Traffic & Safety Improvements on Hayden Rowe Street

Town of Hopkinton

February 15, 2017

WORLDTECH ENGINEERING

- ➢ Project Need

- ➢ Project History

- ➢ Existing Conditions

- ➢ Crash History

- ➢ Potential Improvements

- ➢ **Hear <u>your</u> concerns**

- Safety Concerns

- Vehicle Speeds

- Operational Improvements

- School Traffic – Existing and Future

- Local and Through Traffic

PROJECT HISTORY

➢ **2014 Educational Complex Study & Concepts**

➢ **2015 Early Elementary School Study**

➢ **Current Phase**

  ➢ **Extend study limits – Grove Street to Milford Town Line**

  ➢ **Data Collection**

  ➢ **Public Outreach**

  ➢ **Operational analysis of key intersections**

  ➢ **Concept development**

WORLDTECH
ENGINEERING

STUDY AREA
Hayden Rowe Street
Grove Street to Milford Town Line

135

WEST MAIN STREET

GROVE STREET

85

HAYDEN ROWE STREET

MIDDLE SCHOOL & HIGH SCHOOL

EMC PARK

HOPKINS SCHOOL

PROPOSED ELEMENTARY SCHOOL

CHAMBERLAIN STREET

WATER FRESH FARM

TERESA ROAD

CHESTNUT STREET

CORNELL'S

GRANITE STREET

COLLEGE STREET

85

Legend:
- Project Corridor
- Study Intersection (Signalized)
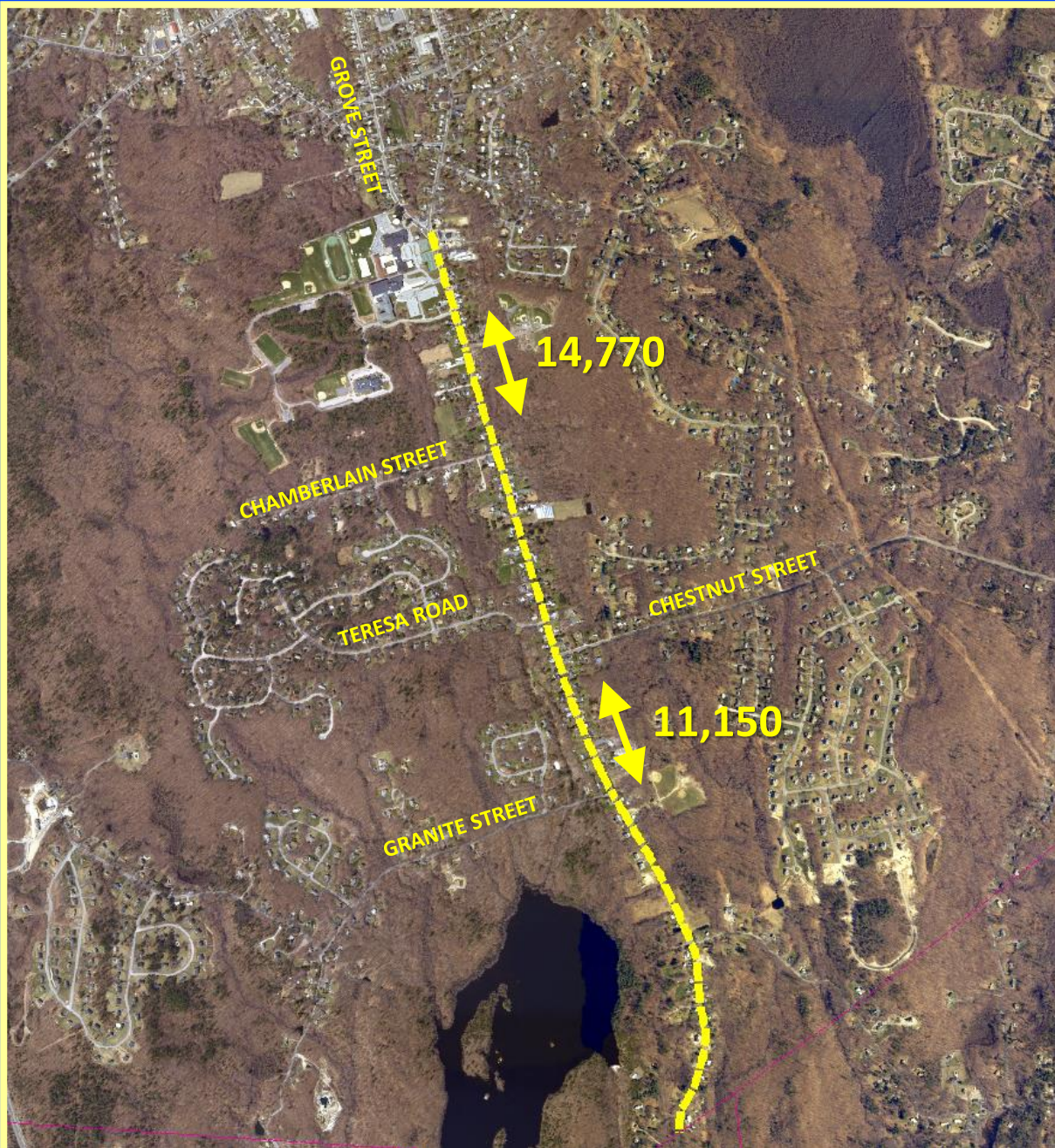- Study Intersection (Unsignalized)

TRAFFIC VOLUMES
Average Daily Traffic

➢ **Minor Arterial roadway**

➢ **Town jurisdiction**

➢ **Width - 25 to 40 ft**
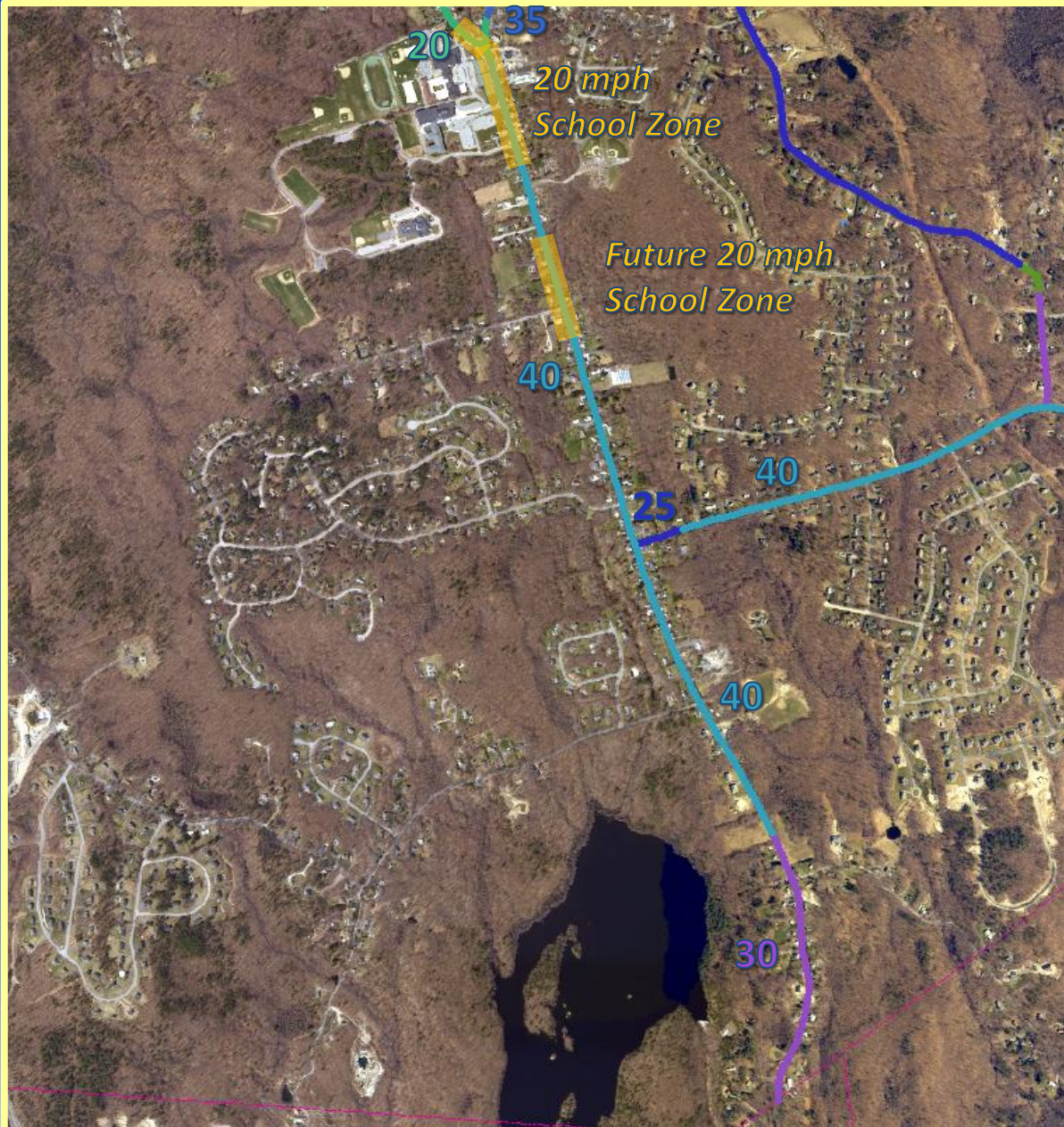
➢ **Right of Way - 40 to 60 ft**

VEHICLE SPEEDS

Posted Speed

- ➤ **MassDOT approved Special Speed Regulations**

VEHICLE SPEEDS
85th Percentile Speed

CRASH HISTORY
Severe Pedestrian/ Bicycle Crashes

Pedestrian injured on sidewalk - 2009

Family injured in crosswalk - 2016

Cyclist killed - 2013

GROVE STREET

CHAMBERLAIN STREET

TERESA ROAD

CHESTNUT STREET

GRANITE STREET
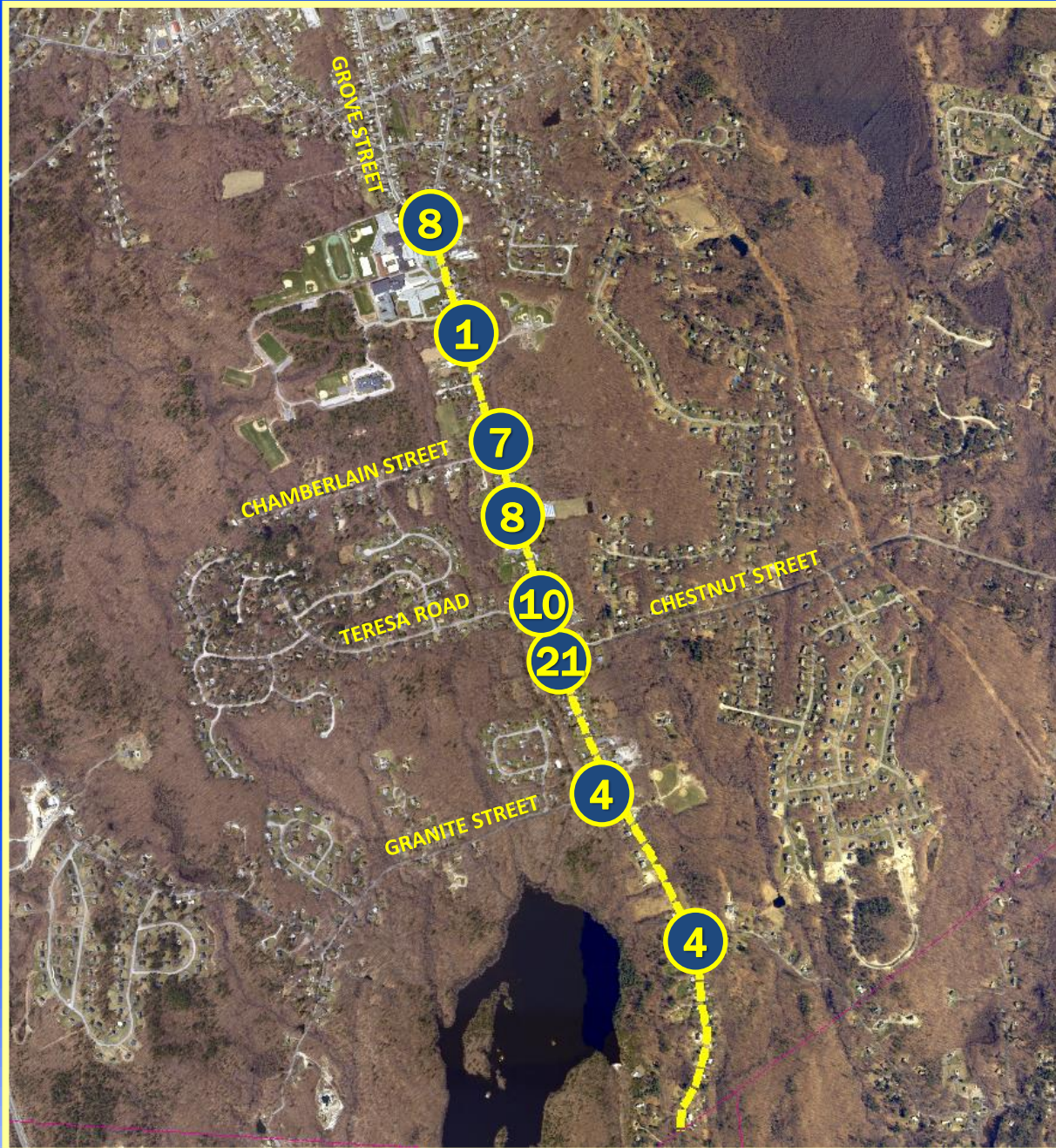
CRASH HISTORY
MassDOT Reported Crashes 2010-2014

➢ **63 crashes in five years**

➢ **23 (37%) - <u>young drivers</u>**

➢ **13 (21%) with injuries**

➢ **One fatality**

➢ **One bicycle crash**

➢ **No pedestrian crashes**

Contributing Factors

➢ **Speed**

➢ **Limited Sight Distance**

➢ **Traffic Congestion**

➢ **Driver Inexperience**

"The combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users" (*ITE Journal*, July 1997)

"An attempt to strike a balance between vehicular traffic and everyone else who uses the street" (*Slow Down, You're Going Too Fast! The Community Guide to Traffic Calming*, Public Technology, Inc., 1998)

TYPES OF TRAFFIC CALMING

➢ **Vertical Deflection (Speed Humps, Raised Intersections)**

➢ **Horizontal Deflection (Chicanes , Chokers, Roundabouts)**
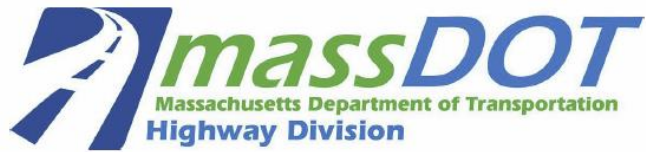
➢ **Narrowings**

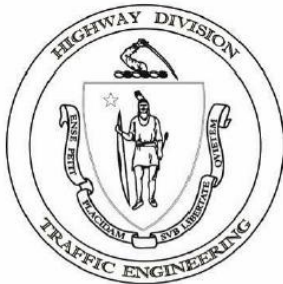➢ **Non-Physical Measures**

Traffic calming on major streets

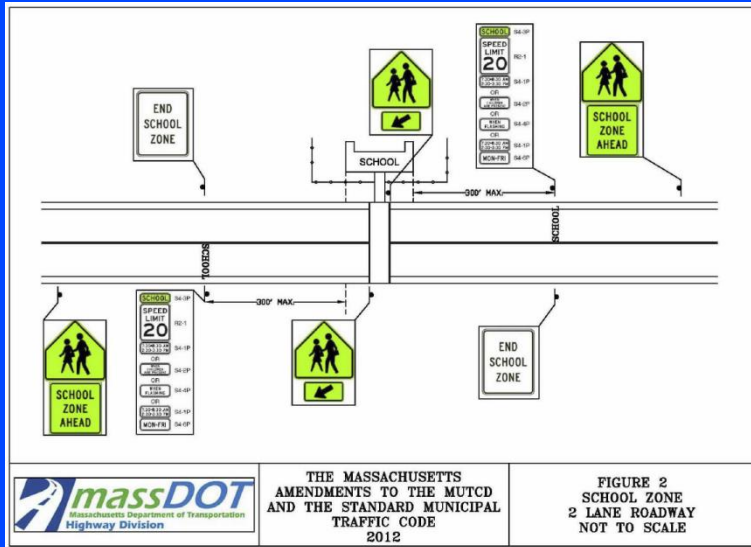| Traffic calming device	Major arterial	Minor arterial	Major collector	Neighborhood collector
Roundabouts	Yes	Yes	Yes	Yes
Traffic circles	No	No	No	Yes
Rasied crosswalks	No	No	Yes	Yes
Curb extensions	No	Yes	Yes	Yes
Parking bays	Yes	Yes	Yes	Yes
Chicanes	No	Yes	Yes	Yes
Street closure	No	No	No	No
Half diverter	No	No	No	No
Diagonal diverter	No	No	No	No
Star diverter	No	No	No	No
Raised median	Yes	Yes	Yes	Yes
Pavement surface modifcation	Yes	Yes	Yes	Yes
Speed humps	No	No	No	No
Speed tables	No	No	No	Yes
Landscaped roadway	Yes	Yes	Yes	Yes
Midblock neckdown	No	No	Yes	Yes
Angled slow point with median	No	No	Yes	Yes

PROCEDURES FOR SPEED ZONING

ON

STATE AND MUNICIPAL ROADWAYS

2012

➢ **Must be approved by MassDOT**

➢ **Requires detailed engineering study**

➢ **Based on existing 85th Percentile speed**

➢ **Cannot post a Speed Limit sign without following this procedure**

➢ **Advantageous to slow traffic prior to executing study.**

SCHOOL ZONES

THE MASSACHUSETTS AMENDMENTS TO THE MUTCD AND THE STANDARD MUNICIPAL TRAFFIC CODE 2012

FIGURE 2
SCHOOL ZONE
2 LANE ROADWAY
NOT TO SCALE

- ➢ **May be posted up to 300 ft from a school building (Grades 1-8 only)**

- ➢ **Students must have access to a marked, unsignalized crosswalk**

- ➢ **20 mph speed limit only in effect when students are present**

POTENTIAL IMPROVEMENTS
Short Term Measures

**Radar
Feedback Signs**

**Rapid Flashing
Beacons**

**Signs &
Pavement Markings**

Curb Extension

Signalization/Turn Lanes

Medians

➤ **May often require roadway widening**

➤ **Requires sufficient roadway width**

POTENTIAL IMPROVEMENTS
Long Term Capital Improvements

Signalization

- ➢ **Meets Signal Warrants**
- ➢ **Reduces angle crashes**
- ➢ **Improves operations**
- ➢ **Provide Gaps**
- ➢ **Requires minor widening for turn lanes**
- ➢ **Opportunity for Median/ Gateway treatment**

Current Phase

- ➤ **Data Collection**
- ➤ **Public Workshop #1**
- ➤ **Conceptual Design**
- ➤ **Public Workshop #2**
- ➤ **Refine Concept**
- ➤ **Cost Estimates**
- ➤ **Town Meeting**

Next Phase

- ➤ **Topographic Survey**
- ➤ **Preliminary Design**
- ➤ **Public Workshop #3**
- ➤ **Final Design**
- ➤ **Project Award and Construction**