



# Acton Town Center Planning

## Kelley's Corner Improvement Initiative

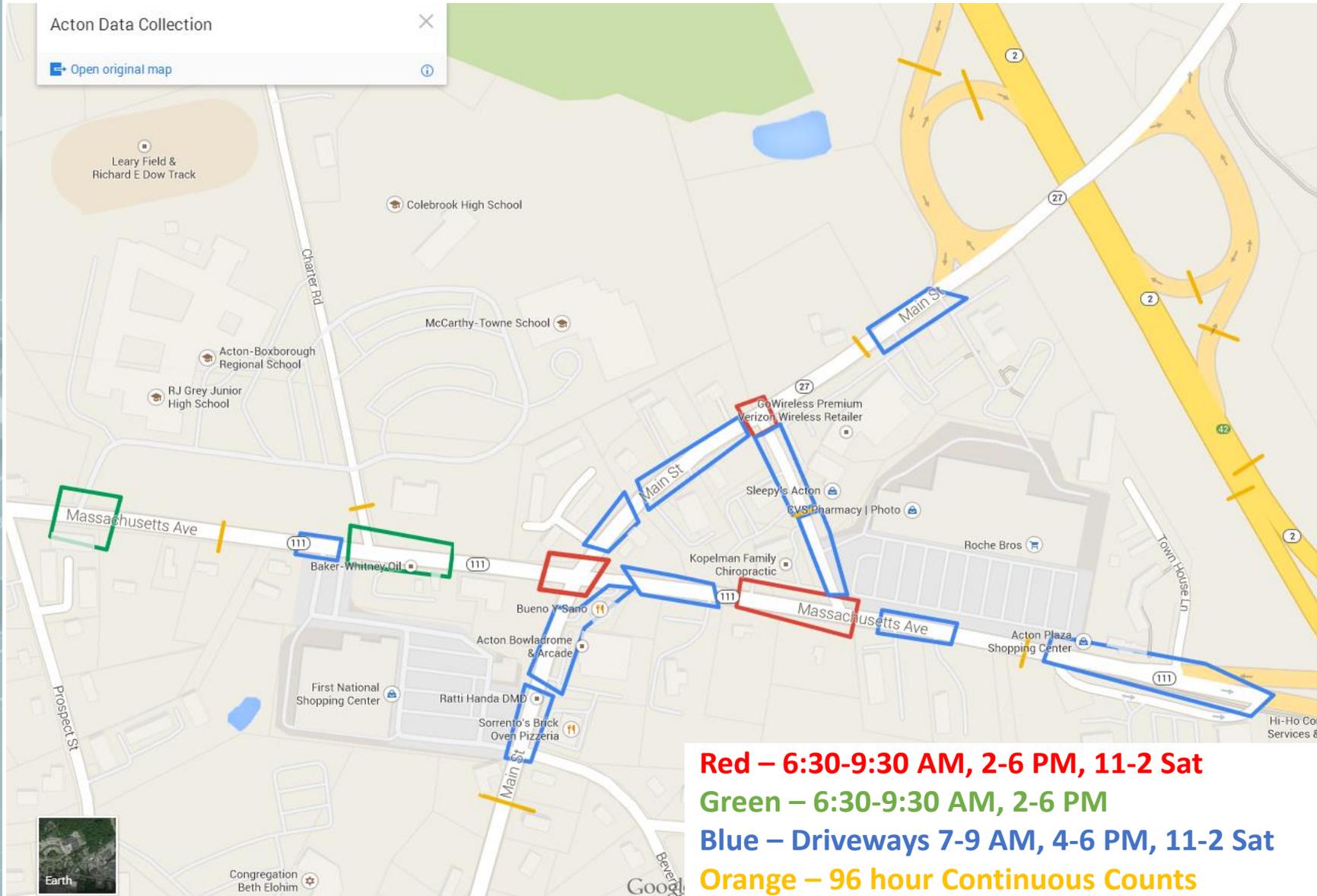
An aerial photograph of a city street grid, showing various streets and building footprints, is visible on the left side of the slide. The image is semi-transparent and serves as a background element.

# Infrastructure Existing Conditions

# Progress

- **Successfully Completed Extensive Data Collection Program**  
All Data Received as of 5/9/2014
- **Coordinated with Town DPW/Engineering & Planning Staff**  
Obtained Base Data/Historic Reports/Infrastructure Assessments
- **Site walk with Town Staff**  
Identified Issues/Concerns
- **Data Analysis On-going**  
Preliminary Findings to be discussed

# Data Collection



# Coordination

- **Record Plan Information**
  - **New Sewer 2002, additional capacity to support higher density**
  - **“Tired” Drainage System**
- **ADA Compliance**
- **Desire to Bury Utilities**

# Coordination

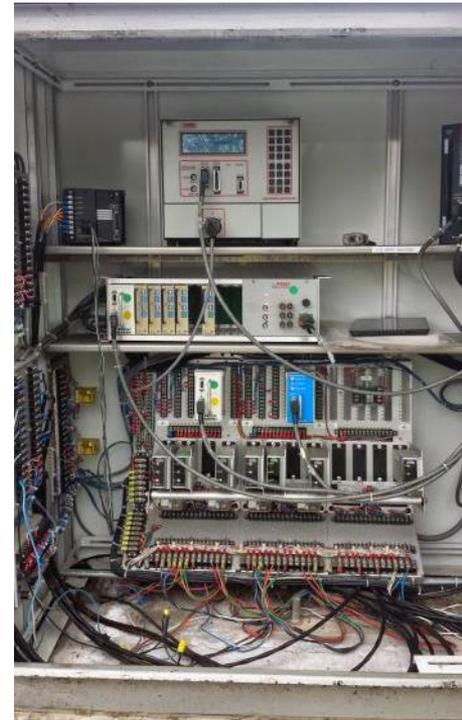


# Coordination

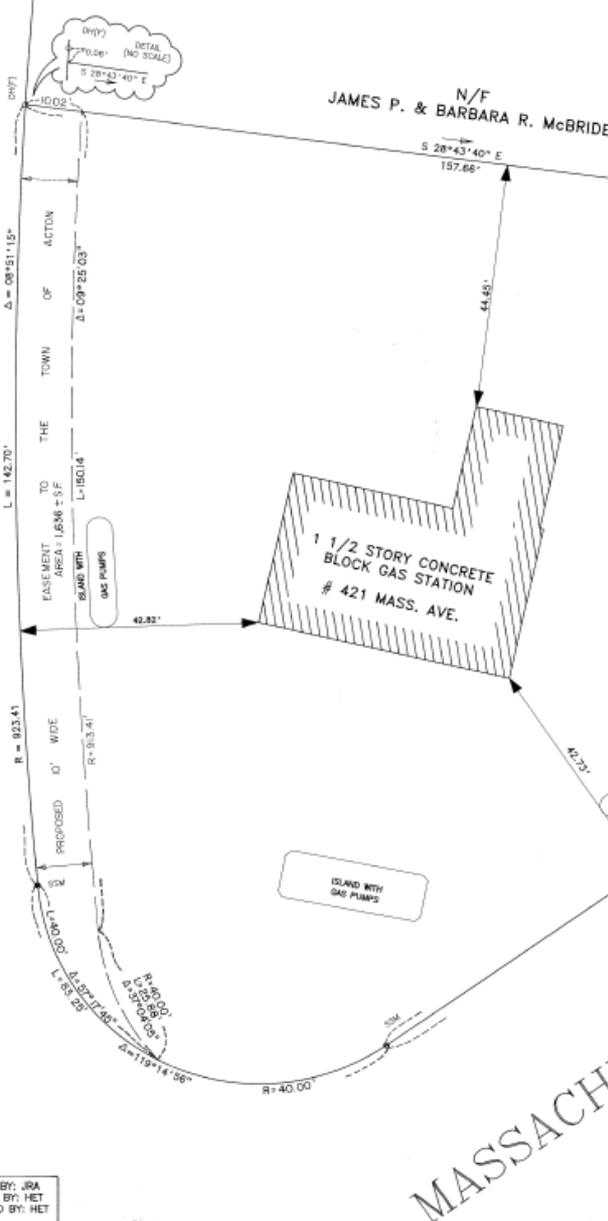


# Signal Equipment

- Single Time of Day Plan
  - No alteration based on AM/PM/School Patterns
- Equipment Operating as Intended
  - One Pre-emption Detector not functioning
- Visibility
  - Some Vehicles Not Responding to Left Arrows
- Compliance
  - System/Intersection does not meet MUTCD or ADA Compliance



**MAIN STREET**  
( ROADS # 27 )  
( 50' WIDE , 1953 COUNTY LAYOUT )

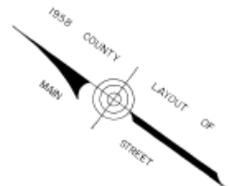


THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEEDS REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF THE PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN ASSESSOR'S RECORDS.

I CERTIFY THAT THIS PLAN SHOWS THE PROPERTY LINES THAT ARE THE LINES OF EXISTING OWNERSHIPS, AND THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR FOR NEW WAYS ARE SHOWN.  
 \_\_\_\_\_ PROFESSIONAL LAND SURVEYOR  
 DATE: June 15, 1993

I CERTIFY THAT THE PREPARATION OF THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS, AS REVISED THROUGH JANUARY 12, 1988.  
 \_\_\_\_\_ PROFESSIONAL LAND SURVEYOR  
 DATE: June 15, 1993

Middlesex Registry of Deeds,  
 Southern District  
 Cambridge, Massachusetts  
 Plan No. 436 of 1994  
 Rec'd 5-18-1994  
 at 10:58 am Doc No. 430  
 Rec'd, Bk. 24530 Page 44  
 Alistair \_\_\_\_\_  
 Registrar



- LEGEND:  
 SYMBOLS AND ABBREVIATIONS SHOWN ON THIS PLAN.
- DH(F) ○ DRILL HOLE, FOUND
  - SSM ● STEEL SURVEY MARKER
  - I.P.(F) ■ IRON PIPE, FOUND
  - M.H.(F) ■ MASSACHUSETTS HIGHWAY BOUND, FOUND
  - N/F ■ NOW OR FORMERLY



PLAN OF LAND IN  
**ACTON, MASS.**  
 PREPARED FOR: SUN REFINING & MARKETING COMPANY  
 SCALE: 1" = 10' DATE: JUNE 15, 1993  
 SCHOFIELD BROTHERS  
 PROFESSIONAL ENGINEERS & PROFESSIONAL LAND SURVEYORS  
 1071 WORCESTER ROAD, FRAMINGHAM, MASS. 01701  
 COPYRIGHT 1993, BY SCHOFIELD BROTHERS OF NEW ENGLAND, INC.



SEE PLAN BY SCHOFIELD BROTHERS, INC.  
 DATED SEPTEMBER 27, 1984.

RESEARCH BY: KDT  
 FIELD CHIEF: KDT  
 COMPUTED BY: HET  
 DRAFTED BY: JRA  
 CHECKED BY: HET  
 APPROVED BY: HET

# Traffic Background

- **Known Development Projects**
  - **Next Generation Children's Center**
  - **CVS**
- **Growth Rate 0.6% annual – CTPS**
- **Pertinent Studies**
  - **Hayward Road/ Main Street Intersection Study**
  - **Route 27 Corridor Study**

# Next Generation Children's Center



Next Generation  
Children's Centers

# Next Generation Children's Center

- **Proposed 22,000 SF Childcare Center**
- **Rejected by Town in 2009**
- **Currently in Litigation**
- **Upwards of 228 Peak Hour Trips (142 per NGCC Empirical Data)**

# CVS



# CVS

- **Redevelopment of Acton Tire Site**
- **Will Utilize Shared Driveway with TD Bank**
- **Recommends Signalizing Shared Site Driveway with Massachusetts Ave/Connector Road**
- **Upwards of 74 Peak Hour Trips**

# Pertinent Studies

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Corridor Study

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## *Route 27 (Main Street) Corridor Study*

Route 2 to Brook Street

Acton,  
Massachusetts

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Prepared for Town of Acton  
Acton, Massachusetts

Prepared by **VHB**/Vanasse Hangen Brustlin, Inc.  
Watertown, Massachusetts

August 1, 2001



## **Hayward Road/Main Street (Route 27) Intersection Study**

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# FINAL REPORT

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*Prepared for*  
**Town of Acton, Massachusetts**

*Prepared by*  
**Howard/Stein-Hudson Associates, Inc.**

**January 24, 2008**



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CREATIVE SOLUTIONS  
EFFECTIVE PARTNERING

# Pertinent Studies

- **Hayward Road/Main Street Intersection Study - 2008**
  - **Focused on Geometric/Traffic Control Improvements at this location just North of the Kelley's Corner**

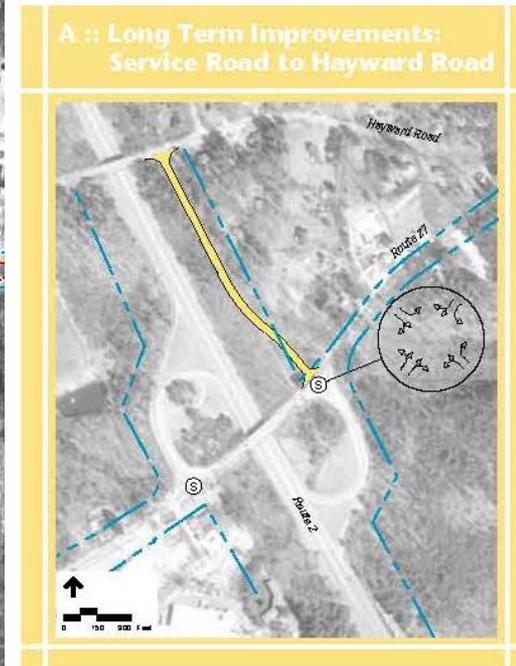
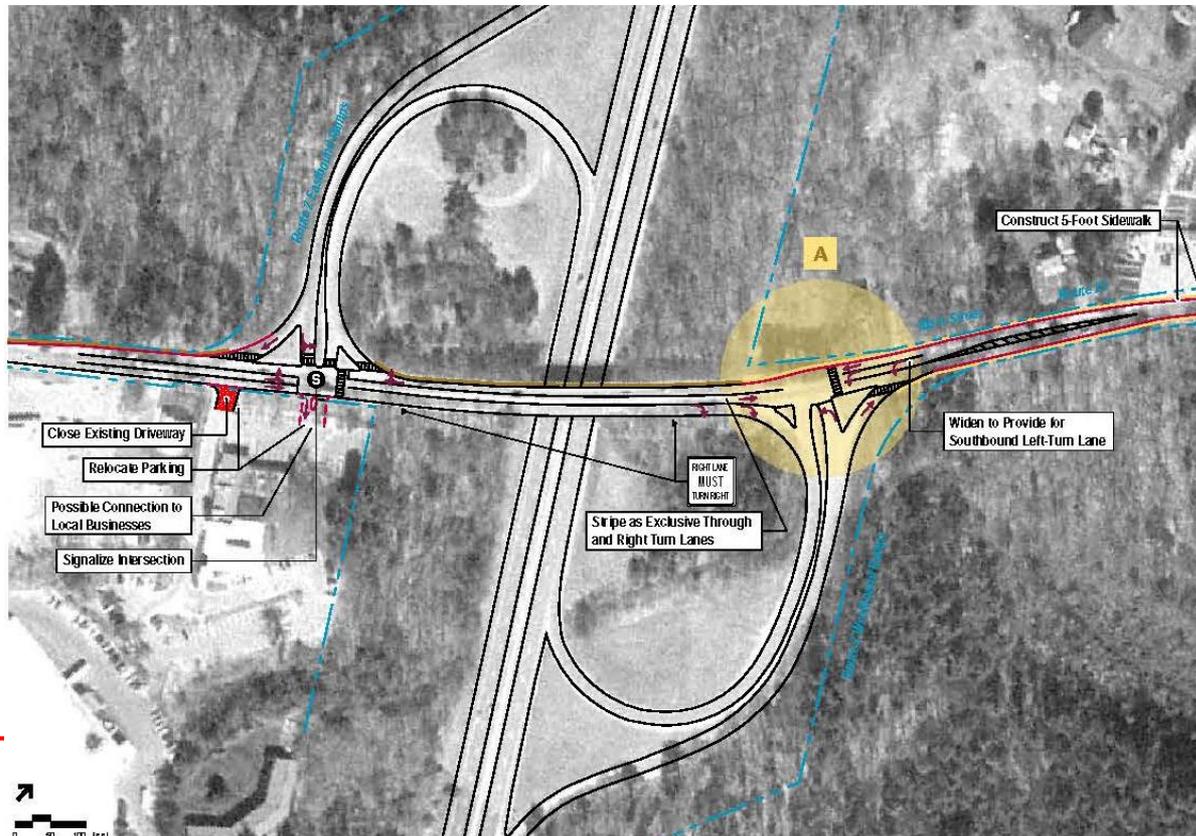
## Route 2 Ramps/Main Street

Significant safety and congestion problems are documented in this study. The intersection of the Route 2 Eastbound Ramps/Main Street is more problematic than that of the Route 2 Westbound Ramps. Some issues with the Route 2 Eastbound Ramps appear to stem from downstream congestion on Main Street south of the ramps.

Signals are warranted at the Route 2 Eastbound Ramps (see Appendix D for detail), and a signal at these ramps could meter the traffic coming from both the ramps and from Main Street southbound into Kelley's Corner. However, any improvements options at these intersections would need to be carefully studied and include both Kelley's Corner and the Public Safety Facility driveways, in order to ensure that fixing one problem does not create a series of new ones. A pair of roundabouts could work here as well. Improvements at the ramp junctions from Route 2 to Main Street will require coordination with MassHighway as well as their review and approval.

# Pertinent Studies

- **Route 27 (Main Street) Corridor Study - 2001**
  - Focused on Route 27 Improvements North of Route 2
  - Included Immediate, Short & Long Term Actions for Route 2 Ramps
  - Alternative Interchange Configuration – Diamond, Full Cloverleaf



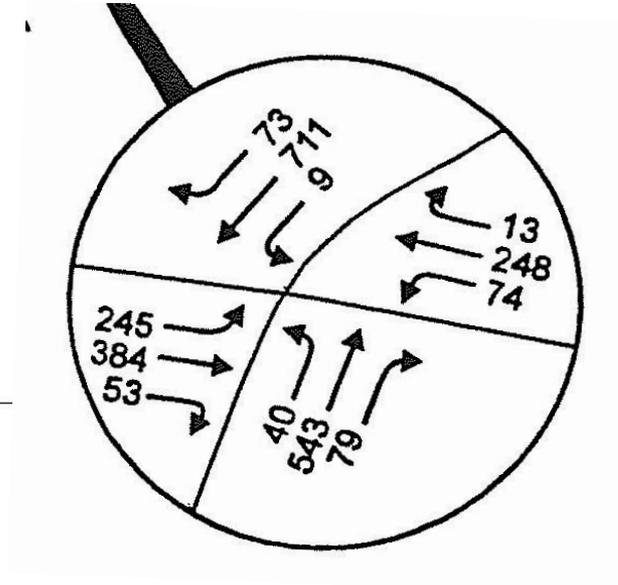
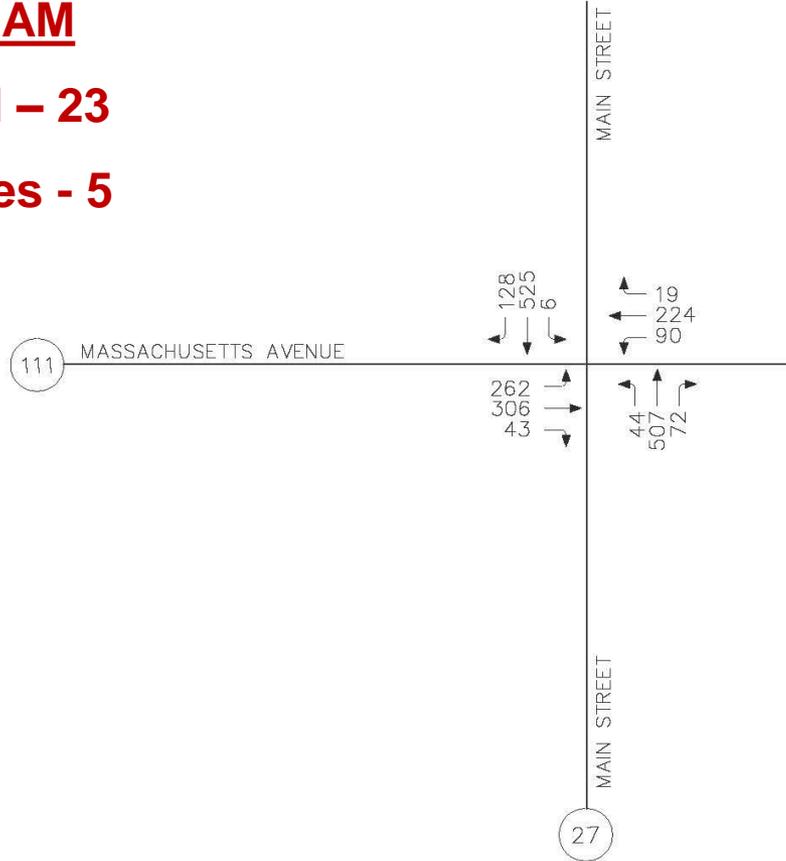
**TRAFFIC IMPACT AND ACCESS STUDY**

Kelly Corner Improvement Initiative, Acton, MA

**6:30-9 AM**

**Total Ped – 23**

**Total Bikes - 5**



**1996**

**10% Decrease**



NOT TO SCALE

Figure 2

2014 Existing  
Weekday AM (7:45- 8:45 AM)  
Peak Hour Traffic Volumes

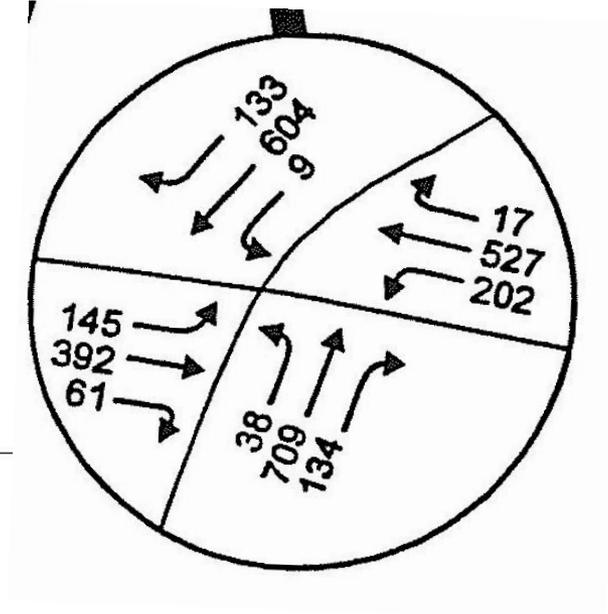
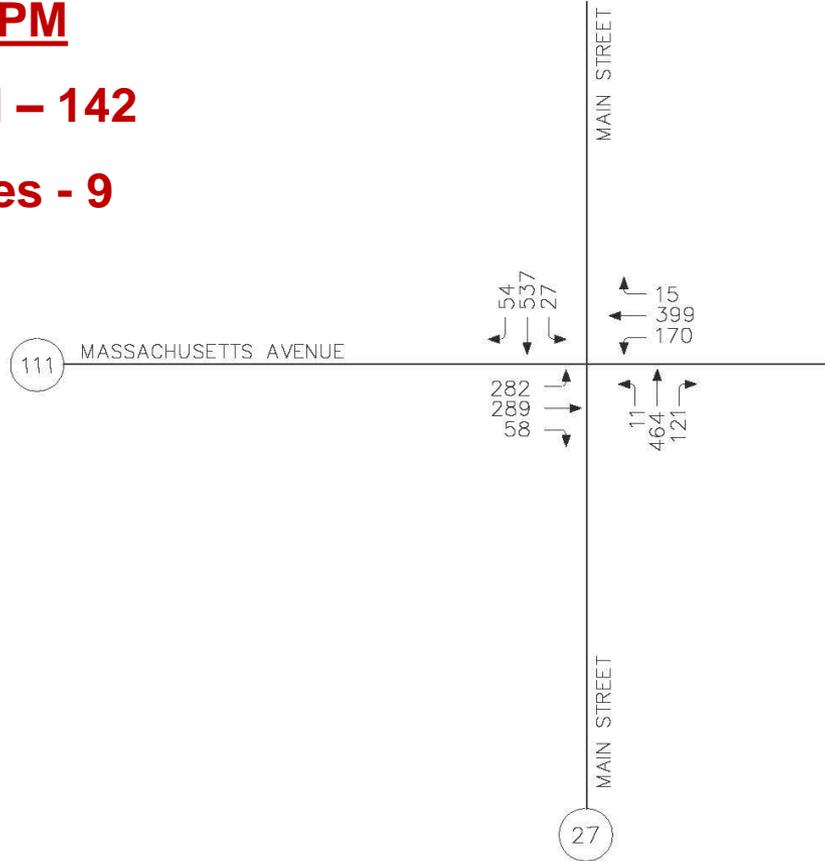
TRAFFIC IMPACT AND ACCESS STUDY

Kelly Corner Improvement Initiative, Acton, MA

**2-6 PM**

**Total Ped – 142**

**Total Bikes - 9**



**1996**

**18% Decrease**



NOT TO SCALE

Figure 2

2014 Existing  
Weekday PM (5:00-6:00 PM)  
Peak Hour Traffic Volumes

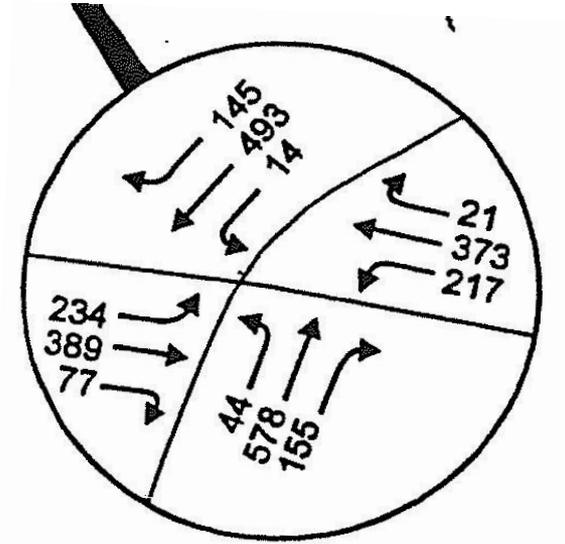
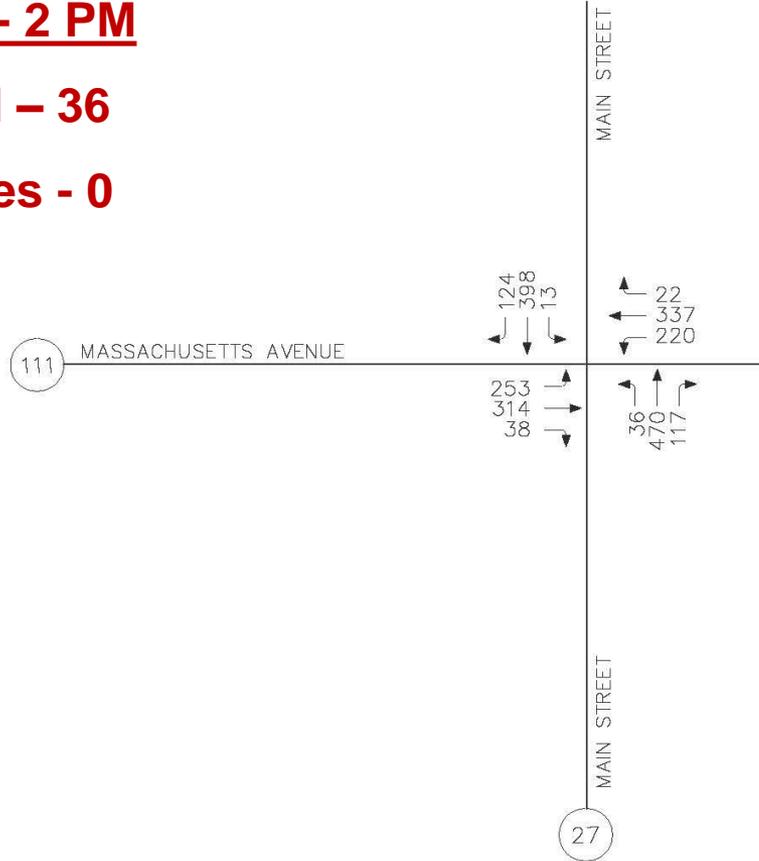
**TRAFFIC IMPACT AND ACCESS STUDY**

Kelly Corner Improvement Initiative, Acton, MA

**11 AM - 2 PM**

**Total Ped – 36**

**Total Bikes - 0**



**1996**

**15% Decrease**



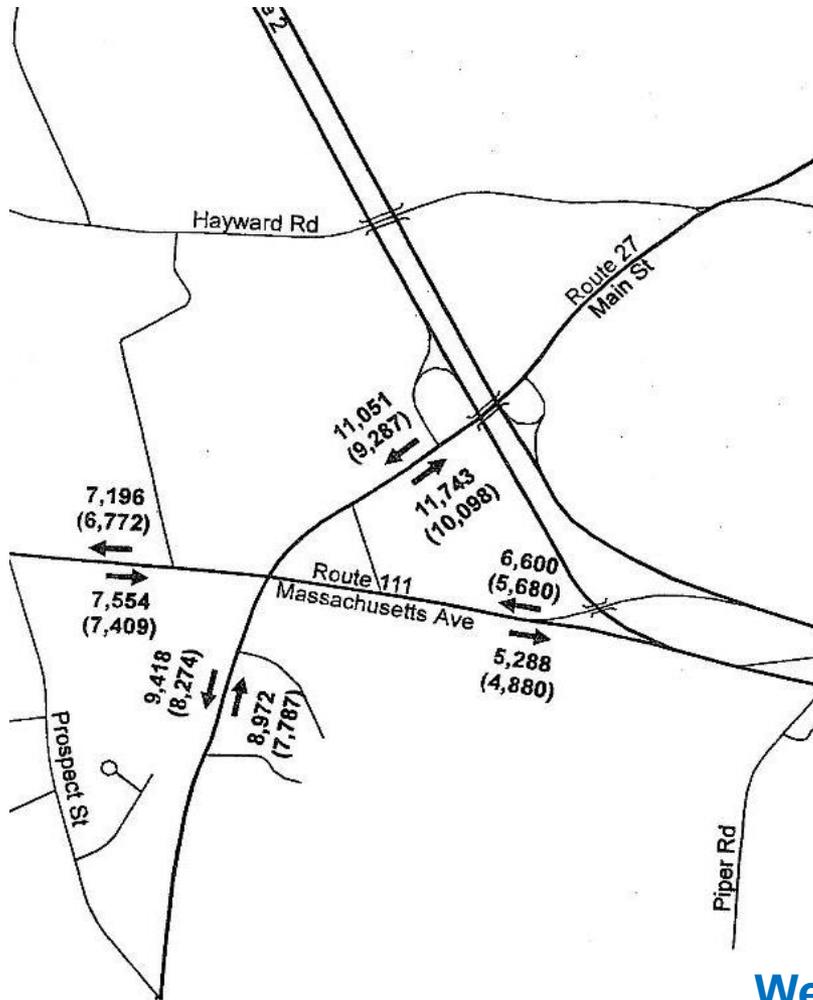
NOT TO SCALE

Figure 2

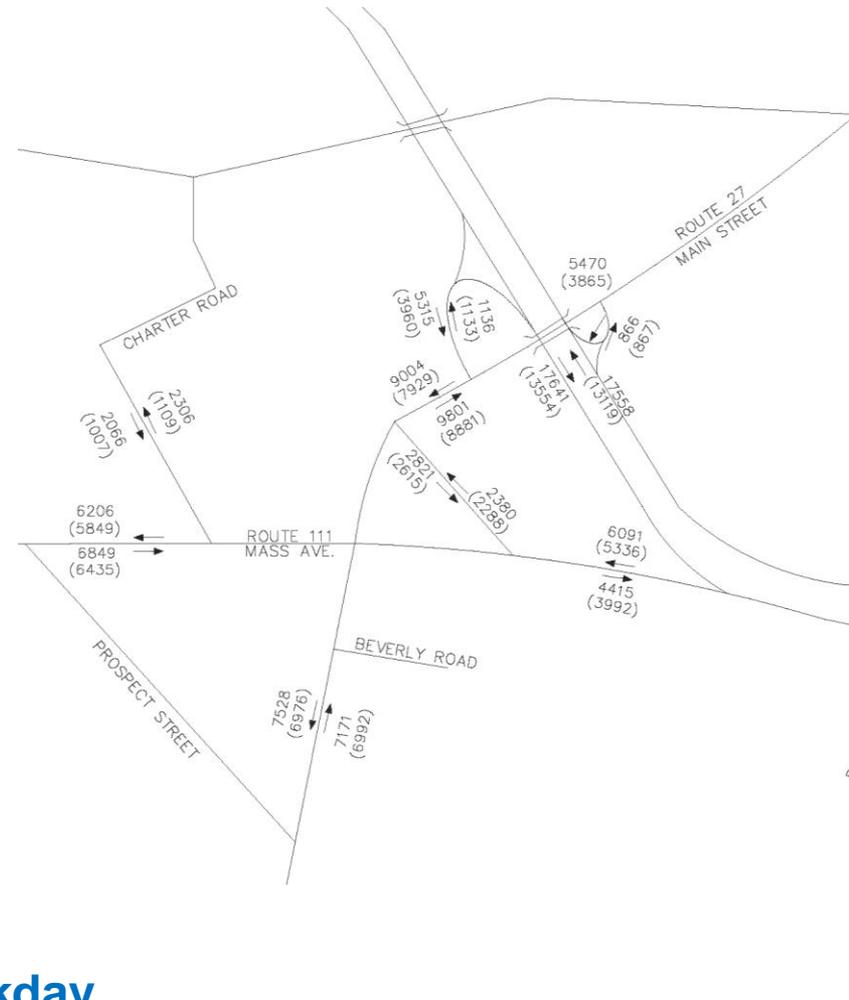
2014 Existing  
Saturday Mid (11:15 AM-12:15 PM)  
Peak Hour Traffic Volumes

# Data

- Traffic approximately 15% lower than 1996 volumes



1996



Weekday  
(Saturday)

2014

# Crash History

Location	Number of Collisions		Severity <sup>a</sup>				Collision Type <sup>b</sup>						Percent During	
	Total	Average per Year	Crash Rate <sup>c</sup>	PD	PI	F	CM	RE	HO	FO	Ped	Other	Commuter Peak <sup>d</sup>	Wet/Icy Conditions
<b>MassDOT (2009-2011)</b>														
Massachusetts Avenue (Route 111) at Main Street (Route 27)	20	6.67	0.62	17	3		11	4	2		1	2	20%	30%

Source: MassDOT Database (2009-2011).

<sup>a</sup>PD = property damage only; PI = personal injury; F = fatality.

<sup>b</sup>CM = cross movement/angle; RE = rear end; HO = head on; FO = fixed object; Ped = pedestrian.

<sup>c</sup>Measured in crashes per million entering vehicles.

<sup>d</sup>Percent of vehicle collisions that occurred during the weekday AM and weekday PM commuter peak periods.

- **Awaiting Local Crash Reports**

# Initial Operational Assessment

