Greater Case Campus Working Group

Town Selectmen
Superintendent of Schools
Chairman of the School Committee
Town Manager
Council on Aging
Recreation Department
Town Library
Town Planning Board
School Building Committee
Traffic and Sidewalk Committee
Town Police Department
Elementary School Principals
Director of Operations
Director of Facilities
Residents and Abutters
Compass Project Management
# Greater Case Campus Master Plan

Town of Weston, Massachusetts

by Jonathan Levi Architects

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1 INTRODUCTION
1.1 Introduction
1.2 Goals
1.3 Timeframe
1.4 Methodology
1.1 INTRODUCTION

Historic Photograph of the Case Campus site

Existing Field Elementary School
The Greater Case Campus Master Plan Project seeks to identify and affect the organization of the civic and educational campus centered around Alphabet Lane to benefit the townspeople of Weston Massachusetts.

This work began during the early development of the new Field Elementary School as members of the Weston School Building Committee identified a need to look beyond the immediate site and consider the campus as a whole in order to fully realize the potential of the School project.

Thus, Town constituents convened to form a Greater Case Campus Master Plan Working Group composed of Selectmen of the Town, the Town Manager; the Superintendent of Schools and the Chairman of the School Committee; members of the School Building Committee, and Traffic and Sidewalk Committee, the Town Planning Board, and the Police Department; representatives of the three Town elementary schools, the Director of Operations and the Director of Facilities; representatives of the Council on Aging, the Recreation Department, and the Library; supporters for the preservation of the Case Estates; and neighbors.

Along with Compass Project Management, the Owner’s Project Manager, the Town engaged Jonathan Levi Architects to perform extensive analyses, develop a series of detailed studies and recommend courses for future improvements to the Case Campus.
1.2 PROJECT OBJECTIVES
The purpose of the Greater Case Campus Master Plan is to understand the conditions and mutual site requirements of the ensemble of education and community buildings around the vicinity of the Country, Field and Woodland Schools and to provide a framework for betterment of use by the Town.

With this, the objectives of the Greater Case Campus Plan are as follows:

1. Study and analyze all aspects of the traffic, parking, facility access for recreational use, pedestrian circulation and open spaces surrounding the Greater Case Campus

2. Develop an understanding of the deficiencies in these defining organizational features in item 1 above not only on an individual basis but also as a system

3. Exhaustively analyze and discuss the available options for improving these individual components

4. Form a recommendation for the preferred alternative arrangement of these elements

As these goals are achieved, it is the intent of the Working Group to correct critical functional problems and to envision future development. Through carrying out this plan, the Campus will heighten its civic identity and comprehensibility as a ‘town green’ that extends the familiar picturesque landscape of Weston.
1.3 TIMEFRAME

The Case House, Weston School Administration Building
The schedule for the Greater Case Campus Master Plan was established after dividing the work into two parts. The first part focused on the vehicular traffic and parking around the site. The second part was set to study the open spaces and pedestrian circulation around the site. This schedule was set with neither segment carrying any precedence. It was decided that by splitting the study into two parts, the Working Group would be able to take advantage of a more focused dialogue.

The Project was carried out over the course of nine formal meetings over six months:

Meeting 1 - Introduction and discussion of scope.
Meeting 2 - Traffic & Parking: Initial Concept Alternatives
Meeting 3 - Traffic & Parking: Refined Alternative Presentation
Meeting 4 - Traffic & Parking: Initial Preferred Concept Alternative
Meeting 5 - Traffic & Parking: Preferred Concept Alternative Analysis
Meeting 6 - Traffic & Parking: Preferred Concept
Meeting 7 - Pedestrian Circulation & Open Space: Initial Concept Alternatives
Meeting 8 - Pedestrian Circulation & Open Space: Concept Alternatives Analysis
Meeting 9 - Pedestrian Circulation & Open Space: Preferred Concept + Cost Estimates
Presentation - Comprehensive Master Plan: Town Committees and Public Presentations
Submission - Comprehensive Master Plan Draft Report
Submission - Comprehensive Master Plan Final Report
1.4 METHODOLOGY

Design Team
The Case Campus Master Plan was undertaken by Jonathan Levi Architects in collaboration with its specialized consultants including: VHB, to analyze parking needs and traffic data; an arborist with Barrett Tree East to study the type and condition of plantings on site; and CDW Engineers to assist with order of magnitude cost estimation and advise on drainage and road construction.

Traffic Study Methodology
The relationship between the capacity of an intersection and the demands placed on it is a fundamental consideration in evaluating how well an intersection accommodates the traveling public. The assessment of traffic operations provides a technical evaluation of the operational qualities of intersections using the procedures documented in the 2000 Highway Capacity Manual.

Level of service (LOS) is the term used to denote the different operating conditions that occur at an intersection under various traffic volume loads. It is a qualitative measure of the effect of a number of factors including roadway geometry, speed, and travel delay. Level of service provides an index to the operational qualities of an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Levels of service A through D are considered acceptable conditions in urban areas. Levels of service E and F are considered deficient.
All of the intersections analyzed for this study are unsignalized T-type intersections with the leg of the T controlled by a stop sign. For unsignalized intersections, the analysis assumes that traffic on the main road is not affected by traffic on the side streets. The level of service for unsignalized intersections is only determined for left turns from the main street and for all movements from the minor street. The intersection level of service designation is for the most critical minor movement, which is often the left-turn movement from the side street.
2 TRAFFIC AND PARKING
2.1 Existing Conditions
2.2 Field School Impact
2.3 Deficiencies and Needs
2.4 Alternatives
2.5 Preferred Concept
The Traffic and Parking study was conducted to assess the impact of the proposed new Field School on Case Campus access, circulation and parking. The study analyzed student drop-off and pick-up activity, school bus operations, traffic operations at eight intersections around the Case Campus, internal traffic circulation and parking for both existing conditions and for conditions with the new school.

Almost all the children attending Field School arrive and depart by school bus or private vehicle. Few, if any, students walk to school. Based on observations and counts, about 100 private vehicles drop students off in the morning and about 145 vehicles pick up students in the afternoon. Drop-off occurs at the front door of the school where approximately 200 feet of curb space is available. In the morning, vehicles can reach the drop-off indirectly from Alphabet Lane or directly from School Street. Vehicles generally exit onto School Street via the library driveway. In the afternoon, about 95 vehicles pick up at the front of the school and another 50 vehicles (about one-third of the total) pick up students at the library. A high majority of the vehicles picking up at the School arrive via Alphabet Lane and travel past the Community Center to form a queue for pick-up. These vehicles exit via the library driveway. The vehicles picking up at the library enter and exit via the library driveway.

School buses currently drop-off and pick-up on the north side of the school (opposite the public library) where about 115 feet of curb space are available. There are about 21 school buses during morning drop-off and afternoon pick-up. However, the maximum number of buses observed to be queuing at any one time is six for afternoon pick-up and last only a few minutes. School buses reach the existing Field School via a one-lane road between Alphabet Lane and the Field School. Buses exit via the library driveway.

The existing Field School has about 49 parking spaces available for school use. There are additional spaces near the school for other users including 59 spaces for the public library and eight spaces for Case House. At times, some of the school spaces may be occupied by other users on the Case Campus, especially library
patrons. Table 3 (page 24) shows the spaces near the school and their utilization in early January 2010. On the afternoon of Thursday, January 6, 108 of the 111 (97%) non-handicap spaces proximate to the school were occupied. This is very heavy utilization, especially considering there were no special activities taking place at the school, library or school administration building that day. Some of the school parking is adjacent to the library parking and can be accessed via the library driveway. The remaining school parking is located between the school building and School Street, and can be accessed via the Field School driveway on School Street or indirectly via Alphabet Lane.

The Library currently operates under a deficiency of parking and shares its available space and entry with the existing Field School. The new Field School will isolate the Library’s entrance and parking from the rest of the Case Campus, allowing it to act autonomously. The Case House currently has a dedicated entry with parking situated immediately adjacent to it. With the planned roundabout project, a reconfiguration of the Case House entrance will be necessary. Additionally a deficiency of parking currently exists. The Community Center has a dedicated parking lot off of Alphabet Lane. The parking lot runs perpendicular from the building for a significant distance. Access to the building occurs in the middle of the Case Campus and does not have any significant entry presence on surrounding major roads. The Country School has parking along Alphabet Lane that will be supplanted by the Field School. This parking will need to be replaced and provide for better access to Alphabet Field. The Woodland School was not surveyed initially and will be impacted only in terms of the larger vehicular service of the campus.
2.2 FIELD SCHOOL IMPACT

Case Campus Aerial
The new school will be located in the northwest corner of the campus south of the Country School and Alphabet Lane. Access to the new Field School parking, student drop-off and pick-up area, bus drop-off and pick-up area, and loading dock will be principally via Alphabet Lane. Additional access to the parking and student drop-off and pick-up area will be via the driveway on School Street. Only one significant change in access to the Case Campus will be necessary with the new school. The library driveway and parking lot will be separated from the rest of the Case Campus parking and will only be available to serve the library. As a result, Field School traffic currently using the library driveway will be shifted to the existing Field School driveway on School Street. Access and circulation for the Country and Woodland schools will be unaffected.

Drop-off and pick-up for the new building will take place in the new school’s parking lot, which will provide almost 300 feet of curb space for drop-off and pickup. Vehicles will be able to enter the drop-off/pick-up area from Alphabet Lane at School Street and exit it via Alphabet Lane at Wellesley Street. Access will also be available via the driveway on School Street.

Bus drop-off and pick-up for the new school will occur on the north side of the school in an area separate from Alphabet Lane and opposite the Country School. There will be enough curb space to accommodate six buses at one time. Buses will continue to reach the area via Alphabet Lane from School Street and will exit via Alphabet Lane or the School Street driveway.

The new Field School will have 70 dedicated parking spaces, which generally will be adequate to accommodate about 65 school staff and visitor parking throughout the typical school day. In addition, because school parking will no longer be conveniently located for library patrons to use, 86 spaces adjacent to the library will be retained to serve the library. The new school parking can be reached via Alphabet Lane or the School Street driveway. Exiting traffic can use Alphabet Lane to Wellesley Street or the School Street driveway.

Based on the traffic and parking analysis, the new school location will not have an adverse impact on traffic and parking. The number and location of access points remains virtually the same. Ingress and egress for school buses and student drop-off/pick-up traffic remain similar to the existing pattern. Parking will be improved by an increase in the number of spaces available for the Field School and by separating school parking from parking for other users.
2.3 DEFICIENCIES + NEEDS

Table 1  Existing Conditions Unsignalized Intersection Capacity Analysis

<table>
<thead>
<tr>
<th>Location</th>
<th>Critical Movement</th>
<th>Peak Period</th>
<th>Dem¹</th>
<th>Delay²</th>
<th>LOS³</th>
<th>Queue⁴</th>
</tr>
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<tbody>
<tr>
<td>1: School Street at Alphabet Lane</td>
<td>NB LT</td>
<td>Weekday Morning</td>
<td>490</td>
<td>4</td>
<td>A</td>
<td>15</td>
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<tr>
<td></td>
<td></td>
<td>Weekday Afternoon</td>
<td>415</td>
<td>1</td>
<td>A</td>
<td>3</td>
</tr>
<tr>
<td>2: School Street at Library Driveway</td>
<td>EB LR</td>
<td>Weekday Morning</td>
<td>150</td>
<td>69</td>
<td>F</td>
<td>229</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weekday Afternoon</td>
<td>105</td>
<td>19</td>
<td>C</td>
<td>41</td>
</tr>
<tr>
<td>3: School Street at Field School Driveway</td>
<td>EB LR</td>
<td>Weekday Morning</td>
<td>20</td>
<td>25</td>
<td>C</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weekday Afternoon</td>
<td>40</td>
<td>15</td>
<td>C</td>
<td>15</td>
</tr>
<tr>
<td>4: School Street at Wellesley Street</td>
<td>SW LR</td>
<td>Weekday Morning</td>
<td>230</td>
<td>&gt;120</td>
<td>F</td>
<td>391</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weekday Afternoon</td>
<td>190</td>
<td>51</td>
<td>F</td>
<td>164</td>
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<td>5: Wellesley Street at Newton Street (north)</td>
<td>NB LT</td>
<td>Weekday Morning</td>
<td>985</td>
<td>1</td>
<td>A</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weekday Afternoon</td>
<td>575</td>
<td>1</td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td>6: Wellesley Street at Newton Street (south)</td>
<td>EB L</td>
<td>Weekday Morning</td>
<td>660</td>
<td>&gt;120</td>
<td>F</td>
<td>1,320</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weekday Afternoon</td>
<td>370</td>
<td>25</td>
<td>C</td>
<td>142</td>
</tr>
<tr>
<td></td>
<td>EB R</td>
<td>Weekday Morning</td>
<td>70</td>
<td>11</td>
<td>B</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weekday Afternoon</td>
<td>35</td>
<td>9</td>
<td>A</td>
<td>3</td>
</tr>
<tr>
<td>7: Wellesley Street at Case House Driveway</td>
<td>SB TR</td>
<td>Weekday Morning</td>
<td>5</td>
<td>11</td>
<td>B</td>
<td>0</td>
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<tr>
<td></td>
<td></td>
<td>Weekday Afternoon</td>
<td>5</td>
<td>11</td>
<td>B</td>
<td>0</td>
</tr>
<tr>
<td>8: Wellesley Street at Alphabet Lane</td>
<td>SB LR</td>
<td>Weekday Morning</td>
<td>115</td>
<td>29</td>
<td>D</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weekday Afternoon</td>
<td>150</td>
<td>20</td>
<td>C</td>
<td>64</td>
</tr>
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Note: Shaded cells denote LOS E or LOS F conditions
Results provided only for the critical movement (side street traffic or main line left turns)
1 Volume on the critical approach
2 Delay on critical approach only, rounded to the nearest whole second
3 Level of service of the critical approach
4 Estimated 95th percentile queue length in feet on the critical approach
NB = northbound, SB= southbound, EB = eastbound, WB = westbound, SW = southwest bound, R = right-turn, L = left-turn, T = thru