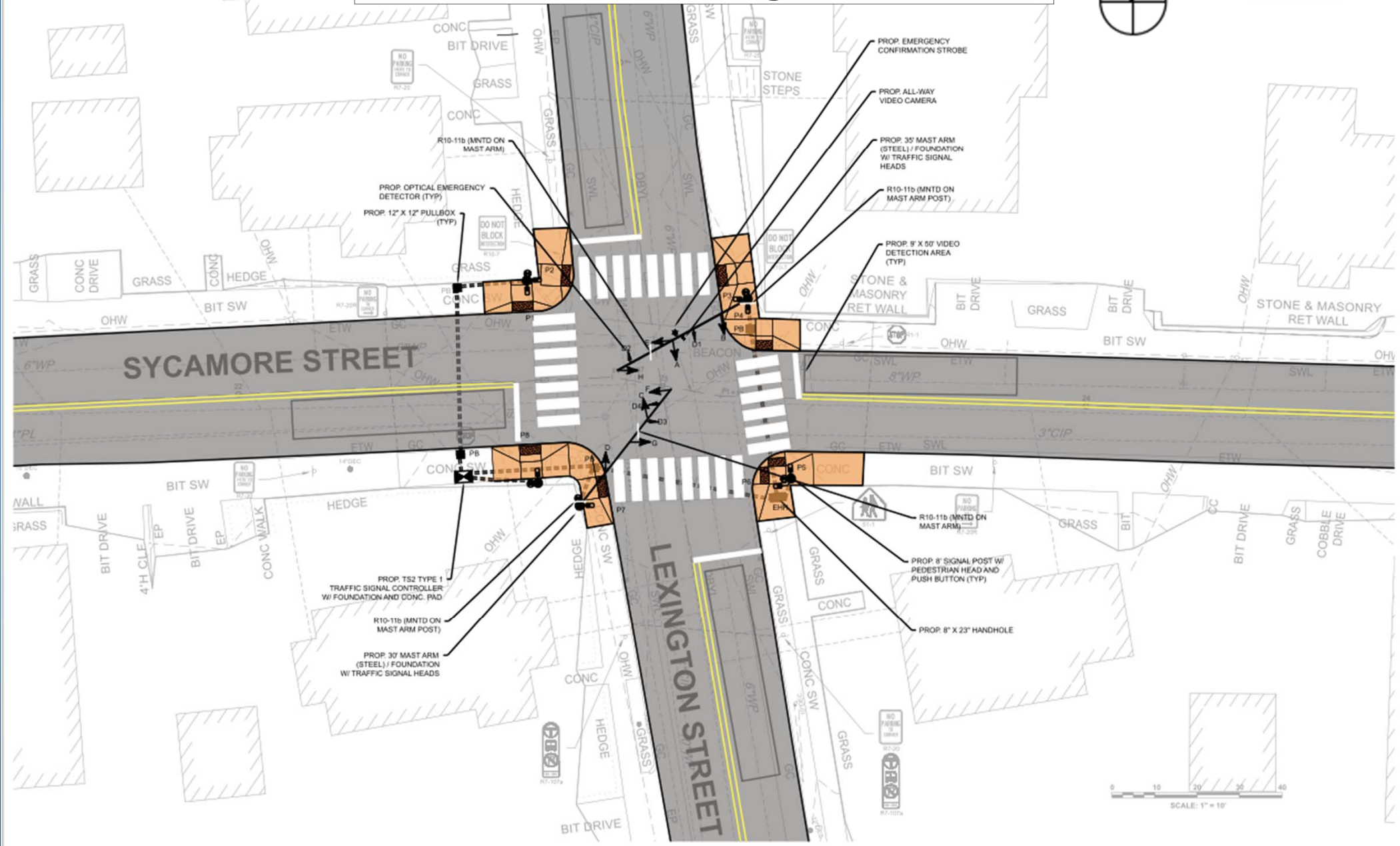
SYCAMORE STREET
N/F
SYCAMORE STREET
CONDOMINIUM

65-67 LEXINGTON STREET
N/F
JANE H. & SOPHIE P. AZAROWICZ
CERT.160536
PID 28-84

70 LEXINGTON STREET
N/F
MARSHA P. CORWIN AND LEW
H. & CURTIS G. WOOLFREY
BOOK 51168, PAGE 307
PID 28-171

0 10 20 30 40
SCALE: 1" = 10'

Intersection Signal Plan



Next Steps

- Perform soil borings for mast arm post foundations
- Prepare final design plans
- Prepare specifications and cost estimate



Questions?



TOWN OF BELMONT



BSC GROUP

Intersection Safety Analysis

Lexington Street at Sycamore Street Crash Summary 2012 - 2018

