

COMMONWEALTH OF MASSACHUSETTS
THE TRIAL COURT

MIDDLESEX, ss.

SUPERIOR COURT DEPARTMENT
CIVIL ACTION NO. 2008-00552

DAVID BERNSTEIN, KATHLEEN BERNSTEIN,)
JEFFREY PORTER, JILL PORTER, SUSAN)
REED, WILLIAM PETRI, ARLENE PETRI,)
TIMOTHY MARSTERS, L. HOWARD HARTLEY,)
MARCIA ANNE HARTLEY, RICHARD MIKELS,)
DEBORAH MIKELS, and MICHAEL BATE,)

Plaintiffs,)

v.)

WAYLAND PLANNING BOARD,)
WILLIAM STEINBERG, ALBERT I. MONTAGUE,)
JR., DANIEL MESNICK, KEVIN MURPHY,)
and LYNNE DUNBRACK, as members of the)
Wayland Planning Board, ANETTE LEWIS,)
as an associate member of the Wayland)
Planning Board, TOWN OF WAYLAND,)
WAYLAND BOARD OF SELECTMEN, AND)
WAYLAND BOARD OF ROAD COMMISSIONERS,)
and TWENTY WAYLAND, LLC,)

Defendants.)

AFFIDAVIT OF KEVIN R. DANDRADE, P.E., P.T.O.E.

I, Kevin R. Dandrade, upon my oath, depose and state as follows:

1. My name is Kevin R. Dandrade. My office address is TEC, 65 Glenn Street, Lawrence, Massachusetts 01843. TEC, Inc. is also known as The Engineering Corp. TEC, Inc. is engaged in the business of providing professional engineering and planning

services for public and private entities, ranging from transportation planning, traffic impact and access studies, roadway and traffic control design, municipal peer reviews, site planning and design, utility design, structural engineering, and construction inspections. I am a Principal and Senior Project Manager of TEC. I have 19 years of experience in traffic impact evaluations, municipal peer reviews, traffic corridor studies, traffic signal design, site design and utility engineering for numerous projects within New England. My expertise includes site layout, traffic impact and access studies, parking studies and layout, signal equipment layout and specifications, intricate coordinated traffic analyses, cost and quantity estimates, contract document preparation, traffic signal construction inspection, and field fine-tuning. I received a Bachelors of Science degree in Civil Engineering from the University of New Hampshire. I am a registered Professional Engineer in Massachusetts, New Hampshire, and Maine, and am a certified Professional Traffic Operations Engineer through the Transportation Professional Certification Board, Inc. I have been qualified by the court and testified in the matter of Demoulas Super Markets, Inc. v. Town of Raynham Planning Board and Walmart Real Estate Business Trust, Bristol Superior Court, Civil Docket #BRCV2005-00567.

2. In July, 2005, the Town of Wayland Highway Department

hired TEC to perform a review of zoning-level traffic information related to the proposed Wayland Town Center Project (the "Project") as part of a Mixed Use Overlay District (MUOD) zoning overlay. In subsequent years, the Town's Planning Department, on behalf of the Planning Board (the "Board") engaged the services of TEC to perform peer review traffic engineering services relative to Twenty Wayland, LLC's application for a master special permit, special permits and site plan approvals for a mixed-use development at 400-440 Boston Post Road, Wayland, Massachusetts consisting of 372,500 square feet of commercial, residential and municipal building space and related infrastructure known as the Wayland Town Center Project. I was the engineer assigned by TEC to perform such services relative to the Project. The peer review traffic engineering services performed by TEC relative to the Project included a review of the off-site traffic impacts of the Project on public ways in the Town of Wayland including Glezen Lane. TEC reviewed the trip generation potential from the site, the potential for variations in trip distribution onto the adjacent municipal street system, intersection capacity, and mitigation measures and other traffic control changes.

3. Soon after David Bernstein and 12 other people residing on Glezen Lane appealed the Board's decision to issue special

permits and site plan approvals for the Project in February, 2008, the Board further engaged the services of TEC to develop proposed traffic control measures relative to the anticipated Project related traffic impacts on Glezen Lane. I was the engineer assigned by TEC to perform such services relative to the appeal. In that regard, TEC was asked to collect certain baseline traffic data along Glezen Lane and participate in discussions with town staff, the appellants, and the appellant's traffic engineer, TEPP, LLC. Some of the Glezen Lane traffic control measures TEC recommended are included in settlement agreement relative to the appeal, including limited time-of-day turn restrictions at the intersection of Route 27 / Glezen Lane (to divert potential cut-through motorists) and several speed tables (to calm or slow traffic).

4. I know the terms of the settlement of the appeal related to traffic. When the traffic thresholds which, once reached, require that certain traffic control measures be taken on Glezen Lane were established, no buildings on the Project site were constructed or occupied. Although there was a documented potential for cut-through traffic along Glezen Lane in my opinions expressed during the permitting process, the actual impacts of the Project could not be better understood until the development was active and new patrons and residents frequented the Project. Town staff and Mr. David Bernstein

obtained and summarized the traffic data on Glezen Lane that lead to the documented exceedances of the traffic-related thresholds. TEC will be reviewing this historic data in the near future.

5. At present, certificates of occupancy have been issued for approximately 80% of the permitted non-residential building space in the Project. In my opinion, this amount of development of the Project is sufficient to provide much more reliable information about the vehicular traffic generated by the Project and its impact on Glezen Lane. TEC's April 6, 2015 technical memorandum summarizes recently collected traffic data and updated calculations for the full build-out of the project to show 31% to 35% lower trip generation potential during the weekday evening and Saturday midday peak hours, respectively. Furthermore, the actual trip distribution of the Project shows less traffic using the Route 27 access point when compared to the original traffic projections.

6. In my opinion, in order to perform a study of the Project-related traffic impact on Glezen Lane, a 60-day study period is necessary. Additionally, to provide the most accurate data associated with the Project's purported cut-through trips, it is my opinion that all existing motor vehicle turn restrictions at the intersection of Old Sudbury Road (Route

27) and Glezen Lane must be removed during the 60-day study period in order to perform an accurate study. In my opinion, this time period will be sufficient to allow motorists to redistribute back to Glezen Lane as they seek the most efficient travel patterns. The right turn restriction from Route 27 northbound onto Glezen Lane and the left turn restriction from Glezen Lane westbound onto Route 27 southbound must be removed during this period to more accurately assess the actual potential for trips between Glezen Lane and the Project. With data collection prior to the 60th day following the removal of the turn restrictions, I estimate that TEC could produce a written report of the findings within another 30 days.

7. TEC provided prior guidance to the town staff during the appeal period and subsequent discussions that the implementation of the proposed geometric change to the intersection of Route 27/ Glezen Lane (see Item G.4. on page 8 and Exhibit 4 of the Judgment on Count II of the Plaintiff's Amended Complaint) would result in a need for fire trucks to utilize all travel lanes on Route 27 and Glezen Lane to negotiate a turn from Route 27 northbound to Glezen Lane eastbound. In my opinion, this geometric change will result in increased response time and potentially unsafe operating conditions for sweeping turns into opposing traffic by the emergency vehicles.

8. I have reviewed the Affidavit of Kim Hazarvartian dated

September 4, 2015 and the exhibits attached to it which were submitted with the Plaintiffs' Motion for Reconsideration or, alternatively, for a Stay in the above-captioned case. Having done so, I make the following statements and offer the following opinions in response to the statements made and opinions expressed by Mr. Hazarvartian in his affidavit:

a.) I discussed the elements of TEPP LLC's recommended neighborhood mitigation measures with Mr. Hazarvartian on several occasions during the Town's settlement discussions. However, Mr. Hazarvartian's recommendations were significantly focused on the redirection and redistribution of both existing and proposed traffic in an effort to potentially reduce and calm traffic along his client's street, Glezen Lane. Although several recommendations were appropriate in type (speed humps or peak hour turn restrictions), I did not agree with the scale of the proposed changes. For example, I disagreed with the number of proposed speed humps and recommended only three when compared to Mr. Hazarvartian's proposal of thirteen devices.

b.) TEC, Inc. advised the Town in March, 2008 that there are potential safety and emergency vehicle access concerns associated with the acute redefinition of the intersection of Old Sudbury Road (Route 27) and Glezen Lane. Item 10 in TEC's "Summary of Mitigation Proposal" dated March 18, 2008 provides guidance that the curb changes to the Glezen Lane intersection

associated with the Old Sudbury Road right-turn restriction are "possible", but reminded Town staff that "it still needs to consider emergency vehicle access."

c.) The preliminary figure that TEC prepared with a print date of October 10, 2008 was meant to be a representation of the TEPP, LLC (Plaintiffs' engineer) graphical depiction of their intended changes, which were subsequently incorporated in the original settlement agreement. It was not meant to be a final design plan, but to simply depict TEC's interpretation of the TEPP layout on top of the Town of Wayland's record geographic information system (GIS) data as a more appropriate base plan. At that time, town staff discussed the potential safety issues associated with that element of the negotiated mitigation at the subject intersection. Since the traffic volume maxima were not yet exceeded for this mitigation element, the discussion was deferred until late-2014.

d.) Old Sudbury Road (Route 27) is classified as a "Rural Minor Arterial" roadway and is listed as a roadway within the National Highway System (NHS). Glezen Lane is identified as a "Local" roadway. The Massachusetts Department of Transportation (MassDOT) Project Development and Design Guidelines do not recommend designing intersections in such a way as to permit a heavy vehicle (trucks, emergency vehicles, etc.) from traversing

into the opposing lane in order to access a side street. See Attachment A for a copy of Exhibit 6-15 from the widely recognized MassDOT standards.

e.) A permanent curb realignment designed to physically influence drivers to avoid a turn to or from Glezen Lane would be most effective with full-height granite curbing (6" height). However, this concurrently precludes safe and efficient emergency vehicle access. Attachment B provides a graphical depiction of an SU-40 truck, similar to a typical fire truck, performing a right turn maneuver from Old Sudbury Road (Route 27) northbound onto Glezen Lane eastbound. In order to negotiate the turn, without mounting the curbing (or snowbanks during winter months), the emergency vehicle would be required to utilize most of the paved width on both roadways. Should a queue of vehicles develop on Glezen Lane westbound, with cars approaching Old Sudbury Road (Route 27) and waiting at the stop sign, an emergency vehicle would not be able to negotiate the turn even if sweeping into the opposing lane on Route 27 southbound.

f.) If the intersection was designed to provide asphalt pavement in the alignment consistent with the turn restrictions, but a supplemental scored, or grooved, cement concrete pavement apron with a much larger corner radius was provided for emergency vehicle turns, it would severely diminish the

effectiveness of the Plaintiffs' desired layout. Regular-sized passenger cars would easily be able to traverse the low-set curbing and/or scored concrete apron. Although this is routinely incorporated into other designs to provide positive guidance for vehicle travel, and yet still allow for heavy vehicles, it does not provide a uniformly effective result for turn prohibitions.

g.) I have worked with Wayland Police Chief Robert Irving on multiple occasions to review the peak hour delays and queuing at the newly signalized intersection of Old Sudbury Road (Route 27) at Concord Road (Route 126), which lies just south of the subject intersection and has seen increasing side street volumes. I have personally witnessed traffic queues extending back along Concord Road beyond the Plain Road intersection as we refined the traffic signal timings over a period of approximately 18 months. In my professional opinion, the recently implemented turn restrictions on the westerly ends of both Glezen Lane and Bow Road are the most likely contributing factor in the increased delays at the new traffic signal.

h.) As stated above, my recommendation to the Town of Wayland to remove the turn restrictions at the subject intersection, and commission a study of the vehicle turns and the origins and destinations of those vehicles, will allow the Town and the residents of the nearby neighborhood to review and

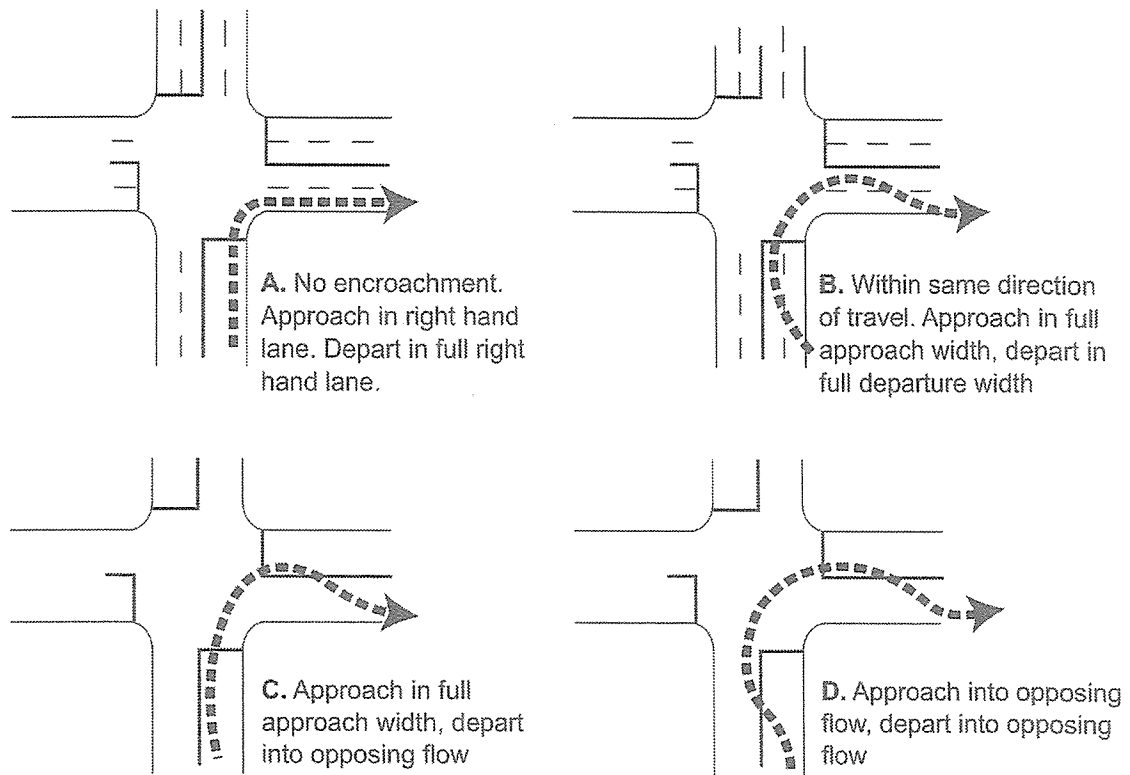
discuss the factual level of impacts based on real data. To date, the maxima (thresholds) established within the settlement agreement focus on the increases in total volume of traffic on Glezen Lane rather than a data-driven review of the specific trips impacts associated with the Town Center Project traffic. Knowing that Glezen Lane has been a historic cut-through commuter-based travel route that parallels Route 20, it is very possible that other regional traffic from Sudbury, and other communities to the northwest, are the primary contributor in the exceedance of the settlement maxima for increasingly restrictive turn prohibitions or traffic calming measures. Therefore, the Plaintiffs' assertions that the increased volumes on Glezen Lane are specifically associated with the Town Center Project, as basis of their original appeal, are currently unfounded. It is my opinion that the opportunity to collect legitimate traffic data, and perform the neighborhood traffic study, will provide significant public convenience for those that may have been unnecessarily hindered by the increasingly restrictive measures.

Subscribed under the penalties of perjury this 17th
day of September, 2015.


Kevin R. Dandrade

traffic, where permitted. A maximum of 10 feet of effective width (i.e., a single lane of traffic) may be assumed for such encroachment.

**Exhibit 6-15
Typical Encroachment by Design Vehicle**



	To (Departure Street)								
	For Tractor/Trailer (WB 50)			For Single-Unit Truck (SU)			For Passenger Car (P)		
	Arterial	Collector	Local	Arterial	Collector	Local	Arterial	Collector	Local
From (Approach Street)									
Arterial (Art)	A	B	C	A	B	C	A	A	A
Collector (Col)	B	B	C	B	B	C	A	A	A
Local (Loc)	B	D	D	C	C	D	A	B	B

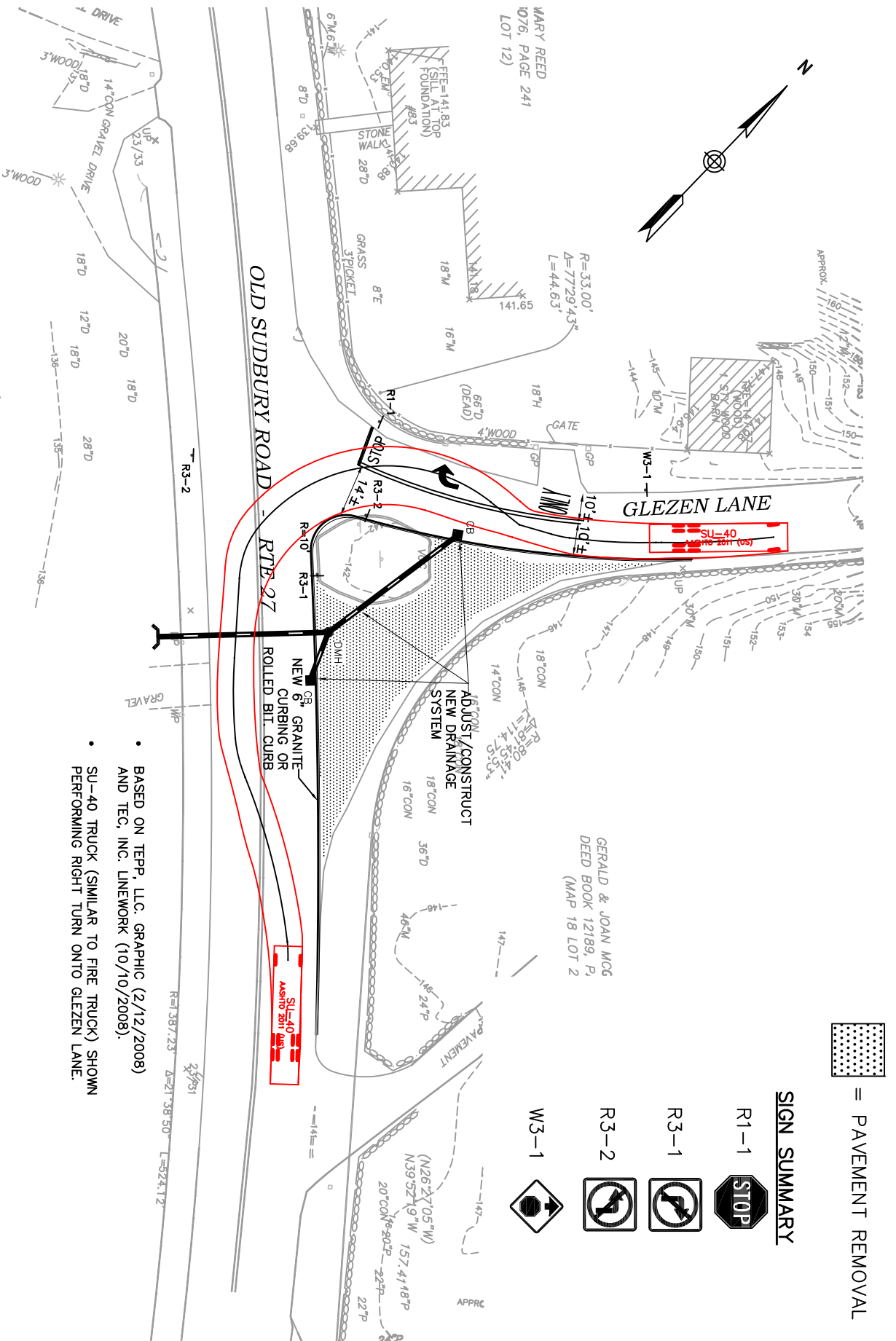
A, B, C, D defined in above diagrams.

Note: Cases C and D are generally not desirable at signal controlled intersections because traffic on stopped street has nowhere to go.

Source: Adapted from ITE Arterial Street Design Guidelines.

1" = 40'

Old Sudbury Road (Route 27) at Glezen Lane - Wayland, Massachusetts



= PAVEMENT REMOVAL

SIGN SUMMARY



R1-1



R3-1



R3-2



W3-1

- BASED ON TEPP, LLC. GRAPHIC (2/12/2008) AND TEC, INC. LINENWORK (10/10/2008).
- SU-40 TRUCK (SIMILAR TO FIRE TRUCK) SHOWN PERFORMING RIGHT TURN ONTO GLEZEN LANE.



TEC, INC.

Attachment B

Old Sudbury Road (Route 27) & Glezen Lane Intersection Layout Review September 15, 2015