

**Pavement Engineering Services**  
**PAVEMENT CONDITION**  
**INVESTIGATION AND RECOMMENDATIONS**  
**Belmont, MA**

LOCATION: Common Street  
 FROM: Warwick Road

STREET ID: COMMO1  
 TO: Payson Road

**RECOMMENDATIONS:** Due to the severe cracking and moderate distortions, combined with its structural inadequacy, this pavement is recommended for RESURFACING. **Alternative #1**, for a 15 year service life, plan to mill the existing pavement to a 3" depth, repair localized base problems, fiber-seal major cracks and tack coat prior to placing 1.75" of Dense Binder and 1.75" of Modified Top Course. **Alternative #2**, for an 8 year service life, plan to mill the existing pavement to a 2" depth, make localized base repairs, seal major cracks, tack coat and place 2" of Modified Top Course.

NOTE: The information furnished by VHB is based on selected representative sample areas and were relied upon to make engineering judgments, assumptions, deductions and to form conclusions for this report. No assurance is given that they have remained unchanged since the field data were obtained, nor are the samples necessarily typical of other locations.

**EXISTING CONDITIONS**

FUNCTIONAL CLASSIFICATION:	Arterial	ZONE:	Residential
RIDING COMFORT:	Poor	DISTRICT:	
DRAINAGE CONDITION INDEX:	Good	STRUCTURE:	HMA on Gravel Borrow
RATER:	JSG	DATE:	6/30/2005
CURB:	5" Reveal	TYPE:	Granite
LENGTH:	664 ft.	WIDTH:	34 ft.
		SECTION ID:	04876
		AVERAGE DAILY TRAFFIC (ADT)	10,000
		Estimated TRUCK TRAFFIC:	3%

**DISTRESS LEVEL INVESTIGATION**

<i><b>DISTRESS IDENTIFICATION</b></i>	<i><b>LOW</b></i>	<i><b>SEVERITY MODERATE</b></i>	<i><b>HIGH</b></i>
Potholes & Non-Utility Patches		<input checked="" type="checkbox"/>	
Alligator Cracking		<input checked="" type="checkbox"/>	
Distortion/Depressions		<input checked="" type="checkbox"/>	
Rutting (Wheelpath)			
Weathering/Oxidation/Block Cracking		<input checked="" type="checkbox"/>	
Transverse/Longitudinal Cracking		<input checked="" type="checkbox"/>	
Bleeding/Polished Aggregate			
Surface Wear & Raveling		<input checked="" type="checkbox"/>	
Corrugations, Shoving & Slippage			

**PAVEMENT CONDITION INDEX**

PCI  
69

**REMARKS:**

The distress evaluation indicates there is moderate pothole patching, distortions, alligator, weather/block and transverse/longitudinal cracking. Extensive light raveling was also noted. The data indicates that the base index is 65 and the surface index is 77. An index of 0 indicates nearly impassible extremely poor pavement condition index, while a newly paved, perfect pavement would exhibit a condition of 100. The PCI has dropped 16 points in the last four years.

The test pit (TP) data revealed there is 6" of HMA on 14" of gravel borrow base with a silty sand subbase/subgrade.

The silty sand subgrade material is a fair to poor foundation when not subject to frost action, having a moderate to high frost potential and exhibiting poor drainage characteristics.

Based on the materials evaluation and traffic, this pavement section was found to be structurally inadequate, requiring a 1.5" overlay to meet the minimum AASHTO Elastic Layer design, which was not recommended.