

# Staff Report

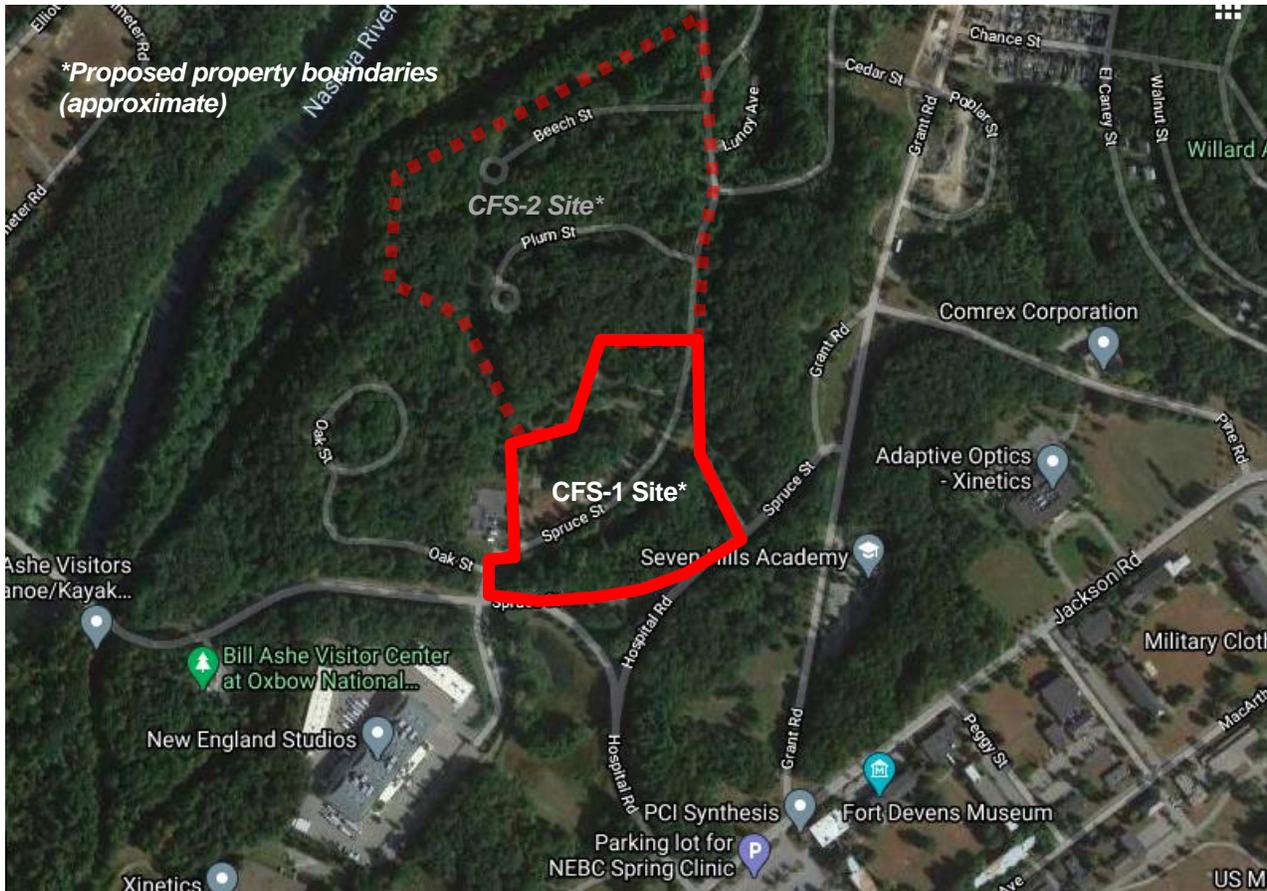
Devens  
Enterprise  
Commission

**Date:** December 14, 2020  
**To:** **Devens Enterprise Commission**  
**Cc:** Peter Lowitt, DEC Director;  
**From:** Neil Angus, Environmental Planner  
**RE:** **111 Hospital Road – CFS-1 Level 2 Unified Permit**

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**Owner/App.:** MassDevelopment Finance Agency/ King Street Properties Acquisitions, LLC.  
**Location:** 111 Hospital Road, Devens, MA  
**Zoning:** Innovation & Technology Business District, Watershed & Aquifer Water Resources Protection Overlay District

**Premises and Proposed Project:** Highpoint Engineering, on behalf of King Street Properties Acquisitions, LLC. has submitted a Level 2 Unified Permit for the development of: a +/- 164,000 gross square foot manufacturing and office building, parking, drainage, and associated site improvements (CFS-1). The proposed CFS-1 building will produce advanced magnets, a key component of Commonwealth Fusion Systems tokamak fusion reactor research and development project proposed as part of a separate Level 2 Unified Permit application (CFS-2).



The CFS-1 building includes 60,000 square feet of office space that will serve as CFS' corporate offices and the remaining 104,000 square feet will be dedicated to manufacturing space for producing the magnets.

CFS-1 is expected to employ 416 people and will include 288 surface parking spaces. The CFS-1 site is being designed and developed for Commonwealth Fusion Systems but will be owned by King Street Properties and leased back to Commonwealth Fusion Systems. The magnets are the key element to making the fusion process successful so it is expected that this facility would produce magnets for CFS-2, as well as other fusion energy projects around the world. These magnets may have other uses beyond fusion energy as well.

**Key Project issues:**

The complete application has been circulated to MassDevelopment and the full DEC Peer Review team: Nitsch Engineering (site plan, stormwater, and traffic), IBI Group (landscaping), and Tech Environmental (light, noise, electromagnetic interference). The following is a summary of those reviews and the key issues raised:

**Access/Traffic:** The Applicant is proposing new driveways to access the site - one at the existing entrance to the Hospital road Electric Substation (directly across from New England Studios entrance), and a second new entrance further east along Hospital Road. These new entrances are located with adequate sight distance for vehicles to safely turn in and out of the site according to the Traffic Study prepared by the Applicant. The Applicant will need to coordinate the final eastern driveway location and details with MassDevelopment to ensure safe alignment with future reconfiguration/elimination of the triangular street network at the intersection of Hospital and Givry Street. The Devens Main Post Trails Plan also identifies Hospital Road as a pedestrian and bike connection so the Applicant should include public sidewalks along the frontage of the property. The proposed project is expected to generate a total of approximately 339 weekday trips in and 339 trips out. Of those trips, 90 entering/35 exiting are expected during the weekday morning peak hours and 46 entering/88 exiting during the weekday evening peak hours. The Traffic study concluded that the proposed project will have minimal impact on the existing road infrastructure and that no off-site improvements are necessary at this time to accommodate the expected increase in vehicle traffic from the project. The DEC's Peer Review Traffic Engineers requested additional details on any adjustments to 2020 traffic data due to the COVID-19 pandemic, and requested clarification on the transportation demand management strategies being implemented (carpooling, vanpooling, shuttle service, bike access, etc.) to ensure the site plans support these initiatives.

**Public Safety:** The Applicant has provided additional supporting information that explains the proposed project – for both the fusion energy research and development portion (CFS-2), and this part of the project – the magnet production facility (CFS-1). See attached Memo from Commonwealth Fusion Systems dated November 20, 2020. A Hazardous Materials Spill Response Plan or Spill Pollution Prevention Control and Countermeasures Plan will be required, depending on the quantities of hazardous materials being stored (refer to 974CMR 4.08). This plan will need to specify the materials, types, quantities, location and method of storage/containment, handling and disposal as per 974 CMR 4.09. These will be required as a condition of approval. The Devens Public Safety Officer is still reviewing the plans to ensure there is adequate site access. Since CFS-1 will be complete before CFS-2, the Applicant should prepare a layout, grading and utility plan for CFS-1 to include emergency access and traffic circulation, utility connections, stubs and how CFS-1 final grading ties into CFS-2.

**Industrial Performance Standards:** To help avoid potential nuisance conditions, the Applicant has designed the facility with due consideration for the surrounding land uses. The closest sensitive receptors include the new housing on Grant Road, New England Studios, Aspire Adult Daycare facility, and the US Fish and Wildlife Service Oxbow National Wildlife Refuge Visitors Center.

**Lighting:** DEC Regulation require 0.5 footcandles for walkways and driveways. A review of the photometric plan shows fairly high lighting intensities in many areas (2.0- 4.0+) which is 3-7x brighter than required. The Applicant is encouraged to review proposed lighting levels and look for opportunities to minimize lighting levels. All site lighting is proposed to be fully shielded and downward directed to prevent off-site glare. Lighting details, including temperature at 3000K, need to be finalized to ensure compliance with 974 CMR 3.04 and 4.04 as requested to minimize impacts to nocturnal wildlife. The Applicant should also indicate if any lighting is required to remain on overnight and if so, how it can be minimized. Any lighting controls (timers, photocells, etc.) should also be indicated.

**Noise:** All manufacturing is proposed to take place inside the building so there should be minimal impacts outside. There is a tank farm proposed outside in the rear of the facility for helium, argon and nitrogen storage. This location will take advantage of the building to block any sound from the residential and daycare receptors. The Applicant should consider utilizing ground-mounted pumps for gas offloading to reduce overall sound from the facility. A

complete noise study of both CFS-1 and CFS-2 is underway by the Applicant and we expect to have the full report before the next hearing date.

**Electromagnetic Interference:** The Applicant has indicated the project will not generate Electromagnetic Interference that could interfere with External Receptor or Special External Receptors as a result of direct radiation or by means of the power distribution system. We have requested additional information to confirm compliance with 974 CMR 4.03 and ensure the proposed magnets and production process will not have any negative on-site or offsite impacts.

**Air Emissions:** A final air quality assessment was referenced in the Applicant's submittal and a copy of this assessment has been requested. Emissions are expected to consist of mainly hot air but the Applicant will need to clarify if there are any stacks or visible emissions associated with the magnet manufacturing process (and any potential for odors). Any stacks should be added to the plans and the proposed height(s) provided.

**Devens Engineering and Utilities:** Devens Engineering and Utilities have a number of comments regarding proposed parcel boundaries, easements, existing and proposed utilities. Due to the existing previous development (roads and former army housing), there are a number of existing utilities that will need to be abandoned, relocated, reconnected, removed, and/or replaced. Coordination between CFS-1 and CFS-2 is also very important as both projects impact one another but are on different timelines. The project proposes internal private roadways that will connect to the Devens public streets so MassDevelopment also has some requests for minor changes to the driveway entrance details. As MassDevelopment is both the property owner and the municipal utility for this project, it is important that these issues be addressed.

**Soil Management:** The property is subject to certain Land Use Control Implementation Program LUCIP requirements from the Army; permanent use restrictions within a former 37-MM ordinance firing area (UXO); and a specific soil management plan for the Oak and Maple Housing Areas. Due to all of these controls, a Soil Management Plan will be required to be prepared and submitted by a Licensed Site Professional that summarizes soil management methods including appropriate environmental protections and worker safety/education associated with the Oak/Maple Activity and Use Limitations (AUL). A Health and Safety Plan will also be required to be prepared and submitted by a Certified Industrial Hygienist or other qualified individual summarizing appropriate personal protection, engineering controls, and environmental monitoring to prevent worker exposures to contaminated soil associated with the Oak/Maple AUL. MassDevelopment's Environmental Engineer has also requested that the plans and supporting materials be updated to include and reference all appropriate land use controls that this property is subject to.

**Stormwater Management:** The DEC Peer Review Engineers reviewed the site plan and stormwater management design in accordance with the DEC Regulations. The Applicant has proposed a series of rain gardens to manage some of the parking lot runoff however there appears to be more opportunities to incorporate more Low-Impact Development techniques (LID) throughout the site to comply with 974 CME 4.08 and minimize pavement/impervious areas and reduce stormwater and urban heat island impacts. Internal road widths and parking areas could be minimized, while still providing ample space for vehicle turning movements. There are a number of additional review comments specific to the drainage details and the MA DEP Stormwater Management Standards that will need to be addressed. The previous Application for preliminary site enabling work for CFS-1 that was approved by the DEC on November 17, 2020, required a Construction General Permit from the EPA and a Stormwater Pollution Prevention Plan still need to be provided to the DEC prior to the commencement of any activity on-site.

**Parking:** Plans show 228 proposed parking spaces for the CFS-1 facility. The DEC Parking Requirements (maximums) are based on the proposed building use and square footage. There are discrepancies between the parking space counts on the plans and in the application. Staff has requested additional information on the square-footage breakdown, expected number of employees, hours of operation, and any shift work as this may reduce the number of parking spaces needed and have positive impacts on stormwater as well. Parking spaces are also proposed at the security gate/guard house. The Applicant should explain how they plan to operate this guard house and how employee and visitor traffic circulation will be handled.

**Landscaping:** The DEC's peer review Landscape Architects have reviewed the plans for compliance with 974 CMR 3.04(8). As discussed in the site enabling work application, there appears to be some opportunities to reduce the limits of clearing and preserve some of the existing mature vegetation that will help buffer this facility from surrounding

land uses. The above comments regarding parking and reducing pavement areas could contribute to this. Depending on any revised limits of clearing, additional screening may be required between the building and Hospital Road to meet the DEC screening requirements. Additional comments regarding plant species selection, stabilization of all disturbed areas, soil compaction and landscape management will also need to be addressed.

**Waiver Requests:**

The Applicant has requested the following waivers:

***974 CMR 3.02(3)e – Erosion and Sediment Control Plan - All site plan submissions shall include an Erosion and Sediment Control Plan containing sufficient information to describe the nature and purpose of the proposed development, pertinent conditions of the site and the adjacent areas, and proposed erosion and sedimentation controls.***

The Proponent seeks a waiver from the submission of an Erosion and Sedimentation Control Plan, as an Erosion and Sedimentation Control Plan was previously submitted under the Level 2 – Lot 1 | Phase 1 Enabling Construction application submitted on October 8, 2020. Staff would suggest the Applicant withdraw this waiver request and simply add the final approved erosion and sediment control plan to this final plan set prior to endorsement.

***974 CMR 3.02(6)(d) - Landscape Treatment. If an irrigation system is proposed, the Submission shall include an irrigation plan complying with 974 CMR 8.09(11): Controls On In-ground Irrigation Systems showing the complete layout and of all components, complete schematic diagrams of all systems, a functional and sequential description of all systems, and irrigation details for installation of all components, including but not limited to piping, valves, valve boxes, sprinkler heads, backflow preventers, automatic control systems, pumps, meters, associated cabinets, and all appurtenances as needed.***

The Proponent seeks a waiver from submission of an irrigation system design until approval of the landscape design is rendered by the DEC. An irrigation design plan will be submitted to the DEC for administrative review when completed. Staff would recommend the Applicant withdraw this waiver request as well. The DEC can make a finding or include a condition that no irrigation is approved as part of this application. An on-site well for irrigation is being proposed. Any proposed irrigation systems can be approved administratively at a later date – however, in order to comply with 974 CMR 3.04(8)(c)12., the Applicant should incorporate all necessary site design measures to utilize rainwater harvesting and/or reclaimed greywater to the maximum extent feasible. On-site cisterns may be installed to store water for irrigation. The DEC discourages irrigation systems connected to potable water supplies.

**Application and Process:** Highpoint Engineering, on behalf of King Street Properties Acquisitions, LLC., submitted the Unified Permit Application on November 8, 2020 and the Determination of Completeness was issued on November 19, 2020. Copies of the application were received by the surrounding Towns on November 23, 2020. Legal notices were placed in Nashoba Publications on November 27, 2020 and December 4, 2020. All abutting property owners were duly notified by certified mail. The 30-day Town comment period expires on December 24, 2020. To date, no comments have been received. The 75 day review period for the DEC to act on this application ends on February 2, 2021.

**Recommended Action:** The 30-day town comment has not expired so the commission will need to continue the public hearing once the Commission and public have had an opportunity to ask any questions and comments, The DEC should continue the hearing to the January 7, 2021 meeting at 7:30AM to allow the sound study and any additional information to be submitted and reviewed.

Attachments: [CFS Safety Questions Memo \(November 20, 2020\)](#)  
[Application Package](#)  
[Site Plan](#)  
[Peer Review Comments](#)