



George J. Saraceno, Senior Civil Engineer

TO: Michael Zehner, Planning Director

**RE: Project of Significant Impact (PSI) – PSI-17-01
Proposed Sports Complex
900 Worcester Street**

DATE: May 18, 2017

The Department of Public Works (DPW) Engineering Division has received the following plans and documents submitted for the Project of Significant Impact (PSI) for the Wellesley Sports Center project at 900 Worcester Street. The documents provided are as follows.

- Email from Michael Zehner, dated April 19, 2017
- Plans. Dated April 12, 2017
Existing Conditions, Layout and Materials (C-1), Grading and Drainage (C-2) and Utilities (C-3)
- Supporting Documents, dated April 13, 2007
- Traffic Impact and Access Study, dated April 2007
- Notice of Intent, dated April 18, 2017

The applicant is Wellesley Sports Center, LLC of Bedford, MA. The design engineer for the project is Allen and Major of Lakeville, MA. The architect is Dacon Corporation of Natick, MA. The project consists of the redevelopment of 900 Worcester Street, the project site, by constructing a 101,356 square foot sports complex that includes two ice rinks, swimming pool, athletic sports field, locker rooms, elevated track, strength and conditioning room, therapy room, conference rooms and spectator viewing areas on a 7.8± acre site. The project will include off-street parking, on-site stormwater management, new utilities, curb cuts, new traffic signals, site approach improvements and landscaping. Construction on the project is scheduled to begin in the fall of 2017, for a duration of 12 months. The project site is located in a Single Family Residence (SR-10) Commercial Recreation Overlay District and meets all the setback requirements.

The project is located in the Water Supply Projection District and therefore should follow section XIVE, part F, Design and Operation standards under, Major Construction Project, which includes safeguards, disposal, fill, spill containment, on-site recharge and grade reduction. The applicant shall provide a statement that the project will meet the design and operation standards.

Prior to removing the church building and rectory building, extensive soil testing was performed on the site by Environmental Partners Group of Hyannis, MA under a separate contract. The test pit, monitoring wells and boring locations performed on the site should be shown on the plans, including soil logs and depth to groundwater. The site is relatively flat, with a steeper slope along the southern portion of the lot, sloping from elevation 129 to elevation 170, from a north to south direction. Stormwater runoff on the site is uncontrolled and sheet flows to a wetland at the rear

of the property. The developed portion of the property along the easterly side drains to a drywell. The existing parking lot is in poor condition, with pavement failure, pot holes, cracking, etc. During a significant rain event, stormwater runoff tends to pond in certain areas along the southern portion of the parking lot. Eventually, stormwater runoff sheet flows to the isolated wetlands at the southern portion of the lot. There is a closed drainage system on Worcester Street that drains to Boulder Brook and out to Morses Pond.

The project site has an approved Order of Resource Area Delineation (ORAD) dated August 21, 2014, MassDEP #324-755. A Notice of Intent for the project was submitted to the Wellesley Protection Committee on April 18, 2017. The project requires a waiver from the Town of Wellesley Wetlands Protection Committee for work within the 25-foot No Disturbance Zone, which is required for constructing the foundation and exterior portion of the proposed sports complex building. The proposed bituminous concrete sidewalk along the rear of the parking lot will also require working within the 25-foot No Disturbance Zone. A portion of the site toward the front northeast corner is within the 200-Riverfront Area, which will consist of regrading, paving and landscaping work. A portion of the project, mainly the proposed parking lot, is located within the flood plain. The grades within the area will be maintained and compensatory storage provided by proposing a porous asphalt pavement surface for the parking lot. The project will increase the impervious area site by 2.28 acres.

The following comments are based on a review of the plans and design documents submitted by the applicant.

GENERAL

- 1.) The plans should include a locus map, scale 1"=500' that shows a larger area of Wellesley around the site.
- 2.) Clarify on the plans that the existing bituminous concrete sidewalk on the south side of Worcester Street will remain and connect to new sidewalks proposed for the project or be removed and replaced by a sidewalk on private property.
- 3.) The Layout and Materials Plan, Sheet C-1, open space surface ratio area table should include sidewalk, bikepad, dumpster and mechanical pads in the impervious coverage percentage calculations.
- 4.) We recommend using granite for curbing rather than a mono concrete curb or precast concrete curb, which does not hold up over time.
- 5.) The Elevations Scheme 2, Sheet SD-4, should provide elevations on the Town of Wellesley datum with the correct bar scale for the plan.
- 6.) Clarify on the plans the location of a gas main on route 9 and if a proposed gas connection is planned for the project.
- 7.) Show the locations of the snow storage areas for the project site.

TRAFFIC & TRANSPORTATION

- 1.) The plans should provide more detail information related to the proposed driveway/ intersection work within the Route 9 layout. We note that the applicant's traffic consultant MDM Transportation Consultants, Inc. provided a Conceptual Design Plan that shows more detail for the proposed intersection on Route 9. Therefore, the plans should be updated to reflect the Conceptual Design Plan as shown in the Traffic Impact and Access Study, which shows various sidewalk connections to the existing sidewalk on Worcester Street, as well as a new crosswalk from Lexington Road to the project site.
- 2.) Label on the plans the location for the bus drop off/pickup area along the northerly portion of the building.
- 3.) The traffic engineer hopes to provide pedestrian access to the site and the Cochituate Aqueduct Trail System, a request from the Town, secondary driveway restrictions, i.e., right turn only, signs and pavement markings and reduced height of trees and shrubs. The applicant should clarify the purposed of running a new sidewalk from the existing sidewalk on Route 9 into the property and running parallel to existing sidewalk on Route 9, which eliminates additional green space for the project. Adding a new sidewalk on private property may also require removing private shade trees located along the Route 9 corridor.
- 4.) The traffic report concludes that the project development will have neutral delays with the inclusion of traffic signals at the main entrance to the site. The signal control would also accommodate pedestrian crossing connection from Lexington Road to the site, crossing Worcester Street. MassDOT is required to review the project proposal and provide a determination on the project design, which may affect the proposed geometric design of the intersection and main driveway entranced.
- 5.) The applicant's designer should review the proposed crosswalk located at the main entrance (eastbound side) and runs diagonally across the parking lot to the sidewalk located at the northeast corner of the proposed sports center building. There may be issues (blind spots) with parked cars backing up into the crosswalk at that location, which is setup as an apex crosswalk.

STORMWATER

- 1.) The project site allows stormwater runoff to sheet flow off the site untreated, which is mainly conveyed to the isolated wetland at the rear of the property. A portion of stormwater runoff is conveyed to a leaching manhole. The applicant performed a stormwater analysis for the pre and post-development conditions, which shows a reduction in the peak rate of runoff and volume for the 2-yr, 10-yr, 25-yr and 100-yr design storm. The proposed on-site stormwater design includes Best Management Practices (BMP's), LID techniques, CDS hydrodynamic separator, Retain-It concrete chambers with an overflow into the wetlands area. LID techniques include grass swales, rain gardens and porous pavement. The building downspouts will be directed into the Retain-It infiltration system. A sweeping program will also be utilized

as part of the BMP for the site.

- 2.) The Municipal Stormwater Impact Analysis shall include soil testing performed on the site that supports the extensive infiltration that is proposed through the use of Retain-It concrete structures. The soil testing should show the depth to groundwater and redoximorphic features within the test hole if encountered. The test pits should be shown on the plans.
- 3.) The designer mentions that the flood plain is compensated by retaining the existing grades within the parking lot and providing a porous pavement surface that retains stormwater runoff and infiltrations that runoff through the porous media into the groundwater. However, the designer shall provide calculations that shows incremental flood storage by 0.5 foot increments for the flood plain area. The stormwater analysis shows that the during a 100-yr synthetic storm event, using HydroCAD, the peak elevation is 128.39 feet, which is below the proposed grade or finish elevation of 132 feet. The available storage with the porous pavement material is 48,509 cubic feet, an area of 186' wide by 326' long by 2' high.
- 4.) Show the proposed underdrain system for the porous pavement.

WATER & SEWER

- 1.) The project proposes a new 8" sanitary sewer connection from the 16" main on Worcester Street to the proposed sports building complex. The Municipal Sewer System Impact Analysis shows an increase in sewer flows generated from the site from 6,150 gpd to 35,196 gpd based on The State Environmental Code, Title 5. Sewer calculations were provided that shows the design flow based on the building use.
- 2.) In the Municipal Sewer System Impact Analysis, the applicant should provide calculations on the current capacity of the sanitary sewer truck line on Worcester Street, the percentage added flow to the pipe and a statement that the additional flows will not adversely affect the sewer truck main or create issues downstream. The designer should meet with the Sewer Division to agree upon the area of the Town's sanitary sewer system to be analyzed.
- 3.) All existing water services are abandoned and the project proposes two new service connection from the 12" water main on Worcester Street. The project proposes a 2" domestic service line and an 8" fire protection service line. We recommend a 4" domestic service line, which should be parallel to the proposed 8" fire protection service line, rather than a 2" service line. The Municipal Water System Impact Analysis shows an increase in water consumption from the site from 3,384 gpd to 6,453 gpd. Provide calculations for estimating the proposed water service lines to the proposed sports complex building.
- 4.) Provide hydrant flow test data for the Municipal Water System Impact Analysis.
- 5.) Provide the projects fire flows and fire pressures required for the project site.

Memo to Michael Zehner
May 18, 2017
Page 5

REFUSE DISPOSAL SYSTEM

- 1.) The solid waste generated from the site will be removed by private haulers and will not impact the Town of Wellesley refuse disposal program. The applicant should state if solid waste or recyclables at the facility will be sent to the Town's Recycling Disposal Facility. An enclosed dumpster is proposed at the back of the proposed building. Provide the estimated amount of refuse and recycling disposal will be handled as a result of this project.

LANDSCAPING

- 1.) The applicant should prepare a landscaping plan that includes a tree protection plan and planting details. The landscape plans should include existing trees to be removed and new plantings.

If I may be of any further assistance in this matter, feel free to contact me.

Sincerely,



George J. Saraceno
Senior Civil Engineer

cc: Michael Pakstis
David Hickey
Douglas Stewart
William Shaughnessy
Joseph Doherty
Lenny Izzo
Michael Grant
Meghan Jop
Phil Cordeiro