Preliminary Assessment

Massachusetts Department of Transportation (MassDOT)
Office of Transportation Planning

Safe Routes to School Infrastructure Program

Paper Mill Elementary School
Westfield, Massachusetts

December 22, 2009

Prepared by:

TEC, Inc.
Planners Collaborative, Inc.
Von Grossmann & Company


1 Introduction

This Safe Routes to School (SRTS) Infrastructure Assessment for the Paper Mill Elementary School in Westfield, Massachusetts is a summary of potential improvements that are intended to make walking and bicycling safer and more attractive modes for children traveling to and from school. This assessment includes recommendations that can either be implemented as part of the Massachusetts SRTS Infrastructure Program or pursued by the City of Westfield as part of a future project. This document describes the SRTS program, the travel characteristics of the Paper Mill student population, and the results of the preliminary assessment effort.

1.1 The SRTS Program

The federally-funded SRTS program is administered through the Massachusetts Department of Transportation (MassDOT). According to the federal legislation that created SRTS, the program’s purpose is:

(1) To enable and encourage children, including those with disabilities, to walk and bicycle to school;

(2) To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and

(3) To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

In Massachusetts, the program is composed of two parts: an education / encouragement component and an infrastructure improvement component. MassRIDES, the Commonwealth’s travel option service, delivers the in-school education and encouragement program for MassDOT.

The infrastructure improvement program is delivered by a consultant team led by TEC, Inc. under contract with MassDOT. The TEC, Inc. consultant team evaluates walking and bicycling access conditions at the school; identifies potential infrastructure projects that would improve pedestrian and bicycle access; and develops designs for a selected set of high priority pedestrian and bicycle access improvements.

1.2 The School Assessment Program

Over the course of a two-year period, MassDOT, through the TEC Team, is conducting
assessments at up to 40 schools throughout the Commonwealth. The first round of assessments started in April 2008 and covered thirteen schools. Ten schools were assessed in the second round beginning in November 2008. Twelve additional assessments were conducted as part of round three beginning in April 2009.

In order to receive an infrastructure assessment, a school must be a participant in the education and encouragement program managed by MassRIDES, and the school must complete an assessment request. Each assessment request must be accompanied by a municipal letter of support naming a municipal liaison for future coordination. To date, infrastructure assessments have been limited to one per community.

1.3 Use of Assessment Recommendations

Each assessment identifies measures that could improve bicycling and walking conditions. The assessment includes preliminary evaluation of feasibility, safety benefits, likelihood of increasing walking and bicycling, and cost. Based on this preliminary evaluation, several potential infrastructure projects are developed in greater detail for review with the school and municipal stakeholders. After this review, final implementation recommendations are made.

2 Paper Mill Elementary School

The Paper Mill Elementary School is located on Paper Mill Road in Westfield. Figure 1 shows the school’s relationship to the network of arterial roadways; these roadways carry heavier traffic volumes that can be a barrier to walking and bicycling. Figure 2 shows the school’s relationship to the streets within a one-mile radius of the school. Both graphics are based on Geographic Information System (GIS) files maintained by MassDOT’s Office of Transportation Planning.

This assessment focuses on the streets immediately adjacent to the school grounds because these are the streets that carry the greatest volume of school-related walking and bicycling students.
Figure 1: Map of Westfield, MA
2.1 Completed SRTS School Assessment Request  
(As submitted by the City)

<table>
<thead>
<tr>
<th>School Information</th>
<th>Municipality Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Name</td>
<td>Municipality Name</td>
</tr>
<tr>
<td>Paper Mill Elementary</td>
<td>City of Westfield</td>
</tr>
<tr>
<td>Street Address</td>
<td>Mailing Address</td>
</tr>
<tr>
<td>148 Paper Mill Road</td>
<td>City Hall</td>
</tr>
<tr>
<td>Westfield, MA 01085</td>
<td>59 Court Street</td>
</tr>
<tr>
<td></td>
<td>Westfield, MA 01085</td>
</tr>
<tr>
<td>Contact Name</td>
<td>Contact Name</td>
</tr>
<tr>
<td>Susan Dargie</td>
<td>Mayor Michael Boulanger</td>
</tr>
<tr>
<td>Tel. No.</td>
<td>Tel. No.</td>
</tr>
<tr>
<td>413-572-6514</td>
<td>413-572-6200</td>
</tr>
<tr>
<td>Email</td>
<td>Email</td>
</tr>
<tr>
<td><a href="mailto:s.dargie@schoolsofwestfield.org">s.dargie@schoolsofwestfield.org</a></td>
<td><a href="mailto:mayor@cityofwestfield.org">mayor@cityofwestfield.org</a></td>
</tr>
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</table>

### School Population Information

<table>
<thead>
<tr>
<th>Grade</th>
<th>K</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Sum</th>
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<tbody>
<tr>
<td>Number of Students</td>
<td>56</td>
<td>47</td>
<td>69</td>
<td>67</td>
<td>66</td>
<td>75</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>380</td>
</tr>
<tr>
<td>Actual number residing within 1 mile of school</td>
<td>12</td>
<td>14</td>
<td>19</td>
<td>16</td>
<td>13</td>
<td>11</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>85</td>
</tr>
<tr>
<td>Estimated number who currently walk/bicycle</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>39</td>
</tr>
</tbody>
</table>

Are students bused within 1 mile of the school? Explain if yes.

Yes. There are some students bused within 1 mile due to dangerous conditions (i.e. high traffic areas without sidewalks).

Describe the potential for increasing walking and bicycling to the school

We have a great deal of potential for increasing walking and bicycling to Paper Mill Elementary School. The proximity of many nearby residential neighborhoods and the adjacent ball fields of Paper Mill Park made this a desirable setting in which to walk or bike. Adults use the area as a walking route, and students can be seen after school hours riding bikes and playing on school grounds.

In addition, we have an involved and active group of parents, many of whom are home with their children when they leave for school and arrive home from school. Because these parents are home, students are able to leave directly from and return directly to their homes rather than participate in before and after school programs or daycare. Parents are able to walk or bike with their children, as evidenced by the participation in National and International Walk To School Days.

Describe the problems your school faces regarding safe routes to your school

Many parents drive their children to school rather than allow them to ride the bus, bike, or walk. This creates an unsafe traffic situation at the school and causes parents to follow suit rather than allowing their children to walk or bike.

The neighborhoods that lead to Paper Mill Road do not have sidewalks. Parents do not want to allow children to walk using these routes. Many of our students live on or off of East Mountain Road. This is an extremely busy road, and it does not have sidewalks. Parents do not want children walking to school using East Mountain Road.
2.2 Participation in SRTS Education and Encouragement

Paper Mill Elementary School in Westfield joined the MA Safe Routes to School program in September 2007. The program successfully encourages and educates students and parents about the benefits of walking and bicycling through information distribution, monthly themed walk-to-school days, bicycle safety education sessions for 4th and 5th grade students, and surveying and monitoring results.

2.3 Transportation Improvements in Westfield

The City of Westfield’s Engineering Department oversees all infrastructure improvement projects in the City. Westfield follows all MassDOT and ADA/AAB standards for sidewalk construction projects. Coordination with the City will be required during both the design and construction phase of any project. Mark Cressotti, P.E., City Engineer, was identified as the municipal liaison for the Paper Mill Elementary SRTS project.

2.4 Field Visit

The field visit for the Paper Mill Elementary School took place on February 11, 2009 and included a meeting with the City Engineer and the school’s principal and assistant principal. The TEC Team then observed the afternoon dismissal period. TEC staff performed a follow-up field visit in May 2009 to review project limits and constructability items.

<table>
<thead>
<tr>
<th>Attendee:</th>
<th>Representing:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Susan Dargie</td>
<td>Paper Mill Elementary, Principal</td>
</tr>
<tr>
<td>Erin Carrier</td>
<td>Paper Mill Elementary, Asst. Principal</td>
</tr>
<tr>
<td>Mark Cressotti, P.E.</td>
<td>Westfield City Engineer</td>
</tr>
<tr>
<td>Ben Hammer</td>
<td>MassRIDES</td>
</tr>
<tr>
<td>Gretchen Von Grossman</td>
<td>Von Grossman &amp; Company</td>
</tr>
<tr>
<td>Jennifer Williams</td>
<td>TEC, Inc.</td>
</tr>
</tbody>
</table>

The Paper Mill Elementary School is located on Paper Mill Road in Westfield. This road connects East Mountain Road and Union Street, and is frequently used by large trucks in addition to neighborhood traffic. Paper Mill Road has a sidewalk on the south side from Mockingbird Lane to East Mountain Road. Very few of the other neighborhood streets have sidewalks. Sidewalks and other existing conditions are shown on Figure 3.
Figure 3: Existing Conditions Around Paper Mill School

KEY

Sidewalk
No Sidewalk
Existing Crosswalk
Crossing Guard
4-Way Stop

Westfield City Line
Paper Mill School District
Path

Note: Streets not marked were not observed during the site visit.

TEC, Inc.
Massachusetts Safe Routes to School Infrastructure Team
2.5 General Observations

School Arrival and Dismissal

- A crossing guard is posted at the intersection of Joseph Avenue and Paper Mill Road during arrival and dismissal periods for Paper Mill School students.

- During arrival and dismissal, no parent vehicles are permitted to enter the school driveway. Parents who drive to school must use the parking area in the park west of the school driveway and walk their children from the parking lot to the school. This parking lot has been identified by school staff as very unsafe for children due to conflicts in pedestrian/vehicle circulation. Issues include cars pulling into or backing out of parking spaces and constrained parking/circulation in the winter due to snow storage.

- Paper Mill School staff monitor the dismissal period in the afternoons. Students are individually dismissed directly from the building to waiting parents or guardians (on foot) or dismissed to walk all the way home if prior arrangements have been made with the school.

- The Paper Mill School does not currently have any organized, regular walking school buses, but does have high levels of participation on National and International Walk to School Day.

- Paper Mill kindergarten students are dismissed five minutes prior to the balance of the elementary student population.

- There are seven buses and three vans that drop off and pick up students. Students living one and a half miles from the school or farther are bused.

Sidewalk and Pathway Infrastructure

- A path connects the east side of the Paper Mill School to the Hillcrest Circle neighborhood.

- The City of Westfield plows and maintains the existing sidewalks and municipal parking lots near the Paper Mill School.

- Paper Mill Road does not have a sidewalk along the north side to connect pedestrians from Walker Avenue, Elizabeth Avenue, or Joseph Avenue. In addition, there is not a defined crosswalk near the school driveway.
• The shortest connection between the school and the parking area from the park is a paved pathway. This cut-through presents some risks to students walking across the parking lot while parents are entering and exiting parking spaces.

• There are no sidewalks on East Mountain Road. There are significant slope, tree and utility impacts that would make installing a sidewalk on this road a very difficult and expensive project. East Mountain Road is a collector road with higher speeds than other area roadways. Although the assessment request submitted by the school highlights the lack of sidewalks on East Mountain Road, there are a limited number of residences on this street and there would be significant challenges to creating a sidewalk.

Traffic Volumes

• In 2002, MassDOT recorded traffic volumes on Paper Mill Road, with 2,400 vehicles per day east of Union Street and 2,900 vehicles per day west of East Mountain Road.

• In September 2009, the traffic division of the Westfield Police Department collected traffic data on Joseph Avenue, south of Paper Mill Road between 8am on September 29th and 8am on September 30th. The traffic volume on Joseph Avenue during that 24-hour period was 557 vehicles.

• During 2005, the Pioneer Valley Planning Commission recorded traffic volumes on East Mountain Road. Average daily traffic on East Mountain Road south of North Road (Route 202) was 6,775 vehicles per day.

2.6 School/Municipality-Identified Needs/Opportunities

Paper Mill School staff have identified the following items as their primary safety needs or opportunities to increase walking and bicycling at their school:

- A lack of neighborhood sidewalks connecting to the school

- Vehicular congestion caused by parents choosing to drive their children instead of allowing them to ride the bus or walk or ride a bicycle to school.

- The lack of sidewalks and the perceived volume/speed of traffic on East Mountain Road, which discourage students living on this road from walking to school, despite its close proximity to school.
3 Recommendations for Improvement

As a result of the needs identified in the assessment request, the field assessment, and input from the City of Westfield, the TEC Team has identified a number of potential improvements to the pedestrian and bicycling environment in the vicinity of the Paper Mill Elementary School. These are illustrated graphically in Figure 4 and can be divided into those improvements that are recommended for potential implementation through the SRTS program and those that are recommended for implementation through other funding sources.

3.1 Primary Recommendations

The following improvements are recommended as potential infrastructure projects as part of the SRTS Infrastructure program:

**Recommendation 1: Construct Sidewalk on the West Side of Joseph Avenue**

The TEC Team recommends constructing approximately 1,300 feet of 5-foot wide asphalt sidewalk and berm on the west side of Joseph Avenue between Amy Drive and Paper Mill Road. The proposed sidewalk would provide a defined pedestrian connection from the large neighborhood to the southwest of the school.

If constructed without a grass strip, the newly installed utility poles can be retained in their current positions and allow the proposed sidewalk to conform to ADA standards. At the Joseph Avenue / Paper Mill Road intersection, two new ADA-compliant ramps and a new crosswalk would be installed on the southerly side of the intersection to connect the proposed sidewalk to the existing sidewalk on Paper Mill Road. This intersection is currently controlled as a 4-way stop; this traffic control should be retained, but should be enhanced with new retroreflective stop signs and stop bars. This improvement has an estimated cost of approximately $193,000. See Figure 5 for further detail.

**Recommendation 2: Construct Sidewalk on the North Side of Paper Mill Road**

The TEC Team recommends constructing approximately 600 feet of 5-foot wide concrete sidewalk with granite curb on the north side of Paper Mill Road between Walker Avenue and Elizabeth Avenue to the east. This may require the removal of trees and/or relocation of landscaping and securing of easements on private property. A new crosswalk with ADA-compliant ramps would connect the proposed sidewalk to the existing sidewalk on the east side of the school driveway. A new crosswalk with ADA-compliant ramps would also be installed across the entrance to the school driveway. School zone crosswalk signs and advance warning signs would be installed to warn motorists of the new mid-block crosswalk.

Additionally, the TEC Team recommends that a field survey be done of the parking lot area at the Paper Mill Road Playground to identify signing and striping needs to improve the safety of pedestrians.

This improvement has an estimated cost of approximately $182,500. See Figure 6 for more detail.
Potential SRTS Infrastructure Project Recommendations

1. Construct Sidewalk on the West Side of Joseph Avenue
2. Construct Sidewalk on the North Side of Paper Mill Road from Walker Avenue to Elizabeth Avenue

Recommendations to be Pursued by Town or through Other Funding Sources

3. Construct Sidewalk on East Side of Mockingbird Lane and Partridge Lane
4. Construct Sidewalk on Southwest side of Joseph Avenue and West Side of Rachael Terrace

<table>
<thead>
<tr>
<th>KEY</th>
<th>PROPOSED IMPROVEMENT</th>
<th>FEASIBILITY</th>
<th>SAFETY/ MOBILITY BENEFIT</th>
<th>COST</th>
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<tbody>
<tr>
<td>1</td>
<td>Construct Sidewalk on the West Side of Joseph Avenue</td>
<td>High</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>2</td>
<td>Construct Sidewalk on the North Side of Paper Mill Road from Walker Avenue to Elizabeth Avenue</td>
<td>High</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>Construct Sidewalk on East Side of Mockingbird Lane and Partridge Lane</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>4</td>
<td>Construct Sidewalk on Southwest side of Joseph Avenue and West Side of Rachael Terrace</td>
<td>Moderate</td>
<td>Low</td>
<td>Moderate</td>
</tr>
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</table>

Figure 4: Location of Recommended Improvements
RECOMMENDED SCOPE OF WORK AND CONCEPTUAL COST ESTIMATE:

5' WIDE ASPHALT SIDEWALK & 6” BERM (1300LF +/-) = $131,500
SIGNS & STRIPING = $3,000
DRAINAGE MODIFICATIONS = $12,200
LANDSCAPING = $7,500
TRAFFIC CONTROL = $19,500

+/- 25% CONTINGENCY & CONSTRUCTION ENGINEERING = ± $39,000

SUBTOTAL = $193,000

Install ADA Accessible Ramps (Typ.) and Crosswalks

Construct 5’ Wide Asphalt Sidewalk

Figure 5: Recommendation 1- Construct Sidewalk on the West Side of Joseph Avenue
**Figure 6: Recommendation 2 - Construct Sidewalk on North Side of Paper Mill Road from Walker Avenue to Elizabeth Avenue**

**RECOMMENDED SCOPE OF WORK AND CONCEPTUAL COST ESTIMATE:**

- **5’ WIDE CONCRETE SIDEWALK, GRASS PANEL & GRANITE CURB (INCLUDING RAMPS) (600LF +/-)** = $93,000
- **DRAINAGE IMPROVEMENTS** = $10,500
- **SIGNS & STRIPING** = $4,000
- **TREE REMOVAL/ LANDSCAPING** = $20,000
- **TRAFFIC CONTROL** = $20,000
- **+/- 25% CONTINGENCY & CONSTRUCTION ENGINEERING** = ±$35,000

**SUBTOTAL** = $182,500

- Install ADA Accessible Ramps and Crosswalks
- Construct Short Section of Sidewalk on Elizabeth Avenue
- N.T.S.
- Restripe Paper Mill Playground Parking Lot and Crosswalks
- Existing Sidewalk on School Driveway

**Paper Mill Road, Typical View Looking East**
3.2 Secondary Recommendations

The following are recommended improvements to be implemented by the City or utilizing other funding sources.

**Recommendation 3: Construct Sidewalk on the East Side of Mockingbird Lane and Partridge Lane**

The TEC Team recommends constructing a 900-foot long sidewalk on the east side of Mockingbird Lane and Partridge Lane between Paper Mill Road and Maria Circle. This proposed sidewalk would connect the Paper Mill School with Maria Circle, Woodcliff Drive and Salvatore Drive, all of which have existing sidewalks. New crosswalks with ADA-compliant ramps would provide an accessible route to connect the existing sidewalks.

**Recommendation 4: Construct Sidewalk on the Southwest Side of Joseph Avenue and Rachael Terrace**

The TEC Team recommends constructing a 2,000-foot sidewalk on the southwest side of Joseph Avenue and Rachael Terrace. This sidewalk would be an extension of the proposed sidewalk on Joseph Avenue in Recommendation 2. It would continue on Joseph Avenue from Amy Drive to Rachael Terrace and end at the intersection of Rachael Terrace and Grandview Drive. New crosswalks with ADA-compliant ramps would ensure that the proposed project provides an accessible route along Joseph Avenue to the existing sidewalk on Rachael Terrace.

3.3 Other Considerations

The TEC Team recognizes that the lack of sidewalks on East Mountain Road is a barrier to some children and families who would like to walk to school. Installing a sidewalk on this road would be very expensive and have significant impacts to the terrain and abutting land owners. Given the fact that East Mountain Road is under local jurisdiction, any future sidewalk installation project on this road would be the responsibility of the City of Westfield.
4 Next Steps

The recommendations included in this assessment will be finalized upon receipt of any comments from the City of Westfield and Paper Mill School staff. As part of the public participation for the project, we strongly recommend that the City invite project abutters and neighborhood groups, through such activities as inviting them to a meeting of the Board of Selectmen and soliciting public comment on these proposals. If the City requires assistance in presenting the recommendations, a representative of MassDOT or the SRTS Infrastructure Team will be available to participate.

The issuance of this assessment does not guarantee that MassDOT will fund the recommended improvements. Each school and community will be evaluated for the anticipated effectiveness of the proposed improvements; this may influence the selection, deferral, or order of the various SRTS infrastructure projects in the program.

Once the SRTS infrastructure project is proposed and approved by MassDOT, a project design will be advanced in coordination with MassDOT and the City’s municipal liaison. This project design will require conformance with MassDOT’s Project Development and Design Guide, where applicable. The design work will require detailed topographic ground survey and property line research to properly locate the proposed infrastructure, and to design any required drainage modifications.

The survey and design process would identify any permanent and temporary easements on private property that are needed to facilitate construction. The City will be required to secure all easements necessary to complete the project. The identification and legal clearance of the public right-of-way must be completed prior to MassDOT’s issuance of a Right-of-Way Certificate, which is necessary to enable the use of federal funds through the SRTS program. The SRTS Infrastructure Team will also submit a Categorical Exclusion (CE) request, if appropriate, through MassDOT as part of the National Environmental Policy Act (NEPA) permitting. These permitting elements require coordination with the MassDOT’s Office of Transportation Planning, Environmental Section and Right-of-Way Bureau.

To quantify the benefits of the project, pre-construction and post-construction evaluations will be undertaken by MassDOT.