

Christian K. Miller, AICP
City Planner
1051 Boston Post Road
Rye, New York 10580



Tel: (914) 967-7167
Fax: (914) 967-7185
E-mail: cmiller@ryeny.gov
<http://www.ryeny.gov>

CITY OF RYE

Department of Planning

Memorandum

To: Rye City Council

From: Christian K. Miller, AICP, City Planner

cc: Scott D. Pickup, City Manager
George Mottarella, P.E., City Engineer

Date: July 22, 2010

Subject: **Temporary Alternative Traffic Control on Purchase Street**

As an alternative control measure City staff is considering replacing existing traffic signals on Purchase Street at the Locust Avenue, Elm Place and Smith Street intersections with stop signs and other related sidewalk improvements. In August, the City will be conducting a test of this alternative traffic control concept by temporarily turning off the existing signals and installing temporary stop signs at these intersections. This memorandum provides background on the evolution of this concept, its benefits and details of the test.

Background

As part of the 2010 budget the City Council authorized \$165,000 to design and install a replacement traffic signal at the Purchase Street and Locust Avenue intersection. The design team has completed a detailed survey of the area, but has encountered challenges that are forcing a reconsideration of the original project.

The preliminary traffic signal design requires a new pole located on the east side of Purchase Street. The base of the pole will be approximately two feet in diameter. The concrete footing for the traffic signal pole would be ten or more feet below grade, which presents challenges given all of the all the underground utilities in the area. In addition, a large controller box and four pedestrian signal poles will be required for the project. All of this equipment will result in additional obstructions on already narrow sidewalks.

Temporary Alternative Traffic Control on Purchase Street

July 22, 2010

Page 2 of 3

Some of these challenges were identified in the 2009 Central Business District (CBD) Capital Planning and Streetscape Plan. As part of that plan the CBD Task Force suggested that stop signs be considered as an alternative traffic control for the Smith/Elm/Purchase intersection. The Task Force discussed conducting a test in 2010 of this concept to assess its effectiveness. City staff is expanding that test to include the Locust intersection as well.

Stop Sign Benefits

Every intersection has different characteristics. Each has different prevailing speeds, traffic volume, pedestrian activity, turning movement patterns, sight-line obstructions and other considerations. It's important to match the appropriate traffic control measure with the specific needs of the intersection. Just because traffic signals exist in a location does not mean that they should be replaced. Stop signs are not appropriate for every intersection in Rye, but have many benefits if applied in the CBD. Signals may have had benefits over forty-five years ago when they installed in the CBD, but less benefit today. Consider the following:

- Signals do not provide traffic flow benefits in a congested environment like Purchase Street. Traffic delays are caused by numerous conditions that signals do not address or in some cases aggravate. Pedestrian crossings delay traffic, parallel parking delays traffic, back-ups from the Purchase/BPR signal extends delays through the Locust intersection causing vehicle delays. Traffic signals will not improve these conditions.
- Signals with pedestrian phases will increase vehicle delays, frustrating both pedestrians and drivers. Many will activate the pedestrian phase and cross anyway given the short crossing distances in the CBD causing unnecessary vehicle delays.
- Traffic signals encourage speeding as drivers race to beat the red light.
- Stop signs will improve traffic flow. Currently, the biggest contributor to vehicle delays is from vehicles turning left from Purchase Street onto Smith or Locust. Stop signs will stop vehicles on Purchase Street allowing left turning movements and result in less delay.
- Stop signs will stop vehicles at the intersection allowing more opportunities for pedestrians to cross the street safely. Pedestrian and vehicle activity is high in the CBD, however pedestrian safety should be prioritized over facilitating traffic flow.
- There is little space on Purchase Street sidewalks to accommodate the multiple poles required for signalization of the intersections. Installing signals will further reduce already limited space for pedestrians.

Temporary Alternative Traffic Control on Purchase Street

July 22, 2010

Page 3 of 3

- Underground utilities will make installing new poles very challenging. More poles with significantly larger bases will be required for new signals.
- Signals are expensive to install, operate and maintain.

It is anticipated that stop signs will be an effective traffic control measure. Other intersections in Rye have comparable traffic and pedestrian characteristics and are not signalized, such as the Station Plaza Drive/Purchase Street intersection. Other area downtown communities such as Mamaroneck have no traffic control at pedestrian crossings and stop signs at intersections. These areas function efficiently and safely.

To further improve pedestrian safety, bump-outs (or sidewalk extensions) are proposed as part of the Locust/Purchase intersection design. Bump-outs would extend the curb and sidewalk area at the intersection. They allow the pedestrian to be more visible, improve sight distance at intersections for vehicles, reduce street crossing distances for pedestrians and prohibit vehicle encroachment into crosswalks. Because of their pedestrian safety benefits bump-outs are proposed for any new traffic control (i.e. stop sign or traffic signal) at the Locust/Purchase Intersection.

Alternative Traffic Control Test

It is not uncommon for traffic signals, particularly those installed many years ago to be removed. The Federal Highway Administration website discusses removing unwarranted traffic signals and recommends a implementing a test before removal.

The City's test will begin the week of August 9 after the annual sidewalk sale and last two or three weeks. Existing traffic signals will be either turned-off or set to a "flashing red". Temporary stop signs will be placed at the Locust and Smith/Elm intersections, including stop signs on Purchase Street. The existing "No Left Turn" restrictions at the Smith/Elm intersections will be preserved.

I look forward presenting the plan to the City Council at its July 26, 2010 meeting and addressing any questions.

Purchase Street Temporary Traffic Control

