



**Stow Lower Village Traffic Study**  
Town of Stow, Massachusetts

*Alternative 2 - Roundabout/One-Way Pair*  
Figure 3-3



Fay, Spofford & Thorndike, LLC  
Engineers • Planners • Scientists

Schematic Diagram:  
Not to Scale





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*Roundabout Concept - Pomositticut Road at Great Road Aerial View*





Relocated  
Gardner Road

Enlarged Town  
Common

One-Way Area Concept

# Alternative 2

Roundabout/One-way Pair

## Pros

- ❑ Slows through traffic – particularly westbound through roundabout
- ❑ Creates a significant westbound gateway
- ❑ Reduces Red Acre Road congestion through diversion
- ❑ Creates significant landscaping opportunities
- ❑ Addresses Pompositticut Road congestion
- ❑ Minimizes queuing during off-peak hours

## Cons

- ❑ Significant through traffic impacts; large truck operations
- ❑ One-way treatment requires land-takings at Stow Plaza & significant number of curb cut consolidations to be effective
- ❑ Peak hour congestion is likely at the roundabout; queues are not expected to be as long as with signalization
- ❑ Historic character impacts – continuity of Great Road
- ❑ Roundabouts not particularly pedestrian friendly, though medians provide some measure of safety
- ❑ Most costly of build alternatives



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Alternative 3 - Traffic Signal Control

Figure 3-4



# Alternative 3

## Traffic Signal Control

### Pros

- Stow Plaza east driveway and Pompositticut Road would have better access to Great Road
- Creates significant landscaping opportunities, particularly if Stow Plaza east driveway is not relocated per Alternative 1
- Eases pedestrian crossings of Great Road at signal locations
- Creates gaps for side street traffic

### Cons

- Potential Stow Plaza right turn lane adversely affects Town Common (w/o lane a 1/4 mile backup occurs in the PM peak)
- Through traffic impacts most significant of Build alternatives
- Widening needed at Pompositticut Road to accommodate lefts and possibly at Stow Plaza East driveway to accommodate rights
- Signals are not rural in character; westbound visibility of Pompositticut signals is a design issue
- Signals may increase rear end crashes

# Peak Hour Traffic Operations Summary By Location west to east

▮ *Great Road at Bradley Road/Deerfield Lane*

▮ *Great Road at Elmridge Road*

▮ *Great Road at Post Office Driveway*

▮ *Great Road at Pizza/Bank*

▮ *Great Road at Samuel Prescott Drive*

▮ *Great Road at Country Plaza Driveway*

Alternatives approximately the same (LOS E-F), except Alternative 3 signals may cause AM eastbound backups to these intersections and create westbound gaps at other times of the day

▮ *Great Road at West Plaza Driveway*

Alternatives approximately the same (LOS F), except Alternative 3 operates best during AM peak hour ; Alternative 2 operates best during the PM peak hour

# Peak Hour Traffic Operations Summary By Location west to east (Continued)

## ***Great Road at East Plaza Driveway***

Alternatives 2 and 3 are C-D in the AM; Alternative 1 is LOS F – worse than the No-Build; Alternatives 1 and 2 are LOS F in the PM, while Alternative 3 is an LOS B with through traffic queues

## ***Great Road at East Plaza Bank***

All alternatives approximately the same (LOS F), except signals block this intersection causing greater congestion than with Alternatives 1 and 2

## ***Great Road at Red Acre Road***

Alternatives approximately the same (LOS A-B), except No-Build roundabout provides an exit only to Red Acre Road

## ***Great Road at Pompositticut Road***

Alternatives 1 and No-Build at LOS F; roundabout may be congested eastbound in the AM and westbound in the PM; queues clear quicker in the roundabout than with traffic signal

## ***Great Road at White Pond Road***

Alternatives 1 and 2 at LOS E-F; Alternative 3 more congested due to queuing from Pompositticut traffic signal

# Next Steps

- Committee should review, discuss with abutters, residents, officials, and provide input as to consensus features
- FST will evaluate 'Preferred Alternative' for 2015 & Develop an Implementation Strategy
- FST Prepares final report incorporating Tech Memos

**Questions?**