Staff Report

Devens Enterprise Commission

Date: January 5, 2021

To: **Devens Enterprise Commission**

Cc: Peter Lowitt, DEC Director;

From: Neil Angus, Environmental Planner

RE: **111 Hospital Road – CFS-1 Level 2 Unified Permit – Continued Public Hearing**

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

Proposed Project Recap: +/- 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.

Project Issues Resolved Since Last Meeting:
Access/Traffic: The proposed project is expected to generate approximately 419 daily weekday trips in and 419 daily weekday trips out of the site. Of those, 125 are expected to be new vehicle trips (90 entering/35 exiting) during the weekday morning peak hour and 134 new vehicle trips (46 entering/88 exiting) during the weekday evening peak hour. The traffic study confirms that existing road network is capable of supporting the projected increase in traffic from this project with no off-site mitigation. Based on the results of the traffic study, the Applicant has committed to implementing the following measures:

- Transportation Demand Management (TDM) Program: The Applicant agrees to participate in the Devens Transportation Management Initiative which seeks to minimize potential traffic impacts in the region as a result of the redevelopment of Devens through various TDM strategies that reduce peak traffic flows, single-occupancy vehicle trips and increase options for alternative forms of transportation. These strategies reduce traffic congestion and avoid or delay the need for physical street improvements. The Applicant is committing to implement the following strategies:
    - a Guaranteed Ride Home Program (in case of emergencies for those who use alternative transportation or participate in ridesharing)
    - Participate in the Employee Relocation Commuter Assistance Program (educating employees on transportation options)
    - Provide Ridesharing/Ridematching Services (to promote carpooling and reduce single occupancy vehicle trips)
    - Offer flexible work hours/compressed work weeks (to reduce AM and PM peak traffic)
    - Devens Shuttle Bus Circulator (providing access to Devens services and local commuting options)
    - Designate parking spaces as preferred parking for any ridesharing services (car/van vanpools)
    - Designate parking spaces as preferred parking for any hybrid or zero/low-emission vehicles
    - Provide Hybrid/Electrical vehicle plug-in/recharge stations
    - Provide bicycle racks and shower/changing facilities

  The Applicant is committed to achieving a 15% reduction in traffic volume to and from this site, based on these TDM strategies. The Applicant has also agreed to have an on-site TDM coordinator who will monitor participation in the program and document the estimated reduction in site-generated traffic associated with

these TDM measures. These findings will be reported to DEC Staff six months after occupancy of the Project.

- Site Access Improvements: There is adequate sight distance for vehicles to safely turn in and out of the site at both new entrances. Since MassDevelopment is planning to re-align the Givry/Hospital Road intersection (eliminating the existing triangle and creating a new T-intersection), the Applicant will need to coordinate the final eastern driveway location and details with MassDevelopment to ensure safe alignment with this new intersection.
- Post-Occupancy Traffic Monitoring Program: The Applicant has agreed to complete an annual traffic monitoring program (TMP) to occur six months after full occupancy of CFS-1 and CFS-2. The data collected as part of the TMP will be distributed to the DEC staff and MassDevelopment within two months of completing the monitoring effort. The primary purpose of the TMP is to validate the assumptions in the traffic study for the current phase of the Project (traffic generation and distribution) and serve as a basis for evaluating future phases of development at the site.

Nitsch Engineering has finalized their review of the Traffic Study and have a few remaining items that will need to be addressed in a final version of the report. This, and the above measures can be addressed as a condition of approval.

***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, the Applicant will need to develop a comprehensive Soil Management Narrative that addresses all these requirements for moving soils throughout both sites (CFS-1 and CFS-2) and how they will work to adhere to all restrictions. Such plan will need to be prepared by a Licensed Site Professional. It will also need to include a Health and Safety Plan component prepared 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. The Applicant will need to ensure they provide unrestricted access to both sites for the EPA, Army, MA DEP, and MassDevelopment for monitoring and enforcement of all associated land use restrictions. MassDevelopment's Environmental Engineer has requested that the plans and supporting materials be updated to reference these details and all appropriate land use controls that this property is subject to. This will be required as a condition of approval.

Project Issues Still being Addressed:

Hours of Operation and Shifts: CFS-1 is expected to employ 416 people and will include 288 surface parking spaces but we have not received any details on hours of operation. Hours of operation are important to understand from an off-site impact and industrial performance standard perspective. Staff has requested additional information on the square-footage breakdown, expected number of employees per shift, 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. If the guard house is to be manned, it will require restroom facilities.

***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). CFS-1 will include process gases stored in outside bulk gas storage tanks. Process gasses include Helium, Nitrogen and Argon. These tanks will require permitting from the Devens Fire Department.

The Applicant is also proposing a diesel emergency generator as well (size and fuel storage capacity yet to be determined). A Hazardous Materials Spill Response Plan or Spill Pollution Prevention Control and Countermeasures Plan will be required as part of an overall facility operations and maintenance plan due to the quantities of hazardous materials being stored. 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. This will be required as a condition of approval.

Safe access throughout the property is also a design consideration. The proposed internal road network is extremely wide (26'-30'). These are wider than highway travel lanes and can create unsafe conditions for motorists, cyclists and pedestrians using the site. Road widths of 20' to a maximum of 24' are sufficient to handle two-way truck traffic and occasional oversized loads. The design of the site and parking areas also needs to take into consideration safe

pedestrian access and movement through the site. This presents an opportunity to reduce pavement costs, reduce stormwater treatment and management, reduce heat island impacts, all while creating a safer transportation network on campus.

Since CFS-1 will be complete before CFS-2, the Applicant will need to prepare a site logistics plan that includes emergency access and traffic circulation, utility connections, stubs and how CFS-1 operations will be safely separated from CFS-2 construction activity. The Devens Public Safety Officer is still reviewing the plans to ensure there is adequate emergency site access and infrastructure for fire suppression.

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. From a regulatory perspective, both CFS-1 and CFS-2, as well as future build-out of CFS-3 and 4 have to be considered together/cumulatively when assessing potential environmental impacts with respect to traffic, safety, hazardous material storage, emissions and other industrial performance standard issues.

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. Staff has requested the Applicant review the lighting plan to ensure compliance with 974 CMR 3.04 and 4.04. The Applicant also needs to indicate if any lighting is required to remain on overnight and if so, how it can be minimized (reduced lighting plan required between 11PM and 7AM). Any lighting controls (timers, photocells, etc.) should also be indicated.

Noise: The Applicant has conducted background sound measurements to establish a baseline ambient noise level. A noise modelling study of both CFS-1 and CFS-2 is currently underway by the Applicant. As of the writing of this report, we have not received the full report. While all manufacturing is proposed to take place inside the building, there is a lot of outdoor equipment, tank farm for helium, argon and nitrogen storage, emergency generator, as well as proposed rooftop mechanical equipment and exhaust from the buildings. All of these sources need to be considered in the modelling, along with any required mitigation, to demonstrate compliance with 974 CMR 4.05.

Electromagnetic Interference: The proposed magnets being constructed are electromagnetic – meaning the magnetic field is activated when electrically charged. The Applicant states: "*As a final quality check, each magnet will undergo electrical testing in a sealed cryogenic vessel at temperatures of 77 and 20 K. The worst-case estimate of the magnetic field of these magnets will range from 7 to 24 Tesla (will likely operating at less than half of these fields) and the safety-critical Gauss lines will remain inside the building."* The DEC's Peer Review Consultants are reviewing this and have asked for some additional information to aid in their review to ensure the magnet manufacturing and testing process will not create any harmful electromagnetic radiation or interference on or off-site.

Air Emissions: As the facility will be manufacturing, they need to provide details on their proposed air emissions. They have indicated that there will be a lot of waste heat emitted from the process manufacturing and testing process. Staff is still waiting for the air quality assessment performed by the Applicant. This needs to be reviewed by our Peer Review Engineers prior to acting on this application. We also requested clarification if there are any stacks or visible emissions associated with the magnet manufacturing process (and any potential for odors). Any stacks need to be added to the plans and the proposed height(s) provided. The proposed diesel generator will require Compliance Certification be submitted to the MA DEP (copied to the DEC).

Greenhouse Gas Emissions: In addition to stationary (building/facility) emissions, the traffic study indicates that the entire future build-out of the campus is expected to generate 3,122 weekday trips (mobile emissions). As previously mentioned, these types of impacts have to be considered cumulatively for the entire project. While CFS-1 and CFS-2 are on separate parcels and will be under separate ownership, they operate together. 974 CMR 4.11 requires projects that generate more than 2,000 average daily trips to comply with the MA Stretch Code (780 CMR 120AA) as amended.

Note: On January 7, 2021, the DEC Industrial Performance Standards Peer Review Engineers will be providing a list of remaining questions/information that they need to complete their review.

Devens Engineering and Utilities: Devens Engineering and Utilities had a number of comments regarding proposed parcel boundaries, easements, existing and proposed utilities as part of the initial review. These items still need to be addressed. The project proposes internal private roadways that will connect to the Devens public streets so MassDevelopment has requested some minor changes to the driveway entrance details. As discussed in the traffic section of this Staff Report, the DEC should include a condition that requires the Applicant to coordinate the construction of both proposed entrances with MassDevelopment/Devens Public Works and Engineering.

Stormwater Management: The DEC Peer Review Engineers reviewed the site plan and stormwater management design and have requested the applicant explore more opportunities to incorporate more Low-Impact Development techniques (LID) throughout the site to comply with 974 CMR 4.08 and minimize pavement/impervious areas and reduce stormwater and urban heat island impacts where feasible. Revised plans are expected to be submitted this week. As the project disturbs greater than one acre, it will require a Construction General Permit from the EPA and a Stormwater Pollution Prevention Plan to be prepared. These will be required as a condition of approval prior to commencement of any construction activity on-site.

Accessibility: 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. Sidewalk design will need to be coordinated with MassDevelopment/Devens Engineering and the future Hospital Road improvements.

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). There appears to be opportunities to reduce the limits of clearing in some areas and preserve existing mature vegetation that will help buffer this facility from surrounding land uses. This would reduce the amount of new landscape screening required. The above comments regarding parking and reducing road widths could contribute to this. Additional comments regarding plant species selection, stabilization of all disturbed areas, soil compaction and landscape management will also need to be addressed in revised plans.

Phasing: The approval of the Master Plan is conceptual in nature and any additional development beyond CFS-1 and CFS-2 will require additional Level 2 Unified Permit approvals from the DEC.

Waiver Requests:
The Applicant originally requested two waivers as part of their original application:

974 CMR 3.02(3)e – Erosion and Sediment Control Plan.
974 CMR 3.02(6)(d) - Landscape Treatment. Irrigation plan complying with 974 CMR 8.09(11).

Since the erosion control plan was already prepared for the site as part of the previous Level 2 – Lot 1 | Phase 1 Enabling Construction application, and no irrigation is proposed at this time, The Applicant has withdrawn both waiver requests. Staff will include a draft condition requiring the previously approved erosion and sediment control plan to be included in this plan set prior to endorsement. Similarly, irrigation plans can be approved administratively by Staff at a later date so we can address this as a condition as well (that the plan comply with 974 CMR 3.04(8)(c)12 and incorporate all necessary site design measures to utilize rainwater harvesting and/or reclaimed greywater to the maximum extent feasible.

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 expired on December 24,

2020. No comments have been received other than those from MassDevelopment and our Peer Review Consultants. 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 expired however there are still a number of issues that need to be resolved and revised plans are expected to be submitted so staff would recommend, once the Commission and public have had an opportunity to ask any questions and comments, the commission continue the public hearing to either a special meeting on January 19, 2021 at 6:45PM, or to the next regularly scheduled public hearing on January 26, 2021 at 6:45PM. Which date will depend on when revised plans and supporting information are submitted. As of the writing of this report, they have not.