The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Maura T. Healey
GOVERNOR

Kimberley Driscoll
LIEUTENANT GOVERNOR

Rebecca L. Tepper
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1081
http://www.mass.gov/eea

July 24, 2023

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: Cell Signaling Technology at the Old Quarry
PROJECT MUNICIPALITY	: Manchester-by-the-Sea
PROJECT WATERSHED	: North Coastal
EEA NUMBER	: 16716
PROJECT PROPONENT	: Cell Signaling Technology, Inc.
DATE NOTICED IN MONITOR	: June 23, 2023

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR).

Project Description

As described in the Environmental Notification Form (ENF), the project consists of the construction of two buildings for Research and Development (R&D) use with a combined gross square footage (GSF) of 260,000 square feet (sf), a five-story parking garage with 479 spaces, 56 surface parking spaces, interior drives and a new stormwater management system. In addition, the project will restore approximately 4.5 acres of previously disturbed areas within the site to improve habitat and provide a small parking area with five spaces at a new trailhead to an adjacent public forest.

The project will be constructed in two phases. Phase 1 will include a five-story, 127,000-sf building, a lobby entrance and courtyard on the west side of the building which will also serve the Phase 2 building, a portion of the parking garage with 227 spaces to be constructed east of the building, and 40 surface parking spaces. Phase 2 will include a five-story, 133,000-sf building, construction of the remainder of the parking garage (an additional 252 spaces) and 16 surface parking spaces. The Phase 2 building will be located west of the common lobby and courtyard constructed in Phase 1. The Town of Manchester-by-the-Sea (Town) will construct a 1.1 mile water main and a 0.8-mile long sewer main from Forest Street south of the site. The

water and sewer mains will be installed within Forest Street and Mill Street south of Route 128, and in an existing utility conduit under Route 128 to reach the project site.

Project Site

The 50-acre project site is located at the site of a former gravel quarry in northern Manchester-by-the-Sea. It is bordered to the south and east by Route 128, to the southwest, west and north by commercial uses, undeveloped land and wetlands associated with Sawmill Brook located on Atwater Avenue; and to the northeast by forested open space known as the Monoliths owned by the Trustees of Reservation. The commercial uses directly abutting the site to the northwest are also located within the former quarry. Riverfront Area associated with Sawmill Brook extends onto the western portion of the site. As shown on the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer, the 100-year floodplain (no Base Flood Elevation (BFE) established) associated with Sawmill Brook is located to the west of the project site and includes portions of Atwater Avenue, but does not extend onto the project site.

The site is not located within one mile of an Environmental Justice (EJ) population, and within one mile of the site there are no languages other than English spoken by five percent more of the population who do not speak English very well.[1] The site is located within five miles of EJ populations designated as Minority and Income located in Gloucester and Hamilton.

Environmental Impacts and Mitigation

Potential environmental impacts of the project include alteration of 21.5 acres of land; creation of 4.6 acres of impervious area; alteration of 20,500 sf of Riverfront Area; generation of 2,800 New average daily trips (adt); use of 20,000 gallons per day (gpd) of water; and generation of 20,000 gpd of wastewater.

Measures to avoid, minimize, and mitigate environmental impacts identified in the ENF include restoration of approximately 4.5 acres of previously-disturbed land within the former quarry, restoration of approximately 6,000 sf of previously-altered Riverfront Area, installation of a traffic signal at the intersection of Route 128 Northbound Ramps/School Street and Mill Street, roadway striping and replacement of the Stop sign on Atwater Avenue, implementation of a Transportation Demand Management (TDM) program, construction of a new stormwater management system that will comply with the Massachusetts Stormwater Management Standards (SMS), heating and cooling provided by electric and geothermal systems with efficient gas boilers to meet peak heating demand and installation of rooftop solar photovoltaic (PV) systems on the buildings and parking garage.

Jurisdiction and Permitting

The project is subject to MEPA review and preparation of an ENF because it requires Agency Actions and exceeds the thresholds at 301 CMR 11.03(6)(b)(13), generation 2,000 or more New adt on roadways providing access to a single location; 301 CMR 11.03(6)(b)(14), generation 1,000 or more New adt on roadways providing access to a single location and

[1] "Environmental Justice Population" is defined in M.G.L. c. 30, § 62 under four categories: Minority, Income, English Isolation, and a combined category of Minority and Income.

construction of 150 or more new parking spaces at a single location; and 301 CMR 11.03(6)(b)(14), construction of 300 or more new parking spaces at a single location. The project requires a Vehicular Access Permit from the Massachusetts Department of Transportation (MassDOT).

The project requires an Order of Conditions from the Manchester-by-the-Sea Conservation Commission (or in the case of an appeal, a Superseding Order of Conditions from the Massachusetts Department of Environmental Protection (MassDEP)). It requires a National Pollutant Discharge Elimination System (NPDES) Stormwater General Permit from the U.S. Environmental Protection Agency (EPA).

While the Proponent is not seeking state funding for the development portion of the project, the ENF indicated that the Town is seeking funding for the water and sewer main extension to the site through the MassWorks Infrastructure Grant program. Because the project will therefore receive Financial Assistance from an Agency, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the ENF

The ENF provided a description of existing and proposed conditions, preliminary project plans, and an analysis of alternatives. It identified measures to avoid, minimize and mitigate project impacts and provided a Transportation Impact Assessment (TIA). During the review period, the Proponent provided supplemental information which described the proposed stormwater management system, reviewed the project's impacts to Riverfront Area, and proposed mitigation measures. Consistent with the MEPA Interim Protocol on Climate Change Adaptation and Resiliency, the ENF contained an output report from the MA Climate Resilience Design Standards Tool prepared by the Resilient Massachusetts Action Team (RMAT) (the "MA Resilience Design Tool"),[2] together with information on climate resilience strategies to be undertaken by the project.

Alternatives Analysis

The ENF evaluated No Build, Commercial Use, Surface Parking and Off-site Alternatives to the proposed project. The No Build Alternative establishes a future baseline condition to provide a comparison of the impacts of the Preferred Alternative and other alternatives. It would involve leaving the site in its current condition, which is largely disturbed and unvegetated as a result of its prior use as a quarry. The Commercial Use Alternative would involve development of the site for other uses allowed under zoning, such as retail stores, leisure facilities or office space. According to the ENF, retail uses would not be consistent with the Proponent's need to expand its R&D facilities and may not be economically viable because the site is isolated from other retail districts and is not served by public transportation. In addition, construction of one or more office buildings with a similar total square footage as that proposed by the Preferred Alternative would generate more adt and have greater impacts on the local and regional roadway systems. The Surface Parking Alternative would include an approximately 68,400-sf (1.6 acres) surface parking lot with 253 spaces to accommodate Phase 1 and an

[2] https://resilientma.org/rmat_home/designstandards/

additional 66,400-sf (1.5 acres) surface parking lot with 196 spaces to accommodate Phase 2. The Surface Parking Alternative would add 11.1 acres of impervious area compared to 9.1 acres of impervious area in the Preferred Alternative due to a larger parking surface and longer paved driveways, and would not provide space for a rooftop PV system proposed in the Preferred Alternative. The Off-site Alternative would avoid impacts associated with development of the project site by expanding the Proponent's existing facility in Danvers by 200,000 sf and an additional 580 parking spaces. According to the ENF, the Danvers site has adequate space to expand the existing facility but has less space available for additional stormwater infrastructure or open space amenities; in addition, it would add traffic to more congested roadways in the vicinity of the site, including roadways serving a nearby EJ population. The Preferred Alternative involves the redevelopment of a disturbed site with adequate space for the Proponent to meet its need for expanded R&D space and associated parking. The project's impacts will be mitigated by restoring areas of the quarry with native vegetation, constructing a new stormwater management system and incorporating energy-efficiency and renewable energy sources into the design of the proposed buildings.

Transportation

The ENF included a transportation study generally consistent with the EEA/Massachusetts Department of Transportation (MassDOT) *Transportation Impact Assessment (TIA) Guidelines* issued in March 2014. It reviewed future traffic operations for the weekday evening and Saturday midday peak hours for 2023 Existing, 2033 No Build and 2033 Build scenarios**.**

The TIA analyzed the transportation impacts of the project in a study area including the following intersections:

- School Street/Atwater Avenue
- School Street/Route 128 Southbound (SB) Ramps
- School Street/Route 128 Northbound (NB) Ramps and Mill Street
- School Street/Route 128 Northbound (NB) Ramps
- School Street/Pleasant Street
- School Street/Lincoln Street

All of the intersections are unsignalized. Only the Route 128 Ramps and the section of School Street between the Route 128 NB and SB Ramps are under the jurisdiction of MassDOT; all other roadways and intersections are under Town jurisdiction. Vehicular access to the site will be provided by a driveway off Atwater Avenue, which ends at the project site.

Trip Generation

The TIA reviewed trip generation estimates for proposed uses at the site. Based on the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* 11th edition using Land Use Code (LUC) 760 (Research and Development Center) for the proposed square footage of 263,000 sf, the project will generate 2,800 adt, including 259 trips in the AM peak period and 246 trips in the PM peak period. For comparison, the TIA calculated the trip generation for LUC 760 based on the number of employees (550 employees) rather than building square footage,

which yielded an estimate of 1,896 adt. The traffic analysis was conducted using 2,800 adt as the project's trip generation so as to not potentially underestimate the project's impact on the roadway system.

Traffic Operations

The TIA provided peak period capacity analyses and level-of-service (LOS) designations for through traffic and turning movements at study area intersections under 2023 Existing, 2033 No Build and 2033 Build conditions. According to the Proponent, a 10-year planning window was used for the traffic analysis because that is what is typically required for analyses of potential changes to highway ramp systems. The LOS reflects the overall operations of an intersection, including traffic speed, delay, and capacity. For urban intersections, LOS D reflects an acceptable level of operations; LOS E or F reflect significantly congested conditions and long delays. The 2033 No Build condition reflects a background traffic growth rate of 1.0 percent per year and the trip generation associated with two planned development projects in Manchester-by-the-Sea. The 2033 No Build scenario also includes the reconstruction of a portion of School Street adjacent to Route 128 to provide a new roadway surface, sidewalks and bicycle lanes, and planned pedestrian improvements by the Town, including new sidewalks and ramps, at the intersections of School Street/Pleasant Street and School Street/Lincoln Street. The 2033 Build condition reflects the addition of project-generated trips to the 2033 No Build scenario.

Under 2023 Existing conditions, traffic movements at all intersections operate at LOS D or better, except for the southbound approach to the School Street/Pleasant Street intersection (LOS E in the AM peak period) and westbound approach to the School Street/Lincoln Street intersection (LOS E in the AM peak period). Under 2033 No Build conditions, the left turn from the Route 128 NB Ramps onto School Street will operate at LOS F during both peak periods; the southbound School Street approach and westbound right turn from Pleasant Street onto School Street will operate at LOS F in the AM peak period; and the westbound approach to the School Street/Lincoln Street intersection will operate at LOS F in the AM peak period.

According to the TIA, project-generated trips will impact operations at several intersections, including Route 128 SB Ramps/School Street (left turn from the ramps onto School Street will operate at LOS F in both peak periods) and School Street/Atwater Avenue (Atwater Avenue approach to the intersection will operate at LOS E in the PM peak period). In addition, the project will add traffic and cause longer delays at the Route 128 NB Ramps/School Street (AM and PM peak periods), School Street/Pleasant Street (AM peak period) and School Street/Lincoln Street (AM peak period only) intersections. According to the ENF, the impacts at the School Street/Atwater Avenue, Route 128 SB Ramps/School Street, School Street/Pleasant Street and School Street/Lincoln Street intersections do not require mitigation because the degraded LOS will not extend beyond peak periods, there is adequate capacity (low volume to capacity ratio) to accommodate the additional vehicles generated by the project, and the queues are not expected to exceed four vehicles. As noted below, the Proponent has proposed mitigation measures at the Route 128 NB/School Street and School Street/Atwater Avenue intersections.

Transportation Mitigation

The Proponent will mitigate the project's impacts to the Route 128 NB/School Street intersection by installing a fully actuated traffic signal with demand-based vehicular and bicycle

detection, accommodations for emergency vehicle preemption and a protected or exclusive pedestrian crossing. The signal will also control the Route 128 NB/School Street and Mill Street intersection. The Proponent will prepare 25 percent intersection design plans prior to Phase 1 occupancy and install the signal prior to Phase 2 occupancy, if required by MassDOT. According to the TIA, the signal will result in the intersections operating at LOS D or better under 2033 Build with Mitigation conditions. The Proponent also evaluated a roundabout control design at this intersection as an alternative mitigation measure to the proposed traffic signal. According to the TIA, a roundabout is not feasible because the Proponent would be required to acquire property abutting the intersection too construct the roundabout and it would significantly shorten the length of the Route 128 NB On-Ramp from 720 ft to between 500-600 ft, which is below MassDOT's guidelines for minimum ramp length. According to MassDOT, the Proponent should continue to coordinate with the District 4 office regarding the design of the proposed signal at the intersection and any alternative designs that should be evaluated prior to full occupancy of the site. The Proponent will also restripe the centerline along Atwater Avenue and replace the stop sign at the westbound approach to the School Street/Atwater Avenue intersection; these measures will improve safety but will not affect the operation of the intersection.

Multimodal Transportation

The project site is located in an area without nearby public transportation options and with limited bicycle and pedestrian facilities. According to the ENF, the nearest public transportation facility is the Massachusetts bay Transportation Authority's (MBTA's) Manchester-by-the -Bay commuter rail station located 2.2 mile south of the site. There are presently no formal bicycle and pedestrian accommodations within the study area; however, the shoulders along portions of School Street are wide enough to support bicycle travel and, as noted below, pedestrian improvements are planned for short segments along School Street. According to the ENF, even if there were more extensive pedestrian accommodations along School Street, there are a limited number of origins and destinations for pedestrian and bicycle trips to and from the site for workers at the proposed buildings. However, comments from the Manchester Bike and Pedestrian Committee highlight the need for pedestrian and bicycle accommodations to be provided on School Street because it provides the most direct access to recreational trails north of Route 128 to the main population center of Manchester-by-the-Sea, which is located south of Route 128.

Transportation Demand Management

The ENF included a TDM plan intended to reduce the number of single-occupancy vehicle (SOV) trips to the site by both employees and visitors and evaluate the expected trip reduction of each. Proposed TDM measures include:

- The Proponent, who is a member of the North Shore Transportation Management Association (TMA) for its Danvers and Beverly locations, will work with the TMA to extend its services to Manchester-by-the-Bay;
- Provide preferential parking for rideshare, carpool and hybrid vehicles;
- Provide electric vehicle (EV) charging stations in close proximity to entrances of the buildings;

- Provide parking at a rate lower than recommended by ITE and the Town's zoning by-law;
- Install pedestrian signal equipment at the proposed signal at the Route 128 NB Ramps/School Street/Mill Street intersection;
- Provide striping for buffered bicycle lanes along School Street from Atwater Avenue to the Route 128 Ramps;
- Provide on-site sidewalks and ramps;
- Provide secure, weather-protected long-term bicycle parking for employees in the parking garage;
- Provide showers for employes who walk or bike to work;
- Provide a trailhead connection with public parking to the adjacent Monoliths recreational area;
- Provide maps, schedules and other information about public transportation options to employees;
- Provide a 25 percent subsidy for employee commuter rail passes and rideshare fees between the Manchester-by-the-Sea MBTA commuter rail station and the project site;
- Designate a transportation coordinator to oversee transportation issues, including implementation of TDM measures and transportation monitoring;
- Develop and administer an employee rideshare program;
- Encourage employee participation in carpools and vanpools;
- Develop and implement a Guaranteed Ride Home program for employees;
- Provide flexible hours to employees; and,
- Provide direct deposit option for employees;

Transportation Monitoring Program

The ENF described a proposed traffic monitoring program that would be implemented to monitor trip generation, traffic operations, parking use, use of public transportation and pedestrian and bicycle activity. The results of the monitoring program will be used to ensure that the project's impacts are consistent with those described in the ENF, evaluate the assumptions made in the traffic study and the adequacy of the transportation mitigation measures, including the TDM program, and assess the need for additional mitigation. The monitoring program will include:

- Simultaneous automatic traffic recorder (ATR) counts at each site driveway, Atwater Avenue and School Street for a continuous 24-hour period on a typical weekday;
- Parking demand counts from 5:00 AM to 9:00 PM;
- Motor vehicle crash reports for study area intersections;
- Travel survey of employees at the site;
- Weekday AM and PM peak hour turning movement counts (TMCs) and operations analysis at study area intersections; and,
- Assess whether additional transportation mitigation is necessary.

The Transportation Monitoring Program should provide confirmation to MassDOT that the full buildout of the project will not exceed 3,000 adt, which would trigger the mandatory EIR threshold at 301 CMR 11.03(6)(a)(6). The Proponent should file a Notice of Project Change (NPC) if the project generates 3,000 or more adt.

Wetlands and Stormwater

Approximately 3.86 acres (168,320 sf) in the southwestern portion of the project site is located within Riverfront Area associated with Sawmill Brook (which is located off-site). Most of the on-site Riverfront Area consists of disturbed areas, including paved driveways, a lawn and a tennis court. Project activities will impact 20,500 sf of on-site Riverfront Area, including construction of a stormwater infiltration basin within the footprint of an existing tennis court (12,500 sf), reconstruction of a driveway within its footprint (2,000 sf), and restoration of disturbed areas (6,000 sf). According to the ENF, the infiltration basin must be constructed at this location because it is one of the few areas with suitable soils for infiltration. In total, activities within on-site Riverfront Area will result in a net decrease in impervious area and enhance its habitat value. In addition, the project will impact 3,600 sf of off-site Riverfront Area on Atwater Avenue and Mill Street for the installation of water, sewer, electric and gas infrastructure. These utilities will be installed within the roadway, which will be restored to its pre-construction condition.

The project will add 4.6 acres of impervious area. The ENF provided a conceptual description of the proposed stormwater management system, which will include Best Management Practices (BMPs) such as new deep sump catch basins, infiltration basins and water quality swales. In addition, one or more rain gardens will be constructed in several locations throughout the site. According to the ENF, the stormwater management system has been designed to comply with the SMS, including the requirements that 80 percent of the Total Suspended Solids (TSS) be removed from runoff and that pre-construction peak runoff rates be maintained or reduced under post-construction conditions. As noted below, the stormwater management system will have sufficient capacity to handle projected increased precipitation under future climate conditions The Town's Conservation Commission will review the project's impacts on wetland resource areas and make a determination regarding the proposed stormwater management system's compliance with the SMS. The Proponent should review MassDEP's comment letter, which identifies additional information that may be required to fully evaluate the project's impacts and mitigation measures.

Climate Change

Adaptation and Resiliency

Effective October 1, 2021, all MEPA projects are required to submit an output report from the MA Resilience Design Tool to assess the climate risks of the project. Based on the output report attached to the ENF, the project has a "High" exposure rating based on the project's location for extreme precipitation (urban flooding) and extreme heat. Based on the 40-year useful life and the self-assessed criticality of the project, the MA Resilience Design Tool recommends a planning horizon of 2070 and a return period associated with a 10-year (10% chance) storm event when designing the project for the extreme precipitation parameter. The tool recommends planning for the 50th percentile with respect to extreme heat (which indicates an increase in extremely hot days as compared to a historical baseline).

According to the ENF, the stormwater management system has been designed to attenuate runoff from storm events using NOAA Atlas 14 rainfall data, which estimates a rainfall

depth of 8.02 inches for a 100-year (1% annual chance), 24-hour storm event; this exceeds the projected precipitation depth of 6.9 inches for a 2070 10-year (10% chance) storm event generated by the MA Resilience Design Tool. According to the ENF, the Proponent will evaluate the feasibility of designing the stormwater management system with adequate capacity for the projected storm events in 2070 and 2090. As noted above, the Proponent will restore vegetation to approximately 4.5 acres of land altered by gravel-mining activities and over 80 percent of the site will be vegetated and pervious, which will minimize the urban heat island effect.

Greenhouse Gas Emissions

While a GHG analysis was not required because the project does not meet a mandatory EIR review threshold, the ENF included a "Concept Design Phase Energy and Carbon Report" which described GHG mitigation measures incorporated into the design of the proposed buildings. Notably, the buildings will use fully electric hot water heating, ventilation and cooling systems and a hybrid heating system that will use electric geothermal heat pumps under most conditions, with a gas boiler used only to meet peak heating demand. In addition, the project will include rooftop solar photovoltaic (PV) generating systems.

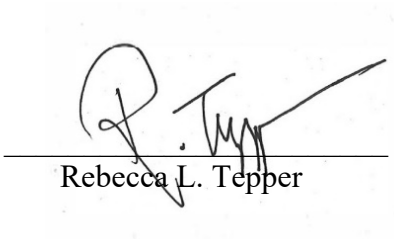
Construction Period

All construction and demolition (C&D) activities should be managed in accordance with applicable MassDEP regulations regarding Air Pollution Control (310 CMR 7.01, 7.09-7.10), and Solid Waste Facilities (310 CMR 16.00 and 310 CMR 19.00, including the waste ban provision at 310 CMR 19.017). The project should include measures to reduce construction period impacts (e.g., noise, dust, odor, solid waste management, etc.) and emissions of air pollutants from equipment, including anti-idling measures in accordance with the Air Quality regulations (310 CMR 7.11). I encourage the Proponent to require that its contractors use construction equipment with engines manufactured to Tier 4 federal emission standards, or select project contractors that have installed retrofit emissions control devices or vehicles that use alternative fuels to reduce emissions of volatile organic compounds (VOCs), carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). If oil and/or hazardous materials are found during construction, the Proponent should notify MassDEP in accordance with the MCP. All construction activities should be undertaken in compliance with the conditions of all State and local permits. I encourage the Proponent to reuse or recycle C&D debris to the maximum extent. The Proponent should consult MassDEP's comment letter for additional requirements related to construction activities.

Conclusion

The ENF has adequately described and analyzed the project and its alternatives, and assessed its potential environmental impacts and mitigation measures. Based on review of the ENF and comments received on it, and in consultation with Agencies, I have determined that an EIR is not required.

July 24, 2023
Date



Rebecca L. Tepper

Comments received:

07/13/2023	Massachusetts Department of Environmental Protection (MassDEP)/ Northeast Regional Office (NERO)
07/13/2023	Massachusetts Department of Transportation (MassDOT)
07/13/2023	Manchester Bike and Pedestrian Committee

RLT/AJS/ajs

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Northeast Regional Office • 150 Presidential Way Woburn, MA 01801 • 978-694-3200

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

July 13, 2023

Rebecca L. Tepper, Secretary
Executive Office of
Energy & Environmental Affairs
100 Cambridge Street
Boston MA, 02114

RE: Manchester
Cell Signaling Technology (CST) at the Old Quarry
EEA# 16716

Attn: MEPA Unit

Dear Secretary Tepper:

The Massachusetts Department of Environmental Protection Northeast Regional Office (MassDEP-NERO) has reviewed the Environmental Notification Form (ENF) for the proposed Cell Signaling Technology (CST) at the Old Quarry project in Manchester. MassDEP provides the following comments.

Wetlands

The multi-phased project entails constructing two (2) life science buildings (127,000 and 133,00 square feet, respectively) along with a multi-level garage that will accommodate 479 cars and the implementation of stormwater measures. The proponent states that the proposed project will alter the Riverfront Area associated with Sawmill Brook and the 100-foot Buffer Zone to Bank and Bordering Vegetated Wetlands (BVW). MassDEP cannot provide comments pertaining to the Environmental Notification Form (ENF) since insufficient information was submitted to MEPA. Specifically, the project narrative does not address how the project will meet the Riverfront Area performance standards under 310 CMR 10.58(4), or provide details about the "new meadow, restored woodland habitats" that are mentioned on pg 1-1. A Stormwater Report with supporting computations should be submitted to show how the project meets the Stormwater Standards (310 CMR 10.05(6)(k)). In addition, the proponent submitted rendered drawings rather

than civil engineered plans, which do not show where the wetlands boundaries are located, proposed grading and drainage plan(s) with details. Lastly, Figure 15 entitled, "Rendered Site Plan Trail Network" shows a proposed trail network that traverses the property, but there was not mention of this in the narrative; therefore, the proponent should clarify if this is proposed within wetland resource areas and/or its the 100-foot Buffer Zone.

Wastewater

The ENF indicates that this project will generate wastewater design flows of 20,000 gallons per day. The ENF also indicates that a connection to the municipal sewer system is proposed, which will include a wastewater pump station and approximately 4,200 feet of force main to connect to the Town's gravity sewer on Forest Street. This will require the proponent obtain a sewer connection permit from the Town of Manchester-by-the-Sea. While a MassDEP permit is not required for this connection based on the information provided, the design, construction, and operation of this connection must conform to MassDEP regulations at 314 CMR 7.00 and 314 CMR 12.00; and, the responsibility for operation and maintenance of the system to connect to the municipal sewer should be clearly delineated, inclusive of access to the system to perform routine or emergency maintenance. In addition, the ENF did not describe in detail the quality of the non-domestic wastewater or the need for pretreatment, or otherwise proper disposal of laboratory wastewater and other industrial wastewater generated on site. These issues should be discussed in detail with the Town's wastewater management staff to ensure that all wastewater receives proper treatment, and there are no disruptions to the proper operation of the Town's wastewater treatment works.

The MassDEP appreciates the opportunity to comment on this proposed project. Please contact Kristin.Divris@mass.gov at (508) 887-0021 for further information on wetlands and wastewater issues. If you have any general questions regarding these comments, please contact me at John.D.Viola@mass.gov or at (857) 276-3161.

Sincerely,

John D. Viola
Deputy Regional Director

cc: Brona Simon, Massachusetts Historical Commission,
Eric Worrall, Kristin Divris, Jill Provencal, Pam Merrill, Susannah King, MassDEP-NERO

Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Gina Fiandaca, Secretary & CEO

massDOT
Massachusetts Department of Transportation

July 13, 2023

Rebecca Tepper, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114-2150

RE: Manchester: Cell Signaling Technology (CST) at the Old Quarry – ENF
EEA #16716

ATTN: MEPA Unit
Alexander Strysky

Dear Secretary Tepper:

On behalf of the Massachusetts Department of Transportation, I am submitting comments regarding the Environmental Notification Form filed for the proposed Cell Signaling Technology (CST) at the Old Quarry in Manchester-by-the-Sea as prepared by the Office of Transportation Planning. If you have any questions regarding these comments, please contact J. Lionel Lucien, P.E., Manager of the Public/Private Development Unit, at (857) 368-8862.

Sincerely,

David J. Mohler
Executive Director
Office of Transportation Planning

DJM/jll

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
www.mass.gov/massdot

cc: Jonathan Gulliver, Administrator, Highway Division
Carrie Lavallee, P.E., Chief Engineer, Highway Division
Paul Stedman, District 4 Highway Director
James Danila, P.E., State Traffic Engineer
Metropolitan Area Planning Council (MAPC)
Manchester-by-the-Sea Planning Board

Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Gina Fiandaca, Secretary & CEO

massDOT
Massachusetts Department of Transportation

MEMORANDUM

TO: David J. Mohler, Executive Director
Office of Transportation Planning

FROM: J. Lionel Lucien, P.E., Manager
Public/Private Development Unit

DATE: July 13, 2023

RE: Manchester: Cell Signaling Technology (CST) at the Old Quarry – ENF
EEA #16716

The Public/Private Development Unit (PPDU) has reviewed the Environmental Notification Form (ENF) for the proposed Cell Signaling Technology (CST) at the Old Quarry project at 8 Atwater Avenue in Manchester-by-the-Sea as submitted by Fort Point Associates, Inc on behalf of Cell Signaling Technology, Inc (the "Proponent"). The site is bounded by Route 128 to the east and south, forested open space to the east, several commercial sites to the north, and the Manchester Athletic Club to the west. The project site was once a former gravel quarry.

The Project entails the construction of a 263,000 square foot (SF) research & development (R&D) facility with 550 employees and 535 off-street parking spaces (56 surface parking spaces and 479 garage spaces). It will be carried out in two phases. Phase 1 involves the construction of a five-story, 127,000 SF life science building and lobby, along with the five-story parking garage. The building will feature open labs on the eastern side, with support and office functions facing the quarry garden to the north and the upper meadow to the south. Phase 2 will encompass a 133,000 SF life science building, completing the overall campus design. During Phase 2 construction, the parking garage will be expanded to accommodate Phase 2, located to the east of the existing garage.

The Project surpasses MEPA thresholds for review of an Environmental Notification Form (ENF) due to impacts on land per 301 CMR 11.03(3) and transportation per 301 CMR 11.03(6). The Project additionally requires a Vehicle Access Permit from MassDOT as the proposed site abuts Route 128, a state-owned roadway.

The Proponent has prepared a Traffic Impact, Access, and Parking Study (TIAPS) to evaluate potential traffic impacts associated with the proposed mixed-use development. The study is prepared in accordance with the MassDOT/EEA Guidelines for *Transportation Impact Assessment (TIA)* and pursuant to the standards of the traffic engineering and transportation planning professions for the preparation of such reports.

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
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Trip Generation

To estimate the trip generation of the Project, the TIAPS uses statistics published by the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* for Land Use Code (LUC) 760 - Research and Development (R&D). Trip generation for this land use can be assessed by two independent variables: gross floor area or number of employees. The TIAPS reviews both independent variables.

Assessed by square footage, the proposed development is anticipated to generate 2,800 new vehicle trips during the average weekday, with 259 new vehicle trips (212 entering and 47 exiting) during the weekday morning peak hour and 246 new vehicle trips (39 entering and 207 exiting) during the weekday evening peak hour. If assessed by employee count, the number of trips generated by the site would be less by 904 daily trips. The TIAPS uses the more conservative trip generation, which is calculated by gross floor area, to conduct the traffic analysis for the Project. MassDOT finds this methodology acceptable as a conservative framework to estimate net trip generation.

Trip Distribution

The directional distribution of the site-generated trips to and from the Project is based on gravity model using 2017-2019 U.S. Census Bureau Journey-to-Work data for the Town of Manchester-by-the-Sea. The trip distribution for the Project results in 13 percent of site traffic traveling to/from the site along School Street to the north of Atwater Avenue, 44 percent of site traffic traveling to/from the site along Route 128 west of the School Street interchange, 21 percent of site traffic traveling to/from the site along Route 128 east of the School Street interchange, 1 percent of site traffic traveling to/from Mill Street opposite the Route 128 northbound (NB) Ramps, and 21 percent of site traffic traveling to/from the site along School Street to the south of the project.

Study Area

A comprehensive field inventory of existing traffic conditions on the study area corridors and intersections was conducted during various site visits by TEC staff from February 2023 through March 2023. The field investigations consisted of existing roadway geometrics, operating characteristics, study area safety concerns, and multi-modal accommodations. The study area for the Project contains the major roadways which provide access to the Project, as well as the intersections that are expected to accommodate most of the Project-related traffic. The study area includes:

- School Street / Atwater Avenue;
- School Street / Route 128 Southbound (SB) Ramps;
- School Street / Route 128 NB On-Ramps / Mill Street;
- School Street / Route 128 NB Ramps;

- School Street / Pleasant Street; and
- School Street / Lincoln Street.

Safety

Crash data for the study area intersections were compiled and analyzed for the most recent consecutive five-year period (2017-2021) of data on file with the MassDOT Interactive Mapping Portal for Analysis and Crash Tracking (IMPACT) online website. This includes the most recent three-years of complete data (2017 through 2019). The motor vehicle crash data was reviewed to determine if any crash trends exist within the study area.

There is a limited history of crashes for the study area intersections based on an evaluation of the MassDOT's IMPACT database. All intersections included within the study experience less than three crashes per year on average with crash rates at each intersection below the statewide and District-wide averages for unsignalized intersections. No locations within the study area are designated as high crash locations.

On-Site/Off-Site Access Improvements

Access/egress to the site will be provided via two (2) full access/egress driveways, one at the end of Atwater Avenue adjacent to the Manchester Athletic Club and one along Beaver Dam Road approximately 175-feet east of Atwater Avenue. All traffic generated by the site will access/egress along the 2,000-foot Atwater Avenue from its terminus to its intersection with School Street, approximately 1,250 feet north of the Route 128 SB Ramps. To improve traffic operations and mitigate the impact of the Project, the Proponent has committed as part of Phase 1 to the following improvements at the School Street / Atwater Avenue intersection:

- Apply a high-visibility double-yellow centerline along Atwater Avenue for approximately 200-feet to/from School Street to define the two-way directional traffic flow along the approach adjacent to the projected 95th percentile queue distance.
- Replace the faded stop-sign and the stop line (high-visibility) along the Atwater Avenue westbound approach.

Prior to Phase 2 occupancy of the Project, the Proponent will implement geometric and traffic improvements at the School Street / Route 128 NB Ramps / Mill Street. According to the ENF, these improvements will include:

- Installation of a fully actuated traffic signal with advanced vehicle and bicycle detection, emergency-vehicle pre-emption capabilities, and a dedicated pedestrian crossing. The traffic signal will incorporate the Mill Street approach into its control system, operating in a split-phased sequence.

- Updating pavement markings and traffic signage at the intersection to comply with MUTCD standards, considering the new traffic signal and other planned improvements.

The Proponent should work with the MassDOT's District 4 office during the permitting of Phase 1 to discuss the proposed redesign for this intersection. This may include an alternative analysis to select the preferred alternative for improvements at this intersection.

Transportation Demand Management

The Proponent has committed to research and provide a dynamic TDM program to reduce single-occupancy vehicle (SOV) trips to/from the site. Currently, the Proponent is committed to provide the following TDM measures:

- *Parking Measures*
  - *Preferential Parking* - Provide preferential parking for rideshare, carpool, and hybrid vehicles at locations throughout the site's parking areas near major entranceways.
  - *Electric Vehicle Stations* – Provide electric vehicle (EV) charging stations at locations throughout the site's parking areas near the building entrances.
  - *Reduced Parking Supply* – The Applicant is committed to reducing the parking supply by providing a minimal number of parking spaces below the Town of Manchester-by-the-Sea Zoning requirements to a level of the demand need only. The current parking layout provides a parking supply that is both below the Town of Manchester-by-the-Sea Zoning and comparable to ITE parking demand estimates.
- *Bicycle and Pedestrian Measures*
  - *Pedestrian Signal Equipment* – Install new pedestrian signal equipment at the intersection of School Street / Route 128 NB Ramps / Mill Street as part of a modification to traffic control as specified in this TIAPS.
  - *On-Site Pedestrian Accommodations* – Sidewalk and accessible curb ramps will be provided on-site providing connection to various site structures and components.
  - *Bicycle Accommodations* - Provide striping improvements for buffered bicycle lanes along School Street with complementary bike signs.
  - *Bicycle Racks* - Provide secure, weather protected, long-term bicycle parking for employees at designated locations within the proposed parking structure.
  - *Employee Shower Facilities* - Coordinate with tenants to provide showers for employees who commute by walking or biking.
  - *Walking Trails* – The site will include trailhead connection locations for several walking trails as part of the 146-acre Monoliths recreation area as part of the Trustees of Reservations. Surface parking for these trailheads will be provided onsite.

- *Public Transportation Measures*
  - *Maps / Schedules* – Public transportation schedules with transit maps for the MBTA Commuter Rail, as well as for all nearby routes will be provided to each employee on their start date. Schedules and maps will also be provided in the lobby and lunchroom in each on-site building.
  - *Transit and Rideshare Subsidies* – The Proponent commits to no less than a 25% subsidy for employee Commuter Rail passes and rideshare fees between the Manchester MBTA Station and the project site.
- *Other Measures*
  - *Employee Transportation Coordinator (ETC)* – An ETC will be provided on-site to oversee, implement, monitor, and evaluate TDM measures. The ETC will be responsible for managing rideshare and carpool programs, as well as distributing information to employees to encourage alternative means of transportation. The ETC will be responsible for posting and distributing announcements, holding promotional events to encourage rideshare, bicycling, and walking.
  - *Marketing of Transportation Options and Benefits* – A welcome packet for all employees will be distributed which includes information for all transportation related benefits, promotions, and local transportation options; including location of MBTA stops, transit schedules, EV and carpool parking locations, and any other emerging new mobility locations.
  - *Rideshare* – The ETC, in consultation with the North Shore TMA, will develop an employee rideshare program to encourage employees to seek alternatives to driving to work alone.
  - *Vanpool and Carpool* – The Proponent and the ETC will encourage vanpooling participation through marketing, events, and vanpool formation meetings.
  - *Guaranteed Ride Home Program* – The ETC will be responsible for providing all employees who carpool, bicycle, or walk to work with an emergency ride home.
  - *Flex Hours* – Provide flexible hours to employees.
  - *Direct Deposit for Employees* – Encourage employees to adopt direct deposit to reduce employee trips to/from the site.
  - *Promotional Events and Activities* – The ETC will be responsible for organizing promotional events and activities to encourage rideshare and alternative transportation means.

Transportation Monitoring Program (TMP)

The Proponent is committed to implementing a TMP, which is intended to monitor traffic operations, parking occupancy, public transportation utilization, and pedestrian/bicycle use for a five-year period following completion of the Project. The TMP will include providing traffic count information to the MassDOT Public\Private Development Unit, the District 4 office, and the Town of Manchester-by-the-Sea for use of tracking site generated trips. The monitoring program intends to ensure that the Project impacts are consistent with

those predicted in the Project's permitting process, evaluate the effectiveness of the TDM measures in meeting the mode share targets, and assess the need for additional off-site improvements or TDM measures.

Conclusion

As documented in this study, Project-related traffic can be safely and efficiently accommodated within the study area corridors and intersections upon implementation of off-site mitigation. The Proponent has committed to work cooperatively with MassDOT and the Town of Manchester-by-the-Sea to implement the phased transportation mitigation program.

Given the limited Project impacts based on the anticipated new trip generation, MassDOT recommends no further environmental review based on transportation issues. The Proponent should coordinate with MassDOT District 4 to obtain the necessary access permit for the Project site. If you have any questions regarding these comments, please contact *william.m.simon@dot.state.ma.us.*

July 13, 2023

Ms. Rebecca Tepper
Secretary of Energy and Environmental Affairs
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office
Alexander Strysky, EEA No 16716
100 Cambridge Street, Suite 900
Boston MA 02114

Dear Secretary Tepper:

We are writing today to offer comments on the Environmental Notification Form (ENF) for the Cell Signaling Technologies (CST) at the Old Quarry project in Manchester, Massachusetts. The proposed project will add 260,000 gross square feet of research & development (R&D) in two phases on 21 acres of land at a former quarry on Atwater Avenue. School Street, a north south roadway between Manchester's downtown and the Essex town line, will provide access to Atwater Avenue. School Street also provides connections to the Route 128 interchange (Exit 50) just south of the site.

The project proponent is to be commended for its environmentally sensitive and sustainable features to limit surface parking and to include the rooftop solar photovoltaics, design measures to minimize heat gain, ground-source heat pumps, green roof design high and electric vehicle charging infrastructure. We appreciate the robust Transportation Demand Management (TDM) report as described in the ENF with a commitment to construct new trail heads to the Monoliths, to provide on-site parking for those trail heads as well as commitments and to install bicycle facilities on School Street.

Our comments will focus on the transportation-related impacts of the project, particularly as they affect the bicycle and pedestrian elements of the system. While the CST project will sit on the edge of Manchester, we would like to offer recommendations as options to further knit this project more strongly into the fabric of the town.

Traffic Monitoring Program

The traffic monitoring program will provide a useful set of information. We recommend that you include bicycle and pedestrian counts as part of the intersection counts and conduct the counts at an appropriate time in the spring or fall when schools are in session and weather is comfortable for biking and walking. We also ask you to consider extending the timeframe of the counts to include more hours in the early morning and afternoons when cyclists and walkers are more prevalent on School Street.

School Street

Route 128 bisects Manchester. To the south are residential neighborhoods, commercial areas, parks, beaches, and conservation areas. To the north are large conservation areas like the Wilderness Conservation Area and the Monoliths, a Trustees of the Reservations property. School Street is one of two streets – the other being Pine Street to the west – that link town residents to these recreational and natural resources.

The Manchester Bicycle & Pedestrian Committee has identified School Street as an important corridor for cyclists and pedestrians, particularly for recreational walkers and cyclists. This spring, we worked with Town officials who coordinated the recent implementation of bike markings on School Street. We believe that the Proponent's commitment to extend these bike lanes to Atwater Avenue will further advance these improvements and recommend fully extending the bike lanes to the town line, just past the recreational area mentioned above.

We are also interested in extending the pedestrian network. We understand that MassDOT's 2022 updates to the Walkability Maps do not ascribe a walkability potential to School Street other than the low potential that is identified on the School Street bridge over Route 128. We believe this in not germane to the reasons for advancing pedestrian accommodations to the north. We desire a pedestrian connection from the residential neighborhoods that are a mile to a mile and a half south of trail heads at the Wilderness Conservation Area and the Monoliths. We note that the Walkability Maps do no show walkability potential for other very popular multiuse trails exist throughout the Commonwealth (e.g., the Katama Road Pathway in Edgartown.)

Roundabout at the Mill St./Route 128 Exit 50 Northbound Ramps/School St. Intersection

We are also interested in exploring the potential for roundabouts at the two ramp intersections. We appreciate that the ENF included an analysis of a roundabout at the Mill Street/Route 128 Exit 50 northbound ramps/School Street intersection as an alternative to a traffic signal. We are concerned that the ENF recommended a traffic signal over the roundabout, noting that this would be the first full traffic signal in the town of Manchester and the first signalized ramp intersection east of Route 128 Exit 43 in Danvers.

We believe that the ENF prematurely rejected the roundabout concept at this location because the off-ramp was reduced to 500 feet, which is below the 1,000-foot length as part of FHWA and MassDOT guidelines. We believe that it is premature to reject the roundabout. We request that the Proponent reconsider this finding and instead identify the types of measures that would be necessary to advance a roundabout design at this location and at the adjacent ramp intersection, including the determination of appropriate funding sources and implementation opportunities.

Atwater Avenue

It is our understanding that the layout of Atwater is constrained by the environmentally sensitive resources that it abuts. We encourage the Proponent to identify appropriate traffic calming measures that would allow cyclists and pedestrians to safely use this roadway to connect with current and future bicycle and pedestrian facilities along School Street. The proposed new trail heads to the Monoliths could also provide some of this connectivity.

School Street Corridor Study

We request that the Proponent be directed to develop or fund a corridor study of School Street from the ramp interchanges to the town line to ensure that proposed off-site mitigation measures along the corridor are developed in a holistic way. To be clear, we understand the need for projects to mitigate their impacts in a proportional way. The intent of this effort is to ensure that there is a roadmap for School Street that provides context for measures that the Proponent plans to implement. This study would include the extension of the bicycle and pedestrian networks including, if appropriate, shared use paths, roundabouts at the ramp intersections and other appropriate interventions such as pedestrian and bicycle crossings of School Street. It would have two timeframes: a near-term concept plan and long-term vision plan.

Recommendations

Finally, we would like to summarize our recommendations:

- As part of the five-year monitoring program:
    - Include bicycle and pedestrian counts as part of the intersection counts and conduct the counts at an appropriate time in the spring or fall when schools are in session and weather is comfortable for biking and walking.
    - Consider extending the time of the counts to include more hours in the early morning and afternoons when cyclists and walkers are more prevalent on the School Street.
- Extend bike lane markings to the Essex town line.
- Identify the types of measures that would be necessary to advance a roundabout design at the ramp intersections, including determination of appropriate funding sources and implementation opportunities.

- Develop or fund a comprehensive corridor study of School Street from the ramp interchanges to the town line to ensure that proposed off-site mitigation measures along the corridor are developed in a holistic way.
- Identify appropriate traffic calming measures that would allow cyclists and pedestrians to safely use Atwater Avenue to connect with current and future bicycle and pedestrian facilities along School Street.

Thank you for the opportunity to comment on this project. As we stated above, we commend the Proponent for their thoughtful and environmentally sensitive design approach and look forward to continuing to work with them to realize the full benefit of this project.

Sincerely,

Joseph G. Beggan, on behalf of the Manchester Bike & Pedestrian Committee
2A Surf Village
Manchester, MA 01944