



MEMORANDUM

TO: Recreation Department
Town of Wayland
66 River Road
Wayland, MA 01778

DATE: February 16, 2017
Updated March 14, 2017

FROM: Samuel W. Gregorio, P.E., PTOE
Douglas S. Halpert, E.I.T.
Eric R. Paquette, E.I.T.

PROJECT NO.: T0558.16

RE: Traffic Assessment – Proposed Trout Brook Road Recreational Field

TEC, Inc. has been retained by The Town of Wayland to perform a Traffic Assessment associated with a proposed recreational field at a property located on Trout Brook Road in Wayland, Massachusetts. The proposed recreational field includes an 11v11 soccer field (130 yards x 110 yards), a 34-space parking lot, and a pathway connecting to the existing Farrar Pond Trail network.

TEC has evaluated the traffic operations for the study area intersections under existing and future conditions. The future year planning horizon examines traffic operations under existing conditions (2017), as well as a five-year design horizon (2022) for traffic-volume projections, which includes an evaluation of the no-build conditions (without the proposed project) and build conditions (with site traffic added). These conditions are compared to determine what, if any, additional off-site mitigation is necessary to provide reasonable traffic operations in the area after the project is complete.

EXISTING CONDITIONS

The study area was selected to contain the major roadways providing local access to the project site. The following intersections were included in the study area:

1. Oxbow Road / Trout Brook Road (safety review only)
2. Oxbow Road / Campbell Road / Farrar Road (safety review only)
3. Concord Road (Route 126) / Oxbow Road
4. Sherman's Bridge Road / Oxbow Road / Alpine Road

The study area intersections are shown graphically in Figure 1.

Geometry

A comprehensive field inventory of existing traffic conditions at the study area intersections was conducted by TEC staff in January 2017 to obtain information related to intersection geometry and lane use. The field investigation consisted of an inventory of existing roadway geometrics, operating characteristics, and safety characteristics. A description of the existing roadway and intersection inventory is provided below.

CONCLUSIONS AND RECOMMENDATIONS

TEC has examined the potential traffic impacts associated with the proposed recreational field on the study area roadways. The following is a summary of the results and conclusions of this effort:

- The project consists of constructing a recreational field to be used primarily as an 11v11 soccer field (130 yards x 110 yards) during the spring and fall seasons. The Town of Wayland is also considering striping the field for lacrosse usage during the spring and field hockey usage during the fall.
- The project is anticipated to generate 72 new vehicle trips on an average weekday, with 2 new vehicle trips (1 entering and 1 exiting) during the weekday morning peak-hour and 18 new vehicle trips (12 entering and 6 exiting) during the weekday evening peak-hour. On a typical Saturday, 118 new vehicle trips are anticipated, with 30 new vehicle trips (14 entering and 16 exiting) during the Saturday midday peak-hour. These trip counts could be confirmed by the Town during any spring 2017 soccer and lacrosse activities.
- Approximately 52 percent of site-generated trips are expected to access Oxbow Road via Concord Road (Route 126) from the south. The remaining 48 percent are expected to access Oxbow Road via Sherman's Bridge Road, with 34 percent coming from the east and 14 percent coming from the west.
- The sight distance characteristics meet or exceed industry guidance at most locations. However, the sight line from Campbell Road (looking west along Oxbow Road) is limited to 100 feet due to a fence located along the roadway. Similarly, the sight line from Farrar Road, looking west along Oxbow Road, is limited due to minor brush along the roadway that can be easily cleared. TEC recommends the Town of Wayland and the Town of Lincoln consider trimming or removing some brush to improve sight lines at the intersections. Alternatively, the Towns can introduce a stop sign on the Oxbow Road eastbound approach, making it an all-way stop controlled intersection. These can be evaluated in the field with Town of Wayland Police and DPW staff.
- The traffic to be generated by the proposed recreational field is not anticipated to have any negative effects on the operating conditions at the study area intersections. In the 2022 Build condition, all movements at the study area intersections are expected to operate at acceptable levels-of-service (LOS B or better) and with queues not exceeding one vehicle. Even if the trip generation for the site increased in intensity by two or three times, it would not materially impact the capacity of the surrounding roadway system.
- TEC believes the proposed 34 parking spaces should adequately accommodate the average parking demand during weekdays. The Town should review operations after commencement of the use of the field and stagger game times if the parking demands exceed the supply of stalls as planned. If necessary, the Town can construct the supplemental 21 parking stalls in the adjacent gravel lot and perform periodic assessments to manage the intervals between successive matches or practices.

After reviewing the potential traffic impacts associated with the proposed recreational field, and performing minor vegetation removal, TEC is confident that the proposed project can be

General Notes

PRACTICE SOCCER FIELD

OXBOW MEADOWS

MARSHALL CLARY LANDSCAPE ARCHITECTS
DATE: AUGUST 13, 2014 SCALE: 1"=40'

No.	Revisions/Issues	Date



Schematic Plan
Oxbow Meadows
Recreation Area

Project	Sheet
Oxbow Meadows	1 of 4
Date	8/13/2014
Scale	1"=40'

